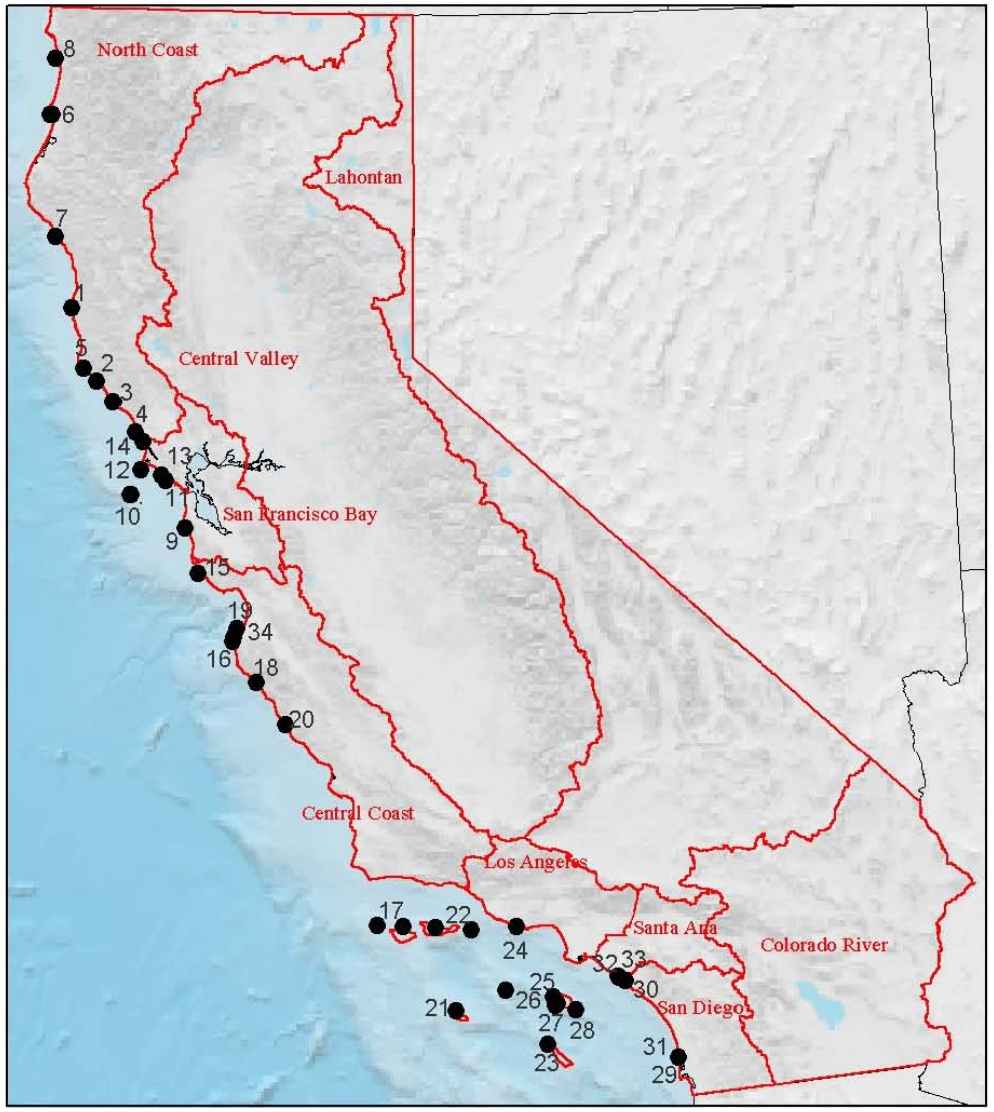
California Ocean Plan Areas of Special Biological Significance

Dominic Gregorio, Senior Environmental Scientist, Ocean Unit, State Water Resources Control Board, Division of Water Quality, October 24, 2005

Areas of Special Biological Significance (ASBS)

