FINAL
MONTARA-MOSS BEACH
WATER WELL EIR

August 9, 1989
State Clearinghouse Number:
89010308

A Report Prepared for:

San Mateo County Department of Environmental Management
Planning and Development Division
590 Hamilton Avenue
Redwood City, CA 94063

FINAL MONTARA-MOSS BEACH WATER WELL EIR

Kleinfelder Job No. 10-1800-01

KLEINFELDER, INC.
California Plaza, Suite 570
2121 North California Boulevard
Walnut Creek, California 94596
(415) 938-5610

In Association With:
Balance Hydrologics, Inc.
Thomas Reid & Associates
Diane Renshaw, Biologist

August 9, 1989

TABLE OF CONTENTS

PROJECT STAFF

The Final EIR has been developed by a project team of professionals having diverse disciplinary backgrounds:

Kleinfelder:

Charles G. Wolfe, Senior Consultant
Dennis M. Laduzinsky, Hydrogeologist
Caryl Walti, Hydrogeologist
Carolyn Donahue, Technical Typist
Jennifer Higgins, Technical Typist

Balance Hydrologics:

Barry Hecht, Hydrologist, Hydrogeologist, Project Manager
Matthew D. O'Connor, Hydrologist
Eric Forno, Cartographer

Thomas Reid and Associates:

Taylor Peterson, Planner
Cathy Pinkerton, Planner

Diane Renshaw, Biologist

San Mateo County:

Bill Rozar, Senior Planner
Deborah Raines, Planner
Dan Arellano, Traffic Engineer

Other individuals who have contributed in other ways to the findings presented in this report, are listed in Section 11.2 of the Draft EIR.

1 COMMENTS RECEIVED ON DRAFT EIR

A Draft EIR on the Montara-Moss Beach Water Well Project was prepared March 15, 1989 (State Clearinghouse Number 89010308). The report was distributed by both the State Clearinghouse and by the San Mateo County Department of Environmental Management. Copies of the report were sent to the following:

California Coastal Commission
640 Capitola Road
Santa Cruz, CA 95062

PUC Water Utilities Branch
455 Golden Gate Avenue, Room 5234
San Francisco, CA 94102

Citizens Utility Co. of California
P.O. Box 15468
Sacramento, CA 95851

Point Montara Fire Protection District
501 Stetson Street
Moss Beach, CA 94038
Attn: Chief Kennedy

Committee for Green Foothills
c/o Lennie Roberts
339 La Cuesta
Portola Valley, CA 94025

Montara/Moss Beach Water Improvement Association
P.O. Box 370575
Montara, CA 94037
Attn: David Sandhaus

California Dept. of Fish and Game
P.O. Box 47
Yountville, CA 94599

California Dept. of Health Services
2151 Berkeley Way
Berkeley, CA 94704
Attn: Chris Brown

California State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

Dept. of Water Resources
1416 Ninth Street
Sacramento, CA 95814

Copies of the report were also made available to the public through County Library, Half Moon Bay Branch, 620 Correas Avenue, Half Moon Bay.

Comments on the Draft EIR were received from six agencies:

- California Department of Water Resources
- California Department of Fish and Game
- California Department of Health Services
- Citizens Utilities of California
- Montara Sanitary District
- The Montara Moss Beach Water Improvement Association

The following pages contain copies of the comments received on the Draft EIR. Handwritten numbers have been added to each as a quick guide to the pertinent response in Chapter 3 of this Final EIR.

TATE OF CALIFORNIA—OFFICE OF THE GOVERNOR

GEORGE DEUKMEJIAN, Governor

FFICE OF PLANNING AND RESEARCH
00 TENTH STREET
ACRAMENTO, CA 95814

May 8, 1989

Mr. Bill Rozar
San Mateo County
590 Hamilton Street
Redwood City, CA 94063

Subject: Montara/Moss Beach Water Will EIR
SCH# 89010308

Dear: Mr. Rozar:

The State Clearinghouse has submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is now closed and the comments from the responding agency(ies) is(are) enclosed. On the enclosed Notice of Completion form you will note that the Clearinghouse has checked the agencies that have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the comment package is not in order, please notify the State Clearinghouse immediately. Remember to refer to the project's eight-digit State Clearinghouse number so that we may respond promptly.

Please note that Section 21104 of the California Public Resources Code requires that:

> "a responsible agency or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency."

Commenting agencies are also required by this section to support their comments with specific documentation.

These comments are forwarded for your use in preparing your final EIR. Should you need more information or clarification, we recommend that you contact the commenting agency(ies).

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact Loreen McMahon or Marilyn Nishikawa at 916/445-0613 if you have any questions regarding the environmental review process.

Sincerely,

David C. Nunenkamp
Chief
Office of Permit Assistance

Enclosures

cc: Resources Agency

NOTICE OF COMPLETION AND ENVIRONMENTAL DOCUMENT TRANSMITTAL FORM — SCH # 89010308

1. Project Title: Montara/Moss Beach Water Well EIR
2. Lead Agency: San Mateo County — 3. Contact Person: Bill Rozar
3a. Street Address: 590 Hamilton Street — 3b. City: Redwood City
3c. County: San Mateo — 3d. Zip: 94063 — 3e. Phone: (415) 363-4161

PROJECT LOCATION 4. County: San Mateo — 4a. City/Community: Montara/Moss Beach
4b. Assessor's Parcel No. N/A — 4c. Section N/A — Twp. N/A — Range N/A
5a. Cross Streets: N/A — 5b. For Rural, Nearest Community: N/A
6. Within 2 miles: a. State Hwy # 1 — b. Airports Half Moon Bay — c. Railways N/A — d. Waterways Pacific Ocean

7. DOCUMENT TYPE

CEQA
01. ___ NOP
02. ___ Early Cons
03. ___ Neg Dec
04. X Draft EIR
05. ___ Supplement/Subsequent EIR (Prior SCH No.: ___________)
06. ___ NOE
07. ___ NOC
08. ___ NOD

NEPA
09. ___ NOI
10. ___ FONSI
11. ___ Draft EIS
12. ___ EA

OTHER
13. ___ Joint Document
14. ___ Final Document
15. ___ Other ___________

8. LOCAL ACTION TYPE
01. ___ General Plan Update
02. ___ New Element
03. ___ General Plan Amendment
04. ___ Master Plan
05. ___ Annexation
06. ___ Specific Plan
07. ___ Community Plan
08. ___ Redevelopment
09. ___ Rezone
10. ___ Land Division (Subdivision, Parcel Map, Tract Map, etc.)
11. ___ Use Permit
12. ___ Waste Mgmt Plan
13. ___ Cancel Ag Preserve
14. X Other Coastal Development

9. DEVELOPMENT TYPE
01. X Residential: Units 58 Acres N/A
02. ___ Office: Sq. Ft. ______ Acres ______ Employees ______
03. ___ Shopping/Commercial: Sq. Ft. ______ Acres ______ Employees ______
04. ___ Industrial: Sq. Ft. ______ Acres ______ Employees ______
05. ___ Water Facilities: MGD ______
06. ___ Transportation: Type ______
07. ___ Mining: Mineral ______
08. ___ Power: Type ______ Watts ______
09. ___ Waste Treatment: ______
10. ___ OCS Related
11. ___ Other: ___________

RECEIVED MAR 23 1989 STATE CLEARINGHOUSE

10. TOTAL ACRES: ___________ 11. TOTAL JOBS CREATED: ___________

12. PROJECT ISSUES DISCUSSED IN DOCUMENT
01. ___ Aesthetic/Visual
02. ___ Agricultural Land
03. ___ Air Quality
04. ___ Archaeological/Historical
05. X Coastal Zone
06. ___ Economic
07. X Fire Hazard
08. ___ Flooding/Drainage
09. X Geologic/Seismic
10. ___ Jobs/Housing Balance
11. ___ Minerals
12. ___ Noise
13. X Public Services
14. X Schools
15. X Septic Systems
16. X Sewer Capacity
17. ___ Social
18. ___ Soil Erosion
19. ___ Solid Waste
20. ___ Toxic/Hazardous
21. X Traffic/Circulation
22. X Vegetation
23. X Water Quality
24. X Water Supply
25. X Wetland/Riparian
26. ___ Wildlife
27. X Growth Inducing
28. ___ Incompatible Landuse
29. X Cumulative Effects
30. ___ Other ___________

13. FUNDING (approx) Federal $ ___________ State $ ___________ Total $ ___________

14. PRESENT LAND USE AND ZONING: Residential (R-1 S17, RM/CZ)

15. PROJECT DESCRIPTION:

A Master EIR to assess the impacts of drilling 58 water wells to service 58 residential dwelling units which wereallocated 58 sanitary sewer connections by the Montara Sanitary District. The EIR also assesses the desirability of allowing septic systems in conjunction with water well systems. The project is located in Montara and Moss Beach on the San Mateo Mid Coast.

CLEARINGHOUSE CONTACT: 916/445-0613
[illegible] MCMAHON
MARILYN NISHIKAWA
M. Nishikawa

STATE REVIEW BEGAN: 3-~~22~~-89

DEPT REV TO AGENCY: 5-1

AGENCY REV TO SCH: 5-5

SCH COMPLIANCE: 5-8

PLEASE RETURN NOC WITH ALL COMMENTS

Resources
AQMD/APCD: 2 (File Date: 3/25)

N/C N/C
___ ___ • Resources
[redacted]
___ ___ • Conservation
✓ ___ • Fish & Game
[redacted]
✓ ___ • DWR
[redacted]
___ ___ • Coastal Comm
[redacted]
Ca St Water Res Cnt Bd
___ ___ • Wtr Qual (4TH)
___ ___ • Wtr Rts (3RD)
[redacted]

N/C N/C
___ ___ • RWQCB# 2
___ ___ • Caltrans# 4
[redacted]
✓ ___ • Health
[redacted]

State of California

The Resources Agency

5/8

Memorandum

Date : APR 12 1989

To : A-38
Gordon F. Snow, Ph.D.
Assistant Secretary for Resources
The Resources Agency
1416 Ninth Street, Room 1311
Sacramento, CA 95814

From : Department of Water Resources

Subject : SCH No. 89010308 Montara/Moss Beach Water Well EIR, San Mateo County

We have reviewed the subject Draft Environmental Impact Report which was transmitted by the State Clearinghouse Notice of Completion dated March 23, 1989, and have the following comments and recommendations:

#1 In conjunction with the well monitoring, the EIR should discuss mitigation measures to be taken if monitoring data indicate adverse effects are occurring due to ground water pumping.

For further information, you may wish to contact George Newmarch of my staff at ATSS 492-7168. Thank you for this opportunity to review and comment.

Jerry Vayder

Jerry Vayder, Chief
Central District
ATSS 485-5631

State of California

The Resources Agency

5/8

Memorandum

To : 1. Project Coordintor

Date : May 2, 1989

2. Mr. William Rozar
San Mateo County
590 Hamilton Street
Redwood City, CA 94063

From : Department of Fish and Game

Subject : Montara-Moss Beach Water Well Draft Environmental Impact Report (DEIR), San Mateo County, SCH 89010308

Department of Fish and Game personnel have reviewed the DEIR for the proposed Montara-Moss Beach Water Well project. The project would consist of 58 individual wells which would allow development of 58 lots.

#2 The DEIR does not adequately discuss potential impacts to fish and wildlife, and the recommended mitigation measures are inappropriate. The document repeatedly states that there may be significant impacts to fish and wildlife resources, but "Lack of data . . . makes it impossible to assess the significance of this impact." The California Environmental Quality Act (CEQA) requires a full disclosure of anticipated impacts and a recommendation for measures to offset or fully mitigate those impacts. In many of the recommendations for mitigation, the DEIR recommends "biomonitoring," "no practical mitigation is available," "biological inventory," and "to the maximum extent possible." None of these types of recommendations constitute mitigation as is stated in Section 15370 of the CEQA Guidelines. Briefly, mitigation includes: impact avoidance, minimizing impacts, rectifying, or reducing impacts to a level of insignificance, and compensation through replacement.

#3 On page 123 the document discusses possible impacts to the State and Federally listed endangered San Francisco garter snake. The report also acknowledges that, should the snake exist on the site, impacts would be significant. However, for mitigation the report recommends snake surveys and protection "if appropriate." The status of the garter snake must be determined through field studies before the DEIR can be considered to have adequately addressed this issue. If located, mitigation for adverse impacts to the snake will be required, as will consultation with the U.S. Fish and Wildlife Service.

The alternatives discussion (Chapter 3) includes an alternative which would involve community, rather than individual, wells. The reason this was dismissed was because there are existing service areas, and "other sound reasons." If this alternative would be less environmentally damaging, it should not be eliminated on the basis given unless the "other sound reasons" are substantial, and clearly defined in the document.

Inasmuch as the document fails to fully discuss identified potential impacts to fish and/or wildlife resources and does not recommend tangible mitigation, it is not appropriate to certify the DEIR. If data does not exist, appropriate studies must be undertaken which will develop the necessary information. After the project impacts are identified, meaningful mitigation can be developed. We, therefore, recommend against certification of the DEIR; we recommend that the document be rewritten to satisfy CEQA requirements; and that it then be recirculated as a Supplemental DEIR through the State Clearinghouse.

Should you have any questions, please contact Carl Wilcox, Associate Wildlife Biologist, at (707) 944-5525.

for Pete Bontadelli
Director

State of California

Department of Health Services

Memorandum

5/0

To : Terry Roberts
State Clearinghouse
1400 Tenth Street, Room 121

Date : April 24, 1989

Subject: Draft
Montara-Moss
Beach Well EIR
SCH# 89010308

From : Environmental Health Division
714 P Street, Room 600
3-6111

The Department of Health Services has reviewed the subject environmental document and offers the following comments:

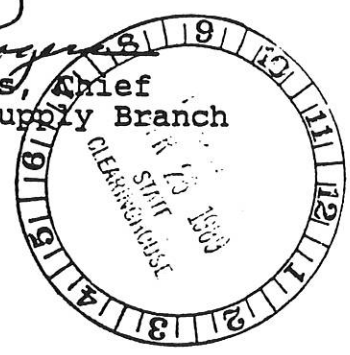
#4 The wells may encounter two failure possibilities that may impact the water supply situation in the Montara-Moss Beach area. First, it is possible that well production may initially be plentiful and then diminish significantly after a period of time that it could no longer supply the needed water. Second, it is possible that the water quality of the wells may, at first, be acceptable and then deteriorate to the extent the wells cease to be viable sources of domestic water.

If these occur, the Department is concerned that the Citizens Utilities Company of California would be forced to provide emergency water supply to the users of the affected wells, thus aggravating the problem of inadequate water supply that now exists in the area.

The above possibilities should be addressed and their impact be mitigated.

If you have any questions or need further information concerning these comments, please contact Clifford L. Bowen of the Public Water Supply Branch at 2151 Berkeley Way, Berkeley, CA 94704-9980, (415) 540-2153.

Peter A. Rogers, Chief
Public Water Supply Branch



cc: San Mateo County Health Department
Environmental Health
590 Hamilton Street
Redwood City, CA 94063

CITIZENS UTILITIES COMPANY
OF CALIFORNIA

GENERAL OFFICE
3335 Longview Drive
North Highlands, California

MAILING ADDRESS
P. O. Box 15468
Sacramento, CA 95851

TELEPHONE NUMBER
(916) 481-7350

May 12, 1989

San Mateo County
Department of Environmental Management
Planning and Development Division
590 Hamilton Avenue
Redwood City, CA 94063

Attn: Mr. William Rozar

Subject: Draft Montara - Moss Beach
Water Well EIR

Thank you for the opportunity to respond to the Draft Montara - Moss Beach Water Well Environmental Impact Report (EIR).

The data compiled by your consultant Kleinfelder, is very thorough and inclusive, but does contain some minor errors. CUCC has a great deal of concern regarding some of the conclusions reached in the EIR.

A review of Table 5, "Effects of Proposed Groundwater Pumpage on Storage and Outflow" indicates that new uses as a percentage of normal outflow well falls within your established criteria of 40%. However, review of Tables 6 - 10, "Water Budgets" of each Sub Unit, indicate that only the Upper Montara Creek and Moss Beach Terrace Subunits have a significant surplus of inflows over outflow. The remaining subunits have little or no surplus available. With this in mind we can not imagine groundwater production facilities within the Montara Terrace, Montara Heights and Upper Seal Cove areas being very successful. The EIR states that a low rate of successful groundwater development may be expected in the Seal Cove Subunit. Also Upper Moss Beach and Montara Terrace are subunits where the safe yield may be approached. Furthermore any extractions in the Seal Cove area may effect sensitive habitants in the ponds surrounding that area.

#5

Twenty two (22) out of the fifty eight (58) units addressed in the EIR are located in the Montara Terrace, Montara Heights and Seal Cove Subunits. Estimated costs of domestic water well installation costs range from $11,000 to $20,000. That represents a proposed investment of between $242,000, $440,000 for wells in these areas. There

#6

appears to be a high probability of failure for wells in those three subunits; this represents a significant impact on homeowners and an unacceptable irreversible commitment of resources, should these wells fail to produce.

#7 CUCC agrees with statements contained within the EIR that the smaller dispersed domestic wells should have a minimal impact on base flow on CUCC's existing facilities. However, due to the transmissivity of the acquifers, CUCC's existing facilities may have an adverse impact on proposed well sites. The zones of influence of our existing facilities may extend out thousands of feet and will drop water levels during pumping. This may render some areas, which would otherwise be hydrogeologically acceptable, useless to individual well users.

#8 CUCC strongly objects to the use of on-site septic systems within the Montara/Moss Beach areas. The use of septic systems increase the possibility of contamination of our few existing facilities. A loss of any of our existing facilities would have a detrimental affect on our ability to deliver water to our existing customers. Septic systems should continue to be strongly discouraged in the Montara-Moss Beach area.

#9 "Section 5.1.2.2 - Water District", contains several errors which should be corrected. PUC Decision No. 88-09-23 dated September 14, 1988 contained the following findings of fact:

1. The productive capacity of CUCC's water sources is 383 gpm.

2. The Montara System required 465 gpm of productive capacity to meet the demand of current customers...the demand of individual lot owners who have applied or will apply for service and the demand of the Farallon Vista Housing Development...requires at least 550 gpm of productive capacity.

CUCC has three wells in the Airport Plain aquifer; none actually located within the Pillar Point Marsh. The Airport Plain aquifer feeds into the Pillar Point Marsh. In accordance with LCP Sections 2.32, 2.33 and 7.20, CUCC has retained consultants to perform a hydrogeologic study to determine the safe yield of the acquifers feeding the marsh. Should the results of the study be in CUCC's favor, CUCC will be permitted to drill an additional well in the Airport Plain.

#10 Currently, CUCC's existing sources of water are eight (not seven) wells and a surface diversion at Montara Creek.

In conclusion, CUCC makes the following comments pertinent to the proposal of allowing 58 (or possibly more) individual wells in the Montara - Moss Beach area:

1. Some of the hydrogeological subunits may not support groundwater development. Wells within these areas should be discouraged due to the low probability of being successful and the high unrecoverable cost of construction should the well be unsuccessful. CUCC can not allow connections to its existing system should these wells fail to produce.

2. Some of the subunits may be within the zone of influence of existing CUCC wells and may be rendered useless during extended pumping to meet community water demands. CUCC's deliveries to the whole community must take precedence over these individuals.

3. On site individual septic systems should continue to be discouraged. They pose a threat to our existing facilities and possible individual well owners.

Should you require additional information please contact me at (9156)481-7350.

Very truly yours,

H. E. Niederberger, Jr. P.E.
Engineering Manager

MONTARA SANITARY DISTRICT

of San Mateo County • Montara - Moss Beach
A Public Agency

May 14, 1989

William Rozar, Senior Planner
Department of Environmental Management
Planning and Development Division
590 Hamilton Avenue
Redwood City, California 94063

Re: Draft Montara-Moss Beach Water Well EIR

Dear Mr. Rozar:

The Montara Sanitary District appreciates the opportunity to comment on the subject draft EIR and submits the following comments:

#11 As a general statement, the project is not adequately defined to determine the scope of the project. The summary and overview as well as title of the document is misleading in that it only refers to water wells. Commencing on page 10, there is discussion of septic systems and later in the document, assumptions are made that 58 parcels will be developed with water wells and the 157 on the waiting list for sewer permits maintained by the Sanitary District will drill water wells and sanitary facilities will be by septic systems until the sewer plants is expanded. For the stated reason the project lacks specificity.

#12 Also, as a general statement, the summary, the introduction, the project description, and the conformance with policies, plans and regulations is replete with assumptions, estimates, presumptions, suggestions and conceptions. A determination based upon assumptions, estimates, presumptions, suggestions and conceptions of an adequate water supply or lack of adequate water in order to authorize the drilling of 58 to 200 water wells in a community plagued with an inadequate supply for domestic and fire protection purposes is irresponsible and lacks specificity as required by the California Environmental Quality Act.

#13 Throughout the EIR the terms 58 parcels, 58 permits, and 58 connections are used interchangeably. While the number of parcels is 58, the number of permits and connections is 60.

#14 Table 1, page 2: Suggested Mitigation (3) Required hookup to community supply for Upper Seal Cove Sub-Unit. Is the mitigation suggested in lieu of allowing wells to be

(415) 728-3545 • P.O. Box 131 • Montara, CA 94037 • (415) 728-5079

drilled or in the event of well failure? Given the current moratorium on new water connections to the community supply, this mitigation in the event of well failure would exacerbate the situation.

#15 On page 5, 1st full paragraph, the statement that the proposed project has a limited effect on the hydrologic balance in the area is a conclusion without foundation or facts.

#16 Page 5, line 11: "By spreading impacts and diversifying sources of ground water, the proposed wells represent a new and positive approach to ground water development." No consideration has been given to the issue of whether those who may be allowed to drill individual wells will be required to connect to the community water system when sufficient new supplies become available. Such consideration was given in a letter dated July 27, 1988 from Paul M. Koenig, Director of Environmental Management, to the Board of Supervisors.

#17 On page 5, 2nd full paragraph, the statement that the project is less environmentally stressful than continuing withdrawing from Wagner Valley is a conclusion without foundation or facts.

#18 Table 2, pages 6, 7 and Table 5, page 52: Table 2 shows the same Dry Year and Critically-Dry Year Storage as Normal Year Storage for the Montara Heights and Upper Moss beach Sub-Units. Yet Table 5 has more conservative estimates of the Dry Year and Critically-Dry Year Storage for these areas. The more conservative values should be used in Table 2 as well.

#19 Page 8, line 9: "The information needed to assess the quantity, quality, and reliability of ground water supply is not available, as the community has not needed to know about ground water conditions in the past." This statement is not only untrue, it lacks sensitivity to the critical situation with our community water system. On page 15, the need for such information is reflected in LCP policy 1.25 which is "still awaiting full implementation". In fact, if the proposed project does not yield valid hydrologic data, it would not be in conformance with this policy.

#20 On page 9, the last sentence under 2.3 is erroneous.

#21 On page 10, 3rd paragraph, the statement that the current County policy is to prohibit onsite waste disposal systems in urban areas is not correct and in fact, the County encourages

such onsite waste disposal systems.

On page 11, line 18: "regarge" should be "recharge".

#22 On page 12, 2nd full paragraph, last sentence needs elaboration and identification in order to comment adequately.

#23 Page 15, the answer under 4.3.1 is conclusion without foundation or analysis.

#23 Page 18, last paragraph under 4.3.4 is an assumption and lacks specificity, as does the answer under LCP Policy 10.4 on page 19.

#23 The discussion at the top of page 22 is vague and ambiguous.

#24 Pages 18-22, Section 4.4: "The policies in this section are labeled "LCP" policies while the section refers to "General Plan" policies.

#25 On page 22, answer to 4.4.3 finds conformity with exceptions noted. However, the exceptions do not appear to be noted and therefore, cannot be considered or commented upon.

#26 Page 26, 5.12, roads, emergency services and fire protection should be included as listed services.

#27 Page 28, what is the relevancy of the first three paragraphs?

#28 Page 30, 2nd paragraph states that Citizens Utility (sic) is planning to replace water lines and install an additional storage tank for fire flows. This statement should be verified as it does not appear to be true and assumptions made in this document upon an apparent untrue statement could be misleading and should be reconsidered.

#29 Pages 30, 115-116: Fire Protection. "The water system in the Moss Beach area is subject to inadequate fire flow levels due to inadequate sustained pressure. Citizens Utilities Company, which supplies the water for the hydrants, is planning to replace part of the water lines and to install an additional storage tank which will help to increase the fire flow levels." Given the track record of Citizens, it is not prudent to assume that this will happen any time soon. "If Citizens found supplying the fire flow to non-customers

to be a burden; they could charge for this service...Effects on water supply from the existing community wells are expected to be insignificant...Since the parcels proposed to be private wells rather than to the water district's service, the development would not directly interfere with fire flow levels provided by Citizens". Adding fire flow requirements to a system that already has inadequate fire flow would increase the potential demand and risk to the new homeowners as well as the rest of the community. Cost is certainly an issue, but safety is paramount.

#30 Page 32, 5.1.2.5 is in error stating solid waste disposal is provided by Browning Ferris. Seacoast Disposal provides garbage service and some of the garbage is disposed of at Ox Mountain.

#31 Page 51, 5.4.2.1 is an estimate based upon theory.

#31 Page 53 does not adequately address well requirements in drought years.

#31 Page 54 discussion lacks information and analysis in order to make the necessary findings.

#32 Page 58 finds that there is no detailed analysis merited and then concludes by using the analysis. This appears to be contradictory. Regarding water balances, the accuracy of estimates are limited by available data and there apparently is no available date. This statement needs clarification.

#32 Pages 57, 58: The limitations with respect to the use of water balances in general and specifically for the Montara and Moss Beach areas should be reason enough to question the prudence of proceeding with this project.

#33 Page 71, the discussion of aquifer outflows used old data.

#34 Page 72, states that the development of additional wells could affect dry year performance of existing wells. This statement needs further elaboration as suck development of wells apparently could jeopardize the entire water supply of Montara and Moss Beach.

#34 Page 81, the health of individuals using water wells has not been considered nor the proximity of the proposed wells to septics and cess pools.

#35 Page 86, the effect of erosion on existing sewer lines has not been considered.

#36 Page 96, 5.6.3 uses old data and refers to personal conversations which are not a part of this document.

#37 Page 103, 5.7.1 is not a true statement. Traffic volume in the area during peak commute hours is very heavy with slow and no go traffic.

#38 Page 105, only five of the six intersections are listed.

#39 Page 107, the major building project of the San Mateo County Harbor District should be considered under cumulative projects.

#40 Page 109, includes an untrue statement of prohibition on waste systems and such untrue statement could affect the analysis of Section 6.

#40 Page 109, line 5: "Since the use of such onsite systems is now prohibited...". Some septic systems have been permitted already and appears to be encouraged by the County as an alternative as a result of the lack of sewage treatment capacity.

#41 Page 111, the Sanitary District has approved amendments to Ordinance No. 66, not a draft to the Ordinance.

#42 Page 114 bases conclusions upon out-of-date information. 1.4 children is a low figure and should be reconsidered using current data. The last paragraph is misleading as there is no sewer capacity to permit expanded school facilities.

#43 Page 115 does not analysis the effect of the proposed water wells on the existing supply of water including the effect on fire flows.

#44 Page 116, 2nd paragraph contradicts pages 115, 134, and 138.

#45 Page 117, the caution provided by the author needs clarification.

#46 Page 118, last paragraph: "Upper Moss Beach and montara Terrace are sub-units where safe yield during both normal and dry periods is likely to approached, but not exceeded, and

where ground-water development may proceed with observation and caution". No contingency plans have been offered in the event that the proposed wells are unable to deliver water of sufficient quantity or quality. Connecting to the community water system should not be considered a viable contingency plan until the current water shortage is corrected. The references to Montara "Terrace" on this page should be to Montara "Heights".

#47 Page 126. Fire Protection. "This would be accomplished either through extension of hydrant lines or installation of a 10,000 gallon water storage tank". As noted above, there are notable risks with serving new homeowners through the existing hydrant system.

48 Page 127, 2nd paragraph refers to sewage duty of the Sanitation (sic) District. This statement needs clarification.

#49 Page 127: Reliability of Yield. "Wells constructed in these areas may go dry in areas of deficient recharge, and homes lacking water in dry periods are likely to require supplemental public services". Since existing public services are inadequate and are likely to remain inadequate for the foreseeable future, it would not be prudent to allow drilling of wells in these area (e.g. Montara Heights, Upper Moss Beach, and Upper Seal Cove).

#50 Page 128, the effects of erosion on existing sewer mains and facilities needs further analysis.

#51 Page 128 refers to an apparent mitigation of volunteerism and cooperation to promote recharge of the unknown water supply.
Further analysis of such mitigation is needed.

#51 Page 128: Erosion, Sedimentation, and Recharge Protection. "Mechanisms for promoting recharge and water conservation on a valley-wide basis are not currently in effect; successful programs of this type presently call for neighborhood volunteerism and cooperation." A successful program would require some public leadership and funding as well.

51 Page 130 refers to an apparent mitigation of volunteerism and cooperation to promote recharge of the unknown water supply. Further analysis of such mitigation is needed.

#52 Page 132, the traffic analysis is inadequate as discussed above.

#53 Pages 133-136. Alternatives. All three alternatives presented, in combination, would seem to be the most prudent approach. The discussion of the Watershed Management Alternative should be expanded.

#54 Page 134 discusses supplemental wells being constructed by Citizens Utilities. These statements appear to be verified as the lack of water by Citizens is the reasons for considering water wells.

#55 Page 134, last paragraph, the "other sound reasons" should be identified.

#56 Page 137, 2nd paragraph, development of the 58 lots would constitute buildout as relates to capacity of the treatment plant.

#57 Page 137, line 13: "157" should be "159".

#58 Page 138, 9.4 contradicts statements made on page 116 and 134.

#59 Page 138, the erroneous statement in 9.5 as discussed, above should be corrected as does the second paragraph on page 139.

