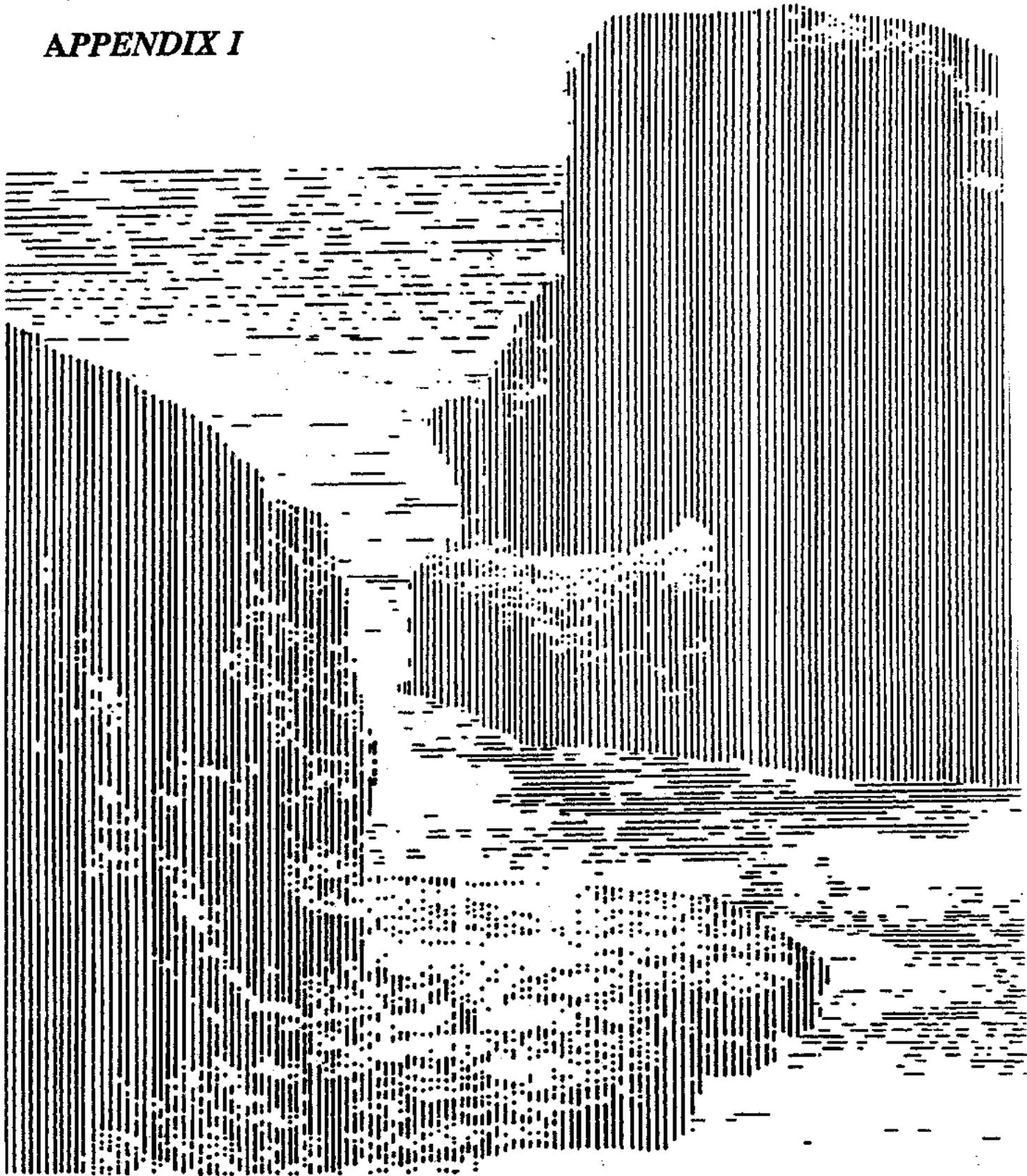


NORTH COAST BEACHES UNIFIED PLAN

APPENDIX I



COUNTY OF SANTA CRUZ

RETURN TO SANTA CRUZ COUNTY PARKS

Unified Plan for the North Coast Beaches

County of Santa Cruz Appendix Two One

- 0 The 1983 Santa Cruz Transportation Commission Report**
- 0 The 1985 North Coast Today and Tomorrow Report**
- 0 The 1987 General Plan for the North Coast Beaches**
- 0 The 1989 Davenport Beaches and Bluffs Addendum**

**Prepared by
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December, 1990





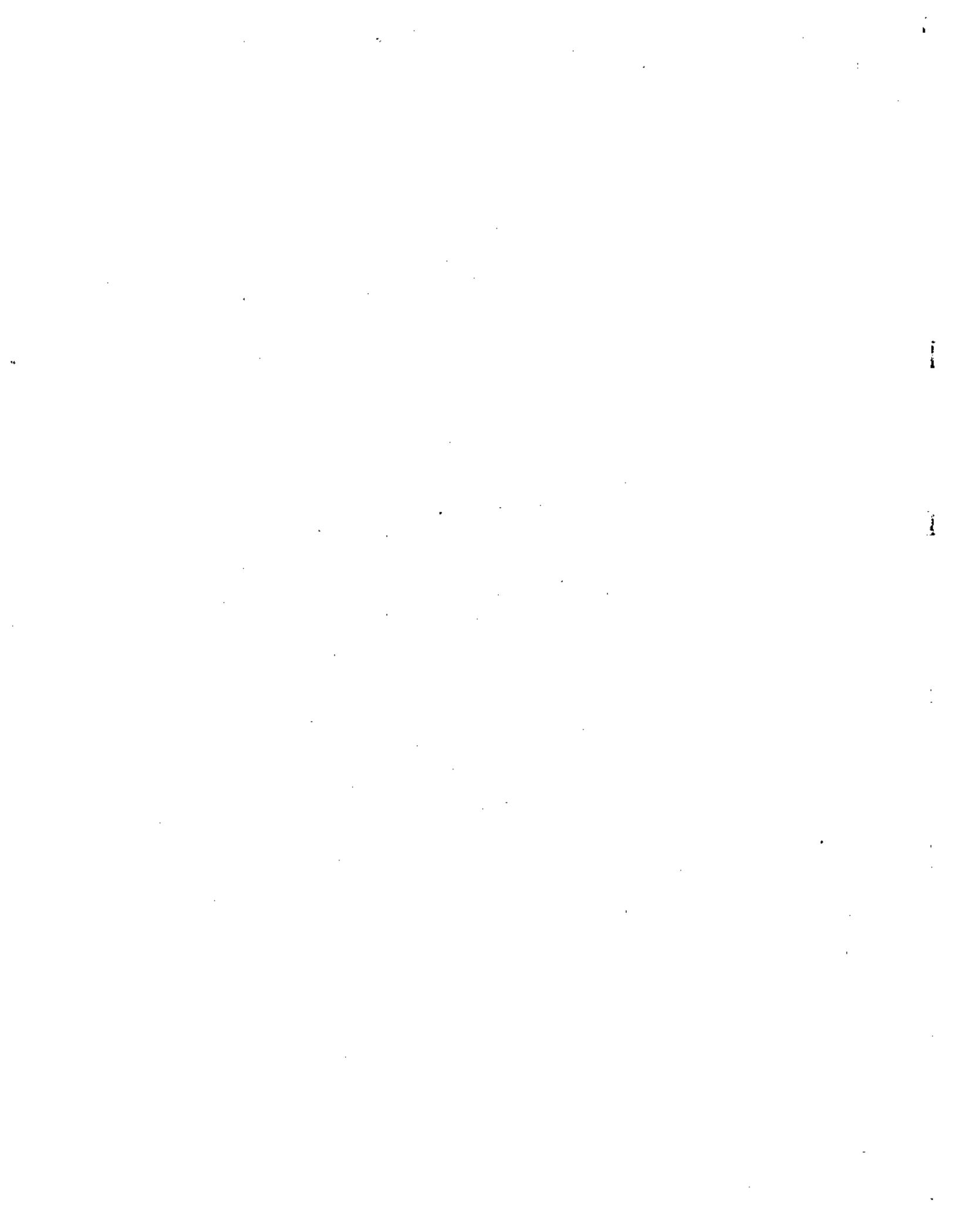
Santa Cruz County Transportation Commission

701 OCEAN STREET • ROOM 420 • SANTA CRUZ, CALIFORNIA • 95060 (408) 425-2776

NORTH COAST BEACH PARKING STUDY

JUNE 1983





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NORTH COAST PARKING STUDY

THE PROBLEM

A number of beaches along Highway 1 between the City Limits of the City of Santa Cruz and the San Mateo County Line are very popular, resulting in considerable numbers of vehicles parked along the shoulders of Highway 1 or on wide spots just off the highway. This creates interference and a potential hazard to the relatively high speed through traffic on Highway 1. Only one of these beach access areas, Greyhound Rock, has a finished, paved parking area with an adequate entrance. At two other areas, Bonny Doon Beach and Laguna Creek Beach, CALTRANS has improved parking areas by providing hard gravel surfaces.

Rowdyism, vandalism, and excessive littering at these beaches and the parking areas have also been reported. Although these problems do not directly affect traffic that uses Highway 1 in the area, they should be kept in mind while analyzing solutions to the traffic problem.

BACKGROUND

The following list includes the most popular north coast beach parking areas with locations by mile post on Highway 1, parking conditions, whether designated a "primary public access point" in the LCP Land Use Plan, and other pertinent information. Right-of-way comments are based on a comparison of CALTRANS drawings and aerial photographs. Actual right-of-way lines should be verified by field survey at all sites. (Note: Mileposts on Highway 1 run from south to north. The westerly City Limits of the City of Santa Cruz are approximately at mile post 20.5.)

No fees are charged at any of the public beach parking access sites. The County contracts for trash pickup at a number of sites.

<u>Mile Post</u>	<u>Name</u>	<u>Comments</u>
23.5	Four-Mile Beach	part of the Wilder Ranch property, a State-maintained facility
25	Red, White, and Blue Beach	private beach; fee charged; designated "primary public access" in LCP Land Use Plan
26	Laguna Creek Beach	unpaved off-road parking on opposite side of Highway 1 - pedestrians must cross both highway and railroad tracks; existing facility located within CALTRANS R/W; county trash pickup in parking area; designated "primary public access" in LCP Land Use Plan
26.5	Yellowbank Beach (sometimes spelled Yellow Bank)	unpaved off-road parking between Hwy. 1 and railroad tracks - pedestrians must cross railroad tracks; approx. 50% in CALTRANS R/W, 50% in SPRR R/W; county trash pickup

in parking area; designated "primary public access" in LCP Land Use Plan

- 27.7 Bonny Doon Beach unpaved off-road parking between Hwy. 1 and railroad tracks - pedestrians must cross railroad tracks; existing facility located within CALTRANS R/W; county trash pickup in parking area; designated "primary public access" in LCP Land Use Plan
- 28 Panther Beach unpaved off-road parking between Hwy. 1 and railroad tracks - pedestrians must cross railroad tracks; existing facility located within CALTRANS R/W; no county maintenance
- 28.5-29 Davenport Area some unpaved off-road parking west of both Hwy. 1 and railroad tracks pedestrians do not have to cross road or railroad tracks; R/W owned by several entities - Lone Star + CALTRANS, some land (or easement) has been donated to the County; no county maintenance; designated "primary public access" in LCP Land Use Plan
- 31-31.5 Scotts Creek Beach (sometimes spelled Scott Creek) no existing parking areas except Hwy. 1 shoulders - causes a hazard to traffic on Hwy. 1 as pedestrians exit or enter cars; frequented by off-road vehicles that drive on beach and dunes; considerable property has been donated to County; no county maintenance at this time; designated "primary public access" in LCP Land Use Plan
- 35 Greyhound Rock paved parking area; County-owned; county trash pickup in parking area and beach; designated "primary public access" in LCP Land Use Plan
- 36.5 Waddell Creek maintained by State Park System; trash pickup; designated "primary public access" in LCP Land Use Plan

With the exception of the Greyhound Rock and Waddell Creek locations, existing off-road parking facilities are generally wide unimproved places along the

highway edge that permit vehicles to pull well off the roadway . There is no control over the way that vehicles are parked at any location except at Greyhound Rock which has a paved parking lot with parking blocks to indicate head-in parking. Since there are no specific entrances to or exits from the existing unimproved parking areas, vehicles presently turn from Highway 1 or enter the traffic flow at any point along the parking area (up to 700' in one area), creating a confusing situation for through traffic. None are as hazardous as the Scotts Creek area, however, where no off-road parking area exists, and vehicles park on both shoulders of the highway within inches of the edge of the travelled way, causing through traffic to slow to a crawl at times to avoid parked vehicles, pedestrians, and off-road vehicles crossing the highway.

Note that all beach users who park at areas between the City Limits of Santa Cruz and the Davenport area must cross Southern Pacific railroad tracks to get to beach areas. There is no official approval from the railroad for such public crossing of its right-of-way at any of these locations.



TYPICAL PEDESTRIAN RAILROAD CROSSING

There are four unimproved beach parking areas that are considered to be under the County's jurisdiction located on or adjacent to Highway 1. They are Laguna Creek, Yellowbank, Bonny Doon, and Scotts Creek beach parking areas.

Accident records at these four beach parking areas for the past 3 years reveal the following accident pattern:

<u>Location</u>	<u>Annual Attendance*</u>	<u>Accidents**</u>	<u>Accident Rate***</u>
Laguna Creek	35,480	1 in 1982 1 in 1981 2 in 1980	1.4 1.4 2.8 (Avg. = 1.9)
Yellow Bank	41,476	none noted	0.0
Bonny Doon	<u>181,112</u>	2 in 1982 0 in 1981 4 in 1980	0.6 0.0 1.1 (Avg. = 0.6)
Scotts Creek	42,157	3 in 1982 3 in 1981 2 in 1980	3.6 3.6 2.4 (Avg. = 3.2)

*from LCP Land Use Plan, pg.

**from CHP accident records

***accidents/50,000 attendance

From this it can be seen that the most accident-prone location (based on accidents per 50,000 visitors) is Scotts Creek Beach, followed by Laguna Creek and Bonny Doon Beaches, respectively.

The 1982 traffic volumes according to CALTRANS in this area of Highway 1 are as follows:

<u>Location</u>	<u>Peak Hour</u>	<u>ADT</u>	
		<u>Peak Mo.</u>	<u>Annual</u>
Santa Cruz, north city limits	1,250	12,100	8,800
Bonny Doon Road	1,450	10,500	7,200
Davenport, north	1,200	7,700	5,400
San Mateo County Line	1,150	6,500	4,600

The capacity of a two-lane rural highway is approximately 2,000 vehicles per hour in both directions, under ideal conditions. The level of service at these locations during the peak hour volumes, using volume/capacity ratio criteria from Transportation Research Circular 212, varies from A to C. Note that the Bonny Doon Beach area which has the highest accident rate also has the highest peak hour volume.

The most recent attempt to improve parking along the North Coast involved the Scotts Creek area. This area was apparently selected for improvements because:

- (1.) the existing parking situation presents the greatest safety hazard along the North Coast,
- (2.) sufficient County-owned land is available to construct a parking lot, and
- (3.) the area is north of the end of the SPRR railroad tracks eliminating the need to obtain right of passage from SPRR and the possible danger to pedestrians in crossing the tracks.

A design for an off-road parking lot on the north side of the beach area was prepared by a consultant using ideas of the Public Works Department, but approval for construction was denied by the Planning Commission. The Commission did, however, recommend that the Board of Supervisors approve construction of a guardrail along the westerly edge of Highway 1 at Scotts Creek Beach to provide an effective barrier against use of the beach by off-road vehicles. This guardrail is to be constructed in the near future.

An additional problem was presented by CALTRANS in the form of a requirement for a left turn lane for northbound traffic entering the site, and an acceleration lane for southbound traffic exiting the parking lot. The CALTRANS philosophy is that although beach users would not have any basis for suing CALTRANS as a result of using the existing informal parking sites, CALTRANS might well be open to such liability if improvements to parking areas were made without corresponding safety measures such as left turn lanes and acceleration lanes on Highway 1. The responsibility for funding such lane construction was delegated to the County. Because of economic and physical difficulties in constructing such lanes, the project became infeasible. Recently, CALTRANS has indicated that a parking lot of 40 cars or less may not require a left turn lane or acceleration lane if sufficient sight distance is available. An additional problem with this plan is that access to the beach from the parking area is made difficult by Scotts Creek itself, which flows between the parking area and the beach. This may be a winter condition that does not occur during summer months when Scotts Creek flows at a lower rate. A site on the south side of the creek was also investigated, but problems with the sight distance on Highway 1 and the actual location of the parking area could not be overcome to the satisfaction of those involved.

The three remaining unimproved parking areas would require easements from Southern Pacific Railroad for public crossings of the railroad. From past correspondence it appears that the railroad is not opposed to such crossings, but considerable time may be required to obtain these easements since approval of the Public Utilities Commission may be required as well as approval by Southern Pacific. Improvements to beach area parking lots would not be advisable without first obtaining easements because of the liability that would fall upon the County by encouraging increased use of "clandestine" crossings.

Three of the four unimproved beach parking areas are located just off the edge of Highway 1. Improvements to them would require a clear 40' from the edge of the pavement to the CALTRANS right-of-way line to provide organized parking with 60° spaces, a fenced perimeter, and a proper entrance and exit. Unfortunately, the terrain at each of the sites with roadside parking areas prohibits use of the full right-of-way for improvements. See the description of recommendations for specific sites below for details.

SPECIFIC RECOMMENDATIONS

LAGUNA CREEK BEACH - MP 26:

1. The parking area is on the inland side of Highway 1 -- pedestrians must walk across Highway 1 and the railroad tracks to get to the beach. Enlargement of the existing facility is inappropriate because of the safety problem involved in encouraging more pedestrians to cross Highway 1. On the other hand, there is no real possibility of creating parking areas on the beach side of Highway 1 in this area within the CALTRANS R/W because of the terrain which includes a ravine and a rocky hill. Of course, ravines can be filled and rocky hills levelled, but only at great economic and ecological cost in this case.

2. The existing parking area is approximately 50' x 200'. All of the area appears to be within the CALTRANS R/W.

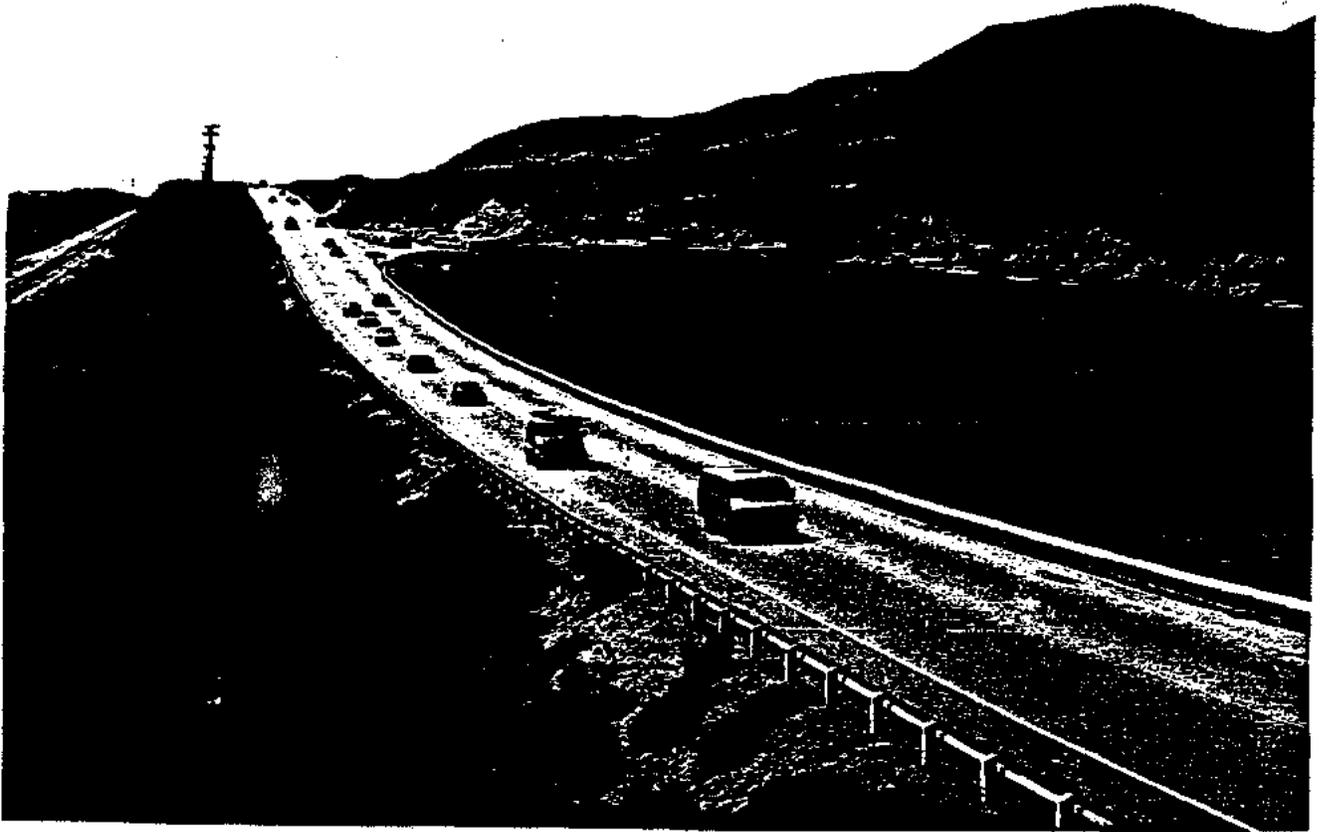
3. The number of vehicles that can be accommodated by unregulated parking is probably 33 (25 parked perpendicular to Hwy.1, 8 parked parallel to Hwy. 1). Vehicles are also routinely parked along one side of Laguna Road, a small side road that loops to intersect Highway 1 in two locations within 1300 feet of each other.

4. One possibility for increasing parking would be designating Laguna Road, an apparently little-used County-maintained road, as a one-way road with parallel parking along one side. Some operational difficulties could arise, generally by beach goers trying to find the closest space to the beach along the road and having to return to the starting point via Highway 1, and there is not much chance for charging for parking. Also, providing "official" parking on the inland side of Highway 1 could be construed as encouraging pedestrians to cross the highway in an area where controls or even a crosswalk would be inappropriate.

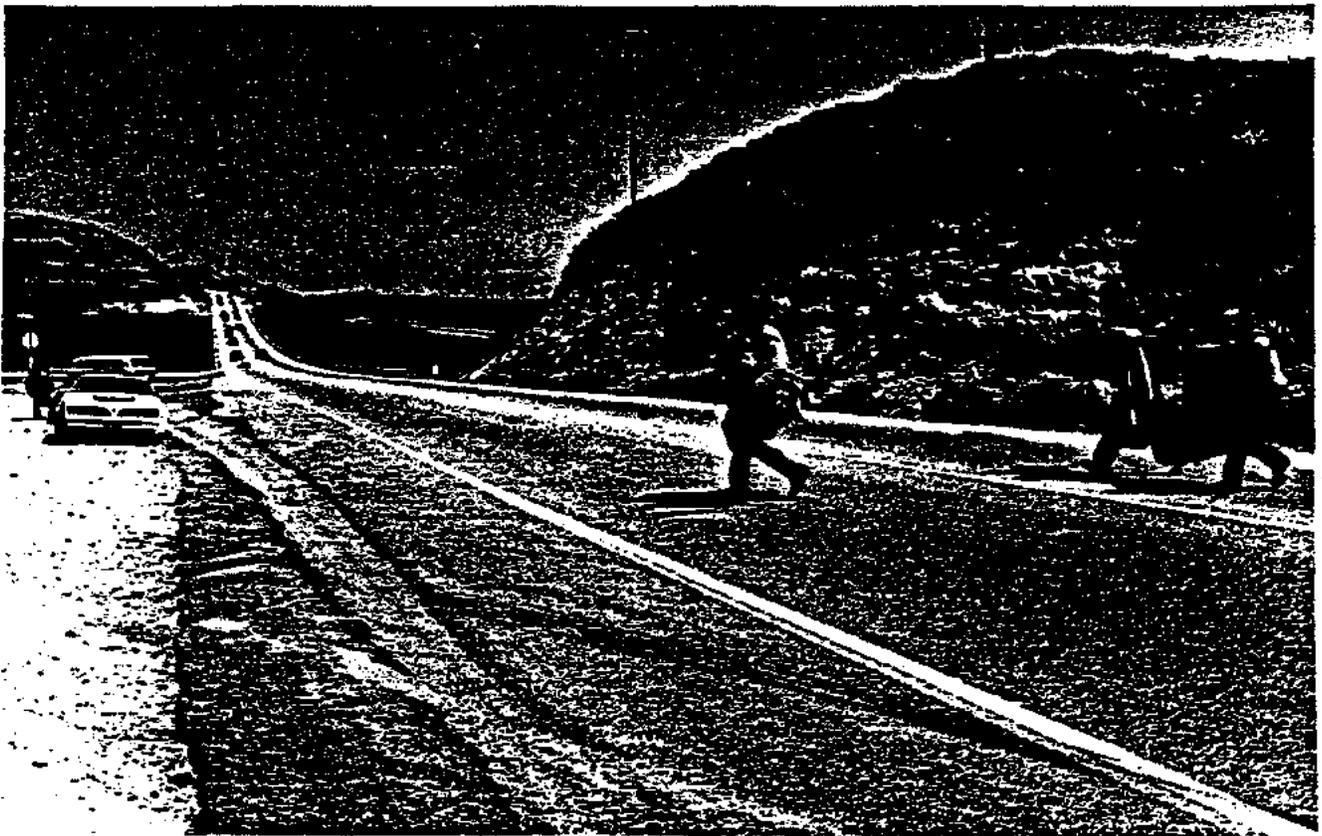
RECOMMENDATION: Investigate provision of parking on Laguna Road, including re-designation as a one-way road. Provide signs on Highway 1 in advance of the parking area to warn motorists of pedestrians crossing the highway.



LAGUNA CREEK BEACH PARKING AREA -- LOOKING EASTWARD ACROSS HIGHWAY 1



LAGUNA CREEK BEACH PARKING AREA -- LOOKING NORTHWARD



LAGUNA CREEK BEACH PARKING AREA -- LOOKING SOUTHWARD

SPRR R/W

HWY. 1

CALTRANS R/W

EXISTING PARKING AREA

>>>=N=>>

LAGUNA CREEK BEACH

(near M.P. 26)

Note: locations of R/W lines shown are approximate only.

Approx. Scale: 1"=200'

YELLOWBANK BEACH - MP 26.5-27:

1. The parking area is located off Highway 1 between the highway and SPRR tracks, and is actually located on both CALTRANS and SPRR R/W.

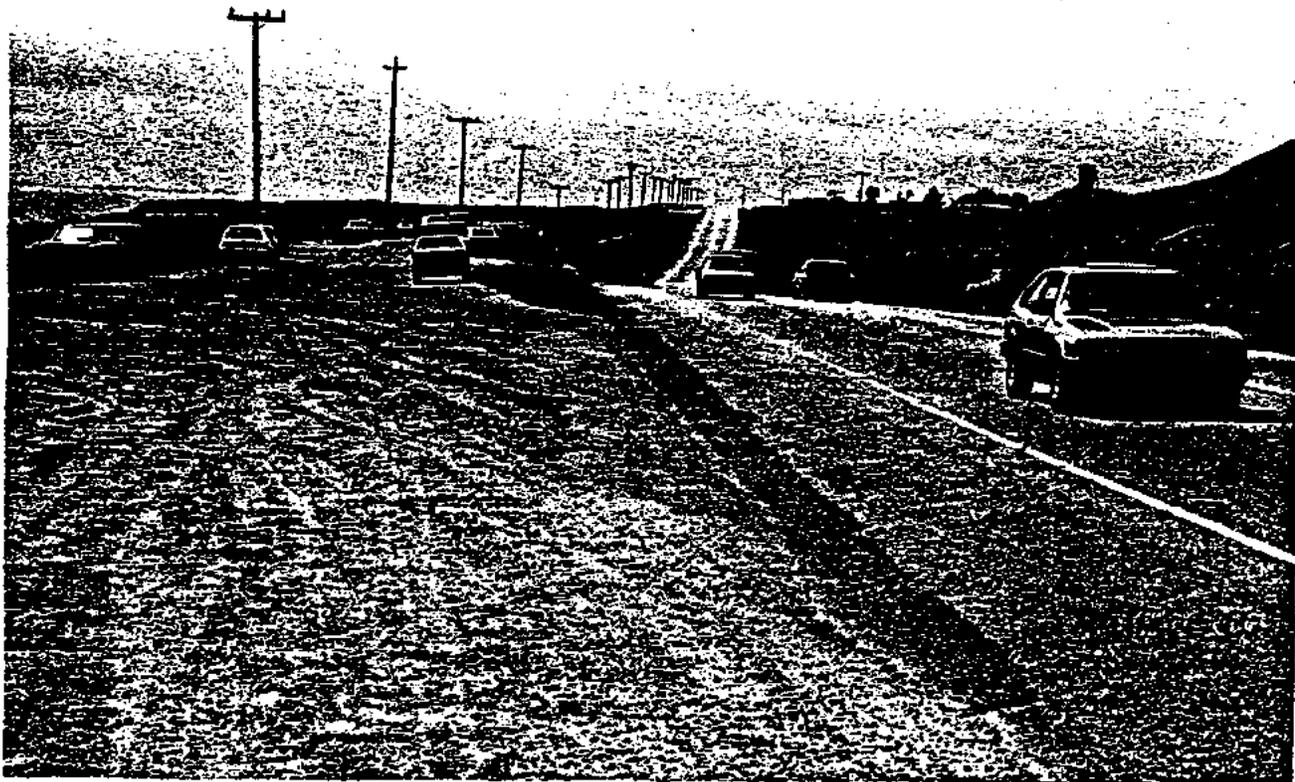
2. The size of the existing parking area is approximately 1000' x 30'-40'. The parking method is parallel parking on both sides. The maximum capacity, allowing for a turnaround at the end, is 78 cars.

3. If SPRR approval could be obtained to continue using part of its R/W for this parking area, the area could conceivably be widened to 45' to provide 110 spaces (a 41% increase) using perpendicular (head-in) parking with a two-way aisle. The estimated cost of grading, paving, providing a fence (it may actually require guardrails to keep cars from running off the hillsides), chemical toilets, and picnic tables is \$90,000.

RECOMMENDATION: Obtain an easement from SPRR for use of a portion of its R/W, widen to 45' to provide 110 spaces (41% increase), improve the entrance/exit. If SPRR will not grant an easement, or if CALTRANS requires a left turn lane, this project may become infeasible.



YELLOWBANK BEACH PARKING AREA -- AT ENTRANCE LOOKING SOUTHWARD



YELLOWBANK BEACH PARKING AREA -- AT ENTRANCE LOOKING NORTHWARD



YELLOWBANK BEACH PARKING AREA -- INTERIOR LOOKING NORTHWARD

EXISTING PARKING AREA

SPRR R/W

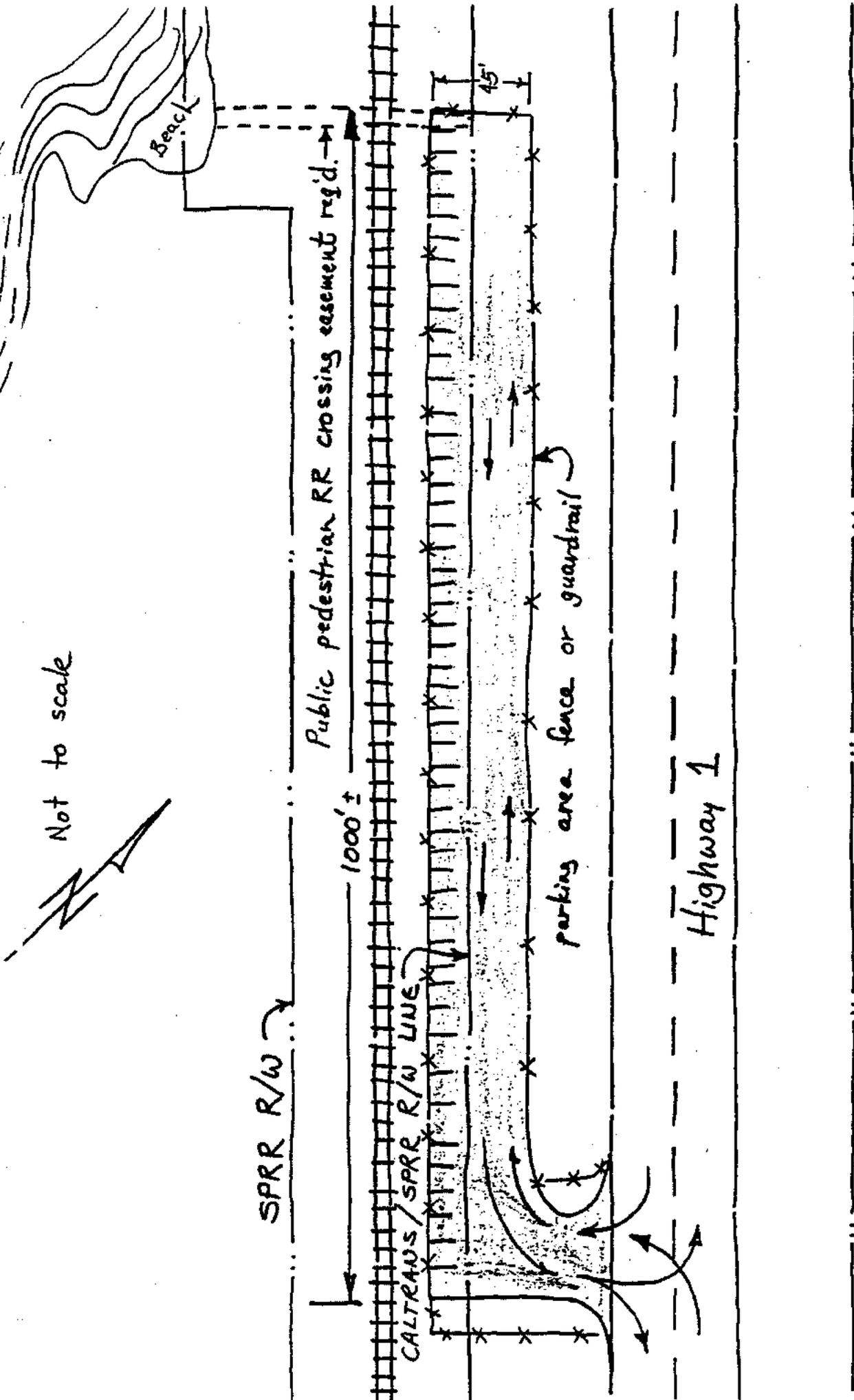
HWY. 1

CALTRANS R/W

---N--->

YELLOWBANK BEACH
(near M.P. 27)
Note: locations of
R/W lines shown are
approximate only.

Not to scale



SPRR R/W

Public pedestrian RR crossing easement 1000'±

CALTRANS/SPRR R/W LINE

45'

parking area fence or guardrail

Highway 1

CALTRANS R/W

Possible parking area improvements at Yellowbank Beach parking area

BONNY DOON BEACH - MP 27.7:

1. The existing parking area is located between Highway 1 and SPRR tracks, and appears to be contained within CALTRANS R/W.

2. The existing useable parking area size is approximately 400' x 40'. The width can probably not be increased because of a high, steep RR embankment. The existing capacity is approximately 47 cars. Vehicles are also routinely parked on the east side of Highway 1 and on one side of Bonny Doon Road.

3. This is a very popular beach area, and a significant increase in spaces is warranted. Safety improvements are also warranted because of the accident record at this parking area. Unfortunately, no real increase in size or safety improvements are possible because of the steep railroad bank on one side, and tall rocky hills at each end of the existing parking area. The amount of width available for an improved fenced parking area with entrance and exit is only 35' (allowing for a reasonable clearance from the highway). The number of spaces that could be accommodated is 32, a 32% decrease. Since a decrease in available spaces in the existing parking area would result in more parking along the sides of Highway 1, this option is not considered feasible.

RECOMMENDATION: No improvements are recommended except placement of signs well in advance on Highway 1 to warn motorists of pedestrian activity on the highway.



BONNY DOON BEACH PARKING AREA — LOOKING SOUTHEASTWARD



BONNY DOON BEACH PARKING AREA -- LOOKING NORTHWARD



BONNY DOON BEACH PARKING AREA -- LOOKING NORTHEASTWARD FROM ROCKY HILL



SPRR R/W

HWY. 1

CALTRANS R/W

PARKING AREA

→→→ N →→→

BONNY DOON BEACH
(near M.P. 27.7)
Note: locations of
R/W lines shown are
approximate only.
Approx. Scale: 1"=200'

PANTHER BEACH - MP 28:

1. The existing parking area is between Highway 1 and SPRR tracks, within CALTRANS R/W.

2. The existing size is approximately 450' x 40', the usual parking method is perpendicular to Highway 1, and the capacity is approximately 53 cars.

3. This beach parking area is not designated as "primary public access" in the LCP Land Use Plan, and observations indicate that there is not as great a demand for parking here as there is at other areas. In addition, no accidents were reported in this area in the past 3 years, although the sight distance on Highway 1 is poor at the north end of the site. The site has some potential for safety improvements, but probably at the cost of some decrease in parking spaces. For all these reasons, no improvements are recommended at this time.

RECOMMENDATION: No improvements except signs on Highway 1 to warn motorists of possible pedestrian activity on the highway.



PANTHER BEACH PARKING AREA -- LOOKING NORTHWARD

PANTHER BEACH

(near M.P. 28)

Note: locations of
R/W lines shown are
approximate only.

Approx. Scale: 1"=200'



← EXISTING PARKING

SPRR R/W

Hwy. 1

CALTRANS R/W

DAVENPORT AREA -- MP 28.5 - 29

1. The Davenport Bluffs area has not been investigated in this study because it does not appear to have a high accident rate nor a high demand for parking by beach users. The area is popular, however, with whale watchers during a few months of the winter when traffic flow on Highway 1 is at relatively low levels.

2. Any parking area in this area would require crossing of the railroad tracks by either vehicles or pedestrians.

3. The Davenport Landing area has not been investigated in this study because it does not cause a problem on Highway 1.

RECOMMENDATION: No recommendations.



DAVENPORT BLUFFS AREA -- LOOKING SOUTHWESTWARD

SCOTTS CREEK BEACH -- MP 31.5

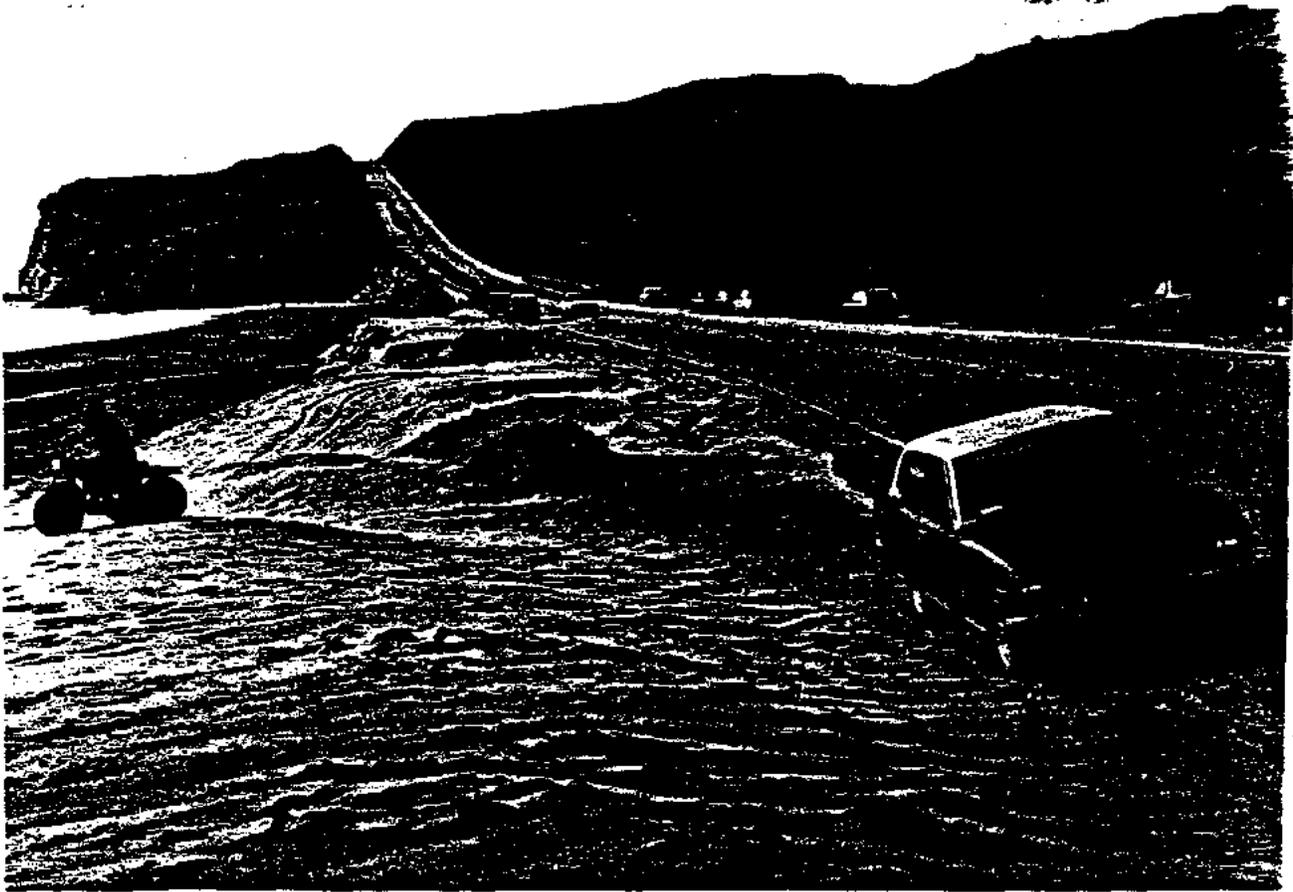
1. This beach has no existing off-road parking area -- beach users park all types of vehicles along both sides of Highway 1 on marginal shoulder areas. This area has the highest accident rate of any of the beach access areas. The cover photo was taken at this site and shows a good example of the parking conditions that occur during periods of high use which coincide with periods of high traffic volumes on Highway 1.

2. Sufficient land has been donated to the County to provide a parking lot for approximately 40 vehicles, but objections from the Planning Commission and requirements by CALTRANS for a left turn pocket have made such construction infeasible in the past. Recent information from CALTRANS indicates that a parking lot of 40 cars or less may not require a left turn pocket if adequate sight distance is available. The County Department of Parks, Open Spaces, and Cultural Services has developed a plan for a parking lot to serve this beach that would fit CALTRANS requirements, and a funding source to pay for it.

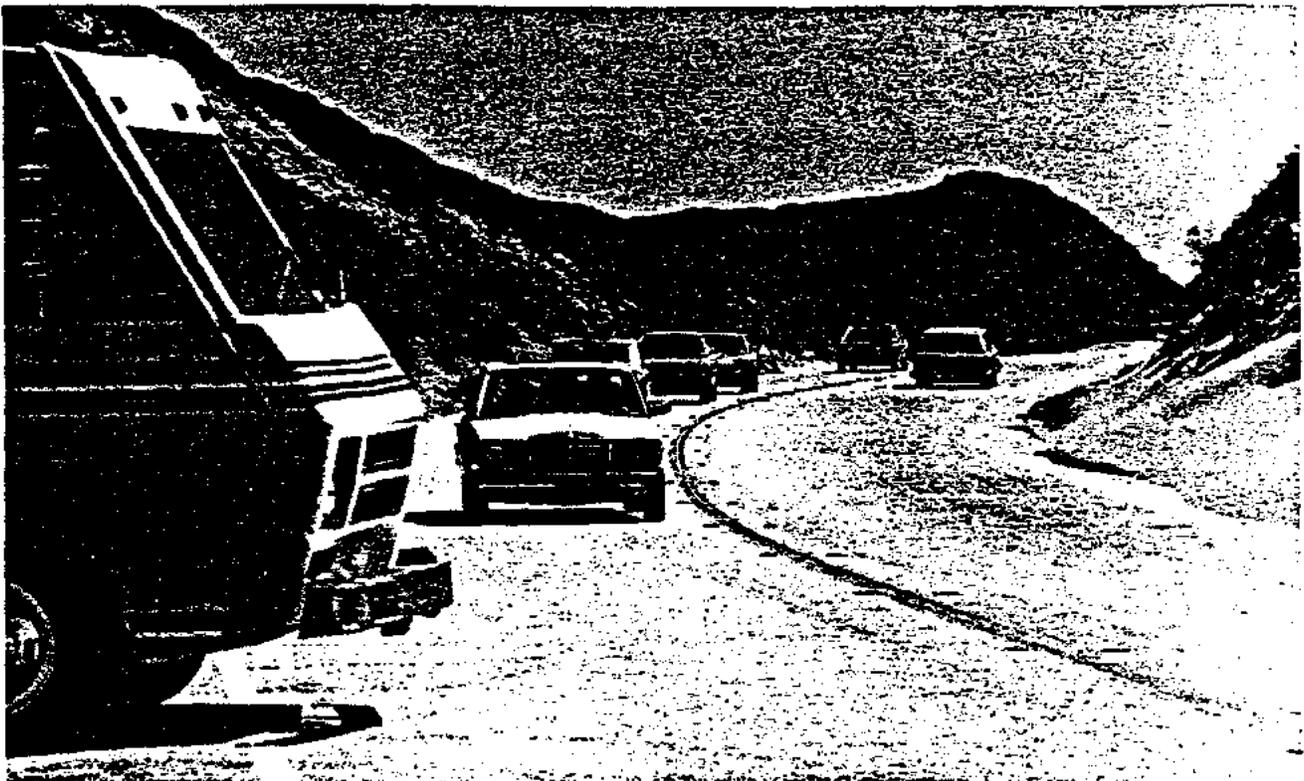
RECOMMENDATION: Encourage the County Department of Parks, Open Spaces, and Cultural Services to pursue construction of a parking lot at Scotts Creek Beach. In the interim, place signs in advance of the area warning motorists of pedestrian activity.



SCOTTS CREEK BEACH AREA -- LOOKING SOUTHWARD



SCOTTS CREEK BEACH AREA -- LOOKING NORTHWARD



SCOTTS CREEK BEACH AREA -- LOOKING SOUTHWARD

FEE CHARGING

One method of financing improvements to beach parking areas would be by charging parking fees. The experience of State Park representatives in both Santa Cruz County and San Mateo County in charging for parking is as follows:

1. attendance drops dramatically upon starting to charge for parking (25%-75% drop)
2. attendance rebuilds gradually to 75%-90% of pre-charging levels, with a "different" clientele - one that is less likely to vandalize, create disturbances, or litter the beach and parking areas
3. people who did not consider visiting the beach areas because of disturbances caused by others began to return to the beach areas and commented to rangers that they felt safer with attendants (and were therefore willing to pay the price charged)
4. beach areas are easier to keep clean when beach areas and parking lots can be closed at night
5. the State beaches charge \$2/day per vehicle; fees are charged year round, with on-site attendants during periods of high usage, and unattended collection boxes ("Iron Rangers") for fee collection envelopes during periods of low attendance
6. unattended fee collection boxes ("Iron Rangers") are not effective unless followups are performed with warning notices and/or citations (State Park Rangers are also peace officers)
7. State beaches normally have some sort of restroom facilities (chemical toilets at least), some picnic tables, barbecue facilities, and a Ranger-attendant (Manresa State Beach even has a lifeguard)

By making improvements to the Yellowbank Beach parking area as suggested above, the total number of chargeable parking places available would be approximately 210 (including Greyhound Rock). The cost of improvements to the Yellowbank Beach parking area, including grading, paving, fencing, chemical toilets, and picnic tables is estimated at approximately \$90,000. If average annual attendance at Yellowbank and Greyhound Rock dropped to 50% of the current attendance as shown in the LCP Land Use Plan as a result of charging fees, it would still provide a revenue of \$38,020 per year, assuming that an average of 2 persons arrived per car, and the fee were \$2 per vehicle per day. Assuming that this attendance occurs during the 6 summer months, and assuming that a roving attendant (or two part time persons) would cost the County \$15/hour for 8 hours a day, 7 days a week during that period, a sum of \$16,420 per year would remain available for payback of construction and maintenance costs. The attendant(s) would be responsible for checking that envelopes with parking fees were contained in "Iron Rangers" (metal strong boxes) for all parked vehicles at the two sites. This person would probably have to be a peace officer of some sort to be able to issue citations and handle problems that could be expected to occur from time to time at the sites. Of course, by charging at these two sites, many people could be expected to avoid them and instead visit other areas where fees were not charged, increasing the traffic and parking problems at those sites. The payback time for the \$90,000 construction costs at Yellowbank would be 6 years if no interest or

maintenance costs were deducted from the revenue. If \$500/month were deducted for maintenance during the 6 summer months, and 12% interest paid on the balance unpaid, the payback period would be 15 years.

One important aspect of charging for parking at an improved parking area is the safety of vehicles parked there. The experience at State parks appears to indicate that vehicles parked in organized lots without attendants may be more vulnerable to burglary than those either parked along public roads or parked in a lot with a full-time attendant. The use of a roving attendant may be sufficient to discourage burglaries if each site is visited frequently.

RECOMMENDATION: Do not charge for parking unless picnic tables, trash collection, and toilet facilities are provided. Do not charge for parking unless an attendant is on site or an "Iron Ranger" is used with enforcement.

SUMMARY

It is our opinion, based on observations and accident records, that a very dangerous condition exists at all north coast beach parking areas, caused by beach traffic interfering with relatively high speed through traffic on Highway 1. There are no left turn pockets or paved right shoulder areas for vehicles to use in slowing for turns from the highway, and there are no marked or defined entrances to parking areas. The intentions of vehicles slowing to search for empty parking spaces are sometimes confusing to following through traffic which may not be aware of the existence of parking areas.

An inspection of existing off-road parking sites makes it obvious that only one of four can be improved relatively easily and at reasonable cost because of the surrounding terrain. Even that one depends on the granting by SPRR of an easement for use of part of its right-of-way. The other existing parking areas along the highway edge cannot be improved safely because of the close proximity of SPRR tracks and terrain which includes ravines too deep to be easily filled, and rocky hills that would be difficult and costly to level. In addition, the same physical conditions limit the feasibility of widening Highway 1 to provide left turn pockets and/or right shoulder widening for acceleration/deceleration areas.

Scotts Creek Beach, which has no existing parking area and has the highest accident rate record of any beach area because of the lack of an off-road parking area of any kind, could be provided with a parking lot using land donated to the County and funds available to the County Department of Parks, Open Spaces, and Cultural Services.

Since the existing parking areas at three of the four beach parking areas being considered cannot be expanded practically or safely, we recommend that no improvements be made except for placement of signs to warn motorists of pedestrian activity on the roadway at each site.

The best solution to problems of north coast beach access parking would be to provide parking lots located well off Highway 1 near beaches with safe entrances including left turn pockets and acceleration/deceleration lanes. In order to ensure that adequate facilities can be provided in the future, we would normally recommend that the Board adopt a policy of establishing reserved areas for parking lots on the beach side of the railroad tracks, to be dedicated to the County by property owners at such time that development

plans were submitted for approval. These areas would be reserved for the specific purpose of providing beach access, and no development would be permitted on them. In addition, sufficient area for a left turn pocket would be included in the land reserved at each site, as well as a deceleration/acceleration lane. The north coast is not subject at this time to development pressure, however, and it may be that no development in these areas will be accomplished for many years. As a result, the existing parking lots will have to serve the beach areas for a considerable time into the future unless the County can purchase beach area land for use as parking lots. We therefore recommend that coastal conservancy grants and others be actively sought to provide funds to purchase this land. Private entrepreneurs could also be encouraged to provide proper facilities. One such operation is currently in existence at Red White and Blue Beach, complete with parking facilities that do not cause any conflicts with traffic on Highway 1.

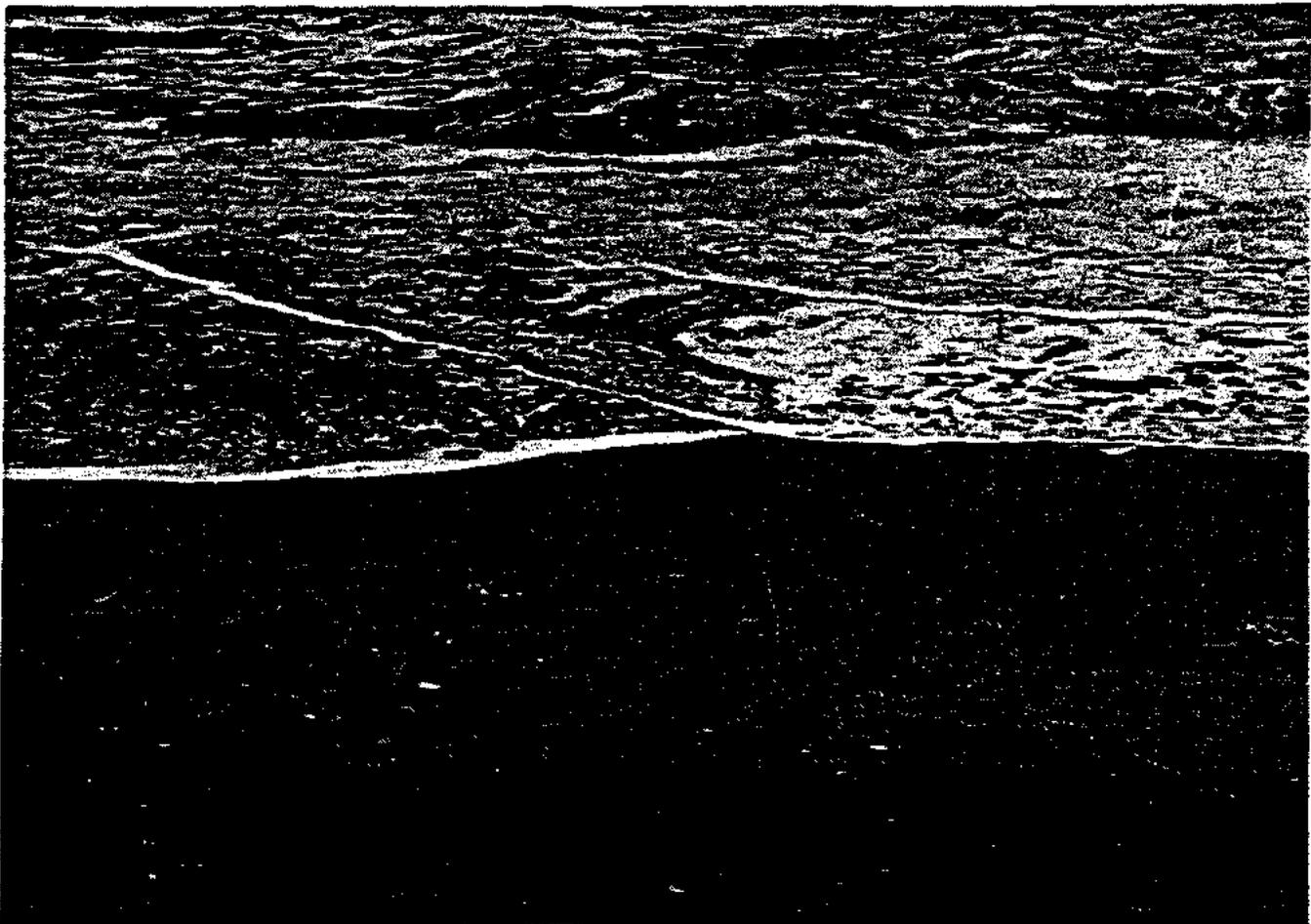
SUMMARY OF RECOMMENDATIONS:

1. Obtain easements for public pedestrian crossing of SPRR right-of-way between all existing beach area parking areas and beaches. Field surveys of all sites should be performed to establish the exact location of right-of-way lines.
2. Prepare preliminary plans for improvements to the Yellowbank Beach parking area as outlined above, and begin the process of obtaining an easement from SPRR to use a portion of its right-of-way for this purpose.
3. Obtain CALTRANS approval for improvements at Yellowbank Beach. Have CALTRANS determine if it will require a left turn lane and/or an acceleration lane.
4. Encourage the County Department of Parks, Open Spaces, and Cultural Services to pursue construction of a parking lot at Scotts Creek Beach at the earliest possible time.
5. Budget for improvements and prepare final plans.
6. Construct improvements as funds become available.
7. Charge for parking at improved areas, but only if facilities include minimum features of picnic tables, trash collection, and toilets, and if attendants or roving enforcement officers are utilized.
8. Place signs at all beach access sites, including unimproved sites, warning motorists of pedestrian traffic.
9. Adopt a Board policy of reserving areas near beaches designated in the LCP Land Use Plan as primary public coastal access points for use as parking lots.
10. Take advantage of any grants that can be used for purchase and development of off-road parking areas on the beach side of the SPRR tracks.





THE NORTH COAST TODAY AND TOMORROW



Report of the
North Coast Beaches Advisory Committee

June, 1985



June 3, 1985

Members of the Board of Supervisors:

Attached is the report of the North Coast Beaches Advisory Committee as requested in your Resolution of May 1, 1984.

The Committee has met monthly--and various subcommittees even more often. We explored each beach, digested the available data and materials, and interviewed public officials and knowledgeable private individuals.

Concurrently, the Committee debated the philosophical issues raised by specific proposals. At times we found ourselves supporting seemingly contradictory goals: to preserve the beaches just as we remembered them; yet accommodate and exert control over their inevitable use by an expanding population. In the end, each of us bent and compromised, and we believe that this report resolves the earlier contradictions.

