

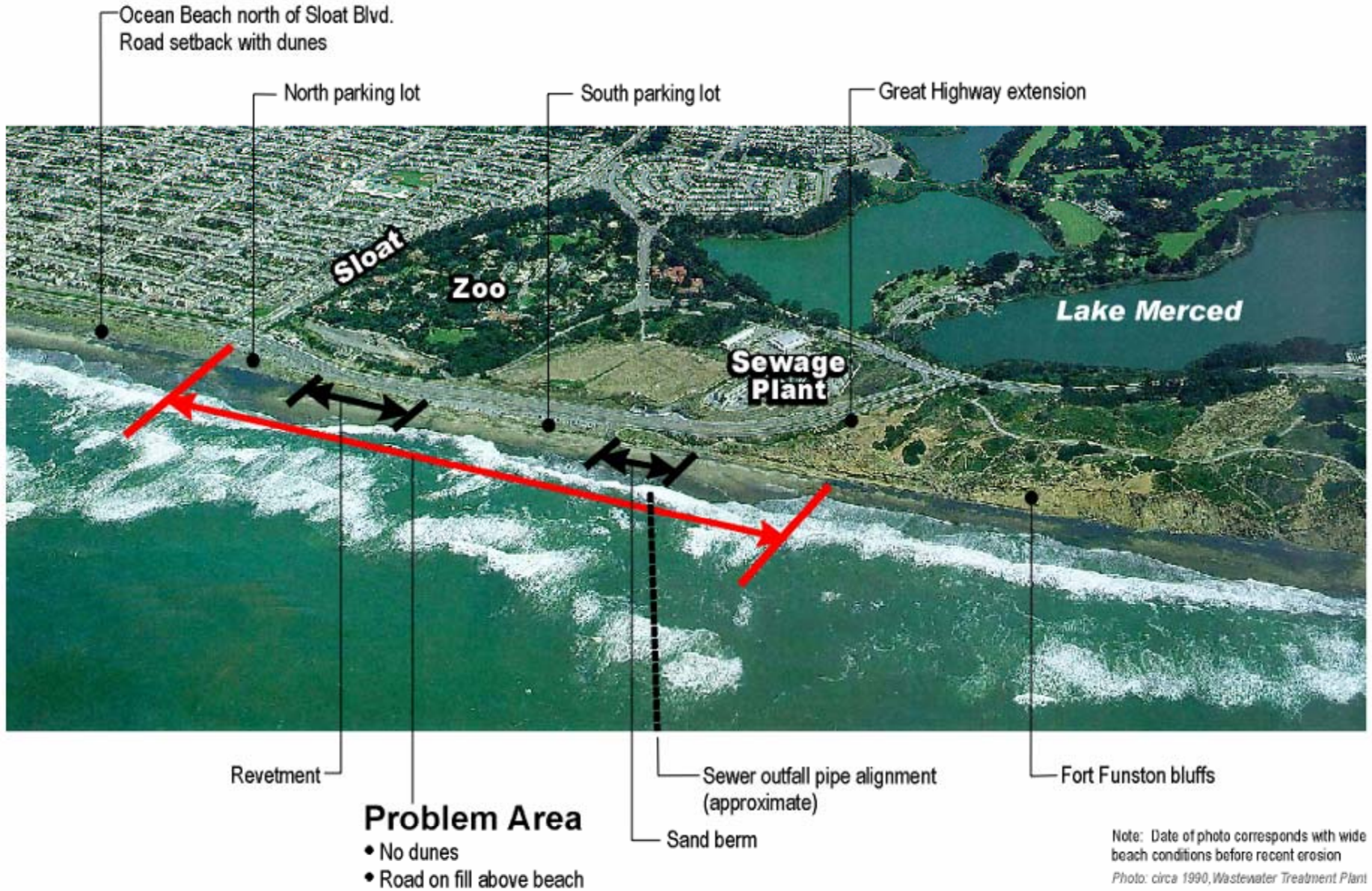
South Ocean Beach Shore Management Discussion