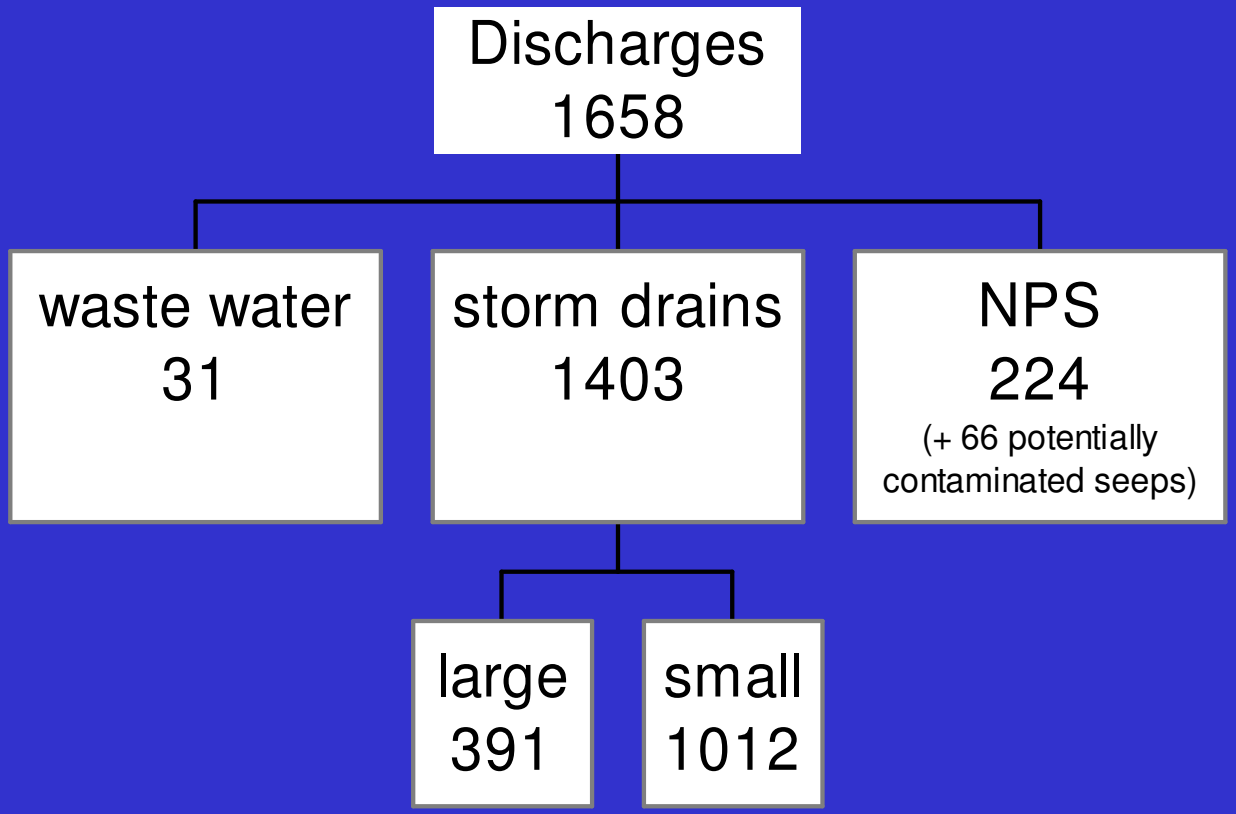
- 34, designated in the 1970s by the State Water Resources Control Board
- Regulated through the California Ocean Plan
- Ocean Plan: *"Waste shall not be discharged to designated Areas of Special Biological Significance…"*
- Public Resources Code: ASBS are a subset of State Water Quality Protection Areas