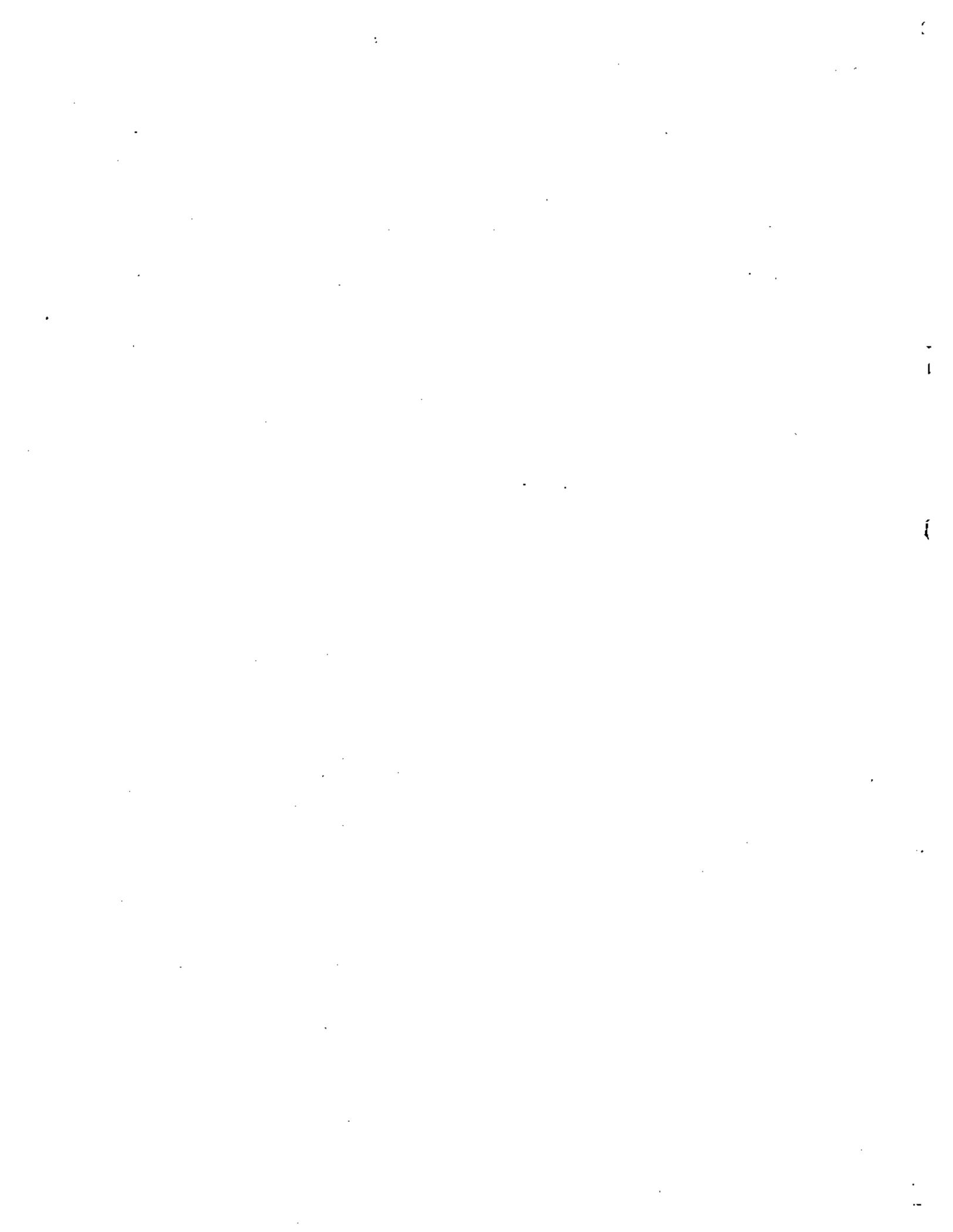
We found that degradation of natural resources, overcrowding and crime were the most pressing problems. However, they are not irreversible, if the County will quickly assume a leadership role. We recommend that the County increase the public management presence, construct minimal improvements, and avoid submitting blindly to growth and development pressures.

We recognize that our recommendations require a commitment of energy and resources, but we understand that some of the needed improvements, particularly access and signing, can be funded by the Coastal Conservancy and other agencies. It is likely that the County must cover management and maintenance costs, or encourage other entities, such as the State, to do so. We have suggested some means of gaining revenues for on-going operations. Generally, however, we were not able to determine the costs of capital improvements or management and maintenance. Still we are convinced that our recommendations will reverse the current decay and that they will prove a sound investment.

Finally, we would like to acknowledge the aid of Ben Angove, Dave Laughlin, Roy Holmberg, and Kennan Ward of Davenport for the use of his photographs. Special thanks is given to Gary Patton, for facilitating the committee's work.

North Coast Beaches Advisory Committee:

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Cover photograph and photograph on page two
by Kennan Ward

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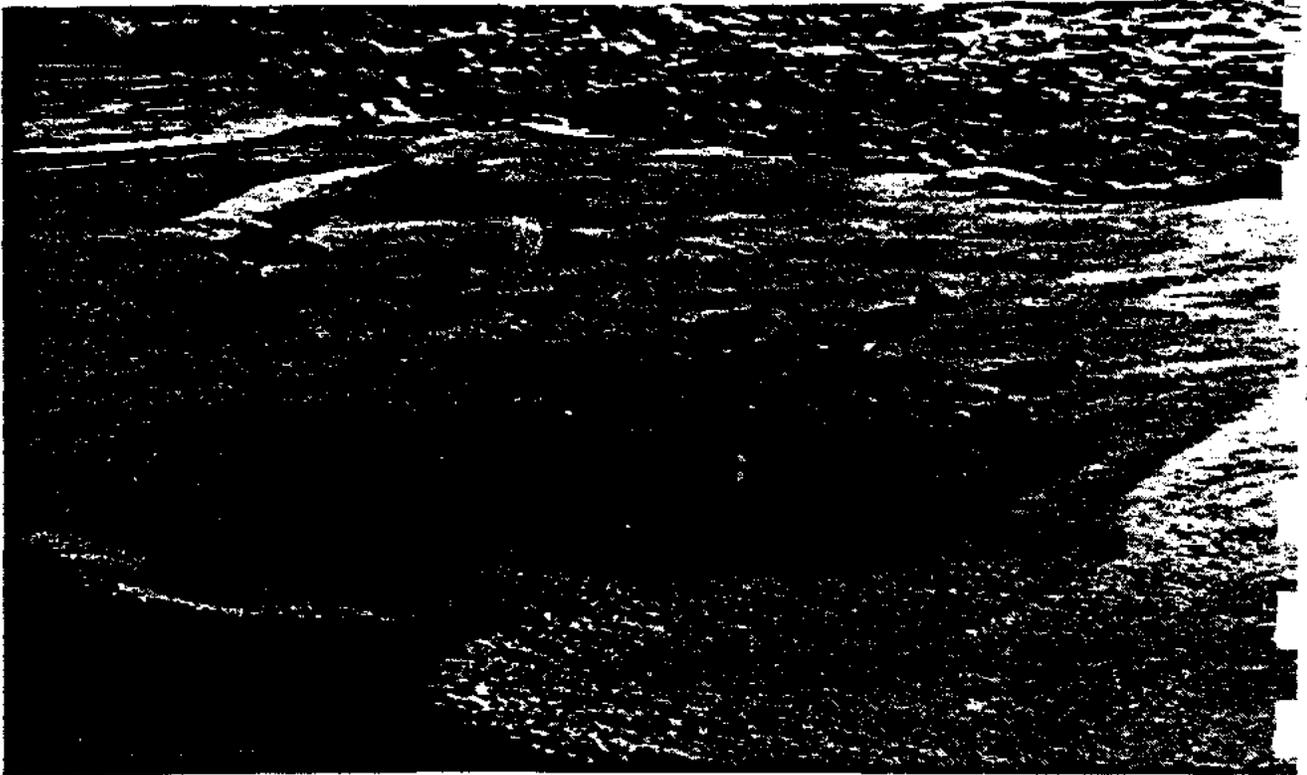
RECOMMENDED GOALS

- * Preserve, enhance, and restore the natural beauty of the north coast beaches and protect and enhance wildlife habitats along the north coast.
- * Retain maximum long-term local control over the improvement and management of the north coast beaches.
- * Protect the unique character and ambience of each beach and maintain the type of overall management that minimizes regulation except in the case of obvious health and safety problems.
- * Provide beach management, law enforcement, and minimum impact improvements in order to:

Ensure a safe and enjoyable beach experience for all.

Enhance the security of north coast residents and their property.

Improve access and sanitation.



THE NORTH COAST TODAY: PROBLEMS

NATURAL RESOURCES

The beaches along the north coast of Santa Cruz County are among the most scenic in California. Their beauty and isolation remain their most outstanding qualities, though they lie within an hour's drive of millions of people.

The north coast beaches are important to wildlife as feeding and nesting areas. Large numbers of migratory shorebirds use the area during the winter. Snowy plovers, a locally endangered bird, nest on several of the beaches. Wetlands at Laguna Creek beach, Scott Creek beach, and other areas are used by wading and diving birds. The cliffs that back the beaches provide protected nesting sites for other species. Marine mammals, including Stellar sea lions, harbor seals, and elephant seals, haul out on north coast beaches. The grey whale, in its annual migration, passes just offshore. Scott Creek and several other streams that flow across the north coast beaches support steelhead and salmon.

Other important natural and cultural resources are present on the north coast and must be taken into account during future improvement of the beaches: Archaeological sites lie adjacent to some of the beaches, and valuable agricultural lands adjoin most of them.

Unfortunately, the quality of these natural resources is declining due to increasing recreational use. The decline in environmental quality is reflected by:

- * eroded access trails, dunes, and parking areas, and reduced vegetation around many of the beaches;
- * diminished aesthetic values due to litter, eroding hillsides, and congested parking areas;
- * reduced wildlife habitat due to human activities (and harassment by dogs).

There are considerable differences in the environmental character of the various beaches. Management plans for the individual beaches must therefore be tailored to reflect their respective natural values.

LITTER AND SANITATION

Litter has become a major problem on the beaches, especially on the most popular ones. Portions of the beaches are littered with broken glass, bottles, cans, food containers, paper and cardboard, and campfire debris. The problem is especially acute

North Coast Today: Problems

during the summer. This litter is not only an eyesore, but a hazard. It is no longer safe to walk barefoot on many of the beaches because of broken glass.



1977
WEEK D WEEK
HIGH USE MONTHS
HOLIDAYS
OK OFF

The County has provided trash cans at some parking areas, but they are too few and are not emptied often enough. There are no trash cans on any of the beaches. Trash is frequently left on the beaches. It is only cleared away by winter waves or the occasional efforts of private groups.

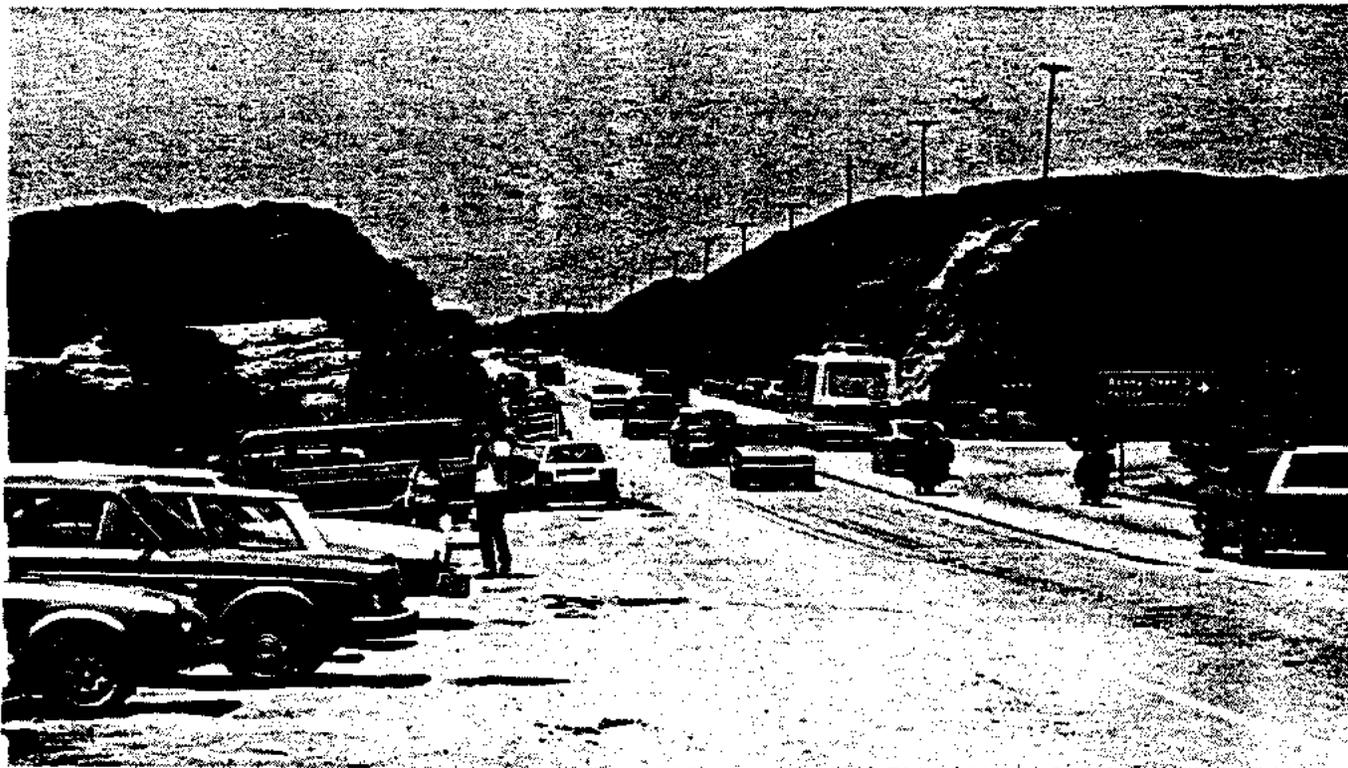
None of the beaches have sanitary facilities. Some semi-secluded locations are becoming de-facto pit toilets. This lack of sanitary facilities is an inconvenience, a nuisance, and a potential health hazard.

PARKING AND TRANSPORTATION

Most beach parking areas are little more than pullouts along Highway One that have grown larger with increased beach use. CalTrans has provided limited grading for some of these areas. The only exception, Greyhound Rock, has a large asphalt-surfaced parking lot.

North Coast Today: Problems

Most parking areas reach or exceed capacity during periods of high use. At popular beaches the shoulders of Highway One and adjacent roads--and sometimes the adjacent roads themselves--become choked with parked cars. Enlarging parking areas is generally not feasible because of physical constraints and the pattern of land ownership: most parking lies within CalTrans or Southern Pacific rights of way, or is located on private property.



Parking is free at all of the north coast beaches (except for the privately operated Red, White, and Blue beach). Parking from 10pm to 6am is prohibited and posted in some beach parking areas, although signs have been repeatedly torn down.

Parking areas have not been directly supervised. Until last summer it appeared that law enforcement personnel seldom patrolled the areas. Consequently, vandalism and theft from cars is a widespread and persistent problem.

North Coast Today: Problems

There are no signs along Highway One to alert motorists of beach accesses, parking facilities, or pedestrian crossings. High speed traffic moves through areas of congested shoulder parking and crossing pedestrians.

Facilities such as restrooms, water, and trash or sewage disposal are not available for overnight RV campers, although there is some demand for such improvements.

Relatively few people ride bicycles or take the bus to the beaches, but the beaches are in easy reach of the bus route along Highway One. No formal bus stops are located at beach accesses, however.

ACCESS

There are no improved pathways, stairs, safety railings, or access signs at any of the beaches. Access routes are generally in poor condition, and are often not in the best locations. The lack of improved access has a number of undesirable effects:

- * Disabled persons, small children, and many elderly persons are unable to get to most of the beaches.
- * Safety is a concern on some access paths due to high cliffs, poor or loose trail surfaces, or slick, muddy paths.
- * The many informal trails are unsightly, and at some locations cause erosion and vegetation loss.
- * Uncontrolled access has resulted in trespassing on agricultural areas adjacent to access paths, and vandalism of irrigation pumps, pipes, sheds, and crops.



North Coast Today: Problems

LAW ENFORCEMENT

For many years the isolated north coast beaches attracted relatively small numbers of surfers, sunbathers, fishermen, and picnickers. Dramatic increases in the use of the north coast beaches in recent years, coupled with the lack of adequate management and law enforcement, has resulted in growing conflicts between users, problems for property owners, and degradation of the natural environment.

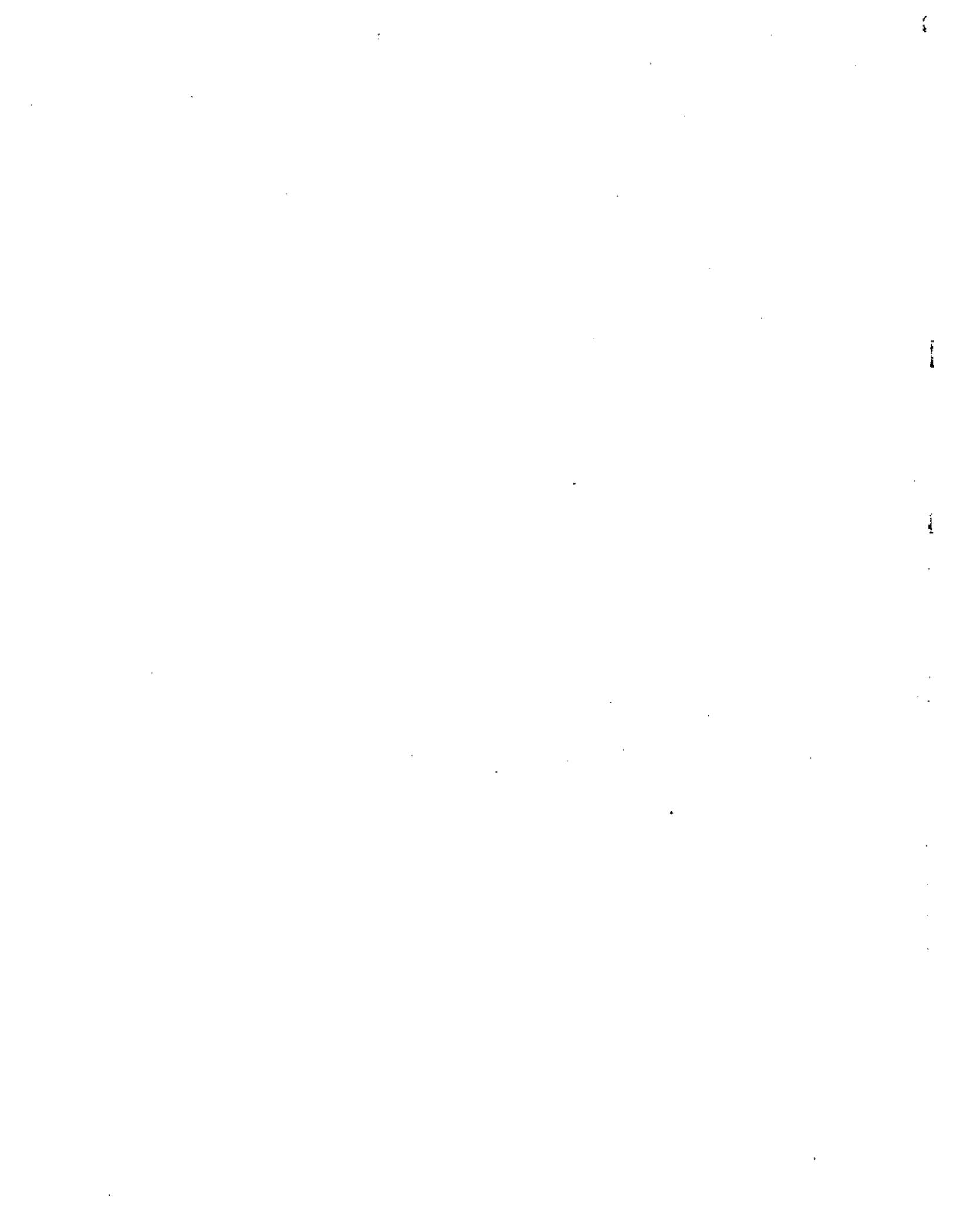
The District Attorney, the County Sheriff, and local residents describe the law enforcement problem as ranging from moderate to serious. During the 1984 Fourth of July weekend, 151 citations are issued along Highway One. The most serious crimes have included physical violence against persons. Other problems include harassment of individuals, especially women alone, theft from parked cars, and vandalism of farming equipment.

The Sheriff's North Coast Patrol, begun the summer of 1984, has been successful in reducing many of the law enforcement problems on the beaches. One notable achievement of the increased patrol has been the reduced use of off-road vehicles (ORVs) at Scott Creek beach. North coast residents and beach users feel that increases in patrol frequency and coverage are needed, with an emphasis on preventing serious crimes against people and property.

MANAGEMENT

There is very little management presence on the County's north coast. Its absence contributes significantly to problems of crime, vandalism, anti-social behavior and environmental damage. Experience at beaches where State Park Rangers are present shows that the incidence of crime is very low. When situations do occur that require police assistance, the Rangers are equipped to call for help.

Emergency assistance is too limited on the north coast beaches. The only public telephone on Highway One between the City of Santa Cruz and the County line is at Davenport. Davenport also sponsors a volunteer fire department, which has aided swimmers and accident victims. But generally, when problems have occurred on the beaches, anyone in need of assistance must rely primarily on help from other persons on the beach.



THE NORTH COAST TOMORROW: RECOMMENDATIONS

THE NORTH COAST TOMORROW: RECOMMENDATIONS

NATURAL RESOURCES

- (1) Restore and enhance the natural resources at each beach.
- 2) Increase public awareness of natural resources present at each beach through on-site management and educational signing and programs.
- 3) Consider seasonal restrictions to access at certain critical wildlife sites during breeding or haul-out seasons. Laguna Creek beach, where snowy plovers nest, is an example of an area where such restrictions may be needed.
- (4) Monitor environmental conditions. Investigate the impacts of dogs, beach users, and agricultural practices on beach and lagoon ecosystems.
- (5) Improve access and parking to reduce trail and parking area erosion.
- (6) Seek funding and technical assistance in these efforts from other agencies.
- (7) Continue to oppose on and off-shore developments (oil, natural gas, mining, toxic dumps, etc.) that might affect the north coast beaches.

LITTER AND SANITATION

- 1) Place an adequate number of trash cans in the parking lots at each beach.
- 2) Place trash cans at the head and/or foot of each formal trail leading to the beaches, or as recommended in the beach reports. Remove cans located at the bases of trails during winter months, if necessary to prevent storm damage.
- (3) Clean the beaches periodically, with major cleanups scheduled following the Memorial Day, July Fourth, and Labor Day holidays.
- (4) Strengthen and enforce litter laws.
- ;) Provide toilets where recommended in the beach reports.
- (5) Enclose toilets in attractive, permanent structures, and locate them to minimize visibility (while fostering safety). Separate them from parking lots to reduce vandalism, but place close enough to provide easy access for pump trucks.

The North Coast Tomorrow: Recommendations

- (7) Service trash cans and toilets on a regular basis throughout the year commensurate with use levels. Note: at several beaches, trash cans (or their contents in plastic sacks) may have to be hand-carried up relatively steep trails.

PARKING AND TRANSPORTATION

Limiting parking spaces may be the most effective means of holding the number of beach users to a desired level. In the beach plans that follow, parking recommendations reflect both physical constraints and desirable use levels for each beach.

- (1) Give chief priority to enhancing the safety of motorists and pedestrians when planning parking improvements.
- (2) Prohibit parking on the paved shoulder of Highway One near any of the beach areas.
- (3) Include an annual, low cost permit, modeled after that in Live Oak, for any fee system developed. Parking fees may be appropriate and necessary means of providing revenues for beach management, but should not be charged until beach improvements are complete.
- (4) Encourage the SCMTD to run more buses to the north county. Designate bus stops at each beach, where feasible.
- (5) Identify sites for lease or purchase to provide weekend-shuttle parking to ease traffic congestion.
- (6) Investigate the possibility of passenger trains along the beach route to Davenport, since rail access is excellent.
- (7) Encourage bicycle access to the beaches by maintaining wide, clean shoulders on Highway One. Install locking bicycle stands, probably alongside access trails in view of the beaches.

ACCESS

In carrying out the recommendations that follow, there are two important considerations: First, the multiple private and public land holdings complicate the process of obtaining and formalizing public access easements. Second, trail improvements should respect the natural character and scenic grandeur of the beaches.

- (1) Locate and improve trails as indicated in the individual beach plans, using durable, aesthetically pleasing designs that blend into the existing rural, agricultural setting.
- (2) Close unsafe trails and eliminate informal trails where feasible. Management personnel should work to prevent the proliferation of trails.

The North Coast Tomorrow: Recommendations

- 3) Discourage access to sensitive and hazardous areas and private property.
 - 4) Provide for handicapped access at Davenport Landing Beach.
 - 5) Negotiate access easements with private land owners and the Southern Pacific Railroad and investigate the liability of all parties.
 - 6) Erect single, unobtrusive information signs at beach entrances, as beach access is developed and other improvements are made. Include some or all of the following kinds of information as appropriate for each beach:
 - Beach hours
 - Parking hours and restrictions
 - "Remove valuables from car"
 - "Pack your trash"
 - Camping restrictions
 - Glass container ordinance
 - Leash law
 - Hazard warning for cliffs, trails, tides, etc.
 - "No lifeguard on duty"
 - Location of emergency telephone, emergency number
 - Resource protection rules
 - Access rules or instructions
- Order marine mammal warning signs from the State and kept on hand to be posted seasonally as needed.
- 7) Prohibit motorized vehicles on the beaches, except emergency vehicles under emergency conditions.

LAW ENFORCEMENT

- 1) Expand the Sheriff's North Coast Patrol to cover the beaches year-round and augment during peak use periods.
- 2) Concentrate the Patrol's efforts on preventing the most serious kinds of crimes: violence, harassment, and crimes against property. Enforce parking restrictions, litter laws, and prohibitions of ORVs on the beaches, in cooperation with on-site management personnel and the Highway Patrol.
- 3) Install emergency telephones (911) at each of the north coast beaches, perhaps on toilet buildings or information signs.

MANAGEMENT PLAN

The County should develop and implement its own plans for the North Coast beaches in order to maintain local control over their long-term character. The County should also ensure that

The North Coast Tomorrow: Recommendations

development and management of the beaches is consistent with its long range goals and plans for the beaches and with the County's Local Coastal Program. Specifically we recommend that the County:

- (1) Provide for ongoing, permanent management, supervision and maintenance at levels adequate to protect existing natural resource values and the improvements that will be made.
- (2) Solicit financial and technical assistance to improve and manage the beaches and related facilities from a variety of sources.
- (3) Discuss the State Parks and Recreation Department's interest in assuming management responsibility, and what the conditions and cost to the County would be, since it may be the logical agency to manage at least some of the beaches.
- (4) Investigate contracting with a private management company also. This might be a good approach to provide interim on-site management until improvements are completed and long-term management is arranged.

There are three general phases to implement the North Coast Plans:

1) Interim Management: Summer 1985

Designate priority areas for immediate improvements and management during summer of 1985.

- * Continue and expand use of the Sheriff's North Coast Beach Patrol; efforts should be focused on crimes against persons, and car theft and vandalism.
- * Place two or more radio-equipped beach rangers on patrol during high use periods to provide emergency assistance to the public or summon Sheriff's Deputies as needed, inform the public of beach rules, and gather statistics on beach uses and natural resources that will assist in refining detailed development plans.
- * Install portable toilets at parking areas or along access paths to serve high-use beaches and provide more trash cans.
- * Remove litter from beaches, and service trash cans and portable toilets on a regular basis with additional clean-up following holidays.
- * Install at least one emergency telephone at a suitable location between Davenport and Santa Cruz.

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The North Coast Tomorrow: Recommendations

Improve Greyhound Rock for in-transit vehicle camping. Install portable toilets, and additional trash cans, access and information signs, and an iron ranger to collect overnight camping fees. These relatively minimal improvements will enable the County to gain some revenues early on.

2) Refining the Plans: 1985-86

Continue to develop master plans for north coast beaches using County staff, in cooperation with north coast residents and land owners.

Identify precise ownership and jurisdiction on the North Coast among the State, County, CalTrans, S.P.R.R. and private owners.

Negotiate with land owners affected by the beach plans to gain dedicated beach access-ways from the land owners. The beach and supporting areas could be granted in fee to the County. Where such dedications or grants are not made, attempt to enter into long-term leases with the property owner. In exchange for grants and leases, the County should work with the land owner to absolve him or her of any liability resulting from public use, and should make other reasonable improvements such as fencing to help protect the private property.

Hold public meetings to discuss the north coast beaches and to review the beach plans. Particular attention should be given to the communities of Davenport and Bonny Doon, in relation to proposed plans for Davenport Beach and Bluffs, Davenport Landing Beach and Bonny Doon Beach.

Discuss interim management options with State Parks and Recreation and private operators.

Investigate the most effective means for maintaining long-term County control of the north coast beaches.

* Apply for grants from the Coastal Conservancy and other funding sources for access and parking improvements and environmental restoration.

Initiate a natural resources management program to manage, restore, and enhance dunes, wetlands and eroding bluffs, and to protect wildlife habitat. During the first year priority should be given to the following areas:

Greyhound Rock--provide effective erosion control to prevent gullying and bluff erosion.

Scott Creek--revegetate eroding dunes at south end of beach

The North Coast Tomorrow: Recommendations

and install additional Off-Road-Vehicle barriers as needed.

Laguna Creek--protect lagoon and marsh wildlife habitat from intrusion by beach users and dogs. Evaluate feasibility of restoring and enhancing the wetlands.

Bonny Doon--revegetate eroding dunes at back of beach. It may be necessary to make interim access improvements prior to revegetating in order to channel beach users away from the damaged areas.

3) Final Phase: 1986 and beyond

Construct access, parking and other improvements in accordance with the beach plans, and complete long range management arrangements.

- * Order priority for permanent improvements by the level of public use, relative need for environmental and people management, and potential for fee income from parking, and/or camping.
- * Schedule improvements in the following sequence: Bonny Doon, Scott Creek, Greyhound Rock, Davenport Bluffs, Yellowbank, Laguna Creek, Davenport Landing, and Panther.
- * Create an environmental camping program, similar to that operated by the State Parks, after a management plan and improvements are in place. Camping should be limited to a maximum of three days, and controlled by County-issued, low-cost permits. Several beaches appear suitable for such a program, as noted in the beach plans that follow. Experience at those beaches should determine whether camping could be extended to other north coast beaches.

BEACH REPORTS

Each report describes existing conditions and presents recommendations in the following categories:

Natural Resources

Access

Parking

Litter and Sanitation

Law Enforcement

Management

Laguna Creek



EXISTING CONDITIONS

Physical Description

Laguna Creek Beach, about six miles north of Santa Cruz, is one of the least disturbed beaches described in this report. The main beach is about one-sixth of a mile long, widening at the south end. A large lagoon lies inland, and Brussels sprout fields cover the terraces north and south of the lagoon. North of the main beach is a narrow cove that is sheltered from the prevailing summer breezes.

Beach Use

Laguna Creek Beach is used by a wide variety of people, including

Laguna Creek Beach

sunbathers, families, fishermen, musselers (in winter), overnight campers, and surfers. There is less evidence of large parties at this beach than at most others, and ORV use is relatively infrequent. The north end of the beach is most heavily used, because it provides shelter from summer winds.

Natural Resources

Laguna Creek Beach is still relatively pristine. The large lagoon is its most significant natural feature. The lagoon is a wintering area for many avian species, and is potentially a valuable nesting site. Snowy plovers, a locally unique species, nest on the beach.

Access

There are two main access routes to the beach. The main route follows a bedrock-surfaced farm road. This road leads to several small and eroding footpaths down the low bluffs at the north end of the beach. The second route is an eroding and potentially dangerous trail that runs close to the north end of the lagoon and emerges at the south end of the main beach.

Parking

There is a dirt parking area on the inland side of Highway One, adjacent to a little-used side road. This side road provides overflow parking space when the dirt lot is full. The County Transportation study estimates the dirt lot can hold 33 cars, but we place that number closer to 50. The existing parking capacity is adequate for current use levels. Traffic and pedestrian safety is a very serious problem because of the combination of cars approaching rapidly over a blind hill, cars turning left into the parking area, and pedestrians crossing the highway.

Litter and Sanitation

Laguna Creek Beach does not have the serious litter and sanitation problems that some beaches have, but there is enough existing garbage to warrant attention. There is one trash can in the parking area, and one informal trash-dumping area at each end of the beach. There are no sanitary facilities at the beach.

Law Enforcement

Officers in four wheel drive vehicles can drive nearly to the beach if the gate at the entrance is opened. This access crosses private property, however, and the key to the gate is held by the landowner.

Except for the occasional voyeur or exhibitionist, there does not seem to be serious crime problem at this beach. However, when Four-mile Beach is developed by the State, the parties and ORV use that currently take place there may move north to Laguna Creek Beach.

Laguna Creek Beach

RECOMMENDATIONS

General

Every effort should be made to preserve the environmental integrity and semi-wilderness character of this beautiful beach. This beach is a low priority for increased use or development. We would like to maintain the present low numbers and variety of people that use the beach, and to discourage ORV use and large parties.

Natural Resources

- (1) Restrict camping and dogs from the lagoon area.
- (2) Sponsor studies of human and agricultural impacts on the lagoon ecosystem, and study ways to restore and preserve its value as a wildlife habitat.
- (3) Investigate the impacts of humans and dogs on the breeding success of snowy plovers on the beach. It may be necessary to restrict access during the plover's breeding season.

Access

- (4) Channel beach visitors along the main route. This is the safest and most direct route, and it disturbs natural and agricultural areas as little as possible.
- (5) Erect unobtrusive signs to indicate the main access route; it is not necessary to improve this route.
- (6) Improve the last few yards of trail down to the north cove to reduce erosion and improve safety, perhaps with masonry steps.
- (7) Discourage beach-goers from using the access route that borders the lagoon, and direct them instead to the main trail.

Parking

- (8) Maximize the number of cars that will fit in the existing parking area.
- (9) Increase safety for pedestrians and drivers by making some or all of the following improvements:
 - a) Build a guard-rail along the edge of the parking lot to

Laguna Creek Beach

keep people from entering and leaving the parking area wherever they choose. Traffic would enter the lot from the side road, not from the highway.

b) Erect a caution sign next to the southbound lane of Highway One just north of the parking area to warn drivers of the hazard ahead.

c) Erect a "No Left Turn" sign next to the southbound lane of Highway One at the north end of the loop road. Cars would be directed to turn left at the south end of the loop, and take the loop road to the parking area.

d) Build an underground walkway for pedestrians to get from the parking area to the head of the beach trail. This walkway would go under the highway, but not under the railroad tracks, in the vicinity of the existing culvert at the north end of the parking area.

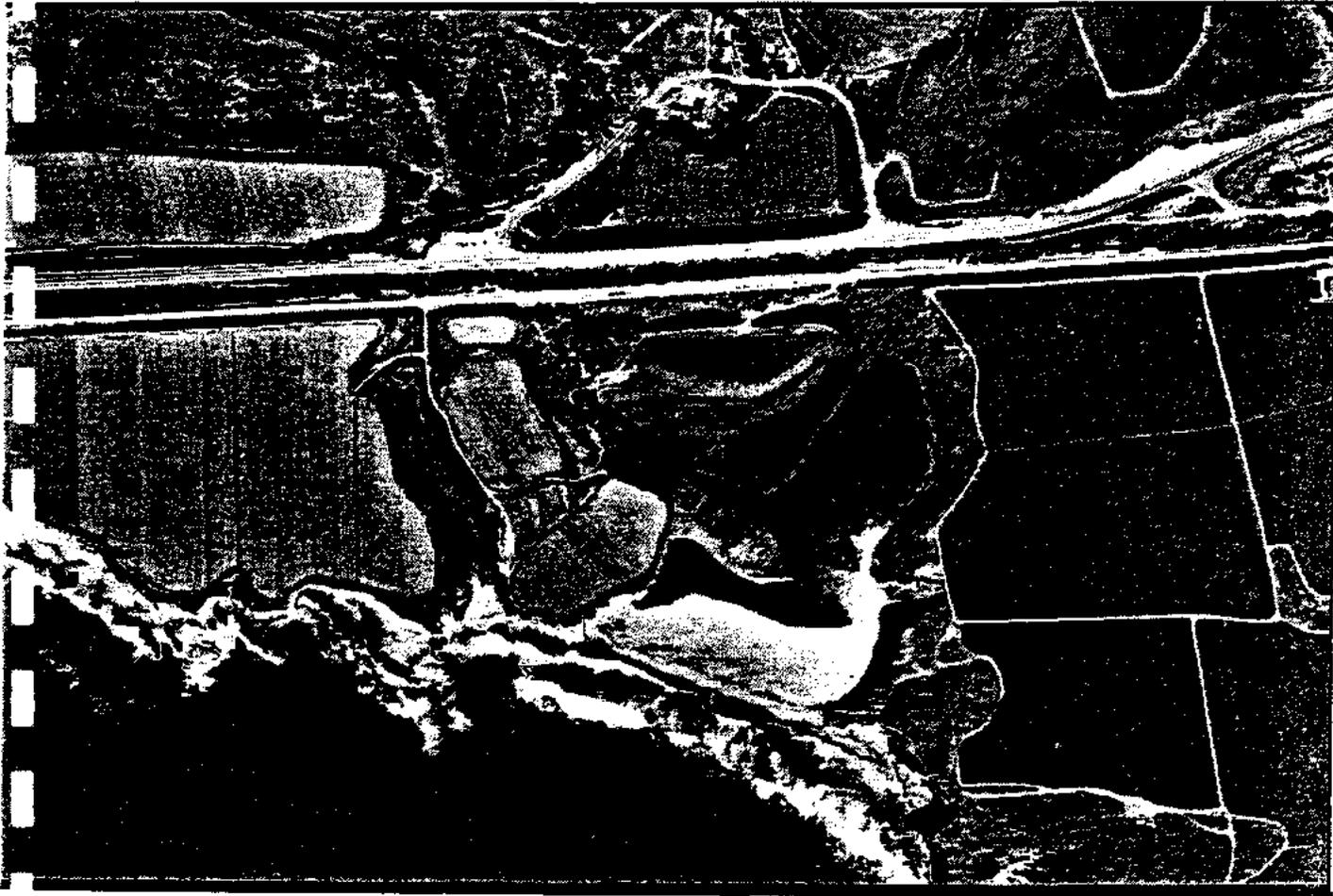
Litter and Sanitation

- (10) Place four trash cans on the beach where they will not be removed by the waves - two where the "north beach" trail begins to head uphill, and two where the "south beach" trail heads uphill to connect with the main trail. At least two trash cans should be placed in the parking lot.
- (11) Install two chemical toilets as close to the beach as possible. Examine the flat area closest to the beach to see whether it could support a septic tank or if pumping trucks could reach the area. If not, place the toilets in the parking area.

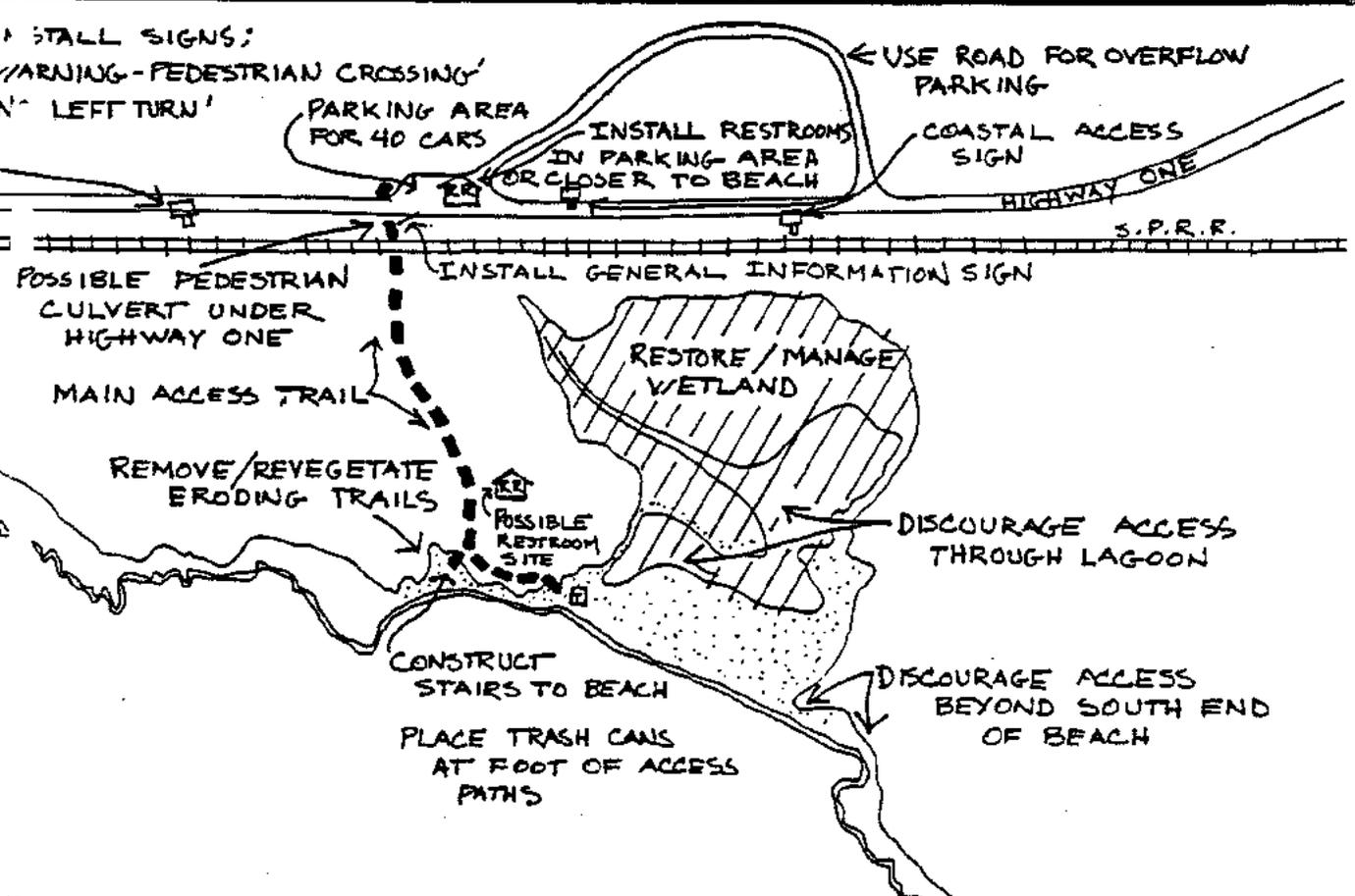
Law Enforcement/Management

- (12) Monitor the beach for increases in law enforcement problems, especially after Four-Mile Beach is developed.
- (13) Establish an environmental camping program for this beach, after a management program has been implemented. Limit camping to three days. Low-cost camping permits would be issued by the County.
- (14) Allow informal camping until the environmental campground permit system is established. Use levels should be monitored in the meantime, and beach use limited if necessary to achieve management and resource protection goals.

Laguna Creek - Existing Conditions



- Recommended Improvements



Yellowbank
(popularly known as Panther Beach)



EXISTING CONDITIONS

Physical Description

Yellowbank Beach lies about eight miles north of Santa Cruz. There are two sections to the beach, separated by a narrow rock archway that is only passable at low or medium tides. The back of the north (main) beach is bounded by railroad/highway fill that separates the Yellowbank Creek canyon from the beach. The main beach is approximately one hundred yards long and up to seventy yards wide. Yellowbank Creek crosses the main beach, after passing through a tunnel under the railroad and highway. The stream is small and flows across the sand only during the wet season.

Yellowbank Beach

The south beach is backed by vertical cliffs and ends in a rock shelf and point. South of this, low rock shelves continue for several hundred yards. The south beach is about two hundred yards long and twenty five to fifty yards wide in the summer.

Both beaches are bounded at either end by thirty to forty-foot cliffs. The north end of the main beach and several recessed areas on the south beach provide shelter from prevailing breezes.

Beach Use

Swimming is the principal activity at this beach, but fishing and camping are also common. The main beach receives the use because it is closest to the parking area and because access to the south section is only safe at low tide.

Natural Resources

Yellowbank Beach is still relatively unspoiled. The main beach suffers from heavy use--trash and fire remnants litter the back of the beach--but the south section remains nearly pristine.

Many shorebirds use the north and south beaches, and nest on the cliffs bordering the south beach. The rock shelves at the south beach contain small tidepools. There is no noteworthy vegetation on either beach. Low brush covers portions of the slopes behind the beaches.

Access

The principal trail serves the main beach. It begins at the north end of the parking lot, crosses the railroad tracks, and drops directly to the beach. The trail is steep, braided, eroded, and can be difficult due to loose rocks and dirt. There is no trail access to the south beach.

Several little-used trails descend to the beach on either side of the main trail. Informal trails follow the top of the bluffs, and a well-used trail extends to the tip of the promontory separating the two beaches. These trails afford excellent overlooks of the beaches and the coast to the north and south.

Parking

The parking area lies along a ridge between the highway and the N.P.R.R. tracks. It is a long, narrow dirt strip with space for 50 to 100 cars. It is in poor condition, with an uneven surface

Yellowbank Beach

and large ruts. The parking lot is near capacity for existing peak period demands.

Highway access is from the south end of the area only. The parking area is easily visible to northbound motorists, but southbound motorists are hampered by a tight turning area, and by conflicts with cars leaving the area.

Litter and Sanitation

Several trash cans are located at the north end of the parking area. There are no trash cans on the beach. Litter on the main beach is moderate, most of it lying at the back of the beach. Some areas are blackened by campfires. The south beach is considerably cleaner than the main beach.

Law Enforcement

Law enforcement personnel have access to the parking area, and can use the unpaved farm roads between the railroad tracks and the beach. Vehicular access to the beach is not possible, but the entire beach can be seen from the bluffs above.

Yellowbank Beach

RECOMMENDATIONS

General

Long-term management and development of Yellowbank Beach should accommodate recreational uses while protecting the natural resources and beauty of the area. The main beach, with its relatively easy access and history of more intensive use, should continue to receive the most use. The south beach, with its limited accessibility and better habitat, should be maintained in its near-pristine condition. Increased access to and use of this area should not be encouraged.

Natural Resources

Recommendations made in other sections of this report should provide adequate environmental protection for both beaches.)

- 1) Consider prohibiting camping on the south beach, due to the lack of safe access, emergency assistance, and sanitary facilities, as well as to protect wildlife.
- 2) Inform the public of wildlife habitat areas on a general information sign.

Access

- 3) Remove the existing main trail and the minor trails nearby and revegetate the area.
- 4) Construct a new trail on the sandstone slope just southwest of the present trail. Design this new pathway with a gentle slope, and one or two switchbacks, if needed. Engineer it carefully to prevent runoff from eroding areas nearby.
- 5) Consider installing a fence or some other barrier to prevent people from taking a shorter route directly down the slope.
- 6) Consider improving the short section of trail between the parking area and the railroad tracks for safety and ease of access. Steps and a railing may be most effective here.
- 7) Discourage access to the trails along the bluff top, because of hazardous cliffs and private property.
- 8) Place coastal access signs on Highway One near the entrance to the parking area. Erect a general information sign beside the beginning of the access trail on the seaward side of the S.P.R.R. tracks.

Bonny Doon



EXISTING CONDITIONS

Physical Description

Bonny Doon Beach is located approximately eleven miles north of Santa Cruz at the intersection of Highway One and Bonny Doon Road.

The beach is about 250 yards long, with a wind-free cove at the north end. The sandy cove, which is reclaimed by the sea during winter months, is the most popular portion of the beach. The north and central portions of the beach are surrounded by high cliffs. Liddell Creek crosses the southern end of the beach during winter and spring, emerging from a culvert beneath Highway One and the railroad tracks. At the south end of the beach a dune rises about 60 feet above the sand. The south end of the beach is encompassed by steep slopes of sand and earth, negotiable only by the nimble-footed. The land above is used for agriculture.

Beach Use

Bonny Doon Beach is used mainly by nude sunbathers. There is little family use. Most beach users are young to middle-aged adults. Sunbathing, socializing, drinking, and sports such as

Bonny Doon Beach

Volleyball and frisbee are popular activities. Scuba, surfing, fishing, and other water sports are uncommon because of hazardous conditions.

Natural Resources

The dune system at the southern end of the beach is badly deteriorated as a result of indiscriminate foot traffic. Stabilizing vegetation has been virtually eradicated. Erosion has occurred on the steep slopes leading to the beach, again because of unchannelled foot traffic.

Access

Visitors must climb a steep berm supporting the railroad tracks, cross the tracks at grade, then descend the berm on the other side to reach paths leading to the beach. Several trails are in use. All but the northern-most trail are badly eroded.

Parking

The current demand on Bonny Doon Beach almost exactly equals the parking capacity. However, much of this capacity is met by parking in hazardous locations.

There are three main parking areas at present: A graded lot below the railroad embankment; the shoulder of Highway One; and the shoulder of Bonny Doon Road. The latter two areas create an extremely hazardous situation as people park partly in the roadway, open doors or step out in front of moving cars or bicycles, pull into or out of parking spaces suddenly, or are forced to walk in the roadway to get to or from their cars.

The graded parking area can hold about fifty cars. It presents a traffic hazard in its current condition. Cars are able to enter and exit the lot anywhere along its length, and are often forced full onto the highway from between parked vehicles that block their view of oncoming traffic.

Litter and Sanitation

Bonny Doon Beach is often littered with garbage and broken glass. The southern end of the beach, which is not washed by the sea during winter months, is particularly bad. It has become unsafe to walk barefoot in this area because of broken glass. There are no toilet facilities. There is room for sanitary facilities near the access trails from the two parking lots.

Law Enforcement/Management

Currently, there is a sizable enforcement problem here. Night use, above all, has consistently resulted in law enforcement problems.

Bonny Doon Beach

RECOMMENDATIONS

General

This is a high-use recreational beach, and will remain so. Attempts must be made to curtail crimes against persons and property, protect the environment, and provide a safe atmosphere for beach users.

Natural Resources

- (1) Restore dune vegetation at the south end of beach.
- (2) Consider the safety of wildlife before deciding whether to allow dogs on the beach.

Access

- (3) Eliminate all but the northern-most trail to the beach. Improve this trail.
- (4) Construct an aggregate concrete stairway with a hand-rail along this route.
- (5) Place signs directing foot traffic to this route.
- (6) Restore and revegetate all other trails.
- (7) Formalize the trail connecting the main lot with the Panther Beach lot, and identify this trail with signs.

Parking

- (8) Prohibit shoulder parking along Bonny Doon Road and Highway One.
- (9) Improve main lot by paving or screening lots, striping spaces, and fencing to create single entrance/exit. (This will mean a reduction in the amount of parking spaces available at the beach.)
- (10) Develop the parking lot at Panther Beach as an overflow lot for Bonny Doon Beach to help meet the demand for parking spaces. This lot holds an estimated 55 cars. A 1/4 mile trail already connects the two lots.
- (11) Design the parking lots to allow the addition of a kiosk or "iron ranger," should the County decide to charge for parking.

Litter and Sanitation

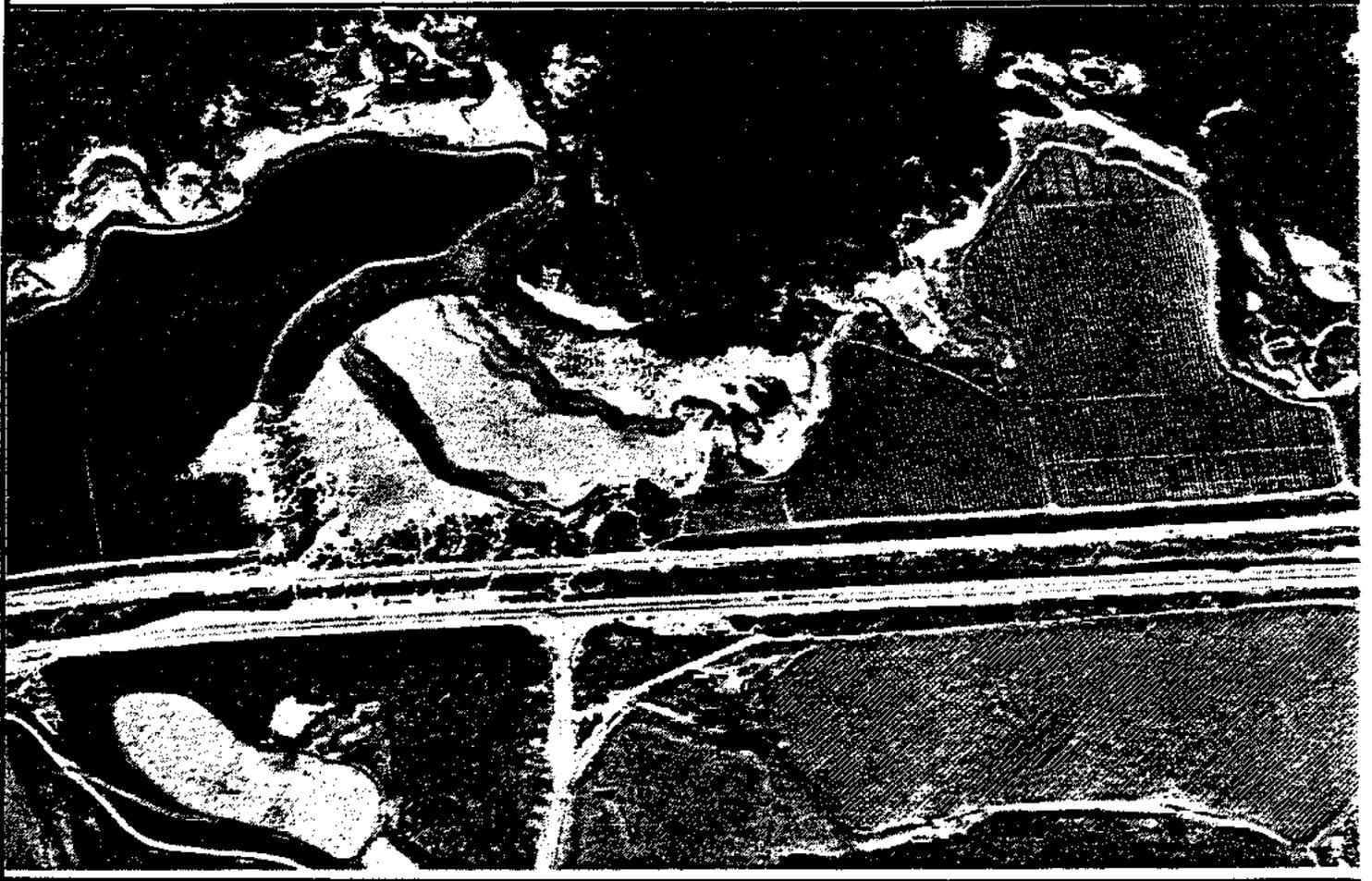
Bonny Doon Beach

- (12) Sift sand for broken glass
- (13) Provide trash cans in parking lots and at the beginning and end of access trails.
- (14) Place a toilet near the intersection of the access trails connecting the two parking lots.

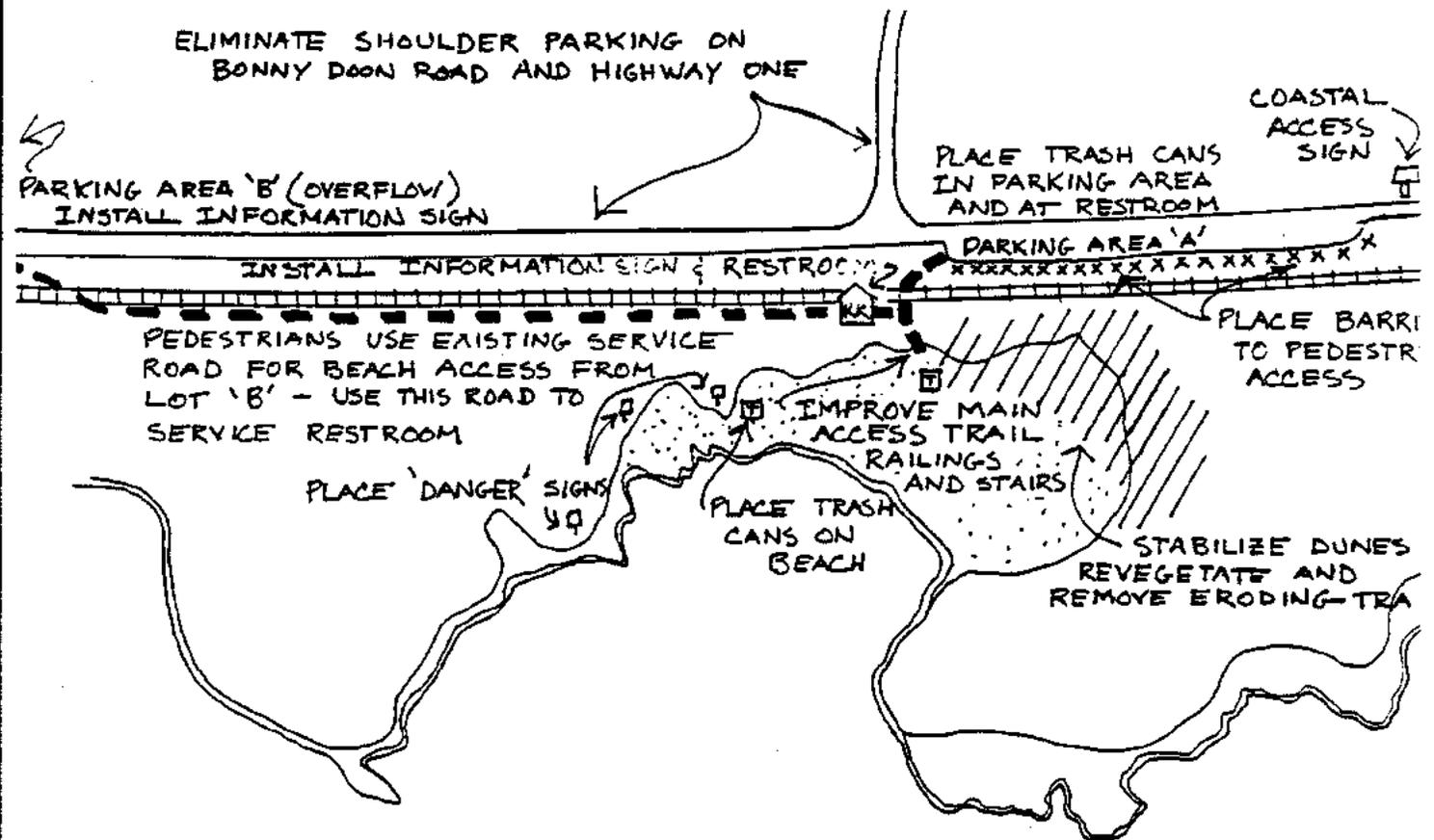
Law Enforcement/Management

- (15) Prohibit night and overnight parking in the main lot.
- (16) Prohibit camping on the beach.
- (17) Patrol beach and parking areas regularly with management personnel.
- (18) Direct additional efforts toward preventing auto break-ins.

