DECEMBER 12, 2012 SAN DIEGO RWQCB WORKSHOP:

Will tentative storm water regulations be applicable to controlling Sunset Cliffs Natural Park erosion and marine pollution?

D. Craig Barilotti, Ph. D
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STATE OF CALIFORNIA—CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9771 CLAIREMONT MESA BOULEVARD, SUITE B
SAN DIEGO, CA 92124-1331
TELEPHONE: (619) 467-2952

May 26, 1992

Robert E. Cain, NPDES Program Coordinator
Engineering and Development Department
City of San Diego
Executive Complex
1010 Second Avenue, Suite 1200
San Diego, CA 92101-4154

Dear Mr. Cain:

STORMWATER EROSION IN SUNSET CLIFFS SHORELINE PARK AND RESULTING SEDIMENTATION OF ADJACENT TIDE POOL HABITATS

It has come to the attention of the Regional Board that there is an ongoing problem of severe erosion within the City of San Diego's Sunset Cliffs Shoreline Park. Staff of the Regional Board has found that the accelerated erosion in this park is contributing large amounts of sediment into sensitive ocean waters adjacent to the park.

The extensive tide pool habitats which are located within the adjacent coastal waters can be expected to be adversely impacted by the sediment which is being discharged from the park. Adverse impacts associated with such a discharge include: (1) the physical covering of attached biota (killing attached animals through suffocation and attached algae through shading), (2) reduced primary productivity through a reduction in water clarity, and (3) a reduction in the recruitment of new attached biota since the microscopic settling stages of this biota are less likely to find a suitable hard substrate upon which to attach.

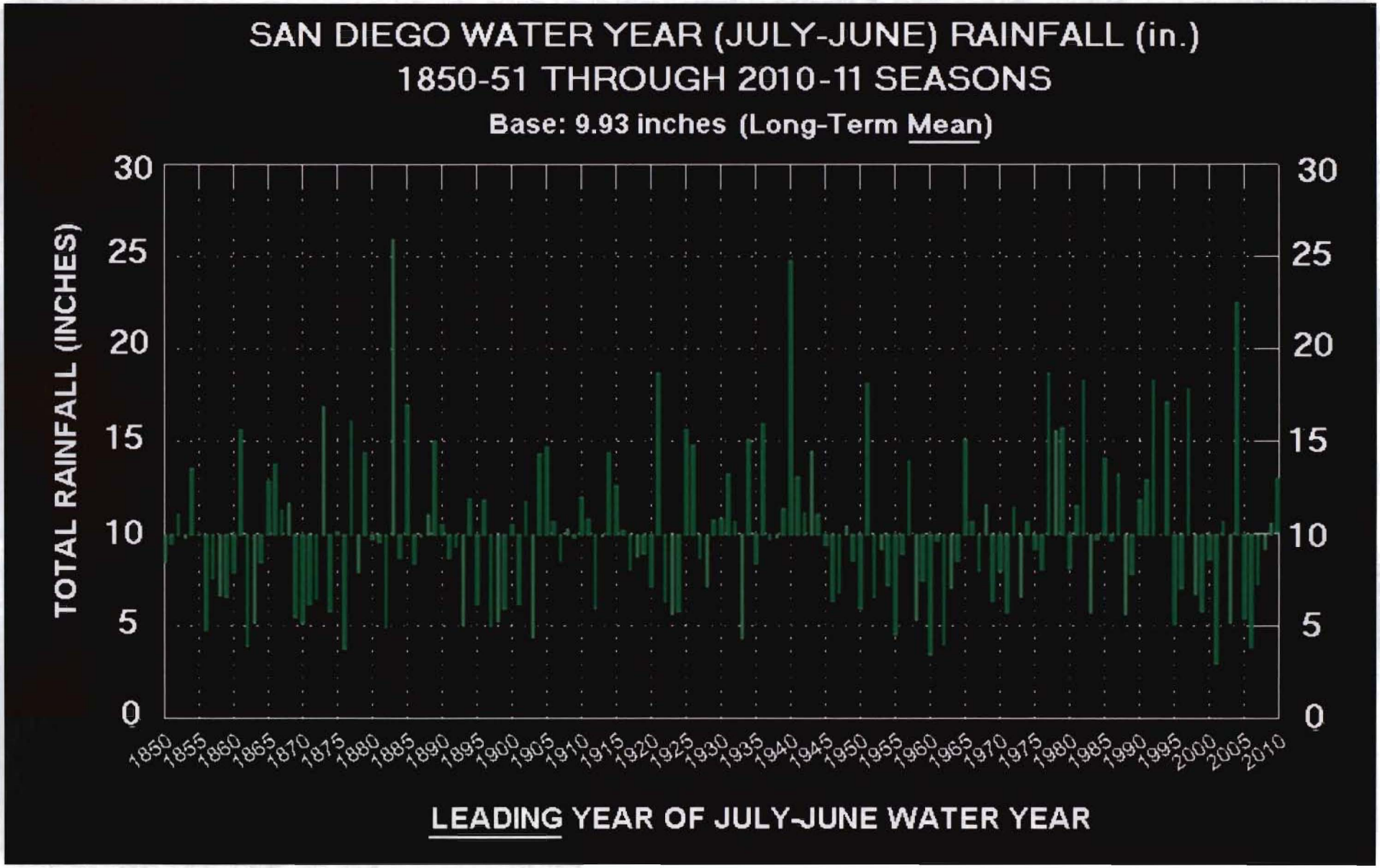
Since the majority of the accelerated erosion and sedimentation is being caused by urban stormwater, I felt that perhaps your department might be the most logical to address it. One obvious solution to prevent most of the park erosion is contain all significant offsite stormwaters within lined channels or piping, and not allow such stormwaters to traverse the park through unprotected natural lands.

