

# 3<sup>rd</sup> District Proposal and Recommendations for Goleta Beach County Park

Jim Hickling  
Park Commissioner  
Third District

29 September 2005

# GB Working Group

## Majority (11/17) Recommendation:

- **Objective** – “Save the park in its current configuration by:
  - Utilize engineered buried rock revetments to act as the last line of defense during heavy winter storms;
  - Continue and expand on beach nourishment and opportunistic fill efforts;
  - And/or employ sand retention devices such as artificial headlands, artificial reefs, or groins so sand added to the beach stays in place while mitigating wave energy. “
- **Source:** signed letter to Commission from 11 WG members

# 3<sup>rd</sup> District Proposal And Recommendations To Meet Majority Objective For Goleta Beach

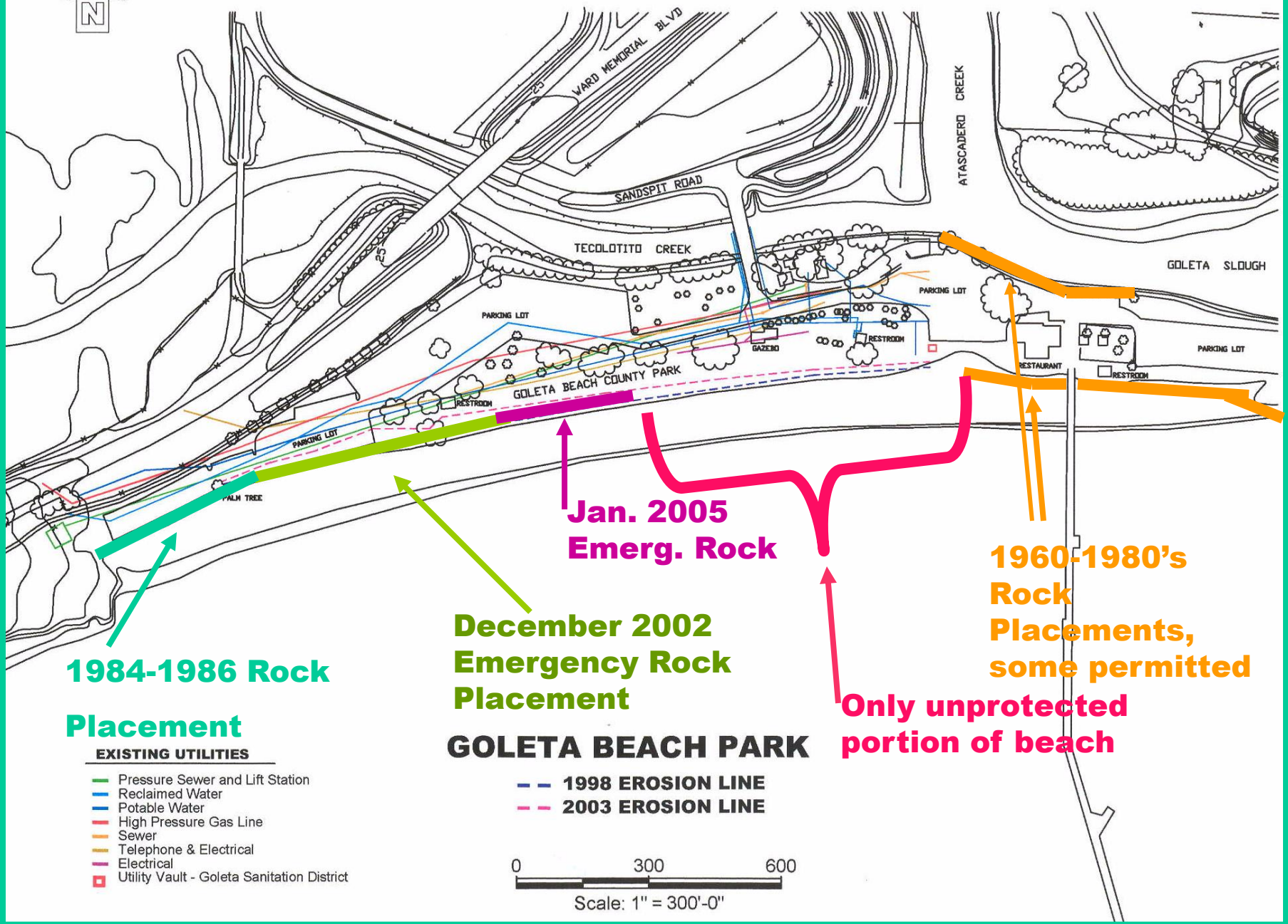
- Retain, seek permits for, and repair all existing revetments.
  - 1960's through 1980's revetments, installed at both ends of the park have survived, been effective and have caused no recorded environmental impact – New “Engineered” replacement structures may not add any more value
  - Repair is feasible, low in cost (about \$50/ft) and would cause less environmental impact than by ripping these existing revetments out( MN Table 3-2)
  - Rock revetments now cover over 70% of the usable park shoreline (2800/3825 feet) and have been largely unobtrusive (except when exposed by storms)
  - Total cost to repair: 2800 ft x \$50 = \$140,000 over an estimated period of three years
  - Timing: as storms/weather expose revetments, conduct repair.
    - Advantage – less labor and disturbance to park and environment
- Seek permits for unprotected portion (approx. 1000 ft) if needed in future