Bonny Doon - Existing Conditions

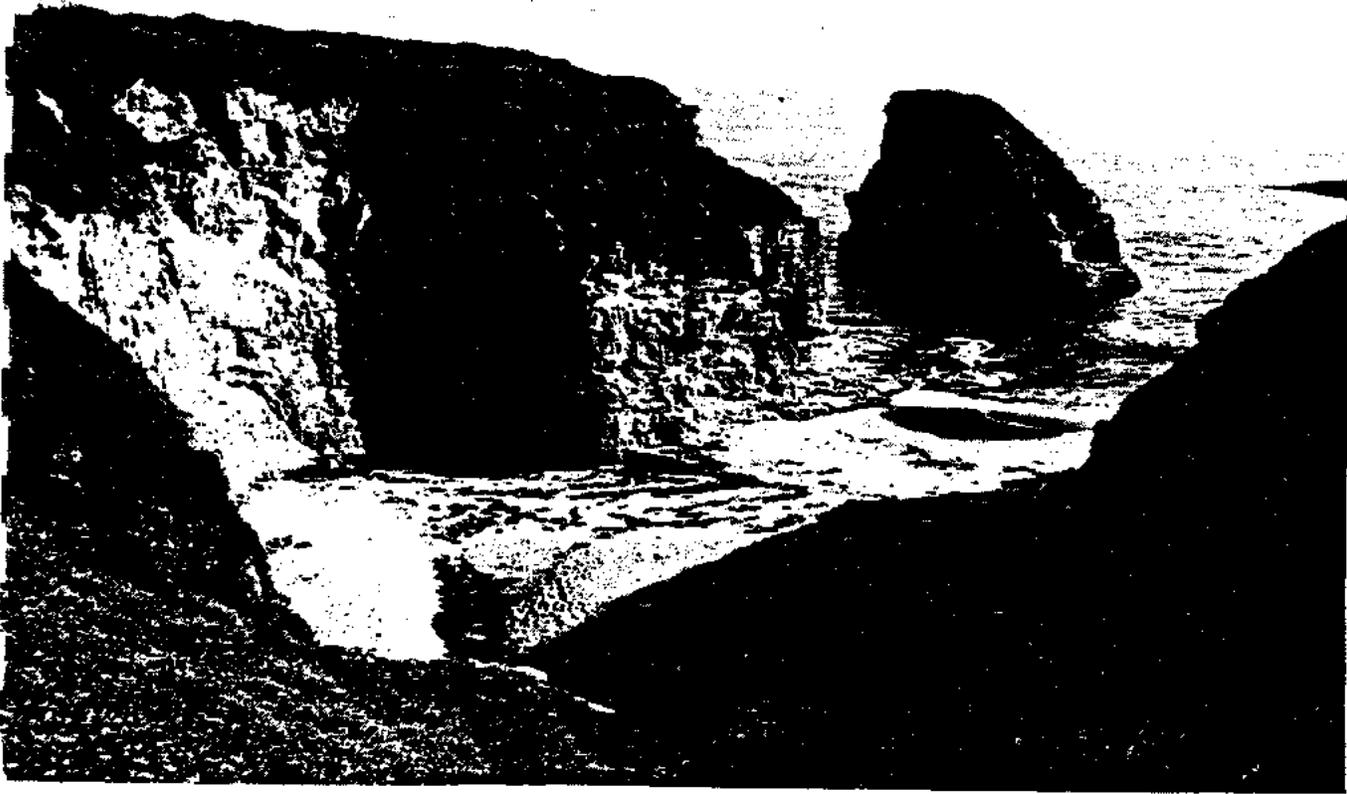


- Recommended Improvements



Panther

(Note: This name was used by the County in a previous report, but is not in popular use. Generally, the name "Panther Beach" refers to the beach known in this report as Yellowbank Creek.)



EXISTING CONDITIONS

Physical Description

This is a narrow pocket beach about 1/2 mile north of Bonny Doon Beach. The beach is surrounded by fields and, although it is close to Highway One, cannot be seen from the road. The size of the beach varies greatly from year to year, but it is seldom as large as any of the other beaches described in this report. It can accommodate about 10-15 people during high tide, and up to 25 people at low tide when several offshore rock shelves are exposed.

Panther Beach

Beach Use

Young and middle-aged adult sunbathers use the beach most frequently. Water use (swimming, surfing, fishing) is rare or non-existent, but some people do use the beach for camping. The cliffs above the beach are used for whale watching.

Natural Resources

The steep slopes adjacent to the beach are well vegetated, although the area nearest the path has been eroded. An agricultural drainage "stream" flows onto the beach through a tunnel in the cliffs. We do not know what forms of wildlife use this beach.

Access

The only way to get to this beach is by climbing over a metal gate, walking down a slight incline to the railroad tracks, and climbing down a steep and dangerous path. The path is badly eroded, and some side trails end in impassable drops.

Parking

Just north of the beach is one of the largest dirt pull-off areas currently in use on the north coast. CalTrans estimates that 55 cars can park here. This lot has a much higher parking capacity than the beach can accommodate.

Litter and Sanitation

The beach is heavily littered, both with trash and with large pieces of concrete. It has no trash bins, and no sanitation facilities.

Law Enforcement/Management

There are no known law enforcement problems here. Virtually the entire beach can be observed from the cliffs above.

Panther Beach

RECOMMENDATIONS

General

This beach is small and can serve few people at any one time. It should be a low priority for improvement relative to the other beaches.

Natural Resources

- 1) Prevent continued erosion of trail, and revegetate adjacent areas.

Access

- (2) Consider installing a concrete, stone, or metal stairway to improve access to this beach. However, its cost would be high compared with the carrying capacity of the beach. Therefore it is a low priority improvement.

Parking

- (3) Post signs at this parking area directing people to Bonny Doon Beach, and warning of the dangerous cliffs at this location--to resolve the conflict between the large parking capacity and the low beach-use capacity. If a shuttle-bus system is created, this lot might be used as a staging area.

Litter and Sanitation

- (4) Clean up the beach, including the broken concrete.
- (5) Place trash cans at the base of the path, if access is improved.
- (6) Install chemical toilets in the parking area, if access is improved or the parking lot is used for Bonny Doon beach or shuttle parking.

Law Enforcement/Management

- 7) Approve an environmental camping program for this beach if chemical toilets are installed, and a management system has been implemented. Allow informal camping until the environmental campground permit system is established.

Davenport Bluffs and Beach



EXISTING CONDITIONS

Physical Description

The site is located directly across Highway One from the community of Davenport and the Lone Star cement plant. The beach is in an exposed location and is generally windy. San Vicente Creek flows across the north end of the beach from a tunnel under the railroad tracks. The ocean front along the 100-foot bluffs extends for about 3/4 of a mile and the sand beach is about 300 yards long.

The availability of supplies, restaurants, overnight accommodations and other services in Davenport makes this recreational area unique.

The area can be looked at as four distinct parcels: the beach, the bluff viewing area, the cypress grove, and the parking area.

Davenport Bluffs and Beach

Beach Use

The beach is generally used for camping, picnicking, sunbathing, and sight-seeing, not for swimming or surfing. A high grassy berm along the railroad tracks next to the sand is currently serving as a camp site. There is some surf-fishing from the sand beach and good rock-fishing from the exposed shelf at the southern end. This rocky area is safe to fish only during low tides with calm seas.

The bluff provides an excellent site from which to view of the annual grey whale migration and the extensive marine bird and mammal life of the area.

The cypress grove is a popular day-use area and is also used for overnight camping.

Natural Resources

The cove at the north end of the beach provides shelter for sea birds, harbor seals and California sea lions. San Vicente Creek is a major steelhead stream. Cliff-nesting birds inhabit the bluffs. North of the site, but easily viewed from the bluffs, is a crumbling pier that is the only known nesting site in the county for Brandt's cormorants, and is also home for double-crested cormorants.

Access

The beach can be reached from both the north and south. The south trail is poor and steep, winding up and over the railroad tracks and then down to the beach. The north access originates at the main parking area, goes along the tracks and enters the beach just above San Vicente Creek. The bluffs and cypress grove are easily accessible.

Parking

The main parking area holds approximately sixty cars. It is level and unpaved. There is a small parking area along Highway One at the south end of the beach that holds about ten vehicles.

Litter and Sanitation

Remendous amounts of trash have accumulated along the south beach access trail. There is a lot of litter in the Cypress grove, along bluff trails, and near parking and camping areas.

Law Enforcement/Management

The Davenport Volunteer fire department is called frequently for rescues.

Davenport Bluffs and Beach

RECOMMENDATIONS

General

- (1) Consult the citizens of Davenport closely about the planning, development and management of this area, because the site's proximity to the town offers opportunities, but also raises special concerns. The beach and bluff parcels could be developed to highlight the attractiveness of the site to tourists.

Natural Resources

- (2) Protect the cove north of the beach where seals and sea lions haul out.
- (3) Prohibit camping in the dunes at the back of the beach. Investigate whether a suitable site for environmental camping exists.

Access

- (4) Improve the north beach access so that emergency and maintenance vehicles can reach a staging location adjacent to the north end of the beach. Close the trail at the south end of the beach.
- (5) Improve pathways to the bluff view area so that handicapped persons are able to enjoy this site. Fencing at the bluff edge would increase safety.
- (6) Install benches and interpretive signs at a central location or near the cliffs.
- (7) Designate the cypress grove area for day-use only. Improve the primary access trail and install safety measures (fences, signs) at the cliff-edge.
- (8) Construct a control gate at the south end of the parking area to create a single access point; place an information kiosk here, if desired.

Parking

- (9) Eliminate the turnout on the west side of Highway One at the beach's south end.
- (10) Grade and surface the large parking area.
- (11) Designate a small part of the parking lot, if desired, for in-route camping for self-contained recreational vehicles.
- (12) Improve the parking lot to accommodate shuttle parking, if needed.

Davenport Bluffs and Beach

Litter and Sanitation

- (13) Place trash cans and toilets at the "staging area" immediately adjacent to the north end of the beach, where they can be easily serviced.
- (14) Consider placing trash cans and toilets for the general parking area. Screen all sanitary facilities with attractive landscaping or fencing.

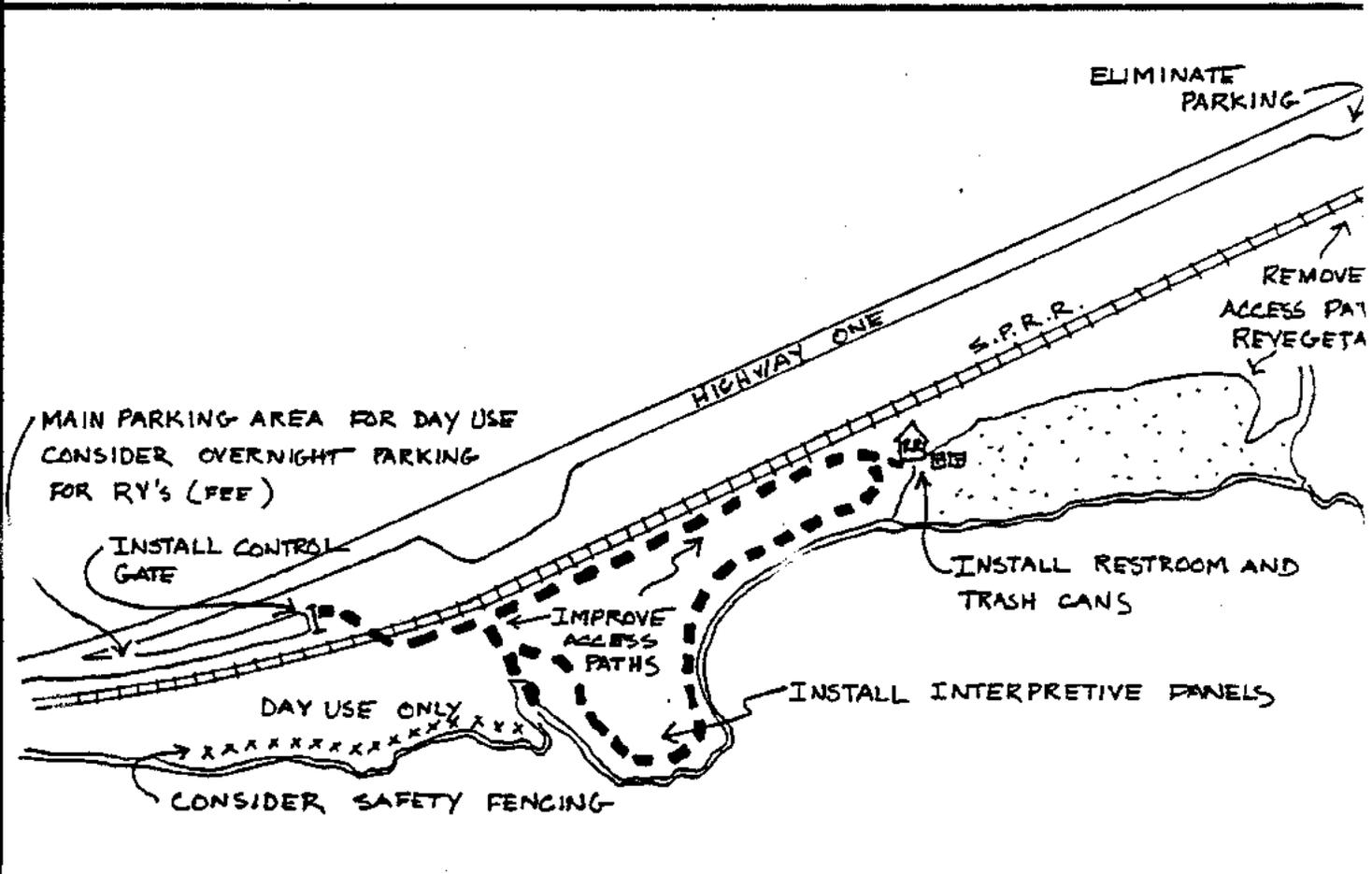
Law Enforcement/Management

- (15) Provide interim management through occasional visits by State Parks Rangers, or the like, until a permanent plan has been implemented. A County contract with the State Department of Parks and Recreation would provide for this.

Davenport Bluffs and Beach - Existing Conditions



- Recommended Improvements



Davenport Landing



EXISTING CONDITIONS

Physical Description

Davenport Landing Beach is located about one mile northwest of Davenport. The beach is reached by turning off Highway One onto Davenport Landing Road.

The beach is about 200 yards long and 50 yards wide. The sandy area is bounded on both ends by low rocky terraces backed by vertical cliffs 30 to 40 feet high. The water directly offshore of the center of the beach is deep and free of surf, with submerged reefs on either side. The north end of the beach is sheltered from the prevailing north-west winds and is preferred by sunbathers and picnickers.

There are three private residences directly behind the beach, and two other homes on the inland side of Davenport Landing Road. There is a small aquaculture facility next to the residences, and a large, open cement channel from this facility crosses the south end of the beach. Brussels sprouts are grown on the terraces bordering the beach.

Beach Use

Davenport Landing Beach is used year-round and has one of the most consistent use patterns of any of the beaches. It is easily

Davenport Landing Beach

accessible from the road, which encourages its use by families with children, older persons, and handicapped persons. Because it is near the road many visitors feel safer here than on the more isolated beaches. Fisherman and surfers also use this beach. During the fall and winter, surfers are often the largest single user group. Other beach uses include limited informal camping and occasional parties. These activities, which have caused problems in the past, are being discouraged by local residents.

During summer months an average of 25 to 50 people may be found on the beach and adjacent rocky areas. Peak use probably reaches 100 persons.

Natural Resources

A small stream crosses the north end of the beach during wet months. Along its bed are cattails, ferns, and other riparian plants. There is little native vegetation on the beach itself or in the immediate vicinity. On the inland side of Davenport Landing Road is a low-lying marshy area of about an acre. Willows and other wetland plants grow here.

Shorebirds use the main beach, and there are nesting sites in the cliffs south of the main beach. There are small tidepools on the terraces beneath the north and south bluffs.

While the natural setting of this beach is beautiful, the nearby road and buildings give the area a more developed appearance than most north coast beaches. Litter and the many informal trails between the road and the beach detract from the natural beauty of the area, however.

Access

The beach is about fifty yards from the road. Several informal trails lead from the parking area across a low intervening terrace to the beach. The terrace is mostly level, but ends in a four foot drop-off. An earth berm and several large boulders have been placed between the shoulder of the road and the terrace to keep vehicles off the beach.

The access trails are on private property, but an access easement across the property coincides with the main trail.

Parking

Parking is available on both sides of the County road in front of the beach. There is room for about twenty-five to thirty vehicles on the road shoulder, which is unpaved, rutted, and deteriorating in places. Existing parking appears adequate for current use levels. Access from Highway One onto Davenport Landing Road is reasonably safe.

Davenport Landing Beach

Litter and Sanitation

The County maintains several trash cans next to the road. There are no trash cans on the beach. Litter is conspicuous on the road shoulder, the terrace leading to the beach, and the north end of the beach. At the back of the beach are the remains of campfires. Storms, high tides, and intermittent streams tend to clean the beach during the winter. Local residents occasionally clean the road shoulder and beach during the summer.

There are no sanitary facilities. The hillside to the north of the stream shows the effects of this lack.

Law Enforcement/Management

Aside from a few thefts from cars there have been few law enforcement problems at this beach, probably because it is visible from the road and nearby houses. Law enforcement personnel have direct access to the beach via the County road and can provide normal patrol or emergency services with relative ease.

Davenport Landing Beach

RECOMMENDATIONS

General

Davenport Landing Beach should be developed and managed to accommodate a wide range of users. It is suitable for use by families, picnickers, and elderly or handicapped visitors because it is easily reached from the nearby road. Use levels will be controlled by the limited parking available.

Natural Resources

(Recommendations listed elsewhere in this section will help preserve the natural resources in this area.)

Access

- (1) Construct a single pathway through the center of the open terrace along the dedicated access easement. The path should be about six feet wide, with a hardened surface of natural-appearing materials, and should have a ramp extending to the edge of the sand to permit wheelchair access.
- (2) Remove informal trails that cross the open terrace.
- (3) Construct a walkway leading to this path between the parking area and the ORV barrier, to encourage use of the single improved path.
- (4) Place standard coastal access signs on Highway One near each end of Davenport Landing Road. Erect a general information sign beside the pathway.
- (5) Install hazard warning signs at either end of the sandy beach where the rocky shoreline begins, if desired.

Parking

- (6) Widen and pave both shoulders to increase available parking by five to ten spaces and improve the appearance of the roadway and shoulders.
- (7) Widen the northern-most intersection of Davenport Landing Road and Highway One to assist south-bound right turns.
- (8) Limit visitor parking, if possible, to the area in front of and north of the vacant properties fronting the beach, where the shoulder is widest.
- (9) Reinforce the rock barrier between the road and the vacant parcels to prevent ORV access to the beach. The barrier could consist of a low, unobtrusive metal railing, posts, or

Davenport Landing Beach

boulders.

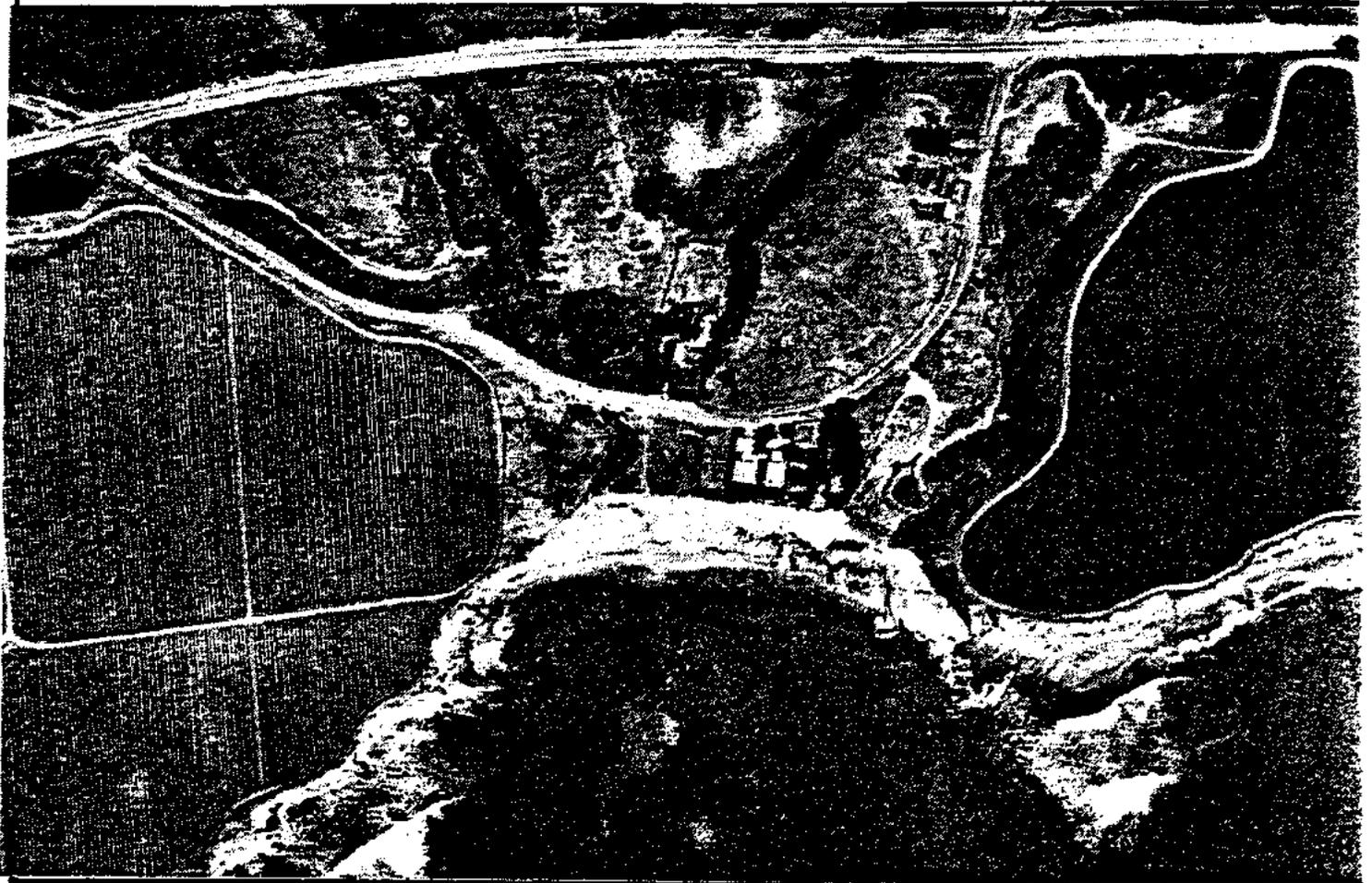
Litter and Sanitation

- (10) Place four to six trash cans next to the access path. Move the cans to the top of the low bluff to avoid high tides during winter months. Also place several cans near the parking area.
- (11) Construct a permanent structure housing two chemical toilets on the open terrace next to the access path and information sign. The structure should be attractive and durable, and should accommodate handicapped users.
- (12) Establish a landscape buffer of native plants on the south end of the open terrace to help screen the sanitation facilities and parking areas from the adjacent residences. Consult the owners of the terrace property and the adjacent parcels about such screening.
- (13) Place fire rings on the beach.

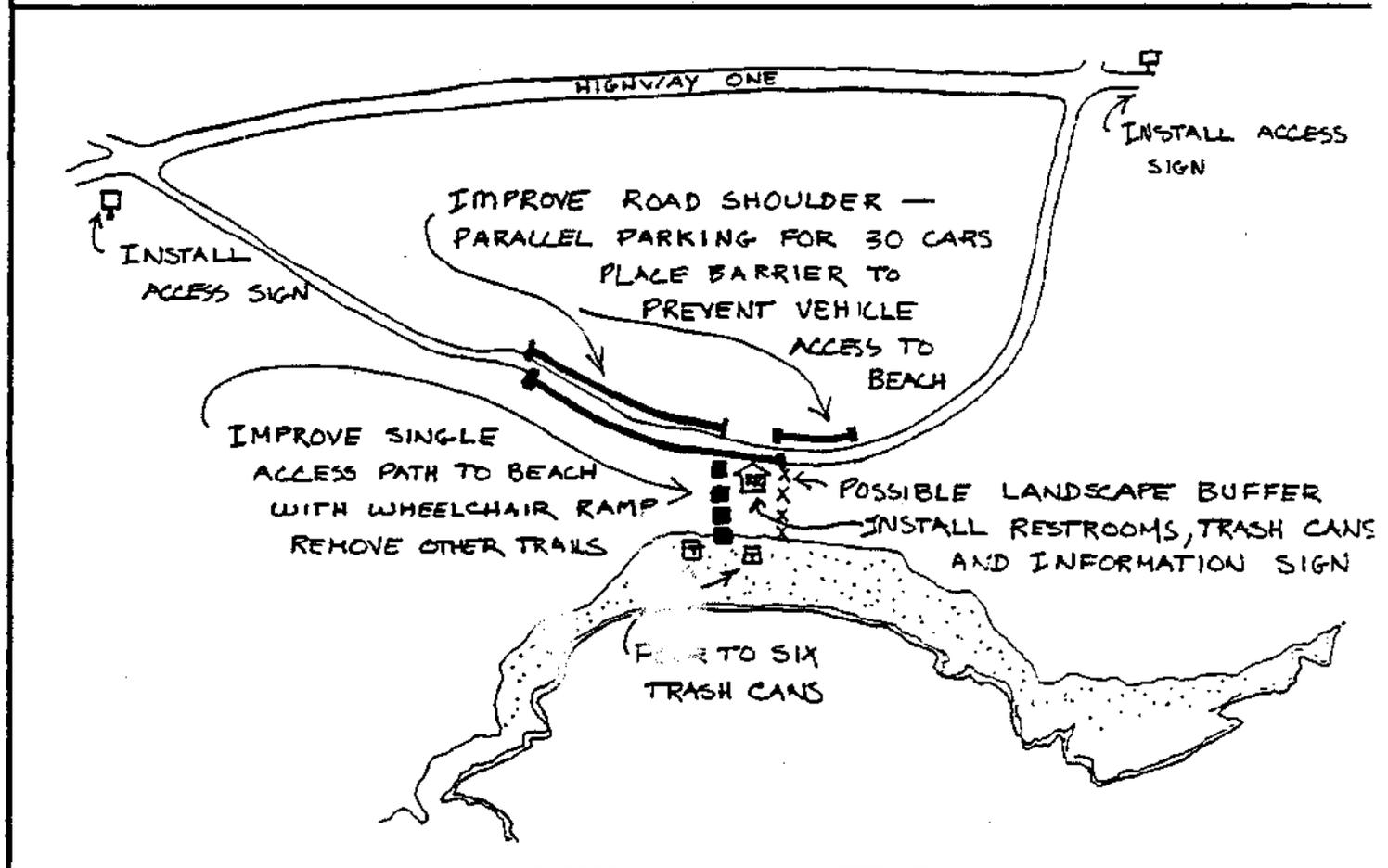
Law Enforcement/Management

- 14) Patrol by management personnel down Davenport Landing Road several times a day to discourage auto break-ins; check the trash cans and toilets once daily during high use periods.
- 15) Obtain easements for the toilets and information sign which are on private property (owned by the Lone Star Cement Company).

Davenport Landing - Existing Conditions



- Recommended Improvements



Scott Creek



EXISTING CONDITIONS

Physical Description

This beach is about fifteen miles north of Santa Cruz, immediately adjacent to Highway One. The main beach is about one-half mile long. It can be seen from the highway, both as one crosses the bridge at Scott Creek and from vistas as one descends to the creek from the north or south. Both the north and south ends of the beach are bounded by high bluffs that form the backdrop for highly scenic views from the highway.

Scott Creek flows across the beach most of the year, creating a lagoon and a large stream. In some years this stream limits access from north to south along the beach. Molino Creek crosses the south end of the beach.

This is an open beach and receives the brunt of the spring and summer northwest winds. At such times the only shelter is in the northeast corner of the beach.

East of Highway One is a large wetland area with about twelve acres of marsh and five acres of sheltered water, bounded on the north and south by agricultural lands.

Both the beach and portions of the north and south bluff areas are owned by the County of Santa Cruz.

Scott Creek Beach

Beach Use

On sunny days with little or no wind the beach is used to the extent that parking allows. Beach activities range from sunbathing and reading to picnicing, surf-fishing, kite flying, and occasional large beach parties. Off-road vehicle (ORV) use of the beach frequently limits beach users to those who do not mind vehicles racing past them, however.

At the north end of the beach, a submerged reef creates one of the best surfing waves on the north coast. This area is used by surfers from October through April or May.

Natural Resources

There are migratory fish runs up Scott and Molino Creeks. Cliff-nesting birds use the bluff north of the beach. The north bluff also has fairly well-preserved coastal scrub vegetation. The north bluff has erosion problems caused by informal trails to the beach.

Off-road vehicles (ORVs) have destroyed virtually all vegetation on the beach. The sand is no longer stabilized, and blows across the highway. Sand is being blown into the wetland across Highway One, filling in parts of the marsh. ORVs have also created erosion problems on the bluffs north and south of the beach.

The Scott Creek wetland was identified as a wildlife habitat of critical importance by the California Department of Fish and Game. This area has been proposed for acquisition by the State in the past.

Access

North of the creek, visitors must park on the narrow west shoulder of the highway and climb down a sand slope or over rip/rap. This access is difficult when Scott Creek flows along the north end of the beach.

South of the creek, visitors park on both shoulders of the highway and walk directly onto the beach. Still farther south, the beach can be reached by parking in a small turnout on the west side of the highway and walking down a ravine.

Since Scott Creek periodically changes direction, blocking access to portions of the beach, it is occasionally necessary to cross the highway bridge to reach the beach. The bridge is very narrow and no pedestrian walkway is provided.

Parking

There are no parking areas at Scott Creek beach. Parking occurs mainly along the shoulder of Highway One, as well as in two small

Scott Creek Beach

turnouts at the south end of the beach. These parking areas can hold an estimated 60-100 cars, but are filled only during peak-use periods.

Parking along Highway One is extremely hazardous. Scott Creek beach has the highest accident rate of all north coast beach access areas. However, because of topographic constraints, viewshed considerations, and the restrictions placed on use of agricultural land, alternative parking areas are scarce.

The County has proposed a forty car parking lot for the bluff north of the beach. This lot would be clearly visible to northbound vehicles and from the beach.

Litter and Sanitation

Portions of the beach are heavily littered. Broken glass is common, particularly along the south bluff, in the former camping area. There is also a large cement pad on the south bluff. There are four trash cans along the highway. There are no restrooms.

Law Enforcement/Management

ORVs are the main law enforcement problem at Scott Creek. When present, law enforcement officers are generally able to keep ORVs off the beach, but ORV use increases as soon as enforcement decreases.

Safety vehicles can gain access via a road that leads to the north end beach.

Scott Creek Beach

RECOMMENDATIONS

General

The overall appearance of Scott Creek beach is natural, despite the ORV use. The natural character and scenic qualities of the beach and bluffs should be retained through careful siting of any improvements.

Natural Resources

- (1) Undertake an aggressive dune stabilization program as soon as possible. Revegetate dune and bluff areas. Install fences as needed to reduce blowing sand, and prevent sand from blowing onto the highway.
- (2) Correct the current channeling of runoff from the agricultural fields on the east side of the highway into the wetland.
- (3) Support and investigate the creation of a Scott Creek Wetland Ecological Preserve.

Access

- (4) Provide an attached pedestrian walkway along the Scott Creek highway bridge.
- (5) Construct an access trail at the north end of the beach.

Parking

- (6) Provide adequate safe parking. Locate parking lots so that their visibility from the highway and the beach is minimized.
- (7) Eliminate shoulder parking by means of signs, barriers, and enforcement.
- (8) Construct a parking lot at the south end of the beach, using the old Highway One roadbed (in the ravine) for vehicular access. Pursue approval for this lot from CalTrans. Limit its size to preserve views from the beach and highway, probably not to exceed space for 80-100 cars--the level of service provided by existing informal parking areas. This lot is strongly preferred to the previously proposed parking lot on the north bluff even if costs run higher than for the north lot.
- (9) Investigate the area east of the highway at the north end of the beach for a surfer's parking lot. The proposed location

Scott Creek Beach

is adjacent to the agricultural fields, in a small wash. An old road leads to it. This site has several drawbacks, however. It is on private land, and may be zoned for agricultural use even though periodic inundation probably prevents farming there. There is danger that runoff from a parking lot could contaminate the wetland. Also, beach access would be limited to a pedestrian crossing on the highway or a long trail leading under the highway bridge.

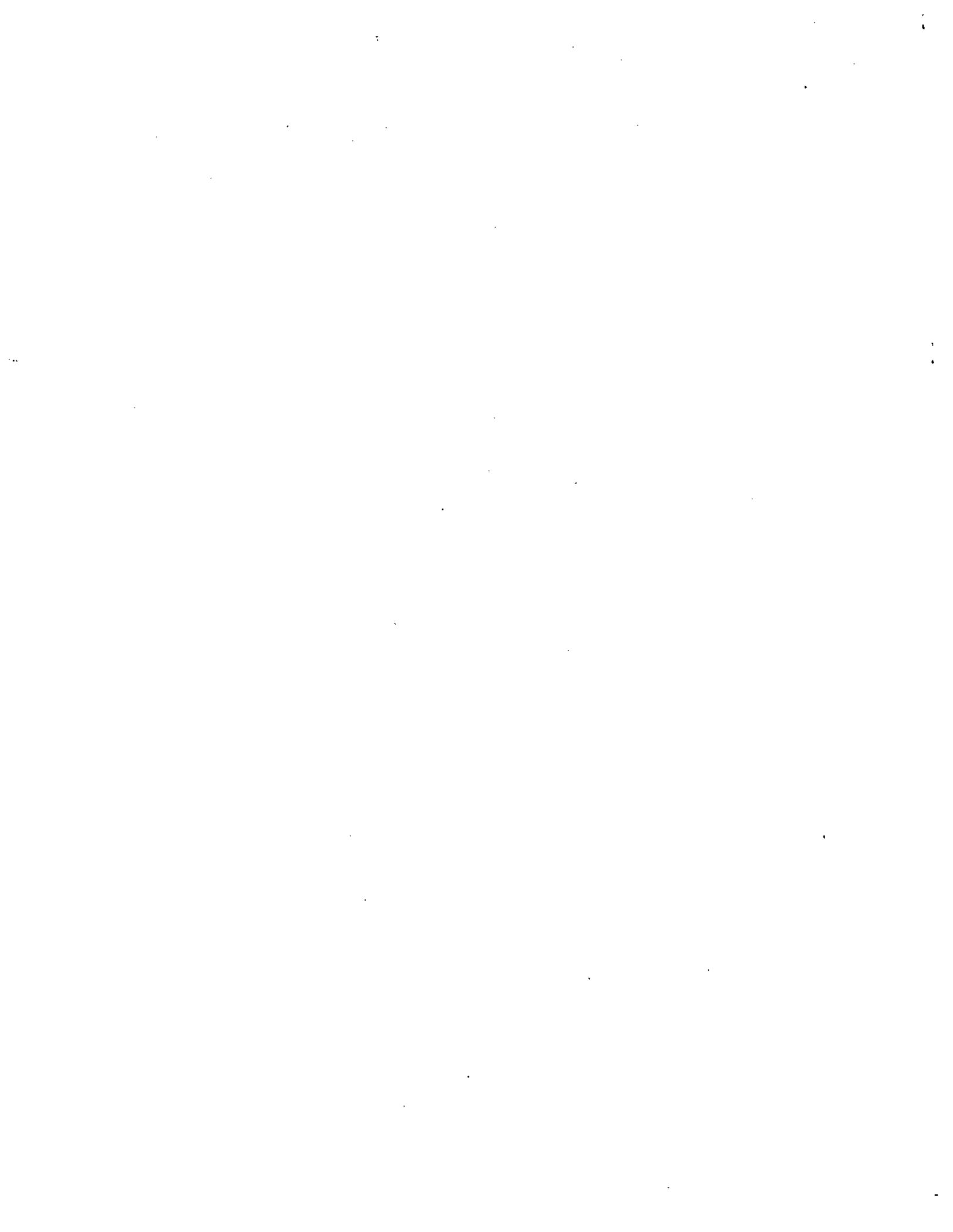
- (10) Maintain the small turnout east of Highway One, along the marsh.
- (11) Eliminate the plan to construct a parking lot on the north bluff. If it must be used as a last resort, then screen the lot from view with appropriate vegetation.

Litter and Sanitation

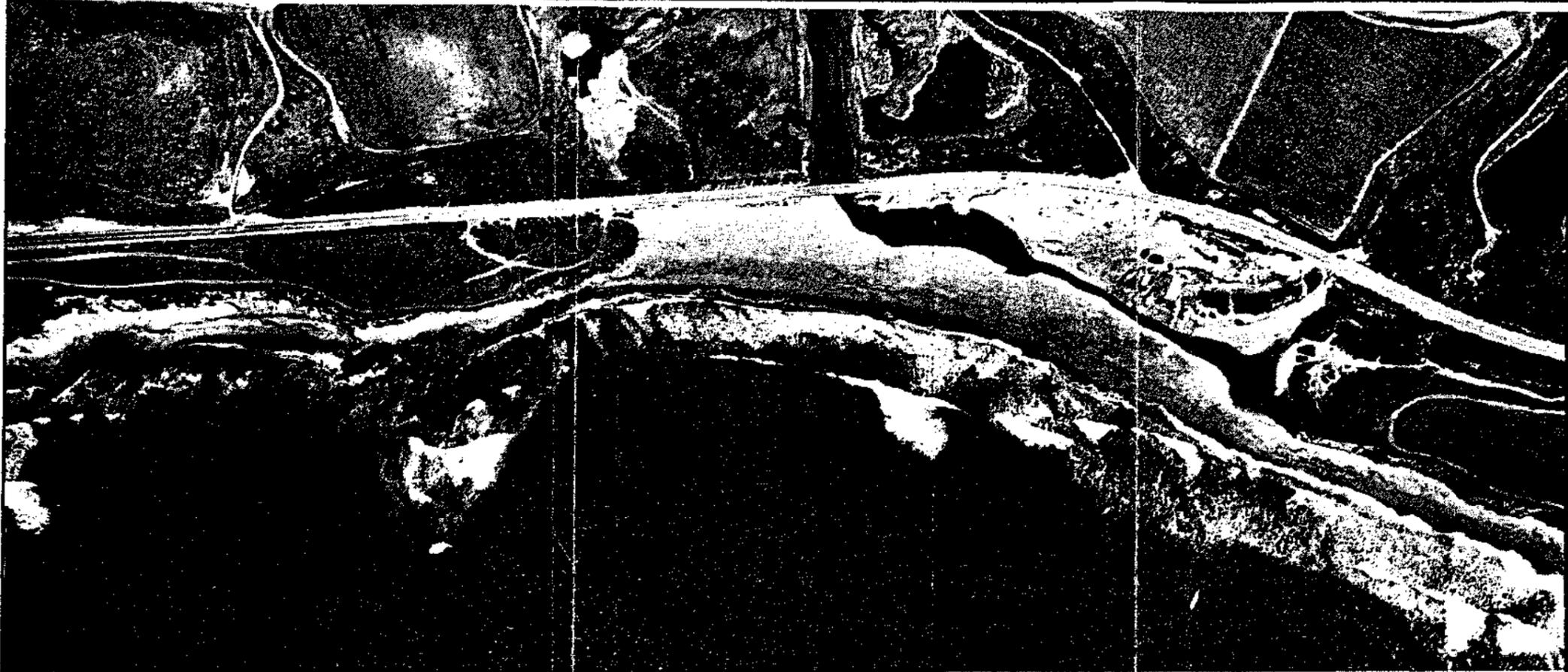
- (12) Provide parking areas and the base of access trails with trash cans.
- (13) Install a toilet facility in the proposed south parking lot.

Law Enforcement/Management

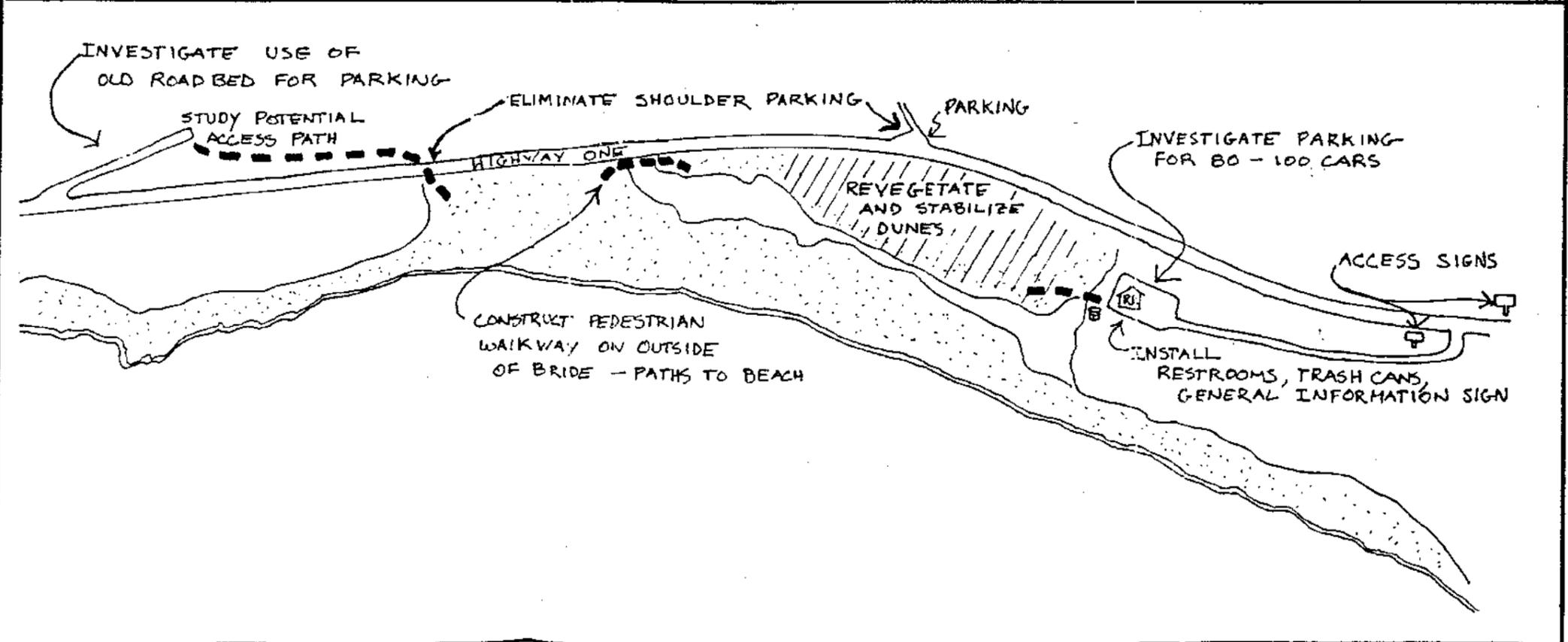
- (14) Maintain a management presence on a routine, year-round basis to eliminate ORV use.
- (15) Expand County enforcement of ORV prohibitions until a management presence is created, and notify California ORV dealers that ORVs are prohibited at Scott Creek Beach. Such enforcement is essential to allow dune vegetation to recover.
- (16) Remove sand from the highway so that it does not cover the ORV barriers. Place additional barriers at the far south parking area and the north end of the beach, since the existing barriers are ineffective.



Scott Creek - Existing Conditions



- Recommended Improvements



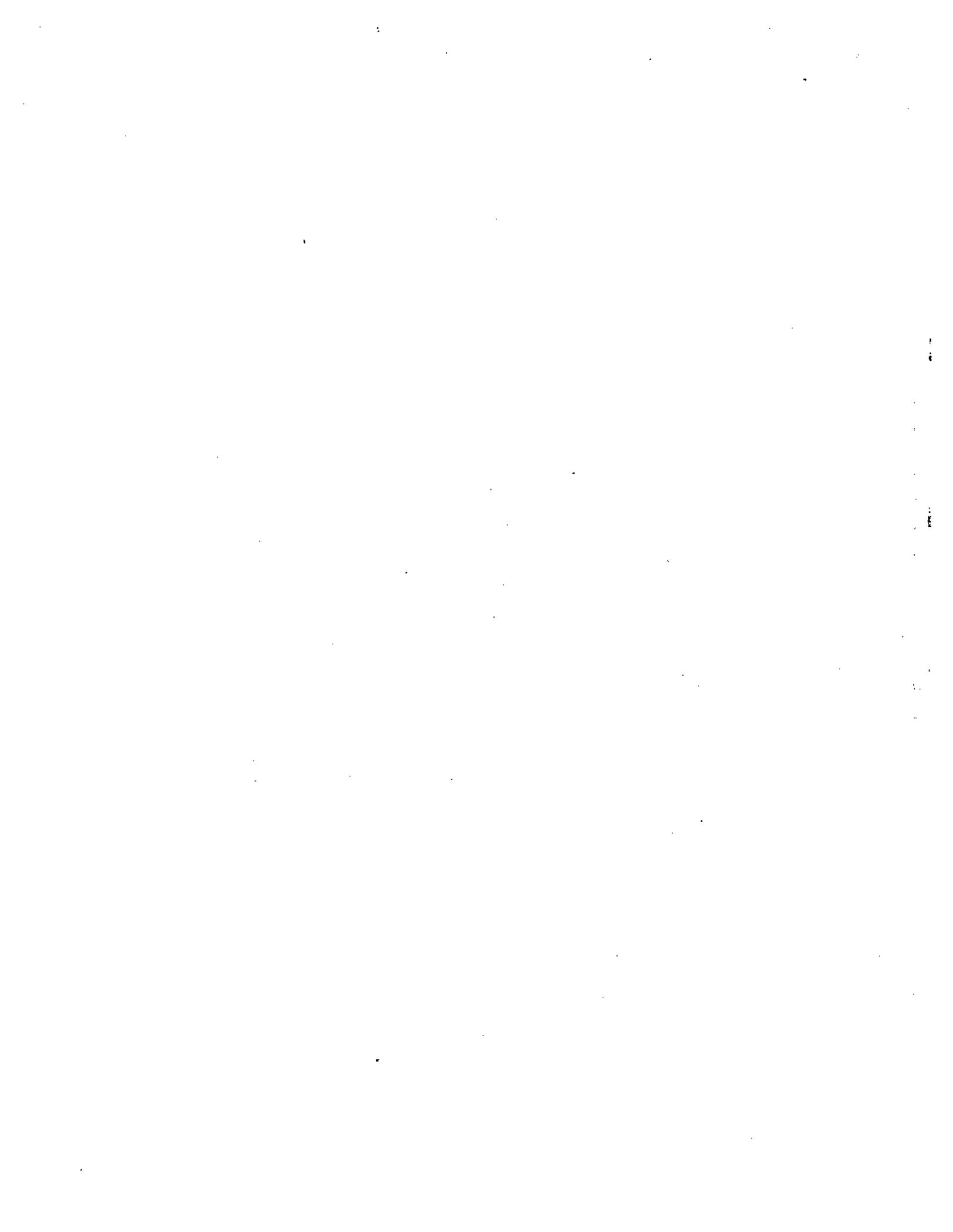
Greyhound Rock



EXISTING CONDITIONS

Physical Description

This beach lies at the base of 100-foot high near-vertical, unstable bluffs. The beach has low dunes and varies in width from summer to winter (maximum 200' wide in summer). There are many picturesque rocks offshore, including Greyhound Rock and, further south, Pelican Rock. Approximately 1/2 mile south of the access path from the parking lot the beach ends at a rocky headland. During the summer the beach is passable all the way to Waddell Creek. The beach is open to the summer afternoon winds, and sunbathing is confined to the areas at the base of the bluffs and behind the dunes below the parking lot.



Greyhound Rock Beach

Beach Use

Tourists traveling along the Coast Highway often use the area, if they can spot the turn-off, because of its improved appearance. Camping is common in the parking lot. There also is evidence of frequent camping at the south end of the beach, and a good deal of trash scattered about.

Summer beach use involves a wide variety of people, including families, couples, groups of young adults, and travelers, but perhaps fewer large beach parties than at other beaches. Surfers, scuba divers, and fishermen also use the beach. The steepness of the access trail will always limit the number of people using the beach, however.

Natural Resources

Partially disturbed chaparral and coastal strand vegetation grow on bluffs and terraces, along with a few low pines. A rare plant occurs here. Snowy plovers are reported to nest on Greyhound Rock Beach.

The upper parts of the bluff are highly susceptible to gullying. Aside from the eroded access road, there are no signs of development on the beach. The inland dunes are relatively well vegetated, in comparison with other north coast beaches, lending a sense of wildness to the place. There are active dunes to the north. The inland sand dunes and their coastal strand vegetation are a fragile and increasingly rare resource.

Stellar sea lions haul-out on offshore semi-submerged rocks between Greyhound Rock and Waddell Creek. Elephant seals haul-out on the beach.

Access

The turnoff for the parking lot is unsigned, and is difficult to spot from the highway.

A formerly paved road serves as the main access trail from the parking lot to the beach. This trail is steep and treacherous. Along its upper portion, gullying has caused minor failures in the fifteen foot high embankment to the south. Where the road emerges in front of the sea-cliff, poor drainage has caused at least two landslides and some large gullies on the downslope side of the road. In addition, ocean waves, and possibly runoff, have eroded away thirty feet of the seaward end of the road, leaving a fifteen foot high erosion scarp. Because of this, wire fencing has been installed along the downslope side of the road, where it is the most dangerous, and the trail has been marked "closed."

Greyhound Rock Beach

Perhaps as a result of the poor condition of the main trail, a series of informal trails have been created below the south lot. These informal trails are causing erosion and extensive gullying, and are undermining the parking lot in places.

Parking

There are two paved parking areas surrounded by pines, easily accessible from the Coast Highway. There are generally excess parking spaces, although the south lot may fill on prime beach-use days.

There is a parking problem on the bluffs seaward of the north parking lot. In this area motor vehicles have created a turn-off from the Coast Highway onto an old road out to the bluff-top. This parking/camping is destroying the vegetation and causing erosion.

Litter and Sanitation

There is trash on the bluffs and sand, but generally less than on other beaches. There are no restrooms.

Law Enforcement/Management

Greyhound Rock Beach is owned by the State and leased to the County for management. This contract expires in July of 1987.

Greyhound Rock does not seem to share the law enforcement problems found at the other north coast beaches.

There is currently no vehicular access to the beach. Given the steepness of the descent to the beach, and the open invitation vehicular access seems to present to ORVs, such access is not recommended. Law enforcement personnel will have to rely on pedestrian access if called to Greyhound Rock Beach.

Greyhound Rock Beach

RECOMMENDATIONS

General

The County should take immediate action to gain continuing management control over Greyhound Rock Beach by obtaining an extension of the current lease or by obtaining a new lease from the State. Alternatively, the County should attempt to insure that management by the State, upon expiration of the current lease, will be consistent with the recommendations of this report.

This beach is used by a wide variety of people, and has great recreational potential. It has an undeveloped quality, despite the improved parking lots, because of the well vegetated dunes. This quality should be maintained.

Natural Resources

- 1) Restrict access to the bluff-edge and gullied bluff-side trail with low wooden fencing and signs.
- 2) Consolidate and plan trails along the bluff-top to reduce erosion, and install another bench or two.
- 3) Provide warning signs during elephant seal haul-out seasons (appropriate signs are in use by State Parks) and patrol on a regular basis. Restrict beach access during haul-out seasons, if conflicts between marine mammals and people or their pets become apparent.
- 4) Protect the dunes to the greatest extent possible by monitoring recreational use of the beach and installing signing, fencing, or other measures to limit access to the dunes, if needed.
- 5) Prohibit camping on the beach to protect the coastal strand plant community on the inland sand dunes.
- 6) Revegetate the bluff area seaward of the north parking lot. Consider walking trails, viewing benches, interpretive signs, and picnic tables in this area if the bluff edge is fenced.

Access

- 7) Rebuild main access road for pedestrian traffic only, possibly using stairs. Consider low-cost, easily replaced access-ways, instead of expensive engineering projects, because of the likelihood of future drainage and hillside-stability problems along this route. In any case, both surface and subsurface water must be carefully avoided or

Greyhound Rock Beach

controlled to reduce problems. Construct improvements as far from the ocean as possible to reduce the frequency of wave damage.

- ALL ROAD
CONSTRUCTION*
- (8) Halt motorized vehicle access to the bluff near the north parking lot as soon as possible.

Parking

- (9) Create a short-term overnight vehicular camping site in the north parking lot. This would provide a good source of revenue. Since the beach's carrying capacity seems to be about what the south parking lot can accommodate, overnight parking would not take away needed parking spaces for day use visitors.
- (10) Install signs on Highway One showing the location of the south parking lot.

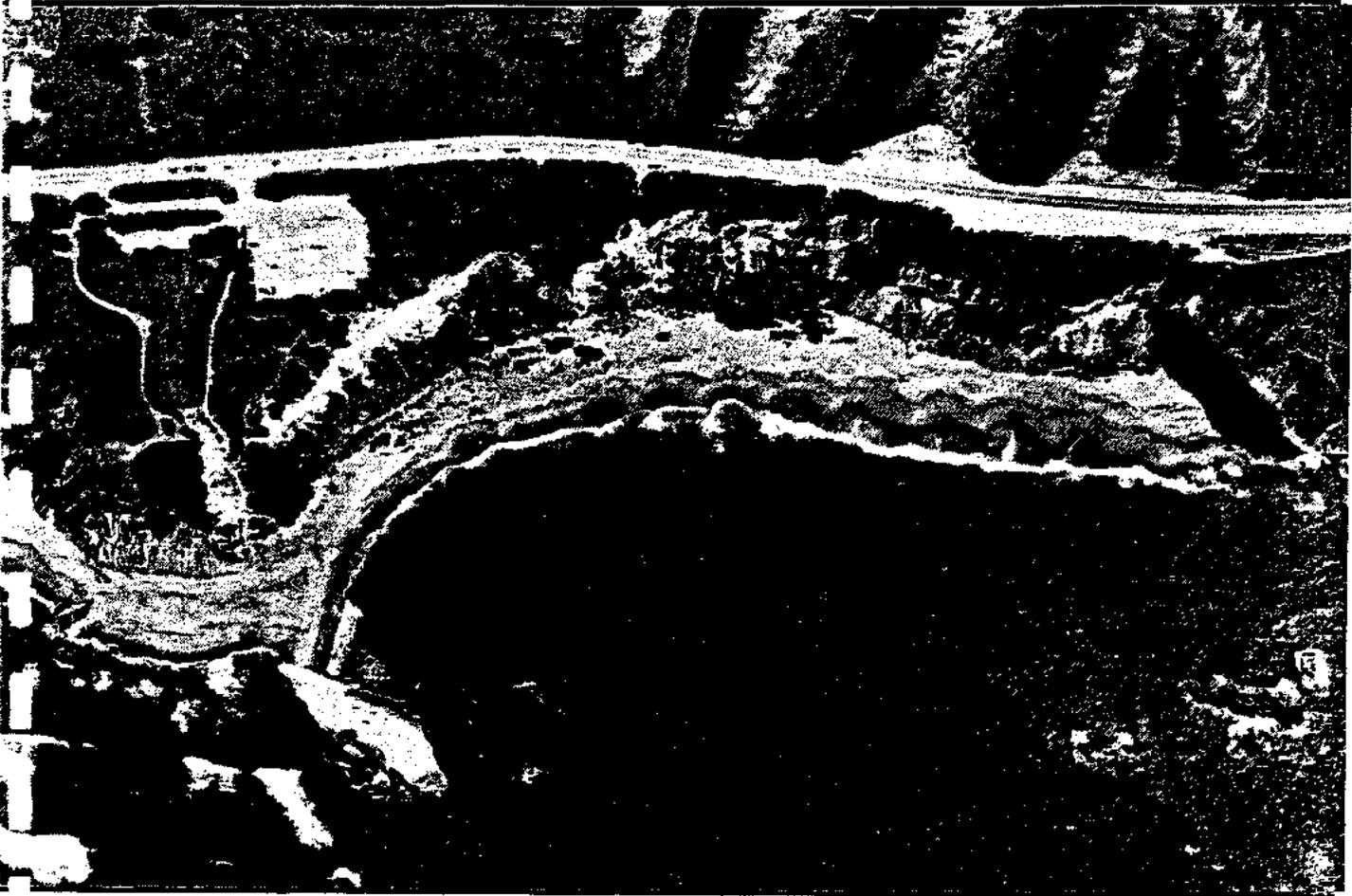
Litter and Sanitation

- (11) Remove trash from the beach, bluffs, and informal camping areas.
- (12) Install toilet facilities near the parking lots (there is a concrete pad in the north lot that might be a good spot).
- (13) Place trash cans at the foot of the access trail, but above the level of wave activity, and in both parking lots.