#60 Page 138: Short-term Uses Versus Long-Term Productivity. "If effectively monitored, the individual wells can provide the data needed to develop a usable understanding of the local ground water resource, indirectly a significant enhancement to long-term productivity". It would be irresponsible to let this project proceed without effective monitoring as well as other measures. Other viable alternatives for obtaining the data, such as a complete hydrologic study, should be considered.

#61 Page 138: Irreversible Commitment of Resources. ..."the environmental effects of additional pumping of existing wells may be greater than those associated with dispersed ground water development." This statement would make sense only if the new homeowners were allowed to connect to the community system despite the moratorium.

#62 Page 138: Effects Found Not To Be Significant. "The proposed development of individual water wells is not expected to significantly deplete the available ground water outflow or storage, considered on a sub-unit or regional basis". This statement is not consistent with the previous discussions relating to the Montara Heights, Upper Moss Beach, and Upper Seal Cove sub-units.

#63 Page 141, 2nd paragraph needs clarification.

#64 Page 141, 4th paragraph provides an unique, but probably unacceptable way to observe and measure the quantity of ground water.

#65 Page 143, 1st paragraph is not clear what the costs are related to and who would be responsible for paying such costs.

#66 The following issues identified in the letter dated January 16, 1989 from the Montara Sanitary District Board of Directors to Mr. William Rozar of the San Mateo County Planning Department in response to his scoping letter have not been addressed in the draft EIR.

SEPTIC SYSTEMS:

1. Accurately identify all existing septic and other private disposal systems within the urban area...

2. Assess the performance of the identified individual sewage disposal systems and where failures are noted. Determine if this failure is the result of improper or lack of periodic maintenance or stems from other causes.

3. Assess the need for a regular maintenance and inspection program.

#67 WATER WELLS:

3. Discuss what economic effect multiple private wells (non-public water users) will have on the remaining property owner's share of the acquisition costs of the Citizens Utilities Company which the County is engaged in acquiring on behalf of the community.

#68 4. Discuss soil structural changes and the potential for

building foundation or utility failures...

#69 7. Address the need for a water authority to manage all underground water extraction and flow.

#70 8. Discuss the necessity of a water extraction fee to fund the additional monitoring costs or to regulate the use.

#71 The document does not address the effects of digging 157 septics to serve the waiting list as suggested in the DEIR, upon the sewer treatment plant expansion project and the health of the community by doing so when comingled with 157 water wells.

Environmental impact reports serve the important function of forcing agencies to develop specific information of how the project may adversely affect the environment. The subject DEIR should better identify the project and provide better analysis and detail of the possible effects upon the environment and the proposed mitigation measures.

The DEIR attempts to serve as a ground water study under color of a DEIR and due to lack of information, fails as a DEIR for lack of specificity and fails as a ground water study for lack of information.

We will appreciate a copy of the Final Environmental Impact Report when available.

Very truly yours,

Sharon Wilson

Sharon Wilson
District Manager

THE MONTARA MOSS BEACH WATER IMPROVEMENT ASSOCIATION

P.O. Box 370575, Montara, California 94037

RESPONSE TO

DRAFT MONTARA-MOSS BEACH

WELL WATER EIR

MAY 14, 1989

RE: page 1, Par. 1

#72 Why is it expected that these 58 parcels will be served by individual private wells when there are other alternatives as dexcribed in chapter 8, and individual water wells are only one alternative. An EIR should discuss the impact of all alternatives. This approach clearly favors the individual well alternative. The question is - since there arre a number of sewer hookups available, can water be made available to them and how. The EIR lists four alternatives, three of which are buried at the end and not even discussed until Chapter 8. These three alternatives are preferable to the one that received all of the focus. It is our understanding than an EIR should aid in making responsible decisions in problem solving that has environmental consequences. This EIR seems to only address aspects of the individual well alternatives when in fact the other three alternatives may be highly preferable.

RE; page 1, Par. 3

#73 As of May 1, 1989 the California Deepartment of Water Resources reports 85% of normal precipation since 10/1/88 with only 25% of normal runoff for this area. If 10% of the recharge is used in a normal year-they would be using nearly 50% of what we can expect in a slightly below normal year such as this or even more in a drought year.

RE: page 2, Table 1

#74 Given current moritorium on new water connections to the community supply and the 25% deficiency of water in the community supply - how can requiring hookups to the community supply by Upper Seal Cove be considered a mitigation?

A better mitigation would be to find out how much water is in the acquifir with a ground water study of the Montara-Moss Beach area. Rather than hoping these wells are productive. Who is responsible if these wells fail after a short while? This is not addressed. Will they expect to turn to the already deficient community water supply? It makes better sense to put new, high capacity community wells in the most productive areas.

RE: page 3, Table 1

We agree that Septic Systems are not appropriate for any of Montara or Moss Beach.

RE: page 5, Par. 3

#75 Why is Wagner Valley area development considered less environmentally stressful than the 58 individual wells? When the Wagner Valley area is shown later in the EIR to be one of the more productive areas of our community (pg. 6, Table 2)

Comoparable outflow, highest storage. Also in chapter 5.4 hydrology and water quality of the individual acquifirs are discussed in depth and the Upper Montara Creed sub unit is shown to be the most highly productive.

The EIR goes on to claim that by allowing the individual wells it will spread impacts and diversify sources of ground water. The impact will be spread from the individual well drillers t;o the entire community which may have to bail him out when their well fails.

Since when are individual wells "a new and positive approach". It is well proven that a reliable community water supply is the best and safest approach.

Why do these wells have to be in use to monitor water levels. Test wells should be drilled and monitored but consumptive use of water from these wells should not be allowed unitl impacts on the entire acquifir have been assessed.

RE: Page 6&7, Table 2

#76 The numbers are misleading for Montara Heights and Upper Moss Beach. Table 5, page 52 uses more conservative estimates of Dry and Critically Dry storage for these areas.

RE: Page 8, Par. 2

#77 There is no quantity or quality groundwater information available, not because of lack of community interest in knowing, but because Montara and Moss Beach are unincorporated areas, and we rely on Citizens Utilities, San Mateo County and the California Public Utilities Commission to know about the groundwater conditions and to comply with the LCP policy 1.25 which requires the County of San Mateo to undertake a water monitoring program to determine water availability in our community.

RE: Page 8, Par. 3

#78 How can the effects of individual wells be assessed without a hydrologic investigation since in the preceeding paragraph it was stated that there is a lack of information available needed to assess the quantity, quality, and reliability of ground water supply. This lack of information is repeatedly mentioned throughout the EIR as a justification for speculation.

RE: Page 10,

#79 The proposed project should be defined as how are we going to find water for these 58 potential households. The way that it is written is not addressing this problem but looking only at one particular method in detail and by the way, there are three other alternatives. AND totally ignoring the health and safety issues for which 1600 existing

households are at risk because of inadequate water supply.

RE: Page 10, Par. 2

#80 A random distribution of wells spread throughout the community - when the EIR states in numerous places that 3 of the 6 acquifirs (Upper Seal Cove, Upper Moss Beach and Montara Heights) are not worth developing because they are unreliable sources of water.

RE: Page 12, Par. 1

#81 The drilling of wells can indeed be expected to endanger safe yields especially in Upper Seal Coive, Upper Moss Beach and Montara Heights.

Why isn't water available from the present water system (CUCC). Is it because CUCC has chosen not to develop new water sources. Could more water resources be developed for the community if a comprehensive groundwater study were done?

RE: Page 13, Par.2

#82 In terms of the "harm to the enviromment" issue, since the PUC has determined that there is a current shortage of 25% in the water supply for Montara and Moss Beach and that on certain days there is not enough water pressure in the system to fight a fire; how are additional demands on an already dangerous situation not considered as harm to the environment?

RE: Page 15, 4.3.1

#83 Why wasn't the water monitoring program done. It is 7 years over due. When will it be done?

The lack of such data is again referred to as an excuse for using guesses instead of accurate information that would be available should an actual monitoring program be done.

A groundwater study needs to be completed before residents rely on individual wells as their water source.

RE: Page 16

#84 Due to past community experience in Portola Estates where houses were built and subsequently wells went dry, are safe yields to be determined when the sell is dug, or after it has been monitored for a period of time to include dry seasons?

RE: Page 19 LCP 10.4

#85 The reason that new connections to the water systems are unavailable is that there is not sufficient water for the current users. Additional individual wells would only add to the problem, and would not be a viable source of water in

this situation.

RE: Page 20, 10.10

#86 There is a threat to public Health Safety and Welfare and therefore these 58 wells should not be allowed according to LCP 10:10

RE: Page 21, 10.20 a

#87 Some of the proposed 58 wells are near water courses as described later in the EIR.

RE: Page 22, 10.18 a

#88 This is what needs to be done before any more water is taken from the acquifir.

The general plan does more than juist encourage development of water supplies, it encourages studies to learn more about what supplies are available before they are developed.

RE: Page 30, Par. 1

#89 Why does Citizens Utilities have to wait for a study to determine the impact of the proposed groundwater removal when these 58 wells do not?

#90 Adding fire flow requirements to a system that already has inadequate fire flow would increase the risk to the new homeowners as well as the rest of the community.

RE: Page 61, Par. 5

#91 Infiltration from roadside ditches is not a reliable source of recharge as someday these may be paved and stormdrains built.

RE: Page 72, Par. 4

#92 If there were additional individual wells in Wagner Valley it would negatively impact wells already in that acquifir supplying the community especially during dry years.

RE: Page 73, Par 1

#93 Again, author of EIR cites the need for additional hydrologic data.

Yet another need for additional hydrologic data before direction of flow over the course of a year can be determined.

RE: Page 81

#94 Because existing wells are not evenly distributed

throughout the area, no firm conclusions can be drqwn regarding water quality.

Based on existing wells, approximately one-third of the 58 wells will also exceed the drinking water standard for iron and/or manganese and probably require treatment. Once again, author cites insufficient information.

RE: Page 84, Par. 2

#95 In 1977 drought, ground water hydrograph got within 7 feet of sea level. With increase pumping we have today it could well go below sea level making salt water intrusion a possibility (see pg. 142, fig. 12).

RE: Page 85

#96 There is no discussion of coliform.

RE: Page 86, Par 1

#97 Fuel and Chemical solvents in the ground is more of a concern with individual wells as there is a much higher probability of affecting one of these many wells as opposed to one of a very few.

RE: Page 109, Par 1

#98 Since the use of septic systems is now prohibited why would this be a valid scenario?

RE: Page 115, Par. 5

#99 On what do they base the statement that effects on water supply from existing community wells are expected to be insignificant. Common sense says that there would be an affect in terms of Fire, Drought, and taking water from the same acquifir. Adding new fireflow requirements to a system that already cannot meet fireflow requirements would increase the risk to the existing 1600 households as well as the 58 new homes.

RE: Page 116, Par 2

#100 If there is a fire these 58 wells will be looking to the fire hydrant - not there well - and this would be an additional demand on the fire flow levels, which is already inadequate.

RE: Page 117, 6.3.1

#101 The 17.4 acre feet per year should first go towards alleviating the shortfall faced by the existing 1600 households. This 17.4 acre feet is equal to 11% of the estimated total annual groundwater outflow in a critical

year. The 270 gallons per day/unit water usage is probably low due to continued water use restrictions in the area.

RE: Page 118

#102 These three acquifirs should not be relied upon for groundwater for domestic use. Would tap into water storage in dry and critically dry years.

RE: Page 126 7.1.2

#103 By serving new homeowners through the existing hydrant system the entire community of 1600 households is placed at risk.

RE: Page 127, Par 2

#104 Water usage at 270 gallons per day in Montara and Moss Beach reflects a 20% reduction in usage already having taken place.

We strongly agree that no septic systems should be allowed.

#105 Since existing public services are inadequate it would not make sense to allow wells in Montara Heights, Upper Moss Beach and Upper Seal Cove.

RE: Page 128

#106 A successful program would require some Public leadership and funding.

RE: Page 133-136

#107 This Chapter 8 should have been discussed in as much detail as the other alternative of drilling 58 individual wells. All three alternatives, in combination would make the most sense. They are far more prudent than the individual wells approach. Allowing individual wells sets a poor precedent which may be difficult to overcome.

RE: Page 138

#108 It would be irresponsible to let this project proceed without effective monitoring as well as other measures. The amount of water available for use as well as the best areas to develop need to be found before any more individual domestic wells are fdrilled. Other viable alternatives for obtaining this data, such as a complete hydrologic study should be considered.

On site waste disposal systems intrinsically cause possible serious unavoidable impacts to the ground water.

RE: Page 139 9.6

#105 This statement contradicts precious discussions relating to Montara Heights, Upper Moss Beach and Upper Seal Cove sub units.

RE: Page 140, Par. 1

#106 Once again, EIR states need for more data on water quantity and quality.

RE: Page 143, Par 1

Any measurements should be a part of a groundwater hydrologic study.

2 RESPONSES TO GENERAL COMMENTS

The following paragraphs present responses to general issues raised in several of the comments received on the Draft EIR.

1. WHAT HAPPENS IF THE HOMES RUN OUT OF WATER?

Individuals participating in the lottery are aware that connection to the CUCC system will not be possible in the near future. Should they decide to drill a well, they assume the risks associated with this type of supply, as they would if a community system did not exist.

The EIR suggests means by which individual owners may minimize their risk. Among these are drilling and/or testing wells during the driest time of the year (August through the first hard rains), testing to the standards of the San Mateo County well ordinance, careful monitoring of yields and water levels during summer and during dry years, and siting and designing their homes for maximum water conservation. Owners are also encouraged to construct wells appropriate to their individual hydrogeologic settings, including providing adequate depth and flexibility in pumping levels. Individual owners may obtain assistance from their contractor, water-well contractor, or from licensed hydrogeologic professionals familiar with the area, should they wish additional expertise or assurance.

Individuals who drill wells should advise subsequent owners of their water-supply source as part of the seller's disclosures; if such information is not sufficient, the new owners may have recourse and are afforded a measure of protection against the sale of a home known to have a limited water supply.

It should be noted that complete well failures can happen, but are rare in areas having sufficient storage and recharge. If yields decline, owners supplied by wells can ration their own water, and purchase drinking water if needed. They may also refurbish wells and pumps, or deepen the well(s), following any needed County approval.

2. ARE THE WELLS TO BE PERMANENT, OR WILL THEY BE ABANDONED AFTER WATER BECOMES AVAILABLE THROUGH THE COMMUNITY SYSTEM?

The future of the wells should be consistent with public policy at the time that a community supply becomes available. At present, the Local Coastal Program (Policy 10-10) calls for connection to a community supply whenever possible. Assuming this policy remains in effect when a source of community water supply is offered to owners, the wells would become:

a) a source of irrigation for landscaping, or
b) part of the County's monitoring system in the area, or
c) abandoned per terms of the County's Well Ordinance.

3. IS THE PROJECT BEING EVALUATED THE ENTIRE QUESTION OF ADDITIONAL WATER SUPPLY FOR THE AREA, OR IS IT THE WATER WELLS?

In issuing permits which are widely dispersed and are unrelated to potential supplemental supplies of ground water, Montara Sanitary District allocated the right to connect to its sewers in a manner which calls for a dispersed, site-specific approach to water supply, if connections are to be utilized during the next several years. The process of locating, completing, proving, permitting, and connecting new sources of community water supply seems to require a minimum of two years in the Mid-Coastside; additional requirements, such as lifting the moratorium currently affecting the community distribution system, will likely lengthen the time required to provide water from any centralized source. The proposed project may be envisioned as a means of providing water for the lots granted connections to the sewer until such time as a community source is available. Assuming that the Local Coastal Program policies calling for connection to community systems are still in effect, such connections would be required once available.

It is important, too, to recognize that the use of individual wells is reasonably the environmentally-preferred alternative for supplying this number of homes, so long as individual owners are prepared to bear associated risks. Alternatives chosen for analysis have different impacts, of perhaps roughly-comparable magnitude, although the comparison is one of "apples and oranges". The alternatives considered are ones

which can be effectively implemented at a later date, once the moratorium on new water connections has been removed by the PUC, if so indicated by contemporary wisdom and policies, and if a supplemental community source is available.

4. SHOULD ALL SEPTIC SYSTEMS BE LOCATED AS PART OF THIS ASSESSMENT?

The County's Well Ordinance places the responsibility for locating a well upon its owner. Currently, the County requires that the owner establish that a well is situated at least 100 feet from the nearest septic pit, or septic system leachfield. The owner is therefore obligated to conduct a search at a much greater level of detail than can be addressed in a regional EIR, and cannot be relieved of this responsibility.

As a means of assisting readers assess the relative compatibility of the proposed project with the locations of known septic systems, Leonard Chew of the Division of Environmental Health has compiled a map of the onsite systems which are presently under County permit. This map is made part of the Final EIR as Appendix D.

5. WHY ALLOW ANY WELLS IN WATER-SHORT AREAS, SUCH AS UPPER SEAL COVE, MONTARA TERRACE, AND UPPER MOSS BEACH?

Both storage and recharge of ground water in the two latter areas, while not very large, appear sufficient to reasonably allow individuals to explore for water -- with the understanding that the chances for success are lower than in more favorable hydrogeologic settings elsewhere on the Coastside. In these two areas, the withdrawals from wells may be offset whole or part by induced inflow from adjoining areas.

Recharge and storage in Upper Seal Cove are both significantly lower than in the other sub-units of Montara and Moss Beach. The likelihood of obtaining and sustaining adequate supplies of consistent water of suitable quality is low. Because the subunit is elevated above surrounding areas, inflow is limited to percolation from seasonal rainfall. It is unlikely that the demand posed by all proposed wells in

this subunit can be met without environmental impacts upon the individual owners, other community members, and habitat values in the pond area immediately to the east.

As a result, the County may wish to require more extensive well tests, including 24-hour (sedimentary) or 72-hour (granitic) well tests, monitoring of adjacent wells, and/or hydrologic analysis by a registered professional prior to final approval of a well.

6. WHAT ABOUT FIRE FLOWS?

As noted in the EIR, the study area is served by the Point Montara Fire Protection District, and the water system in the Moss Beach area is subject to inadequate fire flow levels due to inadequate sustained pressure in the water system currently provided by Citizens Utilities Company of California. If the proposed development on the 58 to 64 lots were to connect to the current water system for domestic supply, it would further reduce the flows and would have a significant impact on the District's ability to fight fires. This is not the case, and the proposed development of 58 to 64 residences would not adversely affect fire flows for the following reasons (R. Loeffler, Chief, PMFPD):

1. The development would not connect to the existing water supply system. Instead it would be served by private wells.
2. The rate of flow that is currently provided would serve the proposed development which is primarily single family residential and constitutes infilling in the already developed area. If the development were primarily commercial or of a higher density, a higher fire flow would be required.
3. Any necessary extension of the hydrant network to serve this development would not affect the fire flow. Major extensions are not anticipated because the development is infilling an area already served by the hydrant system. In addition, the developer has the option of installing a 10,000 gallon water tank for fire protection rather than paying for an extension of the hydrant system. One of these options is required under FPD Ordinance if a building is 900 feet or more from the nearest hydrant.

4. The addition of 58 to 64 new homes built to code would not significantly increase the risk of fire or affect the FPD's ability to fight a fire unless several homes caught fire simultaneously. This is an unlikely event due to the distance between structures in the District's service area.

In addition, the EIR determined that the pumping of the new wells would not adversely affect the current water supply provided by Citizens Utilities, either by compromising the amount or the water quality.

As noted in the Draft EIR (page 116), no financial impact or increase of firefighters due to the project is anticipated, and no fees are assessed by the district on new development.

As noted in the EIR (page 115), Citizens provides the water to the fire hydrants and the service is provided free of charge to all buildings with in the service area. No charge is levied on well users for using Citizens-supplied fire hydrant water for fire suppression. Citizens would be allowed by the PUC to charge for fire flow provided to non-customers, and could do so if it found that supplying the fire flow to non-customers to be a burden. Any new hydrants which might be required by development would be paid for by the developer, as noted above. A new hydrant would not be subject to the PUC moratorium on Citizens because it does not constitute a new connection.

7. IS A HYDROLOGIC STUDY NEEDED BEFORE ALLOWING WELLS TO BE DRILLED?

Available information suggests that sufficient water is stored in the ground and recharged within most sub-units, such that properly-constructed wells may be sustained without significant impact to regional- or community-scale resources, provided that the withdrawals envisioned in the Draft EIR (up to 60 domestic wells) are not substantially exceeded. Cautions regarding Upper Seal Cove, and perhaps other areas, should be noted.

Montara and Moss Beach are distinct from other Mid-Coastside areas in that the hydrogeologic setting is much more varied than in areas having large, continuous

terrace aquifers. This setting underscores two important concepts for evaluating the need for a 'hydrologic study':

a. Sufficient data to develop an area-specific study beyond that described in the Draft EIR are not known to be available.

b. The information which can be developed during construction and operation of the proposed wells is the type of information which is needed; if sustained with an ongoing monitoring program, data obtained from these wells can provide the longer record of aquifer response to droughts, storms, and pumpage which is needed to better assess the regional resource.

c. Request that the operator of the local water system participate with community-wide monitoring programs by providing bi-monthly or quarterly water-level measurements for all wells.

8. WHAT MEASURES ARE NEEDED TO ADDRESS QUESTIONS REGARDING THE SAN FRANCISCO GARTER SNAKE?

San Francisco garter snakes have been reported from the old irrigation ponds just west of Half Moon Bay airport (Figure 11). Nine parcels that are part of this project were identified as potential upland habitat for snakes that may live in the ponds (see Specific Parcel Inventory). Dr. Sam McGinnis has recently (July, August, 1989) reviewed these sites and the nearby ponds, where this snake species has been identified in the past. His inventory findings and recommendations for parcel-by-parcel surveys are summarized in Appendix C to this Final EIR. This summary also gives technical and seasonal requirements for site-specific snake surveys.

San Mateo County will require site-specific surveys for the snake as part of the development permit process. Development-related impacts identified during the parcel surveys would be discussed with USFWS and CDFG, and appropriate mitigation measures would be coordinated with these agencies as well. Further information on San Francisco garter snake survey is presented following Comment #9.

9. HOW ARE OTHER MEASURES RECOMMENDED FOR BIOLOGICAL RESOURCE PROTECTION TO BE IMPLEMENTED

Several comments indicated that readers were unsure as to how specific project impacts were to be identified and how appropriate mitigation measures were to be implemented. This EIR identifies general impacts that can be expected to occur, and designates specific areas where more precise evaluation of resources and impacts is necessary. On designated parcels (see Specific Parcel Inventory, Appendix A, individual parcel owners are responsible for sponsoring surveys by qualified experts to evaluate certain sensitive resources and project-related impacts, and identify appropriate mitigation measures that might be possible. This table should be referred to during the project approval process.

Sensitive resources that may be adversely affected by development of individual residences as part of this project include the following: San Francisco garter snake, San Francisco gumplant; Hickman's cinquefoil; California strawberry; riparian habitat; freshwater wetland; and monarch butterflies. As discussed in the EIR, these resources differ as to degree of legal protection, and each has distinct survey requirements for evaluating site-specific conditions. For convenience, these survey requirements and mitigation recommendations are summarized in Appendix E.

10. WILL INDIVIDUAL WELLS INTERFERE WITH COMMUNITY WATER-SUPPLY WELLS?

It is unlikely that the few domestic wells which may mutually affect community wells will significantly diminish available yields. The total anticipated annual yield of the 58 wells is about 17 acre feet, of which less than 10 percent may come from areas of overlapping drawdown with community wells. By contrast, the community wells draw about 383 acre feet per year.

Citizens Utilities has considerable flexibility in operating its wells. Until the purveyor can establish the area from which each of its wells draw, it will be difficult to convince individual owners to forego their rights to develop a well.

11. AREN'T THE PROJECT ALTERNATIVES ENVIRONMENTALLY PREFERABLE TO THE PROPOSED PROJECT?

Three alternatives to the proposed project were considered in Chapter 8 of the Draft EIR: no action or deferred development, supplemental community wells, and intensive watershed management ("water harvesting"). Effects of the two action alternatives, and those of the proposed project, are all limited in degree, but are different in kind. Community wells, for example, will have larger effects on a smaller area; the water-harvesting alternative calls for more intensive management and commitment of land to water conservation and development, as least in part. So long as the project is limited to providing ground water to 60 homes, the environmental effects of all alternatives (including the proposed project) are very limited.

It might also be emphasized that implementing the proposed project does not preclude a transition to one of the other action alternatives at a later date, if adverse effects are in fact observed or if water-management policies are subsequently revised. Quite possibly, the most favorable scenario, environmentally, may be a sequential progressing from the dispersed individual wells to one of the other action alternatives. As it is presently unclear when additional community supplies will become available, from where they will be drawn, and which entity will be the purveyor, this sequence cannot meaningfully be assessed separately.

3 RESPONSES TO SPECIFIC COMMENTS

The following section contains responses to specific comments made in the letters, reports, and memoranda presented in Section 1 of this Final EIR. In each case, the comment is quoted or paraphrased and the response is indicated below. Each article is numbered to correspond to the specific comment in the original document.

1. California Department of Water Resources, Memorandum, April 12, 1989, second paragraph

COMMENT: In conjunction with the well monitoring, the EIR should discuss mitigation measures to be taken if monitoring data indicate adverse effects are occurring due to ground water pumping.

RESPONSE: Based on the analysis presented in the EIR, adverse effects are not expected from the pumpage anticipated for this project. However, in the event that adverse effects are noted during the recommended monitoring of ground water levels, ground water quality, and sensitive biological resources, and these effects are directly traceable to the use of a well, the County could also require the following mitigative measure:

"If adverse effects of well pumpage are detected during monitoring of ground water levels, ground water quality or sensitive biological resources, the County should require either reduced usage or a halt to use of well(s) determined to be causing the effect(s) in order to reduce the effect(s) to non-significant. If public water supply is not available for the well user(s) to connect to, the user(s) would be required to depend on imported water for domestic needs or take other steps described in Response to General Comments number 1.

2. California Department of Fish and Game, Memorandum, May 2, 1989, second paragraph

COMMENT: Incomplete evaluation of impacts and recommended mitigations based on lack of data does not meet CEQA requirements.

RESPONSE: This EIR identifies general impacts associated with residential development in various habitat types within the study area. Site-specific surveys are the responsibility of the individual landowners. A Specific Parcel Inventory, accompanying this report, presents the findings of the field work and identifies individual lots where potential development impacts may occur. In response to this comment, this table has been revised to indicate more clearly all survey work that will be the responsibility of the individual landowners. Specifications for survey work to be done by the landowner, prior to development at each of these parcels, are given in the Responses to General Comments section. These surveys will permit identification of impacts and appropriate mitigation measures in accordance with CEQA.

While other streams along the San Mateo County coast have been surveyed for aquatic resources by CDFG, no such survey has been done for any of the streams in the project area, and there are no data on aquatic biota in these watercourses. However, the projected impact of this project on ground water storage and streamflow is expected to be not significant to the local streams (see Section 6.3, Hydrological Impacts) and consequently is assumed to have no significant impacts on stream biota. Similarly, incremental stream turbidity is expected to be minimal, as use of recommended erosion and runoff control measures would reduce sedimentation and discharge into streams to non-significant levels (see Sections 6.5 and 7.2.4).

Some general impacts for which there is no practical mitigation were identified: introduction of domestic animals in a residential area; and increased human activity and disturbance in a residential area. There is no practical mitigation for offsetting the unavoidable disturbance that accompanies residential development. In addition, while these general impacts are cumulative in overall effect, they are not significant at the scale of this project, and because it involves infill of existing residential areas.

3. California Department of Fish and Game, Memorandum, May 2, 1989, third paragraph

COMMENT: The status of the San Francisco garter snake must be assessed.

RESPONSE: Individual lots where residential development and installation of a well may affect the snake are identified in the Specific Parcel Inventory. Site-specific surveys of designated parcels and necessary mitigation measures based on survey findings will be required by San Mateo County Planning and Development Division as part of the development permit process. Additional information that is pertinent to this comment is in the preceding section (Response to General Comments, Number 8).

4. California Department of Health Services, Memorandum, April 24, 1989, first paragraph

COMMENT: The wells may encounter two failure possibilities. . . First is possible that well production may . . . diminish significantly . . .(and) no longer supply the needed water. Second, it is possible that the water quality of the wells may . . . deteriorate to the extent that the wells cease to be viable sources of domestic water."

". . . The above possibilities should be addressed and their impact be mitigated"

RESPONSE: As connection to the community supply is currently infeasible, each owner must consider the possibility of diminishing yield. Many potential responses to this possibility for individual wells are presented in General Response Number 1.

We understand, however, that DOHS has a mandate to address larger public water-supply concern meriting specific attention. We note that the irregular and heterogeneous nature of the ground water system makes it exceedingly unlikely that many wells could cease producing at the same time -- as might be the case in other geologic settings. Additionally, the wells are dispersed. Hence, the lack of water at any one home is best addressed at that level (rationing, deepening the well, importing water, adding wells, etc.).

5. Citizens Utilities Company of California, Letter, May 12, 1989, third paragraph

COMMENT: ". . . we can not imagine ground water production facilities within the Montara Terrace, Montara Heights, and Upper Seal Cove areas being very successful."

RESPONSE: The analysis in the EIR supports the viewpoint that sufficient water supply and recharge are available in most of the area to allow the use of domestic wells, where suitably located and appropriately constructed. We concur that 'groundwater production facilities', such as those used by Citizens, may not be appropriate or environmentally sound in many parts of Montara and Moss Beach. Use of domestic wells is in many ways a more appropriate technology for water-resource development in the three areas named, although such wells may not always be successful.

6. Citizens Utilities Company of California, Letter, May 12, 1989, fourth paragraph

COMMENT: ". . . Estimated costs of domestic water well installation costs range from $11,000 to $20,000 . . . this represents a significant impact on homeowners and an unacceptable irreversible commitment of resources, should these wells fail to produce."