Locations of Areas of Special Biological Significance



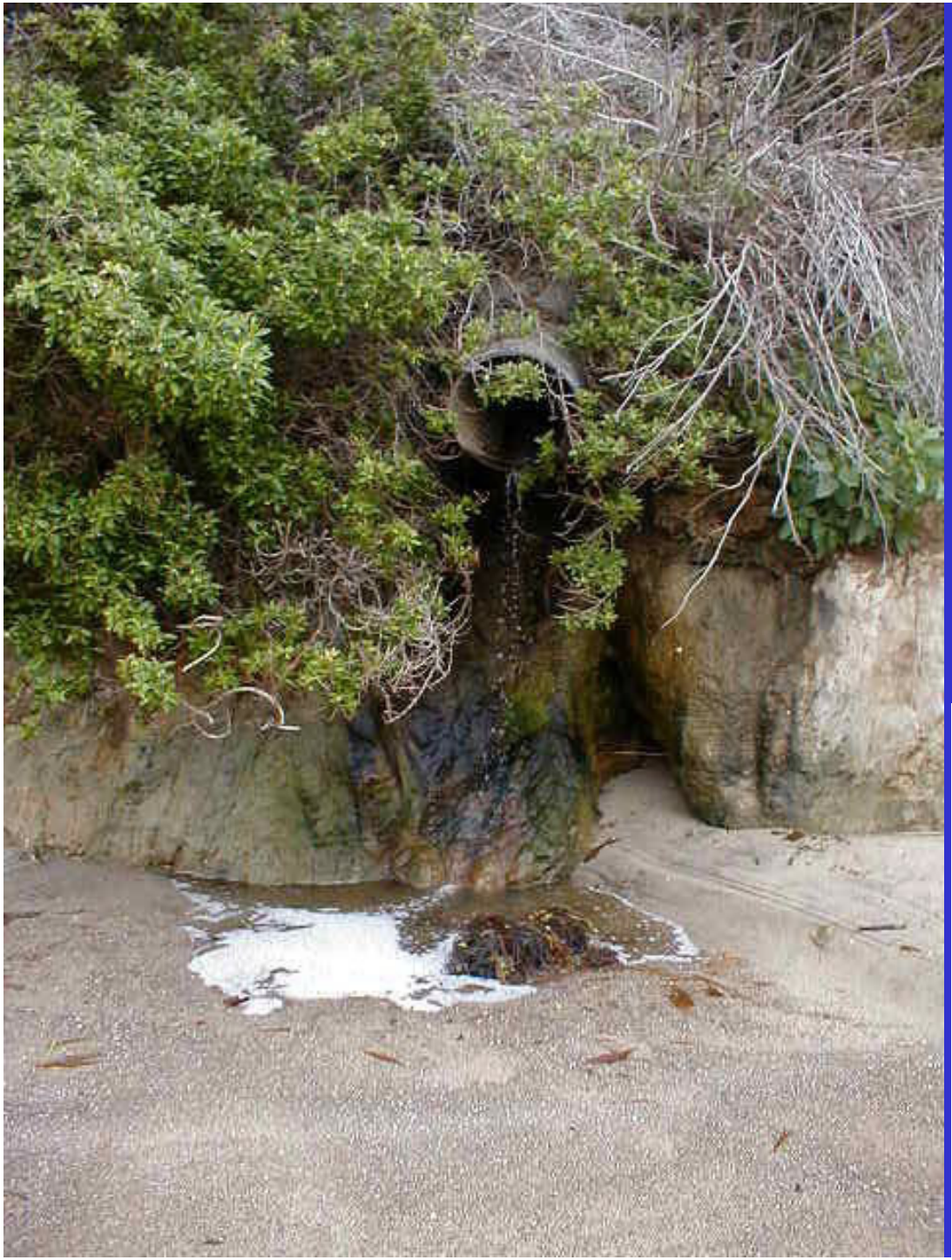
Source: Final Report: Discharges into State Water Quality Protection Areas, SCCWRP, July 2003