After you have had a chance to investigate this matter, I would appreciate your informing me of what remedial actions the City intends to take. We are eager to get this problem corrected before the next rainy season. Please contact Greig Peters of my staff at (619) 467-2976 if you have any questions regarding this matter.

Very truly yours,

ARTHUR [illegible]
Executive Officer

92110


SAN DIEGO WATER YEAR (JULY-JUNE) RAINFALL (in.)
1850-51 THROUGH 2010-11 SEASONS
Base: 9.93 inches (Long-Term Mean)
TOTAL RAINFALL (INCHES)
0
5
10
15
20
25
30
1850
1855
1860
1865
1870
1875
1880
1885
1890
1895
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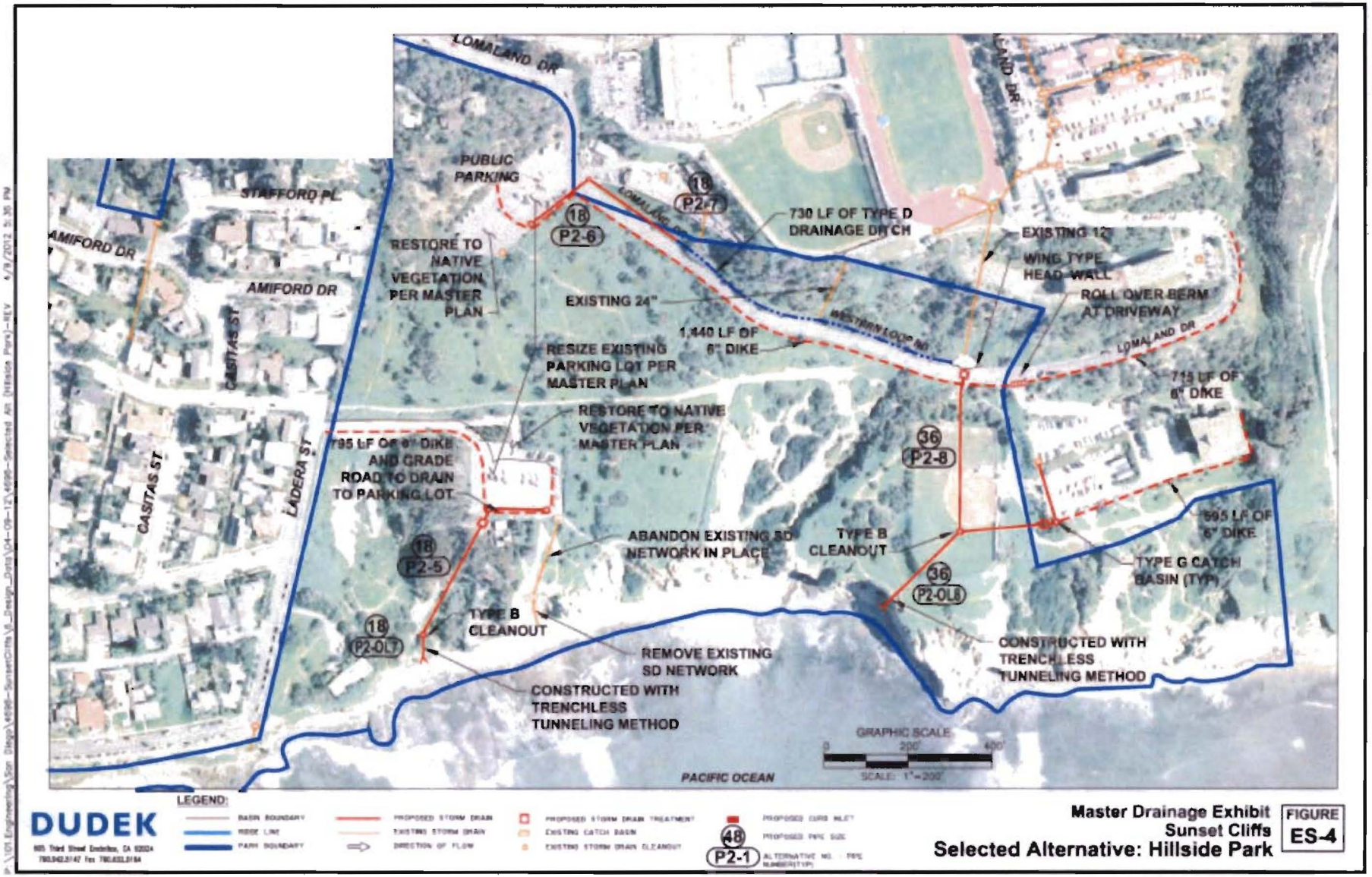
1995
2000
2005
2010
LEADING YEAR OF JULY-JUNE WATER YEAR


