

Progress Report on Recent Contracts

In addition to studies that are funded by the signatory agencies, SCCWRP conducts research for government agencies and private organizations for specific projects. Two large projects contracted to SCCWRP and initiated in 1987 are still in progress. In addition, two new research contracts were initiated by SCCWRP in 1988.

Ongoing Research

A book entitled *Ecology of the Southern California Bight: A Synthesis and Interpretation* was funded by the Minerals Management Service of the Department of the Interior through a contract to the Ocean Studies Institute of California State University at Long Beach and SCCWRP. This reference book will feature several articles by SCCWRP authors (Anderson, Cross, Eganhouse, and Thompson) and a number of other marine scientists.

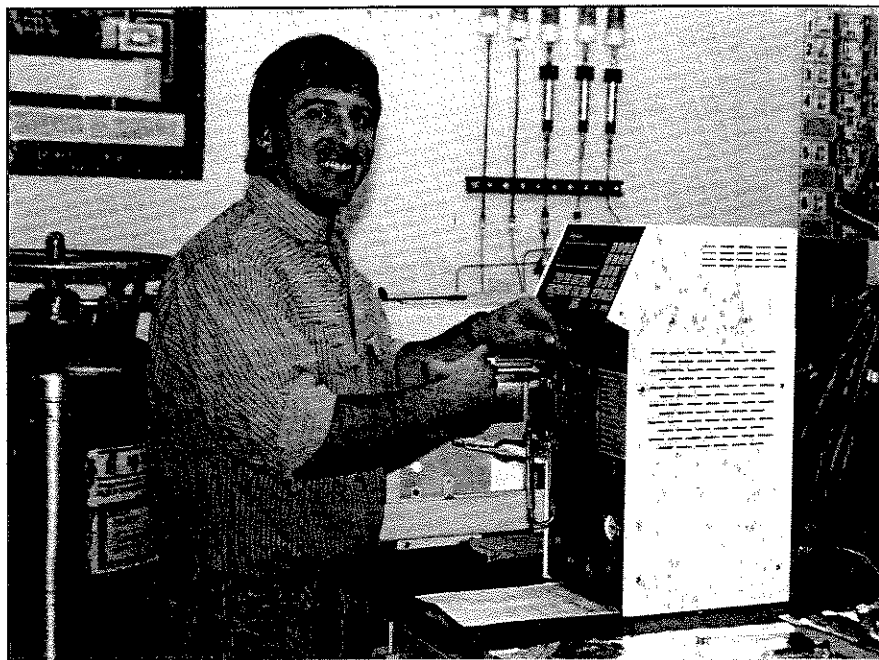
The second draft of the book has been completed and distributed to the Quality Review Board and a number

of outside reviewers. Suggestions and corrections received will be incorporated into each chapter and the number of pages will be trimmed to produce a final draft equivalent to about 700 printed pages. Dr. Donald Reish and an outside professional editor will edit the final manuscript to provide a consistent style of

presentation.

Many illustrations are being prepared, and we plan to incorporate some innovative figures summarizing major aspects of the scientific fields discussed (eg. fishes, physical oceanography). Three publishing companies have expressed an interest in publishing this book; the primary consideration in the choice of publishers will be to offer this reference volume to users at the lowest possible cost.