Statewide ASBS/SWQPA Discharges



Storm Water and Nonpoint Sources

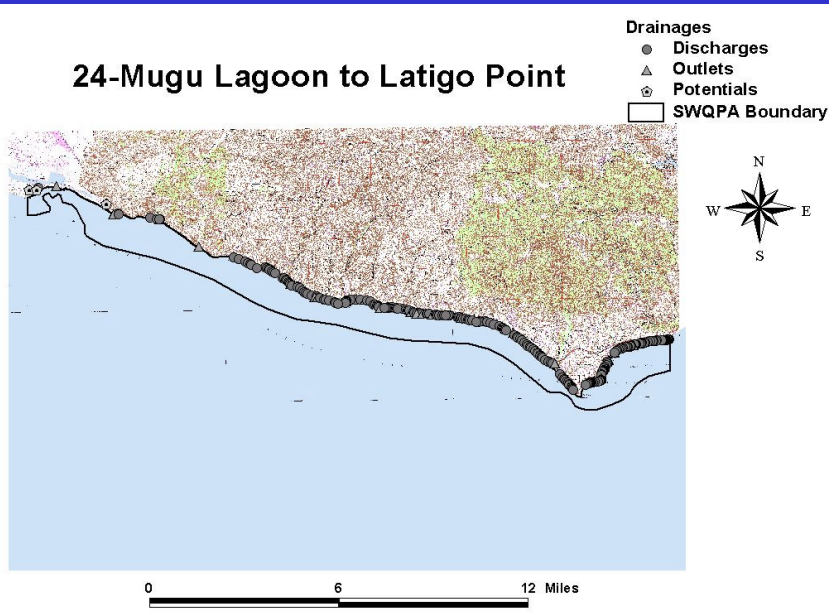
- Storm water 1403 (1012 small, 391 large)
- Nonpoint Sources 224 (+66 seeps) also includes agriculture, marine operations
- Many NPS and small storm drains were low volume low threat
- October 18, 2004 letters
- August 18, 2005 letters