2
1


11-02-86
1



DUDEK

605 Third Street Encinitas, CA 92024
760.942.5147 Fax 760.632.5164

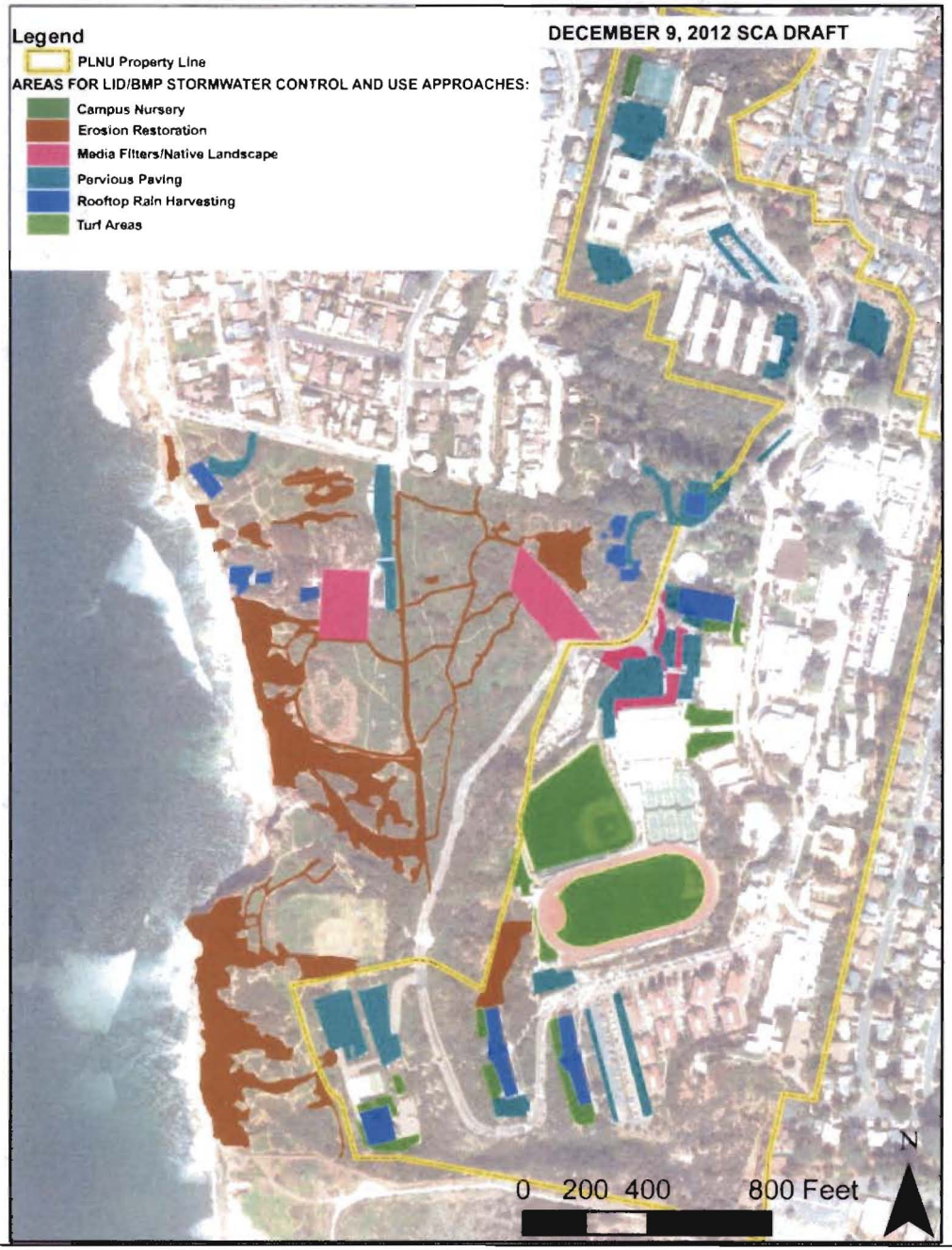
Master Drainage Exhibit
Sunset Cliffs
Selected Alternative: Hillside Park

FIGURE ES-4

DECEMBER 12, 2012 SAN DIEGO R.W.Q.C.B. WORKSHOP

POSSIBLE AREAS FOR USING LID/BMP APPROACHES FOR CONTROLLING AND USING STORM WATER

FROM A POINT LOMA NAZARENE UNVIVERSITY (PLNU) AND THE SURFRIDER FOUNDATION GRANT PROPOSAL
AND
SUNSET CLIFF ASSOCIATION (SCA) DATA



STORM WATER REGULATIONS AND SCNP

- Will the tentative storm water regulations be relevant to SCNP erosion and marine pollution?
- Where in the planning for SCNP projects, design and construction will the City of San Diego become part of the process for the new storm water regulations?
- How will it be determined if the City of San Diego is or is not in compliance with water quality regulations relative to pollutants and sedimentation in the near shore waters?

Sunset Cliffs Association

Mr. Lee McEachern
California Coastal Commission
Deputy Director, San Diego District
7575 Metropolitan Drive
San Diego, CA 92108-4421

October 3, 2012

Dear Lee:

The Sunset Cliffs Association (SCA) is registered as an Unincorporated Nonprofit Association pursuant to California Corporations Code Section 21300. One of our goals is to help ensure that the marine and terrestrial resources of Sunset Cliffs Natural Park (SCNP) are used in a sustainable manner.