Bob Battalio, PE

January 25, 2010



SOUTH OCEAN BEACH





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Post construction





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Recent



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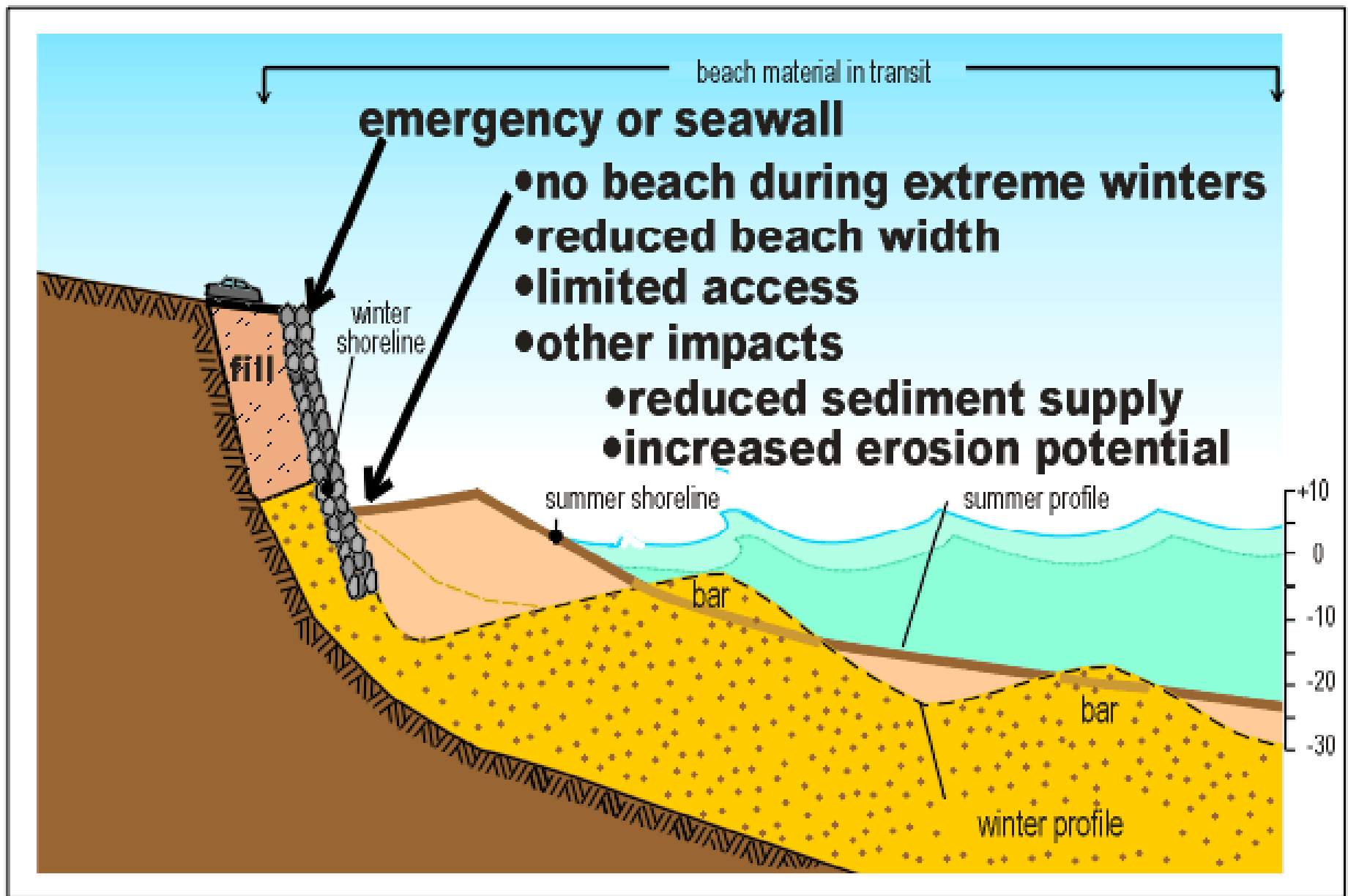
Post construction