RESPONSE: While the costs cited by Citizens for completed domestic wells are substantially higher than those typically incurred in the area, and while only a borehole -- not a completed well -- may be needed for exploration, the possibility of not finding developable quantities of ground water should be carefully considered by each owner prior to commencing development.

7. Citizens Utilities Company of California, Letter, May 12, 1989, fifth paragraph

COMMENT: CUCC agrees with statements contained within the EIR that the smaller dispersed domestic wells should have a minimal impact on base flow on CUCC's existing facilities. However, due to the transmissivity of the aquifers, CUCC's existing facilities may have an adverse impact on proposed well sites. The zones of influence of our existing facilities may extend out thousands of feet and will drop water levels during pumping. This may render some areas, which would otherwise be hydrogeologically acceptable, useless to individual well users."

RESPONSE: While some interference effects would be expected for domestic wells located in close proximity to CUCC production wells, these effects are not considered to be of a magnitude sufficient to render useless potential well sites to individual users. In fact, some of the existing data used in preparation of the EIR is contained in a report prepared for Citizens Utilities (Evaluation of Ground Water Development Potential, Montara Water Service Area, by Luhdorff & Scalmanini, 1982) which states with regard to the Wagner Valley area . . . "A positive benefit associated with local values of transmissivity, (such as those estimated for the granitic aquifer), is the ability of such aquifers to support multiple wells on relatively-close spacing without the occurrence of significant mutual interference during pumping." The report goes on to provide estimates of interference

drawdown of 5.5 feet and 1.5 feet at a distance of 500 and 1,000 feet, respectively, from the production wells. These are considered to be hydrologically reasonable estimates of expected well interference patterns, and should not result in significant adverse effects on individual well owners.

In addition, as CUCC currently pumps nearly continuously from the Wagner Valley well field, any associated interference patterns will be in effect at the time of well drilling, especially if the domestic wells are drilled during the late dry season. As such, potential effects should be observable and taken into account at the time of well construction. Therefore, unexpected effects having an adverse impact after well completion are much less likely.

8. Citizens Utilities Company of California, Letter, May 12, 1989, sixth paragraph

COMMENT: "CUCC strongly objects to the use of on-site septic systems within the Montara/Moss Beach areas. . ."

RESPONSE: Comment noted. It is consistent with the findings of the EIR.

9. Citizens Utilities Company of California, Letter, May 12, 1989, seventh paragraph

COMMENT: Section 5.1.2.2 - Water District, contains several errors which should be corrected. PUC Decision Number88-09-23 dated September 14, 1988 contained the following findings of fact:

1. The productive capacity of CUCC's water sources is 383 gpm.

2. The Montara System required 465 gpm of productive capacity to meet the demand of current customers . . . the demand of individual lot owners who have applied or will apply for service and the demand of the Farallone Vista Housing Development . . . requires at least 550 gpm of productive capacity.

CUCC has three wells in the Airport Plain aquifer; none actually located within the Pillar Point Marsh. The Airport Plain aquifer feeds into the Pillar Point Marsh. In accordance with LCP Sections 2.32, 2.33 and 7.20, CUCC has retained consultants to perform a hydrogeologic study to determine the safe yield of the aquifers feeding the marsh. Should the results of the study be in CUCC's favor, CUCC will be permitted to drill an additional well in the Airport plain. (Niederberger, Citizens Utilities Company of California).

RESPONSE: Comment noted. Section 5.1.2.2 on pages 28-30 is revised to read: "Water service to the communities of Montara and Moss Beach is provided by Citizens Utility Company of California (Figure 4). A moratorium on new water connections to Citizens has been imposed by the Public Utilities Commission (PUC). The PUC Decision No. 88-09-23 (9/14/88), contained the following findings of fact:

1. The productive capacity of Citizens' water sources is 383 gpm.

2. The current demand on the Montara System is 465 gpm.

3. Anticipated growth on individual lots and in Farallone Vista will increase the demand to at least 550 gpm of productive capacity.

Citizens' existing sources of water are seven wells and a surface diversion at Montara Creek. Citizens has three wells in the Airport plain aquifer. In accordance with LCP sections 2.32, 2.33 and 7.20, Citizens has undertaken a hydrogeologic study to determine the safe yield of aquifers feeding the Pillar Point marsh, including the Airport plain aquifer. If the results support the utility's position, Citizens may be allowed to drill an additional well in the Airport plain. This would increase Citizens' service capacity."

10. Citizens Utilities Company of California, Letter, May 12, 1989, eighth paragraph

COMMENT: "Currently, CUCC's existing sources of water are eight (not seven wells and a surface diversion at Montara Creek."

RESPONSE: The last line in the paragraph should read "Existing sources of water are eight wells and a surface diversion at Montara Creek". Five wells are located in the Wagner Valley area and three wells are located in the Airport Plain near Half Moon Bay Airport.

11. Montara Sanitary District, Letter, May 14, 1989, comment 1

COMMENT: As a general statement, the project is not adequately defined to determine the scope of the project. The summary and overview as well as title of the document is misleading in that it only refers to water wells. Commencing on page 10, there is discussion of septic systems and later in the document, assumptions are made that 58 parcels will be developed with water wells and the 157 on the waiting list for sewer permits maintained by the Sanitary District will drill water wells and sanitary facilities will be by septic systems until the sewer plant is expanded. For the stated reasons, the project lacks specificity.

RESPONSE: In addition to clarifications presented elsewhere, it should be noted that discussion of additional septic systems is entirely within the context of assessing their effects upon the proposed wells, or cumulatively, upon others. The project is adequately defined.

Commentor incorrectly interprets the EIR to indicate that 157 septic systems would result from this project. In response to a request by the County Board of Supervisors, the EIR discusses the possibility that wait-listed parcels would apply for septic system permits. In the discussion the EIR defines the significant constraints to septic system disposal on the Mid-coastside. As a result of the analysis presented on pages 111-113, a total of six of the 159 parcels entered into the lottery are of adequate size to potentially accommodate a septic system, even though such septic systems may never be allowed due to physical constraints (soils, leachfield) or policy constraints imposed by the LCP. It should also be noted that the EIR recommends against the use of septic systems (pages 119-120 and 127).

12. Montara Sanitary District, Letter, May 14, 1989, comment 2

COMMENT: Also, as a general statement, the summary, the introduction, the project description, and the conformance with policies, plans and regulations is replete with assumptions, estimates, presumptions, suggestions and conceptions. A determination based upon assumptions, estimates, presumptions, suggestions and conceptions of an adequate water supply or lack of adequate water in order to authorize the drilling of 58 to 200 water wells in a community plagued with an inadequate supply for domestic and fire protection purposes is irresponsible and lacks specificity as required by the California Environmental Quality Act.

RESPONSE: Comments of this type cannot help but dilute the value of several constructive suggestions offered in the MSD letter. The project would entail drilling a maximum of 64 wells, including those for 58 lots which would connect to the sewer system and 6 lots which could potentially accommodate a septic system. Please also see the Responses to General Comments, Numbers 4 and 6, regarding septic systems and fire flows.

13. Montara Sanitary District, Letter, may 14, 1989, third comment

COMMENT: Throughout the EIR the terms 58 parcels, 58 permits, and 58 connections are used interchangeably. While the number of parcels is 58, the number of permits and connections is 60.

RESPONSE: The Montara Sanitary District issued 58 sewer connections in the recent lottery (Sharon Wilson, District Manager, Montara Sanitary District, personal communication, 7/5/89). It is assumed in the EIR that one connection would be allowed per parcel and that the 58 connections would translate into the development of a maximum 58 lots. The EIR also assesses the impacts of the maximum development of 64 lots (58 sewered, 6 septic), which is not appreciably different. It is possible that not all of the parcels will be developed for one reason or another, but the EIR assesses the impacts of the "worst-case" scenario under which all of the lots are developed.

14. Montara Sanitary District, Letter My 14, 1989, comment 4

COMMENT: Table 1, page 2: Suggested Mitigation (3) Required hookup to community supply for Upper Seal Cove Sub-Unit. Is the mitigation suggested in lieu of allowing wells to be drilled or in the event of well failure? Given the current moratorium on new water connections to the community supply, this mitigation in the event of well failure would exacerbate the situation.

RESPONSE: Community supply of water, when and if available, is the environmentally preferable means of providing water for the Upper Seal Cove subunit.

15. Montara Sanitary District, Letter, may 14, 1989, comment 5

COMMENT: On page 5, 1st full paragraph, the statement that the proposed project has a limited effect on the hydrologic balance in the area is a conclusion without foundation or facts.

RESPONSE: This statement, included in the summary chapter, is fully substantiated in the body of the report.

16. Montara Sanitary District, Letter, May 14, 1989, comment 6

COMMENT: Page 5, line 11: "By spreading impacts and diversifying sources of ground water, the proposed wells represent a new and positive approach to groundwater development." No consideration has been given to the issue of whether those who may be allowed to drill individual wells will be required to connect to the community water system when sufficient new supplies become available. Such consideration was given in a letter dated July 27, 1988 from Paul M. Koenig, Director of Environmental Management, to the Board of Supervisors.

RESPONSE: Continued use of wells would not be the preferred method of water supply in the Mid-Coast area once a reliable community supply became available. See Responses to General Comments, Number 2.

17. Montara Sanitary District, Letter, May 14, 1989, comment 7

COMMENT: On page 5, 2nd full paragraph, the statement that the project is less environmentally stressful than continuing withdrawing from Wagner Valley is a conclusion without foundation or facts.

RESPONSE: This statement in the summary chapter, is fully substantiated in the body of the report. See also response to comment 75.

18. Montara Sanitary District, Letter, May 14, 1989, comment 8

COMMENT: Table 2, pages 6, 7 and Table 5, page 52: Table 2 shows the same Dry Year and Critically-Dry Year Storage as Normal Year Storage for the Montara Heights and Upper Moss Beach Sub-Units. Yet Table 5 has more conservative estimates of the Dry Year and Critically-Dry Year Storage for these areas. The more conservative values should be used in Table 2 as well.

RESPONSE: See response to Comment 76.

19. Montara Sanitary District, Letter, May 14, 1989, comment 9

COMMENT: Page 8, line 9: "The information needed to assess the quantity, quality, and reliability of ground water supply is not available, as the community has not needed to know about ground water conditions in the past." This statement is not only untrue, it lacks sensitivity to the critical situation with our community water system. On page 15, the need for such information is reflected in LCP policy 1.25 which is "still awaiting full implementation". In fact, if the proposed project does not yield valid hydrologic data, it would not be in conformance with this policy.

RESPONSE: Comment noted. While we agree that additional information on the levels, yields, and quality of ground water in the area will be beneficial to the community in addressing evolving needs, it should be noted that Policy 1.25 addresses rural watersheds and is not relevant to development of individual water wells in Mid-Coast area.

20. Montara Sanitary District, Letter, May 14, 1989, comment 10

COMMENT: On page 9, the last sentence under 2.3 is erroneous.

RESPONSE: The last sentence on page 9 reads, "Significant assistance was also provided by the staff of the County's Environmental Health Division". Perhaps the writers refer to another statement, as their willingness and ability to assist in such matters can hardly be questioned by anyone who has worked with the Environmental Health Staff.

21. Montara Sanitary District, Letter, May 14, 1989, comment 11

COMMENT: On page 10, 3rd paragraph, the statement that the current County policy is to prohibit onsite waste disposal systems in urban areas is not correct and in fact the County encourages such onsite waste disposal systems.

RESPONSE: Use of onsite waste disposal systems in urban areas is rare, and occurs only where so allowed by law. The County does not encourage such use.

22. Montara Sanitary District, Letter, May 14, 1989, Comment 13

COMMENT: On page 12, 2nd full paragraph, last sentence needs elaboration and identification in order to comment adequately.

RESPONSE: Parcels with sensitive resources that might be affected by development and that will require landowner-initiated surveys are identified in the Specific Parcel Inventory, appended to the EIR. More detailed information that is pertinent to this comment is presented in the Responses to General Comments section, Comments # 8 and 9.

23. Montara Sanitary District, letter May 14, 1989, comments 14, 15 and 16

COMMENT: Page 15, the answer under 4.3.1 is conclusion without foundation or analysis.

Page 18, last paragraph under 4.3.4 is an assumption and lacks specificity, as does the answer under LCP Policy 10.4 on page 19.

The discussion at the top of page 22 is vague and ambiguous.

RESPONSE: The writers are welcome to disagree with the statement and interpretation of LCP policies. While the comments are not specific as to the nature of disagreement, any effects on the substantial findings of the EIR are questionable.

24. Montara Sanitary District, letter, May 14, 1989, comment 17

COMMENT: Pages 18-22, Section 4.4: "The policies in this section are labeled "LCP" policies while the section refers to "General Plan" policies.

RESPONSE: The 1986 General Plan, written after the LCP was adopted, subsumes and incorporates many LCP policies by name.

25. Montara Sanitary District, letter, May 12, 1989, comment 18

COMMENT: On page 22, answer to 4.4.3 finds conformity with exceptions noted. However, the exceptions do not appear to be noted and therefore, cannot be considered or commented upon.

RESPONSE: The exceptions are noted in both tables; as they are minor and not directly conflicting with LCP and General Plan policies, the exceptions may not have been noticed by the commentor.

26. Montara Sanitary District, letter, May 14, 1989, comment 19

COMMENT: Page 26, 5.12, roads, emergency services and fire protection should be included as listed services.

RESPONSE: Comment noted. Roads are addressed under Traffic and Circulation, pages 102-103 and 124-125. The second sentence on page 26 is revised to read, "Services required for development of these parcels include schools, police, fire and emergency services, water, sewer, and solid waste".

27. Montara Sanitary District, letter, May 14, 1989, comment 27

COMMENT: Page 28, what is the relevancy of the first three paragraphs?

RESPONSE: The first three paragraphs on page 28 are:

> "El Granada Elementary School is served by the Granada Sanitary District (GSD), and Hatch Elementary School is served by Half Moon Bay (HMB). Wastewater treatment capacity remains for both GSD and HMB which could possibly be used for expansion of El Granada or Hatch Schools or for serving a new school. Coastside County Water District (CCWD), which serves both of these schools, is operating under a moratorium on new connections. Expansion at existing connections may occur as long as water mains and connections are adequate for the increased flow. A new school would require a new water connection which would be subject to the moratorium.
>
> Cunha Intermediate School has a regular enrollment of 644 and a capacity of 725 students with its current program and services offered. The capacity could be increased through changes in the program and services offered including reduction of special education and use of floating teachers who use other teachers' rooms during the teacher's free period (M.E. Powell, pers. Comm.). The school is not considered to be near capacity.
>
> Half Moon Bay High School currently serves 973 students. Its capacity is greater than 1000 students. The high school could accommodate an even greater capacity with changes to services and programs now provided (C. Edwards, Pers. comm.)."

This discussion of the environmental setting relative to schools is relevant because the growth allowed by permitting the wells would potentially add students to these schools.

28. Montara Sanitary District, letter, May 14, 1989, comment 21

COMMENT: Page 30, 2nd paragraph states that Citizens Utility (sic) is planning to replace water lines and install an additional storage tank for fire flows. This statement should be verified as it does not appear to be true and assumptions made in this document upon an apparent untrue statement could be misleading and should be reconsidered.

RESPONSE: Our conversations with Mr. Herb Niederberger, Engineering Manager for Citizens Utilities Company of California, indicate that a master plan for replacement of water mains is outlined in CUCC's Master Water Plan. Funds were apparently budgeted for 1989 for replacement of the water main along California Street, and other areas requiring general maintenance. Mr. Neiderberger states that it is the policy of CUCC to replace lines as needed, or when major road improvements are planned.

The Point Montara Fire Protection District has required the installation of a 0.25 million gallon storage tank for fire-flow associated with the Farallone Vista development. In addition, the California Coastal Commission has required the construction of a 0.20 million gallon storage tank prior to allowing construction of a fourth well in the Airport Plan. A "hydrologic study" for the new well is being performed at present to assess potential effects upon Pillar Point Marsh and other nearby environmentally-sensitive areas.

29. Montara Sanitary District, letter, May 14, 1989, comment 22

COMMENT: Pages 30, 115-116: Fire Protection. "The water system in the Moss Beach area is subject to inadequate fire flow levels due to inadequate sustained pressure. Citizens Utilities Company, which supplies the water for the hydrants, is planning to replace part of the water lines and to install an additional storage tank which will help to increase the fire flow levels." Given the track record of Citizens, it is not prudent to assume that this will happen any time soon. "If Citizens found supplying the fire flow to non-customers to be a burden, they could charge for this service . . . Effects on water supply from the existing community wells are expected to be insignificant . . . Since the parcels proposed to be private wells rather than to the water district's service, the development would not directly interfere with fire flow levels provided by Citizens." Adding fire flow requirements to a system that already has inadequate fire flow would increase the potential demand and risk to the new homeowners as well as the rest of the community. Cost is certainly an issue, but safety is paramount.

RESPONSE: Please see the Response to General Comments, Number 6 and also Number 2.

30. Montara Sanitary District, letter, May 14, 1989, comment 23

COMMENT: Page 32, 5.1.2.5 is in error stating solid waste disposal is provided by Browning Ferris. Seacoast Disposal provides garbage service and some of the garbage is disposed of at Ox Mountain. (Wilson, Montara Sanitary District).

RESPONSE: The EIR is amended to read "Solid waste disposal in Montara and Moss Beach is provided by Seacoast Disposal. The landfill used by Seacoast Disposal is Ox Mountain Landfill located on Highway 92."

31. Montara Sanitary District, letter, May 14, 1989, comments 24, 25, and 26

COMMENT: "Page 51, 5.4.2.1 is an estimate based on theory."

RESPONSE: We have to this time been unable to receive clarification on the specific estimate or theory of concern in this comment. However, Section 5.4.2.1 contains a discussion of the Montara Terrace sub-unit that is primarily based on extrapolation of data from nearby similar hydrologic settings and reasonable applications of standard hydrogeologic equations.

COMMENT: "Page 53 does not adequately address well requirements in drought years."

RESPONSE: It is beyond the scope of this investigation to specify well construction requirements for any individual well. Specific well construction requirements should be evaluated at the time of drilling by the owner, by the contracting well driller, or by a registered geologist or engineer with appropriate ground water experience and familiarity with the local area. A suitably-constructed well should produce in both normal and dry years.

COMMENT: "Page 54 discussion lacks information and analysis in order to make the necessary findings."

RESPONSE: We have to this time been unable to receive clarification on the specific concern addressed in this comment. The comment has been noted.

32. Montara Sanitary District, letter, May 14, 1989, comments 27 and 28

COMMENT: Page 58 finds that there is no detailed analysis merited and then concludes by using the analysis. This appears to be contradictory. Regarding water balances, the accuracy of estimates are limited by available data and there apparently is no available data. This statement needs clarification.

Pages 57, 58: The limitations with respect to the use of water balances in general and specifically for the Montara and Moss Beach areas should be reason enough to question the prudence of proceeding with this project.

RESPONSE: The writers are apparently unfamiliar with the use of water balances in water-resource development, the mandated use of this approach in enforcement of federal wetland and endangered species regulations, and in water-rights determinations (such as those in Purisima Creek).

Perhaps the most helpful approach is to reason by analogy. Montara Sanitary District has used sewage loadings and other calculations akin to the water-budget components as the foundation for design and construction of major facilities, including the linkage to SAM. Subsequent refinement of these measurements led to the discovery of a small increment of capacity remaining to the District. The same process, applied to water budgeting, may be used to guide development of the water resources of the area; subsequent measurements and analysis can lead to refinements in water development in future years, but such measurements would be meaningless or would never come about without the water balances (or sewer-loading calculations) as an initial step.

33. Montara Sanitary District, letter, May 14, 1989, comments 33

COMMENT: Page 71, the discussion of aquifer outflows used old data

RESPONSE: Use of 1977 data for drought conditions is thought to be outdated by the commentors. The position of the project team is that we are extremely appreciative for this key information from the drought of record, and will consider the data current until a more severe drought occurs.

34. Montara Sanitary District, letter, May 14, 1989, comments 30 and 31

COMMENT: Page 72 states that the development of additional wells could affect dry year performance of existing wells. This statement needs further elaboration as such development of wells apparently could jeopardize the entire water supply of Montara and Moss Beach.

RESPONSE: Significant additional pumping such as by community wells from Wagner Valley "could affect dry year performance of existing (community) wells". The material presented on page 72 does not support the statement that this could jeopardize the entire water supply of Montara and Moss Beach.

COMMENT: Page 81, the health of individuals using water wells has not been considered nor the proximity of the proposed wells to septics and cess pools.

RESPONSE: The water quality section begins with a statement asserting the primacy of public-health considerations, underscoring the attention given to this set of issues.

The EIR specifies that siting of a well on a parcel must be in conformance with state and county standards designed to protect users from the effects of septic-system effluent. See also the Responses to General Comments, Number 4.

35. Montara Sanitary District, letter, May 14, 1989, comment 32

COMMENT: "Page 86, the effect of erosion on existing sewer lines has not been considered."

RESPONSE: Erosion processes in Montara/Moss Beach are typical of coastal terrace areas underlain by predominantly sandy soils. The effect of erosion on existing sewer lines is not considered to be more severe that potential impact to other service features such as roadways, sidewalks, etc. Mitigation of erosion impacts is best achieved by concerted erosion management practices.

36. Montara Sanitary District, letter, May 14, 1989, comment 33

COMMENT: Page 96, 5.6.3 uses old data and refers to personal conversations which are not a part of this document.

RESPONSE: Data used are the most current and accurate information available for the study area. Reports referenced include work done by CalTrans in conjunction with the Devil's Slide Bypass project and a December, 1988 CNDDB report developed specifically for this project. Following standard practice, information gathered through direct conversation or telephone interviews during the preparation of this report is presented or summarized in the text, and referenced to source.

37. Montara Sanitary District, letter, May 14, 1989, comment 34

COMMENT: Page 103, 5.7.1 is not a true statement. Traffic volume in the area during peak commute hours is very heavy with slow and no go traffic.

RESPONSE: State of California traffic counts show Cabrillo Highway carries 11,200 vehicles per day in the project area between Princeton and Moss Beach. Between Princeton and Half Moon Bay, Cabrillo Highway carries 19,500. The traffic on Cabrillo Highway in the Montara area generally flows freely. The side streets experience some congestion and delays entering or crossing Cabrillo Highway during the peak hours. On occasions, there could be delays and congestion. Generally, the majority of traffic flows freely.

38. Montara Sanitary District, letter, May 14, 1989, comment 35

COMMENT: Page 105, only five of the six intersections are listed.

RESPONSE: Etheldore Street should be added to the list shown on page 105 of the Draft EIR.

39. Montara Sanitary District, letter, May 14, 1989, comment 36

COMMENT: Page 107, the major building project of the San Mateo County Harbor District should be considered under cumulative projects.

RESPONSE: The majority of the traffic generated by expansion of the San Mateo County Harbor District facilities will be oriented south of the Princeton area. Most of the new employees and customers are expected to come from the Half Moon Bay/Route 92 area. A significant portion of the traffic is expected to come from the existing traffic stream. The net effect of any additional traffic from the Harbor District Project in Montara area would be to add incrementally to the delays experienced by side street traffic.

40. Montara Sanitary District, letter, May 14, 1989, comments 37 and 38

COMMENT: Page 109, includes an untrue statement of prohibition on waste systems and such untrue statement could affect the analysis of Section 6.

Page 109, line 5; "Since the use of such onsite systems is now prohibited . . ." Some septic systems have been permitted already and appear to be encouraged by the County as an alternative as a result of the lack of sewage treatment capacity."

RESPONSE: See Responses to General Comments Number 4, and Specific Comment 6. The Draft EIR discourages further use of onsite waste-disposal systems.

41. Montara Sanitary District, letter, May 14, 1989,, comment 37

COMMENT: Page 111, the Sanitary District has approved amendments to Ordinance No. 66, not a draft to the Ordinance.

RESPONSE: Comment noted. Page 111, first sentence of the first paragraph is revised to read, "Montara Sanitary District has approved amendments to Ordinance 66, Article III which would allow septic systems to be installed within the urban/rural boundary of the District dependent on several conditions being met." Page 111, first sentence of the second paragraph is revised to read, "These amendments would allow septic system use within the urban side of the District as a temporary measure subject to revocation at an undetermined time in the future."

42. Montara Sanitary District, letter, May 14, 1989, comment 40

COMMENT: Page 114 bases conclusions upon out-of-date information. 1.4 children is a low figure and should be reconsidered using current data. The last paragraph is misleading as there is no sewer capacity to permit expanded school facilities.

RESPONSE: The average number of school-aged children per dwelling unit varies depending on location, type, and size of dwelling unit. Since Cabrillo School District does not have these statistics for its District, the figure 1.4 school-aged children per dwelling unit was used to estimate the impact. We have contacted various other agencies in an attempt to update this figure, including the City of Half Moon Bay, the County Office of Education, the State Department of Education, and the Census Bureau. None of these agencies have information on average number of school-aged children per dwelling unit.

The use of a slightly different generation figure is not likely to significantly change the impact on the schools. Based on current school capacities, programs, and services offered, average school-aged children generation rates could increase to 6.6 school-aged children per dwelling unit, or 1.7 elementary-aged children per dwelling unit, before causing the schools to reach capacity. These figures are quite high and very unlikely to occur.

In order to expand, the schools would require amended water and sewer permits. Farallone View School is served by Citizens Utility Company and Montara Sanitary District. Citizens has a moratorium on new connections, but expansion at current connections may occur as long as existing water mains and connections are adequate for the increased flow. Montara Sanitary District has, with the most recent lottery, reached its allotted capacity and would not be able to serve the school expansion until the Sewer Authority MidCoastside (SAM) Treatment Plan is expanded.

43. Montara Sanitary District, letter, May 14, 1989, comment 41

COMMENT: page 115 does not analysis (sic) the effect of the proposed water wells on the existing supply of water including the effect on fire flows.

RESPONSE: Please see the Responses to General Comments, Number 6.

44. Montara Sanitary District, letter, May 14, 1989, comment 42

COMMENT: Page 116, 2nd paragraph contradicts pages 115, 134, and 138.

RESPONSE: Please see the Responses to General Comments, Number 6.

45. Montara Sanitary District, letter, May 14, 1989, comment 43

COMMENT: Page 117, the caution provided by the author needs clarification.

RESPONSE: The Draft EIR indicates that the additional ground water use in the Upper Seal Cove sub-unit may well result in exceeding the management criteria presented in the Draft EIR.

46. Montara Sanitary District, letter, May 14, 1989, comment 44

COMMENT: Page 118, last paragraph: "Upper Moss Beach and Montara Terrace are sub-units where safe yield during both normal and dry periods is likely to be approached, but not exceeded, and where ground water development may proceed with observation and caution". No contingency plans have been offered in the event that the proposed wells are unable to deliver water of sufficient quantity or quality. Connecting to the community water system should not be considered a viable contingency plan until the current water shortage is corrected. The references to Montara "Terrace" on this page should be to Montara "Heights.

RESPONSE: See Response to General Comments, Number 1. Contingency plans are the responsibility of the owners of the few homes in these two sub-areas which will be supplied from wells. The Draft EIR is revised to read "Upper Moss Bend and Montara Heights are sub-units where the safe yield during both normal and dry periods is likely to be approached, but not exceeded, and where ground water development may proceed with observation and caution."

47. Montara Sanitary District, letter, May 14, 1989, comment 45

COMMENT: Page 126. Fire Protection. "This would be accomplished either through extension of hydrant lines or installation of a 10,000 gallon water storage tank". As noted above, there are notable risks with serving new homeowners through the existing hydrant system.

RESPONSE: Please see the Responses to General Comment Number 6.

48. Montara Sanitary District, letter, May 14, 1989, comment 46

COMMENT: Page 127, 2nd paragraph refers to sewage duty of the Sanitation (sic) District. This statement needs clarification.

RESPONSE: The discussion in the first two paragraphs on page 127 refers to further reductions in the use of ground water as a mitigation for the potential impacts to the water supply. The measures mentioned would reduce current estimated water use of 90 gallons per person per day by 20 to 25 percent to about 70 gallons per person per day. It is noted that further reductions would be difficult to

sustain, particularly in light of the fact that the average dry weather flow of sewage from the Montara Sanitary District is 55 gallons per person per day. Since each person generates 55 gallons of wastewater per day, and not all of the water used enters the wastewater systems, a reduction of water use past 70 gallons per person per day seems unlikely.

49. Montara Sanitary District, letter, May 14, 1989, comment 47

COMMENT: Page 127: Reliability of Yield. "Wells constructed in these areas may go dry in areas of deficient recharge, and homes lacking water in dry periods are likely to require supplemental public services". Since existing public services are inadequate and are likely to remain inadequate for the foreseeable future, it would not be prudent to allow drilling of wells in these areas (e.g. Montara Heights, Upper Moss Beach, and Upper Seal Cove).

RESPONSE: See response to comment 46 above, and Response to General Comments, Number 1. Owners must be responsible for obtaining their own supplies. No "public services" - as defined by the Montara Sanitary District commentors - will be affected.

50. Montara Sanitary District, letter, May 14, 1989, comment 48

COMMENT: Page 128, " the effects of erosion on existing mains and facilities needs further analysis."

RESPONSE: See response to comment 35 above.

51. Montara Sanitary District, letter, May 14, 1989, comments 49, 50, and 51

COMMENT: Page 128 refers to an apparent mitigation of volunteerism and cooperation to promote recharge of the unknown water supply. Further analysis of such mitigation is needed

Page 128: Erosion, Sedimentation, and Recharge Protection. "Mechanisms for promoting recharge and water conservation on a valley-wide basis are no (sic) currently in effect; successful programs of this type presently call for neighborhood volunteerism and cooperation." A successful program would require some public leadership and funding as well.

Page 130 refers to an apparent mitigation of volunteerism and cooperation to promote recharge of the unknown water supply. Further analysis of such mitigation is needed.

RESPONSE: Reducing erosion and increasing recharge are two facets of sound watershed management in granitic soils and weathered bedrock. Erosion and loss of recharge is a current community challenge, to which the proposed program will add in a limited and temporary way.