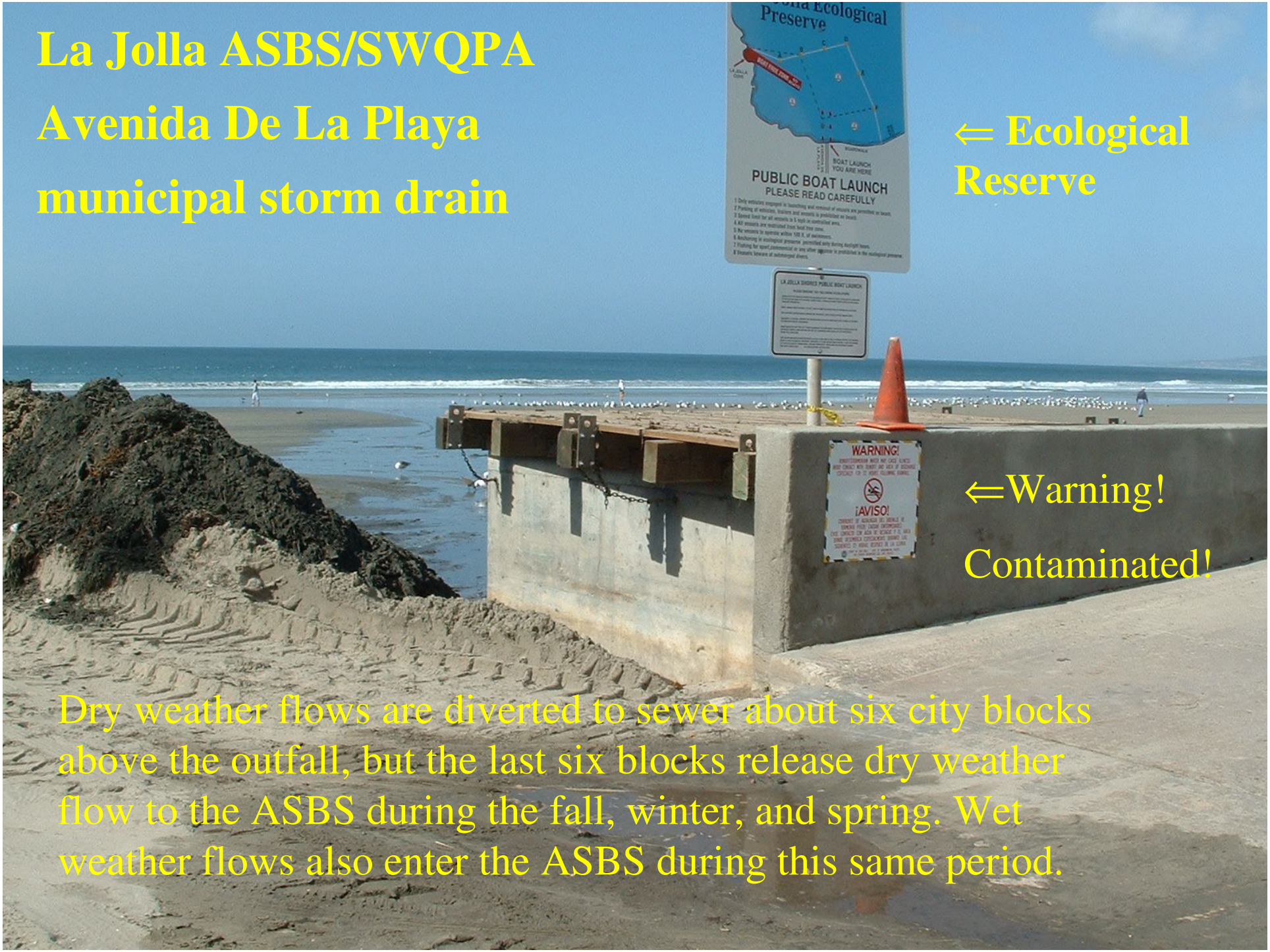


Laguna Point to Latigo Point ASBS, in Malibu

Mystery storm drain…

Dry weather flows




La Jolla ASBS/SWQPA
Avenida De La Playa
municipal storm drain
Preserve
PUBLIC BOAT LAUNCH
PLEASE READ CAREFULLY
BOAT LAUNCH
YOU ARE HERE
⇐ Ecological Reserve
WARNING!
¡AVISO!
⇐Warning!
Contaminated!
Dry weather flows are diverted to sewer about six city blocks above the outfall, but the last six blocks release dry weather flow to the ASBS during the fall, winter, and spring. Wet weather flows also enter the ASBS during this same period.

McWay Falls, Julia Pfeiffer Burns ASBS nonpoint source, sediment

Before 1983, when road clearing operations dumped sediment into the ASBS

February 2003, the only cove in California with a waterfall is now filled in

31 Point Sources

- Previous exceptions (4)
- Scripps (2005)
  - 93 total discharges, including 5 point source
- Remaining (~ 22):
  - October 18, 2005 letters
    - Sewage (no new exceptions recommended)
    - Fish cleaning (no exceptions recommended)
    - Staff proposes individual exceptions for marine lab waste seawater - many also with storm water and/or NPS

Staff Proposal: Marine Labs - Individual exceptions ….to include associated storm water

- UCD Bodega Marine Lab
- Monterey Bay Aquarium
- SU Hopkins Marine Station
- HSU Telonicher Marine Lab

Scripps Institution of Oceanography and the Birch Aquarium

San Diego-Scripps ASBS

University of California, Scripps Institute of Oceanography, Individual Exception

- State Board Resolution 2004-0052
- 19 Conditions
- Some Point Source Oriented
- Some Storm Water and NPS
- Effluent and Receiving Water Monitoring

Scripps Institute of Oceanography
General Provisions

- The discharge must comply with all other applicable provisions of the Ocean Plan.
- Natural water quality conditions in the receiving water, seaward of the surf zone, must not be altered as a result of the discharge.
- Natural water quality will be defined, based on a review of the monitoring data, by an advisory committee.
- Effluent and receiving water analysis for copper must employ the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/ Mass Spectrometry, ICPMS).
- Flow measurements for major outfalls.

