APPENDIX A

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. Our scientific and technical associates are listed in Figure 3.

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.

ALAN J. MEARNS, Fisheries Biologist

Dr. Mearns is head of the Project's biology division. He is an expert on biological oceanography and the effects of pollution on fish and invertebrates. Dr. Mearns received his Ph.D. degree in fisheries from the University of Washington in 1971. He has conducted detailed studies in the Arctic Ocean and Bristol Bay (Alaska), Puget Sound, and southern California. He is an officer of the American Institute of Fisheries Research Biologists and a member of the Southern California Academy of Sciences.

DAVID R. YOUNG, Chemical Oceanographer

Dr. Young is head of the chemistry department and an expert on trace metals and toxic organic materials in marine life. He received his bachelors degree in physics from Pomona College in 1960 and then studied nuclear engineering at UCLA. After extensive study at the Scripps Institution of Oceanography on the problems of low-level radioactivity in the marine environment, Dr. Young received a Ph.D. degree in chemical and biological oceanography. He is the author of many papers on cycling of trace contaminants in the ecosystem.

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 "higest 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.

GARY S. KLEPPEL, Plankton Ecologist

Dr. Kleppel is head of the Project's biology division. He is an expert in biological oceanography with principal interests in the influence of physico-chemical conditions on

planktonic foodwebs and communities, He received his Ph.D. in biology from Fordham University in 1979, and has conducted extensive research on plankton productivity and pollutant transport through lower trophic levels in coastal and estuarine foodwebs. He is a member of the southern California and New York Academies of Sciences, and the Sigma Xi Research Society.

PHILIP S. OSHIDA, Marine Biologist

Mr. Oshida is in charge of the Project's toxicity and bioassay studies. He is responsible for developing, adapting, and testing procedures for determining chronic and acute toxicities of trace contaminants and for investigations into the relative sensitivities of test organisms and the nature and degree of their responses to toxic substances. 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.

DAVID A. BROWN, Biochemist

Dr. Brown is head of the chemistry department and an expert on trace metals, toxic organic materials and their effects on marine life. He received his B.Sc. 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.

JEFFREY N. CROSS, Fish Biologist

Mr. Cross will receive his Ph.D. in fisheries from the University of Washington in 1980. He studied the structure of rocky shore fish assemblages, and the distribution and seasonal dynamics of nearshore demersal fishes occurring on soft substrates. Prior to that, Mr. Cross received an M.S. from the University of Nevada where he studied the distribution and ecology of riverine fishes. He is the author of several papers on fish ecology.

