PEBBLE BEACH RECREATIONAL USE STUDY

(DEL NORTE COUNTY, CALIFORNIA)

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Introduction

In 1984 the Del Norte County Pebble Beach Committee was formed to determine ways of improving and managing beach access while also examining erosion problems along a scenic coastal stretch of Crescent City and Del Norte County known as Pebble Beach Drive. This popular coastal strip is approximately 4 miles in length and encompasses areas of shoreside residential homes, rocky cliffs, sandy beach and rocky intertidal pools.

Crescent City is located in Del Norte County along the California coast approximately 300 miles north of San Francisco and 20 miles south of the Oregon border. The 1984 population of Del Norte County was 18,550. Tourism is a major industry during the summer months and recreational use of the Pebble Beach Drive zone is popular with both local residents and vacationers.

The purpose of the 1985 Pebble Beach Recreational Use Study was to estimate the number of people using the Pebble Beach resources and determine what types of beach uses were predominant. No previous studies or information on recreational beach use along Pebble Beach Drive existed. Types of recreational beach use that were identified during the study included: fishing, surfing, clamming, sightseeing and recreation.

Methods

Recreational user count surveys were conducted on a random basis 3-4 days per week from May 1-Sept. 15, 1985, by the Del Norte County University of California Sea Grant marine advisor. A single sampling day contained three complete use counts along the entire study area. These use counts occurred at 9:00 a.m., noon and 5:00 p.m. and each took approximately 45 minutes to conduct. A total count of beach users was made during each use count (see sample survey data sheet).

The Pebble Beach Drive study area was divided into eight zones for the purpose of analyzing access use and determining which types of recreational beach use occurred in each zone (see zone map). The eight sampling zones were:

Zone 1: Point St. George Access - included parking facility, tidepools and airport beach area off Point St. George.

Zone 2: Pebble Beach Rocks and Cliffs - included two turnouts, Radio Road access and Castle Rock scenic view.

Zone 3: Pebble Beach - sandy beach area off Marhoffer Creek.

Zone 4: Pacific Avenue - included three turnouts on Pebble Beach Drive above cliff, surfer's path and Pacific Ave. steps.

Zone 5: Preston Island Park.

Zone 6: Brother Jonathan Scenic View.

Zone 7: Residential Area - included 5th St. access and 3rd St. access.

Zone 8: Battery Point Access - included the parking facility at the Battery Point Lighthouse Museum, beach area and outer breakwater jetty.

Sampling during each use count started at Zone 1 and continued through Zone 8, or vice versa. The starting points were alternated each counting period. The number of sampling days (60) and counting periods (180) during the 4-month study provided a statistically valid estimate of the number of people using the Pebble Beach study area.

Classifications of beach use were utilized making it possible to separate uses and statistically evaluate them. The classifications of recreational beach use are:

Fishing - includes surf fishing and poke poling.

Surfing - includes board surfing, body surfing and "boogie boards."

Clamming - includes rock clamming, razor clamming and tidepooling.

Sightseeing - includes people sitting in or standing by their cars watching the surfers, whales, sea, etc.

Recreation - includes walking, playing, swimming, picnicking, jogging, agate hunting, beachcombing and firewood gathering along the coastal study area.

Results

The unit of measurement defined for this study was a "recreational use visit." Each person counted in the study area was considered one recreational use visit. A daily recreational use survey counted the total number of people seen in the beach zones (1-8) and the number of cars parked along these zones.

Visits to the Pebble Beach Drive area averaged less than two hours. Recounting the same people during the morning, noon or evening survey was insignificant (less than 1%).

Types of recreational use were classified as recreation, sightseeing, surfing, fishing or clamming. The percent of use in the study area by category was separated by weekdays and weekends with the following results:

	Weekdays	Weekends
Recreation	64%	71%
Sightseeing	22%	17%
Surfing	2%	3%
Fishing	7%	6%
Clamming	5%	3%

Daily use surveys were conducted on 60 of a possible 138 sampling days. The 19 weekend days and 41 weekdays represented a 43% sampling effort. Sampling occurred during weather conditions of rain, fog, sun and high winds. No attempts were made to estimate nighttime use of the study area.

Since sampling occurred three times daily at 9:00 a.m., noon and 5:00 p.m., an estimate of total daily visitor use had to be determined. Several all-day use counts were made at various zones. The total number of daily visits at these selected sites were compared to the three daily individual use counts.

Depending upon the site selected, results were quite varied and ranged from 8% to 25% of total visits. The large variability necessitated choosing a percentage that would give conservative estimates of daily use visits. Therefore, data sheet totals were expanded by 5 times, representing a 20% estimate for survey periods.

Recreational use visits varied during the 4-month study with a major peak in July. The breakdown of average daily recreational use visits was as follows:

	Weekdays	Weekend Days
May 1-June 15	1,095	1,550
June 16-July 15	1,725	1,875
July 16-Aug. 15	1,300	1,715
Aug. 16-Sept. 15	1,340	1,635

The recreational use visits to the Pebble Beach area from May 1-Sept. 15 totaled 130,400 visits during weekdays and 67,095 visits during weekend days. The total of 197,495 visits represents a high recreational use of this coastal area.