Scripps Institute of Oceanography
Specific Waste Seawater Pt. Source Provisions

- Must minimize concentrations of chemical additives, including antibiotics, in the effluent. Formalin shall not be discharged to the ocean. The use of copper as a treatment additive in the open seawater system must be eliminated as soon as practicable…

- A quarterly report of all chemical additives discharged via waste seawater must be submitted in the quarterly monitoring report to the Regional Board.

- A study must be performed to determine the initial dilution and fate of the discharge during storms.

- Develop and implement controls that result in a negligible risk of the release of exotic species.

Scripps Institute of Oceanography
Specific Storm Water Provisions

- By January 1, 2007, must eliminate all discharges of non-storm water urban runoff .

- SWMP must describe the measures by which non-storm water discharges will be eliminated and interim measures ...

- SWMP must include a map of all entry points for urban runoff entering the drainage system.

- SWMP must also address storm water discharges and how pollutants will be reduced in storm water runoff into the ASBS through the implementation of Best Management Practices (BMPs).

- Accelerated Iterative Approach: The implementation schedule must be developed to ensure that non-structural BMPs are implemented within one year of the approval of the SWMP ...

Scripps Institute of Oceanography
Specific Storm Water Provisions cont'd

- If the results of receiving water monitoring indicate that wet weather discharges are causing or contributing to an alteration of natural water quality, Scripps is required to submit a report to the Regional Board …

- Within 30 days following approval of the report by the Regional Board, they must revise the SWMP to incorporate any new or modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

- Implementation of BMPs must be within one year of the approval by the Regional Board of the revised SWMP. The Regional Board may, for good cause, approve a longer time period for structural BMPs.

- As long as Scripps has complied with the procedures described above and is implementing the revised SWMP, then they do not have to repeat the same procedure for continuing or recurring exceedances of the same constituent.

Scripps Institute of Oceanography Monitoring

- Once every permit cycle, a quantitative survey of benthic marine life must be performed.
- Once during the upcoming permit cycle, a bioaccumulation study using sand crabs and mussels must be conducted for metals.
- The effluent from the aquarium outfall must be sampled and analyzed monthly for copper concentrations.
- During the first year of the permit cycle, effluent samples must be collected (twice, once during dry weather and once during wet weather) and analyzed for all Ocean Plan Table B constituents. For wet weather, effluent samples must also be analyzed for bacteria.

Scripps Institute of Oceanography Monitoring cont'd

- Twice annually, once during dry weather and once during wet weather, the receiving water and sediment must be sampled and analyzed for Ocean Plan Table B constituents. Receiving water must also be monitored for bacteria.

- Based on the first year sample results, the Regional Board will determine specific constituents to be tested during the remainder of the permit cycle.

- In addition to the bacterial monitoring requirements in the Ocean Plan, indicator bacteria and total residual chlorine must be tested once monthly in the effluent draining the marine mammal holding facility.