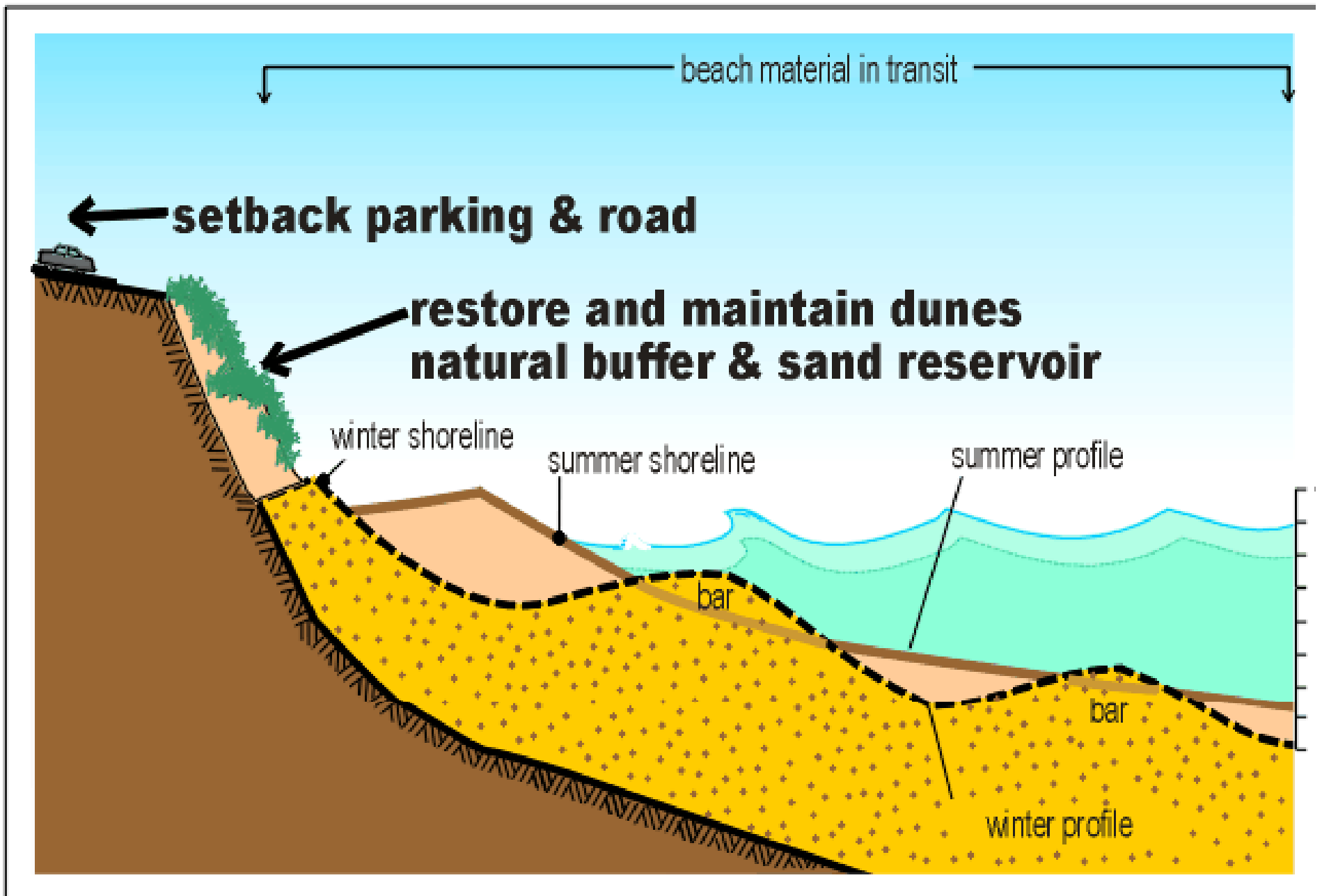


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Recent



Revetment / Seawall Solution



Proposed Solution



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