Beyond the expected compliance with grading ordinances, related control programs have traditionally been based on volunteers and on willing owners. The Resource Conservation Districts, Soil Conservation Service, and regional government agencies (ABAG, AMBAG) have been active in such areas throughout the Central Coast of California, and can provide expertise. Oftentimes, local improvement

districts or institutions such as Montara Sanitary District provide the required leadership and coordination. Individuals seeking to develop site-specific programs may also consult with a Certified Professional Soil Erosion Control Specialist.

52. Montara Sanitary District, letter, May 14, 1989, comment 52

COMMENT: Page 132, the traffic analysis is inadequate as discussed above.

RESPONSE: See responses to comments 37, 38, and 39 above.

53. Montara Sanitary District, letter, May 14, 1989, comment 53

COMMENT: Pages 133-136. Alternatives. All three alternatives presented, in combination, would seem to be the most prudent approach. The discussion of the Watershed Management Alternative should be expanded.

RESPONSE: See Response to General Comment Number 3.

54. Montara Sanitary District, letter, May 14, 1989 comment 54

COMMENT: Page 134 discusses supplemental wells being constructed by Citizens Utilities. These statements appear (sic) to be verified as the lack of water by Citizens is the reason for considering water wells.

RESPONSE: Citizens Utilities presently proposes to install a fourth well in the Airport Plain to supplement its existing supplies. However, the project requires completion of an investigation of potential effects of the well on the Pillar Point marsh. This investigation is being performed at present. According to Mr. Herb Niederberger, Engineering Manager for Citizens Utilities, completion of the investigation has been delayed due to restricted access to private lands.

As discussed in response to comments by the Montara Sanitary District (page 30), installation of this well also requires construction of a 0.2-million gallon storage tank facility.

55. Montara Sanitary District, letter, May 14, 1989, comment 55

COMMENT: Page 134, last paragraph, the "other sound reasons" should be identified.

RESPONSE: The more promising areas for ground-water exploration outside of the Citizens Utilities service area are committed to non-residential uses, or are already served by individual domestic wells. Incentives for small water district formation in this area are limited.

56. Montara Sanitary District, letter, May 14, 1989, comment 56

COMMENT: Page 137, 2nd paragraph, development of the 58 lots would constitute buildout as relates to capacity of the treatment plant.

RESPONSE: Comment noted. Wastewater treatment capacity is also discussed in greater detail on pages 31-33 of the Draft EIR.

57. Montara Sanitary District, letter,

COMMENT: Page 137, line 13: "157" should be "159"

RESPONSE: Actually, "157" should be "101". In all, 159 property owners entered the sewer connection lottery. Of those, 58 will be allowed to connect and the remaining 101 will not. The numbers provided in the discussion of Cumulative Impacts on page 137 are incorrect. The second sentence of the first paragraph under 9.2 should read "An additional 101 sites. . .", and the first sentence of the second paragraph should start, "If all 159 sites .."

58. Montara Sanitary District, letter, May 14, 1989

COMMENT: Page 138, 9.4 contradicts statements made on page 116 and 134.

RESPONSE: See response to comment 59 below.

59. Montara Sanitary District, letter, May 14, 1989, comment 59

COMMENT: Page 138, the erroneous statement in 9.5 as discussed, above should be corrected as does the second paragraph on page 139. (Note to reader: The commentor refers to the discussion of septic systems under Significant Unavoidable Impacts (9.5, pg 138) and Effects Found to be Not Significant (9.6, pg 139).

RESPONSE: Commentor incorrectly interprets the Draft EIR to indicate that 157 septic systems would result from this project. In response to a request by the County Board of Supervisors, the Draft EIR discusses the possibility that wait-listed parcels would apply for septic system permits. In the discussion the Draft EIR defines the significant constraints to septic system disposal on the Mid-coastside. As a result of the analysis presented on pages 111-113, a total of six of the 159 parcels entered into the lottery are of adequate size to potentially accommodate a septic system. These six parcels were included in the analysis of growth and of impacts to public services even though such septic systems may never be allowed due to physical constraints (soils, leachfield) or policy constraints imposed by the LCP. It should also be noted that the Draft EIR recommends against the use of septic systems (pages 119-120 and 127.)

60. Montara Sanitary District, letter, May 14, 1989, comment 60

COMMENT: Page 138: Short-Term Uses Versus Long-Term Productivity "If effectively monitored, the individual wells can provide the data needed to develop a usable understanding of the local ground water resource, indirectly a significant enhancement to long-term productivity". It would be irresponsible to let this project proceed without effective monitoring as well as other measures. Other viable alternatives for obtaining the data, such as a complete hydrologic study, should be considered.

RESPONSE: See Response to General Comments, Number 7.

61. Montara Sanitary District, letter, May 14, 1989, comment 61

COMMENT: Page 138: Irreversible Commitment of Resources. . . . "the environmental effects of additional pumping of existing wells may be greater than those associated with dispersed ground water development." This statement would make sense only if the new homeowners were allowed to connect to the community system despite the moratorium.

Response: See response to comment 75, and the Response to General Comments, Number 1.

62. Montara Sanitary District, letter, May 14, 1989, comment 62

COMMENT: Page 138: Effects Found Not To Be Significant. "The proposed development of individual water wells is not expected to significantly deplete the available ground water outflow or storage, considered on a sub-unit or regional basis". This statement is not consistent with the previous discussions relating to the Montara Heights, Upper Moss Beach, and Upper Seal Cove sub-units.

RESPONSE: The original typescript wording should be restored, as follows: "The proposed development of individual water wells is not expected to significantly deplete the available ground water outflow or storage, considered on a regional basis. On the sub-unit level, both outflow and storage in the Upper Seal Cove area are likely to be significantly reduced at least during periods of consecutive or sustained dry years"...

63. Montara Sanitary District, letter, May 14, 1989, comment 63

COMMENT: Page 141, 2nd paragraph needs clarification.

RESPONSE: See the second half of response to comment 75.

64. Montara Sanitary District, letter, May 14, 1989, comment 64

COMMENT: Page 141, 4th paragraph provides an unique, but probably unacceptable way to observe and measure the quantity of ground water.

RESPONSE: Most monitoring of yields and cumulative pumping impacts statewide are conducted in this manner for fractured bedrock or terrace-on-weathered bedrock systems, such as occur in Montara and Moss Beach. The commentors may wish to read the Department of Water Resources' Mendocino County Coastal Ground Water Study as one example of a multi-year commitment to this approach. Other examples abound.

65. Montara Sanitary District, letter, May 14, 1989, comment 65

COMMENT: page 143, 1st paragraph is not clear what the costs are related to and who would be responsible for paying such costs.

RESPONSE: Costs are approximate as wells have yet to be constructed. They would be offset by fees to be assessed on the individual wells to be permitted, and perhaps on other sources benefitting from the important regional data such as the local purveyor.

66. Montara Sanitary District, letter, May 14, 1989, comment 66

COMMENT: The following issues identified in the letter dated January 16, 1989, from the Montara Sanitary District Board of Directors to Mr. William Rozar of the San Mateo County Planning Department in response to his scoping letter have not been addressed in the draft EIR:

1. Accurately identify all existing septic and other private disposal systems within the urban area . . .

2. Assess the performance of the identified individual sewage disposal systems and where failures are noted. Determine if this failure is the result of improper or lack of periodic maintenance or stems from other causes.

3. Assess the need for a regular maintenance and inspections program.

RESPONSE: See the Response to General Comments, Number 4.

67. Montara Sanitary District, letter, May 14, 1989, comment 67

COMMENT: The following issue identified in the letter dated January 16, 1989, from the Montara Sanitary District Board of Directors to Mr. William Rozar of the San Mateo County Planning Department in response to his scoping letter has not been addressed in the draft EIR (Wilson, Montara Sanitary District):

WATER WELLS:

3. Discuss what economic effect multiple private wells (non-public water users) will have on the remaining property owner's share of the acquisition costs of the Citizens Utilities Company which the County is engaged in acquiring on behalf of the community.

RESPONSE: The California Environmental Quality Act (CEQA), does not require consideration of the economic impacts of a proposed action, and a fiscal analysis was not included in the scope of this EIR. It appears that there are at least three possible scenarios regarding acquisition of Citizens:

1. The County requires all property owners in the service area to share the acquisition costs regardless of whether they are connected to the system or not with the intent that eventually all lots would be connected. Under this scenario the remaining property owners referred to in the comment would not be required to pay any additional fees.

2. The acquisition costs are carried only by the property owners currently connected to the system, in which case the fee for each owner would be higher than under scenario 1.

3. The initial costs are carried by the property owners and the County and the County recovers its costs through a fee on new connections. This scenario may or may not translate to higher costs for property owners connected to the existing system, depending on County requirements at the time of implementation.

68. Montara Sanitary District, letter, May 14, 1989, comment 68

COMMENT: 4. Discuss soil structural changes and the potential for building foundation or utility failures. . . "

RESPONSE: It is assumed that this comment relates to potential concerns abut land subsidence related to ground water withdrawals. Land subsidence due to ground water withdrawals, such as experienced in the San Jose, California area during the early to mid-1900s, is generally related to progressive overdraft in areas underlain by confined aquifers. In these areas, pore water pressure in part provides support of the overlying sediments. Reduction of the pore pressure through excessive ground water withdrawal, leads to compaction of overlying compressible strata, resulting in subsidence of the land surface.

In the Montara-Moss Beach area, ground water is present in two distinct aquifer types; granitic bedrock and marine terrace/alluvial deposits. The granitic bedrock is not generally considered to contain compressible zones, thus precluding subsidence potential. Ground water in the marine terrace or alluvial deposits is generally present under unconfined conditions. As such, pore pressures are not of a magnitude that would provide significant support to the overlying sediments. Therefore, ground water withdrawal would not be expected to result in subsidence of the land surface. Lastly, anticipated ground water withdrawal from the proposed wells (less than 5 percent of the estimated outflow during normal rainfall years) is unlikely to result in overdraft conditions, further minimizing the potential for land subsidence.

69. Montara Sanitary District, letter, May 14, 1989, comment 69

COMMENT: Address the need for a water authority to manage all underground water extraction and flow.

RESPONSE: It seems premature to consider a management authority.

70. Montara Sanitary District, letter, May 14, 1989, comment 70

COMMENT: Discuss the necessity of a water extraction fee to fund the additional monitoring costs or to regulate the use.

RESPONSE: Alternative funding mechanisms are available, such as permit fees, short of the administratively-cumbersome use of metered extraction charges. Portions of the costs may also be supported by the community water system, which benefits from the results.

71. Montara Sanitary District, letter, May 14, 1989, comment 71

COMMENT: The document does not address the effects of digging 157 septics to serve the waiting list as suggested in the DEIR, upon the sewer treatment plant expansion project and the health of the community by doing so when commingled with 157 water wells.

RESPONSE : Commentor incorrectly interprets the EIR to indicate that 157 septic systems would result from this project. In response to a request by the County Board of Supervisors, the EIR discusses the possibility that wait-listed parcels would apply for septic system permits. In the discussion the EIR defines the significant constraints to septic system disposal on the Mid-coastside. As a result of the analysis presented on pages 111-113, a total of six of the 159 parcels entered into the lottery are of adequate size to potentially accommodate a septic system. These six parcels were included in the analysis of growth and of impacts to public physical constraints (soils, leachfield) or policy constraints imposed by the LCP. It should also be noted that the Draft EIR recommends against the use of septic systems (pages 119-120 and 127).

72. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 1

COMMENT: Why is it expected that these 58 parcels will be served by individual private wells then there are other alternatives as described in Chapter 8, and individual water wells are only one alternative. An EIR should discuss the impact of all alternatives. This approach clearly favors the individual well alternative. The question is - since there are a number of sewer hookups available, can water be made available to them and how. The EIR should aid in making responsible decisions in problem solving that has environmental consequences. This EIR seems to only address aspects of the individual well alternatives when in fact the other three alternatives may be highly preferable.

RESPONSE: See Responses to General Comments Number 3. Commentator does not support the questionable statement that other alternatives may be environmentally preferable.

73. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 2

COMMENT: As of May 1, 1989, the California Department of Water Resources reports 85% of normal precipitation since 10/1/88 with only 25% of normal runoff for this area. If 10% of the recharge is used in a normal year, they would be using nearly 50% of what we can expect in a slightly below normal year such as this or even more in a drought year.

RESPONSE: The anticipated effects of the wells, if all wells are constructed and used, are presented in the document both in relation to normal-year recharge and in relation to the estimated volume of water stored underground in each of the sub-units. The volume in storage is a key factor in assessing the ability of the wells to sustain needed yields, and in evaluating the effects of such withdrawals on the local system. Both recharge and storage estimates, for example, have been considered in the recommendation that the level of extraction envisioned for the Upper Seal Cove area may exceed that which is prudent for the environment or community.

74. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 3

COMMENT: Given current moratorium on new water connections to the community supply and the 25% deficiency of water in the community supply, how can requiring hookups to the community supply by Upper Seal Cove be considered a mitigation?

A better mitigation would be to find out how much water is in the aquifer with a ground water study of the Montara-Moss Beach area. Rather than hoping these wells are productive. who is responsible if these wells fail after a short while? This is not addressed. Will they expect to turn to the already deficient community water supply? It makes better sense to put new, high capacity community wells in the most productive areas.

RESPONSE: Community water supplies should be made available to new Upper Seal Cove residents only when additional supplies have been developed, and the moratorium on new connections has been removed.

75. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 5

COMMENT: Why is Wagner Valley area development considered less environmentally stressful that the 58 individual wells: When the Wagner Valley area is shown later in the EIR to be one of the more productive areas of our community (pg. 6, Table 2). Comparable outflow, highest storage. Also in chapter 5.4, hydrology and water quality of the individual aquifers are discussed in depth and the Upper Montara Creek sub unit is shown to be the most highly productive.

The EIR goes on to claim that by allowing the individual wells it will spread impacts and diversify sources of ground water. The impact will be spread from the individual well drillers to the entire community which may have to bail him out when their well fails.

Since when are individual wells "a new and positive approach". It is well proven that a reliable community water supply is the best and safest approach.

Why do these wells have to be in use to monitor water levels. Test wells should be drilled and monitored, but consumptive use of water from these wells should not be allowed until impacts on the entire aquifer have been assessed.

RESPONSE: While the Wagner Valley area is one of the most prolific sub-units in the Montara-Moss Beach area, it may be significantly overused during dry and critically-dry years. The effect of this overdraft is expected to limit non-storm outflow from the valley, concentrating all of the impacts upon the Montara Creek corridor. This corridor has been identified in the EIR as being a biological resource of considerable importance. Use of dispersed domestic wells, even during extreme drought years, is not expected to exert a concentrated adverse influence of this type.

Comments regarding the spreading of risk to the entire community are addressed in General Response Number1.

The hydrogeologic environment of Montara and Moss Beach, with its small units and granitic substrate, calls for development strategies which differ considerably from those used elsewhere in the Mid-Coastside. In such an environment, use of dispersed domestic wells merits consideration as a means of obtaining water supplies when the community system has been unable to locate the large, reliable supplies of ground water more typical of other hydrogeologic settings. They also provide a means of obtaining the type of useful data suggested by the commentor, at a level and frequency appropriate to a highly diverse ground water system (See also Comment 19).

76. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 6

COMMENT: The numbers are misleading for Montara Heights and Upper Moss Beach. Table 5, page 52 uses more conservative estimates of Dry and Critically Dry storage for these areas.

RESPONSE: This comment, and an identical comment from the Montara Sanitary District, address a difficult aspect of the hydrogeology of weathered granitic rocks, especially those dissected by stream and coastal erosion.

Granitic rocks can hold appreciable amounts of water, while yielding at relatively low rates. The estimates in Table 5 (page 52) were developed assuming that weathered rock or fractures deeper than 300 feet did not contribute to the volume in available storage, based both on limited geologic evidence and also on the widely-held belief that it is uneconomic to drill deeper. During the final stages of preparing the Draft EIR, word was received of wells drilled to greater depths (one to 550 feet) in these areas, perhaps in response to the dry-year conditions currently prevailing. Obviously, if knowledgeable individuals are prepared to drill to greater depths during dry years, the amount of developable water within the voids and fractures will increase, even though fewer voids and fractures probably occur at these greater depths. This later perspective is reflected in the summary table (Table 2), wherein the same volumes of storage are given for normal, dry, and critically-dry years; the latter two are footnoted as being uncertain at this time.

Both the values used in Tables 2 and 5 have merit, and are representative of the range of conditions which may be expected. Hence, both are "correct" values under the circumstances prevailing. It is often useful, under these types of uncertainty, to use the more conservative values (i.e., Table 5). This would not significantly change the findings reflected in Table 2, however, as the primary limitation in these subunits is outflow, not storage.

77. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 7

COMMENT: There is no quantity or quality groundwater information available, not because of lack of community interest in knowing, but because Montara and Moss Beach are unincorporated areas, and we rely on Citizens Utilities, San Mateo County and the California Public Utilities Commission to know about the groundwater conditions and to comply with the LCP policy 1.25 which requires the County of San Mateo to undertake a water monitoring program to determine water availability in our community.

RESPONSE: We agree that additional information on the levels, yields, and quality of ground water in the area, over an extended period, will be beneficial to the community in addressing evolving needs. Regarding LCP Policy 1.25 see response to comment 18.

78. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 8

COMMENT: How can the effects of individual wells be assessed without a hydrologic investigation since in the preceding paragraph it was stated that there is a lack of information available needed to assess the quantity, quality, and reliability of ground water supply. This lack of information is repeatedly mentioned throughout the EIR as a justification for speculation.

RESPONSE: See Response to General Comments, Number 7; also portions of the response to Specific Comment 32 may be applicable.

79. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 9

COMMENT: The proposed project should be defined as how are we going to find water for these 58 potential households. The way that it is written is not addressing this problem but looking only at one particular method in detail and by the way, there are three other alternatives. AND totally ignoring the health and safety issues for which 1600 existing households are at risk because of inadequate water supply.

RESPONSE: Response to General Comments Number 3 is most applicable to the first two sentences; Responses to General Comments Number 6 addresses the last part of the comment.

80. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment 10

COMMENT: A random distribution of wells spread throughout the community - when the EIR states in numerous places that 3 of the 6 aquifers (Upper Seal Cove, Upper Moss Beach and Montara Heights) are not worth developing because they are unreliable sources of water.

RESPONSE: See Response to General Comments Number 5. Upper Moss Beach and Montara Heights are subunits where development of ground water is likely to meet environmental guidelines, although caution is encouraged.

81. Montara Moss Beach Water Improvement Association, response report, May 14, 1989, comment

COMMENT: The drilling of wells can indeed by expected to endanger safe yields especially in Upper Seal Cove, Upper Moss Beach and Montara Heights.

Why isn't water available from the present water system (CUCC). Is it because CUCC has chosen not to develop new water sources. Could more water resources be developed for the community if a comprehensive groundwater study were done?

RESPONSE: See the response to comment 82 regarding the Upper Moss Beach and Montara Heights subunits. Speculation on CUCC's exploration program is beyond the scope of the EIR.

82. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 12

COMMENT: In terms of the "harm to the environment" issue, since the PUC has determined that there is a current shortage of 25% in the water supply for Montara and Moss Beach and that on certain days there is not enough water pressure in the system to fight a fire; how are additional demands on an already dangerous situation not considered as harm to the environment?

RESPONSE: Please see Responses to General Comments, Number 6.

83. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 13

COMMENT: Why wasn't the monitoring program done. It is 7 years over due. When will it be done? The lack of such data is again referred to as an excuse for using guesses instead of accurate information that would be available should an actual monitoring program be done. A ground water study needs to be completed before residents rely on individual wells as their water source.

RESPONSE: See response to comment 18.

84. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 14

COMMENT: Due to past community experience in Portola Estates where houses were built and subsequently wells went dry, are safe yields to be determined when the well is dug, or after it has been monitored for a period of time to include dry seasons?

RESPONSE: The County has recently adopted a Water Well Ordinance which may serve to reduce the frequency of such unfortunate events. See also Response to General Comments Number 1.

85. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 15

COMMENT: The reason that new connections to the water systems are unavailable is that there is not sufficient water for the current users. Additional individual wells would only add to the problem, and would not be a viable source of water in this situation.

RESPONSE: One of the primary purposes of preparing the EIR was to determine whether the use of these wells would adversely affect the existing community water supply. The existing water supply (approximately 373 acre feet per year) is provided primarily from wells in the Wagner Valley region of Upper Montara Creek. Most of the proposed private wells would be placed in a different hydrogeologic sub-unit (Montara Heights or Montara Terrace). The new wells (drawing about 17 acre feet per year) would not affect existing community supply. The annual pumpage expected as a result of the proposed project is generally less than five percent of the ground water stored within developable depths, and anticipated pumping from ground water is generally less than 10 percent of the recharge and outflows thought to occur during years of normal conditions. This is well within the levels meeting the County's policy of maintaining safe yields. Also, the effects of the anticipated pumping on quality of ground water or in the local intermittent streams are expected to be nondiscernible, primarily due to the small proportionate impact on water in storage or in movement.

86. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 16

Comment: There is a threat to public Health, Safety, and Welfare, and therefore, these 58 wells should not be allowed according to LCP 10:10.

RESPONSE: See response to comment 85 above, and to the contingency for inadequate yields discussed in Responses to General Comments, Number 1. Policy 10.10 of the LCP refers to providing public access trails near coastal streams.

87. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 17

COMMENT: Some of the proposed 58 wells are near water courses as described later in the EIR.

RESPONSE: Individual parcels which contain sensitive resources are identified in the Specific Parcel Inventory, attached to this report, and will be reviewed on an individual basis for conformance with a number of environmental requirements, including proximity to riparian and wetland zones. Proposed wells and other proposed development within a riparian or buffer zone will be approved or denied by San Mateo County Planning on a case-by-case basis.

88. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 18

COMMENT: The general plan does more than just encourage development of water supplies, it encourages studies to learn more about what supplies are available before they are developed.

RESPONSE: Comment noted. The proposed project, if appropriately monitored, will develop the information needed and so long in coming, without anticipated significant environmental impacts.

89. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 19

COMMENT: Why does Citizens Utilities have to wait for a study to determine the impact of the proposed ground water removal when these 58 wells do not?

RESPONSE: CUCC proposes to draw considerable water from a limited area, exerting a potentially significant impact upon Pillar Point Marsh. The marsh is a jurisdictional wetland, and is also identified in the LCP as an important and sensitive area. The marsh is therefore protected under federal, state, and county programs or ordinances. The proposed project exerts a much smaller, more dispersed impact upon a number of less sensitive areas, at a level below that deemed significant. Hence, CUCC is undertaking more involved studies.

It may be worth noting that CUCC is attempting to develop a large, continuous sedimentary aquifer of a type which does not occur in the Montara-Moss Beach sub-units discussed in the EIR.

90. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 19

COMMENT: Adding fire flow requirements to a system that already has inadequate fire flow would increase the risk to the new homeowners as well as the rest of the community.

RESPONSE: Please see Responses to General Comment Number 6.

91. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 20

COMMENT: Infiltration from roadside ditches is not a reliable source of recharge as someday these may be paved and stormdrains built.

RESPONSE: Such recharge is not deemed significant in the water balance for the area.

92. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 21

COMMENT: If there were additional individual wells in Wagner Valley, it would negatively impact wells already in that aquifer supplying the community, especially during dry years.

RESPONSE: There are only a handful of wells proposed in the Wagner Valley subunit, which would exert a demand of perhaps 1 to 2 percent of the existing community wells. The proposed new domestic wells are also located on the periphery of the unit, away from the CUCC wells.

93. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 22

COMMENT: Again, author of EIR cites the need for additional hydrologic data. Yet another need for additional hydrologic data before direction of flow over the course of a year can be determined.

RESPONSE: The uncertainty, which cannot be resolved until there is a well in the area, is identified as not appreciably affecting the analysis for this subunit.

94. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 23

COMMENT: Because existing wells are not evenly distributed throughout the area, no firm conclusions can be drawn regarding water quality. Based on existing wells, approximately one-third of the 58 wells will also exceed the drinking water standard for iron and/or manganese and probably require treatment. Once again, author cites insufficient information.

RESPONSE: The absence of evenly distributed water quality data precludes a discussion or analysis of water quality for individual sub-basins within the project area. However, the available data indicate that ground water in the Montara-Moss Beach area is generally of fair quality, and typical of most coastal areas of similar aquifer types.

Treatment for iron and manganese is not uncommon for wells drawing water from the Montara Quartz Diorite and associated with marine terrace deposits and is readily available and feasible through standard commercial sources.

95. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 24

COMMENT: In 1977 drought, ground water hydrograph got within 7 feet of sea level. With the increased pumping we have today it could well go below sea level making salt water intrusion a possibility (see pg. 142, fig. 12).

RESPONSE: Comment noted. One objective of monitoring is to preclude sustained ground water levels below sea level.

96. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 25

COMMENT: There is no discussion of coliform.

RESPONSE: Coliform levels are generally low (Table 11). It is not uncommon for slightly elevated levels of coliform to be found in new wells, especially in weathered crystalline aquifers; low values were reported upon retests.

97. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 26

COMMENT: Fuel and chemical solvents in the ground is more of a concern with individual wells as there is a much higher probability of affecting one of these many wells as opposed to one of a very few.

RESPONSE: This statement is accurate in that there is a higher probability of a domestic well being located in the vicinity of a commercial facility (such as a service station) that may potentially leak fuels or solvents. However, underground fuel releases or pesticide storage areas from agricultural operations can also affect ground water in the areas of the more isolated community supply wells, creating potential impacts for a larger portion of the population.

98. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 27

COMMENT: Since the use of septic systems is not prohibited why would this be a valid scenario?

RESPONSE: The County Board of Supervisors requested that the septic system scenario be considered in the Draft EIR because of a recent approval of a single septic system in the Moss Beach area. If the prohibition on private waste disposal systems is removed, six of the 159 lots in the lottery are of an adequate size to accommodate a septic tank under regulations currently in effect. As is explained in the Draft EIR, septic development on these lots may be further constrained by soils and size of leachfield. The EIR also recommends against septic system use due to potential threats to water quality (pp. 119-120, 127).

99. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 28

COMMENT: On what do they base the statement that effects on water supply from existing community wells are expected to be insignificant. Common sense says that there would be an affect in terms of Fire, Drought, and taking water from the same aquifer. Adding new fireflow requirements to a system that already cannot meet fireflow requirements would increase the risk to the existing 1600 households as well as the 58 new homes.

RESPONSE: Please see Response to General Comments, Number 6; the response to Comments 85 and 94 describe the effects on the existing community wells.

100. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 29

COMMENT: If there is a fire these 58 wells will be looking to the fire hydrant - not their well - and this would be an additional demand on the fire flow levels, which is already inadequate.

RESPONSE: Please see Response to General Comments, Number 6.

101. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 30

COMMENT: The 17.4 acre feet per year should first go towards alleviating the shortfall faced by the existing 1600 households. This 17.4 acre feet is equal to 11% of the estimated total annual ground water outflow in a critical year. The 270 gallons per day/unit water usage is probably low due to continued water use restrictions in the area.

RESPONSE: The 17.4 acre feet per year presently is undeveloped. It may be available if developed with a large number of small wells. Citizens Utilities has chosen not to develop this water, but to attempt to additionally utilize the large sedimentary aquifer near the airport (See also Response to Comment 91). Under the existing structure, no means of developing this water is feasible, other than by individuals.

The last sentence of the comment is unclear, so response is not practicable, other than to note that 270 gallons per day per unit is a widely-used value in water-supply planning for the foggy portion of coastal San Mateo County.

102. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 31

COMMENT: These three aquifers should not be relied upon for ground water for domestic use. Would tap into water storage in dry and critically dry years.

RESPONSE: Drawing upon storage in dry years is acceptable. Note that this probably already occurs in Wagner Valley (Draft EIR, p. 72). A long-term surplus, however, is essential.

103. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 32

COMMENT: By serving new homeowners through the existing hydrant system the entire community of 1600 households is placed at risk.

RESPONSE: Please see Response to General Comments, Number 6.

104. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 33

COMMENT: Water usage at 270 gallons per day in Montara and Moss Beach reflects a 20% reduction in usage already having taken place. We strongly agree that no septic system should be allowed.

RESPONSE: Comments noted.

105. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 33

COMMENT: Since existing public services are inadequate it would not make sense to allow wells in Montara Heights, Upper Moss Beach and Upper Seal Cove.

RESPONSE: Important differences between Montara Heights plus Upper Moss Beach, and Upper Seal Cove, are not recognized in this comment. See also Response to Comment 80. To our knowledge, water supply is the only public service of concern.

106. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 34

COMMENT: A successful program would require some Public leadership and funding.

RESPONSE: Public leadership is usually central to an effective erosion-control program. Funding would be welcomed, but is not anticipated, as the impacts are those of infill and not of new development. See also Responses to Comment 51.

107. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 35

COMMENT: This Chapter 8 should have been discussed in as much detail as the other alternative of drilling 58 individual wells. All three alternatives, in combination would make the most sense. They are far more prudent than the individual wells approach. Allowing individual wells sets a poor precedent which may be difficult to overcome.

RESPONSE: Further development of individual wells beyond the 58 to 64 wells of this project is strongly discouraged by the Draft EIR (e.g., Sec. 9.6), pending collection and interpretation of sufficient information to support a quantitative assessment of a potentially significant set of environmental impacts. This vital point should be emphasized in discussion of the EIR's findings. Other issues raised are addressed in Responses to General Comments, Number 3.

108. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 36, 37, 38

COMMENT: It would be irresponsible to let this project proceed without effective monitoring as well as other measures. The amount of water available for use as well as the best areas to develop need to be found before any more individual domestic wells are drilled. Other viable alternatives for obtaining this data, such as a complete hydrologic study, should be considered.

On site waste disposal systems intrinsically cause possible serious unavoidable impacts to the ground water.