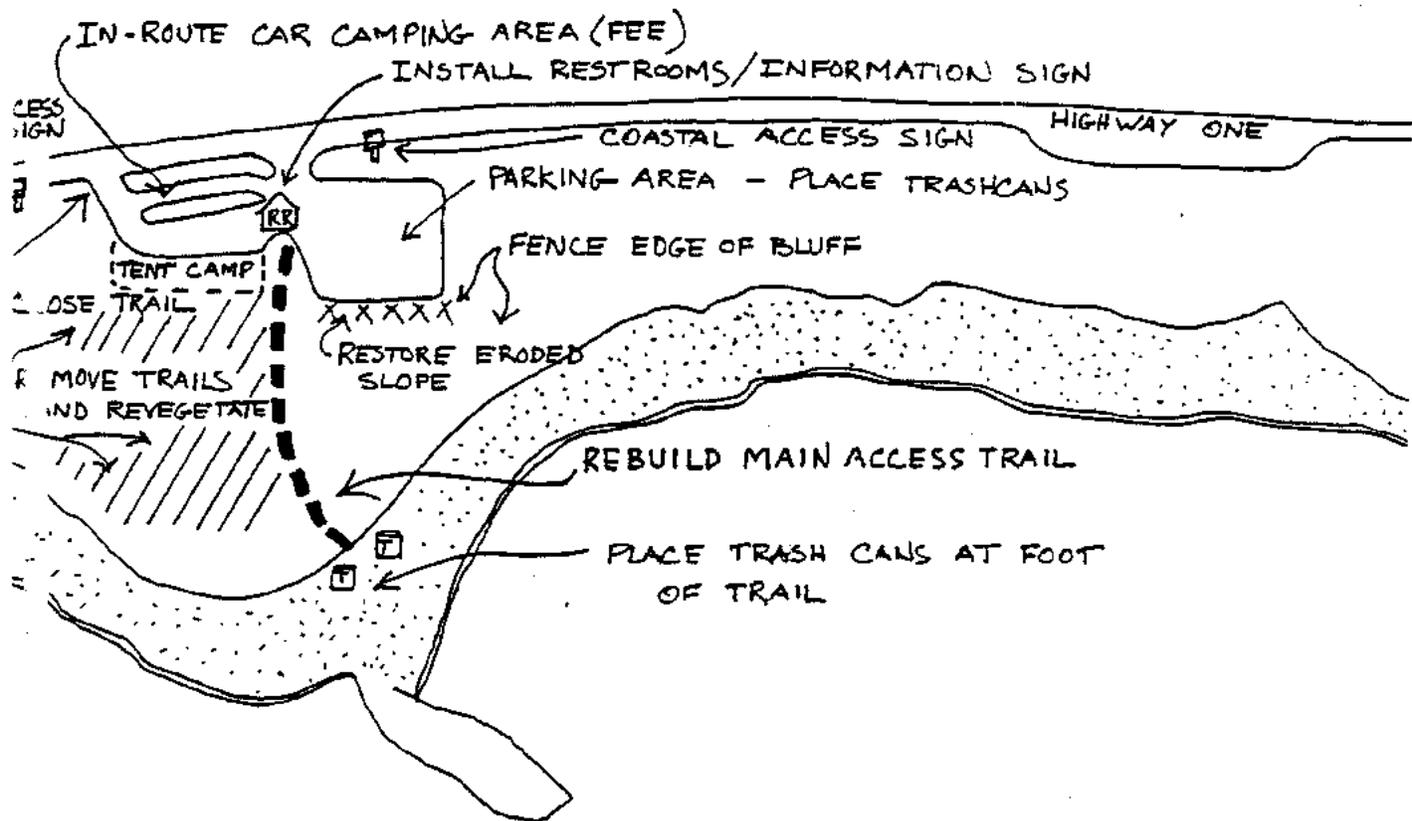
Law Enforcement/Management

- (14) Provide walk-in camping on the bluff next to the north lot, sharing the same litter and sanitation facilities as the overnight parking area.

Greyhound Rock - Existing Conditions



- Recommended Improvements



APPENDICES

COUNTY OF SANTA CRUZ

SUPERVISORS
425-2201

ADMINISTRATIVE CENTER

701 OCEAN STREET SANTA CRUZ, CALIFORNIA 95060-4069

BOARD OF SUPERVISORS
SECOND DISTRICT

GARY A. PATTON
THIRD DISTRICT

EDWARD W. MOORE, JR.
FOURTH DISTRICT

JOE CUCCHIARA
FIFTH DISTRICT

AGENDA: 5/1/84

April 30, 1984

BOARD OF SUPERVISORS
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

RE: RESOLUTION ESTABLISHING A NORTH COAST BEACHES ADVISORY COMMITTEE

Dear Members of the Board:

The attached Resolution would establish a North Coast Beaches Advisory Committee, to advise the Board on an overall access development and management plan for the County's North Coast Beaches. As indicated in my letter of April 16, discussed at our last meeting, I believe that it is important to maximize citizen participation in developing a long-term plan for the future of the County's North Coast.

Accordingly, I recommend as follows:

1. That the Board of Supervisors adopt the attached Resolution, establishing a Santa Cruz County North Coast Beaches Advisory Committee, for a term to end on June 30, 1985.
2. That the Board concurrently notice the vacancies on the Committee, and indicate that it will receive nominations on its consent agenda on May 15, 1984, and make appointments on May 22, 1984.
3. Set the first meeting of the Committee for Tuesday evening, May 29, at 7:30 p.m., at the County Administrative Office Conference Room.

Very truly yours,

[Handwritten Signature]
 GARY A. PATTON, Supervisor
 Third District

FILED 5-1-84
 GEORGE T. NEWELL, COUNTY
 ADMINISTRATIVE OFFICER AND EX-OFFICIO
 CLERK OF THE BOARD OF SUPERVISORS OF
 THE COUNTY OF SANTA CRUZ, CALIFORNIA
 BY *[Signature]* DEPUTY

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GAP:ted
Attachments

BEFORE THE BOARD OF SUPERVISORS
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. 250-84

On the motion of Supervisor Patton
duly seconded by Supervisor Forbus
the following resolution is adopted:

RESOLUTION ESTABLISHING THE SANTA CRUZ COUNTY
NORTH COAST BEACHES ADVISORY COMMITTEE

BE IT RESOLVED by the Board of Supervisors of the County of Santa Cruz as follows:

SECTION I

The Santa Cruz County North Coast Beaches Advisory Committee is hereby established under the authority of Government Code Section 31000.1 in conformity with Santa Cruz County Code Chapter 3.01.

SECTION II

The Santa Cruz County North Coast Beaches Advisory Committee shall observe the following provisions:

2.01 PURPOSE. The Committee shall perform the following duties:

1. Recommend a specific improvement and management plan for each of the following North Coast beach areas:
 - a. Scotts Creek Beach
 - b. Greyhound Rock
 - c. Davenport Landing
 - d. Davenport Bluffs and Beaches
 - e. Panther Beach
 - f. Bonny Doon Beach
 - g. Yellowbank Beach
 - h. Laguna Beach
 - i. Four Mile Beach
2. In connection with the recommended specific improvement and management plans for each of the designated beach areas, consider and make recommendations on the following issues, for each of the designated areas:
 - a. Appropriate beach access trail or trails.

- b. Method for law enforcement personnel to gain access to the beach, if appropriate.
 - c. An appropriate signing program, including highway safety signs, parking restriction signs, signs identifying access paths, and other signs as appropriate.
 - d. Appropriate sanitation and litter facilities.
 - e. Appropriate parking areas and parking restrictions, where necessary.
 - f. A method to provide for parking fee collection, where appropriate.
 - g. A listing of recommended capital improvement projects, with estimated costs, where possible.
 - h. A suggested "management plan" for each designated beach, with overall operational cost estimates, where possible.
3. Provide comments and recommendations on any law enforcement, financing, and long-term operation and management plans for the North Coast beaches suggested by County staff.
 4. Carry out surveys of North Coast beach use, as the Committee deems appropriate.
 5. Consult with the County's Planning Department, Public Works Department, and Parks, Open Space, and Cultural Services Department, the Sheriff, CALTRANS, the State Department of Parks and Recreation, and the State Coastal Conservancy, as necessary to fulfill its duties under this resolution.
 6. Carry out such other duties and responsibilities as the Board of Supervisors may direct.
 7. Prepare and submit a report, pursuant to Section 2.10 of this Resolution, and any interim reports necessary to assist the Board of Supervisors, County staff, and the Committee in jointly considering an overall, long-term management plan for the County's North Coast beaches.

2.02. MEMBERSHIP. The Committee shall consist of fifteen members, residents of the County of Santa Cruz, appointed by the Board of Supervisors on an at-large basis.

2.03 TERM OF OFFICE. The members of the Committee shall serve a term beginning with the effective date of this resolution, and ending on June 30, 1985. The Committee's term is renewable only by resolution of the Board of Supervisors specifying a new termination date.

2.04 OFFICERS. The Committee shall elect a chairperson and vice chairperson. Officers shall be elected during the Committee's first meeting at which a quorum is present and shall serve for the life of the Committee. In the event of the death or removal of a member who is an officer, the Committee shall appoint another of its members to replace that person at the next meeting at which a quorum is present.

2.05 BYLAWS. Procedures for the conduct of this Committee not already established by this resolution shall be contained in bylaws adopted by the Committee and submitted to the Board of Supervisors for final approval. The bylaws shall be submitted to the Board of Supervisors within one month of the first meeting of the Committee at which a quorum is present.

2.06 MEETINGS. The business of the Committee shall be conducted at regular public meetings held at least once each month, the time and place for which shall be determined by a majority of the members and specified in the Committee's bylaws. Nothing contained in this resolution shall prevent the Committee from delegating its responsibilities to subcommittees, consisting of less than a quorum of members of the Committee, which subcommittees may meet as required to carry out the duties and responsibilities assigned to them by the Committee. The Ralph M. Brown Act shall apply to this Committee.

2.07 QUORUM. A majority of the voting members of this Committee shall constitute a quorum. No official action shall be taken during any committee meeting at which a quorum is not present. No act of this Committee shall be valid unless at least a majority of the members concur therein. Any act of this Committee shall be accomplished by a roll call vote when such a vote is requested by any member in attendance.

2.08 MINUTES. Official minutes recording the motions entertained and actions taken at each meeting shall be regularly submitted to the Board of Supervisors and the Clerk of the Board.

2.09 STAFF. Staff from the Planning Department, the Public Works Department, and the Parks, Open Space, and Cultural Services Department shall provide assistance to the Committee, upon request. The office of the Third District Supervisor shall provide additional assistance, and shall record minutes and prepare said minutes for the Committee's review and approval.

2.10 FINAL REPORT. A final report, containing the findings and recommendations of this Committee shall be submitted before the term of this Committee expires. Said final report shall be submitted to the Board of Supervisors.

2.11 VACANCIES. Vacancies on the Committee shall be filled as follows:

1. Reporting the Vacancies. A vacancy shall exist and shall be reported in writing by the Chairperson of the Committee to the Board of Supervisors, the Clerk of the Board, and to the member vacating his or her seat, whenever a Committee member fails to attend three consecutive regular meetings without good cause entered into the minutes of the Committee. Any notice of resignation shall be submitted in writing to the Chairperson of the Committee and shall be forwarded to the Chairperson of the Board of Supervisors, and to the Clerk of the Board. Any vacancy caused by death, disability,

or any other circumstance shall be reported in writing by the Chairperson of the Committee to the Board of Supervisors and to the Clerk of the Board.

- 2. Filling of Vacancies. All vacancies shall be filled by persons appointed as specified in Section 2.02 herein, in accordance with the governing provisions of the County Code.

2.12 COMPENSATION. The members of this Committee shall receive no compensation or reimbursement for traveling and other expenses incurred in connection with the official business of the Committee.

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Cruz, State of California, this 1st day of May, 1984, by the following vote:

AYES: SUPERVISORS Forbus, Patton, Moore, Cucchiara
NOES: SUPERVISORS Levy
ABSENT: SUPERVISORS None

ROBLEY LEVY

Chairman of said Board

ATTEST: STEPHEN M. QUONG
Clerk of said Board

Approved as to form:

Quight J. Hew
County Counsel

DISTRIBUTION: CAO
County Planning Director
County Counsel
County Auditor-Controller
POSCS
Department of Public Works
~~Third District Supervisor~~

STATE OF CALIFORNIA }
COUNTY OF SANTA CRUZ } SS
I GEORGE T. NEWELL, County Administrative Officer and ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz, State of California do hereby certify that the foregoing is a true and correct copy of a resolution passed and adopted by and entered in the minutes of the said Board. In witness whereof I have hereunto set my hand and seal of the said Board, on 5-11-84
GEORGE T. NEWELL, County Administrative Officer
George T. Newell



NORTH COAST BEACHES GENERAL PLAN



General Plan for the North Coast Beaches

County of Santa Cruz

Prepared by
EDAW, Inc.
1725 Montgomery Street
San Francisco, California 94111
(415) 433-1484

Harvey and Stanley Associates, Inc.
Ecological Consultants
906 Elizabeth Street
Alviso, California 95002

December, 1987

Acknowledgements

This General Plan was developed with the assistance of the following Technical Advisory Group members:

Ben Angove Dave Mitchell	Santa Cruz County Parks, Open Space and Cultural Services Department
Gary Patton Andy Schiffrin	Santa Cruz County Third District Supervisor's Office
Bob Jorgensen	North Coast Beaches Advisory Committee
Dave Allan Ray Jenkins Lynn Swank	State of California Department of Parks and Recreation
Nadine Hitchcock	State of California Coastal Conservancy
Ging Chin	State of California Department of Transportation
Rick Hyman	State of California Coastal Commission
Michael Van De Veer	Santa Cruz County Administrative Office
Carol Lacey	Senator Henry Mello's Office
Donna Blitzer	Assemblymember Sam Farr's Office

The effort represented in this General Plan was preceded by the work of the North Coast Beaches Advisory Committee, a 15-member citizens group that met for a year and produced a report titled *The North Coast Today and Tomorrow*. The committee was comprised of the following members:

Carl Bengston	Carmen Mulholand
Eric Dahlhoff	Sam Mitchell
Zelma Fabrini	Pat Pfremmer
Bill Farrel, Vice Chair	Rick Sermon
Kim Fulton	Celia Scott - Von der Muhll
Eric Hoffman	Stanley Walsh
Bob Jorgensen, Chair	Robert Weiner
Nicki Marx	

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Checklist of Vascular Plants at the North Coast Beach Units

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SUMMARY

This plan was completed for the County of Santa Cruz to guide the future development and management of six beaches (Scott Creek, Davenport Landing, Panther, Bonny Doon, Yellowbank and Laguna Creek) located along the North Coast of the county. It has been prepared in accordance with the General Plan standards set forth by the California Department of Parks and Recreation so that it may eventually be considered for adoption by the State Parks and Recreation Commission.

The plan contains resource management recommendations for restoring and protecting native coastal plant communities; enhancing and preserving important wildlife habitat, particularly wetlands; preventing further degradation of the coastlines' other natural, cultural, aesthetic and recreation resources and improving and expanding recreation opportunities and experiences, specifically parking and public access. It proposes to minimize private property damage; reduce public hazards; clarify liability responsibilities and provide sanitary facilities and garbage collection services. Development proposals are prioritized by beach for expected incremental funding; Bonny Doon Beach will be developed first. It is proposed that the beaches be managed at least in the short-term by the private sector; that vehicular access into the parking lots be controlled and fees charged to maintain a financially self-supporting operation.



Currently, there are no signs along Highway 1 indicating where beaches are accessible and whether or not they are available for public use. Parking areas have developed along Highway 1 both on and off the shoulders, as more and more people have discovered the beaches that are generally hidden from view. The sudden slowing of turning vehicles, uncontrolled traffic into and out of the parking areas and backing out into the relatively high speed traffic of Highway 1 are some of the problems that have resulted. During periods of peak use, parking space is insufficient, so parking occurs alongside Highway 1, magnifying normal traffic interference. Where parking occurs on the east side of the highway, auto-pedestrian conflicts also arise.

Pedestrians are further subjected to hazards as they maneuver along the coastal bluff tops, across Southern Pacific railroad tracks and down steep slopes and cliff faces. During the growing season, trail users may be exposed to toxic chemicals that are sprayed on the nearby crops. Hazards exist at the beaches as well. With years and years of use, but no regular garbage collection, most of the beaches are heavily littered with broken glass and other debris. There are also no signs at the beaches to warn users about dangerous currents or the isolation of beach segments at high tide.

There are no sanitary facilities at either the parking areas or beaches. The lack of such facilities is an inconvenience, a nuisance and a potential health hazard. Those seeking more privacy trespass on private property, causing erosion, destroying vegetation, leaving litter and frequently vandalizing fences, crops and even farm and irrigation equipment. Property damage is a major concern as all of the sites except Scott Creek Beach are privately owned.

Natural resources have also suffered greatly from uncontrolled access and lack of on-site management. This is particularly true of the sand dunes where vegetation has been trampled by foot traffic and off-highway vehicles. Coastal bluff plant communities vegetation containing rare plants have declined as well. There are two wetland areas with important wildlife, waterfowl and shorebird habitat value that are sensitive to human and dog intrusion. Endangered or important bird species which nest in the coastal cliffs and on the beach at Laguna Creek are being adversely affected by visitors.

As concern has grown regarding the increasing resource degradation of one of the more scenic stretches of coastline in California, implementation of the policies of the Local Coastal Program

(LCP) has become a top priority of the County of Santa Cruz, as well as other agencies. The LCP, adopted on November 16, 1982 by the Santa Cruz County Board of Supervisors, identifies all the units addressed herein, with the exception of Panther Beach, as primary public access points.

In Section 4.0, Shoreline Access, two objectives are stated:

- 4.0.1 **Objective:** To provide a system of shoreline access to the coast with adequate improvements to serve the general public and the coastal neighborhoods which is consistent with public safety needs, protects natural resource areas from over use, protects public rights and the rights of private property owners, minimizes conflicts with adjacent land uses, and does not adversely affect agriculture.
- 4.0.2 **Objective:** To maintain or provide access, including visual access, to every beach to which access exists or where there is a presumption of access by prescriptive rights, to ensure one access to every pocket beach and convenient, well distributed access to long sandy beaches.

The first policy under this section calls for the development of primary public access points, but only when automobile parking or an acceptable alternative can be provided, and all environmental impacts and use conflicts can be satisfactorily mitigated. The subsequent policies address vertical and lateral access, signing, conflicts with natural resources, conflicts with other land uses, garbage collection, law enforcement, hazards, transportation, parking, bicycle use and trails. This plan represents a significant attempt to implement a major portion of the LCP policies.

In order to effectively solve the North Coast problems via the policies of the LCP, there must be a comprehensive plan, involving as many of the beaches as possible, and a coordinated approach for development and management. This plan strives to serve that purpose by making recommendations for phased physical improvements, habitat restoration and protection, levels of operation and maintenance, agency cooperation, potential funding, labor resources and other implementation strategies.

Objectives of the Plan

The General Plan attempts to meet the following broad objectives:

1. Identify the land base that needs to be secured and the facilities needed to help meet current and future recreation demands along the northern Santa Cruz County coastline, without exceeding the existing low intensity use levels. This includes the provision of designated and safe access routes to the beaches for the general public and disabled persons.
2. Maintain the existing rural scenic character and perpetuate the environmental quality of the natural and cultural resources, particularly wildlife habitat and coastal vegetation, on both private and public property.
3. Provide appropriate interpretive facilities for educational and recreational purposes.
4. Promote a clean, enjoyable and well-managed recreational environment by providing sanitary/garbage collection services and facilities.
5. Promote public safety by: minimizing traffic, railroad, trail, beach, water and health hazards; reducing undesirable/criminal behavior and providing aquatic rescue services.
6. Equip the Department and other state, county and federal agencies, private organizations and individuals with a tool for coordinating their efforts to meet these objectives.

The Planning Process

A parking study issued in June 1983 by the Santa Cruz County Transportation Commission (SCCTC) was the first report of its kind to acknowledge the traffic problems along Highway 1 between the city limits of Santa Cruz and the San Mateo County line. The report also cited "rowdyism, vandalism, and excessive littering" at the beaches and parking areas.

Although none of the report's recommendations were executed, it helped bring about the formation of the North Coast Beaches Advisory Committee by resolution of the County of Santa Cruz Board of Supervisors. Comprised of 15 local citizens with a broad range of backgrounds and interests in the project, the Committee's charge was to develop specific improvement and management plans for each of the beach areas. This group met at least monthly for over a year, collecting and analyzing information about conditions at these beaches. In June 1985, they issued a report titled *The North Coast Today and Tomorrow* that describes existing conditions and problems and makes recommendations regarding natural resources, litter and sanitation, parking and transportation, access, law enforcement, preparation of a management plan and interim management. Much of their documentation is represented in this General Plan. Perhaps the greatest asset of the report is that it represents a philosophical compromise reached among a variety of landowner and beach user interests.

With technical expertise and additional agency input, the proposals contained in the committee's report have been further developed and refined as reflected in this plan. More specific and scientific resource information was assembled from existing data sources and through field observations, and analyzed to establish general policies for enhancing and protecting sensitive and important natural resources. Alternative facility types, locations and management options were evaluated based on site opportunities and constraints. Development and operational costs were estimated to assist the County in deciding how to realize the objectives of this plan.

If the Department were to consider accepting the North Coast beaches into its State Park System, a Resource Inventory and revision to this General Plan are likely to be required. The Department may also demand that certain planning procedures be adhered to, including: public participation to obtain input on issues, management policies, conceptual plan alternatives, an environmental impact report, preliminary and final General Plans. The public would be notified and kept informed of progress via a newsletter, and a series of meetings would be held. The State's full planning process generally takes one to two years to complete.

Regardless of what agency is ultimately responsible for the management of the North Coast beaches, construction drawings and documents will have to be prepared and all necessary dedications and easements will have to be in place before any physical improvements can actually be made.

Agency Coordination

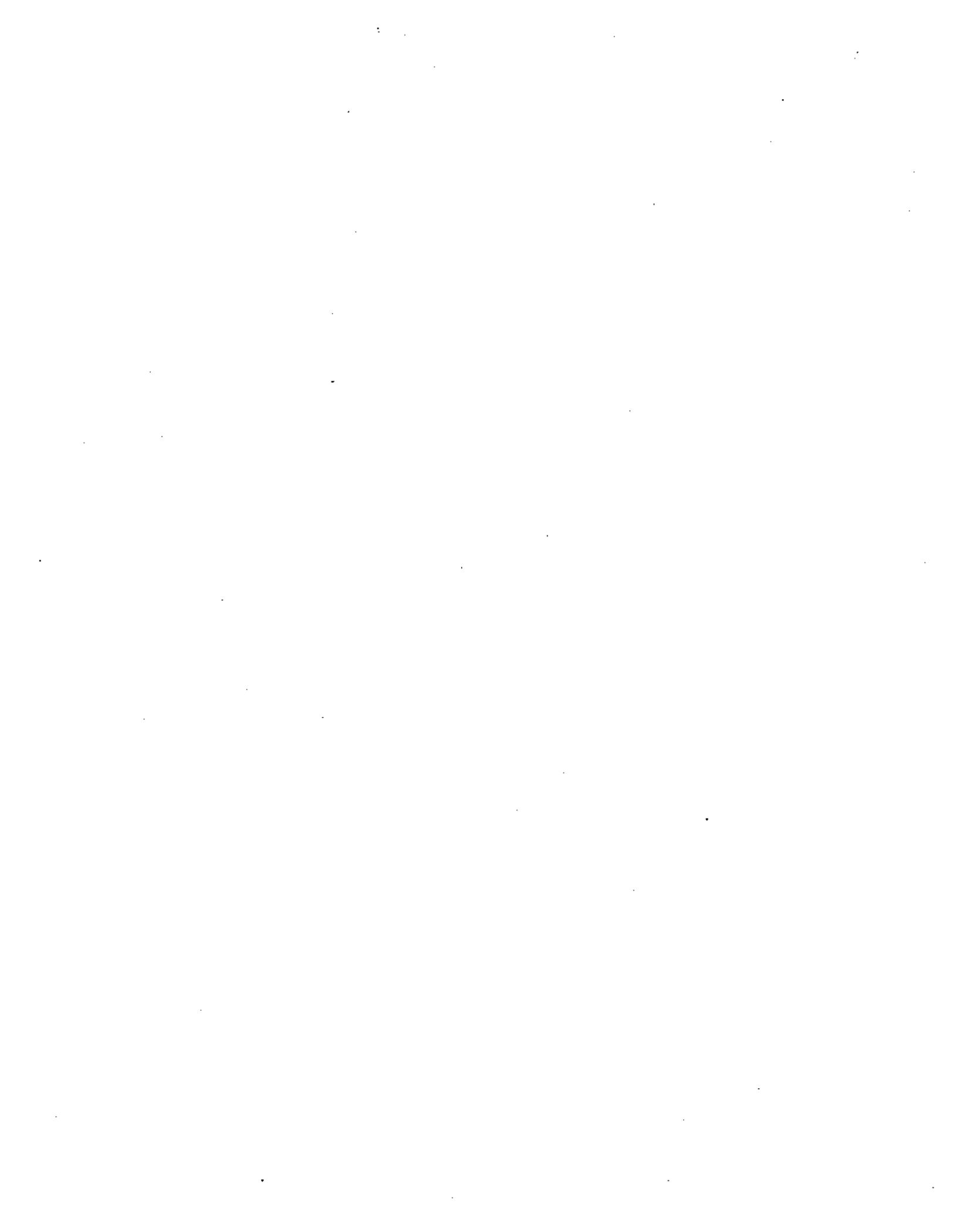
A variety of agencies and organizations have been involved with or may be interested in the planning efforts of this project. Table 1 defines the roles of each.

TABLE 1

Potentially Affected or Interested Agencies and Organizations

Agency	Regulatory Approval	Implementation Assistance	Management Coordination	General Interest
California Coastal Commission	X			
California Coastal Conservancy		X		
California Conservation Corps		X		
California Highway Patrol			X	
California Youth Authority		X		
California Dept. of Fish & Game	X	X	X	
California Dept. of Parks & Recreation		X	X	
California Dept. of Transportation	X	X		
City of Santa Cruz				X
San Mateo County				X
Santa Cruz County Community Action Board		X		
Santa Cruz County Metropolitan Transit District			X	X
Santa Cruz County Planning Department	X			
Santa Cruz County Sheriff's Office			X	
Wildlife Conservation Board		X		

Portions or all of the General Plan will be made available to the above agencies for their review and use. Other organizations and individuals who may be affected by the plan will have access to it.



REGIONAL CONTEXT

The following section briefly describes the northern coastline of Santa Cruz County where all the project sites are located, with emphasis on the recreational setting.

Regional Description

The North Coast beaches, only six of which are addressed in this plan, are located along a 13-mile stretch of rocky coastline between the northern city limits of Santa Cruz to the southern boundary of San Mateo County. They are part of an incredibly scenic and rural landscape traversed by Highway 1 from near the inlet of San Francisco Bay south to Monterey Bay. The coastline is isolated from urban development to the east by the Santa Cruz Mountains, and yet is readily accessible to millions of Bay Area residents via a 1 to 1-1/2 hour drive.

The coastal uplands are generally flat, permitting intensive commercial agriculture, most of which is for the production of Brussels sprouts. Most of the land is private but undeveloped, partly because of restrictive zoning. Many of the beaches cannot be seen from Highway 1, as they are tucked into the undulating coastline where the mountain creeks flow to the sea, at the base of 40- to 80-foot bluffs. Occasionally, Highway 1 dips down to sea level where it separates a broad beach from an inland wetland area. Wildlife is diverse and abundant, and dependent on these wetlands and the shoreline for habitat. The wind frequently blows during the summer, but the North Coast beaches are not as persistently foggy as the beaches farther north along the coast.

Regional Recreation Profile

Existing Beaches

Of all the North Coast beaches, only Scott Creek, Davenport Landing, Panther, Bonny Doon, Yellowbank and Laguna Creek are addressed in this plan. These are dispersed over a distance of approximately 5-1/2 miles along Highway 1. They are located on private property, with the exception of Scott Creek Beach which is owned by the County of Santa Cruz.

There are several beaches to the south that are within the County's jurisdiction. Red, White and Blue Beach is under private ownership. It is managed as a "clothing optional" beach and fees are charged. The others are located in Wilder Ranch State Park which is essentially yet undeveloped. A General Plan for this unit was adopted in 1980 but the first improvement, a 74-vehicle capacity parking lot at the Wilder Ranch complex, will not be constructed until 1988. A second parking lot, with space for 113 vehicles, will be built a year later to serve Four Mile Beach. The park will ultimately have a variety of campgrounds and picnic areas, a hostel and an interpretive center, all connected by hiking and equestrian trails. However, no other parking lots west of Highway 1 are planned.

To the north, the Department's Big Basin Redwoods State Park includes the state owned beach at the mouth of Waddell Creek. It has a parking lot and other minimum improvements. South of this state park lies Greyhound Rock which is owned by the Department of Fish and Game but managed by the County of Santa Cruz. Existing day use facilities will soon be renovated under a grant provided by the Wildlife Conservation Board, and therefore is considered in this plan only in terms of management.

Davenport Beach is another North Coast beach, but it has been excluded from this plan because of its proximity to the Davenport community. It will be incorporated in a more comprehensive community plan at some future date.

The seven major coastal units in San Mateo County (Thornton State Beach at the north end to Ano Nuevo State Reserve at the south end) are owned and managed by the Department. They all have parking lots and sanitary facilities; several have picnic areas. Camping facilities are available at Half Moon Bay. Fees are collected at all of these units, at least during summer weekends.

The greatest number of visitors to state beaches in Santa Cruz and San Mateo Counties originate in the San Francisco Bay Area, followed by the Central Valley and Northern California, Santa Cruz and San Mateo Counties, Southern California and out-of-state (Wilder Ranch General Plan, 1980 and communication with Department personnel in the San Mateo District). The most popular activities include sight-seeing, beachcombing, wading, picnicking, taking pictures and

sunbathing. Local residents particularly enjoy fishing, surfing, windsurfing, jogging, camping, partying, playing volleyball, exercising dogs and sunbathing in the nude. Some visitors swim, fly kites, dig for mussels, observe wildlife and paint. Illegal off-highway vehicle use occurs periodically at beaches that are accessible. Very little scuba diving occurs along this stretch of coastline, as it is suspected of being a shark nursery and the water is generally rough and lacks clarity. The peak use season generally runs from May through September, although the months of March, April and October can be very popular if the weather is warm and dry.

Recreationists at the North Coast beaches are slightly different than those who visit the state beaches to the north and south; they tend to be younger and less family-oriented. This is due to (1) the close proximity of the University of California at Santa Cruz; (2) the lack of management and fee collection; (3) better weather conditions for sunbathing; and (4) more visual isolation from Highway 1 (promoting nude sunbathing).

Demand

Visitor demand differs along the coastline. Between 1981 and 1986, visitor days¹ at Santa Cruz County beaches went from an estimated 2.1 million to 3.3 million. The number of visitors at the less developed San Mateo County state beaches declined dramatically when a fee payment system based on voluntary cooperation was initiated in the early 1980s. Paid visitor attendance records indicate that use increased annually until 1985 when manned kiosks were installed to maximize the effectiveness of the fee collection system. It appears that attendance at these particular beaches has now stabilized (Planning Division, Department of Parks and Recreation).

During summer weekends and holidays when the weather is good, parking lots at all the beaches in both counties cannot meet the overwhelming demand. However, on typical summer days, existing parking lots are more than adequate. As the growth of northern California counties, particularly Santa Clara County, continues to climb as predicted (State of California Department of Finance, 1983), additional parking will be needed. This future need is further reinforced by Department visitor use projections (see Tables 2 and 3).

1 The use of an area for a total of 12 person-hours by one or more people, either continuously or spread over several visits.

TABLE 2
Projected Annual Recreation Demand
(In Participation Days)*
Santa Cruz County

Activity	1985	1990	1995	2000
Saltwater Fishing	232,829	254,496	273,201	289,091
Picnicking	805,944	859,996	904,659	947,560
Nature Appreciation	955,365	1,045,369	1,116,634	1,185,742
Visiting Scenic Areas	660,550	731,502	785,050	834,186
Ocean Swimming	486,605	524,526	550,267	569,975
Scuba and Snorkeling	52,291	59,177	64,573	69,507
Body Surfing	150,908	163,123	174,746	186,748
Board Surfing	71,308	76,987	81,094	84,231
Sunning	570,967	605,077	634,260	663,308
Beach Combing	143,402	151,401	159,464	166,488
Beach Games	249,926	263,677	272,544	281,458
Camping	609,283	653,592	692,576	727,502

- * A participation day is one person engaging in recreation activity for any amount of time in one day.
- ** Totals have not been provided because recreationists frequently participate in more than one activity.

Source: California Department of Parks and Recreation, PARIS III

TABLE 3
Projected Annual Recreation Demand
(In Participation Days)*

San Mateo County

Activity	1985	1990	1995	2000
Saltwater Fishing	709,706	752,446	799,144	830,553
Picnicking	2,485,514	2,569,543	2,667,240	2,743,623
Nature Appreciation	2,355,122	2,478,521	2,599,935	2,698,667
Visiting Scenic Areas	1,491,231	1,596,333	1,683,128	1,74,336
Ocean Swimming	1,414,230	1,484,328	1,541,266	1,578,677
Scuba and Snorkeling	133,831	149,001	161,235	171,851
Body Surfing	455,572	476,394	501,809	525,884
Board Surfing	213,872	225,195	234,707	238,393
Sunning	1,694,074	1,726,466	1,774,431	1,810,966
Beach Combing	398,557	404,206	418,097	426,849
Beach Games	686,228	702,606	715,592	721,578
Camping	1,220,976	1,280,634	1,343,579	1,394,231

* A participation day is one person engaging in a recreation activity for any amount of time in one day.

** Totals have not been provided because recreationists frequently participate in more than one activity.

Source: California Department of Parks and Recreation, PARIS III

Other facilities at the state beaches in the region are currently adequate even though budget requests are made annually to upgrade them. Fortunately, the beaches are large enough to accept many more visitors than they are normally now receiving, without diminishing the experience of the user, as long as equipment and staffing remains adequate.

Although there is no existing data documenting specific use patterns at the North Coast beaches, a consistent increase in visitors has been observed over the years. This may be a combined result of general population growth, increased number of University of California, Santa Cruz students and a migration of users from other beaches where fees have been instated.

Generally, off-highway parking space is either inadequate or unavailable at the North Coast units, although the carrying capacities of the beaches are generous (see Table 5). Basic facilities are sorely needed at all the North Coast beaches.

Development of the Wilder Ranch State Park parking facilities may temporarily ease some of the demand at the six North Coast beaches discussed in this plan, but it is not likely to be significant because parking fees will be charged, and certain types of social behavior will not be tolerated at the state park. Use will probably increase at unregulated, no-fee beaches until a plan for their management is implemented.

Once this plan is implemented, there will be essentially no unmanaged beaches remaining in the area. Initially, use will likely decline, and the type of user may change from young singles to family members. When visitors have become accustomed to paying for beach access parking, use will eventually rise to current levels and beyond.

RESOURCE ELEMENT

The Resource Element (1) summarizes the existing natural and cultural resource conditions of the units and (2) establishes long-range development and management policies based on the constraints and sensitivities of those resources. The appropriateness of these policies further depends on the classification of the unit, the declared purpose of the unit and the defined zone of primary interest.

In a typical planning process initiated by the Department, a detailed inventory of natural, cultural, recreation and aesthetic resources is the first task completed. From the resulting Resource Inventory, data is synthesized for the Resource Element. Since a full Resource Inventory was beyond the scope of this project, the resource summaries may lack the detail of a Department General Plan. However, enough data has been collected, particularly in the areas of wildlife and vegetation, to permit the development of preliminary resource management policies. Information not normally required in a General Plan has been provided regarding parking and access, land ownership and other legal conditions. For additional resource information, refer to the *North Coast Today and Tomorrow* report.

Policy Formation

Classification

Classification of a State Park System unit forms the foundation on which all management and development policies are based. Classification statutes contained in Article 1.7 of the Public Resources Code (PRC) specify broad management objectives and improvements appropriate to state beaches, which is how these units would likely be classified. The PRC further establishes several categories of units that can be included within the boundaries of another unit of the State Park System. At Scott Creek and Laguna Creek Beaches, the wetland areas should be designated as natural preserves to allow the natural dynamics of ecological interaction to continue without interference.

Declaration of Purpose

A declaration of purpose describes the purpose of the unit and identifies the prime resources, long-range management objectives and the relationship between the unit's resources and recreational uses.

The beach units should have a declared purpose to make available to the public, as a recreational resource, the sandy beaches, intertidal rocky shorelines and associated uplands of the six designated sites of the North Coast of Santa Cruz County. All recreational activities and support facilities would have to be consistent with the perpetuation of the beaches and related natural and cultural resources.

The purpose of the Scott Creek natural preserve, located on the inland side of Highway 1 on private property, would be to protect the wetland habitat for the perpetuation of important wildlife and fish species and interpretation for the public. This same purpose would apply to Laguna Creek where the natural preserve would be expanded to include the nesting area of the snowy plover. This would include the depressed area west of Highway 1, all of which is privately owned.

Zone of Primary Interest

The zone of primary interest is that area outside the unit in which land use (changes) could adversely affect the resources of the unit. For these units, it would include the area immediately surrounding the beaches and access trails, as well as the watersheds of the creeks that drain to the beaches.

The Department would be concerned about all activities in this zone and would take action whenever possible to minimize any negative impacts likely to be caused by them.

Resource Summaries and Management Policies

Topography

The terrain along the North Coast consists of a marine terrace that has been uplifted and eroded. The terrace varies in height along the coastline but is generally 60 feet above sea level, and separated from the ocean by steep bluffs. The beaches occur where the terrace is dissected by drainages. At Scott Creek, Davenport Landing and Laguna Creek, the valleys are broad and low; the beach is wide. Panther, Bonny Doon and Yellowbank are pocket beaches.

The main beach at Scott Creek extends over half a mile between a sloped terrace on the north and sand dunes and bluff on the south. A narrow strip of beach, again as long as the main beach, continues to the south at the base of a bluff. It is inaccessible during the winter. The river valley runs deep inland, but the main beach is separated from a wetland area by an elevated portion of Highway 1.

Davenport Landing Beach is approximately 200 yards long and 50 yards wide. It is bounded at both ends by low rocky terraces backed by vertical cliffs 30 to 40 feet high. The beach is bordered to the east by a broad low terrace.

Panther Beach is the smallest of the units and its size can vary from year to year. It is surrounded by 40-foot high cliffs. In the center of the cove there is a large pinnacle of rock, isolated from the shoreline even at low tide.

Sixty foot bluffs enclose Bonny Doon Beach on the north and south, and a large sand dune encloses it on the east. The beach is about 250 yards long and half as wide. A pocket beach at the north end is reclaimed during the winter.

Yellowbank Beach consists of a main beach 100 yards long and 70 yards wide; it is separated from a long narrow beach to the south by a small rock archway that is passable only at low or medium tides, and is otherwise inaccessible. Both beaches are bounded at either end by 30- to 40-foot bluffs. The main beach is separated from the Yellowbank Creek Canyon by a wall of railroad and highway fill.

The most distant from Highway 1, Laguna Creek Beach stretches over half a mile and is half as wide as it is long. There is a small pocket beach at the north end. A series of stepped terraces bound it on the north; the south end is cut short by an 80-foot bluff. A large lagoon and wetland area border the beach to the east.

Meteorology

The climate along the coast is mild throughout the year. The mean July maximum temperature in the Santa Cruz area is 70°F, while the January mean minimum is 38°. Summer weather is characterized by early morning and evening fog, and is generally cool and breezy. The best conditions occur in the spring and fall between low pressure systems. Annual precipitation is about 30 inches.

The North Coast beaches receive less fog than the beaches along the San Mateo County coastline north of Franklin Point. Wind conditions also tend to be less severe during most summer seasons.

All the units are highly exposed to the prevailing winds that come from the west and northwest. Scott Creek Beach is the windiest. The other beaches have northern portions or pocket beaches that are somewhat sheltered from the wind by the terrain; Bonny Doon Beach provides the most shelter. Parts of the lagoon at Laguna Creek Beach are also protected from the prevailing winds.

Hydrology

Information regarding the hydrology of the area has been limited to surface drainage.

All of the beaches have creeks draining into them, several of which are significant in size. At Scott Creek Beach, the stream flows across the length of the main beach a good portion of the year, or sometimes to one side or the other, making the beach partially inaccessible. It is joined at the south end by Molino Creek, a much smaller drainage. At Bonny Doon Beach, Liddell Creek emerges from a culvert and crosses the back part of the beach during the winter and

spring. During the wet season, Laguna Creek covers a large section of the beach, but recedes into the wetland later in the year.

The lagoons at Scott Creek and Laguna Creek have been artificially breached in the past to prevent the flooding of adjacent farmland. In wet years, the lagoons provide ideal rearing conditions for juvenile steelhead and important habitat for shorebirds, gulls, and waterfowl. Summer or fall sandbar breaching can prematurely drain the lagoons and/or reduce the water quality, killing many fish or sharply reducing their growth rates.

Flashboard dam structures exist at the mouth of a man-made tunnel at Bonny Doon Beach and on Laguna Creek at the westernmost edge of the riparian vegetation. The structure at Laguna Creek was apparently used for water diversion in the past. The drop produced by the dam represents a barrier to the movement of coast range and prickly sculpins. Adults of those fish species probably migrate to the lagoon for much of their reproduction, but juvenile and adult fish would be blocked from moving upstream for rearing. The narrow opening in the dam and sloping apron provide ideal conditions for poaching migrating adult steelhead. The structure at Bonny Doon Beach also lends itself to poaching.

Spring and summer streamflows at Scott Creek and Laguna Creek are necessary to increase and maintain lagoon levels after sandbar formation. Water diversions from Laguna Creek for agricultural and domestic water use for the City of Santa Cruz frequently do not allow sufficient inflow to provide optimum lagoon levels for fish and wildlife.

Policy: The Department shall be actively involved in any land use decisions that may have an adverse impact on the unit's water features. Measures to maintain current and natural water quality and flow shall be recommended and supported.

Policy: Artificial sandbar breaching of Scott Creek and Laguna Creek lagoons shall not be permitted. Past breaching activities, dates of breaching and inundation levels should be determined from area landowners, if possible.

Policy: Diversion dam structures and any other structure or feature that severely reduces stream flow and adversely affects the fisheries should be considered for removal after detailed analysis of their usefulness for habitat management and related impacts.

Policy: Any existing water diversions from either Scott Creek or Laguna Creek should be eliminated. The lagoons and wetlands at these units should receive consideration in future water rights hearings. New appropriations from Scott and Laguna Creeks should be opposed.

Geology

The North Coast beaches are located on the southwestern flank of the Santa Cruz Mountains, in the Coast Range Geomorphic Province. The area is part of a large structure block, bounded on the west by the San Gregorio fault and on the east by the San Andreas fault, both of which are considered seismically active. Referred to as the Salinian Block, it is composed of metamorphosed Paleozoic (greater than 225 million years old) sediments and Cretaceous (approximately 80-90 million years old) granitic igneous rocks. The overlying Santa Cruz Mudstone, exposed along the cliffs, was derived from Ben Lomand Mountain and deposited in shallow marine sequences. The dunes at Scott Creek and Bonny Doon Beaches were formed in relatively recent geologic time from sand deposited at the beaches and blown to their present sites. Sand drift is a continual problem across Highway 1 at Scott Creek Beach. Bluff erosion and sediment from downcutting by local streams are the major sources of the sand. Wave erosion accounts for as much as 5-1/2 inches of sea cliff retreat per year (Wilder Ranch State Park General Plan, 1980). Generally, winter storms carry large quantities of the sand out to sea, which is then replaced by milder wave action during the summer.

Policy: Geologic hazards should be posted. Measures should be taken to discourage people from walking near the edges of the bluffs, and particularly over the arch at Yellowbank Beach.

Soils

Due to the typical complexity of soil types, no effort has been made to interpret documentation of nearby areas for application to these particular units. On-site observations indicate, however, that the upland soils surrounding the beaches are shallow, sandy and highly erodible. Foot

traffic, and off-road vehicle use to a lesser extent, have accelerated this erosion process, causing loss of vegetation, slope instability and unsightly conditions.

Policy: Coastal access to the beaches from the parking area shall be directed and controlled to minimize random destructive erosion. Structural means that are harmonious and appropriate to the natural and rural environment shall be installed to prevent further erosion of the coastal bluffs.

Plant Life

The six beach units along the North Coast encompass a diverse assemblage of vegetation communities (see Maps 2 through 6). Several are common to all the sites, a few are unique to only a few (for a complete checklist of vascular plants, refer to Appendix 1). The plant communities are described below.

Coastal Scrub

The coastal scrub plant community dominates the bluff tops and slopes within each beach unit. Even though the vegetation is dense, and often impenetrable, beach users have developed trails throughout the plant community at many of the units. Vegetation has been especially disturbed at Bonny Doon Beach. The community is comprised of lizard tail (Eriophyllum staechadifolium), coyote brush (Baccharis pilularis ssp. cansanguinea), yellow bush lupine (Lupinus arboreus), California sage (Artemisia californica), blackberry (Rubus ursinus) and poison oak (Toxicodendron diversilobum). Herbaceous plants include several species of cudweed (Gnaphalium sp.), seaside paintbrush (Castilleja latifolia), poison hemlock (Conium maculatum), common aster (Aster chiliensis) and common yarrow (Achillea millefolium). The community is important to wildlife for food sources and cover. At Laguna Creek Beach, it is habitat for the federally listed rare San Francisco tree lupine moth.

Coastal Bluff Scrub

Adjacent to the more common and densely growing coastal scrub is a more sensitive plant community, the coastal bluff scrub. Not always distinguished by the casual observer, this plant

community inhabits the north-facing and west-facing slopes where the soil layer is extremely thin; the fractured white sandstone substrate is often visible between the plant growth. Due to the thin soil layer and exposure, plant growth is distinctly different from the dense coastal scrub; plants are low-growing, sparser and composed of different species. This community occurs at Laguna Creek, Yellowbank, Bonny Doon and Scott Creek units. Common plants include live-forever (Dudleya caespitosa), seaside daisy (Erigeron glaucus), goldfields (Baeria chrysostoma), varicolored lupine (Lupinus varicolor), seaside plantain (Plantago juncooides), sea pink (Armeria maritima), beach strawberry (Fragaria chiloensis) and buckwheat (Eriogonum latifolium). Several grasses are also present including bent grass (Agrostis densiflora), California hair grass (Deschampsia caespitosa) and farmer's foxtail (Hordeum leporinum).

Two plant species of concern were observed within this plant community; an orchid, Michael's piperia (Piperia michaelii), and a grass, Blasdale's bent grass (Agrostis Blasdalei). The orchid was observed at the Scott Creek, Yellowbank and Laguna Creek units; the bent grass only at Laguna Creek. The California Native Plant Society (CNPS) lists these species with the R-E-D code of 2-2-3, rare, and 1-2-3, occurrence confined to a few populations, respectively. Both are endangered in a portion of their ranges, and endemic to California. Neither species is listed by state or federal agencies at this time.

Coastal Dunes

The dunes at the beach units are quite extensive. Most are active, as they constantly move and change due to the forces of wind and water. These areas have little vegetation. The more stabilized dunes are protected by extreme natural influences and/or are covered in some degree by vegetation. Plants common to these dunes are yellow sand verbena (Abronia latifolia), pink sand verbena (Abronia umbellata), beach bur (Franseria chamissonia ssp. bipinnatisecta), sea rocket (Cakile maritima), silky beach pea (Lathyrus littoralis), beach strawberry, American dune grass (Elymus mollis) and western rye grass (Elymus glaucus).

Dune vegetation at Scott Creek Beach has been severely disturbed by off-highway vehicle use and foot traffic. Uncontrolled beach access has caused considerable damage to dune vegetation at Bonny Doon as well.

Coastal Cliffs

The steep coastal cliffs are a prominent feature of each of the beach units. The vegetation is limited to areas of water drainage and/or protected ledges and crevices. These areas yield "hanging gardens", islands of vegetation along an otherwise barren sandstone face. Plants common to these "gardens" include many of the species found within the coastal scrub and coastal bluff scrub: seaside daisy; pacific sanicle (Sanicula crassicaulis); live-forever; bent grass; yerba buena (Satureja douglasii); coastal monkey flower (Mimulus guttatus ssp. littoralis); seaside plantain; large-flowered sand spurry (Spergularia macrotheca); California polypody (Polypodium californicum) and short-stemmed sedge (Carex brevicaulis).

This habitat is used extensively by a variety of shorebirds and seagoing birds for roosting, breeding and foraging. Several species are listed as endangered or of special concern.

Riparian

A well-developed riparian plant community occurs within the Scott Creek and Laguna Creek Beach units. This community is the only one occurring in the study area that is composed of a tree overstory. Representative trees are red alder (Alnus oregona), red elderberry (Sambucus callicarpa), coast live oak (Quercus agrifolia), California buckeye (Aesculus californica), box elder (Acer negundo ssp. californicum) and arroyo willow (Salix lasiolepis). Associated shrubs and herbaceous plants include poison oak, blackberry, common vetch (Vicia angustifolia), coast iris (Iris douglasiana), hedge nettle (Stachys bullata), flowering currant (Ribes sanguineum) and coffee berry (Ramnus californica). Scattered occurrences of non-native wattle (Acacia decurrens) are also present. Riparian vegetation is critical to a wide array of wildlife.

Brackish Marsh/Lagoon

The marsh and lagoon community occurs at two of the beach units, Laguna Creek and Scott Creek. The vegetation is dense with cat-tail (Typha sp.), three-square (Scirpus americanus), slough sedge (Carex obnupta), pickleweed (Salicornia sp.), pacific silverweed (Potentilla sp.), dock (Rumex fenestratus), salt grass (Distichlis spicata), willow and curly dock (Rumex crispus).

A significant portion of the Laguna Creek wetland area was farmed in the past and has been further disturbed by human access and activity. Nevertheless, these wetlands are used by waterfowl and shorebirds for feeding, nesting and bathing. The six-acre Scott Creek marsh is identified as a significant natural resource by the California Natural Diversity Data Base (CNDDDB), the California Department of Fish and Game (CDFG) and the Local Coastal Plan (LCP) of Santa Cruz County.

Ruderal

The ruderal areas within the study sites (predominantly Davenport Landing and Scott Creek Beach units) are dominated by introduced, non-native plant species. Common plants include poison hemlock, sweet fennel (Foeniculum vulgare), hottentot fig (Carpobrotus edule), bristly ox-tongue (Picris eciodes), star thistle (Centaurea solstitialis), field mustard (Brassica campestris), ripgut brome (Bromus rigidus), soft chess (Bromus mollis) and English plantain (Plantago lanceolata).

Policy: Plant species listed as rare with the California Native Plant Society and observed or predicted to occur within the coastal bluff scrub habitat at the Scott Creek, Yellowbank, Laguna Creek and Bonny Doon units should be protected. New access trails should not be developed within this community. Off-trail access should be discouraged by erecting fencing and similar barriers.

Policy: For the enhancement of native plant habitat, invasive exotic plant species should be removed or reduced. Of particular concern is the control of hottentot fig/ice plant (Carpobrotus sp.), as well as acacia (Acacia sp.), broom (Cytisus sp.), pampas grass (Cortaderia selloana) and german ivy (Senecio mikanioides). An on-going maintenance program should be established to control the spread of these exotic plant species.

Policy: The coastal scrub vegetation within disturbed areas at Bonny Doon Beach should be reestablished. Access through these areas should be restricted or otherwise discouraged.

Policy: Coastal dune vegetation should be reestablished where it has been disturbed at Bonny Doon and Scott Creek Beaches. The benefits of such restoration are improved plant and animal

habitat; reduced highway maintenance due to stabilization of the sand; enhancement of a scenic resource and reduced coastal erosion. This effort should include the full or partial removal of the concrete slab at Scott Creek Beach, and rehabilitation of the gullies and old access road near the slab.

Animal Life

The North Coast is an important habitat for a diversity of wildlife, especially shorebirds, waterfowl and fish (see Maps 2 through 6). There are several rare and endangered species and many more that are of statewide special concern (see Table 4). They have been identified below by habitat (refer to Appendix 2 for a listing of observed and predicted species).

Coastal Scrub

Wrentits (Chamaea fasciata), song sparrows (Melospiza melodia), California thrashers (Toxostoma redivivum) and brown towhees (Pipilo fuscus) nest in this habitat. Black phoebe (Sayornis nigricanus), several swallow species, loggerhead shrike (Lanius ludovicianus) and northern harrier (Circus cyaneus) forage here.

The San Francisco tree lupine moth (Grapholita edwardsiana), a rare moth listed with the U.S. Fish and Wildlife Service, has been recorded at the Laguna Creek Beach unit adjacent to the railroad tracks where it utilizes yellow bush lupine as a host plant.

Coastal Bluff Scrub

Wildlife that use this plant community for cover and as a food source are similar to those which are found in the coastal scrub further inland.

Coastal Dunes

Wildlife associated with the dune habitat is diverse; the dunes within the water's reach are used by several species of shorebirds for feeding and foraging, including sanderling (Calidris alba), willet (Catoptrophorus semipalmatus) and marbled godwit (Limosa fedoa).

TABLE 4

Animal Species of Special Concern

Federal (USF&WS) Listed - Rare

<u>Species</u>	<u>Unit(s)</u>
San Francisco Tree Lupine Moth	Laguna Creek

Federal (USF&WS) and State (DF&G) Listed - Endangered

<u>Species</u>	<u>Unit(s)</u>
Peregrine Falcon	Predicted at all units but observed only at Scott Creek and Panther

State Listed - Species of Special Concern

<u>Species</u>	<u>Unit(s)</u>
Snowy Plover*	Laguna Creek
Black Swift	All units
Rhinoceros Auklet	Scott Creek
Marbled Murrelet	All units
Tidewater Goby	Scott Creek, Laguna Creek
Steelhead Trout	Scott Creek, Laguna Creek, Bonny Doon
Coho Salmon	Scott Creek

No Listing - Species of Interest

<u>Species</u>	<u>Unit(s)</u>
Pelagic Cormorant	All units

* Also a federal candidate with endangered status

The snowy plover (Charadrius alexandrinus), a candidate for federal endangered species status and a California species of special concern, was observed on the back dune areas at Laguna Creek in nesting/breeding activity. There are past records of breeding activity on Scott Creek Beach; however, due to habitat degradation, it is currently used only as a wintering area. The snowy plover nests in small depressions in bare sand. These birds are easily disturbed by nearby human use and unrestrained dogs. The eggs, well-camouflaged on the sand, can be easily overlooked by beach users and crushed.

Coastal Cliffs

Wildlife use of this habitat is extensive. Shorebirds and seagoing birds roost and breed in cavities and ledges along the cliffs. Common throughout the area are pigeon guillemots (Cepphus columba), rock doves (Columba livia), cormorants (Phalacrocorax sp.) and various gulls (Larus sp.). The American black oystercatcher (Haematopus bachmani) probably breeds in the protected tidepool areas. Ruddy and black turnstones (Arenaria sp.), surfbirds (Aphriza virgata) and wandering tattlers (Heteroscelus incanus) forage among the rocks.

Black swifts (Cypeloides niger) and peregrine falcon (Falco peregrinus), coastal species of particular interest and/or concern, were observed using these cliffs. Other bird species of special concern that utilize these cliffs include rhinoceros auklet (Cerorhinca monocerata) (northernmost cliffs of Scott Creek Beach), the pelagic cormorant (Phalacrocorax pelagicus) and possibly the marbled murrelet (Brachyramphus marmoratus). The black swift, marble murrelet and rhinoceros auklet are state listed species of special concern; the peregrine falcon is state and federally listed as endangered.

Riparian

Riparian vegetation provides valuable habitat for wildlife and is generally heavily used, especially because riparian habitats throughout the region have been reduced considerably, as have the wildlife that depend on that habitat. Thus, there are many species of special concern present in this habitat. Breeding bird species include yellow warbler (Dendroica petechia), western flycatcher (Empidonax difficilis), warbling vireo (Vireo gilvus), black-headed grosbeak (Pheucticus melanocephalus), tree swallow (Tachycineta bicolor) and Wilson's warbler (Wilsonia

pulsilla). During migratory periods, bird species from all over North America may stop over, feed for a few days and continue on their migration. Winter residents include ruby-crowned and golden-crowned kinglets (Regulus sp.), varied thrush (Ixoreus naevius) and sharp-shinned hawk (Accipiter striatus).

Amphibians usually required free-moving water for reproduction; thus, they are most common in riparian woodland habitat. Three species of garter snake (Thamnophis sp.) are abundant throughout the Santa Cruz County coast. Other reptiles include western skink (Eumeces skiltonianus), ringneck snake (Didophis punctatus), common kingsnake (Lampropeltis getulus) and gopher snake (Pituophis melanoleucus).

Riparian woodlands are also used by many mammal species. Deer mice (Peromyscus maniculatus), brush rabbits (Sylvilagus bachmani), dusky-footed woodrats (Neotoma fuscipes), gray fox (Urocyon cinereoargenteus) and raccoon (Procyon lotor) den and forage in the streamside areas. Mule deer (Odocoileus memionus) probably browse the willows growing along the bank. Bobcats (Lynx rufus) may visit the areas from the east.

Wetlands

The use of both the marsh and open water lagoon areas by wildlife is extensive. Waterfowl such as mallard (Anas platyrhynchos), gadwall (Anas strepera) and cinnamon teal (Anas cyanoptera) use the habitat for feeding and nest in adjacent vegetation. During winter, shorebirds such as dowitchers (Limnodromus sp.), whimbrels (Numenius phaeopus) and various other sandpipers use the lagoon system for bathing, feeding and resting. Common yellowthroats (Geothlypis trichas), song sparrows and marsh wrens (Cistothorus palustris) nest in the emergent vegetation. All of these species are preyed upon by raptors such as the cooper's and sharp-shinned hawk and peregrine falcon.