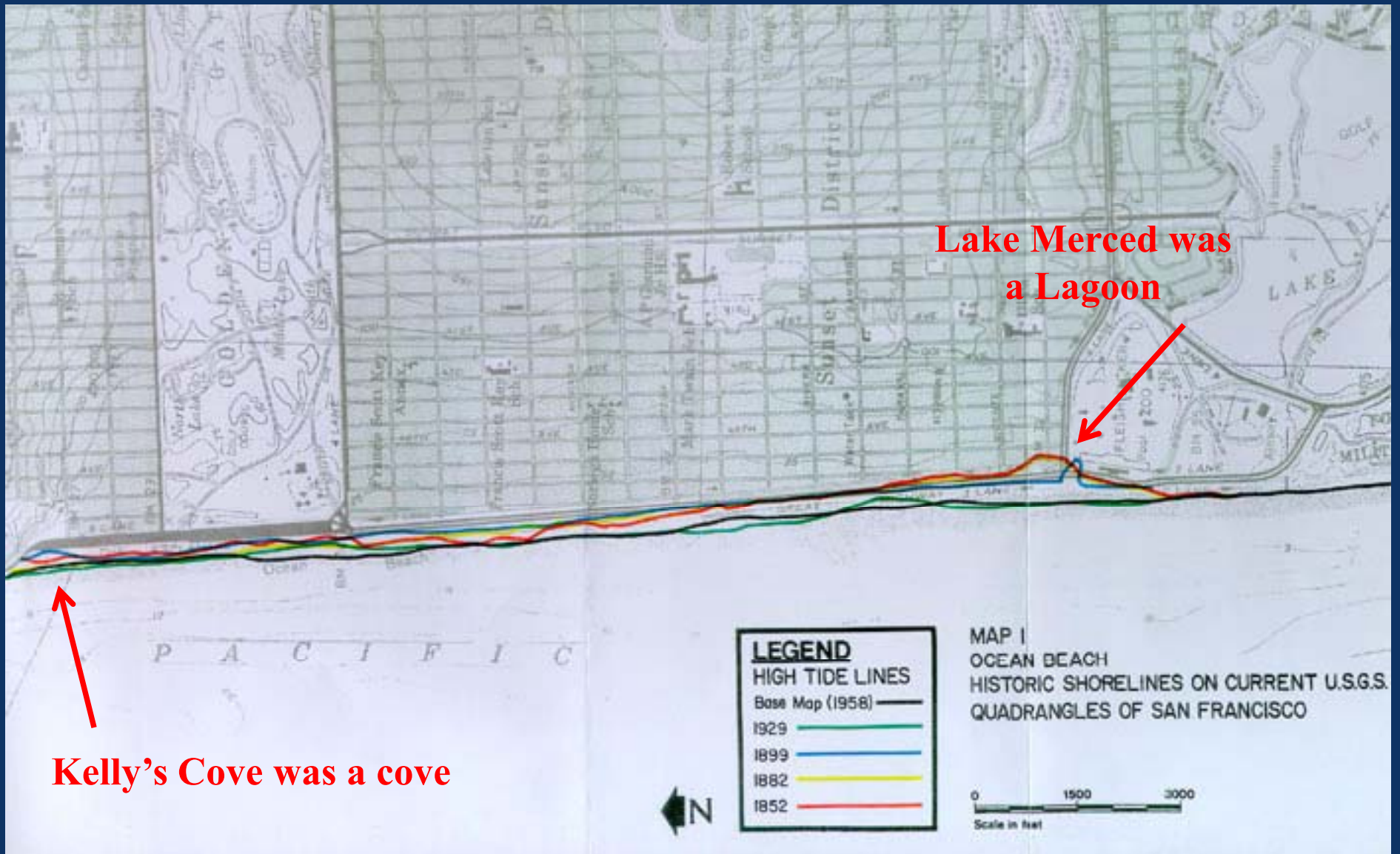
- LEGEND**
- █ Westside Core System
 - █ Bayside Core System
 - █ Southeast & Richmond Facilities
 - █ Lake Merced Transport