I understand you had a phone conversation last week with Craig Barilotti and Norm Allenby, where they registered concerns about implementation of the PLNU drainage plan at Sunset Cliffs. SCAs concern is that the plan if executed would exacerbate the erosion problems in the park and create significant pollution of the ocean west of the park. At your suggestion to put something in writing, here are our thoughts.

We are concerned with the SCNP Hillside Park. Let's review where we have been, where we are and where we perhaps should go.

BACKGROUND

The park is a 50 – acre site at the lower portion of a watershed. The upper portion of the water – shed is a 90 – acre college campus largely developed with lots of building footprints and hardscape from which storm water is collected and directed into the park. This storm water runoff has resulted in erosion and marine pollution due to the runoff transporting eroded sediments over Sunset Cliffs (See Figure 1) for more than twenty years.

With an average annual rainfall of about ten inches, based on a comparison to native vegetation on adjacent Navy property, SCNP can absorb its ten inches of annual rain with zero discharge to the beach. Properly restored with coastal sage plants it may absorb more, but the park as is has periodically been overwhelmed with storm water runoff from the PLNU campus as noted in a 1992 letter from the Regional Water Quality Control Board asking the City to abate the erosion before the next rainy season. The volume and relatively high velocity of the runoff has caused the erosion (See Figure 2) and marine pollution due to sediment discharges (see Figures 3 and 4) that has been apparent throughout the SCNP Hillside Park since 1975.

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WHERE WE HAVE BEEN

The PNLU Master Plan, as conceived in 1992, was in response to an amended CUP item 38e which states:

> "The applicant shall submit a drainage and erosion control plan, to be approved by the Planning Director and City Engineer, which identifies mitigation measures for the sole purpose of correcting future erosion problems which directly relate to the proposed new land use authorized by this CDP/CUP amendment."

Such a plan was prepared, signed off by the appropriate persons, but never implemented. There was public comment to the effect that the contemplated drainage system construction would do more harm than good. Discussions took place between the City and PLNU regarding the use of PLNU funds to offset construction costs to presumably pursue a different plan.

As time continued to pass, an advisory group formed by the City of San Diego Parks and Recreation Department called the Sunset Cliffs Natural Park Council, developed a Master Plan for the Park in 2005. The SCNP Master Plan contemplated project EIRs, a Comprehensive Drainage Plan and a series of sequential steps to be taken in the creation of a Natural Park. The PNLU drainage plan collected dust. The ocean pollution continued as did the erosion. SCNP was literally disappearing.

WHERE WE ARE

A review of the CUP for PLNU came up in 2011. CUP 38e remained an open item. PLNU resuscitated its 1992 drainage plan. Without benefit of any substantial public review, PNLU pressed forward using a private ministerial process where public review and commentary were not required. There was approval of its 1992 drainage plan as amended in 2012, without consideration of the impact such a plan would have on park erosion and ocean pollution and the destruction of the registered archeological sites in the SCNP the 1992 PLNU Drainage Plan would have protected.

The volume of the storm water flow to be anticipated with a fifty-year storm left the design professional for the park drainage plan with no alternative but to design a traditional storm drain system with a big pipe ocean disposal solution to solve the storm water problem.

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The big pipe solution itself would have significant impact on the park but, more importantly, it would not protect the ocean from sediment laden runoff discharge into marine waters and habitats.

That is not to say that the PNLU plan 2012 is not better than the PNLU plan 1992, but it nonetheless does not correct future erosion problems, as required by its CUP item 38e. These past current and future problems could be altogether avoided by the application of current standards of care reflected in BMPs, LID, Storm Water Regulations and good engineering practices.

WHERE ARE WE GOING?

Integrated watershed planning is the twenty-first century's answer to the problem posed by the condition of Sunset Cliffs Natural Park. Ocean pollution will continue if storm water controls have not been properly addressed.