Three anadromous fish streams exist within the study area. Threespine stickleback (Gasterosteus aculeatus) are probably present in Laguna, Yellowbank, Liddell (Bonny Doon Beach) and Scott Creeks. Steelhead trout (Salmo gairdneri) may be found in Laguna, Liddell, and Scott Creeks. Except in extreme drought years, such as 1976, 1977 and 1987, the lagoons at Laguna and Scott Creeks probably provide extremely valuable nursery conditions for juvenile

steelhead. Although steelhead nursery conditions have not been studied at these two locations, studies at similar lagoons indicate that a lagoon can be the most valuable rearing habitat in a watershed. Coho salmon (Oncorhynchus kisutch) are present in Scott Creek and may use the lagoon as a feeding habitat in the spring; coho apparently do not use local lagoons for summer rearing because of high summer water temperatures. Tidewater goby (Eucyclobius newberryi), a species of special concern, was observed in August, 1987 in Scott Creek. Numbers are probably small in most years, as the species had been considered to be extirpated because it had not been collected since 1939. The goby is abundant, however, in the pond on the south side of the lagoon; the pond presently serves as a refuge for the lagoon population. The tidewater goby was observed in the lagoon at Laguna Creek as recently as 1984. However, none were collected in August, 1987 from the few potholes left by the present severe drought. The species might be extirpated at the site, but it did apparently manage to survive the 1976-77 drought. Prickly sculpin (Cottus asper) and coastrange sculpin (C. aleuticus) are present in Laguna, Liddell, and Scott Creeks. Both species migrate downstream to the lagoons and lower portions of the stream for spawning, and young prickly sculpins often rear in the lagoons. Juvenile staghorn sculpin (Leptocottus armatus) and starry flounder (Platichthys stellatus) are probably occasionally present in small numbers in the lagoons at Scott and Laguna Creeks. The young of the year fish, hatched in the ocean, often enter the lagoons for rearing during their first year.

Ruderal

Wildlife use of this area includes Lesser and American Goldfinches (Carduelis sp.), House Finch (Carpodacus mexicanus) and White-crowned Sparrow (Zonotrichia leucophrys).

Policy: The habitats of all state and federally listed rare and endangered species shall be protected by posting signs restricting access. This includes all the bluff tops, at least from May through August, to protect bird species of concern. Use should be discouraged below the steep northernmost cliffs at Scott Creek Beach to protect the nesting area of the rhinoceros auklet. The southern portion and back dune of Laguna Creek Beach should be closed to the public during the snowy plover nesting season, March through possibly August. Fencing should be erected to reinforce the closure. Dogs should not be permitted at this beach. Foot traffic should be directed away from the coastal scrub habitat of the rare San Francisco tree lupine moth at the Laguna Creek unit. The endangered peregrine falcon, observed at Panther and Scott Creek

Beach has not been recorded as nesting along the North Coast. All sightings should be reported to the Predatory Bird Research Project at the University of California, Santa Cruz. Additional measures (see Hydrology) should be taken to preserve the habitat of all fish species of special concern. Tidewater gobies should be reintroduced into Laguna Creek from Scott Creek, if none are observed after this year.

Policy: The Department should consider purchasing in fee, or acquiring easements for, wetland preserves at the Scott Creek and Laguna Creek units. Consideration should be given to acquiring sufficient land for an upland buffer zone approximately 100 feet wide, and to eliminate the need for artificial sandbar breaching. At Scott Creek there may be a need for the construction of levees next to adjacent farmland to prevent flooding. In the case of Laguna Creek, protection of the nesting area of the snowy plover should also be considered.

At Scott Creek, an investigation of the degree and extent of past farmland flooding should be conducted to help determine the boundary of the natural preserve. Detailed restoration plans for these preserves should be developed to determine which levees should be constructed or removed, which channels should be excavated and where the gates should be located in order to achieve the proper mix of various wetland habitats.

Policy: Because mechanical rakers remove important shorebird food sources, they should not be used to clean refuse from the beaches more frequently than once a year.

Cultural Resources

An archaeological survey was not completed as part of this planning effort. However, because prehistoric and historic sites are common all along the coast, important cultural resources are likely to be found at the North Coast units.

Native American Resources

The Costanoan Indians, a Penutian-speaking people related both linguistically and culturally to the Coast Miwok of Marin County, occupied this area (Walter Ranch State Park General Plan, 1980). They settled at beaches where streams furnished fresh water and supplemented their food

supply of shellfish, particularly clams, and other fish. Shellfish and chert processing stations have been identified farther north at the Ano Nuevo State Reserve.

Euroamerican Resources

As early as the mid-1800s, the upland terraces were grazed by cattle and planted with row crops.

Policy: To avoid disturbing important cultural resources, an on-site investigation should be made prior to the excavation or filling of any existing material for the construction or installation of facilities or other site improvements. Should any cultural resources be discovered, the find should be promptly reported to appropriate Department personnel who will determine the validity and significance of the discovery and recommend appropriate protection or stabilization action.

Aesthetic Resources

The most visible of the units is Scott Creek Beach, as Highway 1 descends from the uplands at either end and parallels the beach at a slightly elevated level. Most of Davenport Landing Beach can be seen from the Old Coast Road with glimpses from Highway 1. The other beaches remain virtually hidden, except from vantage points around their perimeters.

Scott Creek is one of the more attractive units due to its varied terrain and composition of vegetation, sand and water. The disturbed dunes and ruderal vegetation does, however, detract from its overall scenic quality. Furthermore, the presence of vehicles parked along both sides of the highway is discordant with the otherwise harmonious coastal setting. There is a concrete slab remnant that covers 10,000 to 15,000 square feet but is not highly visible. Broken glass is especially prevalent along the bottom of the southern bluff in a former dispersed camping area.

Davenport Landing is relatively developed with several residences and a fish farm adjacent to it. The bench behind the beach is a disturbed site crisscrossed by trails and extensively littered. The roadway shoulders are in need of grading; boulders are strewn haphazardly along one side, and utility poles along the other. This beach does not have the rural quality of the other units.

The view from shore at Panther Beach is especially impressive because of a lone, pyramidal-shaped island that sits just offshore, centered in the cove. The beach itself is scenically insignificant. The parking area is essentially a wide highway turnout that extends several hundred feet along the highway.

Bonny Doon Beach has the appearance of an enclosed bowl with steep, vegetation-barren walls. It would be an attractive setting except that the vegetation on the dune, which wraps around the back portion of the bowl, has been heavily damaged by foot traffic. The entire beach is covered with litter, especially broken glass, that is far worse than any of the other beaches.

Yellowbank Beach is unique among the six beaches for it has an arched opening in its southern flank, leading to a smaller beach beyond. Similar to Bonny Doon, it is bowl-shaped, but its walls are more gently sloped and concealed by vegetation. It too has a considerable amount of litter. The parking area is only partially visible from Highway 1, and has four power poles transversing the length of it. These can be seen from the highway and the beach.

Laguna Beach is relatively pristine, probably because of its distance from the highway. It is sequentially exposed to the on-coming viewer across fields of Brussels sprouts and beyond the green wetland below. The beach is wide, open and seemingly undisturbed, except where the southern bluff is sensitive to foot traffic. In contrast, the parking area is visually obtrusive to Highway 1 because of the excavation scar at the rear.

Southern Pacific Railroad tracks pass between the parking areas and beaches at the four southern units. As part of the rural landscape, this feature is not particularly out of place, but it does reduce the viewer's enjoyment of the natural scenery.

The sound of the surf is predominant at all the beaches. Only on still days can the sound of highway traffic be heard from portions of Scott Creek Beach. The beaches do get used frequently for parties, especially Bonny Doon and Davenport Landing. It is not uncommon for users to haul generator-powered speakers to the beaches to amplify music that can be heard from one end of a beach to the other.

Because of prevailing winds, odors from garbage and sanitary use are not a significant problem.

Policy: No site improvements shall be permitted that detract from or contrast with the existing scenic quality of the area.

Recreation Resources

The North Coast beaches provide recreation opportunities unique to the interface of land and sea (refer also to Regional Recreation Profile). Almost all recreation activities occur during the day, but a limited amount of camping does take place. The peak season generally begins with spring (Easter) break and ends in October. A majority of visitors come from the San Francisco Bay Area. Visitation is on the rise. The most popular activities are strolling, sunbathing, wading, picnicking, surf fishing, windsurfing and surfing.

Because of its open exposure to prevailing winds, Scott Creek is not a popular beach for sunbathing. Surfers favor the north end where a submerged reef creates some of the best waves along the North Coast. Many people stop to take a stroll at this particular beach because it is the most accessible. Illegal off-road vehicle use occasionally occurs.

Davenport Landing has the most consistent use throughout the year. It is easily accessible from Old Coast Road, which encourages its use by families with children, the elderly and the handicapped. There is a perception that Davenport Landing is safer than the more isolated beaches. The beach is also heavily used by fishermen and surfers. Occasionally people camp and have parties on the beach.

Young and middle-aged adult sunbathers use Panther Beach most frequently. Very little water use occurs. Occasionally it is used for camping. People whale watch from the plateau above the beach. Of all the units, Panther receives the fewest number of visitors.

Bonny Doon is used primarily by young and middle-aged adult nude sunbathers. Socializing, volleyball and Frisbee throwing are the most popular activities. Water sports are uncommon because of hazardous surf conditions. Bonny Doon is inundated with revelers on holidays, particularly the Fourth of July. California Highway Patrol officers estimate that as many as

3,000 people were present at this beach on July 4, 1987, celebrating with a full arsenal of fireworks. It consistently receives more use than any of the other units.

Sunbathing is the principal activity at Yellowbank Beach, but fishing and camping are also common. Tidepool exploring is also popular. The main beach is more heavily used because of it is closer to the parking area and because the south beach is inaccessible except at high tide.

Laguna Creek Beach is used by a wide variety of people for sunbathing, fishing, musseling (in winter), surfing, picnicing and camping. The north end of the beach and inland wetland area are the most heavily used because they provide shelter from summer winds.

Policy: The level of use and types of recreational opportunities shall be consistent with existing use, unless that use is in conflict with natural resource and habitat protection policies.

Supplemental Existing Conditions and Policies

Parking and Access

The inadequacy and disorganization of parking at North Coast access sites significantly contribute to the traffic hazards along Highway 1, and are major reasons why this plan has been prepared.

Most accidents involve only cars, but occasionally pedestrians are involved. There are more accidents on weekends and holidays, and during the summer months. The four primary causes, in order of magnitude, are: (1) excessive speeding; (2) drunken driving; (3) right-of-way violations and (4) improper turning movements (communication with Officer Bill O'Neill, California Highway Patrol).

Over the past seven years, there has been an average of 52 collisions per year, some involving fatalities, along this stretch of highway between Scott Creek Beach and Laguna Creek Beach. The greatest number occur in the vicinity of the Bonny Doon and Scott Creek units respectively (O'Neill, California Highway Patrol).

At Scott Creek Beach, various conditions promote traffic hazards and cause other problems. Visitors have virtually no place to park but along the narrow elevated shoulders of the highway. During a typical summer weekend day, there are 80 to 100 cars. Pedestrians must cross the highway to reach the beach if they park on the east shoulder. There are no signs warning drivers to slow down for pedestrians. People frequently walk along the narrow bridge during those periods when the creek blocks access to portions of the beach.

Parking at Davenport Landing is along a loop section of Old Coast Road and not on the highway. Although there is space for parking, two-way traffic can be made difficult because of inadequate shoulders. Optimally, only 30 to 60 cars can presently park there. Pedestrian access to the beach is relatively easy.

The parking area at Panther Beach is hazardous because vehicles drive into or out of the dirt pull-off at any location, and sometimes back onto the highway. Approximately 55 vehicles can park here, far exceeding the carrying capacity of the beach. This parking area is used on occasion when parking at Bonny Doon Beach overflows. Beach access is also quite hazardous. Visitors must cross railroad tracks and climb down a steep, slippery path. Some side trails end in impassable drops.

The parking situation at Bonny Doon is similar to Panther Beach in that ingress and egress is uncontrolled. Because of the limited capacity of the parking area (50), in combination with the popularity of the beach, parking on the east shoulder of Highway 1 and on Bonny Doon Road frequently occurs, creating a zone of pedestrian crossings. Traffic is made more hazardous by the offset intersection of Bonny Doon Road on the east side. Visitors must then climb over a steep berm, cross railroad tracks and maneuver down the bluff on eroded trails.

Yellowbank Beach has the only off-highway parking area, accommodating approximately 80 vehicles. However, it has an inadequate turning radius for southbound traffic and cannot be easily seen from that direction. Vehicles park inefficiently because of a gully and several power poles running down the middle of the dirt strip. The principal trail to the beach crosses the railroad tracks, and drops steeply to the beach. Due to loose rocks and dirt, beach goers have selected alternative routes that have been detrimental to the vegetation.

The dirt pull-off at Laguna Creek is wide enough that few cars back onto the highway, but ingress and egress is not controlled. Traffic and pedestrian safety is a serious problem because of the combination of cars approaching rapidly over a blind hill from the north, cars turning left into the parking area or adjacent roadway and pedestrians crossing the highway. The parking area can only hold about 30 cars, but Laguna Creek Road is available and used for additional parking.

The primary access route to the beach follows a farm road and is not difficult to use, except that it leads to several eroding footpaths down the low bluffs at the north end of the beach. A second route skirts the marsh to the north but dangerously narrows to less than a foot in width across a cliff face 20 feet above the lagoon. Another pathway has developed within the wetland area from activity occurring there.

Policy: Parking lots shall be established off Highway 1 where feasible. In those cases where existing pull-offs must be utilized, vehicular access into and out of the parking areas shall be controlled.

Policy: Where feasible, parking areas shall be developed on the west side of Highway 1 to avoid auto-pedestrian conflicts. Parking areas on the east side of Highway 1 shall be eliminated unless there are no other practical alternatives. Other pedestrian hazards shall be eliminated, where possible.

Policy: Parking on the shoulders of Highway 1 shall be eliminated. This shall be enforced via signing and parking citations.

Policy: Either full left-turn channelization lanes or a widened roadway and deceleration lanes shall be provided as required by the California Department of Transportation.

Policy: Coastal access trails shall be made as safe as possible. Structural stairs and railings that are of appropriate materials and construction shall be installed where needed.

Surrounding Land Use

Except for the small amount of residential use and a commercial fishery at Davenport Landing, cultivated agriculture is the predominant land use surrounding the recreational beaches. The two uses are incompatible in that recreationists do sometimes damage crops and farming equipment. Furthermore, pesticides are applied several times during the growing season to the fields adjacent to the beaches, trails and parking lots. Many of the pesticides used in the cultivation of Brussels sprouts are extremely toxic to humans and fish. They are particularly toxic for at least several days following application.

Policy: An agreement with the local farmers should be sought to eliminate the use of the more hazardous compounds within the vicinity of the beaches, trails, parking areas and streams, or to at least reduce the quantity and/or frequency of application. Signs should be posted to warn visitors not to eat or touch the crops because of the toxic pesticides.

Land Ownership and Other Legal Conditions

Land at all the units is privately owned except at Scott Creek Beach. Here, the beach, dunes and northern terrace are owned by the County of Santa Cruz, although the wetland area and terrace at the southern end are in private ownership.

The California Department of Transportation maintains a right-of-way of variable width through each unit except Davenport Landing. The existing parking areas are located either partially or wholly within this right-of-way. The California Department of Transportation therefore has jurisdiction over any improvements made at these parking areas and has the right to require encroachment permits for proposed roads connecting with the highway.

Until July, 1987, Southern Pacific Railroad had a wide right-of-way along the railroad tracks at the Panther, Bonny Doon, Yellowbank and Laguna Creek units, that included large areas once designated for future train stations. They have since quitclaimed back to the original landowners all but a narrow strip of land encompassing just the railroad bed. Trains pass through the area several times a day hauling sand and coal to the Lone Star Cement Company, and hauling cement out.

The wetland at Scott Creek is owned by Albert Smith, who farms land adjacent to the creek. The other private landowner at this unit is Coast Dairies and Land Company, a Swiss-based firm that owns most of the farm land at all the other units, including the wetland area at Laguna Creek. At Davenport Landing there are also several other private landowners. However, improvements are planned only on the property of Lone Star Cement Company.

Policy: Because public funds cannot be used without state proprietary or fee interest, agreements must be sought with all the potentially affected landowners to lease or acquire land for developing proposed improvements, restoring natural resources, preserving important wildlife habitat and providing access.

Allowable Use Intensity and Carrying Capacity

Local citizens have expressed concern about the level of improvements that are planned for these units. It seems to be a general consensus that the desired level of development be commensurate with existing demand and facilities in the region.

Combined with the sensitivity of the resources, as evidenced by existing natural resource conditions, the allowable use intensity for all the units should be low.

In consideration of that general policy, the carrying capacities of the beaches shown in Table 5 reflect a standard of 1,000 square feet of beach per party (single person or group of people).

This is far less dense than that ordinarily employed for determining the carrying capacity of an urban beach, or even a reservoir. This standard represents a spatial distance on the beach which is socially comfortable and which should not be exceeded by the provision of too many parking spaces. It does not necessarily mean that it should be reached. Physical constraints, existing demand and management objectives determine how much of that carrying capacity should be met.

As shown in Table 5, the targeted supply meets or exceeds the existing average peak demand at all the units except Bonny Doon. Additional parking could be made available, with proper

TABLE 5

**Targeted Number of Parking Spaces
Based on Beach Carrying Capacities**

<u>Name of Beach</u>	<u>Size of Beach in Sq. Ft.</u>	<u>Carrying Capacity^a</u>	<u>Average Demand^b</u>	<u>Available Space^c</u>	<u>Targeted Supply^d</u>
Scott Creek	609,000	609	90	10	110
Davenport Landing	92,000	92	35	206	90
Panther	13,320	13	15	55	30
Bonny Doon	238,514	239	100	50	80
Yellowbank	122,826	123	80	80	80
Laguna Creek	303,000	303	50	30	60

^a Optimum number of parties (and therefore vehicles) per 1,000 square feet of beach as measured between high and low tides

^b Number of vehicles based on observations made during summer weekends in 1987

^c Off-highway parking areas only

^d Represents a percentage of the physical carrying capacity, reflecting management objectives for that particular beach, as well as physical constraints

signage and flexible management, during peak use periods along Bonny Doon Road, or along the east side of the highway. Surplus parking at Panther Beach may also help relieve the need for more parking at Bonny Doon.

Recreationists, particularly surfers who use the north end of Scott Creek Beach, currently park along Highway 1 north of the bridge. They will be required to park in the designated parking lot at the south end. The northern lot will be constructed as the carrying capacity of this lot is reached, or as demand otherwise dictates.

As visitor use grows, inadequate parking space will worsen at Bonny Doon. It may also become a problem at Yellowbank and Laguna Creek. At the latter location, parking may be accommodated along Laguna Creek Road, although collecting fees would be more difficult. The parking lot could also be expanded. An additional parking lot at Bonny Doon is conceivable, located north of the existing one. Providing supplemental parking at Yellowbank is made difficult by terrain constraints to the north. Parking could be expanded to the south relatively easily, but at a greater distance from the beach.

LAND USE AND FACILITIES ELEMENT

Land Use and Facility Recommendations

This plan does not propose any changes in land use; rather, it attempts to recognize and accommodate existing and anticipated recreation use. It responds to: (1) the needs of the visitors by providing organized parking, safe access, basic visitor facilities, restored natural resources and maintenance services; (2) the needs of important and sensitive wildlife and plant species through the establishment of protective measures and long-term management, and setting aside special habitat areas as natural preserves and (3) the concerns of individuals that are being adversely affected either directly or indirectly by current unmanaged use and agencies who are currently unable to adequately assist in the proper development, management or protection of the units. The plan represents a thoughtful analysis of all these considerations.

With the exception of certain proposed improvements on county-owned property at Scott Creek Beach, no improvements can be made until necessary approvals and easements or fee titles to property on which the development/use will occur have been secured.

Following are the improvements proposed for each of the units. The natural preserves are discussed separately in the next section. Refer to Maps 7 through 11 for a geographical reference.

Scott Creek Beach

- Add a 12-foot maximum wide center turning lane for northbound traffic turning into the proposed southern parking lot.
- Add an 8-foot maximum wide shoulder turning lane for southbound traffic turning into the proposed southern parking lot.
- Develop a 110-vehicle unpaved parking lot at the south end, complete with an access road off Highway 1 and revegetation of the resulting cut slope.
- Provide a gate and tire teeth at the parking lot so that it can be closed and still permit vehicles to exit.
- Provide fee envelope dispensing and repository boxes at the parking lot.

- Provide an entrance station (kiosk) at the southern parking lot so that fees can be manually collected.
- Construct a pedestrian bridge or elevated boardwalk parallel to and preferably below the Scott Creek bridge.
- Construct a semi-portable log bridge where Molino Creek and Scott Creek meet and flow across the beach to avoid beach visitors and others from artificially breaching the lagoon and to provide access from the southern parking lot. The bridge should be constructed so that it is usable at all lagoon widths and depths, and the movement of water in the lagoon is not obstructed.
- Provide trash containers at various locations.
- Provide vault toilets at the south trailhead adjacent to the parking lot where there will be minimum impact to surrounding coastal bluff scrub vegetation.
- Provide signs (see Sign Schedule).
- Restore and protect dunes (see Habitat Enhancement Plan).
- Establish a wetland preserve (see Habitat Enhancement Plan).

A 30-vehicle parking lot and recreation facilities will be constructed at the northern end of the beach as additional parking becomes necessary. Turning and deceleration lanes on Highway 1 may be required. The lot will be visually screened from the highway with earth mounds and native landscaping.

Davenport Landing Beach

- Grade road shoulders to provide for additional, safer parking.
- Provide fee envelope dispensing and repository boxes at the trailhead.
- Provide an 8-foot wide paved trail with a slope that does not exceed eight percent and with "landings," as required for handicap access.
- Provide a vault toilet near the trailhead.
- Provide signs (see Sign Schedule).
- Provide five fire rings at the back of the beach (these will have to be removed during the winter months when the surf covers the entire beach).
- Plant large growing shrubs to screen nearby residences from the proposed facilities.

TABLE 6
Sign Schedule

Map Key	Scott Creek	Davenport Landing	Panther	Bonny Doon	Yellow-bank	Laguna Creek
A General Information (see below)	3*	1	1	2	1	1
B Coastal Access	4	2	2	2	2	2
C Warning--Hazardous Shoreline	2	2	1	1	2	2
D Warning--No Beach at High Tide			1		1	
E Access Closed						3
F ← Trail	1*					1
G Trail →	1					
H Trail to Bonny Doon Beach			1			
I Habitat Restoration/Protection-- Please Stay Out (with Interpretive Information)	5			4		3
J No Parking at Any Time	11*			7		3
K No Parking 10 p.m. to 6 a.m.	2	4		1	1	
L No Parking Beyond This Point		1	1			1
M Do Not Enter--Tires will be Punctured				1		
N Do Not Block Driveway		1				
O Pedestrian Crossing Next 1500 Feet						2
P Handicap Parking Only Between Signs		2				
TOTAL	29	13	7	18	7	18
General Information Options						
Credit for Improvements	x	x	x	x	x	x
Management Authority	x	x	x	x	x	x
No Littering	x	x	x	x	x	x
Emergency Telephone Information	x	x	x	x	x	x
Fees and Deposit Information	x	x	x	x	x	x
Stay on Trails--Surrounding Property Privately Owned		x	x	x	x	x
Stay on Trails--Help Protect Our Natural Resources	x					
Hazardous Cliffs/Shorebird Habitat	x	x	x	x	x	x
No Breaching of Beach Lagoons Permitted	x					x
Strong Currents/Swim at Your Own Risk/No Lifeguard on Duty	x	x	x	x	x	x
No Overnight Camping	x	x		x	x	
No Motorized Vehicles	x	x				
No Dogs						x

* Signs at the north end of Scott Creek Beach will only be installed if and when the northern parking lot is constructed.

Panther Beach

- Install a guard rail between the highway edge and existing parking area, leaving an opening at the south end for ingress and egress and providing space for approximately 30 vehicles.
- Provide fee envelope dispensing and repository boxes near the parking lot entrance
- Construct concrete stairs with a pipe handrail down to the beach; provide landings where possible.
- Provide trash containers at the beach and trailhead.
- Provide a vault toilet at the trailhead, or at the top of the stairs where it would be accessible by farm road.
- Provide signs (see Sign Schedule).

Bonny Doon Beach

- Add a 12-foot maximum wide center turning lane for northbound traffic turning into the parking lot.
- Add an 8-foot maximum wide deceleration lane along the shoulder for southbound traffic turning into the parking lot.
- Install a guard rail between the highway edge and existing parking area, forming an entrance road at the intersection with Bonny Doon Road and an exit at the south end.
- Expand the existing parking area southward to accommodate a total of 80 vehicles parked at 60-degree angles.
- Provide a gate at the entrance.
- Provide tire teeth at the exit.
- Provide an entrance station and fee envelope dispensing and repository boxes near the opening into the parking lot.
- Construct concrete stairs with pipe handrails at two locations near the parking lot.
- Construct a wood staircase with pipe handrails at the base of the bluff for access to the beach.
- Provide trash containers at various locations.
- Provide vault toilets near the primary trailhead; if use of the farm road for pump truck access cannot be obtained from the landowner, it should be located near the parking lot instead.

- Clean the beach and dune area to remove existing litter; this may have to be done mechanically in order to unbury debris.
- Provide signs (see Sign Schedule).
- Restore and protect dunes (see Habitat Enhancement Plan).
- Enhance fisheries (see Habitat Enhancement Plan).

Yellowbank Beach

- Add 8-foot maximum wide paved shoulders for vehicles turning into the parking lot from the north and south.
- Install a guard rail to form a parking lot entrance/exit.
- Provide a gate and tire teeth to permit closing of the parking lot without locking vehicles in.
- Relocate to one side the electrical poles that traverse the parking lot.
- Regrade the parking area for approximately 80 vehicles and provide proper drainage.
- Provide fee envelope dispensing and repository boxes and an entrance station at the opening to the parking lot.
- Construct concrete stairs with a pipe handrail between the beach and railroad tracks.
- Provide trash containers at various locations.
- Provide a vault toilet at the trailhead.
- Clean the beach of broken glass and other debris.
- Provide signs (see Sign Schedule).
- Rehabilitate a secondary trail (see Habitat Enhancement Plan).

Laguna Creek Beach

- Add 8-foot maximum wide paved shoulders for vehicles turning onto Laguna Creek Road (at the north end) to access the parking lot.
- Paint a pedestrian crossing zone on the highway surface between the trailhead and an opening in the parking lot guard rail.
- Install a guard rail between the roadway edges and the parking area and provide an opening near the rear for ingress and egress.
- Provide a gate, tire teeth, entrance station and fee envelope dispensing and repository boxes in the guard rail opening.

- Improve the access trail by widening the section between the railroad track and highway and grading the farm road evenly for pump truck access.
- Provide concrete stairs with a pipe handrail down the coastal bluff to the pocket beach at the north end.
- Install trail barriers at either end of a secondary trail that runs alongside the wetland.
- Provide trash containers at various locations.
- Provide vault toilets along the trail on the lower bench; if the right to use the farm road for pumping the toilets cannot be obtained from the landowner, the sanitary facilities should be located to the rear of the parking lot.
- Provide signs (see Sign Schedule).
- Establish a wetland preserve (see Habitat Enhancement Plan)
- Protect the snowy plover resting area (see Habitat Enhancement Plan)

All the highway improvements suggested above are subject to the discretion of the California Department of Transportation which will ultimately determine what highway improvements are needed and how they will be designed. Since there are no written policies regarding when turning lanes, widened shoulders and deceleration lanes are required, each situation will be appraised independently. No turning lane for southbound traffic at Bonny Doon will be required as part of this project, however, since it would be of no benefit to the project, and because the plan does not call for permitted parking on the east side of Highway 1 at this location. The four most important criteria used in determining the need for improvements include: (1) sight distance; (2) volume of traffic; (3) the expected number of turns per hour and (4) the speed of the roadway. This plan assumes the worst case; that all the above proposals will be required.

In an attempt to reduce highway traffic, each unit will have a designated bus stop on Highway 1 near the trailhead. To accommodate growth in recreation demand, the Bonny Doon and Laguna Creek Beach plans indicate where parking lots may be expanded in the future.

The proposed facilities will be vandal-resistant, particularly the entrance stations, vault toilets, dispensing and repository boxes, trash containers and signs.

A key aspect to the success of this plan is the sign program. All off-highway signs will have a consistent motif and minimal wording, exclusive of the interpretive signs. Following is a recommended sign schedule with options for the general information signs which will be located at the trailheads. The general information signs may, as an alternative, be posted on the entrance kiosks along with maps showing how to park in the parking lots (since none of the lots will be paved and striped) and how to reach the beaches from the parking areas. The recommended placement of the signs is indicated on Maps 7 through 11.

Overnight camping will only be permitted at Panther and Laguna Creek Beaches, the two most isolated beaches from Highway 1. Campers will be encouraged to use campstoves, and to leave the beaches without any trace of their overnight presence. Campfire grills are proposed at Davenport Landing Beach where there is a current and consistent demand by local residents for barbeque and bonfire facilities. No other picnic provisions are proposed at any of the beaches.

Habitat Enhancement Plan

The protection and enhancement of the natural resources is a critical component of the plan. The highest priorities are: (1) restoring native vegetation, especially coastal scrub and dune plant species; (2) protecting (or mitigating) rare plant and animal species and (3) preserving the habitat values of wetland areas, i.e. lagoons, marsh habitat and stream courses. The policies contained in the resource element are reflected in the following recommendations.

Before this habitat enhancement plan can be implemented, several tasks must first be accomplished. A more detailed analysis should be completed to determine precisely what land modifications or physical improvements are needed to enhance the wetland areas at the Scott Creek and Laguna Beach units, and how much acreage should be designated for the natural preserves. Specific proposals should be reviewed by the California Department of Fish and Game, and they should be given the opportunity to evaluate the importance of the wetland habitat at Laguna Creek, since this has not been done. Fee titles or easements to all affected private property must be obtained prior to the plan's implementation.

Restoration of Native Plant Species

Dune Habitat

Over three acres of coastal dune vegetation at Scott Creek Beach and one acre at Bonny Doon Beach will be reestablished (see Maps 7 and 9). The "straw planting method," a modification of broadcast seed and straw mulching, is recommended because of the ease of application, low cost, low maintenance, unnecessary irrigation and high establishment/survival rates. Bundles of straw are placed vertically into the sand at regular intervals, and the areas between the bundles seeded with a native seed mixture (Ferreira and Gray, 1987). Below is a list of plant species recommended for broadcast seeding.

	<u>SPECIES</u>	<u>% of SEED MIX</u>
Lizard tail	(<u>Eriophyllum</u> <u>staechadifolium</u>)	30
Beach bur	(<u>Franseria</u> <u>chamissonia</u>)	10
Sand verbena	(<u>Abronia</u> <u>latifolia</u>)	10
Beach pea	(<u>Lathyrus</u> <u>littoralis</u>)	5
Mock heather	(<u>Haplopappus</u> <u>ericoides</u>)	20
Coast buckwheat	(<u>Eriogonum</u> <u>latifolium</u>)	5
Saltbush	(<u>Atriplex</u> sp.)	5
Beach primrose	(<u>Camissonia</u> <u>cheiranthifolia</u>)	5
Live-forever	(<u>Dudleya</u> <u>caespitosa</u>)	5
Deerweed	(<u>Lotus</u> <u>scoparius</u>)	5
		<hr/> 100%

All seed will be collected from the North Coast area, preferably from the particular unit where it is found. This is a major cost of the revegetation project, since seed must be hand collected. Seed collection will be accomplished during the summer months, prior to the winter season of installation. Straw planting and seeding will be done from late September through December. Follow-up monitoring will occur in the following spring and summer and proceed for two seasons. Permanent photo stations and sampling transects will be established for this monitoring.

Nylon "snow fencing" will be erected around the periphery of the restoration areas at both units to restrict public access at least during the establishment period. At Scott Creek, wood bollards located near but set back from the highway shoulder will discourage access by motorized vehicles. Dune restoration efforts at Scott Creek Beach will include the removal of an expansive concrete slab which will result in the exposure of bare soil to the forces of wind and precipitation. Part of this area will have to be regraded so that it can be covered with sand and revegetated.

The eroded bluff around the west side of the dune will also be regraded. Jute netting or a similar erosion control fabric will be stapled in place and broadcast with native plant seed and straw mulch. Where hard subsoil or hard dirt road surfaces are revegetated, holes will be drilled with a jeep drill rig to a depth of three to five feet on 10-foot centers. These will be backfilled and hand seeded with native plant materials in slight depressions left one or two inches below grade, and mulched with chips.

Coastal Scrub Habitat

Much of the coastal scrub at Bonny Doon Beach also needs to be rehabilitated. On the parking lot side of the railroad berm, there are eleven eroded gullies that need check dams constructed for replanting; on the beach side there are six.

To construct the check dams, posts will be driven or pre-drilled into the slope. Heavy redwood or creosoted boards will be placed behind the posts to form stepped walls. The bottom of the uppermost check dam will be installed at the same level as the top of the lowermost check dam and backfilled with native material. Check dams will be of such height as to discourage climbing. On the beach side, backfilling may have to be accomplished manually.

The backfilled gullies will be seeded with native shrub species. Vines and thorny shrub types will be used to help hide the check dams and to further discourage access.

Revegetation with coastal scrub community plant species is also proposed at Yellowbank Beach where a secondary trail has developed, and at the two proposed parking lots at Scott Creek Beach.

The recommended plant species include the following:

Yellow bush lupine	(<u>Lupinus arboreus</u>)
Lizard tail	(<u>Eriophyllum staechadifolium</u>)
Coyote brush	(<u>Baccharis pilularis ssp. consanguinea</u>)
Blackberry	(<u>Rubus ursinus</u>)
California sage	(<u>Artemisia californica</u>)
Coffee berry	(<u>Rhamnus californica</u>)

Exotic Plant Species Control

Invasive exotic plant species will be removed. These include the hottentot fig/ice plant (Carpobrotus sp.), acacia (Acacia sp.), broom (Cytisus sp.), pampas grass (Cortaderia selloana) and German ivy (Senecio mikaniodes). Of particular concern is the hottentot fig in the dune habitat. Care must be taken during the removal to prevent unnecessary dune disturbance. Holes will be cut in the ground cover plant and seeded with native plants. Within two years, this process will be repeated. The other species will be removed on a periodic basis.

Rare Plant and Animal Habitat Protection

The plant species Michael's piperia (Piperia michaelii) and Blasdale's bent grass (Agrostis Blasdalei) are listed as rare by the California Native Plant Society. The first species was observed in the coastal bluff scrub habitat at Scott Creek, Yellowbank and Laguna Creek units; the latter at Laguna Creek Beach. While not currently acknowledged as rare by state or federal agencies, protection of the two plant species is warranted. The rare San Francisco tree lupine moth is dependent on the coastal scrub habitat.

At all the units except Scott Creek and Bonny Doon Beaches, access will not be fenced or otherwise physically restricted, but visitors will be directed along designated trails to avoid habitat degradation. If there is significant off-trail use following implementation of access trails, fencing and/or other barriers may need to be erected.

At Scott Creek Beach, a parking lot is proposed within the sensitive coastal bluff scrub where the rare Michael's piperia has been sighted. Measures to mitigate this impact will include the re-establishment of comparable habitat along the newly cut face of the parking lot and the protection of the remaining coastal bluff scrub habitat at this beach unit. Prior to construction of the parking lot, seed from Michael's piperia and associated plants from the community, as well as applicable topsoil, will be collected and stockpiled and used to revegetate the newly cut slope. The remaining habitat to the north of the parking lot will be closed to public access and designated as a mitigation area.

Several bird species observed and/or predicted at the units are recognized as special species of concern by federal and state agencies, including the peregrine falcon and the snowy plover. To protect the latter, it is recommended that use of the southern portion of Laguna Creek Beach and back dune area be closed to public use with signing and seasonal fencing from March 1 possibly through August. Dogs will not be permitted on the beach at any time of the year. The nesting activity will be monitored to document the effectiveness of use limitations and the success of nesting attempts. Monitoring is recommended from March 1 through June; if nesting activity is observed in late June, monitoring will continue until activity ends. The exact location of the fence will vary depending on the location of the nesting activity, as determined by the monitoring program.

The other birds of special concern utilize the cliffs and bluffs of the coast for breeding, nesting and foraging. Access to the bluff tops, as well as the base of the northernmost bluff at Scott Creek Beach, will be discouraged.

The tidewater goby, steelhead trout and coho salmon are fish species of special concern that exist at the Scott Creek, Bonny Doon and/or Laguna Creek units. The Scott Creek and Laguna Creek habitats will be enhanced and protected through the establishment of natural preserves, and the resource policies presented in the Resource Element. At Bonny Doon and Laguna Creek, rock debris and flashboard dam structures will be removed to promote steelhead migration and minimize poaching.

Natural Preserves

The wetland areas at the Scott Creek and Laguna Creek units are of exceptional wildlife value and are therefore recommended as natural preserves.

A preliminary evaluation suggests that approximately 35 acres at Scott Creek and 50 acres at Laguna Creek be established as preserves. These acreages may be altered, depending on a more thorough analysis of necessary hydrologic modifications, the desired extent of the upland buffer zone and the feasibility of acquiring the rights to or ownership of the affected property. The preserves will require few site improvements or alterations and no facilities other than interpretive signs at overlooks. No trails are planned through them, because of potential conflicts with surrounding agricultural use and disturbance of wildlife.

At Scott Creek, the northern levee will be cut to create a channel of flowing water into the marsh and lagoon area. This streambank modification will promote tidewater goby habitat, steelhead trout rearing habitat and wildlife habitat. Either a tidal gate will be installed to regulate flows into these areas, or the levee will be notched to permit the inflow of water at a controlled elevation. New levees may be needed to prevent the inundation of adjacent farmland; other levees may be opened to achieve the proper mix of various wetland habitats.

A flashboard dam structure will be removed at Laguna Creek to improve fish migration and re-establish the wetland area. Again, either a tidal gate will be placed in the existing levee or the levee will be cut so that water can flow into the marsh area to a specified depth of six to twelve inches.

In accordance with the natural resource management policies, artificial sandbar breaching will be prohibited, additional water diversions and requests for water rights will be challenged and public access will be discouraged.

Engineering Feasibility

No proposal in this plan presents an engineering difficulty. No new utilities are required, and all highway improvements, which will be designed by an engineering consultant or the Santa Cruz County Public Works Department, will be reviewed and approved by the California Department of Transportation through the encroachment permit process. Pacific, Gas and Electric will be responsible for relocating the utility poles at the Yellowbank Beach parking lot.

A geotechnical engineer will be consulted in the design of the beach stair structure at Bonny Doon Beach, and possibly for the other staircases.

Sequence of Actions

How this plan is implemented depends heavily on available funding. Ideally, improvements would be made concurrently at all the beaches, so that they could be managed and perceived by the public as one unit rather than as individual ones.

If the improvements are developed one beach at a time, and fees are charged, recreation use will shift to the remaining free beaches, intensifying current problems at these beaches and reducing revenue at the developed sites.

However, it is not economically feasible to simultaneously implement either all or some of the proposed improvements at every beach. A significant portion of the development costs involve highway improvements which must be completed prior to any improvements made for access and beach use. Revenue, needed to offset operating expenses, also requires a certain amount of development. For example, in order to initiate a fee collection system that depends on controlled parking lot access, turning lanes, guard rails, kiosks, gates and tire teeth must first be installed.

Priorities have therefore been established based on incremental funding. The recommended action sequence is as follows:

1. Bonny Doon--All Proposed Improvements (including habitat enhancement recommendations)
2. Scott Creek, As Proposed:
 - Highway Improvements
 - Parking Improvements--South End
 - Sanitation--South End
 - Signs--Appropriate to Phasing
 - Dune Restoration/Preservation
3. Yellowbank--All Proposed Improvements
4. Laguna Creek--All Proposed Improvements
5. Davenport Landing--All Proposed Improvements
6. Panther Beach--All Proposed Improvements
7. Scott Creek--Remaining Proposed Improvements

If a large proportion of the project can be funded during an initial phase, then an alternative plan of action may be to first acquire all land and easements and make all the highway improvements, followed later by parking, fee collection and sanitary facilities. All remaining improvements would subsequently be made.

The California Conservation Corps, California Youth Authority and Santa Cruz County Community Action Board are organizations that can be utilized as a relatively inexpensive means for some development and maintenance. These groups require different levels of technical supervision, but do similar work: trail development; seed collection; plant restoration; and simple construction. Excluding highway improvements, a large portion of the development could be accomplished through the labor provided by these organizations.

Unresolved Issues

At the time of this writing, negotiations with affected landowners to purchase or lease property on which development or public use will occur had just been initiated. While the County of Santa Cruz (who would pass along control to the Department) ascertains that it has prescriptive rights to the existing parking areas, trails and beaches, the plan proposes to expand several of the parking lots onto private property. The natural preserves and restoration areas also involve privately owned land. Until these can be acquired or leased, respective components of this plan cannot be implemented.

A number of management-related issues also remain unresolved. These are discussed in the *Cost/Revenue Analysis and Other Implementation Considerations*.

INTERPRETIVE ELEMENT

Through an increased understanding of the surrounding environment, the public's appreciation and enjoyment of the natural and cultural aspects of that environment are enhanced.

The emphasis at the North Coast beaches will be to obtain cooperation from the public to stay away from sensitive, important plant and wildlife habitat, rather than to encourage closer inspection. Restoration efforts and the need to protect plant communities will be explained. Observation points will be developed at Scott Creek and Laguna Creek to inform the public about those species which depend on the wetland habitats for their survival. Interpretive signs will be erected at these sites. Other strategically located signs will be used to explain the beach and coastal bluff habitats of waterfowl, shorebirds and seabirds, and their susceptibility to human intrusion. Rare, endangered and special species of animals and plants will be highlighted in the information.

A secondary theme will be related to safety and management. Visitors will be warned about unstable cliffs, toxic agricultural spraying, railroad hazards, rip currents, occasional high "set" waves, slippery rocks and even sharks. The location of the nearest emergency phones will be provided. Visitors will be encouraged to respect other users, adjacent property and natural/cultural resources. A "you carry-in, you carry-out" policy will be promoted to keep the beaches clean. Where campfires and camping are restricted, signs will explain the necessity for these policies. Laguna Creek and Panther Beach campers will be encouraged to adopt environmental camping practices to minimize the impacts of their activities.

Other potential themes are geologic history, archeological resources and marine life. Interpretive information should be coordinated with that already provided or proposed for Wilder Ranch State Park and other state beaches in the region to avoid duplication.

No interpretive facilities other than signs are proposed.

OPERATIONS ELEMENT

Currently there is no management at the North Coast beaches. There is no one to collect fees or garbage, provide general information, warn visitors of hazards, help save lives or assist the injured, enforce laws or maintain order. Natural resource degradation continues to worsen.

These conditions will be changed with adequate staff assigned to the management of these beaches. (Refer to Management Options, State Parks, for further detail.)

Staffing needs include two Ranger II supervisors, six Ranger I field operators, two lifeguards and one Maintenance Worker I, all of whom would double as peace officers, and one dispatcher clerk, a half-time office assistant, six seasonal lifeguards and many seasonal park aids to supplement the staff seven days a week June through September and on weekends during the remainder of the year (Department of Parks and Recreation).

Services performed by personnel will include collecting fees, picking up refuse and carrying it up to the trash dumpsters, maintaining facilities, repairing equipment, providing office field support, supervising public safety and performing cliff and aquatic rescues.

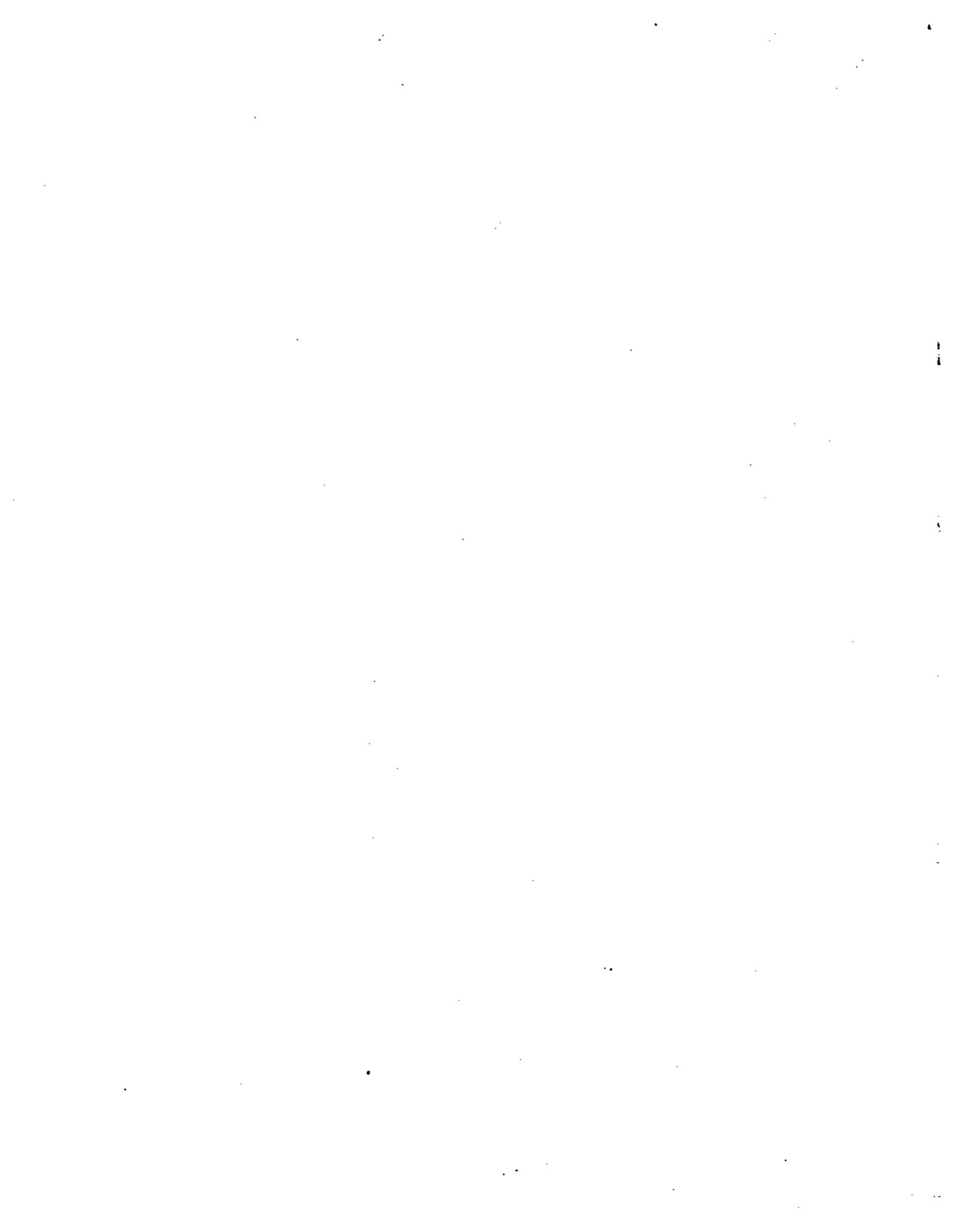
Natural resource management will also be an on-going function of the staff. (Specific monitoring needs are included in the cost estimates.) The interpretive program will not require additional personnel since the emphasis is on physical improvements rather than programs, and visitor use of the natural preserves will be limited to observation points.

Facilities will be selected for their vandal-resistant quality, but maintenance is expected to be relatively high because of reduced winter staffing and harsh climatic conditions.

Equipment needs will be extensive, particularly for communication, general public safety and aquatic safety equipment. A variety of vehicles will be necessary for emergency beach access, natural resource management, prisoner transport, first aid and rescue missions, mobile patrol and maintenance.

Some resource management and maintenance work may be provided by organizations such as the California Conservation Corps and California Youth Authority.

Appendix A



CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK	LAGUNA CREEK
* ACERACEAE							
<u>Acer negundo</u> ssp. <u>californicum</u>	Box Elder						X
* AIZOACEAE							
<u>Carpobrotus chilense</u>	Sea Fig	X	X	X	X	X	X
<u>Carpobrotus edule</u>	Hottentot Fig	X	X	X	X	X	X
<u>Tetragonia tetragonioides</u>	New Zealand Spinach						X
* AMARYLLIDACEAE							
<u>Triteleia laxa</u>	Ithuriel's Spear				X		
* AMYGDALACEAE							
<u>Osmaronia cerasiformis</u>	Oso Berry				X		X
* APIACEAE							
<u>Apiastrum angustifolium</u>	Mock Parsley						X
<u>Conium maculatum</u>	Poison Hemlock	X	X	X	X	X	X
<u>Daucus pusillus</u>	Rattlesnake Weed				X		X
<u>Foeniculum vulgare</u>	Sweet Fennel	X	X	X	X		X
<u>Sanicula crassicaulis</u>	Pacific Sanicle	X				X	X
<u>Erynium armatum</u>	Coyote Thistle						X
<u>Aralia californica</u>	Elk Clover						X
<u>Heracleum lanatum</u>	Cow Parsnip	X		X		X	X
* ANACARDIACEAE							
<u>Toxicodendron diversilobum</u>	Poison Oak	X		X	X	X	X
* ASTERACEAE							
<u>Artemesia douglasiana</u>	California Mugwort	X			X	X	X
<u>Artemesia californica</u>	California Sage	X		X	X	X	X
<u>Baccharis pilularis</u> ssp. <u>consanguinea</u>	Coyote Brush	X		X	X	X	X
<u>Cirsium vulgare</u>	Bull Thistle	X	X		X	X	X
<u>Picris echioides</u>	Bristly Ox-tongue		X		X	X	X
<u>Silybum marianum</u>	Milk Thistle		X	X	X	X	X
<u>Achillea millefolium</u>	Common Yarrow	X	X	X	X	X	X
<u>Ambrosia psilostachya</u>	Common Ragweed						X
<u>Aster chiliensis</u>	Common Aster	X				X	X
<u>Baeria chrysostoma</u>	Goldfields						X

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	VELT CUBBANK
<u>Baccharis douglasii</u>	Douglas' Baccharis	X			X	X
<u>Cardus sp.</u>	Italian Thistle	X			X	X
<u>Centaurium sp.</u>	Star Thistle		X			
<u>Cotula cornopifolia</u>	Brass Buttons	X	X			
<u>Cotula australis</u>	Australian Cotula					
<u>Conyza canadensis</u>	Horseweed					
<u>Eriophyllum staechadifolium</u>	Lizard Tail	X	X	X	X	X
<u>Erigeron glaucus</u>	Seaside Daisy	X	X	X	X	X
<u>Franseria chamissonia</u> ssp. <u>bipinnatisecta</u>	Beach-bur	X			X	X
<u>Grindelia latifolia</u>	Coastal Gum Plant			X	X	X
<u>Gnaphalium purpureum</u>	Purple Cudweed	X				
<u>Gnaphalium chilense</u>	Cotton-batting Plant	X		X	X	
<u>Gnaphalium ramosissimum</u>	Pink Everlasting	X				
<u>Gnaphalium californicum</u>	California Cudweed	X				
<u>Gnaphalium leuto-album</u>	Weedy Cudweed	X				
<u>Gnaphalium bicolor</u>	Bioletti's Sweet				X	
<u>Haplopappus ericoides</u>	Mock Heath	X				
<u>Hypochaeris sp.</u>	Cat's Ear	X				
<u>Jaumea carnosa</u>	Fleshy Jaumea					
<u>Madia capitata</u>	Headland Tarweed					
<u>Madia sp. va</u>	Coast Tarweed	X				
<u>Matricaria matricarioides</u>	Pineapple Weed	X			X	
<u>Senecio elegans</u>	Purple Ragwort				X	
<u>Senecio mikanioides</u>	German Ivy	X				
<u>Senecio minimus</u>	Coast Fireweed				X	
<u>Senecio vulgaris</u>	Common Groundsel	X			X	
<u>Solidago occidentalis</u>	Western Goldenrod	X				
<u>Sonchus oleraceus</u>	Common Sow Thistle	X			X	
<u>Wyethia angustifolia</u>	Narrow-leaved Mule Ear	X				
<u>Xanthium spinosum</u>	Spiny Clotbur					
* BETULACEAE						
<u>Alnus oregona</u>	Red Alder					
* BORAGINACEAE						
<u>Cryptantha leiocarpa</u>	Coast Cryptantha	X				
<u>Amsinckia spectabilis</u>	Fiddleneck	X			X	
* BRASSICACEAE						
<u>Brassica campestris</u>	Field Mustard	X	X		X	X
<u>Cakile maritima</u>	Sea Rocket	X			X	

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK	LAGUNA CREEK
<u>Capsella bursa-pastoris</u>	Shepard's Purse				X		X
<u>Cardamine oligosperma</u>	Bitter Cress	X			X		X
<u>Lobularia maritima</u>	Sweet Alyssum	X	X		X	X	X
<u>Nasturtium officinale</u>	Water-cress	X			X		X
<u>Raphanus sativus</u>	Wild Radish	X	X	X	X	X	X
<u>Sisymbrium sp.</u>	Hedge Mustard	X					
<u>Thelypodium lasiophyllum</u> <u>sp. inalienum</u>	Thelypodium				X	X	X
* CALLITRICHACEAE							
<u>Callitriche marginata</u>	Water Starwort						X
* CAPRIFOLIACEAE							
<u>Sambucus callicarpa</u>	Red Elderberry	X			X		X
* CARYOPHYLLACEAE							
<u>Spergularia macrotheca</u>	Large-flower Sand Spurry	X			X	X	X
<u>Cerastium viscosum</u>	Mouse-ear Chickweed				X		X
<u>Sagina occidentalis</u>	Western Pearlwort	X					X
<u>Stellaria media</u>	Common Chickweed				X		X
* CHENOPODIACEAE							
<u>Atriplex patula</u>	Fat Hen						X
<u>Atriplex californica</u>	California Saltbush						X
<u>Chenopodium sp.</u>	Goosefoot						X
<u>Chenopodium album</u>	Lamb's Quarter				X		X
<u>Salicornia virginica</u>	Pickleweed						X
* CONVALLARIACEAE							
<u>Smilacina racemosa</u>	Fat Solomon's Seal						X
<u>Smilacina stellata</u>	Slim Solomon's Seal						X
* CONVOLVULACEAE							
<u>Convolvulus occidentalis</u>	Western Morning Glory				X	X	X
* CORNACEAE							
<u>Cornus californica</u>	Creek Dogwood						X

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELBUMBANK
* CRASSULACEAE						
<u>Dudleya caepitosa</u>	Live-forever	X		X	X	X
<u>Tillea erecta</u>	Sand Pigmyweed					
* CUCURBITACEAE						
<u>Marah fabaceus</u>	Wild Cucumber	X			X	
* CYPERACEAE						
<u>Carex brevicaulis</u>	Short-stemmed Sedge	X				
<u>Carex obnupta</u>	Slough Sedge					
<u>Cyperus eragrostis</u>	Umbrella Sedge				X	
<u>Scirpus cernuus</u>						
var. <u>californicus</u>	Low Club Rush	X				
<u>Scirpus americanus</u>	Three Square					
* EQUISETACEAE						
<u>Equisetum arvense</u>	Common Horsetail	X				
<u>Equisetum telmateia</u>	Giant Horsetail					
* ERICACEAE						
<u>Arbutus menziesii</u>	Pacific Madrone					
* EUPHORBIACEAE						
<u>Euphorbia pepus</u>	Petty Spurge				X	
<u>Euphorbia lathyris</u>	Gopher Plant					
* FABACEAE						
<u>Cytisus monspessulanus</u>	French Broom					
<u>Lathyrus littoralis</u>	Silky Beach Pea					X
<u>Lathyrus vestitus</u>	Common Pacific Pea					X
<u>Lotus sp.</u>	Bird's Foot Trefoil	X				
<u>Lupinus arboreus</u>	Yellow Bush Lupine	X			X	X
<u>Lupinus bicolor</u>	Lindley's Annual Lupine					
<u>Lupinus varicolor</u>	Varicolored Lupine					
<u>Medicago polymorpha</u>	Bur Clover				X	
<u>Melilotus indicus</u>	Yellow Sweet Clover	X			X	
<u>Trifolium sp.</u>	Clover					
<u>Trifolium repens</u>	White Clover				X	

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK	LAGUNA CREEK
<u>Vicia angustifolia</u>	Smaller Common Vetch						X
<u>Vicia sativa</u>	Spring Vetch						X
<u>Vicia gigantea</u>	Giant Vetch				X		X
* FAGACEAE							
<u>Quercus agrifolia</u>	Coast Live Oak						X
* FUMARIACEAE							
<u>Eschscholzia californica</u>	California Poppy	X				X	X
* GERANIACEAE							
<u>Geranium dissectum</u>	Cut-leaved Geranium	X			X	X	X
<u>Erodium cicutarium</u>	Red-stemmed Filaree		X		X	X	X
<u>Erodium moschatum</u>	Musk Filaree				X		X
* GENTIANACEAE							
<u>Centaurium davyi</u>	Davy's Centaury						X
* GRAMINEAE							
<u>Agrostis densiflora</u>	Dense Bent Grass	X			X		X
<u>Agrostis Blasdalei</u>	Blasdale's Bent Grass						X
<u>Avena barbata</u>	Wild Oat	X	X	X	X	X	X
<u>Avena fatua</u>	Wild Oat				X		X
<u>Bromus mollis</u>	Soft Chess	X	X				X
<u>Bromus carinatus</u>	California Brome	X			X	X	X
<u>Bromus rigidus</u>	Ripgut Brome	X	X		X		X
<u>Bromus willdenowii</u>	Rescue Grass						X
<u>Cortaderia seloana</u>	Pampas Grass				X		X
<u>Deschampsia caespitosa</u> ssp. <u>holciformis</u>	California Hair Grass				X		X
<u>Distichlis spicata</u>	Salt Grass					X	X
<u>Elymus triticoides</u>	Alkali Rye Grass	X			X	X	X
<u>Elymus mollis</u>	American Dune Grass	X					X
<u>Elymus glaucus</u>	Western Rye Grass					X	X
<u>Hordeum brachyantherum</u>	Meadow Barley	X				X	X
<u>Hordeum leporinum</u>	Farmer's Foxtail			X	X	X	X
<u>Lolium perenne</u>	Italian Ryegrass			X			X
<u>Melica torreyana</u>	Torrey's Melica						X
<u>Poa sp.</u>	Bluegrass				X		X
<u>Polypogon monspeliensis</u>	Rabbitsfoot Grass	X			X	X	X

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK
<u>Parapholis incurva</u>	Sickle Grass				X	
<u>Paspalum dilatatum</u>	Dallis Grass					
<u>Vulpia myuros</u>	Rattail Fescue	X			X	
* GROSSULARIACEAE						
<u>Ribes sanguineum</u>	Flowering Currant					
<u>Ribes divaricata</u>	Straggly Gooseberry					X
* HIPPOCASTANACEAE						
<u>Aesculus californica</u>	California Buckeye					
* HYDROPHYLLACEAE						
<u>Nemophila penduculata</u>	Meadow Nemophila	X				
<u>Phacelia distans</u>	Common Phacelia	X				
<u>Phacelia malvaefolia</u>	Stinging Phacelia					X
* IRIDACEAE						
<u>Iris douglasiana</u>	Coast Iris	X				
<u>Sisyrinchium bellum</u>	Blue-eyed Grass	X				
* JUNCACEAE						
<u>Juncus effusus</u>	Bog Rush	X				
<u>Juncus phaeocephalus</u>	Rush	X				
<u>Juncus bufonius</u>	Toad Rush					
<u>Juncus leseurii</u>	Salt Rush					
<u>Juncus patens</u>	Common Rush	X			X	
<u>Juncus xiphioides</u>	Iris-leaved Rush					X
* LABIATAE						
<u>Marrubium vulgare</u>	Common Horehound					
<u>Stachys bullata</u>	Hedge Nettle	X			X	X
<u>Satureja douglasii</u>	Yerba Buena	X				
* LAURACEAE						
<u>Umbellularia californica</u>	California B.					