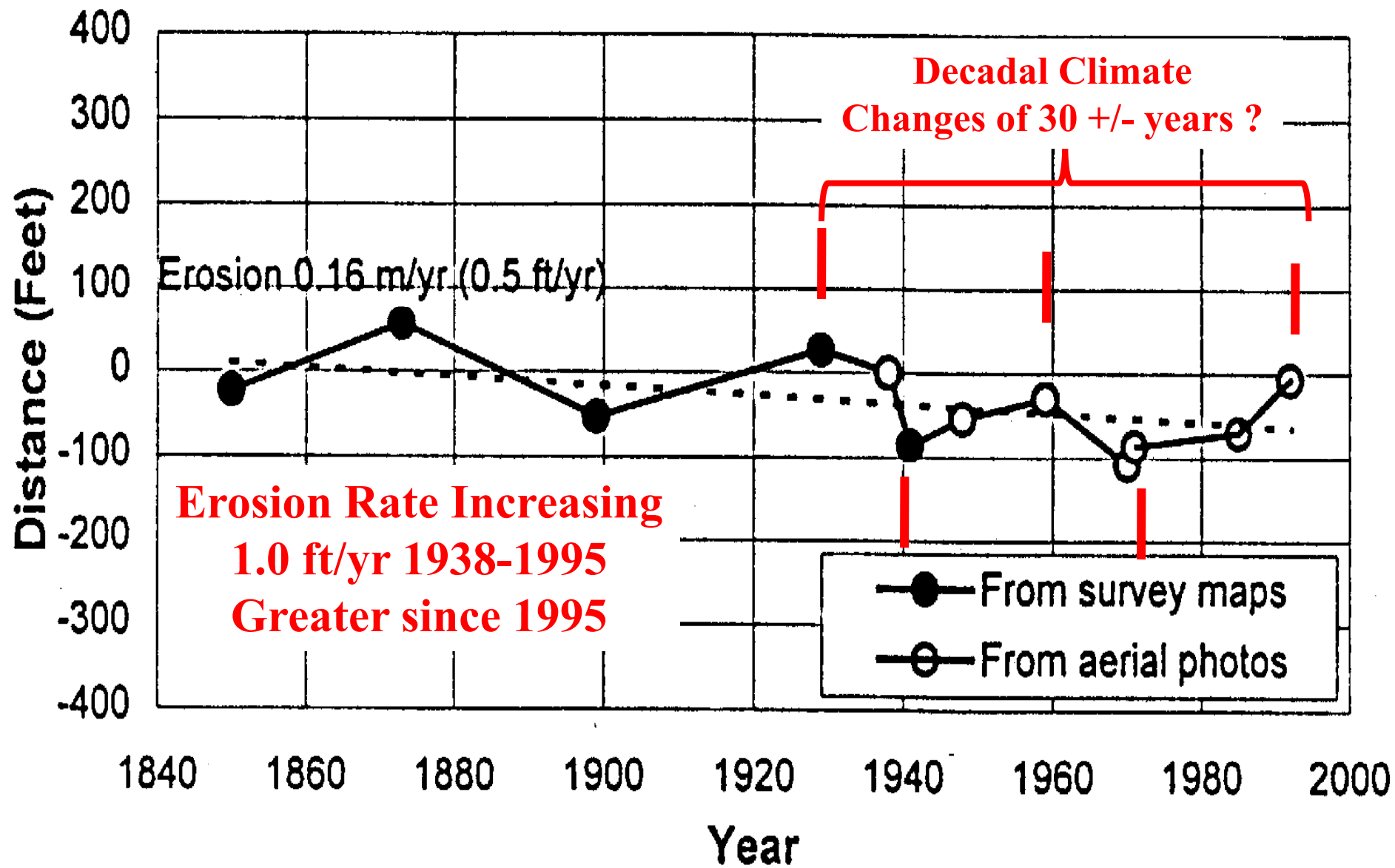
Ocean Beach Task Force

(1999 - 2003 +/-)

- **Emergency Bypass: Construct southbound lane(s) in median to bypass erosion problem area if road compromised – constructed**
- **Place Sand: Place sand in hotspot to erode sacrificially and nourish beach - constructed twice**
- **No Emergency Rock: Do not place rock as emergency action; Consider alternatives to armoring due to adverse effects of armoring**
- **Long-Term Solution : Consider range of alternatives including retreat and relocation of infrastructure; Consider environmental objectives**

Ocean Beach pushed seaward 200+ feet 1900-1930





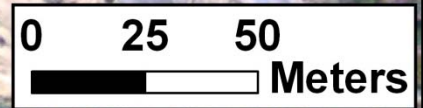
Shoreline Change Data So. Ocean Beach

Mean High Water Shoreline Positions

- Oct. 7, 2009
- Oct. 13, 2004
- Oct. 15, 1997 LiDAR

-18 m
2004 to 2009

-27 m
1997 to 2009



Source: USGS



- 1. Sand Placement – 2 episodes**
 - **Fall, 1999 15,000 tons**
 - **Second Placement in 2001 (?)**
- 2. Bypass Roadway in Median**



