

HISTORY, ORGANIZATION, AND STAFF

The Coastal Water Research Project was founded in 1969, when five local government agencies (Ventura County, the cities of San Diego and Los Angeles, and the County Sanitation Districts of Los Angeles and Orange Counties) entered into a joint powers agreement to sponsor environmental studies. Their intention was to develop regional scientific information on the coastal waters extending from Point Conception to the Mexican border. To keep the Project free of partisan pressures, its control was delegated to a commission of local civic leaders and elected officials, who would reflect the public concern for environmental quality. The financial support from the local government agencies has been supplemented in the last few years by a series of grants from the National Science Foundation, the National Atmospheric and Oceanic Administration, the University of California, the State Water Resources Control Board, and others.

The Project's 20 scientists are organized into three divisions—biology, chemistry, and engineering, as shown on the organization chart (Figure 1). The staff receives overall guidance from a consulting board of eminent scientists from major universities. The members of the research team are identified in the following paragraphs and in Figure 2.

WILLARD BASCOM, Project Director

Mr. Bascom has been involved in oceanographic work since 1945. The early part of his career was spent with the University of California, both at Berkeley and at the Scripps Institution of Oceanography, researching waves and beaches; he later directed the Mohole Project for the National Academy of Sciences. In recent years, he has organized and led many ocean science and engineering projects around the world. Mr. Bascom is the author of many books and papers about the ocean, a member of the Ocean Science Board of the National Academy of Science, and an adjunct professor at the Scripps Institution of Oceanography. In 1980 he won the Explorers Medal and the John Wiley Jones award for leadership in oceanography.

DR. TAREAH J. HENDRICKS, Physicist

Dr. Hendricks brings mathematical order to the Project's diverse findings in chemistry, biology, and oceanography. He obtained a B.S. degree from the University of California at Berkeley with "highest honors" in physics and a Ph.D. degree from the University of California at San

Diego as a National Science Foundation fellow in 1967. Dr. Hendricks' previous research focused on high-energy physics, sanitary engineering, and experimental reverse osmosis.

DR. DAVID A. BROWN, Biochemist

Dr. Brown is head of the Project's chemistry department and an expert on trace metals, toxic organic materials, and their effects on marine life. He received his B.S. degree in biochemistry and his Ph.D. degree in oceanography from the University of British Columbia. His doctoral dissertation was on the toxicology of trace metals, including their detoxification by metallothionein and their role in carcinogenesis. In addition, he has published a number of papers on the biochemical stress response in fish exposed to contaminants and on invertebrate histopathology.

DR. BRUCE THOMPSON, Benthic Ecologist

As leader in the benthic laboratory, Dr. Thompson conducts analyses of how changes in environmental conditions affect the invertebrates at the bases of marine food chains. He brings 5 years experience working on benthos of the region from the Allan Hancock Foundation, U.S.C., from which he received his Ph.D. in 1982. He has also conducted research on deposit feeding communities, invertebrate systematics, and phytoplankton productivity.

DR. JEFFREY CROSS

Dr. Cross conducts research on fish distribution and ecology. His strong statistical background has benefited several of the Project's studies. He received a B.S. in zoology from the University of Rhode Island, an M.S. in zoology from the University of Nevada, Las Vegas, and a Ph.D. in fisheries from the University of Washington in 1981. He has authored several publications on the ecology of marine and freshwater fishes.

RICHARD W. GOSSETT, Chemist

Mr. Gossett is in charge of the trace organics laboratory including biological and sediment sample preparation and analysis by high pressure liquid chromatography and packed or capillary column gas chromatography. He is also involved in the application or development of new techniques in separation and analytical methods, including compound confirmations by gas chromatography/mass spectrometry. Mr. Gossett is currently enrolled in the graduate program at California State University at Long Beach leading to a Masters Degree in organic chemistry.

PHILIP S. OSHIDA, Marine Biologist

Mr. Oshida oversees the Project's toxicity and bioassay studies and is responsible for developing, adapting, and testing procedures for determining chronic and acute toxicities of trace contaminants in seawater. He coordinates the sampling, dissections, and analyses involved with the metallothionein detoxification studies, and also cooperates with California State University, Long Beach while running our student/intern program. Mr. Oshida received his bachelors degree in zoology from the University of California at Berkeley in 1972 and his M.A. degree in marine biology from California State University, Long Beach in 1975.

G. PATRICK HERSHELMAN, Trace Metals Chemist

Mr. Hershelman coordinates trace metal analyses. He has extensive experience with the various techniques of chemical preparation and analysis of marine samples. He received his B.S. degree in biology/chemistry from Loyola University in 1974.

JOHN A. MARDESICH, Marine Engineering

Mr. Mardesich designs, constructs and tests sampling equipment required for the Project's marine studies. He is an expert on marine hydraulics and remotely operated underwater photography and television systems. Mr. Mardesich has a B.S. in mechanical engineering from Northrop Institute of Technology. Prior to joining the Project in 1973, Mr. Mardesich was Chief Engineer for Ocean Science and Engineering Inc.