# Goleta Beach - 3<sup>rd</sup> District Proposal/Recommendations

- Initiate Dune planting and install permanent walkways over revetments (MN table 3.2) for increased access and reduced environmental impact
  - Cost: MN estimated at \$30,000 but need detailed design. Probably closer to \$60,000 or \$5,000 per walkway with one every 100 feet ( total 12)
  - Timing: as soon as approved
- Install Engineered Sand retention capability with attached breakwater design to coastal bluff, pre-filled with sand (MN 3.4.2)
  - Long term protection to UCSB pumping station and to western parking lots
  - Wider, shallower, and very protected recreational beach closer to the majority of the parking spaces at western end
  - Added rocky sub-tidal and inter-tidal habitat
  - No down coast erosion
  - Cost: \$600,000
  - Timing: as approved, but not later than summer 2006

# Net Costs Summary

- Repair of revetments \$140,000
- Dune planting and steps/walkways - \$60,000
- Engineered breakwater attached to coastal bluff with sand fill- \$600,000
- Permits and studies est. \$150,000
- **Most likely initial net cost \$950,000**
- If additional engineered revetments on remaining un-protected beach are required (exposed by future storms)- \$1,266,500 (745 linear feet @\$1,700/foot MN) or perhaps lower based on other costs.
- Net worst case cost **\$2,216,500**
- **PWA managed retreat plan initial cost is \$2.9M** with an additional \$3.7M for the backstop revetment **total \$6.6m**
  - Additionally, PWA plan creates substantial loss of park real estate and patron visits with the construction disturbance during modifications to park facilities



**1984-1986 Rock**

**Jan. 2005  
Emerg. Rock**









**1960-1980's  
Rock  
Placements,  
some permitted**

**December 2002  
Emergency Rock  
Placement**

**Only unprotected  
portion of beach**

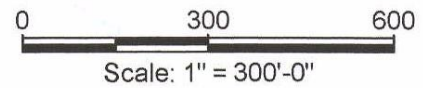
**Placement**

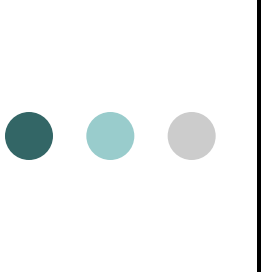
**EXISTING UTILITIES**

-  Pressure Sewer and Lift Station
-  Reclaimed Water
-  Potable Water
-  High Pressure Gas Line
-  Sewer
-  Telephone & Electrical
-  Electrical
-  Utility Vault - Goleta Sanitation District

**GOLETA BEACH PARK**

-  1998 EROSION LINE
-  2003 EROSION LINE





State of California Resources Agency  
***DRAFT REVIEW OF CALIFORNIA COASTAL  
EROSION PLANNING AND RESPONSE:  
A STRATEGY FOR ACTION (2003)***

The State of California should adopt as state policy a set of five general principles for addressing coastal erosion, in order of preference:

***Hazard Avoidance for New or Modified Development.***

Avoid development in coastal areas of high geologic hazard. N/A

***Maintaining Natural Sources of Sediment to the Coast.***

Reduce or eliminate barriers to natural sources of sand leading from coastal watersheds to beaches and whenever feasible seek to re-establish sand flow currently restricted by dams or other structures. N/A

***Regional Beach Nourishment.***

Where feasible, use a regional program of sand nourishment (placing sand on or near beaches) to protect existing shoreline development or recreational features. DID NOT WORK



State of California Resources Agency  
***DRAFT REVIEW OF CALIFORNIA COASTAL  
EROSION PLANNING AND RESPONSE:  
A STRATEGY FOR ACTION***

***Relocating or Eliminating Coastal Development Where Feasible.***

Move development threatened by coastal erosion to safer ground, if such relocation is feasible. N/A

***Hard Protection Devices.***

Consider the construction of hard protection devices (seawalls, revetments, or bulkheads, etc.) for coastal-dependent uses, existing structures, or public beaches in danger from erosion only after all the previous options have been considered and deemed to be infeasible.