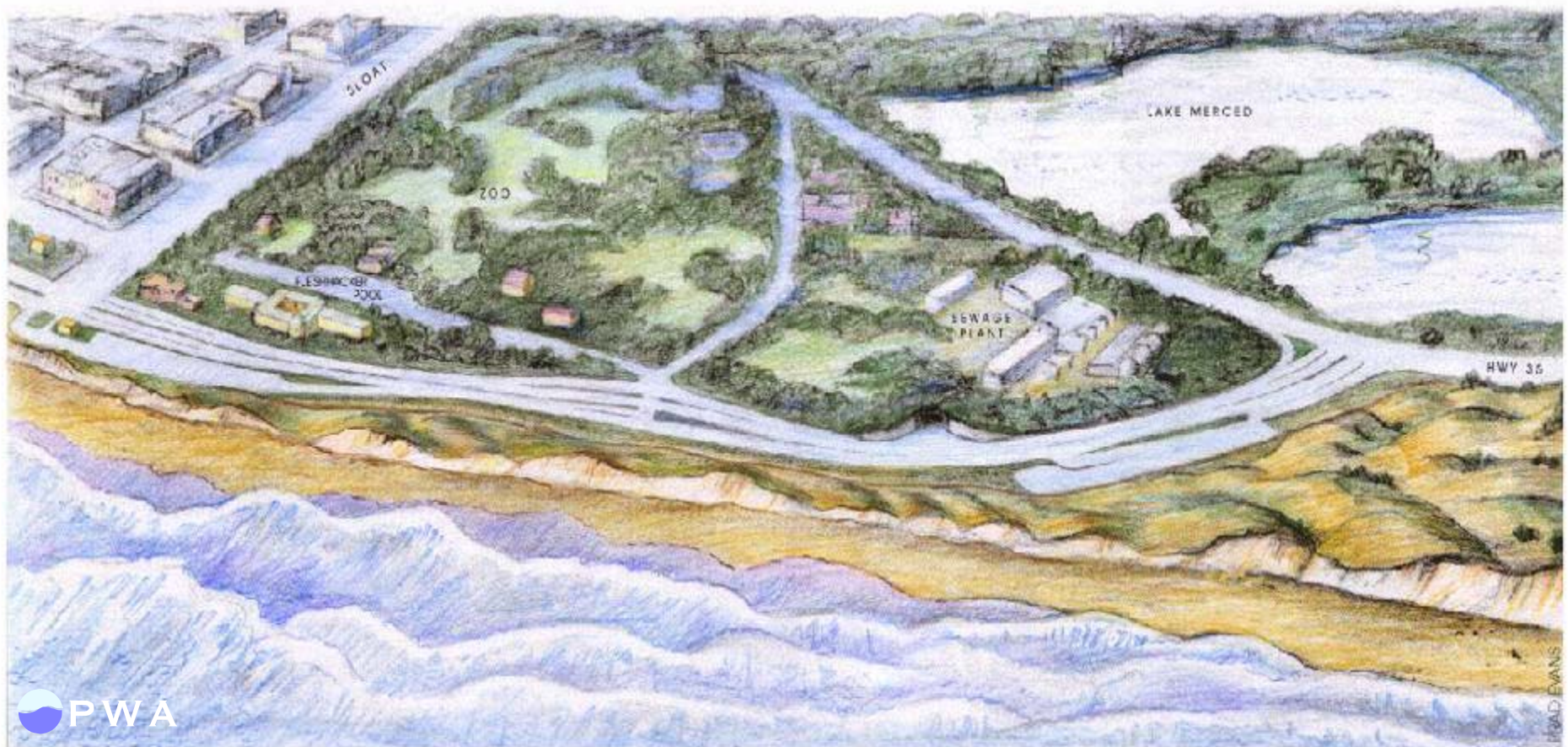




Retreat & Manage Solution

A Vision of South Ocean Beach

Proposal for the Office of Environment, San Francisco



Managed Retreat Vision

- Managed Retreat: Realign infrastructure and roadway farther inland over time;
- Realign Great Highway Extension: Reduce to 2 lanes with no median, as far inland as possible;
- Realign Parking: South parking lot removed and a new parking lot constructed on the Funston side of the roadway. North Parking Lot reconfigured;
- Restore back beach and dunes/ bluff: Remove rubble, place sand and plant;
- Allow Shore Recession: Place sand to reduce erosion rate, if needed, but allow bluffs to erode.



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