Vehicles were counted during each use survey. The purpose of this statistic was to determine if a consistent relationship could be found between the number of cars and total people counted. The number of people per car varied from 2.4 to 2.6 people during each month sampled. Therefore, an overall estimate of 2.5 people per car was very accurate.

This statistic could make it possible for future surveys to use a monthly car count as an estimator for recreational visitor use. Approximately 79,000 cars were parked along the Pebble Beach Drive area during the study.

An additional statistic related to cars was gathered during the user surveys. Car origin was recorded by state license plates as California (62%), Oregon (22%) and others (16%).

Estimates were made during the daily beach surveys of the number of dogs frequenting the beach zones. An average of 58 dogs per weekday and 82 dogs per weekend day was recorded. This totals out to approximately 9,000 "dog day" visits during May 1-Sept. 15.

Discussion

The recreational uses of the Pebble Beach Drive area were quite varied and changed from zone to zone. The differences in recreational use were strongly influenced by zone location, time of day, tide level, geography and weather. It was not possible in this study to statistically separate the different factors affecting recreational use. However, each of the factors will be discussed separately in this section.

A listing of the percentages of recreational visits by zone follows:

	Recreation	Sightseeing	Surfing	Fishing	Clamming
Zone 1	11%	1%	5%	1%	32%
Zone 2	9%	23%	2%	19%	19%
Zone 3	14%	8%	9%	5%	3%
Zone 4	15%	25%	84%	7%	11%
Zone 5	6%	3%	0	22%	5%
Zone 6	3%	28%	0	0	0
Zone 7	10%	2%	0	6%	12%
Zone 8	32%	10%	0	40%	18%
Total	67%	20%	2%	6%	5%

Recreational beach users showed distinct preferences for certain zones. Much of this variation depended upon the geography of these zones. Rocky tidepool zones were dominated by people fishing and clamming; sandy/pebbly beach areas were used predominantly for recreation (walking, swimming and agate hunting); and steep cliff areas were popular for sightseeing.

The category of recreation (swimming, walking, beachcombing, etc.) comprised 67% of the recreational use visits during the study. These recreation visits were distributed throughout the eight zones with the highest percent of visits in Zone 8 - the Battery Point Lighthouse Museum.

Sightseeing visits dominated Zones 2, 4 and 6. All these zones are steep cliff areas with parking facilities to view waves and marine mammal movements. Sightseeing was the second most popular recreational use, comprising 20% of the use visits. It was noted during the study that much of the sightseeing was spent watching other recreational uses (i.e. surfing, windboarding, fishing and kite flying).

Fishing visits constituted 6% of all uses and were concentrated along the rock jetty and rock outcrops of Zones 2, 5 and 8. Clamming comprised 5% of all visits and occurred in several zones, depending upon the type of clams desired. Razor clamming occurred in sandy beach areas, while cockles, littlenecks and butter clams were taken in rocky tidepool zones.

Surfing visits comprised only 2% of the recreational uses and 84% of these were in Zone 4. Wave break is the main factor in surfing use and the waves below the cliffs in Zone 4 create the most consistent surf during the summer months.

Weather

Recreational use in the study area was definitely affected by weather patterns. Frequently early mornings were foggy, resulting in few visits, but as the fog "burned off" the visitors to the beach increased dramatically. Some mornings were clear and calm, but afternoon NW winds often blew 30-40 knots. Those zones which were more protected from wind received the greatest use.

Rainy days generally had low counts of recreation use but higher counts of sightseeing. Sunny days following a 2-3 day rainy period resulted in extremely high recreation counts.

Time of Day

Some consistent trends were seen in recreational use related to time of day. Morning hours were frequented by joggers, beach walkers, clammers and tidepoolers. Spring and summer morning low tide levels increased these uses.

The afternoon periods were dominated by recreation, sightseeing and fishing visits. There was a very clear increase in beach use during the lunch hour by local workers and residents sightseeing and eating lunch. The beach area appeared to be a good get-away for many workers handling work stress.

Evening visits in the study area were dominated by beach walking, agate hunting, picnicking, kite flying and fishing. No attempts were made to account for nighttime uses of the Pebble Beach area (overnight camping, beach parties, necking, etc.).

Tides

Tide levels had a great effect on many of the recreational uses. Low tide levels encouraged clamming, tidepooling, agate hunting, beachcombing and poke-poling in tidepools. Access to the Battery Point Lighthouse Museum is not possible during high tides. The high tide levels generally encouraged rocky shore fishing, surf fishing and surfing. Tide level did not seem to have any effect on sightseeing visits.

Additional Uses

One major use of the Pebble Beach area which appeared during the study, but was not anticipated, was the high use of the area by dog owners. Walking or running a dog along the sandy beach areas (Zones 1, 3 and 7) was a popular use by many residents and visitors.