**ONLY FEASIBLE ALTERNATIVE**





# California State Parks Operation Manual

Issued December 28, 1999

- **Avoid construction of new structures & coastal facilities in areas of coastal erosion, sea cliff retreat...**
  - **Unless risk of loss is offset by the investment and need for facility **Beach and Park cannot be replaced and is needed in present form by community (MN 3.1)****
- **Minimize erosion**
  - Reduce surface runoff
  - Reduce impact to elevating groundwater from irrigation & urbanization
- **New structures located in erosion hazard areas shall be expendable or removable N/A**
- **Structural protection / re-protection of development**
  - Cost of protection must be commensurate with physical and intrinsic value of development **Facility cannot be replaced**
  - Protection cannot negatively affect beach or near shore environment **No negative environmental impact to wildlife or fauna has resulted from existing revetments**

# California Coastal Commission

## Permit Application 4-02-251 (600 l.f. revetment) & 4-02-251-A1 (350 l.f. revetment) Permit Conditions

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### **Special Condition 2. Technical Study of Goleta Beach Erosion & Effects of Shoreline Protection Structures**

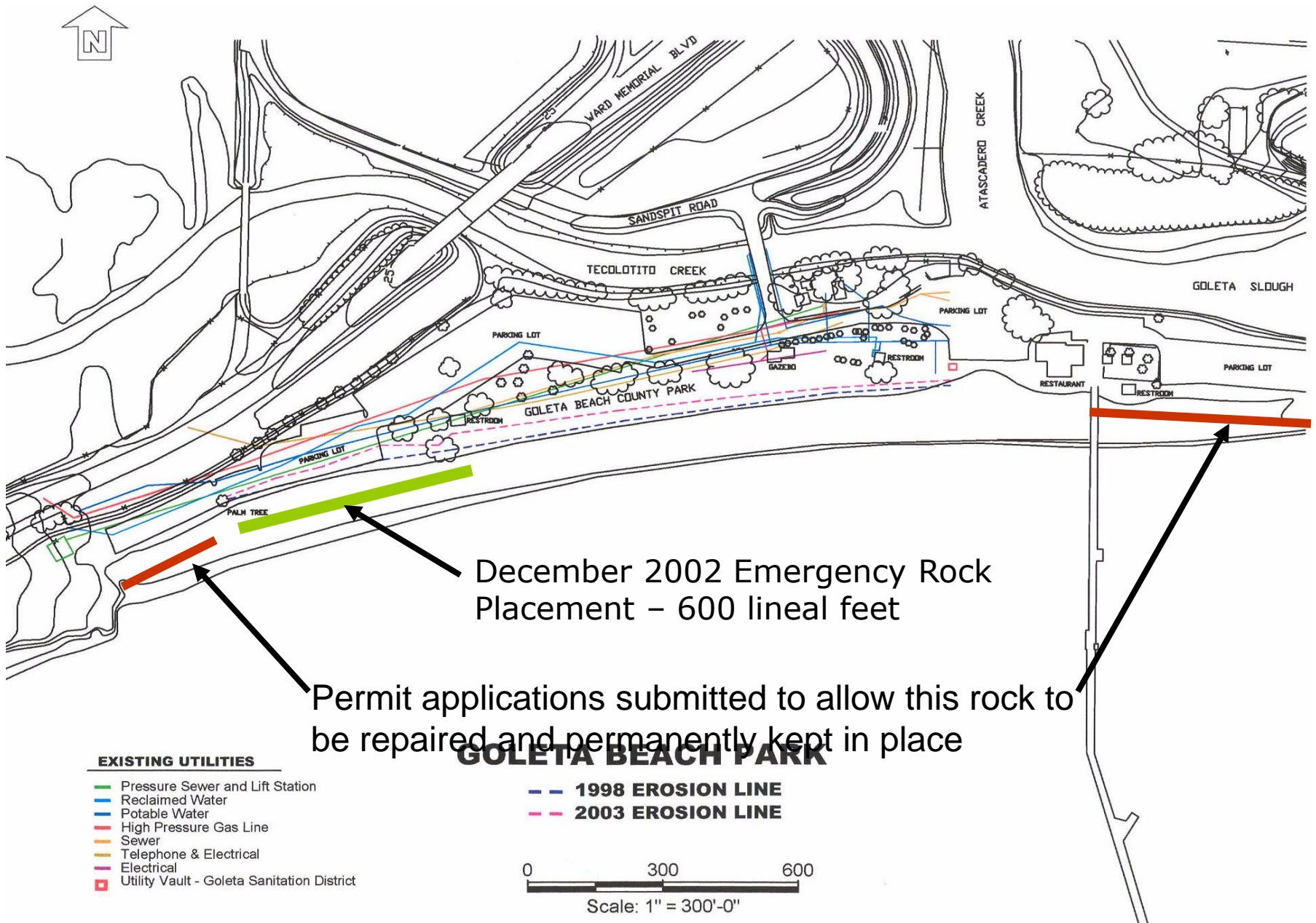
“.....The scope of the required studies set forth below shall ensure that both the revetments subject to application 4-02-251, Amendment 4-02-251-A1, and the previously placed revetments at Goleta Beach that are presently subject to a pending (incomplete) coastal development permit application (CDP Application 4-02-223), are fully evaluated. **Long-term alternatives analysis shall consider and address sand nourishment and managed retreat options in lieu of placement of hard protective structures.**” (emph. added)