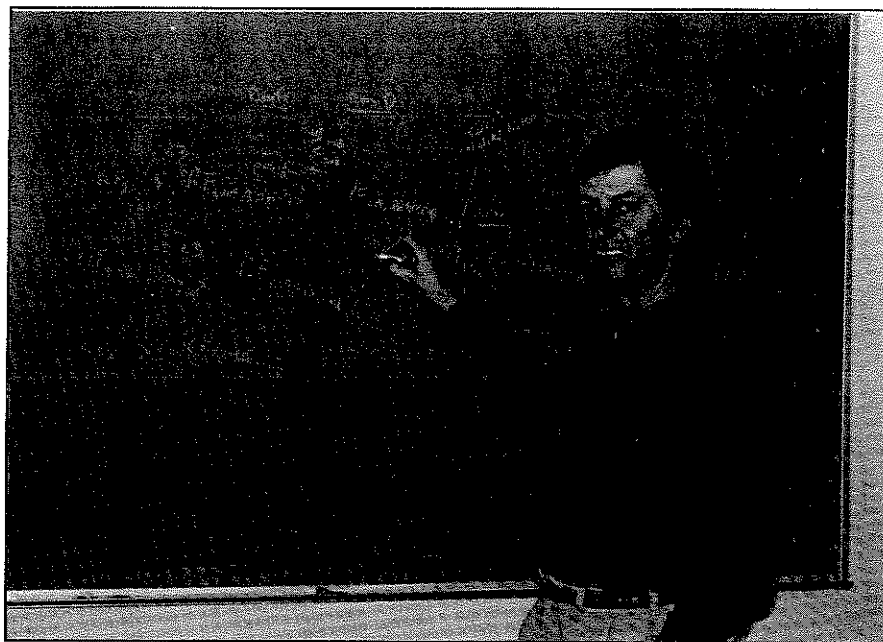
A three-year project funded by the American Petroleum Institute was initiated in 1987 to study produced water toxicity on marine organisms. Now in the second year of investigations, Robert Eganhouse, Skip Wescott, and Ken Schiff from SCCWRP, and Donald Reish (California State University, Long Beach) and JoEllen Hose (Occidental College, Los Angeles) plan to test selected species and produced waters collected from



Ken Schiff analyzes volatile organic compounds for the API study.

several oil production platforms. The researchers have compiled extensive chemical data on the hydrocarbon-enriched water, and bioassays have been conducted on mysids, urchin sperm, and Microtox bacteria. Beginning in July 1989, the researchers will be testing mysids, urchins, and Microtox bacteria plus polychaetes and fish larvae.

The final results of the API study will compare the sensitivities of different test species and provide an evaluation of the toxicity range of several different produced waters. We also hope to determine which of the numerous components in these complex samples are contributing most to toxicity levels.



Bob Eganhouse makes a point during a staff meeting.

New Contracts

Two new research projects were initiated by SCCWRP researchers in 1988. One research study entitled *Modification and Verification of Sediment Deposition Models*, has been funded by the California State Water Resources Control Board. Co-investigators Terry Hendricks and Bob Eganhouse will study the physical oceanography and geochemistry of discharged waste particles near ocean outfalls. This project is scheduled to begin in spring of 1989 when collections will be made near the City of San Diego's Point Loma outfall and the County Sanitation Districts of Orange County outfall. The Los Angeles County Sanitation Districts' Palos Verdes outfall will also be studied by utilizing the extensive historic data base already collected on sediments in that area.

Information collected

during this study will be used to improve the two best models available for simulating the sedimentation of effluent particles (SEDF2D/SEDR by Hendricks and DECAL by Dr. Kevin Farley of Clemson University) by incorporating the processes of particle aggregation and organic matter decomposition. Organic carbon, nitrogen, and selected trace metals in the effluents of all three dischargers will be measured during a one year period. Comparisons of the chemical measurements made on sediment-trap particulates, sediments, and degraded effluent particles should provide information on the origins of the particulates accumulating in the traps. Information on the degradation and transport of contaminants will be used to test the accuracy of the predictions generated in the sedimentation models.

Dr. Hendricks will

study ocean currents off Orange County in the newest SCCWRP project, which is funded by the CSDOC. With the assistance of Dario Diehl and Harold Stubbs, Hendricks will collect current meter and temperature readings at three depths in addition to pressure records that can be converted to wave amplitude and period on one mooring for a period of 12 months. The information collected will permit users to determine how incidents of high fecal coliform detected by normal monitoring on the beaches of Orange County correlate with an onshore current flow.

In a second phase of this project, a model developed by Hendricks will incorporate two years of previously collected current meter data (collected by the CSDOC) to estimate the transport and dispersal of effluents from coastal outfalls.