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK	LAGUNA CREEK
* LILIACEAE							
<u>Chlorogalum pomeridianum</u>	Soap Plant				X	X	X
<u>Fritillaria lanceolata</u>	Mission Bells				X		X
<u>Kniphofia uvaria</u>	Red Hot Poker	X					X
* LYTHRACEAE							
<u>Lythrum hyssopifolia</u>	Lythrum						X
* NYCTAGINACEAE							
<u>Abronia latifolia</u>	Yellow Sand Verbena	X			X		X
<u>Abronia umbellata</u>	Pink Sand Verbena						X
* MALVACEAE							
<u>Malva sp.</u>	Mallow	X	X		X	X	X
<u>Sidalcea sp.</u>	Checker Bloom	X			X	X	X
* MIMOSACEAE							
<u>Acacia decurrens</u>	Green Wattle						X
* ONAGRACEAE							
<u>Camissonia cheiranthifolia</u>	Beach Primrose	X			X		X
<u>Epilobium sp.</u>	Willow Herb	X			X		X
<u>Clarkia sp.</u>	Clarkia						X
<u>Zauschneria californica</u>	California Fuschia						X
* ORCHIDACEAE							
<u>Piperia michaelii</u>	Michael's Piperia	X				X	X
* OROBANCHACEAE							
<u>Orobanche grayana</u> var. <u>violacea</u>	Gray's Broomrape						X
* OXALIDACEAE							
<u>Oxalis pes-caprae</u>	Burmuda Buttercup				X		X

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK
* PINACEAE						
<u>Pinus radiata</u>	Monterey Pine	X				
* PLANTAGINACEAE						
<u>Plantago juncoides</u>	Seaside Plantain	X		X		X
<u>Plantago coronopus</u>	Cut-leaved Plantain	X			X	X
<u>Plantago lanceolata</u>	English Plantain		X		X	
* POLYGONACEAE						
<u>Eriogonum latifolium</u>	Buckwheat	X		X	X	X
<u>Polygonum sp.</u>	Knotweed	X				
<u>Polygonum punctatum</u>	Water Smartweed					
<u>Rumex acetosella</u>	Sheep Sorrel	X			X	
<u>Rumex crispus</u>	Curly Dock	X			X	X
<u>Rumex fenestratus</u>	Dock					
<u>Rumex conglomeratus</u>	Green Dock					
<u>Rumex crassus</u>	Dock	X				X
* PORTULACACEAE						
<u>Montia perfoliata</u>	Miner's Lettuce	X			X	
* PRIMULACEAE						
<u>Anagallis arvensis</u>	Scarlet Pimpernel	X			X	
* PTERIDACEAE						
<u>Dryopteris arguta</u>	Wood Fern	X			X	
<u>Polypodium californicum</u>	California Polypody					
<u>Polystichum munitum</u>	Sword Fern	X			X	
<u>Pteridium aquilinum</u>	Bracken Fern	X				
* PLUMBAGINACEAE						
<u>Armeria maritima</u> var. <u>californica</u>	Sea Pink					X
* RANUNCULACEAE						
<u>Delphinium californicum</u>	Coast Larkspur	X				
<u>Ranunculus californica</u>	Buttercup	X			X	

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK	LAGUNA CREEK
* RHAMNACEAE							
<u>Rhamnus californica</u>	Coffee Berry	X			X		X
* ROSACEAE							
<u>Alchemilla occidentalis</u>	Dew Cup						X
<u>Fragaria chiloensis</u>	Beach Strawberry	X			X	X	X
<u>Potentilla sp.</u>	Pacific Silverweed	X					X
<u>Rubus ursinus</u>	Blackberry	X	X	X	X	X	X
<u>Rosa californica</u>	Wild Rose						X
* RUBIACEAE							
<u>Galium nuttallii</u>	Climbing Bedstraw				X	X	X
<u>Galium californicum</u>	California Bedstraw				X		X
<u>Galium aparine</u>	Cleavers	X			X		X
* SALICACEAE							
<u>Salix lasiolepis</u>	Arroyo Willow	X			X		X
<u>Salix lasiandra</u>	Yellow Willow						X
* SCROPHULARIACEAE							
<u>Castilleja latifolia</u>	Seaside Paintbrush	X			X		X
<u>Diplacus aurantiacus</u>	Sticky Monkey Flower						X
<u>Mimulus guttatus</u> ssp. <u>littoralis</u>	Coastal Monkey Flower	X	X			X	X
<u>Orthocarpus faucibarbatu</u> var. <u>albidus</u>	Smooth Orthocarpus						X
<u>Orthocarpus purpurascens</u> ssp. <u>latifolius</u>	Owls' Clover						X
<u>Scrophularia californica</u>	California Bee Plant	X			X		X
<u>Veronica persica</u>	Persian Speedwell				X		X
* SOLANACEAE							
<u>Solanum douglasii</u>	Douglas' Nightshade					X	X
* TYPHACEAE							
<u>Typha latifolia</u>	Cat-tail	X					X

CHECKLIST OF VASCULAR PLANTS OF NORTH COAST BEACHES

SPECIES	COMMON NAME	SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELI OUBANK
* URTICACEAE <u>Hesperocnide tenella</u>	Western Nettle				X	X
* VERBENACEAE <u>Verbena lasiostachys</u>	Vervain					

COST/REVENUE ANALYSIS AND OTHER IMPLEMENTATION CONSIDERATIONS

This section of the General Plan is included to provide the level of detail necessary in soliciting funding for the physical improvements and to assist the County of Santa Cruz in deciding the best course of action for management. It would not be incorporated in the final State Parks and Recreation General Plan.

Probable Cost Estimate for Development

The following probable cost estimates for developing the six units, (Tables 7 through 12) based on 1987 dollars and reflecting in-place costs at union wages, is approximately \$1,508,283, including contingency costs of approximately 15 percent and design and engineering costs of about 10 percent. With easement/in fee costs, which are unknown at this time, the overall development cost will likely be just under two million dollars.

This estimate represents a worse case scenario in that it assumes that all highway improvements will be required by the California Department of Transportation and that no free or cheap labor would be available. The California Department of Transportation is not likely to require all the proposed turning and deceleration lanes. Considerable cost savings would be achieved with the elimination or reduction in length of any of these highway improvements.

Well over \$100,000 could be saved if organizations like the California Conservation Corps, California Youth Authority and the Santa Cruz County Community Action Board were involved in the construction of access structures and natural resource restoration.

Furthermore, the estimate includes the relocation of existing electrical poles at the Yellowbank Beach parking lot. Pacific, Gas and Electric Company is currently evaluating this proposal and determining whether or not they will assume the costs of moving them. The project costs can be reduced another \$40,000 if they do.

Additional savings, although minor in comparison, would result if less vandal-resistant materials and construction methods were used. There are also cheaper but less effective and higher

TABLE 7

Scott Creek Beach Development Costs*

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements				
12' wide turning lane, 600 L.F.	1	L.S.	\$100,000.00	\$100,000
8' wide shoulder, 400 L.F. (inc. grading, striping, and traffic control)	1	L.S.	40,000.00	40,000
Parking - South end				
On-site cut-and-fill, fine grading		L.S.		25,000
Revegetation w/ jute mesh		L.S.		7,500
Gate	1	Each	1,800.00	1,800
Tire teeth	1	L.S.		1,000
Dispensing and repository boxes	1	Set	300.00	300
Entrance station	1	Each	8,500.00	8,500
Access				
Pedestrian bridge (8' wide x 100' long w/ concrete piers)		L.S.		35,000
Semi-portable log bridge	Allowance			5,000
Sanitation				
Trash cans (chained to posts set in conc.)	2	Pair	250.00	500
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Signs				
Highway	13	Each	50.00	650
Off highway	13**	Each	300.00	3,900
Dune Restoration/Preservation				
Removal of concrete slabs		L.S.		15,000
Erosion control and seeding (pad area and gullies)		L.S.		10,000
Site preparation, seed collection and application	3	Acre	1,400.00	4,600
Nylon fencing	1,700	L.F.	2.00	3,400
Wood Bollards (800 L.F., 5' O.C.)	160	Each	12.00	1,920
Exotic plant removal (annually for 5 years)		L.S.		8,750
Monitoring every 6 months (photo stations)		L.S.		2,100
Wetland preserve-cut channel and levee	Allowance			1,000
				\$303,402
15% contingency and 10% for design and engineering				75,855
			Total	\$379,257

* If and when the northern parking lot and the accompanying improvements are made, an additional cost of \$64,000.00 (including contingency and design costs) will be incurred.

** Three of the signs at the north end will be installed when other improvements are made.

TABLE 8**Davenport Landing Beach Development Costs**

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements				
None				
Parking				
Grading of shoulder (including fill)		L.S.		\$ 7,500
Dispensing and repository boxes	1	Set	300.00	300
Access				
8' wide, 200' long paved trail (including fill)		L.S.		2,500
Sanitation				
Trash cans (chained to posts set in conc.)	1	Pair	250.00	250
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Signs				
Highway	8	Each	50.00	400
Off highway	5	Each	300.00	1,500
Native Vegetative screen (5 gal. shrubs)	15	Each	35.00	525
Fire rings	5	Each	200.00	1,000
				<u>\$41,475</u>
15% contingency and 10% for design and engineering				<u>10,369</u>
				Total \$ 51,844

TABLE 9

Panther Beach Development Costs

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements				
Guard rail	600	L.F.	\$ 15.00	\$ 9,000
Parking				
Dispensing and repository boxes	1	Set	300.00	300
Access				
Concrete 5' wide stairs with pipe handrail		L.S.		40,000
Sanitation				
Trash cans (chained to posts set in conc.)	1	Pair	250.00	250
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Signs				
Highway	1	Each	50.00	50
Off highway	6	Each	300.00	<u>1,800</u>
				<u>\$78,900</u>
15% contingency and 10% for design and engineering				<u><u>19,725</u></u>
				Total \$98,625

TABLE 10

Bonny Doon Beach Development Costs

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements*				
12' wide turning lane, 600 L.F.	1	L.S.	\$ 100,000.00	\$ 100,000
8' wide shoulder, 400 L.F.	1	L.S.	40,000.00	40,000
Guard rail	800	L.F.	15.00	12,500
Culvert Extension	20	L.F.	80.00	1,600
Off-site fill and shaping	5,000	CY	6.00	30,000
On-site cut-and-fill	3,000	CY	3.00	9,000
Parking				
On-site cut-and-fill	1000	CY	3.00	3,000
Gate	1	Each	1,800.00	1,800
Dispensing and repository boxes	1	Set	300.00	300
Entrance Station		Each	8,500.00	8,500
Tire teeth		L.S.		1,000
Access				
Concrete stairs with pipe handrail (parking lot)	2	L.S.		20,000
P.T. wood stairs with pipe handrail on concrete piers (beach)		L.S.		50,000
Sanitation				
Trash cans (chained to posts set in conc.)	3	Pair	250.00	750
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Beach clean-up	Allowance			15,000
Signs				
Highway	9	Each	50.00	450
Off highway	9	Each	300.00	2,700
Dune and coastal scrub restoration/ preservation				
Site preparation, seed collection and jute mesh	2	Acre	6,000.00	12,000
Check dams, back-fill and seeding	Allowance			24,000
Nylon fencing	1,400	L.F.	2.00	2,800
Fishery enhancement				
Removal of flashboard dam and rock debris	Allowance			750
				\$363,650
15% contingency and 10% for design and engineering				<u>90,913</u>
Total				\$454,563

* This estimate assumes that CalTrans will absorb the cost of the turning lane onto Bonny Doon Road for southbound traffic.

TABLE 11

Yellowbank Beach Development Costs

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements				
8' wide shoulder, 400 L.F. (including grading, striping, and traffic control)	2	L.S.	\$ 40,000.00	\$ 80,000
Parking				
Grading	46,200	S.F.	0.15	6,930
Gravel	46,200	S.F.	0.50	23,100
Gate	1	Each	1,800.00	3,600
Tire teeth		L.S.		1,000
Guard rail	400	L.F.	15.00	6,000
Dispensing and repository boxes	1	Set	300.00	300
Entrance Station	1	Each	8,500.00	8,500
Relocation of 4 electrical poles	Allowance			40,000
Access				
Concrete stairs with pipe handrail		L.S.		20,000
Sanitation				
Trash cans (chained to posts set in conc.)	1	Pair	250.00	250
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Beach clean-up	Allowance			12,500
Signs				
Highway	2	Each	50.00	100
Off highway	3	Each	300.00	900
Coastal scrub revegetation	Allowance			500
				<u>\$231,180</u>
15% contingency and 10% for design and engineering				<u>57,795</u>
		Total		\$288,975

TABLE 12

Laguna Creek Beach Development Costs

Item Description	Quantity	Unit	Unit Price	Total
Highway 1 Improvements				
8' wide shoulder, 400 L.F. (including grading, striping and traffic control)	2	L.S.	\$ 40,000.00	\$ 80,000
Guard rail	280	L.F.	15.00	4,200
Culvert extension	20	L.F.	80.00	1,600
Off-site fill and shaping	2,300	C.Y.	6.00	13,800
On-site cut-and-fill (including parking area)	8,000	C.Y.	3.00	24,000
Parking				
Gate	1	Each	1,800.00	1,800
Dispensing and repository boxes	1	Set	300.00	300
Entrance Station	1	Each	8,500.00	8,500
Tire teeth		L.S.		1,000
Access				
Clear and grade	Allowance			2,500
Concrete stair with pipe handrail		L.S.		10,000
Trail barriers	2	L.S.		350
Sanitation				
Trash cans (chained to posts set in conc.)	2	Pair	250.00	500
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Signs				
Highway	7	Each	50.00	350
Off-Highway	6	Each	300.00	1,800
Marsh/snowy plover preservation				
Removal of flashboard dam structure		L.S.		5,000
Levee Modification		L.S.		500
Nylon fencing	1,000	L.F.	2.00	2,000
Monitoring of nesting activity		L.S.		2,300
				<u>\$188,000</u>
15% contingency and 10% for design and engineering				<u>47,000</u>
		Total		<u>\$235,000</u>

maintenance stair types. If a management system is selected that depends solely on the dispensing and repository boxes, then the costs of the entrance stations, as well as the costs to operate them, can be omitted.

The development costs include the provision of entrance stations at four of the units: Scott Creek, Bonny Doon, Yellowbank and Laguna Creek. Two of the three management options require that these be constructed and manned, and one of the two revenue scenarios also depends on the use of these kiosks.

Funding Options

Several different avenues for funding the development at the North Coast beaches have been explored. The two most likely sources are the California Department of Parks and Recreation and the California Coastal Conservancy. The first depends on funding that is budgeted annually by the State Legislature. The source of this funding in the near future will be the 1988 citizen-initiated Parks and Recreation Bond Act, if it is approved by California voters during the primary election. The California Coastal Conservancy also relies upon Bond Act monies, but project funding under this alternative is more direct. The 1988 Bond Act, if approved, further provides a one million dollar grant to Santa Cruz County to acquire conservation easements on coastal terraces north of the Santa Cruz city limits. The California Department of Transportation may also be a potential source of revenue.

In light of the fact that existing units like Wilder Ranch State Park are having to compete with other projects of higher priority for limited state funding, it is not likely that the North Coast units would be allocated development monies in the near future, or in any significant quantity.

Funding can be sought more readily from the California Coastal Conservancy. Small amounts currently exist under the Enhancement Program for natural resource restoration and the establishment of preserves. If the 1988 Bond Act passes, a more significant amount of funds in the range of \$250,000 to \$500,000 will be annually available as of July 1, 1988 for developing access improvements under the Coastal Access Program.

In order to obtain these funds, the managing agency must own or have easements to the land upon which development will occur. California Coastal Conservancy money can be used to acquire land and leases for the purpose of preserving important wildlife habitat, but only with a long-term commitment by a responsible agency or non-profit organization to manage the preserve. The Department of Fish and Game would support a formal reserve status for the Scott Creek and Laguna Creek wetlands, but it has little manpower to manage them.

The wetland at Scott Creek is designated as a high acquisition priority of the Wildlife Conservation Board, but acquisition has not been successfully negotiated with the landowner. However, the landowner may be willing to provide temporary easements for making necessary land modifications and a permanent conservation easement to the Department of Fish and Game for overseeing management. The Laguna Creek wetland will be evaluated by the Department of Fish and Game for management and acquisition priority rating. Acquisition by the Wildlife Conservation Board is improbable, however, because it is already currently protected by zoning restrictions and remains undevelopable due to existing flood potential.

With the preparation of this plan, discussions with the affected landowners should be pursued with the goal of obtaining legal control (permanent or temporary) over all land to be developed or otherwise modified.

Management Options

The County of Santa Cruz approached this project with the ultimate goal of having the California Department of Parks and Recreation assume management of the beach units. This plan responds in format and content to that strategy. However, there are other alternatives, including management by its own Department of Parks, Open Space and Cultural Services and by a private management company.

The following scenarios are founded on typical 1987 salaries, and are designed to reflect the level of management required for all six of the beaches.

County Management

The annual operating expense scenario shown in Table 13 represents a staffing level that is the most realistic. It assumes that a minimum number of personnel would be made available to manage the beaches and therefore a self-pay fee system would be employed rather than hiring fee collectors. While this helps keep the number of employees down, it also means that only 40 to 60 percent of the potential revenue can be collected (communication with Department personnel).

It should be noted that county staff can be readily trained and certified as peace officers which permits them to issue parking citations and make arrests. The staffing does not, however, include the provision for any lifeguards. Signs would be posted warning visitors about shoreline and aquatic hazards.

In the event that seasonal lifeguards were to be added and posted at each beach, the associated costs are likely to be about \$145,000.00.

For the county to manage any one beach, the operating expenses would be approximately 40 percent, or about \$90,000.00 of the total shown in the table because of less efficiency and equipment needs. This assumes that two permanent maintenance workers and one seasonal employee would be needed.

Private Sector Management

If management responsibilities were given to the private sector, fees could be collected in either of two manners: (1) similar to county management, a self-pay fee system could be used; or, (2) entrance stations could be manned by fee collectors. The latter is preferred by the private sector because of the greater control over revenue collection.

The scenario shown in Table 14 represents ideal staffing, which translates into optimum management. It should be realized that upon implementation, this option has the flexibility of having the staff tightened should it become necessary to be more economically efficient.

TABLE 13

**Annual Operating Expenses
County of Santa Cruz**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing</u>		<u>Total</u>
		<u>March-October</u>	<u>November-February</u>	
Supervisor	\$24,500	(1) \$16,415	(1) \$ 8,085	\$24,500
Maintenance Worker	\$21,000	(3) 42,210	(3) 20,790	63,000
Seasonal Field Crew	13,500	(2) 18,090		<u>18,090</u>
Total Labor				\$105,590
Labor Overhead (32% for permanent employees, plus \$10,000 for seasonal ones)				43,789
Equipment Amortized Over 10-Year Period*				27,000
General County Overhead (35% of Total Labor and Equipment Costs)				46,407
Sanitary Services**				<u>40,000</u>
Total				\$262,786

* 3-4 vehicles, radio equipment, tools, uniforms, etc.

** Garbage collection and vault toilet pumping by private contractors

TABLE 14

**Annual Operating Expenses
Private Sector**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing</u>		<u>Total</u>
		<u>March-October</u>	<u>November-February</u>	
Manager	\$25,000	(25) \$4,188	(5) \$2,063	\$6,251
Supervisor	20,000	(1) 13,400	(1) 6,600	20,000
Field Crew	18,000	(4) 48,240	(4) 23,760	72,000
Seasonal Field Crew	12,500	(10) 83,616		<u>83,616</u>
Total Labor				\$181,867
Labor Overhead (30%)				54,560
Company Overhead (5%)				9,093
Equipment Amortized Over 10-Year Period*				15,000
Subtotal				<u>260,520</u>
Profit (20%)				52,104
Sanitary Services**				40,000
Total				\$352,624
County Contract Administration (10% of Total)				35,000
Total				\$387,624

* 1-2 vehicles, radio equipment, tools, uniforms, etc.

** Garbage collection and vault toilet pumping by private contractors

Similar to the county management option, this scenario does not include anyone qualified as a lifeguard. As in the case of the county management option, seasonal lifeguard costs would increase the operating expenses by another \$145,000.00. With the approval of a Board of Supervisors' resolution, staff could be trained and certified as and given the authority of peace officers (communication with Robert Wandruff, County Clerk Court Administrator).

If the private sector were to manage only one of the beaches, the operating expenses would be approximately 35 percent, or about \$123,000.00 of the total. This percentage is slightly lower than that for county management. The projection includes a manager and two permanent and two seasonal field crew employees.

State Parks Management

Of the three management options, the Department would have the highest annual operating expense. This is due in part to the large staff which includes lifeguards. Because the legal system has not consistently recognized warning signs as a sufficient aquatic safety measure, and also because of pending law suits involving liability responsibility for drownings, the Department is not likely to assume management of the units without the provision of both seasonal and permanent lifeguards. The number of lifeguards indicated in Table 15 is not necessarily ideal; some proponents of aquatic safety would argue that at least one lifeguard per beach should always be on duty, even during the winter, because of surfing activity.

Another factor attributable to the high cost of management by the state is equipment. A large portion of the equipment is needed for public safety and aquatic rescues. Four types of vehicles, fully equipped with mobile radio transceivers, light chargers, sirens, etc. would be required as well as a rescue boat with an engine and trailer, rescue surfboards, wet suits and other equipment. The Department prefers that the entrance stations have telephones; however, telephone extension and connection costs have not been included in the development cost estimate. An alternative consideration is providing radio equipment at the entrance stations that would be accessible to the public. Another ideal facility that should be further considered, but which is not in the cost estimate, is a headquarters operation office/maintenance area.

TABLE 15

**Annual Operating Expenses
Department of Parks and Recreation**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing</u>		<u>October-May</u>	<u>Total</u>
		<u>June-September</u>			
Supervisor/Peace Officer	\$ 27,500	(2)	\$ 18,150	(2) \$ 36,850	\$ 55,000
Field Crew/Peace Officer	26,500	(6)	52,470	(6) 106,530	159,000
Lifeguard/Peace Officer	24,000	(2)	15,840	(2) 32,160	48,000
Maintenance Worker	21,000	(1)	6,930	(1) 14,070	21,000
Dispatcher Clerk	19,000	(1)	6,270	(1) 12,730	19,000
Office Assistant	15,000	(5)	2,475	(5) 5,025	7,500
Seasonal Lifeguard	18,000	(6)	111,434*		111,434
Seasonal Field Crew	13,000	(11)	78,019*		<u>78,019</u>
Total					\$428,953
Labor Overhead (30%)					128,686
Equipment Amortized Over 10-Year Period**					30,000
Sanitary Services***					<u>40,000</u>
Total					\$627,639

- * Actually includes coverage for seven days a week during this period as well as for weekends throughout the remainder of the year for a total of 189 days.
- ** 12 vehicles (4-wheel drives, all terrain, compact sedans and pick-up trucks), intertidal Zodiac rescue boat, radio equipment, tools, uniforms, etc.
- *** Garbage collection and vault toilet pumping by private contractors.

Potential Revenue Scenarios

The two potential revenue scenarios presented in Tables 16 and 17 are estimates of the amounts of revenue that could be generated from all six beaches, once full development and management is in place. Under scenario 1, fee collectors would be stationed at Scott Creek, Bonny Doon, Yellowbank and Laguna Creek Beaches. Visitors would be responsible for depositing their fees in boxes at the two remaining beaches. In the second scenario, there would be no manned entrance stations; visitors would deposit their fees at all six beaches.

The number of parked vehicles at one time (column two of Table 16) reflects a percentage (shown in parentheses) of the available number of parking spaces that would be filled during various days of the year. These percentages are based on visitor use patterns at state beaches located in San Mateo County that have similarly sized parking lots and similar facilities. The turnover rates are also founded on existing use patterns. The scenarios assume a \$3.00 charge per vehicle typical of some nearby state beaches. This fee is the amount required to off-set the operating expenses under the best management option.

In addition to revenue that may be collected in fees, revenue may be generated by issuing parking citations to vehicles parked along Highway 1 and other roads where parking will be prohibited and signed accordingly. (During holidays and at other times when the parking lots fill, highway parking may have to be tolerated.) At Davenport Landing and Panther Beach, where there are no proposed manned parking lots, self-paid revenue would be supplemented by fines collected for those vehicles for which fees have not been paid. This combined amount from parking fines is treated as a separate line item in the tables, as it is difficult to determine how many tickets would may be issued during the course of a year, and because the amount will decrease over time as repeat visitors learn the consequences of not paying fees and parking illegally under the proposed management.

The first scenario estimate combines the number of parking violations that would be made near the beaches along Highway 1, Bonny Doon Road and Laguna Creek Road on weekend days during the peak use season with the fines for unpaid fees at the Panther Beach parking lot and along the Old Coast Road at Davenport Landing Beach. A small amount of potential revenue for citations issued during peak season weekdays is included in the estimate. No parking fine

revenue was estimated for the winter season due to low, transient use and the lack of manpower for regular patrolling. The estimate was further adjusted to account for uncollectable citations.

This level of parking fine revenue can only be achieved through regular patrolling, preferably several times a day, during the peak use season. Of the three management options, the private sector has the greatest incentive to ensure compliance with parking and fee regulations.

Experience at nearby state beaches demonstrates that the fee revenue of unmanned parking lots that rely on a self-pay fee system is typically 40 to 60 percent less than at manned ones, because of unregular, more infrequent patrolling and less emphasis on enforcing fee payment regulations. If entrance stations are not provided for the manual collection of fees, then the revenue scenario will be more like that shown in Table 17.

One might expect the parking fine estimate to be larger for the second scenario; if no one is present to request fee payment then visitors are more likely to avoid making that payment, subjecting themselves to possible fines. However, it is assumed that the management staff will be at a minimum and unable to check for fee compliance as frequently as a fully staffed operation. Therefore, the collection of only about half the parking fine revenue can actually be expected.

Revenue - Greyhound Rock

Greyhound Rock, located approximately 3-1/2 miles north of Scott Creek Beach, is owned by the Department of Fish and Game. It is undergoing redevelopment and will soon be managed by the County of Santa Cruz. Revenue from Greyhound Rock would go into the Santa Cruz County General Fund, but could be made eligible to financially support overall North Coast management.

Table 18 presents an estimate of revenue that could be generated at Greyhound Rock from day and overnight use. Again, the figures are based on use patterns at comparable state beach units in San Mateo County.

The estimate borrows the methodology used to project revenue in Scenario 1 to reach a figure that assumes minimum management: no manned entrance stations and no regular patrolling to

TABLE 18

Potential Revenue--Greyhound Rock

**Day Use Revenue (206 Parking Spaces)
Manned Kiosk for 8 Months**

<u>Season/Day of Week</u>	<u># of Vehicles at one time</u>	<u>Turnover Rate</u>	<u># Vehicles</u>	<u>\$/Day</u>	<u>Total</u>	
Peak Use--Holiday	160 (78%)	3.0	480	\$3.00	1,440	\$12,960
Peak Use--Weekend	136 (66%)	2.0	272	\$3.00	816	52,224
Peak Use--Weekday	53 (26%)	1.5	80	\$3.00	239	41,108
Winter--Any	40 (19%)	2.0	80	\$1.50	120	14,280
Subtotal						<u>\$120,572</u>

**(RV) Overnight Revenue (25 Parking Spaces)
Manned Kiosks for 8 Months**

<u>Season/Day of Week</u>	<u># of Vehicles at one time</u>	<u>Turnover Rate</u>	<u>Fee</u>	<u>\$/Day</u>	<u>Total</u>
Peak Use--Holiday	19.5 (78%)	1.0	\$6.00	117	1,053
Peak Use--Weekend	16.5 (66%)	1.0	\$6.00	99	6,336
Peak Use--Weekday	6.5 (26%)	1.0	\$6.00	39	6,708
Winter--Any	4.75 (19%)	1.0	\$3.00	14	1,666
Subtotal					<u>\$15,763</u>

Day Revenue (with manned kiosk for 8 months)	120,572
Overnight Revenue (with manned kiosk for 8 months)	15,763
Subtotal	<u>\$136,335</u>
Less 25% use than comparable	-34,084
Subtotal	<u>102,251</u>
Less 50% of peak season day & overnight use without manned entrance station	-60,195
Subtotal	<u>42,056</u>
Less 30% for management costs	-12,617
Total	<u>\$29,439</u>

issue citations for unpaid fees. Expanding the proposed management plan to include this unit would not significantly increase the operating expenses of the other six units, but there would be costs associated with garbage and sanitary maintenance and possibly aquatic safety services. It is assumed that Greyhound Rock would receive less use than a comparable unit like San Gregorio State Beach in San Mateo County because it is less visible from Highway 1 and has more difficult trail access due to the steep terrain.

Other Variables

There are other variables that may influence these revenue figures both positively and negatively. Because it is difficult to assess how much variation may occur, they have not been quantified, but are presented here for consideration:

Higher Revenue

1. Visitor attendance records and fees at state beach units along the San Mateo County coastline were used to assist this analysis. Due to better weather conditions along the Santa Cruz County coastline, these figures may be conservative.
2. This analysis does not take into account revenue that could be charged in addition to the day use fees for overnight use and for dogs.
3. Additional revenue could also be generated by designating one beach as "clothing optional" and charging \$4.00 rather than \$3.00 for day use.
4. Overall use of the beaches will increase with population growth, particularly that of the South Bay Area.
5. Attendance often rebuilds once good visitor facilities, better law enforcement, etc. are in place.

Lower Revenue

1. If seasonal passes are sold to county residents for \$40.00, as the state now offers at some units, the total amount of revenue could be lowered by as much as 30 or 40 percent. A higher priced resident pass should be considered.
2. Parking fine revenue may decrease over time.

Revenue by Beach

Table 19 indicates how much revenue would be generated with and without manned entrance stations at each of the beach units (excluding Greyhound Rock). These figures are proportional to the number of proposed parking spaces. However, other variables must be considered. For example, the figure shown for Bonny Doon Beach, the most popular of the six beaches, is probably on the low end. In contrast, at Scott Creek Beach, actual revenue will probably be less than that projected because the design capacity of the parking lots exceed existing demand and substantial changes in current parking patterns are proposed.

TABLE 19
Potential Revenue - Each Beach

<u>Name of Beach</u>	<u>Number of Proposed Parking Spaces</u>	<u>Scenario 1</u>	<u>Scenario 2</u>
Scott Creek	110	\$106,443	\$58,152
Davenport Landing	90	87,088	47,579
Panther	30	29,030	15,860
Bonny Doon	80	77,413	42,292
Yellowbank	80	77,413	42,292
Laguna Creek	60	58,060	31,719
Total	450	\$435,447	\$237,894

Operating Expense/Revenue Summary

The following table compares the operating expenses of the three management options with the two potential revenue scenarios. The revenue figure for State Parks does not include Greyhound Rock revenue since the assumption is that the county will manage this unit with minimal staff. If Greyhound Rock were to be managed by the Department, lifeguards would probably be required, in which case all revenue would essentially be cancelled out by the costs of providing this kind of supervision.

The function of Table 20 is to permit a comparison between the operating costs and the potential revenue that would be collected under each management option, rather than between the management options themselves, each of which is defined by a different set of service/liability parameters. As can be seen in the table, both the county and the private sector could economically manage the six beaches, although the "profit margin" is greater for the latter. Furthermore, the private sector can absorb the cost of seasonal lifeguards at several of the beaches and provide a higher management profile than the county. In contrast, the state's annual operating expenses would far exceed the revenue that would be generated. This situation could be alleviated if the Department were willing to either keep the number of lifeguards to a minimum, or eliminate the permanent lifeguard positions and add a few more seasonal ones.

TABLE 20
Operating Cost/Revenue Analysis

<u>Management Options</u>	<u>Scenario 1</u>	<u>Potential Revenue</u> <u>Scenario 2</u>	<u>Expenses</u>	<u>Difference</u>
County		\$267,333	\$262,786	\$ 4,547
Private Sector	\$464,886		\$387,624	\$ 77,262
State Parks	\$435,447		\$627,639	<\$192,192>

Law Enforcement

Presently neither the California Highway Patrol or the County Sheriff's Office has the manpower to regularly patrol the North Coast section of Highway 1. Their involvement is limited to responding to emergency calls and complaints, and providing officers during holidays.

The County Sheriff's Office goal is to eventually have one sergeant and two deputies permanently on the North Coast patrol, but this is not likely to happen until voters approve a tax increase or present funding constraints are otherwise addressed.

A majority of the problems along the Santa Cruz County coastline do occur along the North Coast, foremost at Bonny Doon Beach, followed by Four Mile Beach to the south. Alcohol consumption is the primary cause of poor driving and disorderly conduct at the beaches. Transients live on the beaches and are discovered only if reported by others. Crimes occur throughout the year, but mostly at night, except for car thefts and break-ins which are most frequent during daylight hours.

Signs reading "No parking between 10 p.m. and 6 a.m." have been erected at some of the beach parking areas, but these are repeatedly removed. Anything made with wood eventually gets used as firewood.

By increasing the presence of management, many of these problems will be resolved. If the parking lots are manned, far fewer thefts will occur. With lifeguards, roving rangers and maintenance personnel on the trails and beaches, unacceptable social behavior will be reported and managed, encouraging use by more family-type visitors. The charging of fees will further alter the user type. Beaches not designated as "clothing optional" will deter nude sunbathers. Parties will be controlled by requiring special permits, if allowed at all. Overnight use will be more manageable with parking lots that may be closed and locked at dark.

A strong management presence requires a large staff which is on-site most of the time. It must be supported by an adequate number of trained peace officers and reinforced with the frequent participation of the California Highway Patrol and County Sheriff's Office. This is particularly

important when management is initially instated. Public reaction is likely to be strong and negative until existing users move on to other sites or accept the changes.

A cooperative management approach should be sought with the two law enforcement agencies, realizing that it need not be a permanent effort. Many of the North Coast management personnel, whether they are with the county, state or private sector, should be trained as peace officers.

Risk Analysis

With the extensive presence and severity of hazardous conditions, the North Coast units are ripe for liability suits. Yet it would be difficult to ascertain where ultimate responsibility lies in the event of litigation brought about by an injury or death in the water, on a beach, along the shore or trail, or at a parking area. Presently, private property owners at these units are somewhat exposed to potential litigation.

Any effort to reduce or eliminate these hazards through development and/or management implies some level of responsibility.

The California Department of Transportation will require certain highway-related improvements within its right-of-way for this very reason. The California Department of Parks and Recreation will not consider management responsibility without the provision for lifeguards because of liability exposure. A private management firm, unable to afford the high costs of insurance, would be specific about not being responsible for aquatic safety. The California Coastal Conservancy takes liability into consideration in requiring that purchase and easement agreements be acquired by a responsible agency prior to the commitment of funds for development.

In implementing this plan, the County of Santa Cruz is accepting such responsibility. The county must be sure that it is in fact willing to do so, and is taking every action necessary to provide the safest possible environment for public use.

Action Recommendations

The success of this plan can best be achieved by immediately pursuing the following:

- (1) Required approvals from:
 - California Coastal Commission
 - California Department of Transportation
 - California Department of Fish and Game
 - Santa Cruz County Planning Department
 - Pacific Gas and Electric, Co.
- (2) Necessary purchase and easement agreements from the following landowners:
 - Coastal Dairies and Land, Co.
 - Lone Star Cement, Co.
 - Southern Pacific Railroad, Co.
 - Albert Smith
- (3) Development and acquisition funds from:
 - 1988 California Bond Act Funds
 - California Coastal Conservatory
 - Wildlife Conservation Board
- (4) Labor assistance from:
 - California Conservation Corps
 - California Youth Authority
 - Santa Cruz County Community Action Board
- (5) Management cooperation from:
 - California Department of Transportation
 - California Highway Patrol
 - Santa Cruz County Metropolitan Transportation District
 - Santa Cruz County Sheriff's Office
- (6) Management contract with a private recreation management company of known competence, supplemented by contracted lifeguards for the more popular swim beaches.

Long-term development and management by the state should be pursued but not relied upon for implementation of this plan.



Appendix B



Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit.

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
CLASS: AMPHIBIA						
ORDER: CAUDATA (Salamanders)						
FAMILY: AMBYSTOMATIDAE (Mole Salamanders and Relatives)						
Tiger Salamander, (<u>Ambystoma tigrinum</u>)	P					
FAMILY: SALAMANDRIDAE (Newts)						
Rough-skinned Newt, (<u>Taricha granulosa</u>)	P					P
California Newt, (<u>Taricha torosa</u>)	P					P
FAMILY: PLETHODONITDAE (Lungless Salamanders)						
Ensatina, (<u>Ensatina eschscholtzi</u>)	P					
California Slender Salamander, (<u>Desmognathus attenuatus</u>)	P					P
Black Salamander, (<u>Aneides flavipunctatus</u>)	P					P
ORDER: SALIENTIA (Frogs and Toads)						
FAMILY: BUFONIDAE (True Toads)						
Western Toad, (<u>Bufo boreas</u>)	P					P
FAMILY: HYLIDAE (Treefrogs and Relatives)						
Pacific Treefrog, (<u>Hyla regilla</u>)	P					P
FAMILY: RANIDAE (True Frogs)						
Foothill Yellow-legged Frog, (<u>Rana boylei</u>)	P					P
Bullfrog, (<u>Rana catesbeiana</u>)	P					P
CLASS: REPTILIA						
ORDER: TESTUDINESS (Turtles)						
FAMILY: EMYDIDAE (Pond and Marsh Turtles)						
Western Pond Turtle, (<u>Clemmys marmorata</u>)	P					P
ORDER: SQUAMATA (Lizards and Snakes)						
SUBORDER: SAURIA (Lizards)						
FAMILY: IGUANIDAE (Iguanids)						
Western Fence Lizard, (<u>Sceloporus occidentalis</u>)	P	P	P	P	P	P
Side-blotched Lizard, (<u>Uta stansburiana</u>)	P	P	P	P	P	P
Coast Horned Lizard, (<u>Phrynosoma coronatum</u>)	P	P	P	P	P	P
FAMILY: SCINCIDAE (Skinks)						
Western Skink, (<u>Eumeces skiltonianus</u>)	P					P
FAMILY: ANGUIDAE (Alligator Lizards and Relatives)						
Southern Alligator Lizard, (<u>Gerrhonotus multicarinatus</u>)	P	P	P	P	P	P
SUBORDER: SERPENTES (Snakes)						
FAMILY: COLUBRIDAE (Colubrids)						
Ringneck Snake, (<u>Diadophis punctatus</u>)	P					P
Sharp-tailed Snake, (<u>Contia tenuis</u>)	P					P
Racer, (<u>Coluber constrictor</u>)	P					P
Striped Racer, (<u>Masticophis lateralis</u>)	P					P
Gopher Snake, (<u>Pituophis melanoleucus</u>)	P	P	P	P	P	P
Common Kingsnake, (<u>Lampropeltis getulus</u>)	P	P	P	P	P	P
Common Garter Snake, (<u>Thamnophis sirtalis</u>)	P	P	P	P	P	P
Western Terrestrial Garter Snake, (<u>Thamnophis elegans</u>)	P	P	P	P	P	P
Western Aquatic Garter Snake, (<u>Thamnophis couchii</u>)	P	P	P	P	P	P

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
CLASS: AVES						
ORDER: GAVIIFORMES (Loons)						
FAMILY: GAVIIDAE (Loons)						
Red-throated Loon, (<u>Gavia stellata</u>)	P	P	P	P	P	P
Arctic Loon, (<u>Gavia arctica</u>)	P	P	P	P	P	P
Common Loon, (<u>Gavia immer</u>)	P	P	P	P	P	P
ORDER: PODICIPEDIFORMES (Grebes)						
FAMILY: PODICIPEDIDAE (Grebes)						
Pied-billed Grebe, (<u>Podilymbus podiceps</u>)	P					P
Horned Grebe, (<u>Podiceps auritus</u>)	P	P	P	P	P	P
Red-necked Grebe, (<u>Podiceps grisegena</u>)	P	P	P	P	P	P
Eared Grebe, (<u>Podiceps nigricollis</u>)	P	P	P	P	P	P
Western Grebe, (<u>Aechmophorus occidentalis</u>)	P	P	P	P	P	P
ORDER: PELECANIFORMES (Tropicbirds, Pelicans, and Relatives)						
FAMILY: PELECANIDAE (Pelicans)						
Brown Pelican, (<u>Pelecanus occidentalis</u>)	P	P	P	P	P	O
FAMILY: PHALACROCORACIDAE (Cormorants)						
Double-crested Cormorant, (<u>Phalacrocorax auritus</u>)	P	P	P	P	P	P
Brandt's Cormorant, (<u>Phalacrocorax penicillatus</u>)	P	P	P	P	O	P
Pelagic Cormorant, (<u>Phalacrocorax pelagicus</u>)	P	P	P	P	O	O
ORDER: CICONIIFORMES (Herons, Storks, Ibises, and Relatives)						
FAMILY: ARDEIDAE (Herons and Bitterns)						
American Bittern, (<u>Botaurus lentiginosus</u>)	P					P
Great Blue Heron, (<u>Ardea herodias</u>)	O					P
Great Egret, (<u>Casmerodius albus</u>)	P					P
Snowy Egret, (<u>Egretta thula</u>)	P					P
Cattle Egret, (<u>Bubulcus ibis</u>)	P					P
Green-backed Heron, (<u>Butorides striatus</u>)	P					P
Black-crowned Night Heron, (<u>Nycticorax nycticorax</u>)	P					P
ORDER: ANSERIFORMES (Screamers, Ducks, and Relatives)						
FAMILY: ANATIDAE (Swans, Geese, and Ducks)						
Canada Goose, (<u>Branta canadensis</u>)	P					P
Wood Duck, (<u>Aix sponsa</u>)	P					P
Green-winged Teal, (<u>Anas crecca</u>)	P					P
Mallard, (<u>Anas platyrhynchos</u>)	P					P
Northern Pintail, (<u>Anas acuta</u>)	P					P
Blue-winged Teal, (<u>Anas discors</u>)	P					P
Cinnamon Teal, (<u>Anas cyanoptera</u>)	P					O
Northern Shoveler, (<u>Anas clypeata</u>)	P					P
Gadwall, (<u>Anas strepera</u>)	P					P
Eurasian Wigeon, (<u>Anas penelope</u>)	P					P
American Wigeon, (<u>Anas americana</u>)	P					P
Canvasback, (<u>Aythya valisineria</u>)	P					P
Redhead, (<u>Aythya americana</u>)	P					P
Ring-necked Duck, (<u>Aythya collaris</u>)	P					P

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by DATE (CON 2).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
Greater Scaup, (<u>Aythya marila</u>)	P					P
Lesser Scaup, (<u>Aythya affinis</u>)	P					P
Harlequin Duck, (<u>Histrionicus histrionicus</u>)	P	P	P	P	P	P
Oldsquaw, (<u>Clangula hyemalis</u>)	P	P	P	P	P	P
Black Scoter, (<u>Melanitta nigra</u>)	P	P	P	P	P	P
Surf Scoter, (<u>Melanitta perspicillata</u>)	P	P	P	P	P	P
White-winged Scoter, (<u>Melanitta fusca</u>)	P	P	P	P	P	P
Common Goldeneye, (<u>Bucephala clangula</u>)	P	P	P	P	P	P
Bufflehead, (<u>Bucephala albeola</u>)	P					P
Hooded Merganser, (<u>Lophodytes cucullatus</u>)	P					P
Common Merganser, (<u>Mergus merganser</u>)	P					P
Red-breasted Merganser, (<u>Mergus serrator</u>)	P	P	P	P	P	P
Ruddy Duck, (<u>Oxyura jamaicensis</u>)	P					P
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)						
FAMILY: CATHARTIDAE (American Vultures)						
Turkey Vulture, (<u>Cathartes aura</u>)	P	P	P	P	P	O
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)						
Osprey, (<u>Pandion haliaetus</u>)	P					P
Black-shouldered Kite, (<u>Elanus caeruleus</u>)	P					P
Northern Harrier, (<u>Circus cyaneus</u>)	P					P
Sharp-shinned hawk, (<u>Accipiter striatus</u>)	P					
Cooper's Hawk, (<u>Accipiter cooperii</u>)	P					
Red-shouldered Hawk, (<u>Buteo lineatus</u>)	P					P
Red-tailed Hawk, (<u>Buteo jamaicensis</u>)	P					P
Rough-legged Hawk, (<u>Buteo lagopus</u>)	P					P
Golden Eagle, (<u>Aquila chrysaetos</u>)	P					P
FAMILY: FALCONIDAE (Caracaras and Falcons)						
American Kestrel, (<u>Falco sparverius</u>)	P					P
Merlin, (<u>Falco columbarius</u>)	P	P	P	P	P	P
Peregrine Falcon, (<u>Falco peregrinus</u>)	P	P	P	O	P	P
ORDER: GALLIFORMES (Megapodes, Curassows, Pheasants, and Relatives)						
FAMILY: PHASIANIDAE (Quails, Pheasants, and Relatives)						
Ring-necked Pheasant, (<u>Phasianus colchicus</u>)	P					P
California Quail, (<u>Callipepla californica</u>)	P					P
ORDER: GRUIFORMES (Cranes, Rails, and Relatives)						
FAMILY: RALLIDAE (Rails, Gallinules, and Coots)						
Virginia Rail, (<u>Rallus limicola</u>)	P					P
Sora, (<u>Porzana carolina</u>)	P					P
Common Moorhen (<u>Gallinula chloropus</u>)	P					P
American Coot, (<u>Fulica americana</u>)	P					P
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and Relatives)						
FAMILY: CHARADRIIDAE (Plovers and Relatives)						
Black-bellied Plover, (<u>Pluvialis squatarola</u>)	P	P	P	P	P	P
Snowy Plover, (<u>Charadrius alexandrinus</u>)	O	P	P	P	P	P
Semipalmated Plover, (<u>Charadrius semipalmatus</u>)	P	P	P	P	P	P
Killdeer, (<u>Charadrius vociferus</u>)	P	P	P	P	P	O

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
FAMILY: HAEMATOPODIDAE (Oystercatchers)						
Black Oystercatcher, (<i>Haematopus bachmani</i>)	P	P	P	O	P	P
FAMILY: RECURVIROSTRIDAE (Avocets and Stilts)						
Black-necked Stilt, (<i>Himantopus mexicanus</i>)	P					P
American Avocet, (<i>Recurvirostra americana</i>)	P	P	P	P	P	P
FAMILY: SCOLOPACIDAE (Sandpipers and Relatives)						
Greater Yellowlegs, (<i>Tringa melanoleuca</i>)	P					P
Lesser Yellowlegs, (<i>Tringa flavipes</i>)	P					P
Willet, (<i>Catoptrophorus semipalmatus</i>)	P	P	P	P	P	P
Wandering Tattler, (<i>Heteroscolus incanus</i>)	P	P	P	P	P	P
Spotted Sandpiper, (<i>Actitis macularia</i>)	P					O
Whimbrel, (<i>Numenius phaeopus</i>)	P	P	P	P	P	P
Long-billed Curlew, (<i>Numenius americanus</i>)	P	P	P	P	P	P
Marbled Godwit, (<i>Limosa fedoa</i>)	P	P	P	P	P	P
Ruddy Turnstone, (<i>Arenaria interpres</i>)	P	P	P	P	P	P
Black Turnstone, (<i>Arenaria melanocephala</i>)	P	P	P	P	P	P
Surfbird, (<i>Aphriza virgata</i>)	P	P	P	P	P	P
Red Knot, (<i>Calidris canutus</i>)	P	P	P	P	P	P
Sanderling, (<i>Calidris alba</i>)	P	P	P	P	P	P
Semipalmated Sandpiper, (<i>Calidris pusilla</i>)	P	P	P	P	P	P
Western Sandpiper, (<i>Calidris mauri</i>)	P	P	P	P	P	P
Least Sandpiper, (<i>Calidris minutilla</i>)	P	P	P	P	P	O
Pectoral Sandpiper, (<i>Calidris melanotos</i>)	P					P
Dunlin, (<i>Calidris alpina</i>)	P	P	P	P	P	P
Short-billed Dowitcher, (<i>Limnodromus griseus</i>)	P					P
Long-billed Dowitcher, (<i>Limnodromus scolopaceus</i>)	P					P
Common Snipe, (<i>Callinago callinago</i>)	P					P
Wilson's Phalarope, (<i>Phalaropus tricolor</i>)	P					O
FAMILY: LARIDAE (Gulls and Terns)						
Bonaparte's Gull, (<i>Larus philadelphia</i>)	P	P	P	P	P	P
Heermann's Gull, (<i>Larus heermanni</i>)	P	P	P	P	P	P
Mew Gull, (<i>Larus canus</i>)	P	P	P	P	P	P
Ring-billed Gull, (<i>Larus delawarensis</i>)	P	P	P	P	P	P
California Gull, (<i>Larus californicus</i>)	P	P	P	P	P	P
Herring Gull, (<i>Larus argentatus</i>)	P	P	P	P	P	P
Thayer's Gull, (<i>Larus thayeri</i>)	P	P	P	P	P	P
Western Gull, (<i>Larus occidentalis</i>)	P	P	P	O	O	O
Glaucous-winged Gull, (<i>Larus glaucescens</i>)	P	P	P	P	P	P
Caspian Tern, (<i>Sterna caspia</i>)	P	P	P	P	P	P
Elegant Tern, (<i>Sterna elegans</i>)	P	P	P	P	P	P
Common Tern, (<i>Sterna hirundo</i>)	P	P	P	P	P	P
Forster's Tern, (<i>Sterna forsteri</i>)	P	P	P	P	P	P
FAMILY: ALCIDAE (Auks, Murres, and Puffins)						
Common Murre, (<i>Uria aalge</i>)	P	P	P	P	P	P
Pigeon Guillemot, (<i>Cephus columba</i>)	P	P	O	O	O	O
Marbled Murrelet, (<i>Brachyramphus marmoratus</i>)	P	P	P	P	P	P
Ancient Murrelet, (<i>Synthliboramphus antiquus</i>)	P	P	P	P	P	P
Cassin's Auklet, (<i>Ptychoramphus aleuticus</i>)	P	P	P	P	P	P
Rhinoceros Auklet, (<i>Cerorhinca monocerata</i>)	P	P	P	P	P	P
Tufted Puffin, (<i>Fratercula cirrhata</i>)						

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
ORDER: COLUMBIFORMES (Pigeons and Doves)						
FAMILY: COLUMBIDAE (Pigeons and Doves)						
Rock Dove, (<u>Columba livia</u>)	P	P	P	O	P	P
Band-tailed Pigeon, (<u>Columba fasciata</u>)	P					
Mourning Dove, (<u>Zenaida macroura</u>)	O	P	P	P	P	P
ORDER: STRIGIFORMES (Owls)						
FAMILY: TYTONIDAE (Barn Owls)						
Common Barn Owl, (<u>Tyto alba</u>)	P	P	P	P	P	P
FAMILY: STRIGIDAE (Typical Owls)						
Screech Owl, (<u>Otus kennicottii</u>)	P					
Great Horned Owl, (<u>Bubo virginianus</u>)	P					
Northern Pygmy-Owl, (<u>Glaucidium gnoma</u>)	P					
Burrowing Owl, (<u>Athene cunicularia</u>)	P	P	P			P
Long-eared Owl, (<u>Asio otus</u>)	P					P
Short-eared owl, (<u>Asio flammeus</u>)	P					P
Northern Saw-whet owl, (<u>Aegolius acadicus</u>)	P					P
ORDER: CAPRIMULGIFORMES (Goatsuckers and Relatives)						
FAMILY: CAPRIMULGIDAE (Goatsuckers)						
Common Poor-will, (<u>Phalaenoptilus nuttallii</u>)	P					P
ORDER: APODIFORMES (Swifts and Hummingbirds)						
FAMILY: APODIDAE (Swifts)						
Black Swift, (<u>Cypseloides niger</u>)	P	P	P	P	P	P
Vaux's Swift, (<u>Chaetura vauxi</u>)	P					P
White-throated Swift, (<u>Aeronautes saxatilis</u>)	P					P
FAMILY: TROCHILIDAE (Hummingbirds)						
Anna's Hummingbird, (<u>Calypte anna</u>)	P					P
Rufous Hummingbird, (<u>Selasphorus rufus</u>)	P					P
Allen's Hummingbird, (<u>Selasphorus sasin</u>)	P					P
ORDER: CORACIIFORMES (Kingfishers and Relatives)						
FAMILY: ALCEDINIDAE (Kingfishers)						
Belted Kingfisher, (<u>Ceryle alcyon</u>)	P					P
ORDER: PICIFORMES (Woodpeckers and Relatives)						
FAMILY: PICIDAE (Woodpeckers and Wrynecks)						
Acorn Woodpecker, (<u>Melanerpes formicivorus</u>)	P					
Yellow-bellied Sapsucker, (<u>Sphyrapicus varius</u>)	P					
Red-breasted Sapsucker, (<u>Sphyrapicus ruber</u>)	P					
Nuttall's Woodpecker, (<u>Picoides nuttallii</u>)	P					
Downy Woodpecker, (<u>Picoides pubescens</u>)	P					
Hairy Woodpecker, (<u>Picoides villosus</u>)	P					
Northern Flicker, (<u>Colaptes auratus</u>)	P					
ORDER: PASSERIFORMES (Perching Birds)						
FAMILY: TYRANNIDAE (Tyrant Flycatchers)						
Olive-sided Flycatcher, (<u>Contopus borealis</u>)	P					
Western Wood-Pewee, (<u>Contopus sordidulus</u>)	P					

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
Western Flycatcher, (<u>Empidonax difficilis</u>)	P					
Black Phoebe, (<u>Sayornis nigricans</u>)	P	P	P	P	P	O
Ash-throated Flycatcher, (<u>Myiarchus cinerascens</u>)	P					
FAMILY: HIRUNDINIDAE (Swallows)						
Purple Martin, (<u>Progne subis</u>)	P	P	P	P	P	P
Tree Swallow, (<u>Tachycineta bicolor</u>)	O					P
Violet-green Swallow, (<u>Tachycineta thalassina</u>)	P					P
Northern Rough-winged Swallow, (<u>Stelgidopteryx serripennis</u>)	P					P
Bank Swallow, (<u>Riparia riparia</u>)	P					P
Cliff Swallow, (<u>Hirundo pyrrhonota</u>)	P	O	O	O	P	O
Barn Swallow, (<u>Hirundo rustica</u>)	P	P	P	P	P	O
FAMILY: CORVIDAE (Jays, Magpies, and Crows)						
Steller's Jay, (<u>Cyanocitta stelleri</u>)	P					
Scrub Jay, (<u>Aphelocoma coerulescens</u>)	P					
Yellow-billed Magpie, (<u>Pica nuttalli</u>)	P					P
American Crow, (<u>Corvus brachyrhynchos</u>)	P	P	P	P	P	P
Common Raven, (<u>Corvus corax</u>)	P	P	P	P	P	O
FAMILY: PARIDAE (Titmice)						
Chestnut-backed Chickadee, (<u>Parus rufescens</u>)	P					
Plain Titmouse, (<u>Parus inornatus</u>)	P					
FAMILY: AEGITHALIDAE (Bushtit)						
Bushtit, (<u>Psaltriparus minimus</u>)	P	P	P	P	P	P
FAMILY: SITTIDAE (Nuthatches)						
Red-breasted Nuthatch, (<u>Sitta canadensis</u>)	P					
White-breasted Nuthatch, (<u>Sitta carolinensis</u>)	P					
Pygmy Nuthatch, (<u>Sitta pygmaea</u>)	P					
FAMILY: CERCITHIIDAE (Creepers)						
Brown Creeper, (<u>Certhia americana</u>)	P					
FAMILY: TROGLODYTIDAE (Wrens)						
Bewick's Wren, (<u>Thryomanes bewickii</u>)	P	P	O	P	P	P
House Wren, (<u>Troglodytes aedon</u>)	P	P	P	P	P	P
Winter Wren, (<u>Troglodytes troglodytes</u>)	P					
Marsh Wren, (<u>Cistothorus palustris</u>)	P					P
FAMILY: MUSCICAPIDAE (Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit)						
Golden-crowned Kinglet, (<u>Regulus satrapa</u>)	P					
Ruby-crowned Kinglet, (<u>Regulus calendula</u>)	P					
Blue-gray Gnatcatcher, (<u>Polioptila caerulea</u>)	P					
Western Bluebird, (<u>Sialia mexicana</u>)	P					P
Swainson's Thrush, (<u>Catharus ustulatus</u>)	P					
Hermit Thrush, (<u>Catharus guttatus</u>)	P					
American Robin, (<u>Turdus migratorius</u>)	P					P
Varied Thrush, (<u>Ixoreus naevius</u>)	P					
Wrentit, (<u>Chamaea fasciata</u>)	P					P
FAMILY: MIMIDAE (Mockingbirds and Thrashers)						
Northern Mockingbird, (<u>Mimus polyglottos</u>)	P	P	P	P	P	P
California Thrasher, (<u>Toxostoma californicum</u>)	P					P
FAMILY: MOTACILLIDAE (Wagtails and Pipits)						
Water Pipit, (<u>Anthus spinoletta</u>)	P	P	P	P	P	P

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
FAMILY: BOMBYCILLIDAE (Waxwings)						
Cedar Waxwing, (<u>Bombycilla cedrorum</u>)	P					
FAMILY: LANIIDAE (Shrikes)						
Loggerhead Shrike, (<u>Lanius ludovicianus</u>)	P					P
FAMILY: STURNIDAE (Starlings)						
European Starling, (<u>Sturnus vulgaris</u>)	P	P	P	O	P	O
FAMILY: VIREONIDAE (Typical Vireos)						
Solitary Vireo, (<u>Vireo solitarius</u>)	P					
Hutton's Vireo, (<u>Vireo huttoni</u>)	P					
Warbling Vireo, (<u>Vireo gilvus</u>)	P					
FAMILY: EMBERIZIDAE (Wood Warblers, Sparrows, Blackbirds, and Relatives)						
Tennessee Warbler, (<u>Vermivora peregrina</u>)	P					
Orange-crowned Warbler, (<u>Vermivora celata</u>)	P					
Yellow Warbler, (<u>Dendroica petechia</u>)	P					
Yellow-rumped Warbler, (<u>Dendroica coronata</u>)	P					P
Black-throated Gray Warbler, (<u>Dendroica nigrescens</u>)	P					
Townsend's Warbler, (<u>Dendroica townsendi</u>)	P					
Hermit Warbler, (<u>Dendroica occidentalis</u>)	P					
MacGillivray's Warbler, (<u>Oporornis tolmiei</u>)	P					
Common Yellowthroat, (<u>Geothlypis trichas</u>)	P					O
Wilson's Warbler, (<u>Wilsonia pusilla</u>)	P					
Yellow-breasted Chat, (<u>Icteria virens</u>)	P					
Black-headed Grosbeak, (<u>Pheucticus melanocephalus</u>)	P					P
Lazuli Bunting, (<u>Passerina amoena</u>)	P					P
Rufous-sided Towhee, (<u>Pipilo erythrophthalmus</u>)	P					P
Brown Towhee, (<u>Pipilo fuscus</u>)	P					P
Rufous-crowned Sparrow, (<u>Aimophila ruficeps</u>)	P	P	P			P
Lark Sparrow, (<u>Chondestes grammacus</u>)	P	P	P	P	P	P
Savannah Sparrow, (<u>Passerculus sandwichensis</u>)	P	P	P	P	P	P
Fox Sparrow, (<u>Passerella iliaca</u>)	P					P
Song Sparrow, (<u>Melospiza melodia</u>)	O	O	P		P	O
Lincoln's Sparrow, (<u>Melospiza lincolni</u>)	P					P
Golden-crowned Sparrow, (<u>Zonotrichia atricapilla</u>)	P	P	P	P	P	P
White-crowned Sparrow, (<u>Zonotrichia leucophrys</u>)	P	P	P	P	P	P
Dark-eyed Junco, (<u>Junco hyemalis</u>)	P					P
Red-winged Blackbird, (<u>Agelaius phoeniceus</u>)	P					P
Western Meadowlark, (<u>Sturnella neglecta</u>)	P					P
Brewer's Blackbird, (<u>Euphagus cyanocephalus</u>)	O	P	P	P	P	P
Brown-headed Cowbird, (<u>Molothrus ater</u>)	P					P
Hooded Oriole, (<u>Icterus cucullatus</u>)	P					P
Northern Oriole, (<u>Icterus galbula</u>)	P					P
FAMILY: PRINGILLIDAE (Finches)						
Purple Finch, (<u>Carpodacus purpureus</u>)	O					P
House Finch, (<u>Carpodacus mexicanus</u>)	P	P	P	O	P	O
Pine Siskin, (<u>Carduelis pinus</u>)	P					P
Lesser Goldfinch, (<u>Carduelis psaltria</u>)	P	P	P	P	P	P
American Goldfinch, (<u>Carduelis tristis</u>)	O	P	P	P	P	P
FAMILY: PASSERIDAE (Weaver Finches)						
House Sparrow, (<u>Passer domesticus</u>)	P	P	P	P	P	P

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
CLASS: MAMMALIA						
ORDER: MARSUPIALIA (Opossums, Kangaroos, and Relatives)						
FAMILY: DIDELPHIDAE (Opossums)						
Virginia Opossum, (<u>Didelphis virginiana</u>)	P	P	P	P	P	P
ORDER: INSECTIVORA (Shrews and Moles)						
FAMILY: SORICIDAE (Shrews)						
Vagrant Shrew, (<u>Sorex vagrans</u>)	P	P	P			P
Ornate Shrew, (<u>Sorex ornatus</u>)	P	P	P			P
FAMILY: TALPIDAE (Moles)						
Shrew-mole, (<u>Neurotrichus gibbsii</u>)	P					P
Broad-footed Mole, (<u>Scapanus latimanus</u>)	P					P
ORDER: CHIROPTERA (Bats)						
FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)						
Yuma Myotis, (<u>Myotis yumanensis</u>)	P	P	P	P		P
Long-eared Myotis, (<u>Myotis evotis</u>)	P	P	P	P	P	P
Fringed Myotis, (<u>Myotis thysanodes</u>)	P	P	P	P	P	P
Long-legged Myotis, (<u>Myotis volans</u>)	P	P	P	P	P	P
California Myotis, (<u>Myotis californicus</u>)	P	P	P	P	P	P
Western Pipistrelle, (<u>Pipistrellus hesperus</u>)	P	P	P	P	P	P
Big Brown Bat, (<u>Eptesicus fuscus</u>)	P	P	P	P	P	P
Red Bat, (<u>Lasiurus borealis</u>)	P	P	P	P	P	P
Hoary Bat, (<u>Lasiurus cinereus</u>)	P	P	P	P	P	P
Townsend's Big-eared Bat, (<u>Plecotus townsendii</u>)	P	P	P	P	P	P
Pallid Bat, (<u>Antrozous pallidus</u>)	P		P	P	P	P
FAMILY: MOLOSSIDAE (Free-tailed Bat)						
Brazilian Free-tailed Bat, (<u>Tadarida brasiliensis</u>)	P	P	P	P	P	P
Western Mastiff Bat, (<u>Eumops perotis</u>)	P	P	P	P	P	P
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)						
FAMILY: LEPORIDAE (Rabbits and Hares)						
Brush Rabbit, (<u>Sylvilagus bachmani</u>)	P					P
Desert Cottontail, (<u>Sylvilagus auduboni</u>)	P					P
Black-tailed Hare, (<u>Lepus californicus</u>)	P					P
ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)						
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)						
California Ground Squirrel, (<u>Spermophilus beecheyi</u>)	P	P	P	P	P	P
Western Gray Squirrel, (<u>Sciurus griseus</u>)	P					
FAMILY: GEOMYIDAE (Pocket Gophers)						
Botta's Pocket Gopher, (<u>Thomomys bottae</u>)	P	P	P	P	P	P
FAMILY: HETEROMYIDAE (Pocket Mice and Kangaroo Rats)						
California Pocket Mouse, (<u>Perognathus californicus</u>)	P	P	P			P
FAMILY: CRICETIDAE (Deer Mice, Voles, and Relatives)						
Western Harvest Mouse, (<u>Reithrodontomys megalotis</u>)	P	P	P			P
California Mouse, (<u>Peromyscus californicus</u>)	P	P	P			P
Deer Mouse, (<u>Peromyscus maniculatus</u>)	P	P	P	P	P	P

Wildlife observed (O) and predicted to occur (P) on North Coast Beaches, Santa Cruz County, California, by unit (con't).