There are four separate plans, that include drainage components, in various project stages of development, that could adversely impact sensitive coastal resources as follows: 1) SCNP Hillside Tails and Renovation plan funded in part by the California Coastal Conservancy, is 90% complete; 2) a final Drainage Study recommended by City Parks and Recreation Department (not a comprehensive plan) is finished; 3) the PLNU CUP drainage plan; and 4) a completed SCNP Master Plan. Coordinated environmental work should be done for each plan, yet none of these separate plans discuss any of the others, even though the key entities involved are well aware of each plan, thus creating a piece meal approach. Unless the City and PNLU are required to act together to handle these storm water issues, the park will continue to erode and the beaches and ocean continue to be polluted.

I hope that your group will take a leadership role to get planning and implementation of storm water control measures by PLNU that will eliminate PLNU storm water runoff into the SCNP. Simply put, the 2012 PNLU Drainage Plan should be rejected. PLNU needs a storm water management plan, not a drainage plan. Such a plan would cure future erosion problems and allow the development of a natural park as reflected in the SCNP Master Plan.

Yours truly,

Signed original taken by courier to San Diego CCC Office October 4, 2012

Daniel Mendiguchia
Vice President, Sunset Cliffs Association

Cc: Norm Allenby, Craig Barilotti, Camilla Ingram, Suhail Khalil

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FIGURES FOR SCA CCC OCTOBER 3, 2012 PLNU CUP LETTER

List of Figures:

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Figure 1. Garbage Beach waterfalls due to uncontrolled runoff. In this undated photograph provided by Ann Swanson, runoff, mostly from PLNU, that is channeled down the major erosion gully running through the middle of the Hillside Park that is often called "Culvert Canyon", forms the waterfall that is shown discharging at the south end of Garbage Beach pointed out by Arrow 1. Arrow 2 points to the location of a waterfall made up mostly of runoff generated on SCNP impervious surfaces including the park Lower Parking Lot, roofs, and trails where the soil is compacted by pedestrian traffic. Smaller flows from storm water flowing over the cliffs between Arrows 1 and 2 can also be seen. These runoff flows add erosion sediments to the near shore zone that impact marine plants and animals in intertidal and sub – tidal habitats including surf grass (*Phyllospadix*) beds that provide a nursery habitat for juvenile lobsters during the first 1 – 2 years after they settle out of the plankton. The San Diego Regional Water Quality Control Board Executive Officer in a May 26, 1992 letter to the City of San Diego NPDES Program Coordinator requested that the discharge of sediment laden runoff to the marine water adjacent to the SCNP be abated before the next rainy season.

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Figure 2. Erosion caused by PLNU Young Hall dormitory runoff during December 2004. The runoff caused erosion that partially severed the main trail many park users follow to the shoreline access point called "Ab Trail" by local surfers. This erosion was rapid and deep enough that there was concern it would washout the high pressure force main that transports digested sludge from the Point Loma Water Treatment Plant to the Miramar Sludge processing plant 23 miles away. The runoff causing this erosion in December 2004 originated from the same runoff sources that the contemporary PLNU Drainage system is designed to capture and infiltrate into the soil. Infiltration of runoff into the soil could be problematic if the soil down slope in the SCNP lost its strength, as the soil did in part in the 2004 – 2005 rainy season as evidenced by piping and slumping, exacerbating erosion in the SCNP archeological sites.

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Figure 3. Aerial photograph taken November 2, 1986 of the SCNP area and turbid ocean waters. The turbidity of the ocean waters that is greatest off the southern areas of the SCNP Hillside Park, presumably due to erosion sediments that have been transported to the sea by runoff from SCNP and PLNU. Currents will move the turbidity plume north and southward along the coastline by a number of factors including: tides, wind and prevailing alongshore currents. This photograph is part of an aerial photographic time series for the California coastal zone that is available online, and is compiled by the California Coastal Records Project.

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Figure 4. February 2, 2003 photograph of Culvert Canyon turbid storm water runoff discharges. This photograph, taken by Craig Barilotti, shows how turbidity due to sediment discharges from Culvert Canyon after being introduced into the coastal waters, moves offshore and alongshore depending on prevailing currents, in this case northward towards Ocean Beach.