Once again, EIR states need for more data on water quantity and quality. (RE: Page 143, Par 1). Any measurements should be a part of a ground water hydrologic study.

RESPONSE; A 'hydrologic study' should not be attempted without data from widely-dispersed points within the Montara-Moss Beach area, due to the variability of ground water conditions. Note that MMBWIA was not satisfied with water-quality data from only 25 to 30 wells, reflecting exactly this need for a broader informational base. Until such time as data are available, no study should be undertaken. Some other elements in these comments are addressed in Responses to General Comments, Numbers 3, 7, and 11.

109. Montara Moss Beach Water Improvement Association, Response Report, May 14, 1989, Comment 39

COMMENT: This statement (Sec. 9.6) contradicts previous discussions relating to Montara Heights, Upper Moss Beach and Upper Seal Cove subunits.

RESPONSE: The commentor is correct in noting the discrepancy. See Responses to Comment 62, which provides corrected language.

APPENDICES

APPENDIX A

Specific Parcel Inventory
(Revised)

SPECIFIC PARCEL INVENTORY - PAGE 1

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-014-130	RUD, RES	Occasional wild strawberries	Loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.
036-021-030	DEV	---	---	---
036-022-029	RUD	---	---	---
036-022-150	RUD	---	---	---
036-022-310	RUD	---	---	---
036-024-150	RES, RUD	Occasional wild strawberries	Loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.
036-025-250	CG, RUD	Occasional native plants, bunchgrass	Minor: loss of native plant material	Transplant bunchgrasses if possible.
036-031-130	CG, RUD	Occasional native plants, bunchgrass	Minor: loss of native plant material	Transplant bunchgrasses if possible.
036-032-200	RUD	---	---	---
036-033-280	RES, CG	Occasional native plants, bunchgrass	Minor: loss of native plant material	Transplant bunchgrasses if possible.
036-033-370	RES, CG	Occasional native plants, bunchgrass	Minor: loss of native plant material	Transplant bunchgrasses if possible.

SPECIFIC PARCEL INVENTORY - PAGE 2

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-034-050	RUD	—	—	—
036-034-050/ 070	RES	—	—	—
036-042-180	RUD	SEE NOTES	Possible siltation of adjacent riparian area during construction.	**SURVEY** to determine riparian and buffer boundaries. Refer to Section 7.10 in LCP for performance standards; control erosion and siltation in riparian.
036-052-010/ 020	RUD	—	—	—
036-053-100/ 110/90	RUD	Occasional wild strawberries, other native plants	Loss of strawberries and native plants	**SURVEY** of strawberries may be required. See attachment to EIR for details; transplant other natives if possible.
036-055-230	RUD	Occasional wild strawberries, other native plants	Loss of strawberries and native plants	**SURVEY** of strawberries may be required. See attachment to EIR for details; transplantother natives if possible.

SPECIFIC PARCEL INVENTORY - PAGE 3

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-055-240	RUD	Occasional wild strawberries, other native plants	Loss of strawberries and native plants	**SURVEY** of strawberries may be required. See attachment to EIR for details; transplant other natives if possible.
036-058-130	RUD, CG	Occasional wild strawberries, other native plants	Loss of strawberries and native plants	**SURVEY** of strawberries may be required. See attachment to EIR for details; transplant other natives if possible.
036-062-140	RUD	---	---	---
036-071-010	DEV	Existing residence	---	---
036-085-210	CON, EUK, RUD	1. Adjacent to damaged riparian corridors; SEE NOTES AND MAP	1.Potential damage to adjacent stream from construction, runoff	1. **SURVEY** to determine riparian and buffer boundary; adhere to LCP-specified setbacks and performance standards; if buffer is affected, replant with native riparian species.
		2. Potential monarch butterfly overwintering habitat in trees	2. Potential loss of butterfly trees	2.**SURVEY** for butterflies in fall as specified.
036-092-160	RUD	---	---	---
036-093-080	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 4

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-095-040	RES	---	---	---
036-095-190	RUD, RES	---	---	---
036-095-230	RES	---	---	---
036-095-320	DEV	Residence under construction	---	---
036-095-340	CG, RUD	Site badly damaged by construction activity on adjacent lot; occasional native bunchgrasses	Minor: loss of native bunchgrasses; potential damage to bunchgrass community on adjacent parcel	Transplant bunchgrasses if possible; avoid damage to adjacent parcel during construction.
036-101-250	RUD	---	---	---
036-101-340	RUD, RES	---	---	---
036-101-370	RES	---	---	---
036-102-220	RUD	---	---	---
036-102-240	EUK, CG	1. Frequent wild strawberries (2 species) : SEE NOTES 2. Potential monarch butterfly overwintering habitat in trees	1. Potential loss of strawberries 2. Potential loss of butterfly trees	1. **SURVEY** of strawberries may be required. See attachment to EIR for details. 2. **SURVEY** for butterflies in fall as specified.

SPECIFIC PARCEL INVENTORY - PAGE 5

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-102-240/ 260	RUD, CG	Frequent wild strawberries (2 species) : SEE NOTES	Potential loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.
036-102-490	EUK, CG	1. Frequent wild strawberries (2 species) : SEE NOTES 2. Potential monarch butterfly overwintering habitat in trees	1. Potential loss of strawberries 2. Potential loss of butterfly trees	1. **SURVEY** of strawberries may be required. See attachment to EIR for details. 2. **SURVEY** for butterflies in fall as specified.
036-104-040	CON	2 large pines have been girdled	---	---
036-104-300	DEV	Residence under construction	---	---
036-104-300/ 390	DEV	Residence under construction	---	---
036-104-330	RUD	---	---	---
036-104-400	CON, RUD	Occasional wild strawberries remain in cleared conifer stand	Potential loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.

SPECIFIC PARCEL INVENTORY - PAGE 6

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-104-410	CON, RUD	Occasional wild strawberries remain in cleared conifer stand	Potential loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.
036-105-190/ 200	RUD	---	---	---
036-105-310	RES	---	---	---
036-111-230	RUD, RIP	Ruderal portion recently cleared and graded up to riparian vegetation along Montara Creek: SEE NOTE AND MAP	Potential damage to riparian from construction erosion and siltation	**SURVEY** to determine riparian and buffer boundaries. Only LCP-permitted construction or other activity in riparian corridor or buffer; adhere to LCP-defined setbacks and performance standards; control runoff.
036-111-240	RUD, RIP	Ruderal portion recently cleared and graded up to riparian vegetation along Montara Creek: SEE NOTE AND MAP	Potential damage to riparian from construction erosion and siltation	**SURVEY** to determine riparian and buffer boundaries. Only LCP-permitted construction or other activity in riparian corridor or buffer; adhere to LCP-defined setbacks and performance standards; control runoff.

SPECIFIC PARCEL INVENTORY - PAGE 7

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-111-250 (Lots 19, 20)	RUD, RIP	Ruderal portion recently cleared and graded up to riparian vegetation along Montara Creek: SEE NOTE AND MAP	Potential damage to riparian from construction erosion and siltation	**SURVEY** to determine riparian and buffer boundaries. Only LCP-permitted construction or other activity in riparian corridor orbuffer; adhere to LCP-defined setbacks and performance standards; control runoff.
036-111-250 (Lots 21,22)	RUD, RIP	Ruderal portion recently cleared and graded up to riparian vegetation along Montara Creek: SEE NOTE AND MAP	Potential damage to riparian from construction erosion and siltation	**SURVEY** to determine riparian and buffer boundaries. Only LCP-permitted construction or other activity in riparian corridor or buffer; adhere to LCP-defined setbacks and performance standards; control runoff.
036-111-260	RUD, RIP	Riparian corridor on this parcel has been damaged by clearing up to stream bank: SEE NOTES AND MAP	Potential damage to riparian riparian from construction and siltation	**SURVEY** to determine riparian riparian buffer boundaries. Restore riparian riparian vegetation along stream bank; only LCP-permitted construction or other activity in riparian corridor or buffer; adhere to LCP defined setbacks and performance; control runoff.
036-113-060	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 8

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-113-390	CG, RES	Occasional native bunch-grasses	Minor: loss of native bunchgrasses	Transplant bunchgrasses if possible.
036-113-410	CG, RES	Occasional native bunch-grasses	Minor: loss of native bunchgrasses	Transplant bunchgrasses if possible.
036-113-420	CG, RES	Occasional native bunch-grasses	Minor: loss of native bunchgrasses	Transplant bunchgrasses if possible.
036-122-010	RES, RUD	---	---	---
036-123-020	RES	---	---	---
036-132-060	CON, EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1. **SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Potential monarch butter-fly overwintering habitat in trees	2.Potential loss of butterfly trees	2. **SURVEY** for butterflies in fall as specified.
036-132-080/ 090	CON, EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1. **SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Potential monarch butter-fly overwintering habitat in trees	2.Potential loss of butterfly trees	2. **SURVEY** for butterflies in fall as specified.

SPECIFIC PARCEL INVENTORY - PAGE 9

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-132-210	CON, EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1. **SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Potential monarch butterfly overwintering habitat in trees	2.Potential loss of butterfly trees	2. **SURVEY** for butterflies in fall as specified
036-132-220	CON, EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1. **SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Potential monarch butterfly overwintering habitat in trees	2.Potential loss of butterfly trees	2. **SURVEY** for butterflies in fall as specified
036-161-140	RUD	---	---	---
036-161-240	DEV	Existing residence	---	---
036-161-270	EUK	Potential monarch butterfly overwintering habitat in trees	Potential loss of butterfly trees	**SURVEY** for butterflies in fall as specified.
036-161-280	EUK	Potential monarch butterfly overwintering habitat in trees	Potential loss of butterfly trees	**SURVEY** for butterflies in fall as specified.

SPECIFIC PARCEL INVENTORY - PAGE 10

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-161-290	EUK	Potential monarch butterfly overwintering habitat in trees	Potential loss of butterfly trees	**SURVEY** for butterflies in fall as specified.
036-161-300	EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2. Adjacent to freshwater wetland: SEE MAP	2. Possible damage to wetland	2.**SURVEY** to delineate wetland boundaries and determine buffer. See survey requirements in EIR for details. All activity and construction to avoid wetland and buffer.
		3.Potential monarch butterfly overwintering habitat in trees	3.Potential loss of butterfly trees	3.**SURVEY** for butterflies in fall as specified.
036-161-310	EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2. Adjacent to freshwater wetland: SEE MAP	2. Possible damage to wetland	2.**SURVEY** to delineate wetland boundaries and determine buffer. See survey requirements in EIR for details. All activity and construction to avoid wetland and buffer.
		3.Potential monarch butterfly overwintering habitat in trees	3.Potential loss of butterfly trees	3.**SURVEY** for butterflies in fall as specified.

SPECIFIC PARCEL INVENTORY - PAGE 11

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-161-320	EUK	1.Occasional wild strawberries	1.Potential loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2. Adjacent to freshwater wetland: SEE MAP	2. Possible damage to wetland	2.**SURVEY** to delineate wetland boundaries and determine buffer. See survey requirements in EIR for details. All activity and construction to avoid wetland and buffer.
		3.Potential monarch butterfly overwintering habitat in trees	3.Potential loss of butterfly trees	3.**SURVEY** for butterflies in fall as specified.
036-161-330	RUD	Parcel is upslope from a small freshwater wetland	Potential damage to wetland during construction	**SURVEY** to delineate wetland boundaries and determine buffer. See survey requirements in EIR for details. All construction activity including siltation, to avoid wetland
036-161-340	RUD	Parcel is upslope from a small freshwater wetland	Potential damage to wetland during construction	**SURVEY** to delineate wetland boundaries and determine buffer; see survey requirements in EIR for details. All construction activity including siltation, to avoid wetland

SPECIFIC PARCEL INVENTORY - PAGE 12

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
036-161-350	RUD	Parcel is upslope from a small freshwater wetland	Potential damage to wetland during construction	**SURVEY** to delineate wetland boundaries and determine buffer; see survey requirements in EIR for details. All construction activity including siltation, to avoid wetland.
036-281-070/ 080	EUK	Potential monarch butterfly overwintering habitat in trees	Potential loss of butterfly trees	**SURVEY** for butterflies in fall as specified.
036-281-090	EUK	Potential monarch butterfly overwintering habitat in trees	Potential loss of butterfly trees	**SURVEY** for butterflies in fall as specified.
036-282-240	RUD	---	---	---
036-282-260	RUD	---	---	---
036-282-270	RUD, RES	---	---	---
036-284-190	RES, CG	Occasional native bunchgrasses, other native plants	Minor: loss of native bunchgrasses	Transplant bunchgrasses if possible.
037-012-090	RUD	Occasional wild strawberries	Loss of strawberries	**SURVEY** of strawberries may be required. See attachment to EIR for details.
037-013-250	RUD	---	---	---
037-013-350	RES	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 13

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-014-040 (Lots 12, 13)	CG, RUD	1.Occasional wild strawberries	Loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Large stand of pampas grass		2.Remove all pampas grass
037-014-040 (Lots 14, 15)	CG, RUD	1.Occasional wild strawberries	Loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2. Large stand of pampas grass		2.Remove all pampas grass.
037-014-290	CG, RUD	Occasional native plants; 2 species of bunchgrass	Minor: loss of native plant material	Transplant native bunch-grasses if possible.
037-015-260	RUD, RIP	Site recently cleared, removing native grassland vegetation, and possibly damaging adjacent riparian; SEE NOTES	Possible construction impacts on adjacent riparian	**SURVEY** to determine riparian and buffer boundaries; control runoff and erosion into this area.
037-021-060	RIP, CON	1.Significant riparian vegetation along Montara Creek; SEE NOTES AND MAP	1.Possible significant impacts on riparian zone and buffer	1.**SURVEY** to determine riparian and buffer boundaries; no construction or other activity in riparian; adhere to LCP specified setbacks and performance standards; control runoff.
		2.Small population of strawberry at SE end of site; SEE NOTES	2.Possible loss of strawberries	2. **SURVEY** of strawberries may be required. See attachment to EIR for details.

SPECIFIC PARCEL INVENTORY - PAGE 14

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
		3.Potential monarch butterfly overwintering habitat in trees; SEE NOTES	3.Potential loss of butterfly trees	3. **SURVEY** for butterflies in fall as specified.
037-022-050	CG, RUD	1.Significant population of wild strawberries	1.Possible loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Occasional native plants SEE NOTES	2.Minor: loss of native plants	2.Propagate or transplant natives if possible.
037-061-060	CG, RES	Occasional native plants, bunchgrasses	Minor: loss of native plants	Transplant bunchgrasses if possible.
037-062-150	RUD	Site cleared of vegetation	---	---
037-065-100	CG, RUD	Well-developed patch of native bunchgrasses	Minor: loss of native bunchgrass	Transplant bunchgrass if possible
037-065-230	RES	---	---	---
037-067-070	RUD	---	---	---
037-067-190	RUD, RES	Lots 17, 18	---	---
037-067-190	RUD, RES	Lots 15, 16	---	---
037-067-200	RUD, RES	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 15

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-074-240	EUK	---	---	---
037-084-230	RUD	---	---	---
037-084-280	RUD	---	---	---
037-086-160	CG, CON, RUD	1.Adjacent to unique habitat (see below)	1.Potential damage during construction to sensitive adjacent habitat	1.**SURVEY** is required for Hickman's Cinquefoil, S.F. Gumplant, other botanical resources. See survey requirements in EIR for details; avoid any entry into adjacent habitat.
		2.Occasional native plants; at least two species of native bunchgrasses: SEE NOTES AND MAP	2.Potential loss of native plants	2.Transplant bunchgrasses if possible.
037-086-170	CG	Botanically unique coastal grassland of significant value on ocean bluff; SEE NOTES AND MAP	Significant impact to unique botanical resource: SEE NOTES	**SURVEY** is required for Hickman's Cinquefoil, S.F. Gumplant, other botanical resources. See survey requirements in EIR for details.
037-094-140	DEV	---	---	---
037-094-280	DEV	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 16

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-096-250	RUD	1.Occasional wild strawberries	Loss of strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Large population of pampas grass		2.Remove all pampas grass.
037-112-040/ 070	CG, RES, RUD	1.Exceptional patch of wild strawberries along ocean bluff	1.Potential loss of unique strawberries	1.**SURVEY** of strawberries may be required. See attachment to EIR for details.
		2.Native plants, bunch-grasses: SEE NOTES AND MAP	2.Potential loss of native grasses, other plants	2.**SURVEY** is required for Hickman's Cinquefoil, S.F. Gumplant, other botanical resources. See survey requirements in EIR for details; transplant bunchgrasses if possible.
				3.Adhere to LCP-defined ocean bluff setbacks.
037-113-130	RES	---	---	---
037-116-030	RES	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 17

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-123-430-3	RUD	Site is adjacent to riparian corridor; riparian buffer extends onto site: SEE NOTES AND MAP	Potential damage to riparian from construction, clearing, runoff.	**SURVEY** to determine riparian and buffer boundaries; adhere to LCP-designated setbacks and performance standards; control runoff; avoid clearing or dumping in riparian area.
037-123-560	RES	---	---	---
037-132-250	RUD, RIP	Riparian corridor crosses corner of site: SEE NOTES AND MAP	Potential damage to riparian from construction, erosion and siltation	**SURVEY** to determine riparian and buffer boundaries; no construction or other activity in riparian or buffer; adhere to LCP-specified setbacks and performance standards; control runoff.
037-133-140	RES	---	---	---
037-143-020	RES	---	---	---
037-144-070	DEV	Existing building has been on site since late 1800s	---	---

SPECIFIC PARCEL INVENTORY - PAGE 18

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-144-260	RUD, RIP	Riparian corridor crosses corner of site: SEE NOTES AND MAP	Potential damage to riparian from construction, erosion and siltation	**SURVEY** to determine riparian and buffer boundaries; no construction or other activity in riparian or buffer; adhere to LCP-specified setbacks and performance standards; control runoff.
037-146-070	RUD	---	---	---
037-153-060	RES, RUD	---	---	---
037-156-030	RUD, RIP	Entire site is in riparian corridor: SEE NOTES AND MAP	Potentially significant damage to riparian corridor from construction, erosion, and siltation	**SURVEY** to determine riparian and buffer boundaries; no construction or other activity in riparian or buffer; adhere to LCP-specified setbacks and performance standards; control runoff.
037-157-060	RUD, EUK	Lots 1, 2, 3	---	---
037-171-190	RUD	---	---	---
037-171-480	RUD	---	---	---
037-171-650	RES	---	---	---
037-174-220	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 19

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-174-450	RUD	---	---	---
037-174-470	DEV	Existing residence	---	---
037-182-020	RUD	---	---	---
037-182-030	RUD, RIP	Riparian corridor crosses corner of site: SEE NOTES AND MAP	Potential damage to riparian from construction, erosion and siltation	**SURVEY** to determine riparian and buffer boundaries; no construction or other activity in riparian or buffer; adhere to LCP-specified setbacks and performance standards; control runoff.
037-183-110/ 120	RUD	---	---	---
037-184-080	RES	---	---	---
037-185-050/ 280	RUD, CON	---	---	---
037-186-010	RES	---	---	---
037-186-030/ 040	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 20

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-221-020/ 030	RUD	---	---	---
037-221-050	RUD	---	---	---
037-221-070	RUD	---	---	---
037-221-100	RUD	---	---	---
037-223-150	RUD	Site has large Monterey pines on edge	---	---
037-223-160	RUD	Site has large Monterey pines on edge	---	---
037-233-170	RUD	Site has large Monterey pines on edge	---	---
037-223-170/ 180	RUD	Site has large Monterey pines on edge	---	---
037-225-010	RUD	---	---	---
037-225-070	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 21

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-226-060	RUD	---	---	---
037-256-100	CG, RUD	Potential S.F. Garter Snake upland habitat Good example of coastal terrace prairie, with frequent strawberries and at least 3 species of native perennial bunchgrasses: SEE NOTES AND MAP	1. Potential significant impact on federally-listed endangered species 2. Potential loss of strawberries 3. Potential loss of Hickman's Cinquefoil, S.F. Gumplant, native bunchgrasses, other native plants	1. **SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details. 2. **SURVEY** of strawberries may be required. See attachment to EIR for details. 3. **SURVEY** is required for Hickman's Cinquefoil, S.F. Gumplant. See survey requirements in EIR for details; transplant native grasses and other plants if possible.
037-256-140	RUD	---	---	---
037-258-020	RUD	---	---	---
037-259-170	RUD, RES	---	---	---
037-259-200	RUD	---	---	---

SPECIFIC PARCEL INVENTORY - PAGE 22

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-277-050/ 12	RES, RUD	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.
037-278-010	RES	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.
037-278-070	CG	Possible upland habitat for S.F. Garter Snake; frequent native bunchgrasses; site damaged by vehicle tracks	Possible loss of upland habitat for endangered S.F. Garter Snake; loss of native bunchgrasses	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details; transplant bunchgrasses if possible.
037-278-130	CG	Possible upland habitat for S.F. Garter Snake; frequent native bunchgrasses; other native plants	Possible loss of upland habitat for endangered S.F. Garter Snake; loss of native bunchgrasses	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details; transplant bunchgrasses if possible.
037-279-060	RUD, CG	Possible upland habitat for S.F. Garter Snake; N portion of site with dense bunchgrasses, other natives	Possible loss of upland habitat for endangered S.F. Garter Snake; loss of native bunchgrasses	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details; transplant bunchgrasses if possible.
037-284-060/ 90/110 Lots 12, 13, 14, 15	RUD	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.

SPECIFIC PARCEL INVENTORY - PAGE 23

Parcel No.	Habitat Types	Special Features	On-Site Impacts	Mitigations
037-284-070/ 100	RUD	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.
037-285-120/ 130	RUD	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.
037-287-03	RUD	Possible upland habitat for S.F. Garter Snake	Possible loss of upland habitat for endangered S.F. Garter Snake	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details.
037-287-070	RUD	Possible upland habitat for S.F. Garter Snake; dense patches of native coyote brush	Possible loss of upland habitat for endangered S.F. Garter Snake; loss of native shrubs, wildlife cover	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details;
037-300-010	RUD	Possible upland habitat for S.F. Garter Snake; dense patches of native coyote brush. Dense patches of native coyote brush on this large (almost 4 a.) parcel	Possible loss of upland habitat for endangered S.F. Garter Snake; loss of native shrubs, wildlife cover. Loss of native shrubs, wildlife cover; possibly significant depending on development plans	**SURVEY** of S.F. Garter Snake upland habitat may be required; see attachment to EIR for details; Use native plants, especially bunchgrasses, as landscaping to enhance remaining open space

EXPLANATORY NOTES: SPECIFIC PARCEL INVENTORY

036-042-180 This site is adjacent to a designated damaged riparian corridor, but may be too far above the stream to be restored effectively with native riparian vegetation. The riparian and buffer boundaries should be determined.

036-085-210 This site is adjacent to a damaged riparian area, although it is not mapped as such on the County Sensitive Features map. Native riparian vegetation has been replaced by a mixture of conifers, eucalyptus, and ruderal plants (see map).

036-102-240
036-102-240/
260
036-102-490 Possible hybrids between F. vesca californica and F. chiloensis may occur on this site and should be specifically evaluated and protected as appropriate.

036-111-230
036-111-240
036-111-250
036-111-250 These parcels are adjacent to well-developed riparian vegetation. Riparian and buffer zone should be specifically determined and monitored (see map).

036-111-260 This parcel is adjacent to Montara Creek. Riparian vegetation has recently been removed up to streambank. This vegetation should be restored, by planting. If necessary, unless a valid permitted use as specified in the LCP (Section 7.9) exists. Any necessary flood control that may be necessary on this site should be specified by a qualified professional.

030-161-300
030-161-310
030-161-320
030-161-330
030-161-340
030-161-350 These sites are all either adjacent to or in the immediate vicinity of a small freshwater wetland. Existing information is inadequate to delineate the wetland boundary, which should be done to establish a protective buffer prior to any development. Construction of access roads as they are currently laid out on paper would seriously impact this wetland. Consideration should be given to rerouting access in this area.

037-015-260 Adjacent riparian corridor may include the SW corner of this parcel; on-site riparian vegetation may be damaged. Riparian boundary should be determined more precisely.

037-021-060 Riparian corridor along Montara creek; strawberries occur in association with F. vesca californica and may hybridize. Riparian and buffer boundaries should be specifically determined and the strawberries should be evaluated.

037-022-055 Fragaria chiloensis is abundant throughout this parcel.

037-086-160 This parcel is similiar to the adjacent parcel described below but contains a higher proportion of introduced plant material.

037-086-170 This parcel is dominated throughout by a unique Koeleria cristata / Armeria maritima/ Eryngium armatum grassland. It appears to be potential habitat for Grindelia maritima and Potentilla hickmanii as well, and should be more thoroughly evaluated. If this parcel contains significant resources, acquisition or preservation for the public benefit may be appropriate.

037-112-040/070 This parcel is on an ocean bluff, overlooking Fitzgerald Marine Reserve in Moss Beach. An unusual population of Fragaria chiloensis with 3-, 4-, and 5-leaved plants grows here, along with other native plants. This site is potential habitat for Grindelia maritima and Potentilla hickmanii. The strawberries should be evaluated and a plant survey done at the appropriate time of the year for the other two species.

037-123-430-3 Riparian buffer may extend onto this parcel and should be more specifically determined (see map).

037-132-250 Boundary of riparian corridor and buffer should be determined. This site is quite disturbed; some modest restoration of riparian habitat within the buffer zone would enhance the wildlife habitat value here (see map).

037-144-260 Riparian corridor and buffer boundary should be specifically determined (see map).

037-156-030 Exact boundaries of riparian and buffer should be delineated for this parcel, which appears to be located entirely within the riparian habitat (see map).

037-182-030 Riparian corridor and buffer zone need to be determined for this site (see map).

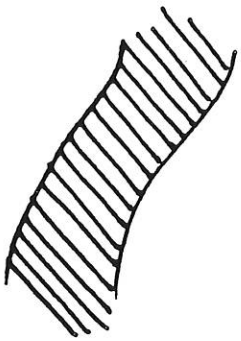
037-256-100 Coastal prairie and strawberries should be mapped to determine if an impact-free building location exists on site. This site is near the potential San Francisco garter snake habitat and should be evaluated as suitable upland habitat.

LEGEND: SPECIFIC PARCEL MAPS

APPROXIMATE BOUNDARY, RIPARIAN CORRIDOR

On streams with riparian vegetation, this boundary shows the approximate limit of that vegetation.

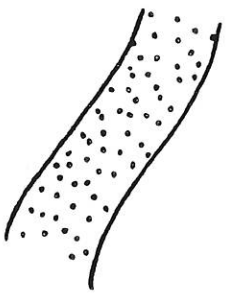
On streams with no riparian vegetation, this boundary extends approximately 30 feet from the high water mark (intermittent streams) or 50 feet from the high water mark (permanent streams).



APPROXIMATE LOCATION, RIPARIAN VEGETATON BUFFER

Buffer extends 30 feet from the riparian vegetation boundary on intermittent streams.

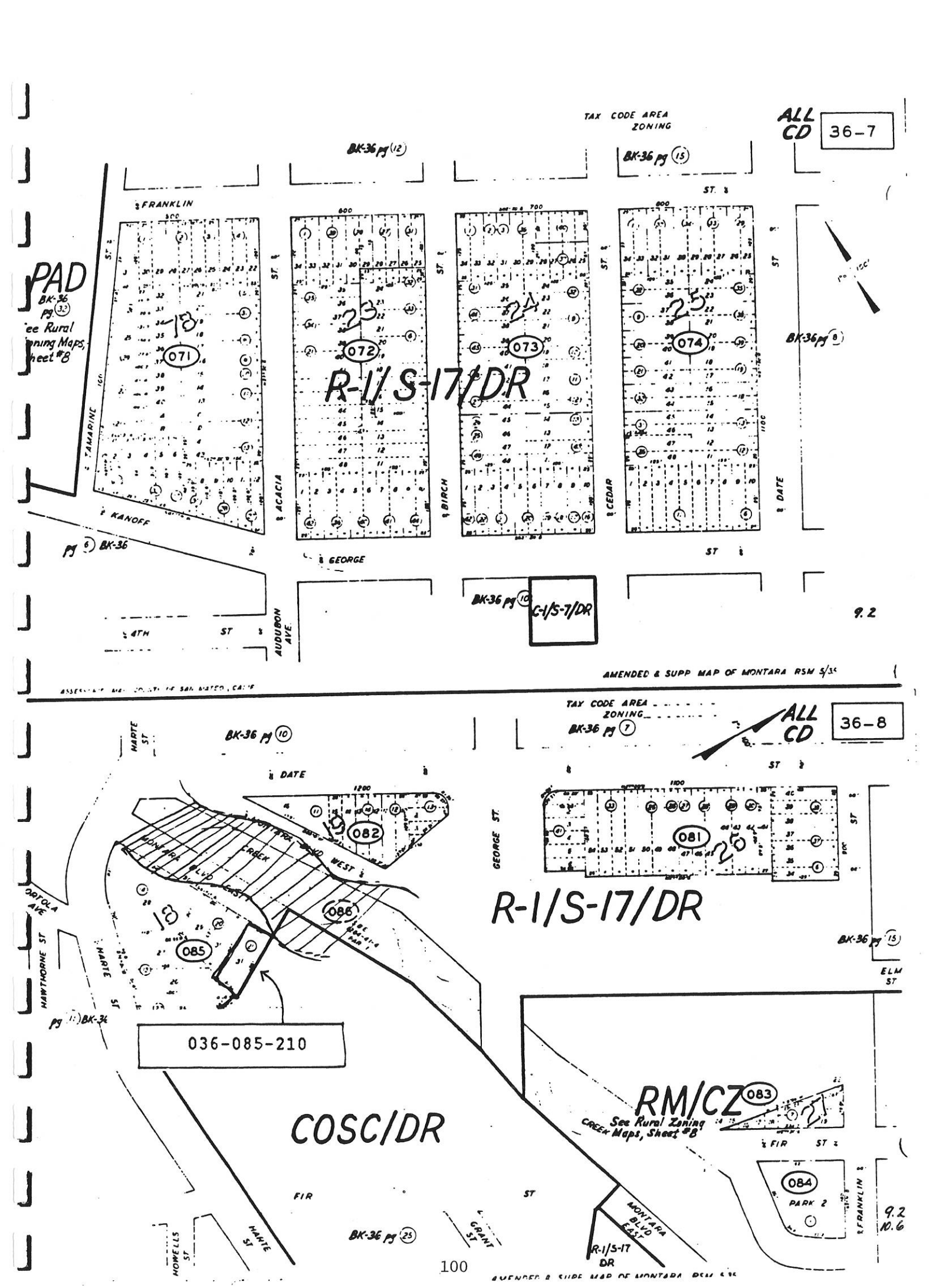
Buffer extends 50 feet from the riparian vegetation boundary on permanent streams.