	Laguna Creek	Yellowbank	Bonny Doon	Panther	Davenport Landing	Scott Creek
Pinyon Mouse, (<u>Peromyscus truei</u>)	P	P	P			P
Dusky-footed Woodrat, (<u>Neotoma fuscipes</u>)	P					
California Vole, (<u>Microtus californicus</u>)	P					P
FAMILY: MURIDAE (Old World Rats and Mice)						
Norway Rat, (<u>Rattus norvegicus</u>)	P	P	P			P
House Mouse, (<u>Mus musculus</u>)	P	P	P	P	P	P
ORDER: CARNIVORA (Carnivores)						
FAMILY: CANIDAE (Foxes, Wolves, and Relatives)						
Coyote, (<u>Canis latrans</u>)	P	P	P	P	P	P
Gray Fox, (<u>Urocyon cinereoargenteus</u>)	P	P	P		P	P
FAMILY: PROCYONIDAE (Raccoons and Relatives)						
Ringtail, (<u>Bassariscus astutus</u>)	P					P
Raccoon, (<u>Procyon lotor</u>)	P	P	P	P	P	P
FAMILY: MUSTELIDAE (Weasels, Badgers, and Relatives)						
Long-tailed Weasel, (<u>Mustela frenata</u>)	P	P	P	P	P	P
Badger, (<u>Taxidea taxus</u>)	P	P	P	P	P	P
Western Spotted Skunk, (<u>Spilogale gracilis</u>)	P					P
Striped Skunk, (<u>Mephitis mephitis</u>)	P	P	P	P	P	P
Sea Otter, (<u>Enhydra lutris</u>)	P	P	P	P	P	P
FAMILY: FELIDAE (Cats)						
Bobcat, (<u>Lynx rufus</u>)	P	P	P		P	P
FAMILY: OTARIIDAE (Eared Seals)						
Northern Fur Seal, (<u>Callorhinus ursinus</u>)	P	P	P	P	P	P
Northern Sea Lion, (<u>Eumetopias jubatus</u>)	P	P	P	P	P	P
California Sea Lion, (<u>Zalophus californianus</u>)	P	P	P	P	P	P
FAMILY: PHOCIDAE (Hair Seals)						
Harbor Seal, (<u>Phoca vitulina</u>)	P	P	P	P	P	P
Northern Elephant Seal, (<u>Mirounga angustirostris</u>)	P	P	P	P	P	P
ORDER: ARTIODACTYLA						
FAMILY: CERVIDAE (Deer, Elk, and Relatives)						
Mule Deer, (<u>Odocoileus hemionus</u>)	P					P

APPENDIX C

CHECKLIST OF FISH OF NORTH COAST BEACHES

		SCOTT CREEK	DAVENPORT LANDING	PANTHER	BONNY DOON	YELLOWBANK
* COTTIDAE						
<u>Cottus aleuticus</u>	Coastrange Sculpin	P				
<u>Cottus asper</u>	Pricky Sculpin	O			P	
<u>Leptocottus armatus</u>	Staghorn Sculpin	P				
* GOBIIDAE						
<u>Eucyclogobuis newberryi</u>	Tidewater Goby	O				
* GASTEROSTEIDAE						
<u>Gasterosteus aculeatus</u>	Threespine Stickleback	O			P	P
* PLEURONECTIDAE						
<u>Platichthys stellatus</u>	Starry Flounder	P				
* SALMONIDAE						
<u>Oncorhynchus kisutch</u>	Coho Salmon	P				
<u>Salmo gairdneri</u>	Steelhead	O			P	

O - observed
P - predicted

GREYHOUND
ROCK BEACH

SCOTT CREEK BEACH

DAVENPORT
LANDING BEACH

DAVENPORT BEACH

PANTHER BEACH
BONNY DOON BEACH

YELLOWBANK BEACH

LAGUNA CREEK BEACH

RED, WHITE AND BLUE BEACH

WILDER RANCH STATE PARK
FOUR MILE BEACH

SANTA CRUZ →

NOTE: Beach titles that are **BOLD**
indicate sites addressed in this study.

VICINITY MAP

MAP 1

**NORTH COAST BEACHES
DEVELOPMENT PLAN**
COUNTY OF SANTA CRUZ

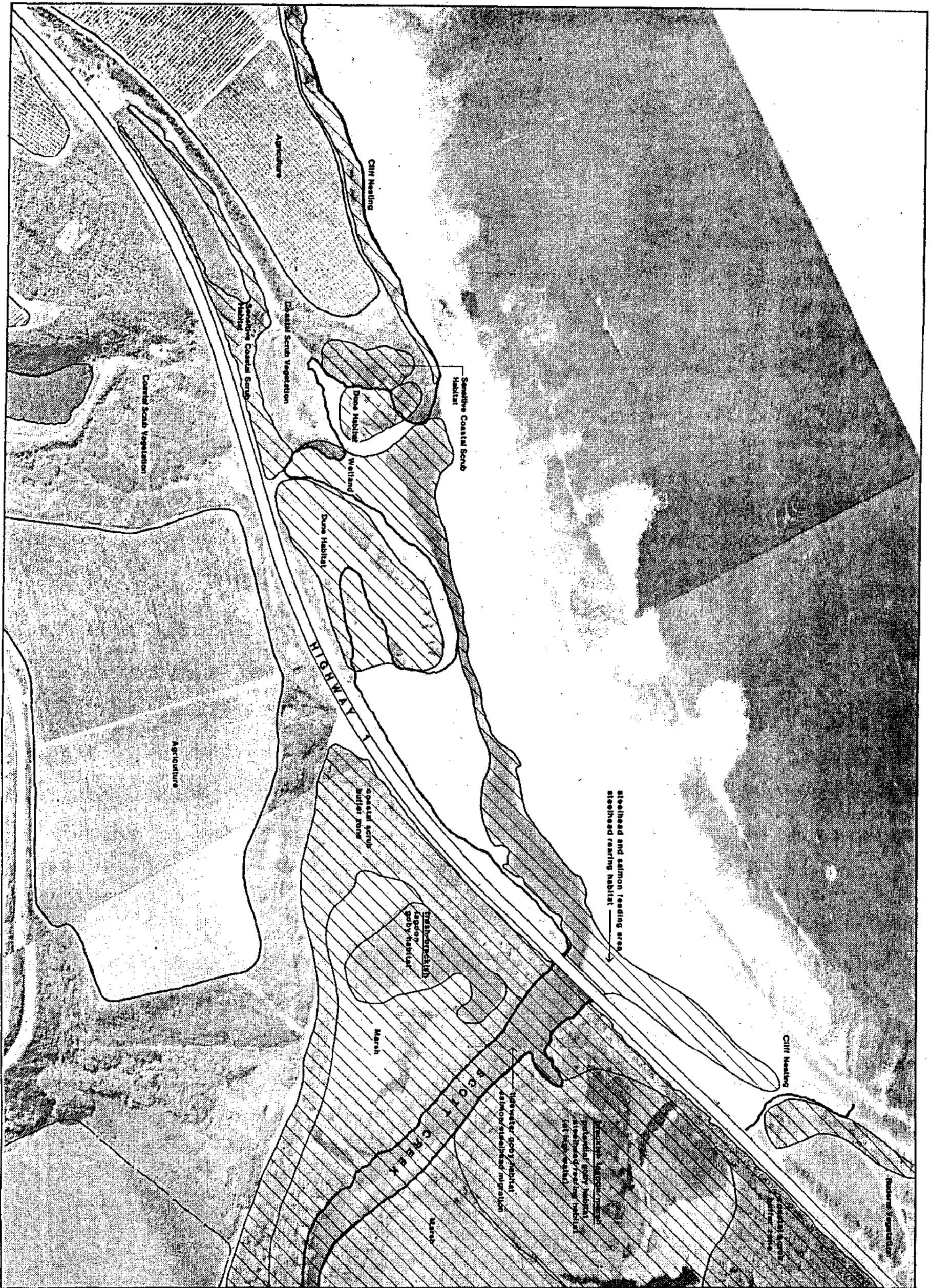
PREPARED BY EDAW INC.



JULY, 1987

NORTH





JULY, 1987



NORTH

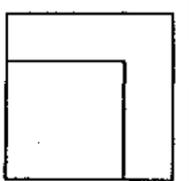
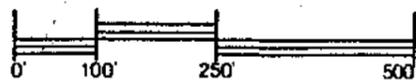
NORTH COAST BEACHES DEVELOPMENT PLAN

COUNTY OF SANTA CRUZ

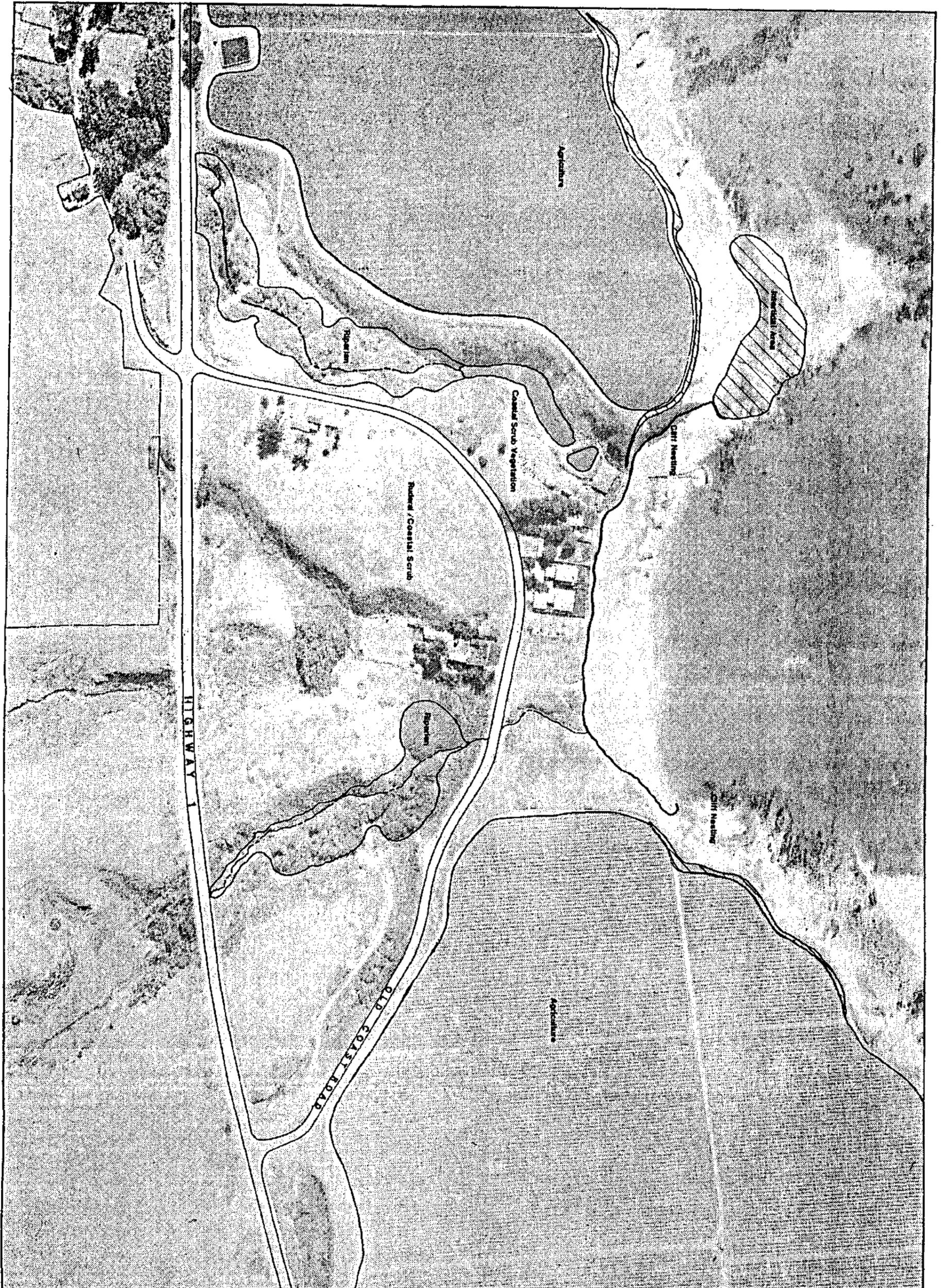
PREPARED BY EDRAW INC.

MAP 2 SCOTT CREEK BEACH VEGETATION AND WILDLIFE

Sensitive Habitat



1/2 ACRE 1 ACRE



JULY, 1987



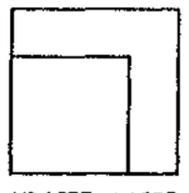
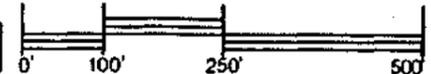
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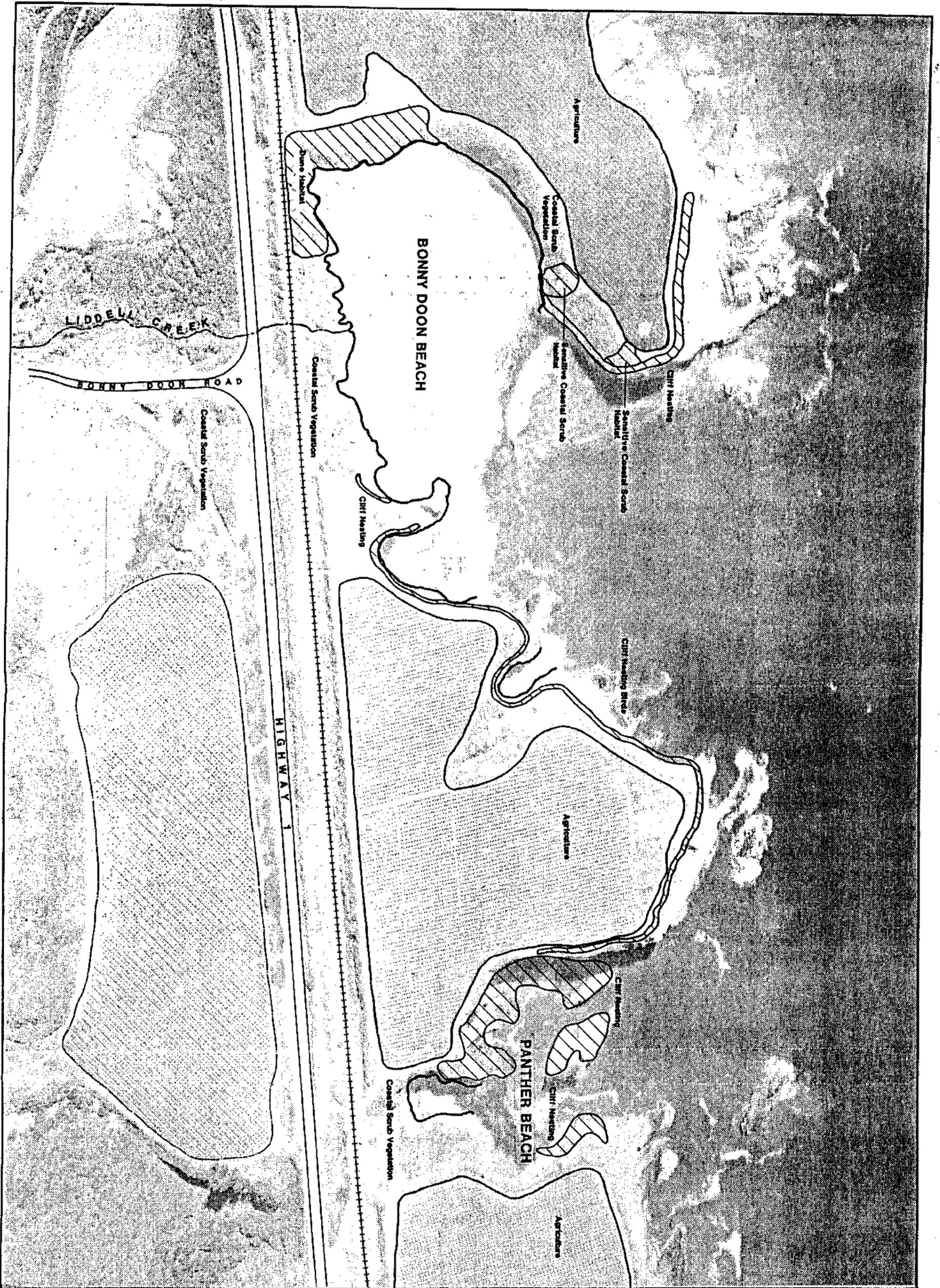
**NORTH COAST BEACHES
DEVELOPMENT PLAN**
COUNTY OF SANTA CRUZ

PREPARED BY EDAW INC.

**MAP 3 DAVENPORT LANDING
BEACH
VEGETATION AND
WILDLIFE**

Sensitive Habitat





JULY, 1987



NORTH

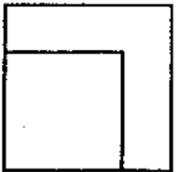
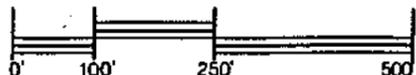
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COUNTY OF SANTA CRUZ

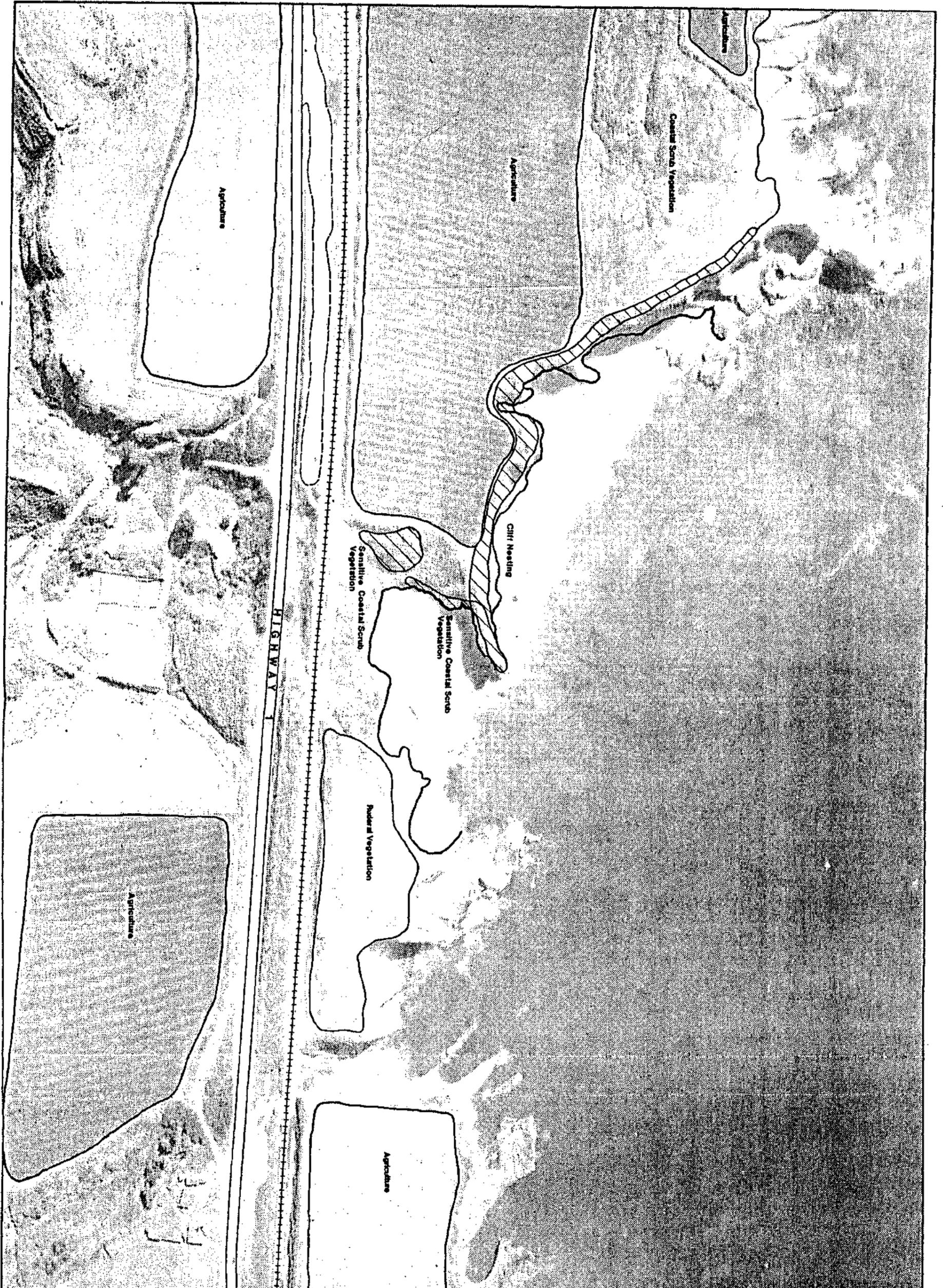
PREPARED BY EDWA INC.

MAP 4 BONNY DOON BEACH AND PANTHER BEACH VEGETATION AND WILDLIFE

Sensitive Habitat



1/2 ACRE 1 ACRE



JULY, 1987



NORTH

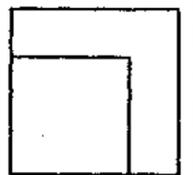
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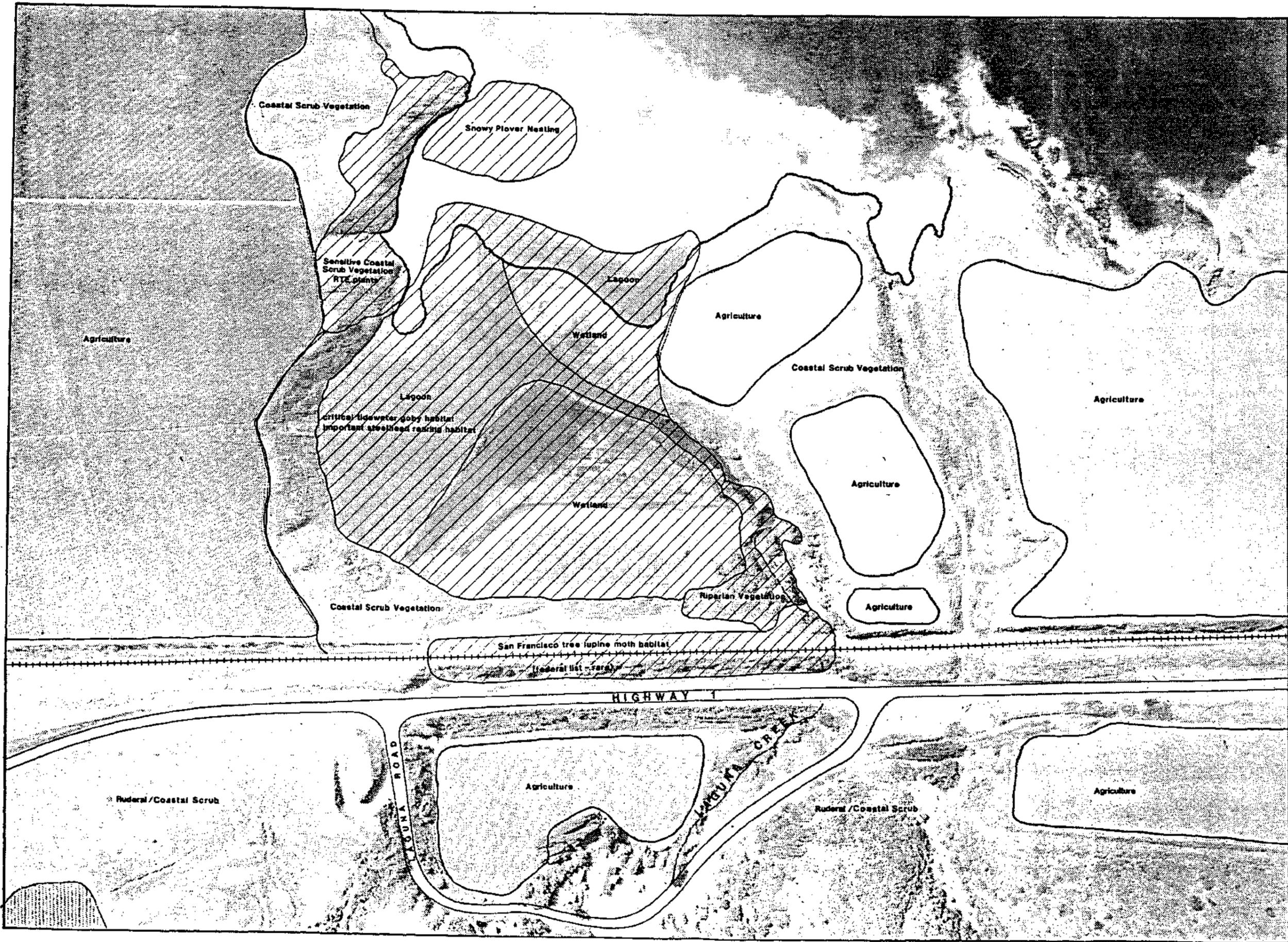
COUNTY OF SANTA CRUZ

PREPARED BY ED AW INC.

MAP 5 YELLOWBANK BEACH VEGETATION AND WILDLIFE

Sensitive Habitat





JULY, 1987



NORTH

**NORTH COAST BEACHES
DEVELOPMENT PLAN**

COUNTY OF SANTA CRUZ

PREPARED BY EDRAW INC.

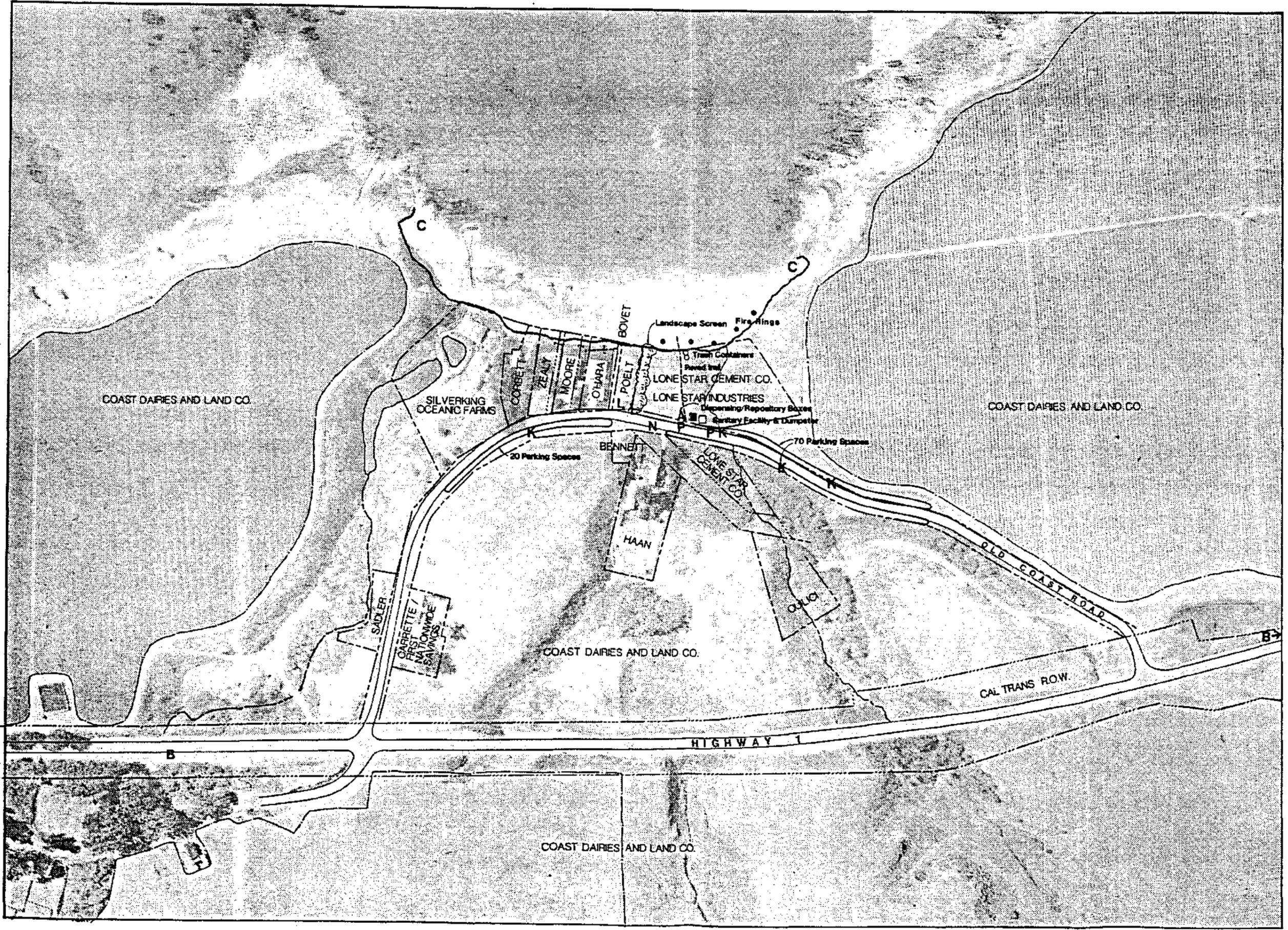
**MAP 6 LAGUNA CREEK BEACH
VEGETATION AND WILDLIFE**



Sensitive Habitat



1/2 ACRE 1 ACRE



JULY, 1987



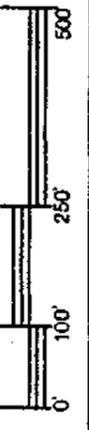
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**NORTH COAST BEACHES
DEVELOPMENT PLAN**
COUNTY OF SANTA CRUZ

MAP 8

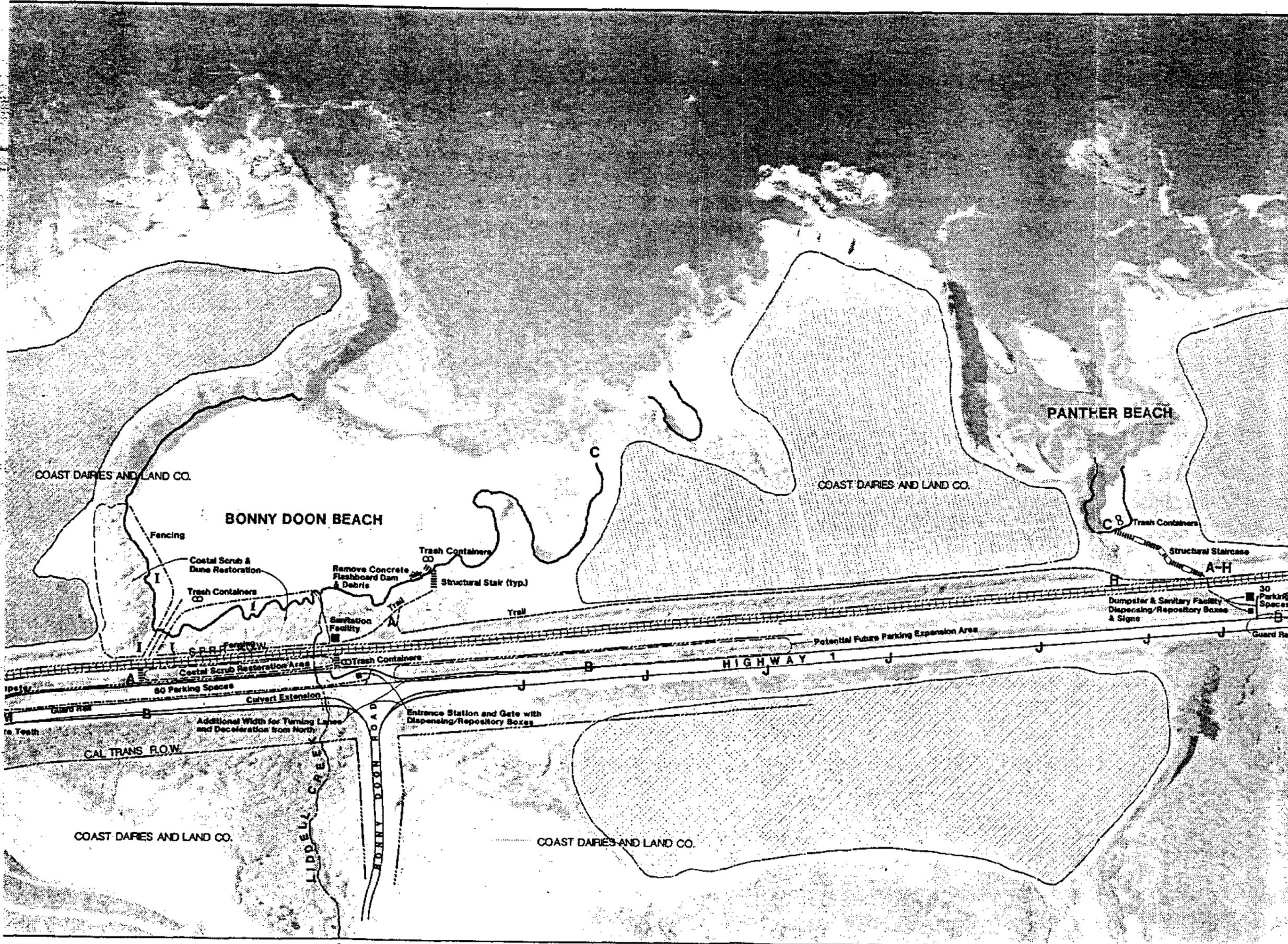
**DAVENPORT LANDING
BEACH**

PROPOSED IMPROVEMENTS
LAND OWNERSHIP / ROW'S



1/2 ACRE 1 ACRE

PREPARED BY EDAW INC.



JULY, 1987



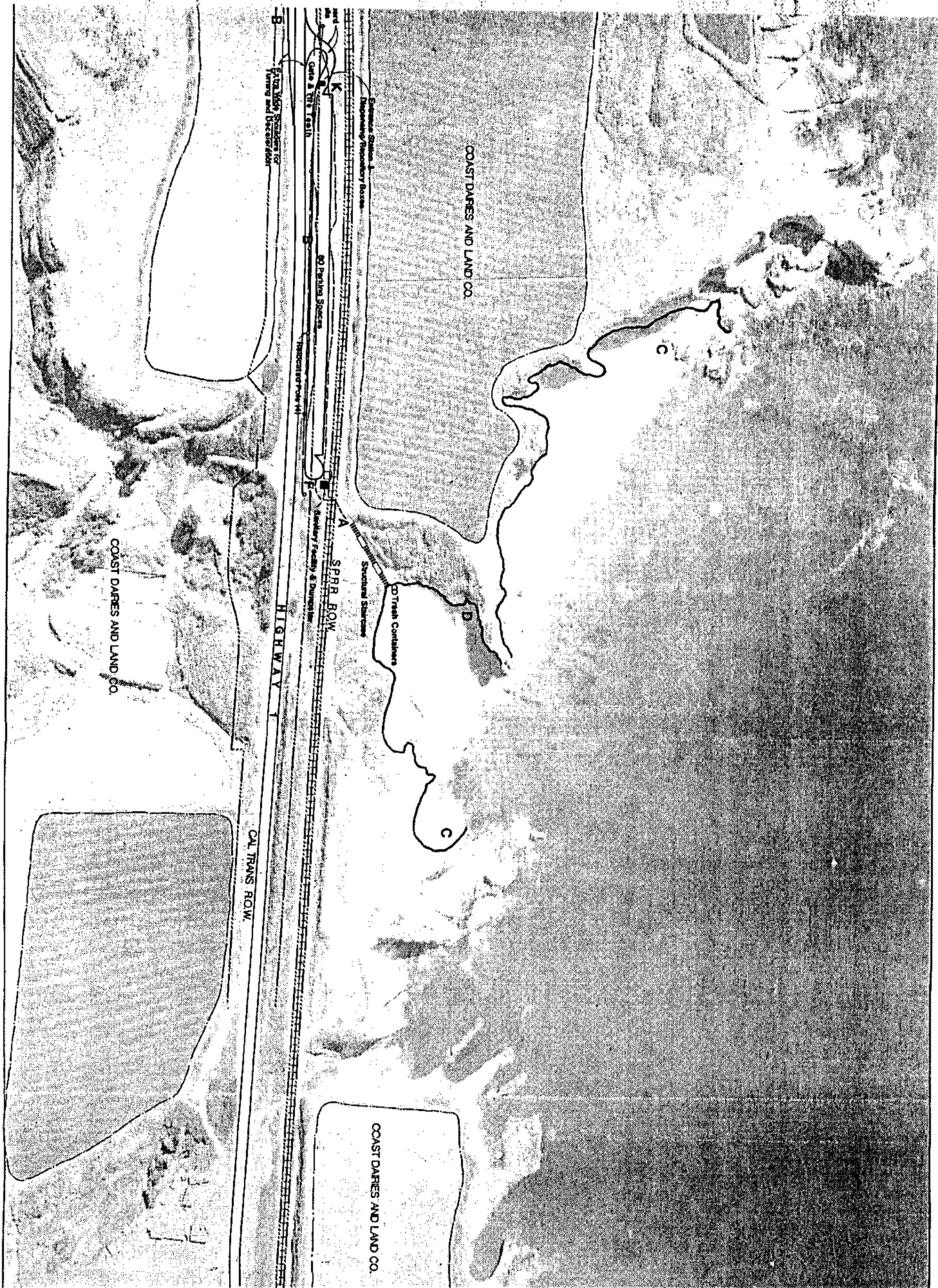
NORTH

**NORTH COAST BEACHES
DEVELOPMENT PLAN**
COUNTY OF SANTA CRUZ

MAP 9 **BONNY DOON BEACH
AND PANTHER BEACH**
PROPOSED IMPROVEMENTS
LAND OWNERSHIP/ROW'S



PREPARED BY EDAW INC.



JULY, 1987



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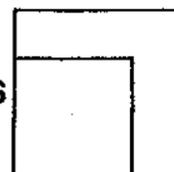
NORTH COAST BEACHES DEVELOPMENT PLAN

COUNTY OF SANTA CRUZ

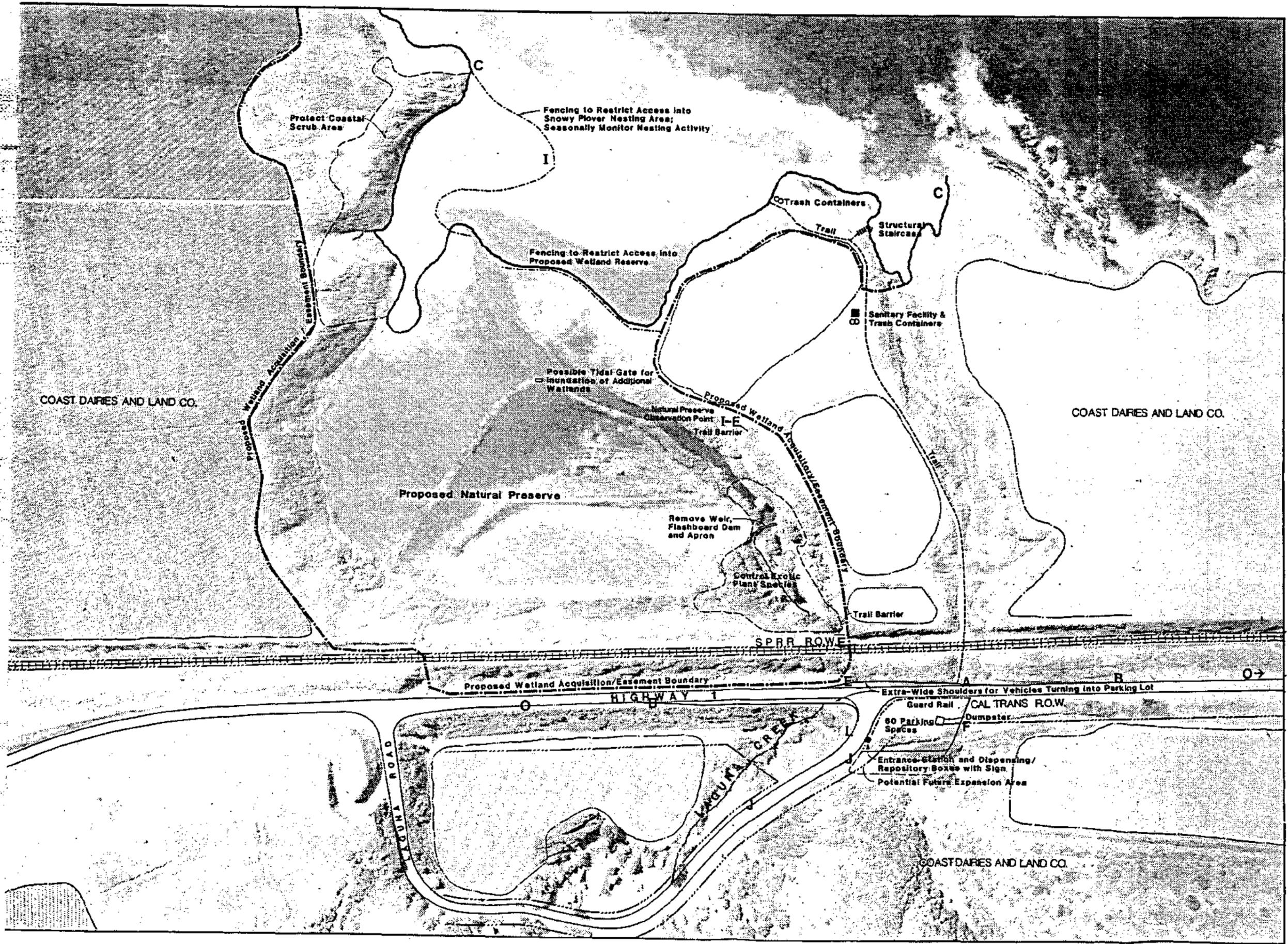
PREPARED BY EDWA INC.

MAP 10 YELLOWBANK BEACH

PROPOSED IMPROVEMENTS
LAND OWNERSHIP / ROW's



1/2 ACRE 1 ACRE



NORTH COAST BEACHES MAP 11 LAGUNA CREEK BEACH
DEVELOPMENT PLAN
 PROPOSED IMPROVEMENTS
 LAND OWNERSHIP / ROW'S
 COUNTY OF SANTA CRUZ

JULY, 1987



NORTH

PREPARED BY EDAW INC.

Addendum to the

**General Plan
for the North Coast Beaches**

County of Santa Cruz

Davenport Beach and Bluffs

Prepared by
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6001 Butler Lane, Suite #1
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July, 1980

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INTRODUCTION

This plan for the Davenport Beach and the Bluffs Area has been prepared as an addendum to the North Coast Beaches General Plan which was completed in December, 1987 for the County of Santa Cruz. The North Coast Beaches General Plan addresses future development and management of Scott Creek, Davenport Landing, Panther, Bonnydoon, Yellowbank, Laguna Creek and Greyhound Rock Beaches. In effect, this addendum includes Davenport Beach and Bluffs in the overall plan for improving public access to the beaches of the Santa Cruz County North Coast. All recommendations contained in this addendum are related to and consistent with those of the North Coast Beaches General Plan.

The Davenport Beach and Bluffs Area, situated directly across Highway 1 from the coastal town of Davenport, is essentially a part of the community. Local residents and merchants helped develop the Plan, since proposed actions in the project area may affect the community in many different ways.

RESOURCE ELEMENT

Resource Summaries and Management Policies

Topography

The project area extends for approximately one-half mile south of Highway 1 across from the town of Davenport and the RMC Lonestar cement plant. The site averages 300 feet in width and is bisected lengthwise by the Southern Pacific Railroad. The railroad cuts through the coastal plateau in the larger, northwestern portion of the site. In this area, getting from the main parking areas to the 80-to-100-foot high bluffs involves descending and ascending embankments on either side of the railroad tracks.

At the southeast end, the railroad crosses a small valley on a raised railroad bed, hiding Davenport Beach from Highway 1 and the town. The beach is broad and approximately 900 feet in length.

Policy: Because of the hazards at the base of the bluffs, visitors should be discouraged from venturing beyond the main beach. Signs should be posted with warnings about the isolation of pocket beaches at high tide, as well as other dangers such as occasional excessively high waves and falling rocks.

Meteorology

Climatic conditions at the Davenport Beach and Bluffs Area are not unlike those at the other North Coast beaches: typically cool and breezy, with morning and evening fog during the peak use season. Consequently, very little swimming and sunbathing occurs.

Hydrology

San Vicente Creek tributaries flow across Davenport Beach at both ends. At the east end, a bluff remnant separates the smaller creek from the beach. At the west end, the greater flow comes underneath the highway and railroad through a tall, arched tunnel in the bedrock. These creeks usually flow year-round.

Geology

As with other bluffs along the North Coast, the Davenport Bluffs are composed of Santa Cruz Mudstone, derived from Ben Lomand Mountain and deposited in shallow marine sequences. Wave erosion accounts for as much as 5 1/2 inches of sea cliff retreat per year (Wilder Ranch State Park General Plan, 1980). This rapid rate of erosion is particularly evident at Davenport Bluffs where Monterey cypress, planted far from the bluff's edge perhaps 30 years ago, now have exposed roots and soon will be lost to the sea.

In more recent geologic time, sand dunes formed at the backside of the main beach.

Policy: Signs warning of geologic hazards should be posted along the top of the bluffs or at the trailheads. In addition, a low rail fence located along the entire length of the bluff top should be considered. The horizontal rail fencing will not prevent individuals from reaching the cliff line if they are determined to do so, but will help avert accidental falls. The fence should be located sufficiently distant from the edge to allow for additional erosion, but not so far from the edge that visitors will be tempted to climb over it in order to get the desired view of the coastline.

Soils

Upland soils are shallow, sandy and highly erodible. Uncontrolled foot and vehicular traffic have accelerated the erosion process and caused the loss of vegetation, slope instability and unsightly conditions.

Policy: Coastal access to the beach and bluffs from the parking areas should be directed and controlled to minimize random destructive erosion. Structural stairs that are harmonious with and appropriate to the natural, rural environment shall be installed to prevent further bank erosion.

Plant Life

The vegetation of the Davenport Beach and Bluffs Area includes five distinct plant communities: coastal scrub, coastal bluff scrub, ruderal, coastal dune and willow thicket riparian (See Map 12 and Appendix D).

Coastal Scrub

The coastal scrub plant community inhabits the bluff tops and slopes. The vegetation is dense with shrubs of coyote brush (*Baccharis pilularis ssp. consanguineum*), lizard tail (*Eriophyllum staechadifolium*), blackberry (*Rubus ursinus*) and yellow bush lupine (*Lupinus arboreus*). Herbaceous plants include common yarrow (*Achillea millefolium*), common aster (*Aster chiliensis*), California polypody (*Polypodium californicum*) and live-forever (*Dudleya caepitosa*).

Coastal Bluff Scrub

This plant community inhabits the south-facing slopes adjacent to the railroad tracks at the eastern edge of the area. The slopes have a thin soil layer and exposed sandstone. Common plants within this habitat include live-forever, cudweed (*Gnaphalium sp.*), buckwheat (*Eriogonum latifolium*), common yarrow and poison oak (*Toxicodendron diversilobum*).

This habitat may potentially contain the locally unique plant species Michael's piperia (*Piperia michaelii*) and Blasdale's bent grass (*Agrostis Blasdalei*). Based on the observations of these species in similar habitats at Scott Creek, Laguna Creek and Yellowbank Beaches in the spring and summer of 1987, the potential for occurrence at the Davenport site is high.

Coastal Dunes

An area at the southeast end of Davenport Beach supports a coastal dune plant community. Plant species observed include sand verbena (*Abronia sp.*), beach morning glory (*Convolvulus soldanella*), sea rocket (*Cakile maritima*) and salt grass (*Distichlis spicata*). This area shows evidence of considerable human disturbance; debris is abundant and non-native plant species, such as ice plant (*Carpobrotus edule*), are extensive.

Willow Thicket Riparian

There are two distinct willow (*Salix lasiolepis*) thickets. A small thicket inhabits the drainage swale at the southeast end, beginning in an area adjacent to the railroad tracks and extending along the top of the creek ravine. The second thicket encompasses a larger area between Highway 1 and the railroad tracks. The willows form dense, virtually impenetrable stands. Adjacent to and intermixed with the willow are blackberry (*Rubus ursinus*) shrubs.

Ruderal/Landscape Plantings

The western bluff is planted with Monterey cypress (*Cupressus macrocarpa*). The trees, varying in size from young seedlings to mature individuals, form a dense canopy along the bluff. The understory is poorly developed and is limited to grasses, bare ground and scattered clumps of common aster, field mustard (*Brassica campestris*), alyssum (*Alyssum maritima*) and English plantain (*Plantago lanceolata*).

The small ravine to the east of the cypress grove is dominated by introduced and weedy, or ruderal, vegetation. Plants include German ivy (*Senecio mikanioides*), alyssum, field mustard, poison hemlock (*Conium maculatum*), bristly ox-tongue (*Picris echioides*), New Zealand spinach (*Tetragonia tetragonioides*), milk thistle (*Silybum marianum*) and Australian thistle (*Cardus pycnocephalus*).

Policy: The areas supporting native plant communities, including coast shrub, coastal bluff scrub, willow thicket riparian and coastal dunes, should be protected from uncontrolled access. Trails through these areas should be placed within previously disturbed areas, i.e. ruderal vegetation areas. Interpretive signs, encouraging the use of established trails and the protection of natural areas, should be erected.