**Have been considered by PWA proposal and MN and does not meet the needs of WG majority or 3<sup>rd</sup> District patrons**

# EXPECTED RESULTS

- Proactive and stops loss of more park
- Has considered all alternatives per directives
- Sustainable
- Lowest impact to environment
- Lowest initial and annual/follow-on cost
- And most of all – **MEETS THE USER NEEDS OF THE MAJORITY IN THE COUNTY**

# Appendix



December 2002 Emergency Rock Placement – 600 lineal feet

Permit applications submitted to allow this rock to be repaired and permanently kept in place

**EXISTING UTILITIES**

- Pressure Sewer and Lift Station
- Reclaimed Water
- Potable Water
- High Pressure Gas Line
- Sewer
- Telephone & Electrical
- Electrical
- ◻ Utility Vault - Goleta Sanitation District

- - - 1998 EROSION LINE
- - - 2003 EROSION LINE



Scale: 1" = 300'-0"



**October 2003- March 2004  
BEACON Demonstration  
Project – 97,600 cubic yards  
placed on the beach**

**All lost in storms**



9/29/2005

Third District Recommendation  
for Goleta Beach

03/03/2004

14

**Feb – March 2005**

**Flood Control placed  
over 100,000 cu. yd of  
creek dredge material  
onto Goleta Beach**

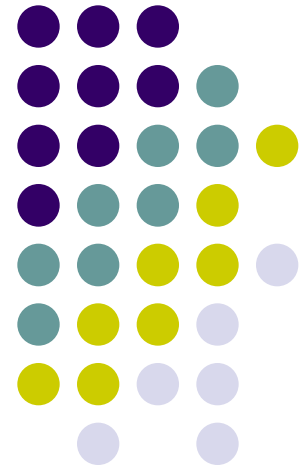


**Goleta Beach Today**

# Summary of Costs

## November 1999 – January 2005

**For Coastal Protection, Analysis,  
Permit Monitoring, Long Term Planning**







## Cost Summary : 1999 – March 2003

### Nov. 1999 – 2000: \$182,500 –Successful until removed

- Install and remove emergency rock revetment; permit and monitoring
  - **Funding Source – General Fund**

### 2000 – 2001: \$110,000 - Lost in subsequent storms

- Sand berm installation, berm maintenance, permit compliance monitoring
  - **Funding Source – General Fund \$73,000; FEMA \$37,000**

### 2001 – 2002: \$114,000 - Sand Berm lost in storm

- Sand berm permitting (3yr permit), sand berm installation, permit compliance monitoring, Moffatt & Nichol Long Term Shoreline Mgmt Plan.
  - **Funding Source – General Fund \$62,000; AB1431 Grant \$52,000**

### 2002-2003: \$ 97,000 Sand Berm lost - Revetment retained

- Sand berm installation, emergency rock revetment, permit compliance monitoring
  - **Funding Source – General Fund \$82,000; CREF Grant \$15,000**

**SUBTOTAL = \$ 503,000**

# Cost Summary: March 2003 – June 2005



## March 2003- July 2004: \$95,000

- Emergency Revetment Permit Compliance: Development of Monitoring Plans; First quarterly on-site data collection / surveys (required quarterly over the next 2 years)
- Goleta Beach Master Plan Community Working Group Process
  - **Funding Source - General Fund \$40,000; CREF Grant \$55,000**

## September 2004- June 2005: \$190,000 - Revetment retained

- Technical Analysis Shoreline Modeling – GB Master Plan
- Second quarterly and post storm on-site data collection / surveys; protective sand berm placement and installation of 350 lineal feet of rock revetment.
  - **Funding Source CREF Grants \$37,200; Coastal Conservancy Grant \$60,000; Goleta Land Trust Grant \$4,000; General Fund \$25,800; FEMA/OES \$63,000**

**SUBTOTAL = \$285,000**

**TOTAL 1999 - June 2005 = \$788,000**

Funding Sources General Fund \$464,800

Grant Sources \$ 323,200

# Park And Beach Actual And Potential Loss

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- 34 parking spaces lost in west end parking lot
- 54,000 square feet of park lawn and supporting irrigation lost
- 8 out of 21 individual family picnic sites permanently removed
- Threatened public utilities:
  - Pressure sewer servicing restrooms, ranger residences and restaurant
    - **Portion relocated Spring 2005**
  - 18” Goleta Water District Reclaimed Water line
  - Utility vault for Goleta Sanitation District Sewer outfall line