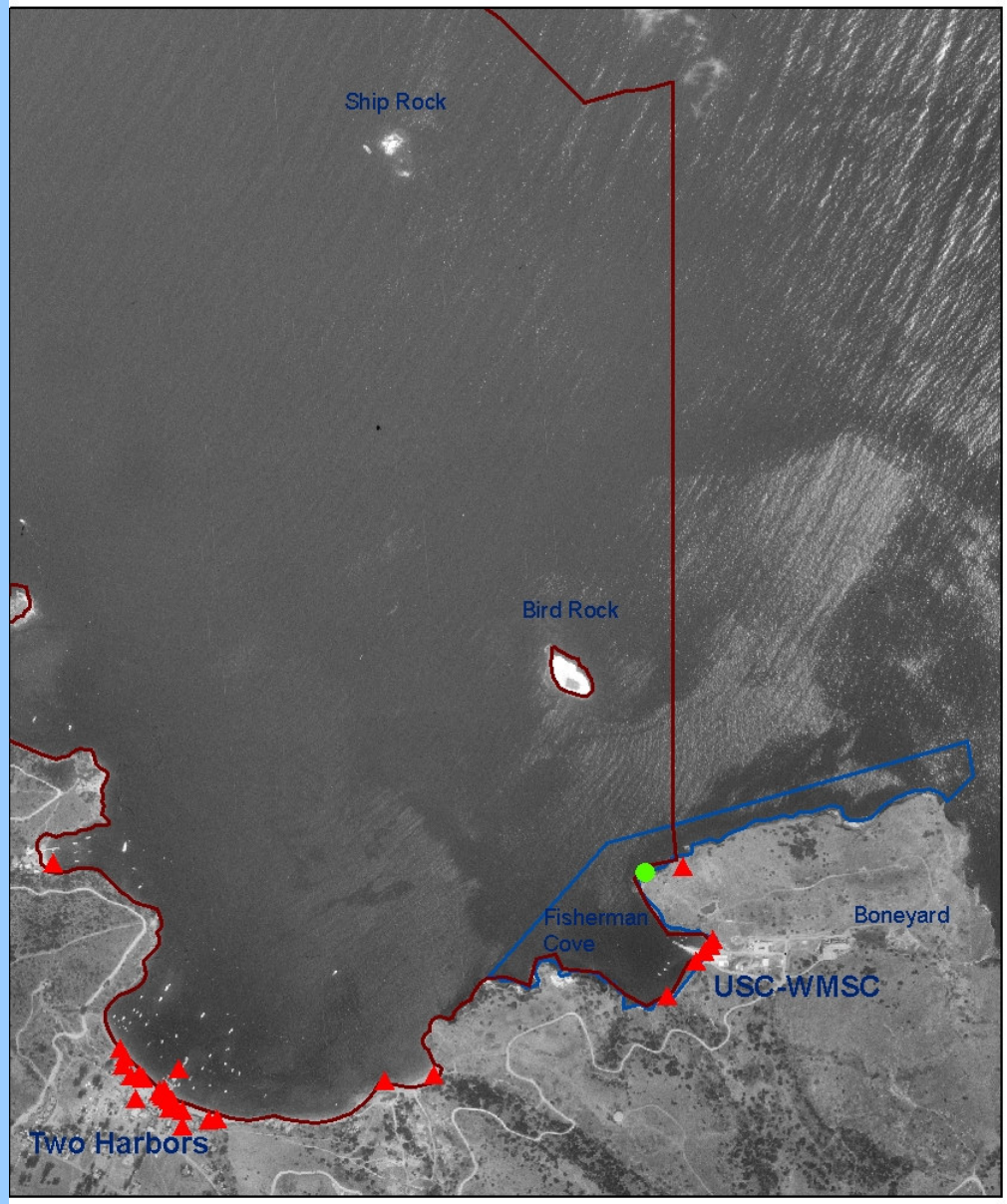
Scripps Exception
Water Quality Committee

Natural water quality will be defined, based on a review of the monitoring data, by an advisory committee…composed of State and Regional Board staff, a representative from UCSD/SIO, and two scientists selected by Regional Board staff from some academic organizations other than UCSD/SIO. At a minimum the advisory committee must meet annually … and to advise the Regional Board whether or not natural water quality is being altered in the ASBS as a result of UCSD/SIO…

First meeting scheduled for October 25, 2005

- NW Santa Catalina Island ASBS
- USC Wrigley Marine Science Center (WMSC)
- Initial Study out early November
- Proposed conditions similar to Scripps, but with site specific differences, e.g.:
- Waterfront management plan
- Intake as reference

Isthmus Cove Area Figure 1



Grant Program Update

Integrated Coastal Watershed Management Planning Grants Awarded:

- ✓5 grants, SWRCB, all with/near ASBS
  - ✓Trinidad
  - ✓Mattole R./King Range
  - ✓Marin coastline
  - ✓Orange County
  - ✓Scripps/La Jolla
- ✓4 grants, DWR, 2 with ASBS
  - ✓(Monterey and Malibu areas)

Draft Prioritization of ASBS

High priority for funding include:

- **ASBS with large number of discharges, associated with widespread/dense development and watershed complexity**
- **ASBS with significant contact recreational use**
- **ASBS with agricultural discharges**
- **ASBS with marine operations (e.g., mooring fields)**

Carmel Bay ASBS

Significant Contact Recreation


Carmel Bay ASBS, Beneficial Use - Protecting Marine Life

Grant Program Update

- ✓ Coastal Nonpoint Source – Consolidated Grants Program
- ✓ Staff proposal to Ocean Protection Council
  - ✓ Rapid Indicators
  - ✓ ASBS – implementation and monitoring
- ✓ Draft guidelines will be posted, likely by end of October

What is waste?