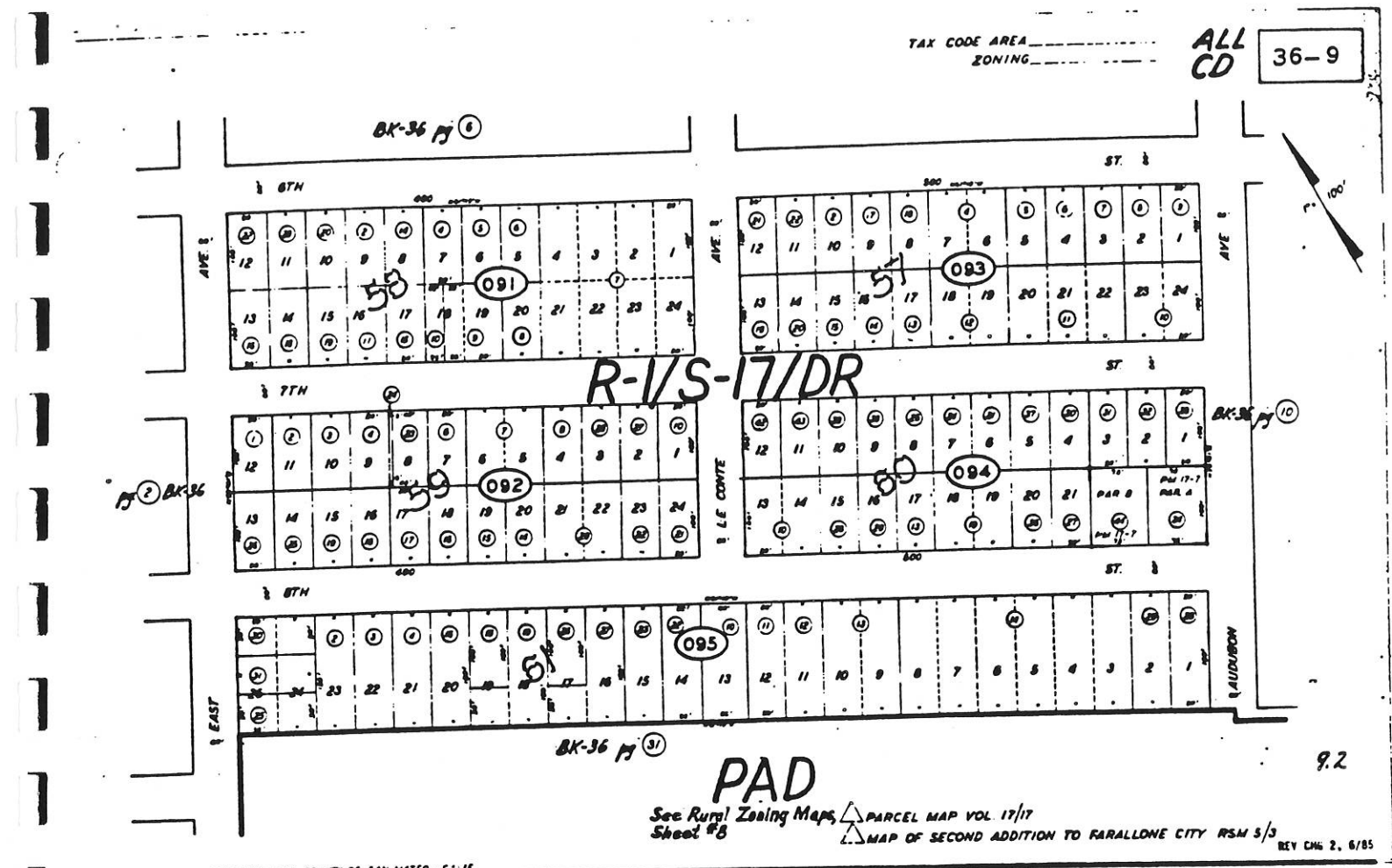


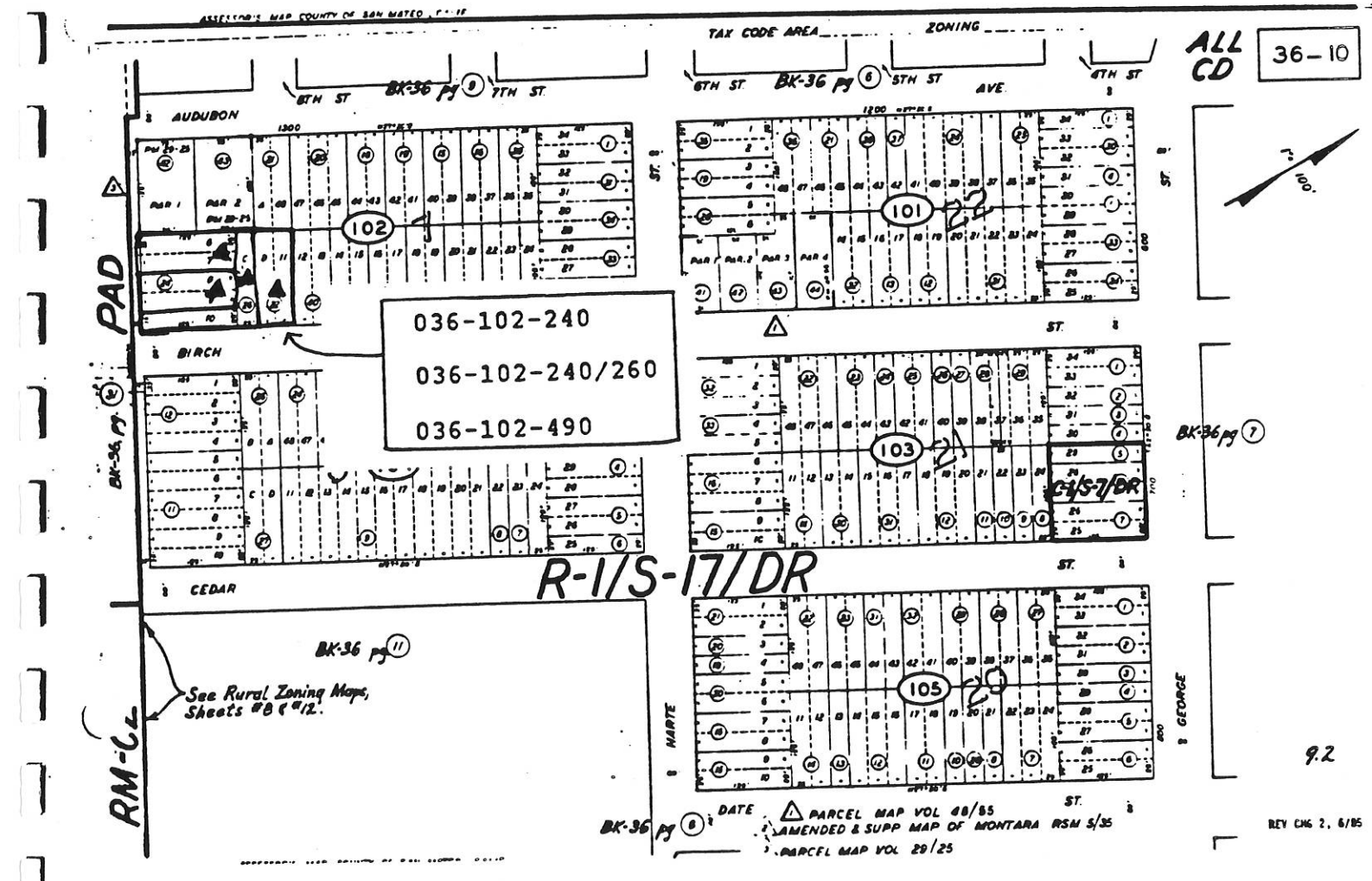
GENERALIZED LOCATION, CALIFORNIA STRAWBERRY (<u>FRAGARIA CHILOENSIS</u>)

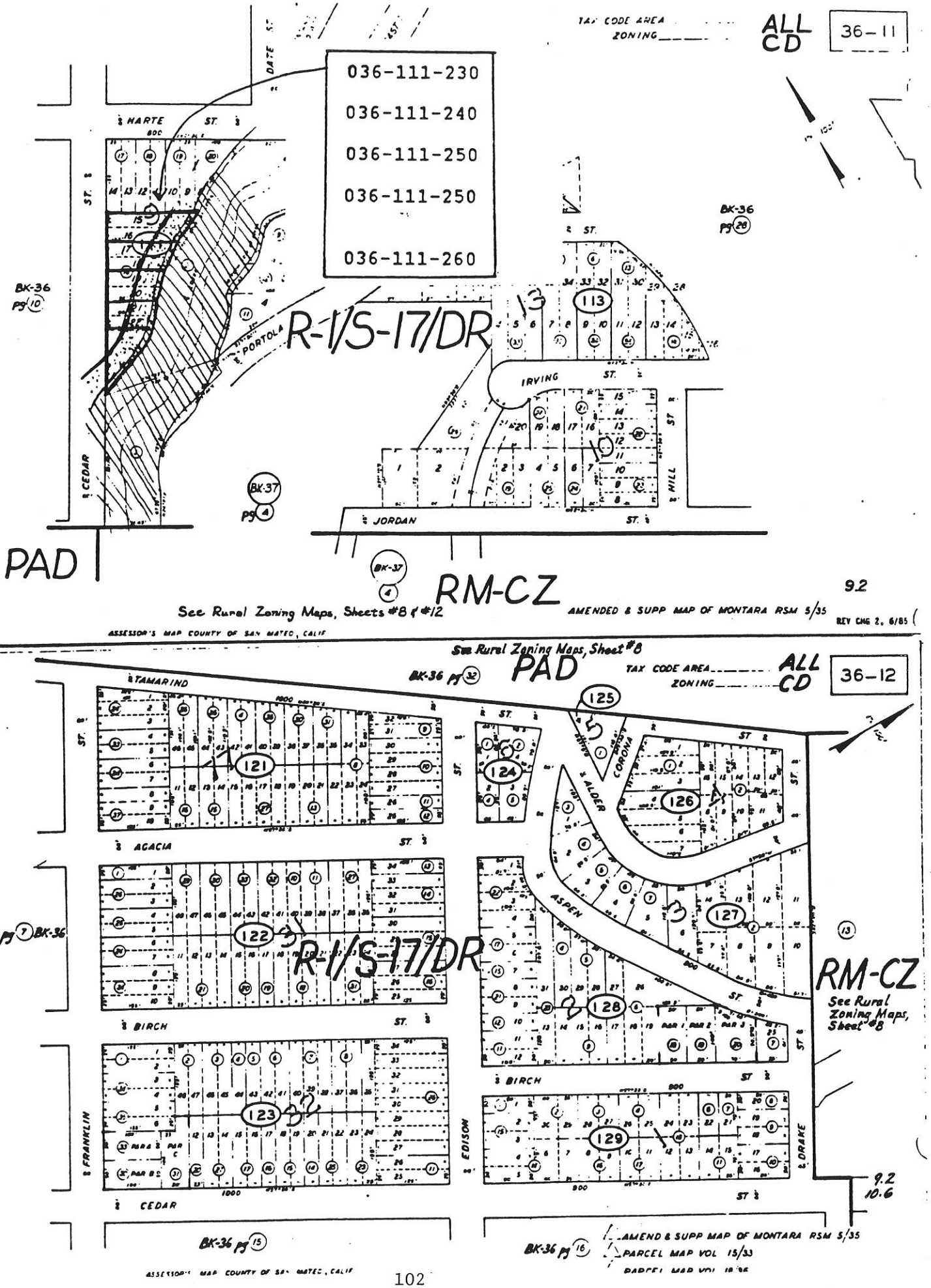
GENERALIZED LOCATION, UNIQUE PLANT ASSOCIATION

GENERALIZED LOCATION, FRESH WATER WETLAND

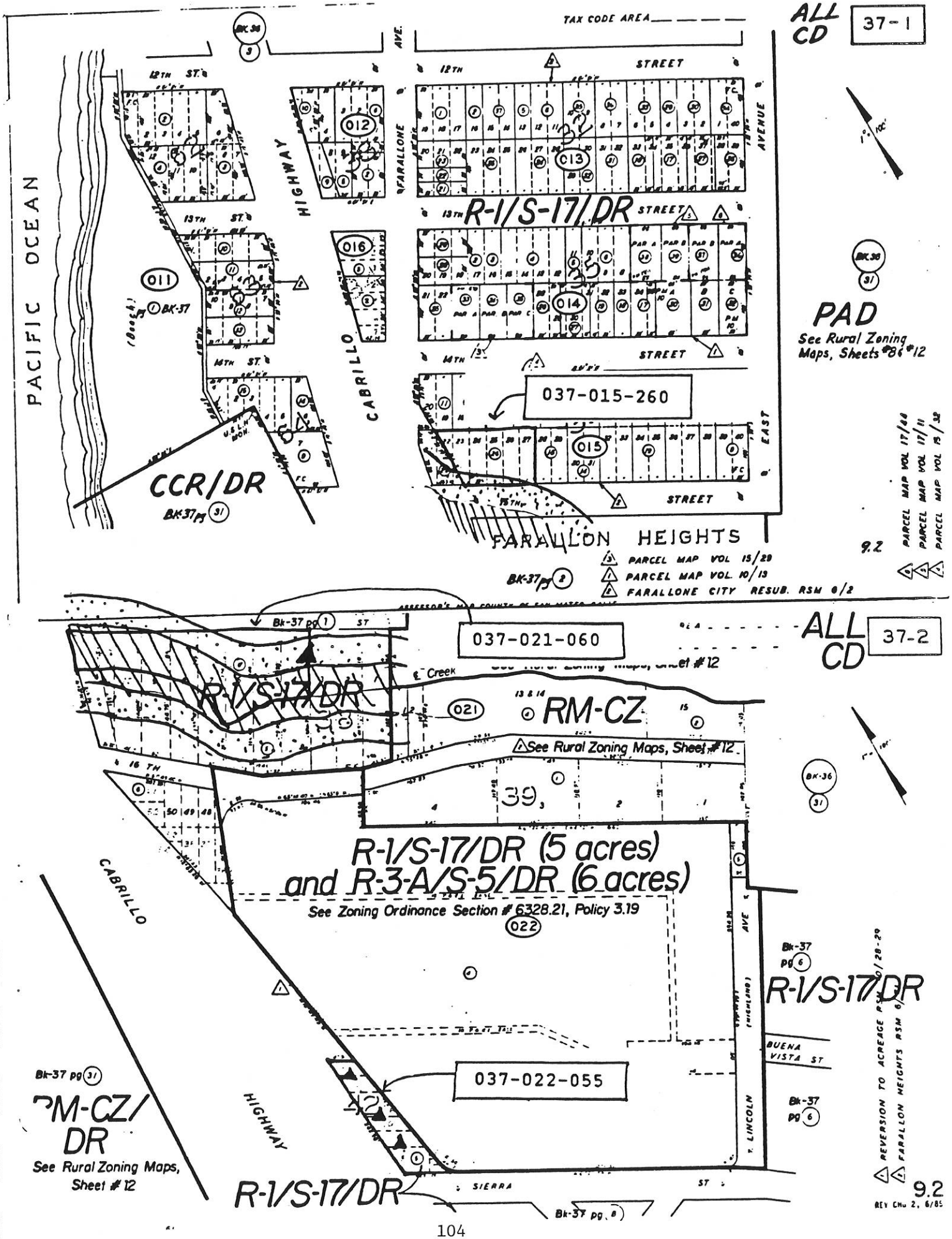

TAX CODE AREA
ZONING
ALL CD
36-7
BK-36 pg (12)
BK-36 pg (15)
FRANKLIN
ST.
PAD
BK-36 pg (33)
ee Rural
oning Maps,
heet #8
TAMARINE
KANOFF
ACACIA
BIRCH
CEDAR
DATE
071
072
073
074
R-1/S-17/DR
BK-36 pg (8)
pg (6) BK-36
GEORGE
BK-36 pg (10)
C-1/S-7/DR
9.2
4TH
AUDUBON AVE.
AMENDED & SUPP MAP OF MONTARA RSM 5/35
TAX CODE AREA
ZONING
BK-36 pg (7)
ALL CD
36-8
MARTE ST
BK-36 pg (10)
DATE
MONTARA CREEK
MONTARA BLVD WEST
MONTARA BLVD EAST
082
081
GEORGE ST.
R-1/S-17/DR
OLOLA AVE
HAWTHORNE ST
085
086
SEE MAP 41-4 PAR 1
BK-36 pg (15)
ELM ST
036-085-210
COSC/DR
RM/CZ
083
See Rural Zoning
Creek Maps, Sheet #8
FIR
ST
084
PARK 2
FRANKLIN
9.2
10.6
HOWELLS ST
BK-36 pg (25)
GRANT ST
R-1/S-17 DR
AMENDED & SUPP MAP OF MONTARA RSM 5/35

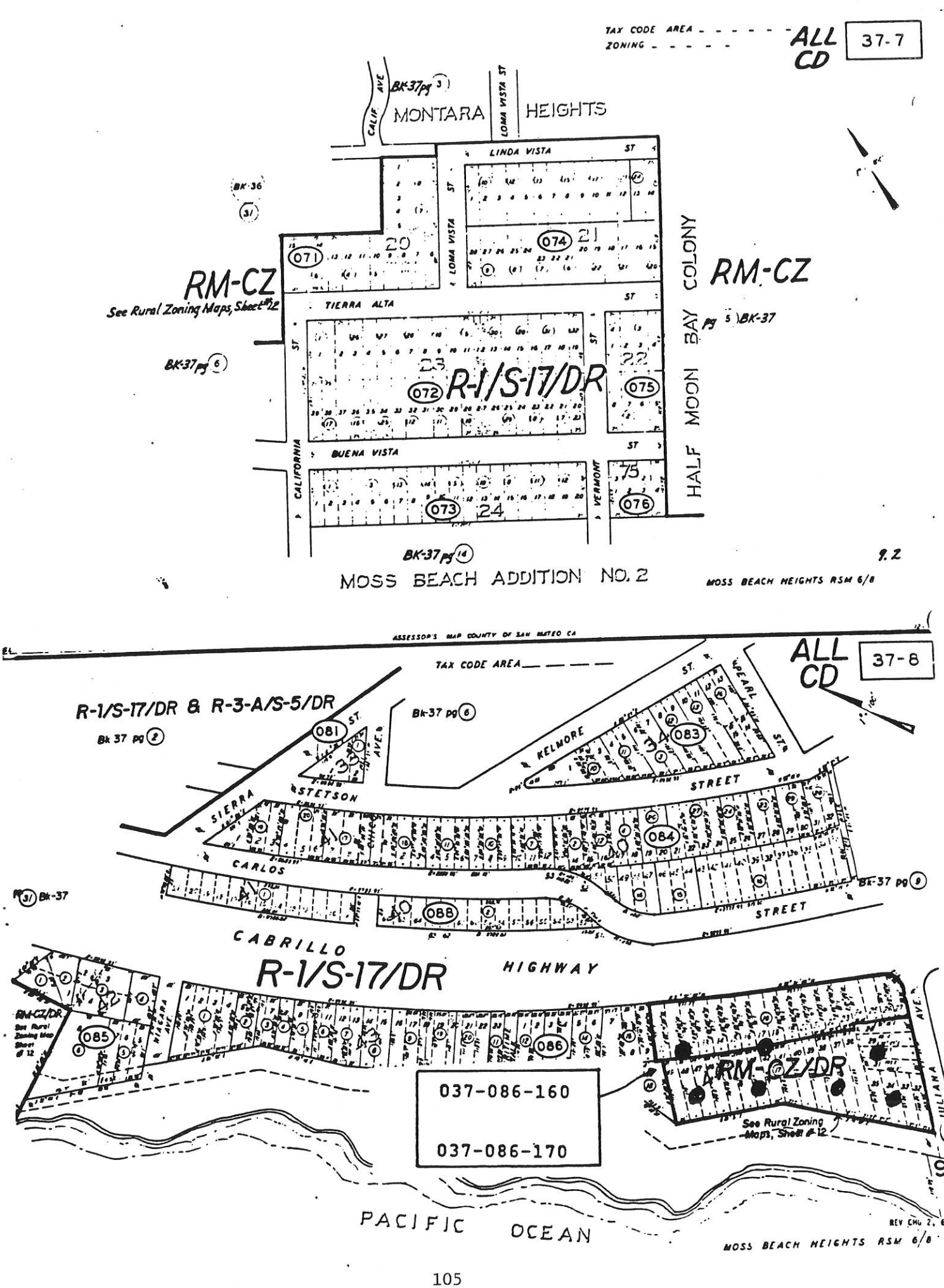

TAX CODE AREA
ZONING
ALL
CD
36-9
BK-36 pg 6
6TH
7TH
8TH
AVE 8
ST.
091
092
093
094
095
R-1/S-17/DR
LE CONTE
EAST
AUDUBON
BK-36 pg 2
BK-36 pg 10
BK-36 pg 31
PAD
See Rural Zoning Maps, Sheet #8
PARCEL MAP VOL 17/17
MAP OF SECOND ADDITION TO FARALLONE CITY RSM 5/3
9.2
REV CHG 2, 6/85

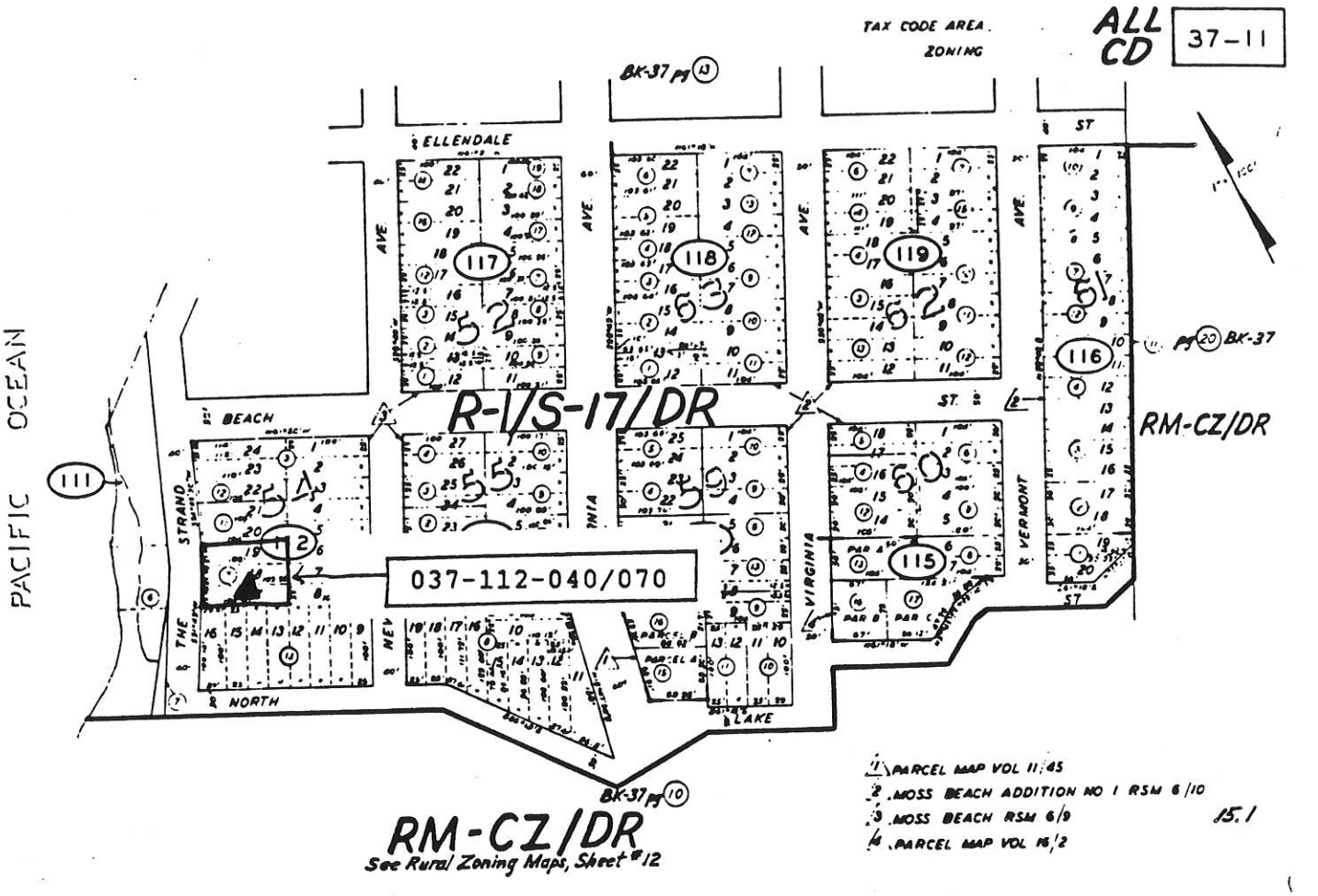

ASSESSOR'S MAP COUNTY OF SAN MATEO
TAX CODE AREA
ZONING
ALL
CD
36-10
6TH ST
7TH ST
8TH ST
AVE
AUDUBON
BIRCH
CEDAR
MARTE
GEORGE
102
101
103
105
036-102-240
036-102-240/260
036-102-490
PAD
R-1/S-17/DR
C1/S-7/DR
RM-1/L
BK-36 pg 9
BK-36 pg 6
BK-36 pg 7
BK-36 pg 11
BK-36 pg 8
See Rural Zoning Maps, Sheets #8 & #12.
PARCEL MAP VOL 48/85
AMENDED & SUPP MAP OF MONTARA RSM 5/35
PARCEL MAP VOL 29/25
9.2
REV CHG 2, 6/85

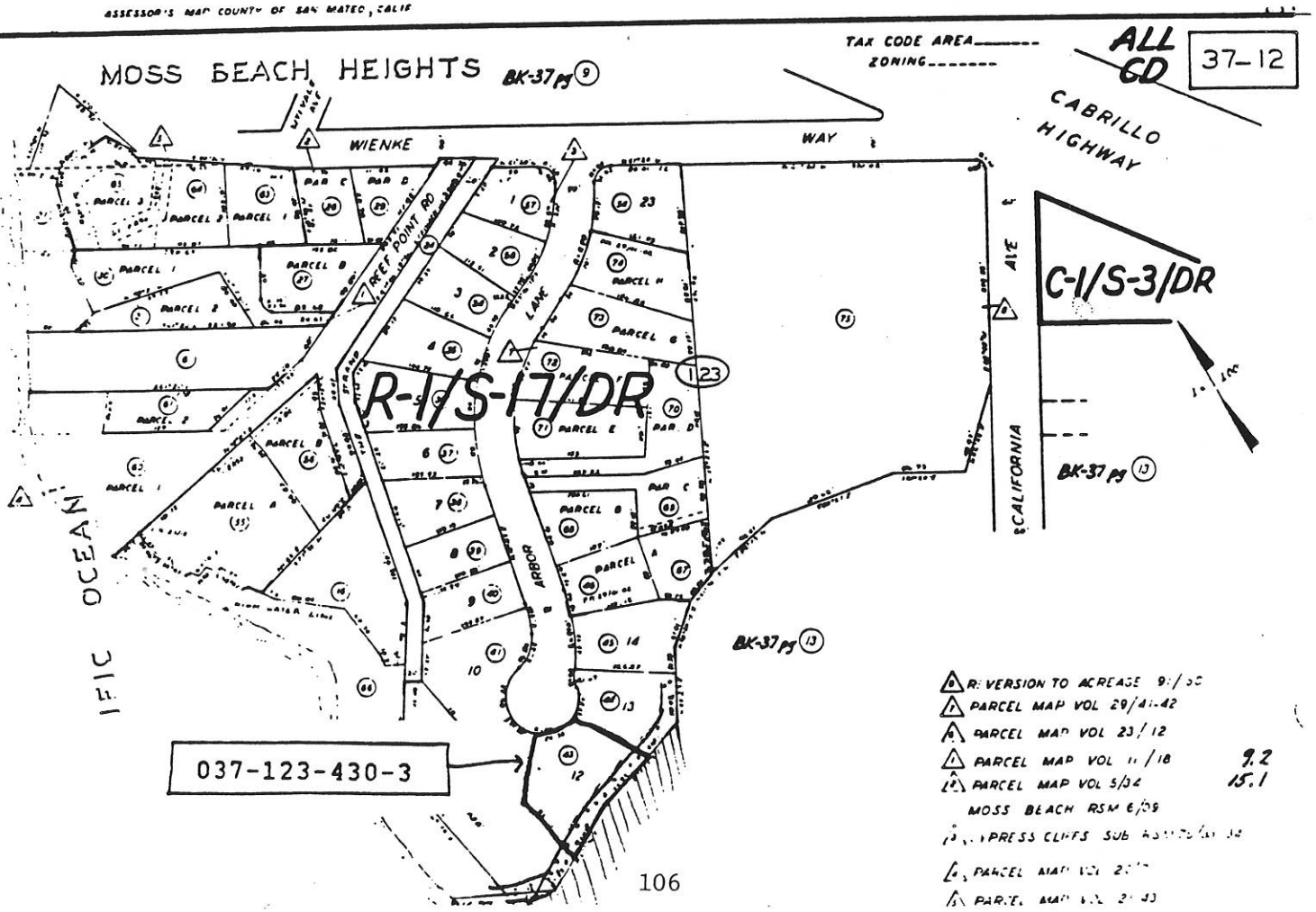

TAX CODE AREA
ZONING
ALL
CD
36-11
036-111-230
036-111-240
036-111-250
036-111-250
036-111-260
HARTE ST.
DATE ST.
CEDAR ST.
PORTOLA
IRVING ST.
HILL ST.
JORDAN ST.
BK-36 PG 10
BK-36 PG 28
BK-37 PG 4
R-1/S-17/DR
PAD
RM-CZ
See Rural Zoning Maps, Sheets #8 & #12
AMENDED & SUPP MAP OF MONTARA RSM 5/35
REV CHG 2, 6/85
9.2
ASSESSOR'S MAP COUNTY OF SAN MATEO, CALIF
See Rural Zoning Maps, Sheet #8
PAD
BK-36 PG 32
TAX CODE AREA
ZONING
ALL
CD
36-12
TAMARIND ST.
AGACIA ST.
BIRCH ST.
CEDAR ST.
FRANKLIN ST.
EDISON ST.
DRAKE ST.
ALDER
CORONA
ASPEN
121
122
123
124
125
126
127
128
129
R-1/S-17/DR
RM-CZ
See Rural Zoning Maps, Sheet #8
BK-36 PG 7
BK-36 PG 15
BK-36 PG 16
9.2
10.6
AMEND & SUPP MAP OF MONTARA RSM 5/35
PARCEL MAP VOL 15/33
ASSESSOR'S MAP COUNTY OF SAN MATEO, CALIF