HAROLD H. STUBBS, Marine Coordinator

Mr. Stubbs is field engineer and coordinator of marine operations for the Project. He organizes and schedules marine surveys, and acts as liaison between vessel operators, equipment vendors, and Project scientists. After 22 years in the U.S. Navy, Mr. Stubbs retired as a Master Diver and Rigger, joining Ocean Science and Engineering, Inc. as a field engineer before coming to the Project.

MICHAEL D. MOORE, Fisheries Biologist

Mr. Moore is involved in the general collection, preservation, and identification of marine organisms sampled by trawl, grab and photography. In addition, Mr. Moore plans, organizes, analyzes and reports on various fishery programs sponsored by the Project or by grant. He received a B.S. degree in zoology from California State University at Long Beach in 1973 and has authored or coauthored several papers on southern California marine fisheries.

HENRY A. SCHAFER, Marine Biologist

Mr. Schafer has contributed to studies of the distribution and effects of discharged sewage sludge and has annually surveyed the characteristics of sewage effluents in southern California since 1975. He also expends considerable effort in the collection and analysis of ecological data on several southern California and one central Pacific food webs. Mr. Schafer received his BA degree in biology in 1974.

STEVEN M. BAY, Marine Biologist

Mr. Bay operates the bioassay laboratory, including the collection and culturing of marine organisms, as well as the analysis of results using microscopic and biochemical technique based on pigment synthesis. Mr. Bay received B.S. and M.S. degrees in marine biology from California State University at Long Beach in 1976 and 1981, respectively.

LESLIE H. HARRIS, phycologist

Ms. Harris collects and identifies marine algae for biological studies. She analyzes historical and environmental data for their relation to algae occurrence patterns. Ms. Harris also coordinates the Project's Taxonomic Standardization Program and has expertise as an invertebrate taxonomist, identifying polychaetous annelids and other invertebrate groups for the benthic biology department.

PETER SZALAY, Chemist

Mr. Szalay prepares and analyzes marine samples for trace metal determinations by atomic absorption spectroscopy and is currently developing enzyme assay techniques for the quantification of the tripeptide glutathione. He received a B.S. degree in biochemistry from the University of California at Riverside in 1975.

JIMMY D. LAUGHLIN, Benthic Biologist

Mr. Laughlin is concerned with the organization and process of benthic samples. He has taxonomic expertise in Polychaeta and Crustacea. He is currently working on feeding habits of benthic infauna. Mr. Laughlin received a B.S. degree in marine biology in 1978 from California State University at Long Beach.

DAVID T. TSUKADA, Benthic Biologist

Mr. Tsukada is a taxonomist involved in sorting, processing, and identifying benthic grab samples. His special expertise is in Mollusca. He received a B.S. degree in marine biology from California State University in 1975.

ENRIQUE MANZANILLA, Marine Biologist

Mr. Manzanilla is conducting an investigation of benthic invertebrate communities and demersal fish feeding habits when he is not at sea helping with the sampling program. He has a B.A. degree in biology from Pomona College.

JENNIFER F. ALFAFARA, Chemist

Ms. Alfafara conducts research involving trace metals detoxification by metallothionein, as well as analysis of trace metals in marine organisms by atomic absorption. She received her B.A. in Entomological Toxicology from California State University at Long Beach in 1979 and will be receiving her M.S. in biology in 1982.

VALERIE RACO, Marine Biologist

Ms. Raco assists in laboratory research involving chlorinated hydrocarbons (CHC) extraction and experimental CHC metabolites. Ms. Raco received her B.S. degree in Marine Biology from California State University at Long Beach in 1982.

DARRIN J. GREENSTEIN, Toxicity Laboratory Technician

Mr. Greenstein conducts sea urchin bioassays that measure the toxicity of sea water and effluent samples as well as performs water quality tests. He is also responsible for the care and feeding of the live marine animals used in our studies. Darrin received an A.S. in Marine Biology at Long Beach City College and a B.S. in Marine Biology at California State University, Long Beach.

KAREN D. ROSENTHAL, Histopathologist

Ms. Rosenthal dissects, prepares, and analyzes histological materials. She received her A.A. from Long Beach City College in 1978 and a B.S. in Marine Biology in December, 1982.

SOPHIA SANTY, Chemist

Ms. Santy conducts analysis for chlorinated hydrocarbons in the Project's trace organics laboratory. She received her B.A. degree in Biology from California State University, Long Beach.

CHARLES WARD, Technician

Mr. Ward performs sediment and organism extraction and analysis in our trace metals laboratory. He is currently an undergraduate student in Marine Biology at California State University, Long Beach.