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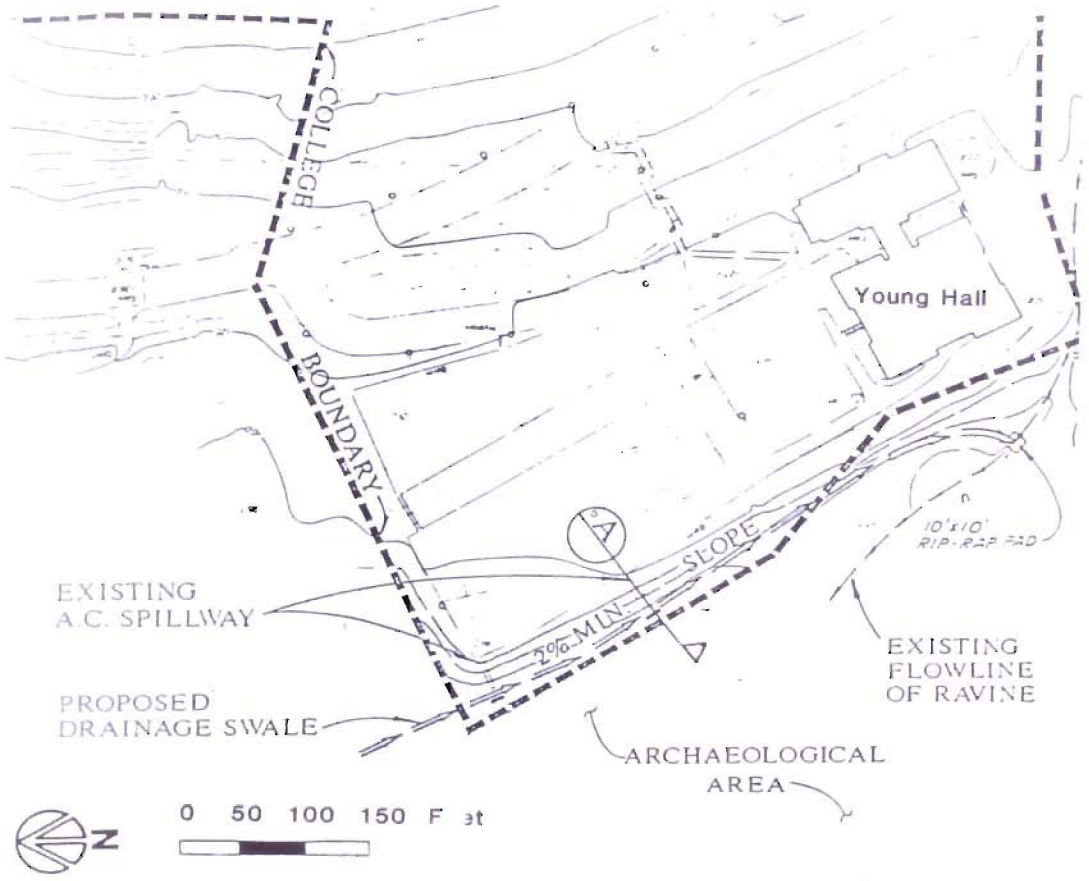

Figure 5. Diagram from the 1992 PLNU Young Hall drainage plan EIR. This design was prompted by concerns for protecting the California registered Native American archeological sites that are just to the west of Young Hall on SCNP property. The discharge structure shown in this diagram and page 3 of the 1992 Drainage System Plans was to have been on SCNP property where it discharged into South Canyon, in part to protect the archeological sites from the Young Hall runoff. The 2012 PLNU Drainage Plan proposes to discharge into velocity dissipaters located on PLNU property, and during periods of heavy rainfall when the drainage system retention capacity is reached, runoff is expected to flow across the PLNU/SCNP property line with a velocity of 2.5 feet per second and into the parkland where the archeological sites are located. The potential for erosion due to Young Hall runoff was demonstrated during the 2004 – 2005 wet season (see Figure 2), when runoff from the Young Hall caused major erosion in the archeological area shown on the EIR diagram.

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