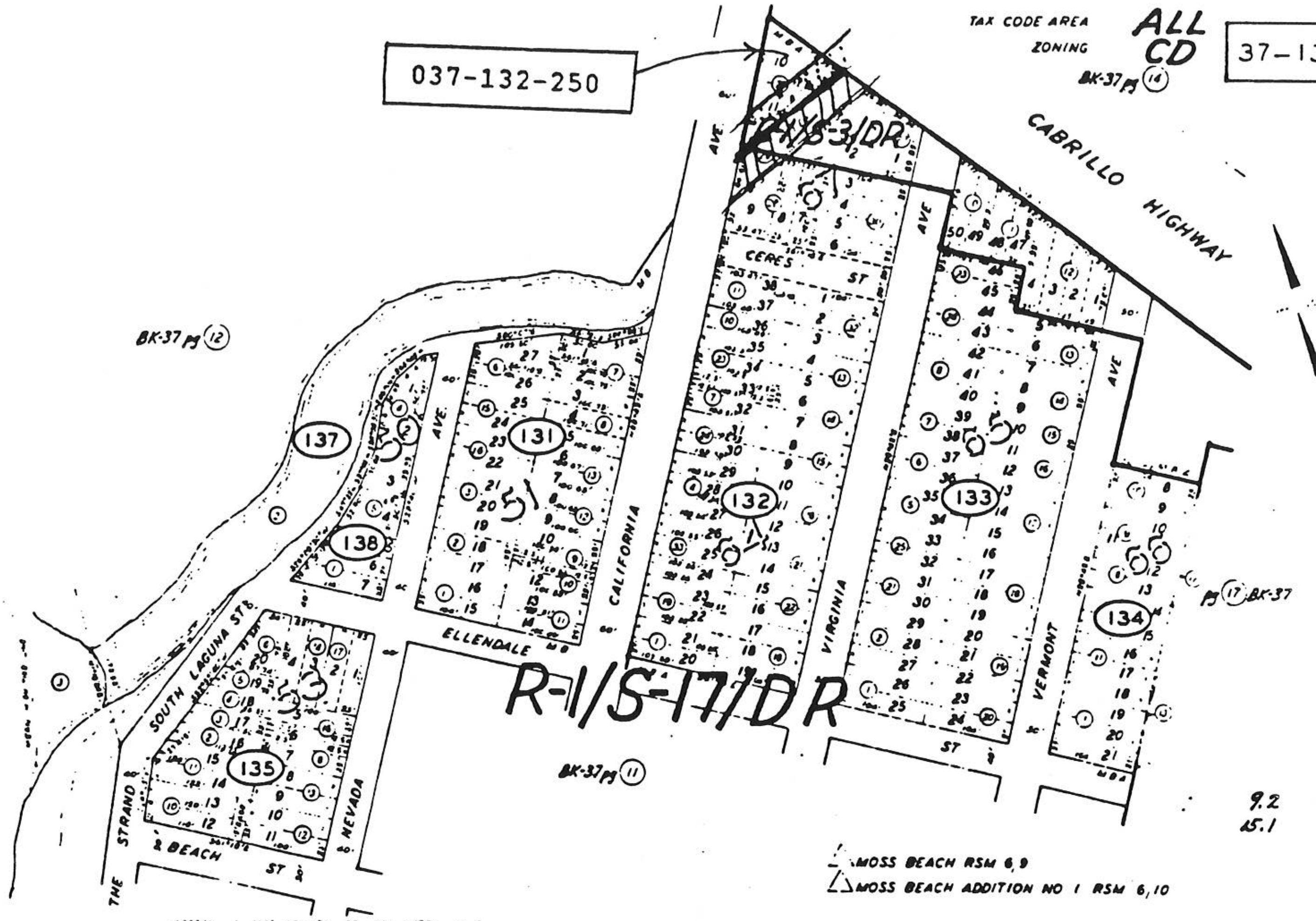

TAX CODE AREA
ALL CD
36-15
BK-36 pg 16
EDISON
ST.
CEDAR
DATE
ELM
FIR
FRANKLIN
151
152
153
154
R-1/S-17/DR
RM-CZ
See Rural Zoning Maps, Sheet 8
PAD
HALF MOON BAY COLONY
BK-36 pg 12
BK-36 pg 7
BK-36 pg 8
AMEND & SUPP MAP OF MONTARA RSM 5
PARCEL MAP VOL 50/61
030-161-300
030-161-310
030-161-320
030-161-330
030-161-340
030-161-350
SECOND
DRAKE
DRAKE ST
EDISON ST
162
163
164
R-1/S-17/DR
RM-CZ
BK-36 pg 15
AMEND & SUPP MAP OF MONTARA RSM 5

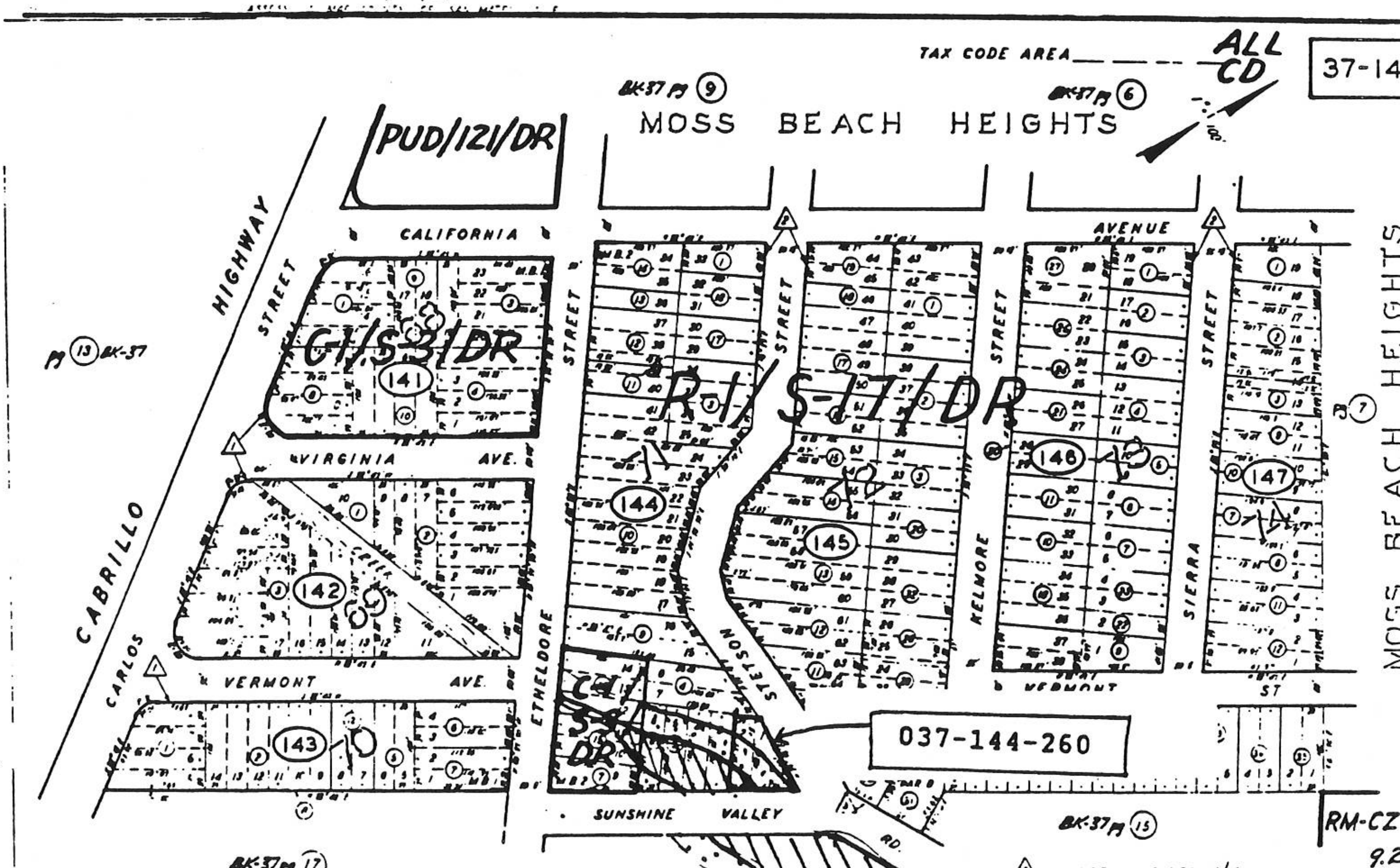

ALL CD
37-1
TAX CODE AREA
PACIFIC OCEAN
HIGHWAY
CABRILLO
FARALLONE AVE.
AVENUE
12TH ST.
13TH ST.
14TH ST.
12TH STREET
13TH STREET
14TH STREET
15TH STREET
012
013
014
015
016
011
R-1/S-17/DR
PAD
See Rural Zoning Maps, Sheets #8 #12
037-015-260
CCR/DR
BK-37 pg 31
FARALLON HEIGHTS
EAST
PARCEL MAP VOL 17/44
PARCEL MAP VOL 17/11
PARCEL MAP VOL 15/32
PARCEL MAP VOL 15/29
PARCEL MAP VOL 10/13
FARALLONE CITY RESUB. RSM 6/2
9.2
ALL CD
37-2
037-021-060
Creek
021
RM-CZ
See Rural Zoning Maps, Sheet #12
R-1/S-17/DR (5 acres)
and R-3-A/S-5/DR (6 acres)
See Zoning Ordinance Section # 6328.21, Policy 3.19
022
039
CABRILLO
HIGHWAY
037-022-055
RM-CZ/DR
See Rural Zoning Maps, Sheet #12
R-1/S-17/DR
BUENA VISTA ST
SIERRA ST
LINCOLN
REVERSION TO ACREAGE RSM 6/28-29
FARALLON HEIGHTS RSM 6/2
9.2
REV CHG 2, 6/85

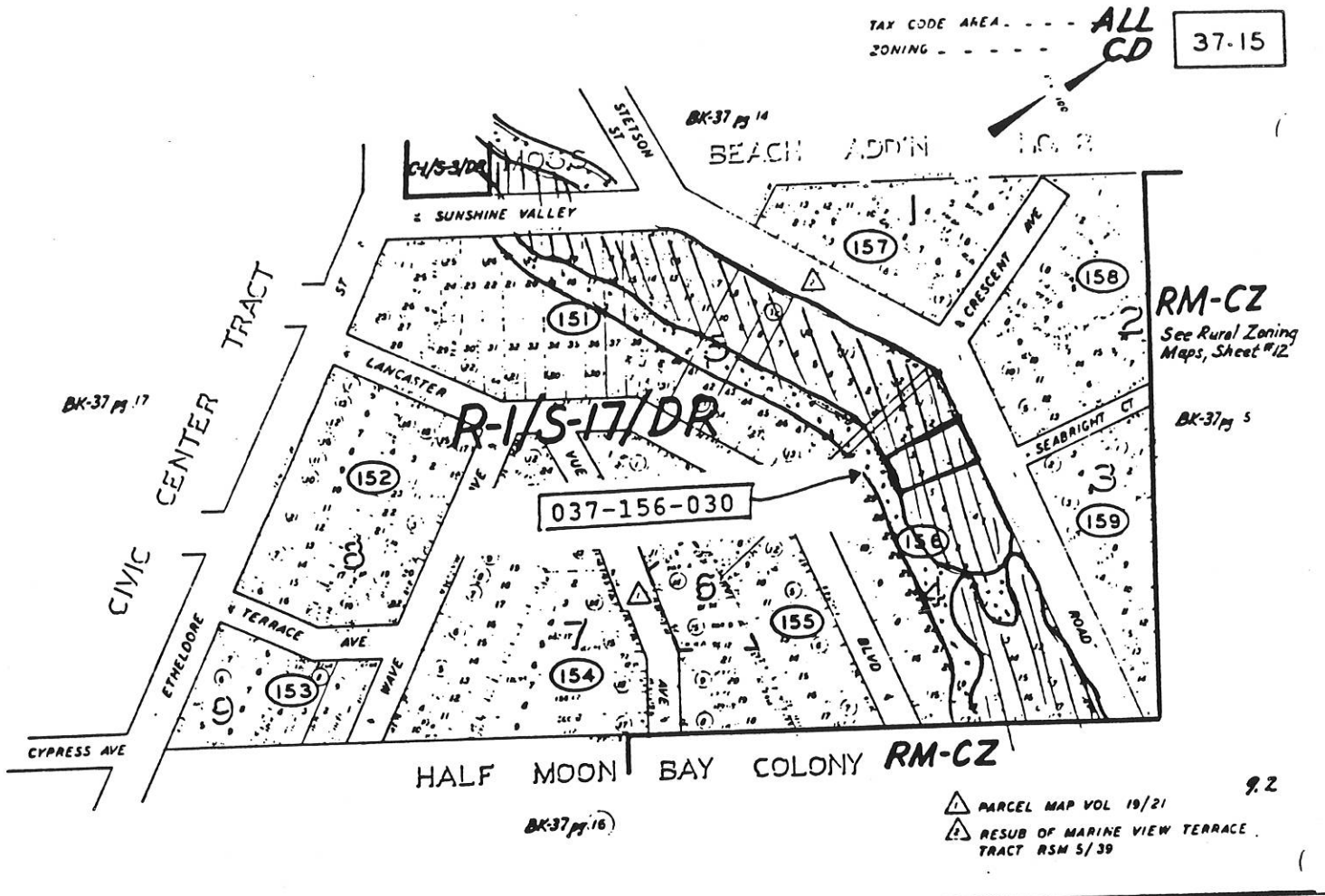

TAX CODE AREA
ZONING
ALL CD
37-7
MONTARA HEIGHTS
CALIF AVE
LOMA VISTA ST
BK-37 pg 3
LINDA VISTA ST
BK-36
31
071
20
074
21
LOMA VISTA ST
RM-CZ
See Rural Zoning Maps, Sheet # 12
RM-CZ
HALF MOON BAY COLONY
BK-37 pg 5
TIERRA ALTA ST
BK-37 pg 6
072
23
R-1/S-17/DR
075
22
BUENA VISTA ST
CALIFORNIA ST
VERMONT ST
073
24
075
076
BK-37 pg 14
MOSS BEACH ADDITION NO. 2
MOSS BEACH HEIGHTS RSM 6/8
9.2
ASSESSOR'S MAP COUNTY OF SAN MATEO CA
TAX CODE AREA
ALL CD
37-8
R-1/S-17/DR & R-3-A/S-5/DR
Bk 37 pg 2
Bk-37 pg 6
081
33
STETSON AVE
KELMORE ST
PEARL ST
083
34
STREET
SIERRA
084
CARLOS
088
Pg 31 Bk-37
Bk-37 pg 9
STREET
CABRILLO HIGHWAY
R-1/S-17/DR
RM-CZ/DR
See Rural Zoning Maps, Sheet # 12
085
086
037-086-160
037-086-170
RM-CZ/DR
See Rural Zoning Maps, Sheet # 12
JULIANA AVE
PACIFIC OCEAN
REV CHG 2, 6/8
MOSS BEACH HEIGHTS RSM 6/8

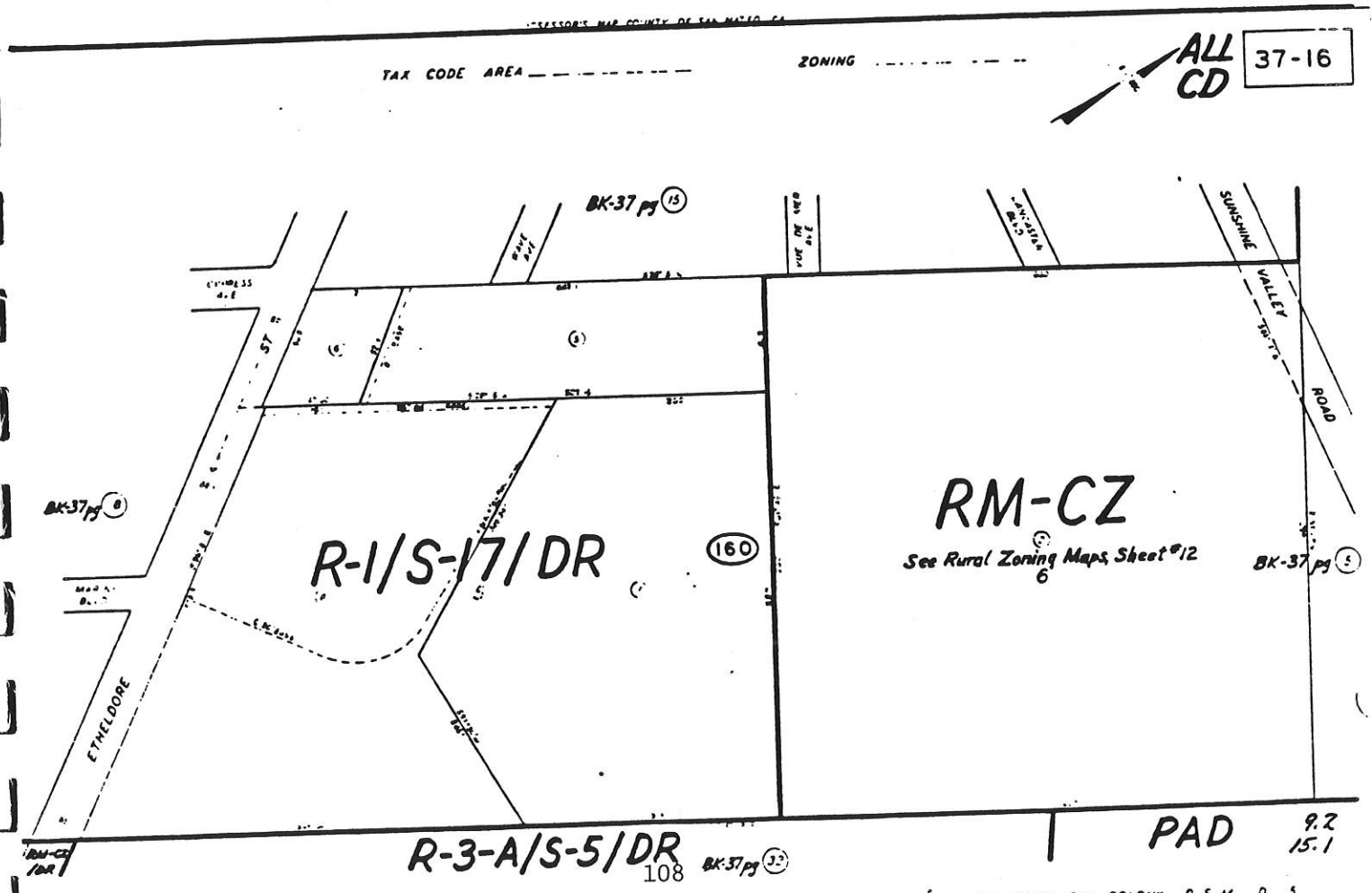

TAX CODE AREA
ZONING
ALL
CD
37-11
BK-37 pg 13
ELLENDALE
AVE
117
118
119
116
ST
BK-37 pg 20
PACIFIC OCEAN
BEACH
STRAND
111
R-1/S-17/DR
RM-CZ/DR
037-112-040/070
VIRGINIA
VERMONT
115
NORTH
LAKE
BK-37 pg 10
RM-CZ/DR
See Rural Zoning Maps, Sheet #12
1 PARCEL MAP VOL 11/45
2 MOSS BEACH ADDITION NO 1 RSM 6/10
3 MOSS BEACH RSM 6/9
4 PARCEL MAP VOL 16/2
15.1
ASSESSOR'S MAP COUNTY OF SAN MATEO, CALIF

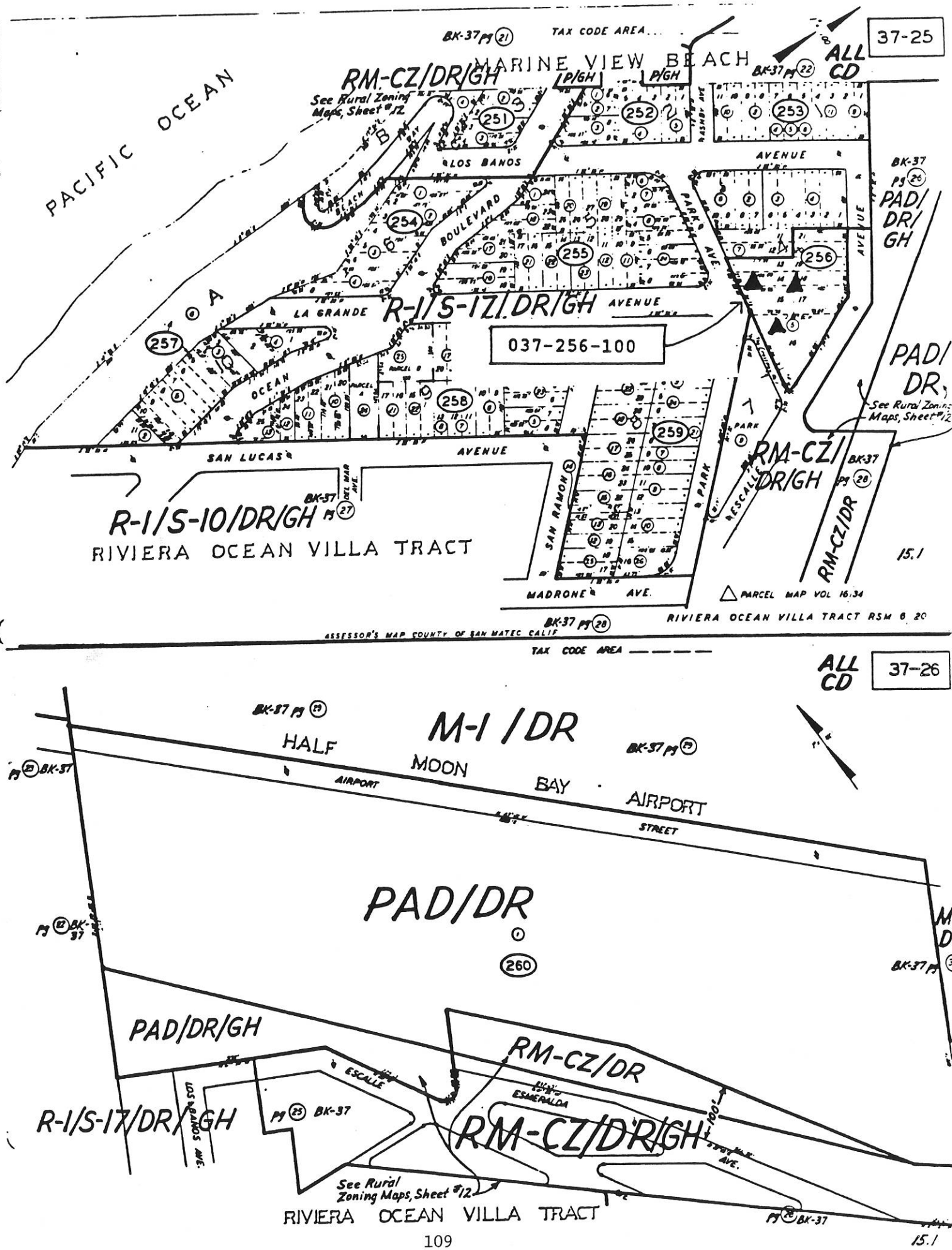

TAX CODE AREA
ZONING
ALL
CD
37-12
MOSS BEACH HEIGHTS
BK-37 pg 9
WIENKE
WAY
CABRILLO
HIGHWAY
REEF POINT RD
LAKE
ABBOTT
AVE
CALIFORNIA
123
R-1/S-17/DR
C-1/S-3/DR
BK-37 pg 13
OCEAN
037-123-430-3
BK-37 pg 13
0 REVERSION TO ACREAGE 9/30
1 PARCEL MAP VOL 29/41-42
2 PARCEL MAP VOL 23/12
3 PARCEL MAP VOL 11/18
9.2
4 PARCEL MAP VOL 5/34
15.1
MOSS BEACH RSM 6/09

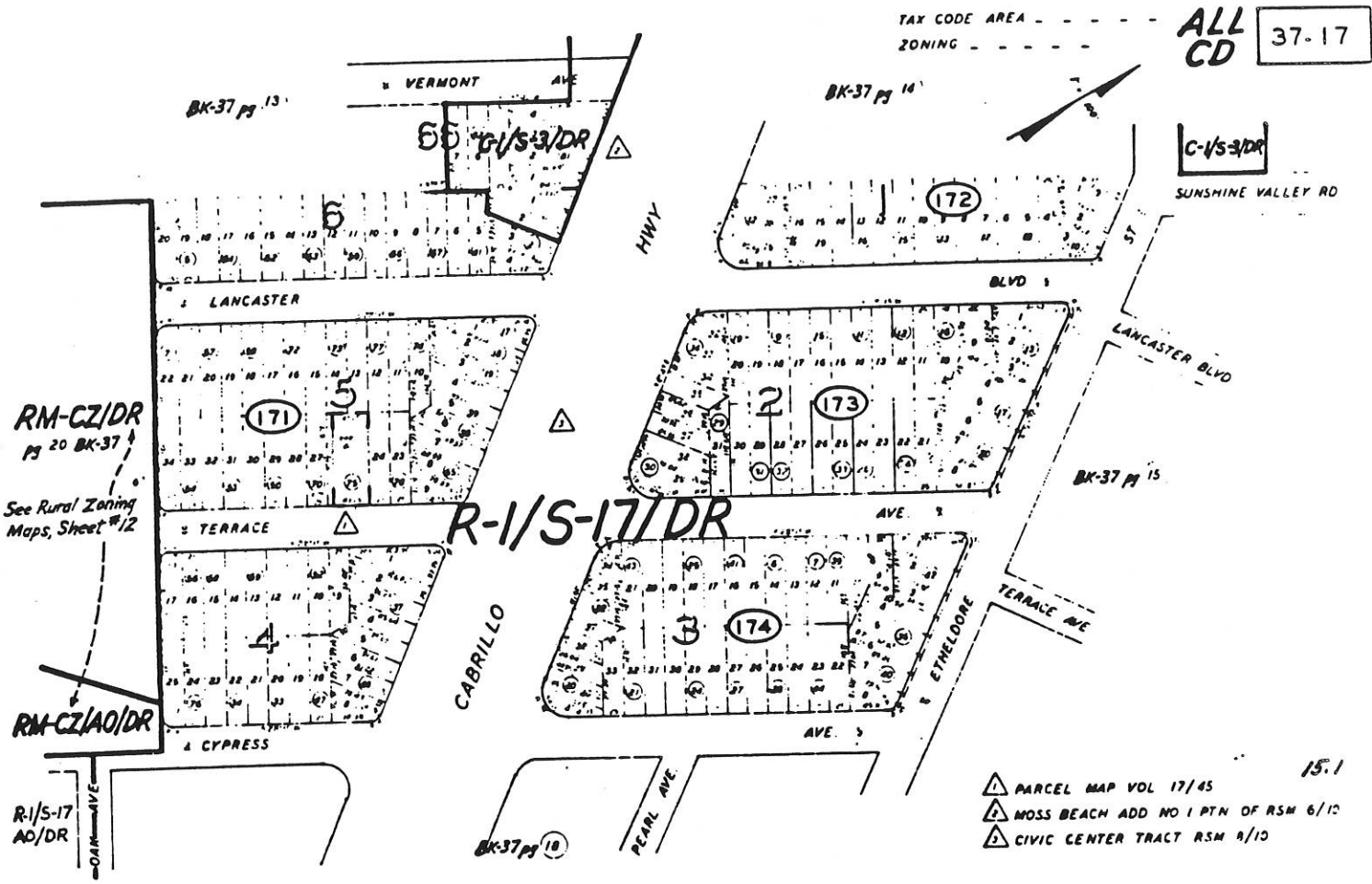

037-132-250
TAX CODE AREA
ZONING
ALL
CD
CABRILLO HIGHWAY
C-1/S-3/DR
CERES ST
CALIFORNIA
VIRGINIA
VERMONT
ELLENDALE
SOUTH LAGUNA STS.
NEVADA
BEACH ST
THE STRAND
R-1/S-17/DR
MOSS BEACH RSM 6,9
MOSS BEACH ADDITION NO 1 RSM 6,10

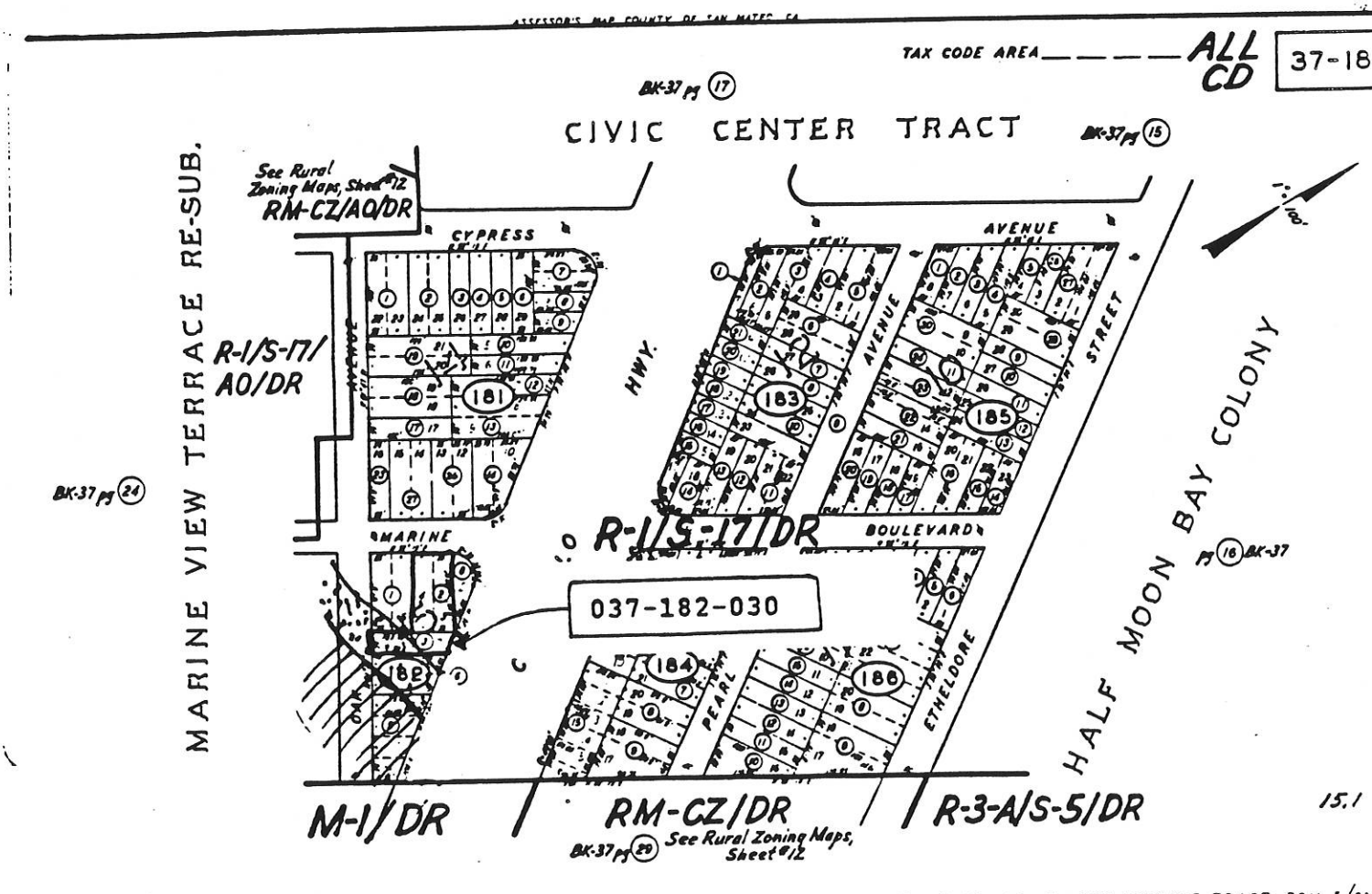

TAX CODE AREA
ALL
CD
MOSS BEACH HEIGHTS
PUD/121/DR
CALIFORNIA
AVENUE
CABRILLO HIGHWAY
C-1/S-3/DR
VIRGINIA AVE.
R-1/S-17/DR
VERMONT AVE.
CARLOS STREET
ETHELDORE STREET
STETSON STREET
KELMORE STREET
SIERRA STREET
037-144-260
SUNSHINE VALLEY RD.
RM-CZ
PARCEL MAP VOL 11/4
MOSS BEACH ADDITION NO 1
MOSS BEACH ADDITION NO 2
ASSESSOR'S MAP COUNTY OF SAN MATEO, CALIF.