Jogging and walking along Pebble Beach Drive or along the sandy beach areas was another popular beach use. However, some sections of Pebble Beach Drive were not developed with jogging in mind and are unsafe (no shoulders) and need improvements. This recreational use appears to be one that will increase in the future.

The Pebble Beach Drive area is a popular coastal resource within the region. This 4-mile span of the coastal zone offers a great diversity of marine recreation. Within this stretch of shoreline a person may enjoy sandy beaches, rocky shorelines, tidepooling, jetty and surf fishing, surfing, agate hunting, beachcombing, sightseeing, whale watching, photography, art and solitude. It is important that the Pebble Beach Drive area be managed and improved to protect its valuable coastal resources while still providing enjoyment to visitors.

PEBBLE BEACH USER SURVEY

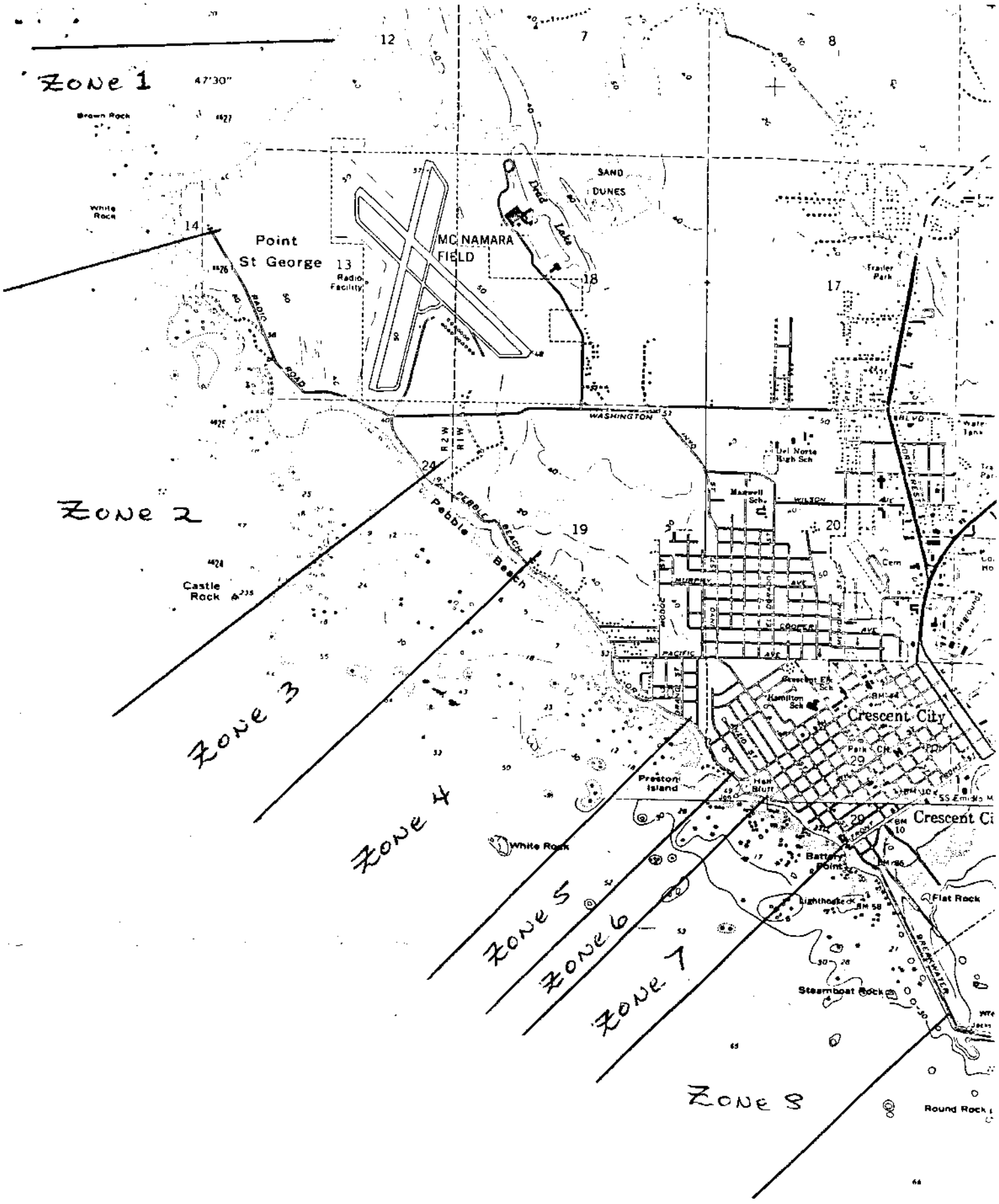
Date:

Sampling Time:

	Recreation	Sight.	Surfing	Fishing	Clamming	Tot.	Dogs	Vehicles		
								CA.	OR.	Other
Zone 1										
Zone 2										
Zone 3										
Zone 4										
Zone 5										
Zone 6										
Zone 7										
Zone 8										
Totals										

Comments:

Marine Mammal Sightings:



Pebble Beach Recreational Study Zonal Map.