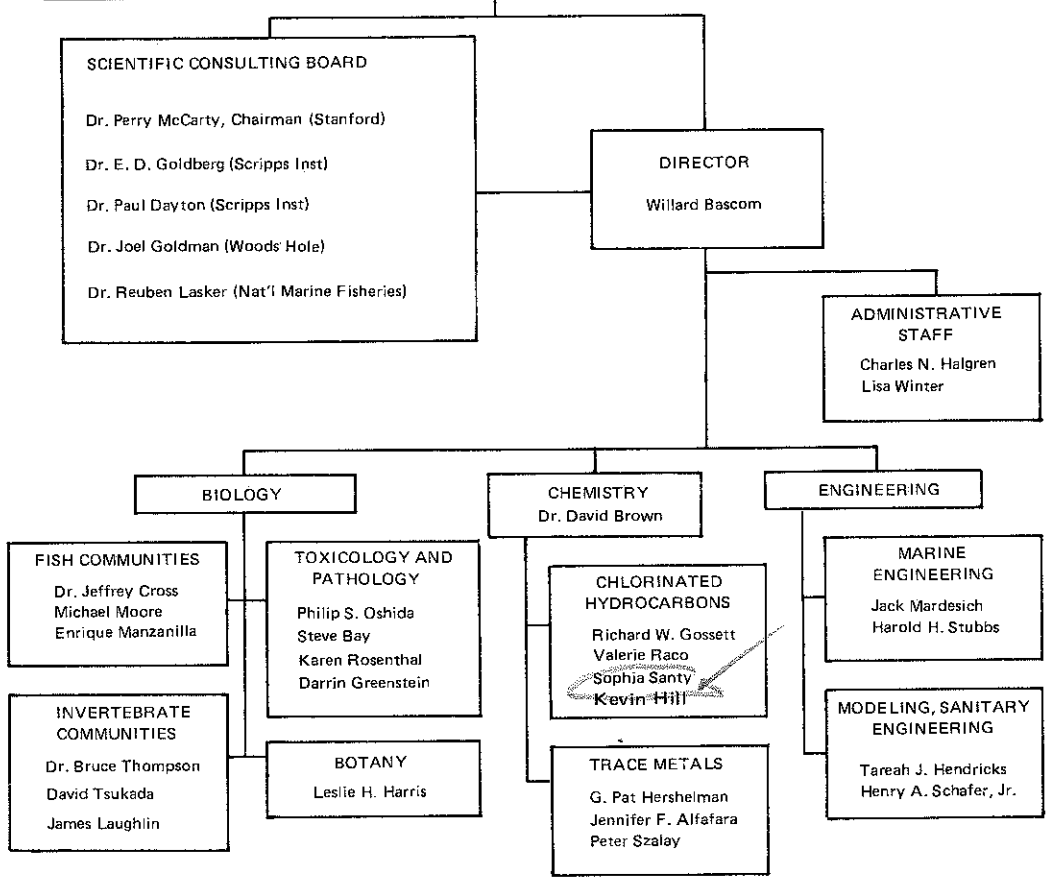
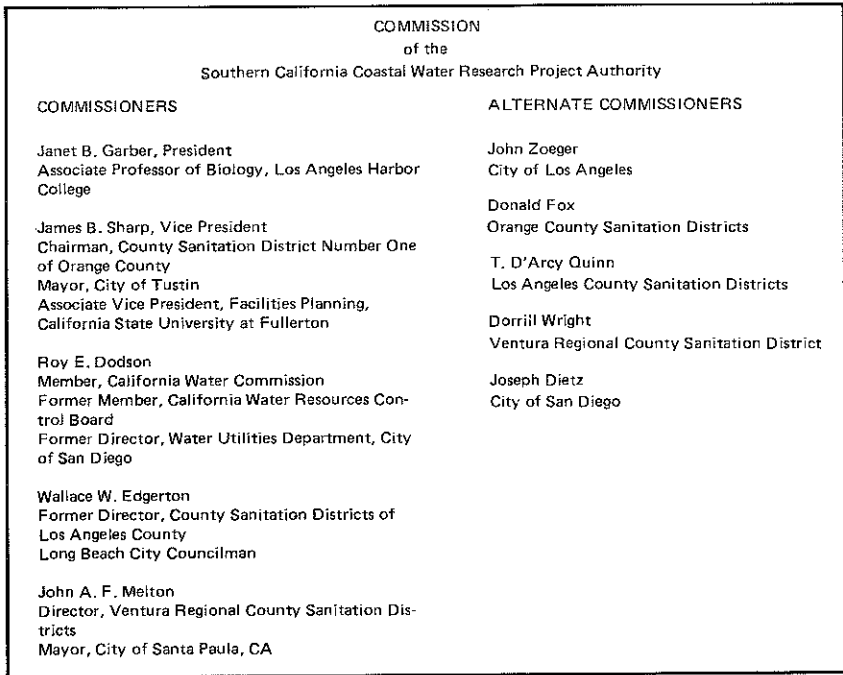


Figure 1. 81-82

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