TAX CODE AREA - - - - ALL
ZONING - - - - - - CD
37-15
BK-37 pg 14
BEACH ADDN
STETSON ST
C-1/S-3/DR
MOSS
SUNSHINE VALLEY
157
158
CRESCENT AVE
RM-CZ
See Rural Zoning Maps, Sheet #12
BK-37 pg 17
CIVIC CENTER TRACT
LANCASTER
R-1/S-17/DR
151
152
037-156-030
156
159
SEABRIGHT CT
BK-37 pg 5
TERRACE AVE
ETHELDORE
153
154
155
WAVE
BLVD
ROAD
CYPRESS AVE
HALF MOON BAY COLONY
RM-CZ
9.2
BK-37 pg 16
1 PARCEL MAP VOL 19/21
2 RESUB OF MARINE VIEW TERRACE TRACT RSM 5/39


TAX CODE AREA
ZONING
ALL
CD
37-16
BK-37 pg 15
SUNSHINE VALLEY ROAD
BK-37 pg 8
R-1/S-17/DR
160
RM-CZ
See Rural Zoning Maps, Sheet #12
BK-37 pg 5
ETHELDORE
R-3-A/S-5/DR
BK-37 pg 33
PAD
9.2
15.1
HALF MOON BAY COLONY


37-25
ALL CD
MARINE VIEW BEACH
PACIFIC OCEAN
RM-CZ/DR/GH
See Rural Zoning Maps, Sheet #12
P/GH
P/GH
BK-37 pg 21
BK-37 pg 22
TAX CODE AREA
LOS BANOS
BOULEVARD
AVENUE
PARK AVE
ASHBY AVE
LA GRANDE
OCEAN
R-1/S-17/DR/GH
037-256-100
SAN LUCAS
AVENUE
DEL MAR AVE.
R-1/S-10/DR/GH
BK-37 pg 27
RIVIERA OCEAN VILLA TRACT
SAN RAMON
PARK
ESCALLE
RM-CZ/DR/GH
BK-37 pg 28
RM-CZ/DR
PAD/DR/GH
See Rural Zoning Maps, Sheet #12
MADRONE AVE.
PARCEL MAP VOL 16/34
RIVIERA OCEAN VILLA TRACT RSM 6 20
ASSESSOR'S MAP COUNTY OF SAN MATEO CALIF
15.1
37-26
M-1/DR
HALF MOON BAY AIRPORT
AIRPORT STREET
PAD/DR
PAD/DR/GH
RM-CZ/DR
ESCALLE
ESMERALDA
RM-CZ/DR/GH
R-1/S-17/DR/GH
LOS BANOS AVE.
See Rural Zoning Maps, Sheet #12
RIVIERA OCEAN VILLA TRACT
CABRILLO UNIFIED SCHOOL DISTRICT


TAX CODE AREA
ZONING
ALL CD
37-17
VERMONT AVE
BK-37 pg 13
BK-37 pg 14
C-1/S-3/DR
SUNSHINE VALLEY RD
HWY
LANCASTER
LANCASTER BLVD
BLVD
ST
RM-CZ/DR
pg 20 BK-37
See Rural Zoning Maps, Sheet #12
TERRACE
R-1/S-17/DR
AVE
BK-37 pg 15
CABRILLO
ETHELDORE
TERRACE AVE
RM-CZ/AO/DR
CYPRESS
R-1/S-17 AO/DR
OAK AVE
BK-37 pg 18
PEARL AVE
15.1
PARCEL MAP VOL 17/45
MOSS BEACH ADD NO 1 PTN OF RSM 6/10
CIVIC CENTER TRACT RSM 8/10
ASSESSOR'S MAP COUNTY OF SAN MATEO CA


TAX CODE AREA
ALL CD
37-18
BK-37 pg 17
CIVIC CENTER TRACT
BK-37 pg 15
See Rural Zoning Maps, Sheet #12
RM-CZ/AO/DR
CYPRESS
AVENUE
MARINE VIEW TERRACE RE-SUB.
R-1/S-17/ AO/DR
HWY.
AVENUE
STREET
HALF MOON BAY COLONY
BK-37 pg 24
MARINE
R-1/S-17/DR
BOULEVARD
037-182-030
PEARL
ETHELDORE
BK-37 pg 18
M-1/DR
RM-CZ/DR
R-3-A/S-5/DR
BK-37 pg 29
See Rural Zoning Maps, Sheet #12
15.1
RE-SUB OF MARINE VIEW TERRACE TRACT RSM 5/39
ASSESSOR'S MAP COUNTY OF SAN MATEO CALIF

APPENDIX B

Findings: Strawberry Parcel Survey, July 25, 1989

Dr. Royce Bringhurst, University of California at Davis

FINDINGS: STRAWBERRY PARCEL SURVEY, JULY 25, 1989

On July 25, 1989, Dr. Royce Bringhurst, University of California at Davis, surveyed the strawberry populations on the parcels identified in the Specific Parcel Inventory. As a result of this field reconnaissance, no further survey or evaluation will be necessary for any of the parcels. Other findings, including required mitigation measures to preserve strawberry populations at several parcels, are summarized below.

Parcel Number	Survey Findings and Mitigation Requirements
036-014-130 036-024-150 036-053-100/110/90	Strawberries are typical of this area; loss will not be a significant impact.
036-055-230 036-055-240 036-058-130 036-102-240 036-102-240/260 036-102-490	Any banks or cuts to be landscaped using strawberry plants collected from onsite prior to site preparation and construction. Provision should be made for collecting and holding strawberries in flats during construction period.
036-104-400 036-104-410	Site recently cleared; strawberries appear typical; no significant impacts expected.
036-132-060 036-132-080/090 036-132-210 036-132-220 036-161-300 036-161-310 036-161-320 037-012-090 037-014-040 (Lots 12-15)	Strawberries appear to be typical for area; no significant impacts expected.
037-021-060	Strawberry plants collected from onsite should be used in landscape plantings. Provision should be made for collecting strawberries and holding them in flats or pots during construction.

037-022-050	Site recently developed. Strawberry plants are becoming re-established on portions of the cleared land and should be included in landscape plantings for this parcel.
037-096-250	Cuts and banks on this steep site should be landscaped using strawberry plants collected onsite prior to construction. Provision should be made to collect plants and hold them in pots or flats during construction.
037-112-040/070	Unusual 4- and 5-leaved strawberry plants onsite should be preserved by transplanting or incorporating into landscape plantings, or both. Provision should be made for collecting strawberries prior to site preparation and for holding in pots or flats during construction.
037-256-100	If existing plants along the steep slope of the Seal Cove fault on this parcel are preserved during development, then no additional mitigation measures to preserve this population on this site will be necessary.

APPENDIX C

Findings: San Francisco Garter Snake Survey, August 2, 1989

Dr. Samuel McGinnis

FINDINGS: SAN FRANCISCO GARTER SNAKE SURVEY
AUGUST 2, 1989

FINDINGS

On August 2, 1989, Dr. Samuel McGinnis and Diane Renshaw conducted a preliminary survey of the old irrigation ponds in the Seal Cove neighborhood and nearby upland areas. The purpose of this survey was to determine the suitability of these areas as habitat for the endangered San Francisco garter snake.

Both the northern and southern ponds contained standing water at the time of the survey. Adult, larval, and metamorphosing tree frogs were abundant in the southern pond and presumably in the northern pond as well, although the water in this less accessible northern pond was not closely examined on this preliminary survey. Two living and two dead coast garter snakes, Thamnophis elegans terrestris, were observed at the southern pond. Both ponds and surrounding banks were well vegetated, with willows and bulrushes growing densely to the water's edge in the northern pond.

Using various habitat parameters, Dr. McGinnis has developed a ranking system specifically to evaluate San Francisco garter snake habitat (McGinnis, in press), with ideal snake habitat rated 12 and completely unsuitable habitat rated 0. Based on this system, both ponds in the Seal Cove neighborhood are good to excellent habitat, rated 10 (southern pond) and 11 (northern pond).

Proposed development parcels on the upland areas to the north and west of the ponds were surveyed for potential as upland habitat. Most of these sites appear to offer possible to good potential upland habitat, as listed below. Sites with relatively high disturbance or isolated by probable barriers to snake travel are not likely snake habitat, as noted below.

CONCLUSIONS AND RECOMMENDATIONS

Development of any parcel used as upland habitat by San Francisco garter snakes could have significant adverse impacts. This preliminary survey found good to excellent potential habitat at the ponds and uncovered no evidence to preclude the presence of the species at this site. A more rigorous, site-specific survey should be done at each of the parcels with potential upland habitat, listed below, prior to any site preparation or development, to determine whether or not snakes are actually present and using that habitat.

San Francisco garter snakes typically move into small mammal burrows in upland areas for winter hibernation. Surveys of upland use are ideally conducted during periods of maximum snake activity: in the fall (August or September through November) as the snakes leave the ponds and move into the surrounding upland areas, and/or in the spring as the weather warms and they return to their pond breeding territory. This survey should use traplines, drift fences, and/or other appropriate field techniques to evaluate the presence of the San Francisco garter snake. The survey must be conducted by a qualified herpetologist, and survey methodology, findings, and recommended mitigations coordinated with the Endangered Species Office, USFWS, Sacramento, and with California Department of Fish and Game.

On these upland habitats, where snake densities may be relatively low, a two to three year trapping study may be required by state and federal agencies to support negative evidence and a conclusion that there are no San Francisco garter snakes present at a given site. Surveys that do find San Francisco garter snakes may be of shorter duration, depending on the findings and recommendations of the USFWS Endangered Species Office and California Department of Fish and Game.

Ideally, the irrigation ponds should be surveyed as well at this time. If there are no San Francisco garter snakes at these ponds, then no upland surveys would be necessary. However, neither of the irrigation ponds, which are the primary potential habitat for the San Francisco garter snake at this site, are on parcels included in this project, and a survey of this habitat cannot be mandated by this EIR. When development plans are proposed for the pond parcels, however, a San Francisco garter snake survey meeting the requirements of the USFWS Endangered Species Office, Sacramento, and California Department of Fish and Game should be conducted. It is expected that state and federal agencies will require this survey to be of at least one year's duration.

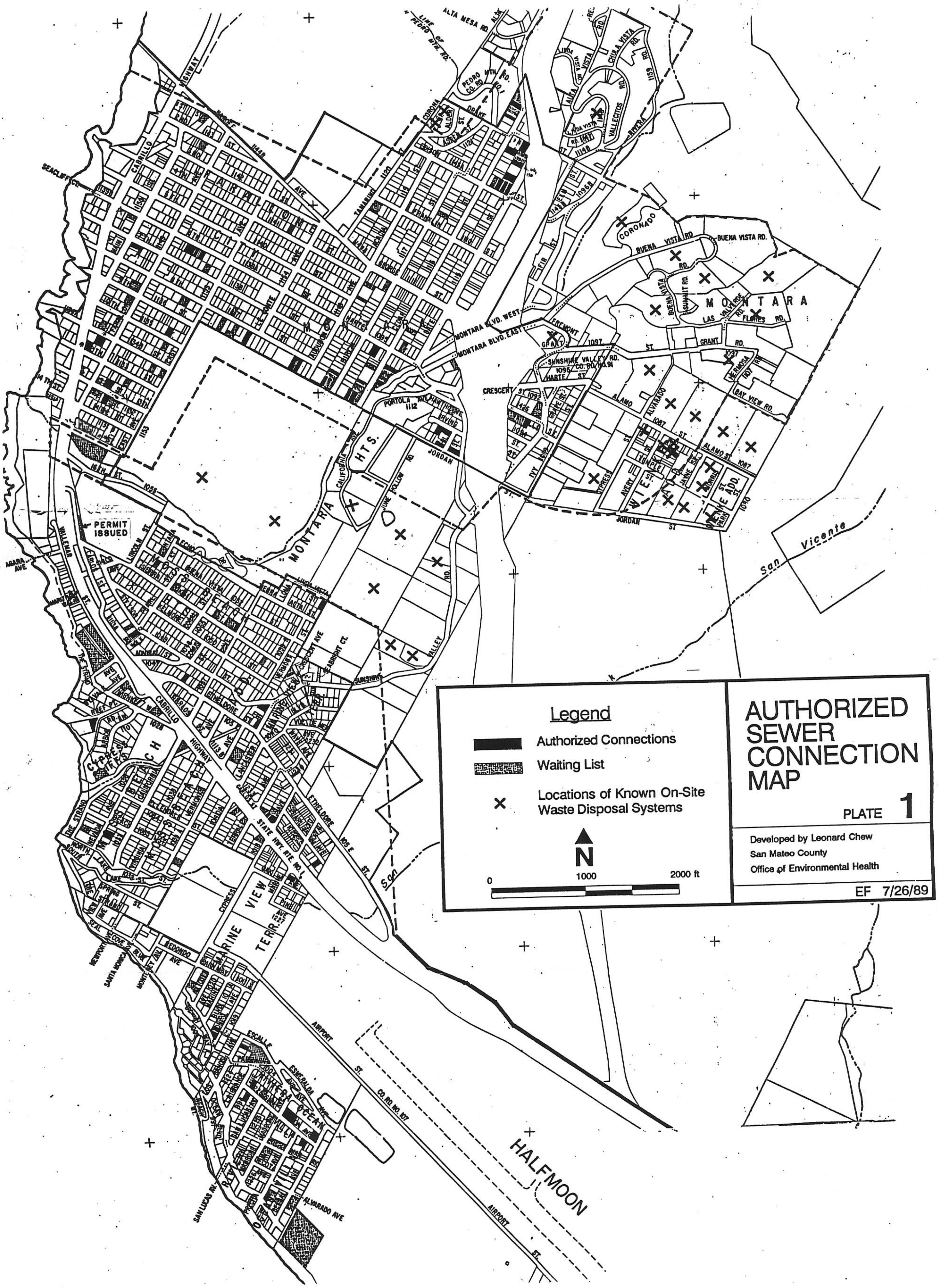
Parcels requiring upland surveys are specified below:

Parcel Number	Survey Findings and Mitigation Requirements
037-256-100	Good potential habitat; survey required, as discussed above.
037-277-050/12	Possible habitat; survey required, as discussed above.
037-278-010' 037-278-070 037-278-130	These three sites are disturbed and/or isolated from pond habitat. No survey required.
037-279-060 037-284-060/90/110 037-284-070/100 037-285-120/130	Possible habitat; survey required, as discussed above.
037-287-03 037-287-070 037-300-010	Good potential habitat; survey required, as discussed above.

Reference: McGinnis, Samuel. In press. The natural history and distribution of the San Francisco garter snake. Endangered Species publication series, California Department of Fish and Game, Sacramento.

APPENDIX D

Authorized Sewer Connection Map
(Revised)


AUTHORIZED
SEWER
CONNECTION
MAP
PLATE 1
Developed by Leonard Chew
San Mateo County
Office of Environmental Health
EF 7/26/89
Legend
Authorized Connections
Waiting List
Locations of Known On-Site Waste Disposal Systems
N
0
1000
2000 ft
MONTARA
HALFMOON
San Vicente
PERMIT ISSUED
HIGHWAY
CABRILLO HIGHWAY
STATE HWY. RTE. NO. 1
MONTARA BLVD. WEST
MONTARA BLVD. EAST
MARINE VIEW TERR.
AIRPORT ST.
CO. RD. NO. 107
ALTA MESA RD.
BUENA VISTA RD.
CORONADO
FREMONT
CRESCENT ST.
JORDAN ST
VALLEY
PORTOLA AVE
CALIFORNIA
HTS.
ALVARADO AVE
SAN LUCAS AV.
ESMERALDA
ESCALLE
REDONDO
THE STRAND
SEACLIFF CT.

APPENDIX E

Survey Requirements and Mitigation Recommendations:

- **Riparian Habitat**
- **Wetland Habitat**
- **San Francisco Garter Snake**
- **California Wild Strawberries**
- **San Francisco Gumplant and Hickman's Cinquefoil**
- **Monarch Butterflies**

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS
RIPARIAN HABITAT

Riparian areas are protected as sensitive habitats under Section 7 of the San Mateo County LCP, which specifies that all permitted uses comply with U.S. Fish and Wildlife and California Department of Fish and Game regulations. The LCP gives a specific definition of riparian corridors and provides for establishment of a buffer zone on either side of a vegetated and/or non-vegetated riparian corridor.

Parcels identified in the Specific Parcel Inventory contain apparent riparian vegetation or lie sufficiently close to an apparent riparian corridor to be affected by a buffer zone. Prior to development, landowners of these designated parcels should arrange for a qualified professional to determine if the conditions on their parcel meet the LCP definition of riparian corridor; to delineate the riparian corridor and buffer zone boundaries. Mitigation measures to control erosion, sedimentations, revegetate with native riparian plants, and so on to permit the project to conform with LCP performance standards should be determined in consultation with San Mateo County Planning.

Parcels requiring riparian surveys prior to development are listed below. This survey has no seasonal requirements and may be done at any time of the year.

036-042-180
036-085-210
036-111-230
036-111-240
036-111-250 (lots 19, 20)
036-111-250 (lots 21, 22)
036-111-260 *
037-015-260
037-121-260
037-123-430-3
037-132-250
037-144-260
037-156-030
037-182-030

* See revegetation mitigation recommended for this parcel on Specific Parcel Inventory and Explanatory Notes.

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS: WETLAND HABITAT

Wetland areas are protected as sensitive habitats under Section 7 of the San Mateo County LCP, which specifies that all permitted uses comply with U.S. Fish and Wildlife and California Department of Fish and Game regulations. The LCP gives a specific definition of wetlands and provides for establishment of a buffer zone extending landward from the outermost line of wetland vegetation. In addition, the U.S. Army Corps of Engineers has jurisdiction over activities affecting certain wetlands by authority of Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act. Corps jurisdiction is determined on a case-by-case basis. In general, fill in wetlands less than one acre in extent is permitted under a nationwide exemption to Section 404; larger projects require more detailed consideration.

One small wetland was identified that might be affected by this project. Exact determination of the boundaries needs to be made by a qualified professional, using vegetation and soils criteria presented in Section 7 of the LCP. When the wetland has been delineated and described, the Corps of Engineers should be consulted to determine if they will claim jurisdiction over this wetland.

Although soils criteria can be used to define wetlands at any time of the year, emergent wetland vegetation is most easily identified during the late winter and early spring. Wetland surveys should be ideally conducted in the late winter and early spring.

Parcels identified in the Specific Parcel inventory lie sufficiently close to the wetland to be affected by a buffer zone, and site preparation on these sites may cause erosion and sedimentation into the wetland. In addition, access to most of these sites as currently planned will be provided by an extension of Date Street, which as planned would require fill and grading within the wetland itself.

Prior to development, parcel owners should individually or collectively determine: the wetland boundaries; wetland buffer boundaries; adverse impacts site development may have, including impacts of necessary access; and possible Corps jurisdiction. Mitigation measures should be developed in consultation with San Mateo County planning, and, if appropriate, the Corps of Engineers. Conformance with LCP performance standards should be determined in consultation with San Mateo County Planning.

Parcels requiring wetland surveys prior to development are listed below.

036-161-300
036-161-310
036-161-320
036-161-330
036-161-340
036-161-350

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS: SAN FRANCISCO GARTER SNAKE

The San Francisco garter snake is listed as Endangered on the California and Federal Endangered Species lists, and is afforded protection by state and federal law, which require mitigations for adverse impacts to this species. Mitigations must be arrived at in consultation with California Department of Fish and Game and U.S. Fish and Wildlife Service. In addition, this species is designated on the Sensitive Habitats Map of San Mateo County and afforded protection under Policy 7.32 of the LCP.

Historic habitat for this snake exists in the Seal Cove area, but the current status of the population is unknown. During late July or early August 1989, Dr. Samuel McGinnis will conduct a preliminary evaluation of the ponds west of Half Moon Bay airport and parcels in this project that may provide upland habitat for the San Francisco garter snake. He will make recommendations for investigations at parcels that appear, in his opinion, to have potential habitat. A summary of his findings will be attached to the EIR, specifying parcels which may require site-specific survey work, and outlining recommended procedures for spring, summer or fall surveys, as appropriate for each survey site.

Parcels identified as potential San Francisco garter snake habitat are listed below. These parcel owners should consult Dr. McGinnis' findings to determine if a survey is required for their parcel prior to development.

037-256-100
037-277-050/12
037-278-010
037-278-070
037-278-130
037-279-060
037-284-060/90/110
037-285-070/100
037-285-120/130
037-287-03
037-287-070
037-300-010

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS: CALIFORNIA WILD STRAWBERRIES

California wild strawberries grow only in the zone of dense summer fogs, and are a source of valuable genetic material for commercial strawberry breeders. Strawberries are extended protection under the San Mateo County LCP, Section 7.49. Parcels containing wild strawberry material are identified in the Specific Parcel Inventory.

Determination of the value of any given population of strawberries must be done by a qualified plant geneticist. Dr Royce Bringhurst, of U.C. Davis, will conduct a preliminary survey of designated strawberry parcels in July, 1989. He will identify parcels that have potentially valuable strawberry plants and will make recommendations if further survey work or investigation is necessary. A summary of his findings will be attached to the EIR, specifying parcels which may require site-specific survey work and outlining recommended procedures for field and laboratory analysis.

Parcels identified as containing California wild strawberries are listed below. These parcel owners should consult Dr. Bringhurst's findings to determine if a survey or other analysis is required for their parcel prior to development. If valuable strawberry material is identified, potential adverse impacts may possibly be mitigated by transplantation to preserve the genetic material.

036-014-130
036-024-150
036-053-100/110/90
036-055-230
036-055-240
036-058-130
036-102-240
036-102-240/260
036-102-490
036-104-400
036-104-410
036-132-060
036-132-080/090
036-132-210
036-132-220
037-014-040
037-021-060
037-022-050
037-096-250
037-112-040/070
037-256-100
037-112-040/070
037-256-100

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS: SAN FRANCISCO GUMPLANT AND HICKMAN'S CINQUEFOIL

Hickman's cinquefoil and San Francisco gumplant are both Category 2 candidates for listing under the Federal Endangered Species Act, but are not at this time legally protected by that act. Hickman's cinquefoil is listed as Endangered on the California Endangered Species list; both species are listed in the CNPS inventory and are considered by CDFG to be protected under CEQA. In addition, both plants are designated on the Sensitive Habitat Map of San Mateo County and afforded protection under Policy 7.43 of the LCP.

Prior to development, parcel owners are responsible for determining if either or both of these plants occur on their parcel. Site-specific surveys for these plants should be conducted by a qualified expert during the optimum blooming period for each plant, as determined by herbarium records, published information, consultation with knowledgeable persons, and/or personal experience. Published information indicates that Hickman's cinquefoil can be expected to bloom from April to August and San Francisco gumplant from July or August through September, depending on location.

If either plant is found, appropriate mitigation measures should be determined in consultation with California Department of Fish and Game and San Mateo Planning.

Parcels listed below were identified as containing habitat that may be suitable for both species of plants, and site-specific surveys should address both species.

037-086-160
037-086-170
037-112-040/070
037-256-100

SURVEY REQUIREMENTS AND MITIGATION RECOMMENDATIONS: MONARCH BUTTERFLIES

Monarch butterflies are conspicuous insects that travel through the San Mateo County coastside area each fall on their annual migration. They are not specifically protected by law, but enjoy public attention and popularity. Use of any given grove of trees as a migratory or overwintering site can only be determined during the fall and early winter, ideally from September 15th through November 1st.

At present, there is no identified migratory or overwintering habitat in the Montara-Moss Beach area. However, coastal habitats are being monitored by interested individuals and Monarch Project researchers, and any new information on butterfly habitat in this coastal area will be provided to the planning division of San Mateo County. Property owners should coordinate with San Mateo County Planning on a case-by-case basis to determine if a butterfly survey will be required for their site.

Parcels with potential monarch butterfly habitat are listed below.

036-085-210
036-132-060
036-132-080/090
036-132-210
036-132-220
036-161-270
036-161-280
036-161-290
036-161-300
036-161-310
036-161-320
036-281-070/080
036-281-090
037-012-090
037-021-060

APPENDIX F

Errata

ERRATA

ALL REFERENCES ARE TO DRAFT EIR

p.11, line 18: recharge, not regarge.

p.89 line 18: 1983, not 2983.

p. 90 line 11: Dean Creek, not Dear Creek.

p. 92 line 14: Eryngium, not Erynglium.

p. 96 line 10: Section 5.6.3.5., not 5.6.3.1.

p. 98 add, at the end of Paragraph 3: Potentilla Hickmanii is listed as endangered on the California Endangered Species List.

p. 122 Paragraph 6.6.6.1, line 3; and Paragraph 6.6.6.2, line 3: change "impossible" to "difficult", and add at the end of line 4, "but it is believed to be minimal."

p. 122 Paragraph 6.6.7.1, add at the end of line 4, "but it is believed to be minimal."

p. 129 Paragraph 7.3.3.5, line 1: weed, not week.

p. 129 Paragraph 7.3.3.5, line 2: Impact, not Impace.

p. 130 Paragraph 7.3.5.1, line 1: accelerated, not acelerated.

p. 148 line 1: change "two parcels" to "four parcels"; delete parcel numbers (037-086-170; 037-112-040/070).

p. 148 line 2: add, at end of line: "(see Specific Parcel Inventory)". p. 148 Paragraph 10.3.4: delete parcel numbers.

Appendix B, title page: Appendix B, not Apppendix B.

(Corrections to Specific Parcel Inventory made directly)

Explanatory Notes: Specific Parcel Inventory:

Paragraph 5: change lines 3 and 4 to read: "...should be restored, by planting, if necessary, unless a valid ..."; line 6, delete first "necessary", which occurs between "Any" and "flood."

Paragraph 6: change all 030- prefixes to 036-.