Policy: Plant species that are non-native to the region and have the potential to invade, or continue to invade areas of native plant habitat, these should be periodically removed and their spreading controlled:

Policy: The small, low-use trail that extends along the bluff in the westernmost portion of the area (in the vicinity of Lone Star's helipad) should be closed and revegetated.

Animal Life

Sensitive wildlife habitats in the project area include all of the coastal cliffs, the pier, the sandy beach adjacent to the pier and the rocky intertidal shelves (See Map 12 and Appendix E). The pier and coastal cliffs are important seabird breeding sites. The beach adjacent to the pier is used by juvenile cormorants, recently fledged from the pier. The rocky intertidal shelves are used as foraging areas by shorebirds, and as roosting areas by shorebirds and gulls. Small numbers of shorebirds also use the sandy beach habitat for foraging and roosting. The bluff top areas receive heavy human disturbance, resulting in reduced wildlife values.

Several bird species of interest breed at Davenport Beach and Bluffs. These are Brandt's cormorant (*Phalacrocorax penicillatus*), pelagic cormorant (*P. pelagicus*), pigeon guillemot (*Cepphus columba*), rhinoceros auklet (*Cerorhinca monocerata*) and possibly black swift (*Cypseloides niger*).

The Pier

Brandt's cormorant, pelagic cormorant and double-crested cormorant (*Phalacrocorax auritus*) roost year-round and nest on the abandoned pier which is located just offshore at the west end of the site. The breeding colony of Brandt's cormorants is the only colony in Santa Cruz County, and the only one between San Pedro Point in northern San Mateo County and Seventeen Mile Drive in Monterey County. Censuses during the spring and summer of 1987 and 1988 found 130 and 131 pairs, respectively. Breeding individuals are present at the colony, displaying, as early as late January. Nest building occurs from February to April. Egg laying and incubation spans from April to mid-May. Nestlings are evident by late May, with fledging occurring from mid-July to mid-August. The breeding adults probably forage along the coast up to ten miles in either direction of the pier. The fledged juveniles use the sandy beach adjacent to the pier as a resting area after leaving the nest. Three hundred to 500 Brandt's cormorants use the pier as a night roost during the non-breeding season.

One to three pairs of pelagic cormorants nest at the pier. A census of breeding seabirds along the Santa Cruz County coast in June of 1988 found 23 pairs of this species nesting in Santa Cruz County. The timing for this species' breeding activity at the pier is very similar to that outlined for Brandt's cormorant. Juvenile pelagic cormorants have not been observed to use the adjacent beach as a resting area. Fifty to 100 pelagic cormorants use the pier as a night roost during the non-breeding season.

Double-crested cormorants use the pier as a night roost all year, with most individuals being present during the non-breeding season. Fewer than ten are typically present from May to mid-July. The number of double-crested cormorants present during the remainder of the year is variable, peaking from November to January. High counts in recent years have been of up to 300 individuals. With numbers apparently declining in recent years at the site, the pier is now the smallest of the three roosts of this species known to occur in Santa Cruz County. The double-crested cormorant is considered a species of special concern by the California Department of Fish and Game (CDFG)*.

Any human interactions with the pier structure, or close approaches by humans to the pier, would probably be a major disturbance to the cormorants. Such disturbances may result in temporary abandonment of the pier. Regular human activity on the adjacent pocket beach would probably disrupt activities at the pier, and might result in abandonment of the site.

Human activity on the pocket beach during mid-July through August would interfere with the use of the site as a resting area by juvenile Brandt's cormorants. Disturbance of the breeding colony from March to early August could lead to a reproductive failure.

There is no indication that the current human activity on top of the bluff affects the activities of the cormorants using the pier.

The Cliffs

The cliffs support pigeon guillemot and rhinoceros auklet nesting. Black swifts have been regularly observed in the area during their breeding season, but nesting in the vicinity of Davenport has not been confirmed.

Pigeon guillemots nest in cracks and hollows on the cliff face. Censuses during the 1987 and 1988 breeding season found 30 to 40 pairs of guillemots nesting in the vicinity of Davenport. The majority have been observed nesting on the high cliffs adjacent to the pier, but nesting has also occurred on the lower cliffs flanking Davenport Beach. Pigeon guillemots nesting in the vicinity of Davenport comprise 7 to 11 percent of the Santa Cruz County breeding population.

They are present from mid-March to late August, with the local breeding season spanning mid-April to early August. Young are in the nest from late May to early August. The breeding adults make frequent trips from the cliff face to the ocean, often gathering in displaying groups on the water adjacent to the nest cliffs.

Rhinoceros auklets were discovered nesting in the cliff face on the small promontory just west of the pier during the spring of 1987. This site is the southernmost confirmed breeding location for this species in North America, and it is the only confirmed breeding location in Santa Cruz County. Up to 16 auklets were present during the 1987 season, with two to five pairs actually nesting. Only three auklets were present during the 1988 nesting season. The rhinoceros auklet is considered to be a species of special concern by the CDFG.

This species is present at the site from late March to late July. The local nesting season spans mid-April to mid-July, with young in the nest from late May to mid-July. The breeding adults frequent the cliffs and adjacent water during the morning, flying out to sea to forage during the remainder of the day, returning at dusk to the nest site.

* Species of special concern are those whose California breeding populations "have declined severely or are otherwise so low that extirpation is a real possibility" (Bird Species of Special Concern in California, J.V. Remsen 1978.)

Black swifts nest in seacaves or cliff faces adjacent to seeps or flowing water. This species has not been observed nesting at the project site, but suitable substrates for nest placement are present. One to four black swifts have been observed at the project site during late May to early August in recent years. The black swift is considered to be a species of special concern by the CDFG.

Any human activity at the base of nest cliffs used by these species would probably disrupt their nesting cycle. Regular human activities would likely lead to nest abandonment. Human activity on top of the bluffs can have significant effects on the rhinoceros auklets, but does not appear to affect the use of the site by pigeon guillemots.

Activity on Davenport Beach, adjacent to nest cliffs, does not appear to have an effect on the pigeon guillemot's use of the cliffs. Activity on the beach adjacent to the pier would probably negatively affect this species' use of those cliffs. Human activities on the bluff top may startle the guillemots down into the water, but the existing levels of activity have not been observed to disrupt the nesting cycle.

The rhinoceros auklets are more sensitive to disturbance than the pigeon guillemots. Their nest sites are inaccessible but can be viewed from the bluff top. The rhinoceros auklets have been observed to fly off the cliff when an observer appears on top of the bluff, and they have been reluctant to return to the nest site when people are present. Such disturbance could result in a nesting failure, and possibly future abandonment of the site.

The black swift typically chooses nest sites that are inaccessible to normal human traffic, and so is less likely to be disturbed. The existing patterns of human activity at the Davenport Beach and Bluffs area probably do not affect this species' use of the cliffs.

Rocky Intertidal Shelves

This habitat provides important foraging substrate for various species of shorebirds, and low tide roosting areas for shorebirds and gulls. Shore bird species using this type of intertidal habitat include black-bellied plover (*Pluvialis squatarola*), black oystercatcher (*Haematopus bachmani*), whimbrel (*Numenius phaeopus*), wandering tattler (*Heteroscelus incanus*), marbled godwit (*limosa fedoa*), willet (*Catoptrophorus semipalmatus*), ruddy turnstone (*Arenaria interpres*), black turnstone (*A. melanocephala*), surfbird (*Aphriza virgata*) and sanderling (*Calidris alba*). Nine species of gulls roost on the rocky shelves, with the primary species being California gull (*Larus californicus*), western gull (*L. occidentalis*) and glaucous-winged gull (*L. Glaucouscens*).

This habitat is most extensively used for feeding and roosting from August to early May. Use is lighter during the breeding season. The black oystercatcher, the only shorebird using the site that breeds locally, nests on rocky shelves, but has not been observed to do so at Davenport Beach and Bluffs.

The presence of humans on or immediately adjacent to the rocky shelves displaces the use of this habitat by shorebirds and gulls, and may discourage their future use of the site. Human activity on top of the bluffs, adjacent to the shelves, may temporarily displace the birds.

Policy: Foot traffic on the top of the bluff west of the pier should be restricted to avoid disturbance of the nesting rhinoceros auklets. A sign should be installed explaining the sensitivity and importance of these birds and their habitat.

Policy: Access to the pocket beach and intertidal shelves should be discouraged to minimize wildlife disturbance.

Policy: Davenport Pier is dilapidated. Part or all of the pier's platform is expected to collapse at some point in the future. When a part of the pier collapses, the platform, a breeding area for cormorants, should be replaced by the State or Federal Governments in the interest of protecting wildlife habitat. Furthermore, to enhance its value as a breeding area for cormorants, the level surface area should be expanded when the pier is rebuilt.

Cultural Resources

The Costanoan Indians once occupied the North Coast area. They settled at beaches where streams furnished fresh water and supplemented their food supply of shellfish and fish.

The Euroamerican era began in the mid-1800's. The uplands were grazed by cattle and planted with a variety of row crops.

Policy: As with the other North Coast Beaches, on-site investigations should be made prior to any ground disturbance at Davenport Beach and Bluffs. The discovery of cultural resources should be promptly reported to appropriate authorities.

Aesthetic Resources

The beach has an interesting solitary rock outcrop just offshore, and the extended coastline, visible from the bluffs, is particularly striking. However, the scenic quality of the area has been

somewhat reduced due to considerable disturbance of native vegetation along the bluff top and in the area of the sand dunes at Davenport Beach.

Policy: Public access should be directed and parking consolidated to reduce visual impacts where vegetation degradation has occurred.

Policy: New site improvements should be visually harmonious with the natural environment.

Recreation Resources

Most visitors come simply to enjoy the environmental setting; they come walking or jogging, or sit in their cars and look around for awhile. Many stop to watch for migrating grey whales, and to a lesser extent, marine birds. Mostly local residents use the beach, primarily for picnicking and fishing, and occasionally for sunbathing. Very little swimming or surfing occurs. Many transients camp in the cypress grove, despite the lack of sanitary facilities and support of the community.

Policy: The level of use and types of recreational opportunities should be consistent with existing use, unless that use is in conflict with natural resource protection policies.

Supplemental Existing Conditions and Policies

Parking and Access

Currently, parking occurs at four separate locations. At the western end of the area, visitors park along the western side of the railroad track below the cypress grove (see Map 12). RMC Lone Star, owner of this property, has recently blocked off most of this area. Directly across the railroad tracks adjacent to Highway 1 is a larger and more accessible parking area. Further east along the highway and across from several business establishments in Davenport is the largest parking lot. It is used not only by Davenport Beach and Bluffs visitors, but also by employees of the Odwalla Plant, and truckers and others stopping by to purchase supplies at stores across the highway. A small amount of parking also occurs near the east end of the beach.

None of the parking lots have singular exits and entrances. This problem is accentuated at the parking lot directly across from the Davenport businesses where trucks also park along the highway and vehicles turn across lanes of traffic in two directions.

Ingressing and egressing vehicular traffic is dangerous as well at the two outermost parking lots due to poor sight distances, and in the case of the most western one, also because of poor turning

radii and the juxtaposition of the railroad tracks across the highway at the parking area.

Pedestrians must cross the railroad tracks from every parking lot except the one at the west end. They must also maneuver up and down several slopes which are not entirely safe or easy.

Davenport residents usually walk to the site from the vicinity of the stores or the end of Davenport Avenue. Although the posted speed limit through town on Highway 1 is 45 mph, and despite a yellow caution signal, most through traffic exceeds this speed. Local residents feel that the speed limit through town should be lowered to reduce traffic hazards, and especially risks to crossing pedestrians.

Policy: The number of parking areas should be reduced to minimize impacts on natural and visual resources and to reduce traffic hazards.

Policy: Parking should be located where ingress and egress will be safe and controlled through single entrances, exits, or combinations thereof.

Policy: Either full left-turn channelization lanes or a widened roadway and deceleration lanes should be provided as required by the California Department of Transportation.

Policy: Visitors should be offered a choice between free and paid parking at the Davenport Beach and Bluffs Area. The free parking lot should be limited to one hour, smaller in size, and located closer to the bluffs, and is intended to accommodate short-stay visitors. Paid parking is needed to help offset management costs. This parking lot should be larger, located closer to the beach and Davenport businesses, and is intended for longer staying visitors. To discourage visitors from parking elsewhere in Davenport, a parking program should be initiated requiring parking permits for all street parking in the community. This program will need to be enforced through the issuance of parking citations by authorized beach management personnel.

Policy: No vehicles should be permitted to parallel park along the highway within the Davenport Area except for semi-trucks traveling south. These drivers frequently pull over for brief stops at the businesses across the highway. These businesses are encouraged to accommodate the trucks by expanding their parking lots and improving truck access.

Surrounding Land Use

The project area is surrounded by a mix of land uses. To the west and northwest, RMC Lone Star operates a cement plant. Southern Pacific Railroad cars pass between the beach and bluffs and the parking areas to the Lone Star plant several times a day, creating a potentially hazardous condition for crossing pedestrians and vehicles.

The community of Davenport is located directly across Highway 1 from the central portion of the Davenport Beach and Bluffs Area. Commercial uses are compatible and frequently visited by those who also go to the beach or bluffs. However, due to a lack of sanitary facilities, trash containers, campsites, etc., some beach and bluffs visitors use nearby residential facilities and lawns. This has greatly upset many residents in the community.

To the east of Davenport Beach, Coast Dairies and Land, Co. property is used for crop production. Accidental spraying of beach users is not a problem, primarily because winds generally blow from west to east. Recreationists cause little damage to crops, as these fields are relatively inaccessible.

Policy: Access across the railroad tracks shall be limited to two or three signed crossings. Signs shall be posted with warnings regarding train traffic. Access alongside the tracks shall be discouraged wherever possible through directional signage and optional trails.

Policy: Sanitary facilities and trash services shall be provided to accommodate visitors' needs and to minimize impacts on local residents.

Policy: Agricultural spraying and beach management shall be coordinated to prevent potential conflicts.

Land Ownership and Other Legal Conditions

South of the railroad, the bluffs are predominantly owned by RMC Lone Star (see Map 13). Ocean Shore Railroad owns a small parcel where the ravine dissects the bluffs. A wedge-shaped parcel between the railroad tracks and highway is also owned by Ocean Shore Railroad. Southern Pacific Railroad's property expands from an eight-foot wide strip at the west end to a much wider area between the highway and Davenport Beach at the east end. A private parcel is situated in the middle, across from the town of Davenport.

Policy: Because public funds cannot be used without fee titles, easements, or other proprietary interests in place, agreements must be negotiated with all potentially affected landowners before developing proposed improvements, restoring natural resources and providing public access.

Allowable Use Intensity and Carrying Capacity

Local residents have indicated that they want the proposed site improvements to be commensurate with existing demand and compatible with existing facilities along the coast.

In consideration of these sentiments and the sensitivity of the natural resources, the allowable use intensity should remain low (Table 21).

Table 21
Targeted Number of Parking Spaces
Based on Beach Carrying Capacities
Davenport Beach and Bluffs Area

<u>Size of Beach in Sq. Ft.</u>	<u>Carrying Capacity^a</u>	<u>Average Demand^b</u>	<u>Available Space^c</u>	<u>Targeted Supply^d</u>
65,000	79	40	60	40

^aOptimum number of parties (i.e. vehicles) per 1,000 square feet of beach plus an additional 14 parties visiting the bluffs at one time

^bNumber of vehicles based on estimates of current use during summer weekends

^cOff-highway parking areas only

^dRepresents a percentage of the physical carrying capacity, reflecting management objectives and physical constraints

LAND USE AND FACILITIES ELEMENT

Land Use and Facility Recommendations

Like the recommendations for the other North Coast beaches, the plan for Davenport Beach and Bluffs does not propose any change in land use, but rather, attempts to provide for existing and anticipated recreation, natural resource, and private ownership needs and concerns.

Proposed improvements for the Davenport Beach and Bluffs Area are described below and illustrated in Map 13.

Davenport Beach and Bluffs

- Extend the existing 12-foot wide center turning lane that runs along Highway 1 through Davenport to safely accommodate westbound vehicles turning into the primary parking lot.
- Add 8-foot maximum wide shoulder turning lanes for eastbound traffic turning into both the primary and secondary parking lots.
- Develop a 26-vehicle unpaved parking lot with a combined entrance/exit located near the center of the site and just west of Davenport's commercial area.
- Develop a secondary 14-vehicle unpaved parking lot with a separate entrance and exit farther west along Highway 1.
- Control access into these parking lots, and the existing private parking lot, by installing a guard rail along the highway.
- Install gates in the guard rail at the entrances to the primary and private parking lots; also provide tire teeth across the exit lane of the primary parking lot so that the lot can be closed while still permitting parked cars to exit.
- Provide fee envelope dispensing and repository boxes at the primary parking lot.
- Provide an entrance station (kiosk) at the primary parking lot so that fees can be manually collected.

- **Construct concrete stairs with pipe handrails where the proposed trail drops down to the beach and on the railroad embankments between the secondary parking lot and bluffs.**
- **Provide trash containers at the parking lots and at the end of the trail at the beach.**
- **Provide a vault toilet adjacent to the primary parking lot at the trailhead.**
- **Provide general information signs at the parking lots, and additional signs where necessary on the trails, shoreline, Highway 1, and public streets in Davenport. (See Sign Schedule for Davenport Beach and Bluffs.)**
- **Erect fencing along the top of the bluffs to minimize risks to visitors.**
- **Plant low growing native shrubbery around the proposed parking lots to reduce the visibility of vehicles and trailhead facilities.**
- **Revegetate areas where native vegetation has been damaged.**
- **Remove exotic plants.**
- **Clean the beach and bluffs of litter and debris.**
- **Reconstruct the pier.**

TABLE 22
Sign Schedule
Davenport Beach and Bluffs Area

Map Key	Description	No. of Signs
A	General Information (see below)	2
B	Coastal Access	2
C	Warning--Hazardous Shoreline	2
D	Warning--No Beach at High Tide	2
E	Access Closed	
F	←— Trail	
G	Trail —→	
H	Trail to Bonny Doon Beach	
I	Habitat Restoration/Protection--Please Stay Out (with Interpretive Information)	1
J	No Parking at Any Time	3
K	No Parking 10 p.m. to 6 a.m.	2
L	No Parking Beyond This Point	
M	Do Not Enter--Tires will be Punctured	1
N	Do Not Block Driveway	
O	Pedestrian Crossing Next 1500 Feet	
P	Handicap Parking Only Between Signs	
Q	←— Trail to Beach Trail to Bluffs —→	1

General Information Options

Credit for Improvements	x
Management Authority	x
No Littering	x
Emergency Telephone Information	x
Fee and Deposit Information	x
Stay on Trails--Surrounding Property Privately Owned	
Stay on Trails--Help Protect Our Natural Resources	x
Watch for Trains before Crossing Railroad Tracks	x
Hazardous Cliffs/Shorebird Habitat	x
No Breaching of Beach Lagoons Permitted	
Strong Currents/Swim at Your Own Risk/No Lifeguard on Duty	x
No Overnight Camping	x
No Motorized Vehicle	
No Dogs	

All off-highway signs should be graphically coordinated and made of identical materials. Information and regulations should be consolidated to the greatest extent possible on two trailhead signs in order to minimize the number of individual signs. Additional signage will be needed throughout the community of Davenport indicating that only permit parking is allowed and that violators will be cited. The permit parking program in Davenport should be developed with input from the community.

Habitat Enhancement Plan

An area-wide clean-up should be performed to remove extensive infestations of the following invasive, non-native plant species: ice plant, wattle (*Acacia sp.*), cypress (outside of the existing grove area only), German ivy, pampas grass (*Cortaderia selloana*) and (*Eucalyptus*).

Existing trails that are not designated on Map 13 and areas where parking will not be continued should be revegetated. The ground should be scarified to a depth of two to three inches and seeded with a fast-growing erosion control seed mix (i.e., Santa Cruz Erosion Control Mix). Seeds collected from native plants in the Davenport area should be added to the seed mix. Recommended plant species include lizard tail, common yarrow, yellow bush lupine and live-forever. Seeding should be conducted in early fall, prior to October 15th. Native shrubbery (e.g., dwarf coyote brush, *Baccharis pilularis*) could also be planted where trails should be obliterated, along the bluff top and around the two proposed parking lots.

These measures and fencing will suffice in protecting wildlife habitat.

Engineering Feasibility

No new utilities are proposed. Highway improvements will be designed by an engineering consultant or the Santa Cruz County Public Works Department and reviewed and approved by the California Department of Transportation. A geotechnical engineer will be consulted in the design of the stair structures, if necessary.

Sequence of Actions

It is hoped that improvements at all the North Coast Beaches can be made within the same general time frame so that use will not significantly shift from one beach to another. However, if this is not feasible, improvements at Davenport Beach and Bluffs should follow development at Bonny Doon and Scott Creek where traffic created by beach visitors is especially hazardous and natural resources have been heavily damaged.

INTERPRETIVE ELEMENT

The only interpretive feature proposed for the Davenport Beach and Bluffs Area is a sign describing important wildlife (e.g. Rhinoceros auklet) and their sensitivity to human activity. This sign should be placed at the westernmost end of the bluff trail.

OPERATIONS ELEMENT

As with the other North Coast beaches, no management currently exists at Davenport Beach and Bluffs.

In adding this area to the overall management of the North Coast Beaches, proposed staffing requirements increase. If it were to be managed by the California Department of Parks and Recreation, an additional Ranger and Maintenance Worker, both of whom would also serve as Peace Officers, and at least two Seasonal Lifeguards and Field Workers each would be needed. These personnel would be responsible for collecting user fees, picking up refuse, carrying trash to a dumpster located at the primary parking lot, maintaining facilities, repairing equipment, providing office field support, supervising public safety, performing cliff and aquatic rescues, issuing parking citations, and managing the natural resources.

COST/REVENUE ANALYSIS AND OTHER IMPLEMENTATION CONSIDERATIONS

Probable Cost Estimate for Development

Table 23 indicates the probable cost for developing the Davenport Beach and Bluffs Area, based on current dollar values and reflecting in-place costs at union wages.

The amount of \$382,688 includes a 15 percent contingency and 10 percent for design and engineering. It is considered a conservative estimate.

Including this area, the total amount for developing the North Coast Beaches is approximately \$1,890,971, excluding potential in fee and easement costs.

**Table 23
Development Costs
Davenport Beach and Bluffs Area**

<u>Item Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
Highway 1 Improvements				
12' wide turning lane, 300 L.F.	1	L.S.	\$50,000.00	\$50,000
8' wide shoulder, 400 L.F. (inc. grading, striping, & traffic control)	2	L.S.	40,000.00	80,000
Guard rail	1,600	L.F.	15.00	24,000
Gate	2	Each	1,800.00	3,600
Parking				
Dispensing and repository boxes	1	Set	300.00	300
Entrance station	1	Each	8,500.00	8,500
Tire teeth	1	L.S.	1,000.00	1,000
On-site cut and fill	3,500	C.Y.	3.00	10,500
Landscaping (5 gal. shrubs)	50	Each	35.00	1,750
Access				
Concrete stairs with pipe handrails	3	L.S.	8,000.00	24,000
Sanitation				
Trash containers (chained to posts in concrete)	6	Pair	250.00	1,500
Vault toilet (2-unit)	1	Each	27,500.00	27,500
Beach clean-up		Allowance		7,500
Signs				
Highway	5	Each	50.00	250
Off-Highway Streets of Davenport*	5	Each	300.00	1,500
Vegetation Restoration and Wildlife Protection				
Exotic plant removal		Allowance		1,500
Site preparation, seed collection and application		Allowance		5,000
Pier reconstruction with redwood planks		Allowance		2,500
Safety				
Concrete rail fencing (2 rail, 3' high)	3,250	L.F.	17.00	55,250**
		Subtotal		\$306,150
15% Contingency and 10% for design and engineering				<u>76,538</u>
			Total	\$382,688

*The number and cost of these signs requires additional study.

** A metal fencing system that is rust resistant may be considered as a less expensive alternative.

Funding Options

Funding options for Davenport Beach and Bluffs are the same as those identified in the North Coast Beaches General Plan for the other sites.

Management Options

As with the other beaches, there are three management options: County of Santa Cruz, the private sector and the California Department of Parks and Recreation.

The following tables identify estimated annual operating expenses for the Davenport Beach and Bluffs Area that are in addition to costs already determined for the other beaches.

TABLE 24

**Additional Annual Operating Expenses
County of Santa Cruz
Davenport Beach and Bluffs Area**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing March-October</u>	<u>Staffing November-February</u>	<u>Total</u>
Seasonal Parking Assistant	\$9,100	(1) \$9,100	(0)	<u>\$9,100</u>
Total Labor				\$9,100
Labor Overhead (10% for seasonal employee)				910
Equipment Amortized Over 10-Year Period*				4,000
General County Overhead (35% of Total Labor and Equipment Costs)				4,904
Sanitary Services**				<u>5,000</u>
Total				<u>\$23,914</u>

* Vehicles, radio equipment, tools, uniforms, etc.

** Garbage collection and vault toilet pumping by private contractors

TABLE 25

**Additional Operating Expenses
Private Sector
Davenport Beach and Bluffs Area**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing</u>		<u>Total</u>
		<u>March-October</u>	<u>November-February</u>	
Manager	\$25,000			\$1,042*
Field Crew	18,000	(1) \$12,060	(1) \$5,940	18,000
Seasonal Field Crew	12,500	(2) 16,723		<u>16,723</u>
Total Labor				\$35,765
Labor Overhead (30%)				10,730
Company Overhead (5%)				1,788
Equipment Amortized Over 10-Year Period**				<u>2,250</u>
Subtotal				50,533
Profit (20%)				10,107
Sanitary Services***				<u>5,000</u>
Total				65,640
County Contract Administration (10% of Total)				<u>6,564</u>
Total				<u>\$72,204</u>

- * Represents proportional cost of Manager's time for a single beach
- ** Vehicles, radio equipment, tools, uniforms, etc.
- *** Garbage collection and vault toilet pumping by private contractors

TABLE 26

**Additional Annual Operating Expenses
Department of Parks and Recreation
Davenport Beach and Bluffs Area**

<u>Personnel Type</u>	<u>Typical Annual Salary</u>	<u>Staffing</u>		<u>Total</u>
		<u>June-September</u>	<u>October-May</u>	
Field Crew/Peace Officer	\$26,500	(1) \$8,745	(1) \$17,755	\$26,500
Maintenance Worker	21,000	(1) 6,930	(1) 14,070	21,000
Seasonal Lifeguard	18,000	(2) 25,773*		25,773
Seasonal Field Crew	13,000	(2) 18,614*		<u>18,614</u>
Total Labor				\$91,887
Labor Overhead (30%)				27,566
Equipment Amortized Over 10-Year Period**				4,500
Sanitary Services***				<u>5,000</u>
Total				<u>\$128,953</u>

- * Actually includes coverage for seven days a week during this period as well as for weekends throughout the remainder of the year for a total of 189 days.
- ** Vehicles (4-wheel drives, all terrain, compact sedans and pick-up trucks), intertidal Zodiac rescue boat, radio equipment, tools, uniforms, etc.
- *** Garbage collection and vault toilet pumping by private contractors.

It should be realized that some of these costs may be absorbed due to the efficiency in adding another unit to the management system.

Potential Revenue Scenarios

There are two potential revenue scenarios. Under the first scenario, fee collectors would be stationed only at Davenport Beach and Bluffs, Scott Creek, Bonny Doon, Yellowbank and Laguna Creek Beaches. In the second scenario, visitors would be expected to voluntarily deposit their fees at all seven beaches.

Using the same assumptions applied to the other beaches, a total of \$31,259 to \$35,019 could potentially be collected annually at Davenport Beach and Bluffs, depending on whether or not fees are collected by staff at a manned station (Tables 27 and 28). It should be noted that at this particular area, because of the proposed community-wide parking program, as much as 75 percent of the parking fine revenue is expected to be collectable. With a strong enforcement program, the amount of revenue from parking violations could be considerably greater for both scenarios.

Operating Expense/Revenue Summary

Table 29 compares the operating expenses of the three management options with the two potential revenue scenarios. While the addition of the Davenport Beach and Bluffs Area can be most efficiently managed by the County, the County staff, which would already be at a minimum, would be stretched even further.

When the costs of managing the Davenport Beach and Bluffs Area are absorbed into the overall management system for all the North Coast Beaches (lower half of Table 29), the relative differences in operational costs among the three management types are consistent with the costs previously determined for the other beaches; that is, private management is the best operating option. County management is slightly risky, and State Parks would definitely operate at a loss. (See additional comments in the North Coast Beaches General Plan.)

TABLE 27
Potential Revenue - Scenario 1
Davenport Beach and Bluffs Area

<u>Season/Day of Week</u>	<u># of Vehicles at One Time</u>	<u>Turnover Rate</u>	<u># Vehicles</u>	<u>Fee</u>	<u>\$/Day</u>	<u>Total</u>
Peak use - Holiday	26 (100%)	3.0	78.0	\$3.00	\$234.00	2,106 ^b
Peak use - Weekend	22 (85%)	2.0	44.0	3.00	132.00	8,448 ^c
Peak use - Weekday	9 (33%)	1.5	13.5	3.00	40.50	6,966 ^d
Winter - Any	7 (25%)	2.0	14.0	1.50 ^a	21.00	2,499 ^e
Subtotal						\$20,019
Revenue from parking fines, assuming \$30.00/ticket (private management only)						\$15,000
Total						\$35,019

- ^a This amount reflects the likelihood that only 50% of the fees will be paid and collected during the four months when entrance stations are not manned
- ^b 9 days during Memorial Day, 4th of July and Labor Day weekends
- ^c 64 weekend days during 8-month peak use season
- ^d 172 week days during 35-week peak use season
- ^e 119 days during 17-week winter season

TABLE 28
Potential Revenue - Scenario 2
Davenport Beach and Bluffs Area

Peak use season (50% of Scenario 1 revenue)	\$17,510
Winter use season (100% of Scenario 1 revenue)	2,499
Subtotal	\$20,009
Parking fine revenue (75% of Scenario 1 revenue)	11,250
Total	\$31,259

TABLE 29
Operating Cost/Revenue Analysis*

<u>Management Options</u>	<u>Scenario 1</u>	<u>Potential Revenue</u> <u>Scenario 2</u>	<u>Expenses</u>	<u>Difference</u>
Davenport Beach and Bluffs				
County		\$31,259	\$23,914	\$ 7,345
Private Sector	\$35,019		72,204	<37,185 >
State Parks	20,019		128,953	<108,934 >
All North Coast Beaches**				
County		298,592	286,700	11,892
Private Sector	499,905		459,828	40,077
State Parks	455,466		756,592	<301,126 >

* Costs reflect adding Davenport Beach and Bluffs to the overall North Coast Beaches management system, and not treating it as an independent management unit.

** Greyhound Rock, Scott Creek, Davenport Beach and Bluffs, Davenport Landing, Panther, Bonny Doon, Yellowbank and Laguna Creek

Law Enforcement

A management presence at Davenport Beach and Bluffs will help reduce a number of existing problems including littering, unsanitary conditions, degradation of natural resources, abandoned cars, and incidences of vandalism, uncontrolled fires, alcohol/drug use, and social conflicts.

The comprehensive parking program for the public streets of Davenport and the fee parking lot will require considerable enforcement to work effectively.

Risk Analysis

With the proposed site improvements and management, existing liability exposure will be alleviated to a great extent for all involved parties. With implementation of this plan, liability will shift from private property owners (upon whose land recreation use is occurring) to the County of Santa Cruz.

Action Recommendations

Actions recommended in the General Plan will apply as well to Davenport Beach and Bluffs. However, two additional property owners will be affected: Fred and Bren Bailey and Ocean Shore Railroad. Ownership and/or easement agreements with these property owners will be necessary in order to make any improvements to the site.

Appendix D

APPENDIX D
LIST OF VASCULAR PLANTS SPECIES
OBSERVED AT DAVENPORT BLUFF AND BEACH

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
AIZOAZEAE	
<u>Carpobrotus edule</u>	Ice Plant
<u>Tetragonia tetragonioides</u>	New Zealand Spinach
ANACARDIACEAE	
<u>Toxicodendron diversilobum</u>	Poison Oak
APIACEAE	
<u>Conium maculatum</u>	Poison Hemlock
<u>Sanicula crassicaulis</u>	Pacific Sanicle
ASTERACEAE	
<u>Achillea millefolium</u>	Common Yarrow
<u>Artemisia douglasiana</u>	California Mugwort
<u>Artemisia californica</u>	California Sage
<u>Aster chiliensis</u>	Common Aster
<u>Baccharis pilularis</u> ssp. <u>consanguinea</u>	Coyote Brush
<u>Cirsium</u> sp.	Thistle
<u>Cotula cornopifolia</u>	Brass Buttons
<u>Eriophyllum staechadifolium</u>	Lizard Tail
<u>Erigeron glaucus</u>	Seaside Daisy
<u>Grindelia latifolia</u>	Coastal Gum Plant
<u>Gnaphalium</u> sp.	Cudweed
<u>Picris echioides</u>	Bristly Ox-Tongue
<u>Sonchus oleraceus</u>	Common Sow Thistle
<u>Silybum marianum</u>	Milk Thistle
<u>Taraxacum officinale</u>	Common Dandelion
BRASSICACEAE	
<u>Brassica campestris</u>	Field Mustard
<u>Raphanus sativus</u>	Wild Radish
<u>Alyssum maritima</u>	Sweet Alyssum
CAPRIFOLIACEAE	
<u>Lonicera hispidula</u>	Hairy Honeysuckle
CARYOPHYLLACEAE	
<u>Stellaria media</u>	Common Chickweed
<u>Spergularia macrotheca</u>	Sand Spurry
CONVOLVULACEAE	
<u>Convolvulus sordanella</u>	Beach Morning Glory
CRASSULACEAE	
<u>Dudleya caepitosa</u>	Live-forever

CUPRESSACEAE <u>Cupressus macrocarpa</u>	Monterey Cypress
FABACEAE <u>Lotus</u> sp. <u>Medicago polymorpha</u> <u>Lupinus</u> sp. <u>Trifolium</u> sp. <u>Vicia</u> sp.	Bird's Foot Trefoil Bur Clover Lupine Clover Vetch
FAGACEAE <u>Quercus agrifolia</u>	Coast Live Oak
FUMARIACEAE <u>Eschscholzia californica</u>	California Poppy
GERANIACEAE <u>Erodium cicutarium</u> <u>Erodium moschatum</u> <u>Geranium dissectum</u>	Red-stemmed Filaree White-stemmed Filaree Cut-leave Geranium
GRAMINEAE <u>Avena barbata</u> <u>Bromus mollis</u> <u>Bromus diandrus</u> <u>Cortaderia seloana</u> <u>Lolium perenne</u> <u>Polypogon monseliensis</u> <u>Distichlis spicata</u>	Oat Soft Chess Ripgut Grass Pampas Grass Perennial Ryegrass Rabbitsfoot Grass Salt Grass
IRIDACEAE <u>Iris</u> sp.	Iris
MALVACEAE <u>Malva</u> sp.	Mallow
MIMOSACEAE <u>Acacia decurrens</u>	Green Wattle Acacia
MYRTACEAE <u>Eucalyptus</u> sp.	Eucalyptus
NYCTAGINACEAE <u>Abronia</u> sp.	Sand Verbena
OXALIDACEAE <u>Oxalis pes-caprae</u>	Bumuda Buttercup
PLANTAGINACEAE <u>Plantago lanceolata</u> <u>Plantago major</u>	English Plantain Broadleaf Plantain
POLYGONACEAE <u>Rumex crispus</u> <u>Eriogonum latifolium</u>	Curly Dock * Buckwheat

PTERIDACEAE

Polypogon californicum

California Polypody

RANUNCULACEAE

Ranunculus californicus

California Buttercup

ROSACEAE

Rubus ursinus

Blackberry

Potentilla sp.

Silverweed

Fragaria californica

California Strawberry

SALICACEAE

Salix lasiolepis

Arroyo Willow

SCROPHULARIACEAE

Scrophularia californica

California Bee Plant

URTICACEAE

Hesperocnide tenella

Western Nettle

Appendix E

APPENDIX E. Wildlife observed (O) and predicted to occur (P) At
Davenport Beach and Bluffs, Santa Cruz County, California.

CLASS: AMPHIBIA

ORDER: CAUDATA (Salamanders)

FAMILY: SALAMANDRIDAE (Newts)

California Newt, (Taricha torosa) P

FAMILY: PLETHODONITDAE (Lungless Salamanders)

Ensatina, (Ensatina eschscholtzi) P

California Slender Salamander, (Batrachoseps attenuatus) P

Black Salamander, (Aneides flavipunctatus) P

ORDER: SALIENTIA (Frogs and Toads)

FAMILY: BUFONIDAE (True Toads)

Western Toad, (Bufo boreas) P

FAMILY: HYLIDAE (Treefrogs and Relatives)

Pacific Treefrog, (Hyla regilla) O

CLASS: REPTILIA

ORDER: SQUAMATA (Lizards and Snakes)

SUBORDER: SAURIA (Lizards)

FAMILY: IGUANIDAE (Iguanids)

Western Fence Lizard, (Sceloporus occidentalis) O

FAMILY: SCINCIDAE (Skinks)

Western Skink, (Eumeces skiltonianus) P

FAMILY: ANGUIDAE (Alligator Lizards and Relatives)

Southern Alligator Lizard, (Gerrhonotus multicarinatus) P

SUBORDER: SERPENTES (Snakes)

FAMILY: COLUBRIDAE (Colubrids)

Ringneck Snake, (Diadophis punctatus) P

Sharp-tailed Snake, (Contia tenuis) P

Racer, (Coluber constrictor) P

Striped Racer, (Masticophis lateralis) P

Gopher Snake, (Pituophis melanoleucus) P

Common Kingsnake, (Lampropeltis getulus) P

Common Garter Snake, (Thamnophis sirtalis) O

Western Terrestrial Garter Snake, (Thamnophis elegans) P

Western Aquatic Garter Snake, (Thamnophis couchi) P

CLASS: AVES

ORDER: GAVIIFORMES (Loons)

FAMILY: GAVIIDAE (Loons)

Red-throated Loon, (Gavia stellata) O

Pacific Loon, (Gavia arctica) O

Common Loon, (Gavia immer) O

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

ORDER: PODICIPEDIFORMES (Grebes)

FAMILY: PODICIPEDIDAE (Grebes)

Horned Grebe, (<u>Podiceps auritus</u>)	O
Red-necked Grebe, (<u>Podiceps grisegena</u>)	O
Eared Grebe, (<u>Podiceps nigricollis</u>)	O
Western Grebe, (<u>Aechmophorus occidentalis</u>)	O
Clark's Grebe, (<u>Aechmophorus clarkii</u>)	O

ORDER: PROCELLARIIFORMES (Albatross, Shearwaters, Storm-Petrels and Allies)

FAMILY: PROCELLARIIDAE (Fulmars, Shearwaters, and large Petrels)

Northern Fulmar, (<u>Fulmarus glacialis</u>)	O
Sooty Shearwater, (<u>Puffinus griseus</u>)	O

ORDER: PELECANIFORMES (Tropicbirds, Pelicans, and Relatives)

FAMILY: PELECANIDAE (Pelicans)

Brown Pelican, (<u>Pelecanus occidentalis</u>)	O
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FAMILY: FREGATIDAE (Frigatebirds)

Magnificent Frigatebird, (<u>Fregata magnificens</u>)	O*
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FAMILY: PHALACROCORACIDAE (Cormorants)

Double-crested Cormorant, (<u>Phalacrocorax auritus</u>)	O
Brandt's Cormorant, (<u>Phalacrocorax penicillatus</u>)	O,n
Pelagic Cormorant, (<u>Phalacrocorax pelagicus</u>)	O,n

ORDER: CICONIIFORMES (Herons, Storks, Ibises, and Relatives)

FAMILY: ARDEIDAE (Herons and Bitterns)

Great Blue Heron, (<u>Ardea herodias</u>)	O
Great Egret, (<u>Casmerodius albus</u>)	P
Snowy Egret, (<u>Egretta thula</u>)	O
Cattle Egret, (<u>Bubulcus ibis</u>)	P

ORDER: ANSERIFORMES (Screamers, Ducks, and Relatives)

FAMILY: ANATIDAE (Swans, Geese, and Ducks)

Brant, (<u>Branta bernicla</u>)	O
Canada Goose, (<u>Branta canadensis</u>)	P
Mallard, (<u>Anas platyrhynchos</u>)	O
Cinnamon Teal, (<u>Anas cyanoptera</u>)	O
Greater Scaup, (<u>Aythya marila</u>)	P
Lesser Scaup, (<u>Aythya affinis</u>)	P
Harlequin Duck, (<u>Histrionicus histrionicus</u>)	P
Black Scoter, (<u>Melanitta nigra</u>)	O
Surf Scoter, (<u>Melanitta perspicillata</u>)	O
White-winged Scoter, (<u>Melanitta fusca</u>)	O
Red-breasted Merganser, (<u>Mergus serrator</u>)	O
Ruddy Duck, (<u>Oxyura jamaicensis</u>)	P

ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: CATHARTIDAE (American Vultures)

Turkey Vulture, (<u>Cathartes aura</u>)	O
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Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)	
Osprey, (<u>Pandion haliaetus</u>)	P
Black-shouldered Kite, (<u>Elanus caeruleus</u>)	O
Northern Harrier, (<u>Circus cyaneus</u>)	O
Sharp-shinned Hawk, (<u>Accipiter striatus</u>)	O
Cooper's Hawk, (<u>Accipiter cooperii</u>)	O
Red-shouldered Hawk, (<u>Buteo lineatus</u>)	O
Red-tailed Hawk, (<u>Buteo jamaicensis</u>)	O
Rough-legged Hawk, (<u>Buteo lagopus</u>)	P
Ferruginous Hawk, (<u>Buteo regalis</u>)	P
Golden Eagle, (<u>Aquila chrysaetos</u>)	P
FAMILY: FALCONIDAE (Caracaras and Falcons)	
American Kestrel, (<u>Falco sparverius</u>)	O,n
Merlin, (<u>Falco columbarius</u>)	P
Prairie Falcon, (<u>Falco mexicanus</u>)	P
Peregrine Falcon, (<u>Falco peregrinus</u>)	O
ORDER: GALLIFORMES (Megapodes, Currassows, Pheasants, and Relatives)	
FAMILY: PHASIANIDAE (Quails, Pheasants, and Relatives)	
California Quail, (<u>Callipepla californica</u>)	P
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and Relatives)	
FAMILY: CHARADRIIDAE (Plovers and Relatives)	
Black-bellied Plover, (<u>Pluvialis squatarola</u>)	O
Semipalmated Plover, (<u>Charadrius semipalmatus</u>)	P
Killdeer, (<u>Charadrius vociferus</u>)	O,n
FAMILY: HAEMATOPODIDAE (Oystercatchers)	
Black Oystercatcher, (<u>Haematopus bachmani</u>)	O,n
FAMILY: SCOLOPACIDAE (Sandpipers and Relatives)	
Greater Yellowlegs, (<u>Tringa melanoleuca</u>)	P
Willet, (<u>Catoptrophorus semipalmatus</u>)	O
Wandering Tattler, (<u>Heteroscelus incanus</u>)	O
Spotted Sandpiper, (<u>Actitis macularia</u>)	P
Whimbrel, (<u>Numenius phaeopus</u>)	O
Long-billed Curlew, (<u>Numenius americanus</u>)	P
Marbled Godwit, (<u>Limosa fedoa</u>)	O
Ruddy Turnstone, (<u>Arenaria interpres</u>)	O
Black Turnstone, (<u>Arenaria melanocephala</u>)	O
Surfbird, (<u>Aphriza virgata</u>)	O
Red Knot, (<u>Calidris canutus</u>)	P
Sanderling, (<u>Calidris alba</u>)	O
Western Sandpiper, (<u>Calidris mauri</u>)	P
Least Sandpiper, (<u>Calidris minutilla</u>)	P
Pectoral Sandpiper, (<u>Calidris melanotos</u>)	P
Dunlin, (<u>Calidris alpina</u>)	P
Short-billed Dowitcher, (<u>Limnodromus griseus</u>)	P
Long-billed Dowitcher, (<u>Limnodromus scolopaceus</u>)	P
Common Snipe, (<u>Gallinago gallinago</u>)	P
Wilson's Phalarope, (<u>Phalaropus tricolor</u>)	P

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

Red Phal

Red-necked Phalarope, (<u>Phalaropus lobatus</u>)	P
FAMILY: LARIDAE (Gulls and Terns)	
Pomarine Jaeger, (<u>Stercorarius pomarinus</u>)	O
Parasitic Jaeger, (<u>Stercorarius parasiticus</u>)	O
Bonaparte's Gull, (<u>Larus philadelphia</u>)	O
Heermann's Gull, (<u>Larus heermanni</u>)	O
Mew Gull, (<u>Larus canus</u>)	O
Ring-billed Gull, (<u>Larus delawarensis</u>)	O
California Gull, (<u>Larus californicus</u>)	O
Herring Gull, (<u>Larus argentatus</u>)	O
Thayer's Gull, (<u>Larus thayeri</u>)	O
Western Gull, (<u>Larus occidentalis</u>)	O,n?
Glaucous-winged Gull, (<u>Larus glaucescens</u>)	O
Glaucous Gull, (<u>Larus hyperboreus</u>)	P
Caspian Tern, (<u>Sterna caspia</u>)	O
Elegant Tern, (<u>Sterna elegans</u>)	O
Arctic Tern, (<u>Sterna paradisaea</u>)	P
Common Tern, (<u>Sterna hirundo</u>)	O
Forster's Tern, (<u>Sterna forsteri</u>)	O
FAMILY: ALCIDAE (Auks, Murres, and Puffins)	
Common Murre, (<u>Uria aalge</u>)	O
Pigeon Guillemot, (<u>Cephus columba</u>)	O,n
Marbled Murrelet, (<u>Brachyramphus marmoratus</u>)	O
Ancient Murrelet, (<u>Synthliboramphus antiquus</u>)	O
Cassin's Auklet, (<u>Ptychoramphus aleuticus</u>)	P
Rhinoceros Auklet, (<u>Cerorhinca monocerata</u>)	O,n
Tufted Puffin, (<u>Fratercula cirrhata</u>)	P
ORDER: COLUMBIFORMES (Pigeons and Doves)	
FAMILY: COLUMBIDAE (Pigeons and Doves)	
Rock Dove, (<u>Columba livia</u>)	O,n
Band-tailed Pigeon, (<u>Columba fasciata</u>)	O
Mourning Dove, (<u>Zenaidura macroura</u>)	O,n
ORDER: STRIGIFORMES (Owls)	
FAMILY: TYTONIDAE (Barn Owls)	
Common Barn Owl, (<u>Tyto alba</u>)	P
FAMILY: STRIGIDAE (Typical Owls)	
Great Horned Owl, (<u>Bubo virginianus</u>)	P
Short-eared Owl, (<u>Asio flammeus</u>)	P
ORDER: APODIFORMES (Swifts and Hummingbirds)	
FAMILY: APODIDAE (Swifts)	
Black Swift, (<u>Cypseloides niger</u>)	O,n
Vaux's Swift, (<u>Chaetura vauxi</u>)	P
White-throated Swift, (<u>Aeronautes saxatalis</u>)	P
FAMILY: TROCHILIDAE (Hummingbirds)	
Anna's Hummingbird, (<u>Calypte anna</u>)	O,n
Rufous Hummingbird, (<u>Selasphorus rufus</u>)	P
Allen's Hummingbird, (<u>Selasphorus sasin</u>)	P,n

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

ORDER: CORACIIFORMES (Kingfishers and Relatives)	
FAMILY: ALCEDINIDAE (Kingfishers)	
Belted Kingfisher, (<u>Ceryle alcyon</u>)	O
ORDER: PICIFORMES (Woodpeckers and Relatives)	
FAMILY: PICIDAE (Woodpeckers and Wrynecks)	
Downy Woodpecker, (<u>Picoides pubescens</u>)	O,n
Northern Flicker, (<u>Colaptes auratus</u>)	O
ORDER: PASSERIFORMES (Perching Birds)	
FAMILY: TYRANNIDAE (Tyrant Flycatchers)	
Western Wood-Pewee, (<u>Contopus sordidulus</u>)	P
Western Flycatcher, (<u>Empidonax difficilis</u>)	P,n
Say's Phoebe, (<u>Sayornis saya</u>)	O
Black Phoebe, (<u>Sayornis nigricans</u>)	O,n
FAMILY: HIRUNDINIDAE (Swallows)	
Tree Swallow, (<u>Tachycineta bicolor</u>)	P
Violet-green Swallow, (<u>Tachycineta thalassina</u>)	O
Northern Rough-winged Swallow, (<u>Stelgidopteryx serripennis</u>)	P
Cliff Swallow, (<u>Hirundo pyrrhonota</u>)	O,n
Barn Swallow, (<u>Hirundo rustica</u>)	O,n
FAMILY: CORVIDAE (Jays, Magpies, and Crows)	
Scrub Jay, (<u>Aphelocoma coerulescens</u>)	P
Common Raven, (<u>Corvus corax</u>)	P
FAMILY: PARIDAE (Titmice)	
Chestnut-backed Chickadee, (<u>Parus rufescens</u>)	P,n
FAMILY: AEGITHALIDAE (Bushtit)	
Bushtit, (<u>Psaltriparus minimus</u>)	O,n
FAMILY: SITTIDAE (Nuthatches)	
Red-breasted Nuthatch, (<u>Sitta canadensis</u>)	P
Pygmy Nuthatch, (<u>Sitta pygmaea</u>)	P
FAMILY: CERTHIIDAE (Creepers)	
Brown Creeper, (<u>Certhia americana</u>)	
FAMILY: TROGLODYTIDAE (Wrens)	
Bewick's Wren, (<u>Thryomanes bewickii</u>)	O,n
House Wren, (<u>Troglodytes aedon</u>)	P
Winter Wren, (<u>Troglodytes troglodytes</u>)	P
Marsh Wren, (<u>Cistothorus palustris</u>)	P
FAMILY: MUSCICAPIDAE (Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit)	
Golden-crowned Kinglet, (<u>Regulus satrapa</u>)	P
Ruby-crowned Kinglet, (<u>Regulus calendula</u>)	O
Blue-gray Gnatcatcher, (<u>Polioptila caerulea</u>)	O
Western Bluebird, (<u>Sialia mexicana</u>)	P
Swainson's Thrush, (<u>Catharus ustulatus</u>)	P,n
Hermit Thrush, (<u>Catharus guttatus</u>)	O
American Robin, (<u>Turdus migratorius</u>)	O,n
Wrentit, (<u>Chamaea fasciata</u>)	P,n

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

FAMILY: MIMIDAE (Mockingbirds and Thrashers)	
Northern Mockingbird, (<u>Mimus polyglottos</u>)	P
California Thrasher, (<u>Toxostoma redivivum</u>)	P,n
FAMILY: MOTACILLIDAE (Wagtails and Pipits)	
Water Pipit, (<u>Anthus spinoletta</u>)	O
FAMILY: BOMBYCILLIDAE (Waxwings)	
Cedar Waxwing, (<u>Bombycilla cedrorum</u>)	P
FAMILY: LANIIDAE (Shrikes)	
Loggerhead Shrike, (<u>Lanius ludovicianus</u>)	P
FAMILY: STURNIDAE (Starlings)	
European Starling, (<u>Sturnus vulgaris</u>)	O
FAMILY: VIREONIDAE (Typical Vireos)	
Hutton's Vireo, (<u>Vireo huttoni</u>)	P
Warbling Vireo, (<u>Vireo gilvus</u>)	O
FAMILY: EMBERIZIDAE (Wood Warblers, Sparrows, Blackbirds, and Relatives)	
Orange-crowned Warbler, (<u>Vermivora celata</u>)	O
Yellow Warbler, (<u>Dendroica petechia</u>)	O
Yellow-rumped Warbler, (<u>Dendroica coronata</u>)	O
Black-throated Gray Warbler, (<u>Dendroica nigrescens</u>)	P
Townsend's Warbler, (<u>Dendroica townsendi</u>)	P
Hermit Warbler, (<u>Dendroica occidentalis</u>)	P
Palm Warbler (<u>Dendroica palmarum</u>)	
MacGillivray's Warbler, (<u>Oporornis tolmiei</u>)	P
Common Yellowthroat, (<u>Geothlypis trichas</u>)	P
Wilson's Warbler, (<u>Wilsonia pusilla</u>)	P
Western Tanager, (<u>Piranga ludovicanius</u>)	
Rufous-sided Towhee, (<u>Pipilo erythrophthalmus</u>)	O,n
Brown Towhee, (<u>Pipilo fuscus</u>)	O,n
Savannah Sparrow, (<u>Passerculus sandwichensis</u>)	P
Fox Sparrow, (<u>Passerella iliaca</u>)	O
Song Sparrow, (<u>Melospiza melodia</u>)	O,n
Lincoln's Sparrow (<u>Melospiza lincolni</u>)	O
Golden-crowned Sparrow, (<u>Zonotrichia atricapilla</u>)	O
White-crowned Sparrow, (<u>Zonotrichia leucophrys</u>)	O,n
Dark-eyed Junco, (<u>Junco hyemalis</u>)	P
Red-winged Blackbird, (<u>Agelaius phoeniceus</u>)	O
Tricolored Blackbird, (<u>Aeglais tricolor</u>)	P
Western Meadowlark, (<u>Sturnella neglecta</u>)	O
Brewer's Blackbird, (<u>Euphagus cyanocephalus</u>)	O,n
Brown-headed Cowbird, (<u>Molothrus ater</u>)	O,n
FAMILY: FRINGILLIDAE (Finches)	
Purple Finch, (<u>Carpodacus purpureus</u>)	P
House Finch, (<u>Carpodacus mexicanus</u>)	O,n
Pine Siskin, (<u>Carduelis pinus</u>)	P
Lesser Goldfinch, (<u>Carduelis psaltria</u>)	O
American Goldfinch, (<u>Carduelis tristis</u>)	O
FAMILY: PASSERIDAE (Weaver Finches)	
House Sparrow, (<u>Passer domesticus</u>)	O,n

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

CLASS: MAMMALIA

ORDER: MARSUPIALIA (Opossums, Kangaroos, and Relatives)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum, (Didelphis virginiana) O

ORDER: INSECTIVORA (Shrews and Moles)

FAMILY: SORICIDAE (Shrews)

Vagrant Shrew, (Sorex vagrans) P

Ornate Shrew, (Sorex ornatus) P

FAMILY: TALPIDAE (Moles)

Shrew-mole, (Neurotrichus gibbsii) P

Broad-footed Mole, (Scapanus latimanus) P

ORDER: CHIROPTERA (Bats)

FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)

Yuma Myotis, (Myotis yumanensis) P

Long-eared Myotis, (Myotis evotis) P

Fringed Myotis, (Myotis thysanodes) P

Long-legged Myotis, (Myotis volans) P

California Myotis, (Myotis californicus) P

Western Pipistrelle, (Pipistrellus hesperus) P

Big Brown Bat, (Eptesicus fuscus) P

Red Bat, (Lasiurus borealis) P

Hoary Bat, (Lasiurus cinereus) P

Townsend's Big-eared Bat, (Plecotus townsendii) P

Pallid Bat, (Antrozous pallidus) P

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Brazilian Free-tailed Bat, (Tadarida brasiliensis) P

Western Mastiff Bat, (Eumops perotis) P

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORTIDAE (Rabbits and Hares)

Brush Rabbit, (Sylvilagus bachmani) P

ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

California Ground Squirrel, (Spermophilus beecheyi) O

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's Pocket Gopher, (Thomomys bottae) P

FAMILY: HETEROMYIDAE (Pocket Mice and Kangaroo Rats)

California Pocket Mouse, (Perognathus californicus) P

FAMILY: CRICETIDAE (Deer Mice, Voles, and Relatives)

Western Harvest Mouse, (Reithrodontomys megalotis) P

California Mouse, (Peromyscus californicus) P

Deer Mouse, (Peromyscus maniculatus) P

Pinyon Mouse, (Peromyscus truei) P

Dusky-footed Woodrat, (Neotoma fuscipes) P

California Vole, (Microtus californicus) P

Wildlife observed (O) and predicted to occur (P) At Davenport Beach and Bluffs, Santa Cruz County, California.

FAMILY: MURIDAE (Old World Rats and Mice)	
Norway Rat, (<u>Rattus norvegicus</u>)	P
House Mouse, (<u>Mus musculus</u>)	P
ORDER: CARNIVORA (Carnivores)	
FAMILY: CANIDAE (Foxes, Wolves, and Relatives)	
Coyote, (<u>Canis latrans</u>)	P
Gray Fox, (<u>Urocyon cinereoargenteus</u>)	O
FAMILY: PROCYONIDAE (Raccoons and Relatives)	
Raccoon, (<u>Procyon lotor</u>)	P
FAMILY: MUSTELIDAE (Weasels, Badgers, and Relatives)	
Long-tailed Weasel, (<u>Mustela frenata</u>)	P
Western Spotted Skunk, (<u>Spilogale gracilis</u>)	P
Striped Skunk, (<u>Mephitis mephitis</u>)	P
Sea Otter, (<u>Enhydra lutris</u>)	O
FAMILY: FELIDAE (Cats)	
Bobcat, (<u>Lynx rufus</u>)	P
FAMILY: OTARIIDAE (Eared Seals)	
Northern Sea Lion, (<u>Eumetopias jubatus</u>)	P
California Sea Lion, (<u>Zalophus californianus</u>)	O
FAMILY: PHOCIDAE (Hair Seals)	
Harbor Seal, (<u>Phoca vitulina</u>)	O
Northern Elephant Seal, (<u>Mirounga angustirostris</u>)	P
ORDER: ARTIODACTYLA	
FAMILY: CERVIDAE (Deer, Elk, and Relatives)	
Mule Deer, (<u>Odocoileus hemionus</u>)	P

KEY:

O = Species observed at Davenport Beach and Bluffs. P = Species predicted to occur at Davenport Beach and Bluffs. n = Bird species observed or predicted to breed at Davenport Beach and Bluffs. * = Observed only once; very rare in Santa Cruz County.