It is broadly defined in the Porter-Cologne Water Quality Control Act, Water Code Section 13000 et seq., to include sewage and "any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin . . . ." (Wat. Code sec. 13050(d))

Waste cont'd

This includes wastes from a variety of activities typically considered nonpoint, such as:

l) drainage, flow, or seepage containing debris or eroded earth from logging;

2) return irrigation or drainage water from agricultural operations;;

3) pesticides improperly applied to waters of the state or which find their way into waters of the state after application; and

4) drainage of wastewater from construction sites.

Comments from August Workshop

Alternatives:

- General Exception
- Time Schedule Order (TSO) approach
- "Stewardship Councils"
- Amend Ocean Plan

Recommendation: "Special Conditions to Limit Storm Water and Nonpoint Source Discharges and Impacts in ASBS."

- The Special Conditions would **allow permit coverage for ASBS discharges**.

- **An accelerated iterative BMP approach**, via permits and management plans

- A **time schedule** would be included.
  - All **dry weather flows would be eliminated** initially (except emergency fire fighting and certain hillside de-watering projects)
  - **Percent reductions in storm flow wastes would be required per year**, until goal of minimal wastes is reached.

Recommendation: "Special Conditions to Limit Storm Water and Nonpoint Source Discharges and Impacts in ASBS."

What do we mean by minimal pollutants?

- "Zero" is impractical and may not be ecologically sound for all constituents.
- Not detects for metals may not be natural.
- Synthetic pollutants should not be detectable in receiving water.
- Runoff effluent should ultimately be comparable (but not necessarily identical) to natural background loads for neighboring pristine watersheds.
- Ocean Plan **Table B objectives would also be used as targets for evaluation purposes**. Currently, there is no plan to prescribe numeric effluent limits.

Structural BMPs - Laguna Beach - Heisler Park ASBS, diverts dry weather flows, CDS treats wet weather flows

Recommendation: "Special Conditions to Limit Storm Water and Nonpoint Source Discharges and Impacts in ASBS."

- **Compliance would be determined by meeting natural water quality** in the ASBS receiving water, thereby supporting healthy marine aquatic life communities there.
- **Strict monitoring requirements** would be included to provide adequate data for evaluating the status of beneficial uses.
- The resolution would also encourage discharger participation in regional or watershed **Stakeholder Workgroups** (modeled on the Critical Coastal Area pilot project committees) to collaborate on pooling resources for monitoring and data collection, planning for BMPs, sharing information on BMP effectiveness, and for addressing watershed impacts to ASBS marine waters.
- **Three regional scientific advisory panels** would be established to help State and Regional Board staff address the question of meeting natural water quality and identifying the health of marine aquatic life during the time schedule period.


Critical Coastal Area Watershed
draining to La Jolla ASBS

Critical Coastal Area Program update

- ✓Pilot Projects
  - ✓James Fitzgerald ASBS
  - ✓Trinidad Head ASBS
  - ✓Orange County -Heisler, Badham (Newport) and Irvine Coast (Crystal Cove) ASBS

Authority for Special Protections

- Section III.I.1 of the Ocean Plan
- California Water Code
- Public Resources Code.

Next Steps

1. Staff will prepare a report: “What we already know about ASBS and what we don’t know?”
2. Staff will develop Draft Board Resolution
3. Scoping Meeting
4. Dischargers data due by May 31, 2006
5. Staff will incorporate all this information into a Draft FED (4-6 months)
6. Public Hearing
7. Final Board decision