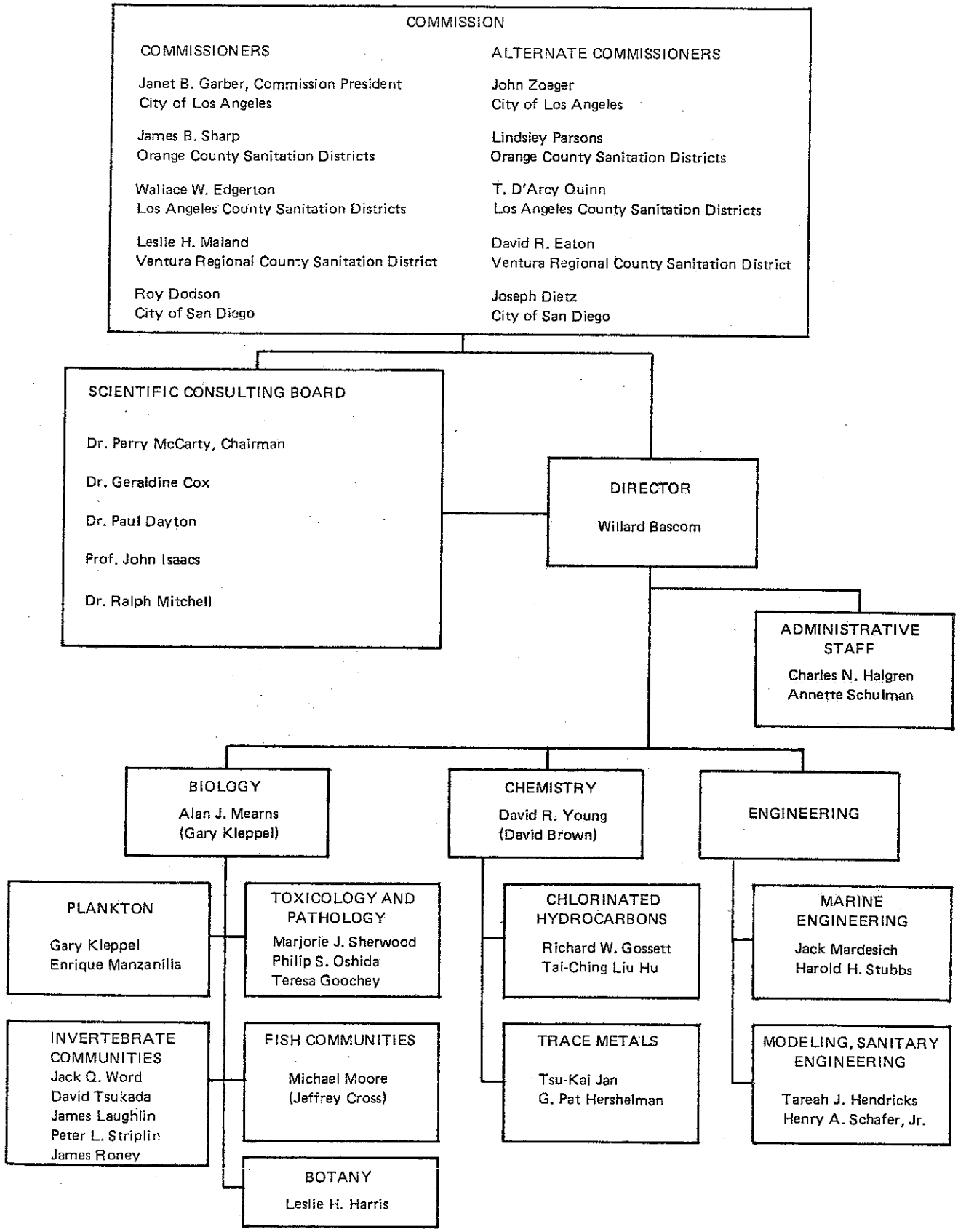

Figure 1. Coastal Water Research Project organization. (Recent additions)

SCIENTIFIC AND TECHNICAL ASSOCIATES

BERNARD C. ABBOTT, Ph.D.
University of Southern California
Red Tide Ecology

GEORGE V. ALEXANDER
University of California, Los Angeles
Emission Spectroscopy

RICHARD BRAY, Ph.D.
California State University, Long Beach
Student/Intern Program Coordinator

GARY BREWER, Ph.D.
University of Southern California
Coastal Fishes

JAMES O. BRITT, JR., DVM
Los Angeles County, Veterinary Services
Marine Mammal/Food Web

PHIL CHANG
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling/Fisheries/Plankton

SAM CHENG, Ph.D.
City of Los Angeles, Hyperion Treatment Plant
GCMS Analysis

CHARLES T. COLLINS, Ph.D.
California State University, Long Beach
Ornithology/Food Web Studies

RICHARD E. COOK
City of Long Beach, Engineering Department
Los Angeles River Run-off Study

L. V. DAVIS
Welder, Long Beach
Equipment Construction and Design

BROCK de LAPPE
Bodega Bay Institute of Pollution Ecology
Synthetic Organics Analysis

M. JANE DILLON
Ontario Research Foundation
Asbestos Analysis

HELEN DUNCAN
University of California, Santa Barbara
Toxicity

KEITH L. DUNCAN
University of Southern California
PAH Analysis

ROBERT P. EGANHOUSE
University of California, Los Angeles
Trace Metal Analysis

GEORGE GALE
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling

GILL G. GEESEY, Ph.D.
California State University, Long Beach
Marine Microbiology

MINA GOEDERS
University of California, Irvine
Neutron Activation Analysis

EDWARD D. GOLDBERG, Ph.D
University of California, San Diego
Organic Tin Analysis

STEVEN R. GOLDBERG, Ph.D.
Whittier College
Fish Reproduction

JOHN J. GRANT
California Department of Fish and Game
Food Web Studies

VINCENT P. GUINN, Ph.D.
University of California, Irvine
Neutron Activation Analysis

THEODORE HEESEN
Los Angeles County Sanitation Districts
Trace Organics Analysis

NEAL HOOKER
University of California, Santa Barbara
Toxicity

MICHAEL H. HORN, Ph.D.
California State University, Fullerton
Fisheries Research

GEORGE L. HUNT, JR., Ph.D.
University of California, Irvine
Ornithology/Food Web Studies

UTAH I. IBATA
City of Long Beach, Engineering Department
Los Angeles River Run-off Study

KENNETH D. JENKINS, Ph.D.
California State University, Long Beach
Toxicity

IAN KAPLAN, Ph.D.
University of California, Los Angeles
Marine Geochemistry

RICHARD A. KLINGBEIL
California Department of Fish and Game
Food Web Studies

REUBEN LASKER, Ph.D.
National Marine Fisheries Service, La Jolla
Fish Biomass Assessment

ANN MARTIN
Orange County Sanitation District
Ocean Sampling and Fisheries

BRUCE McCAIN, Ph.D.
National Marine Fisheries Service, Seattle
Fish Health

DEIRDRE J. McDERMOTT
Lockheed Center for Marine Research, Carlsbad, California
Trace Contaminant Studies

JOHN McMULLEN
Ab Lab, Port Hueneme, California
Toxicity

BRAD MEYERS
Santa Ana, California
Taxonomy

CHARLES T. MITCHELL
Marine Biological Consultants, Inc.
Newport Bay Run-off/Food Web Studies

DAVID MONTAGNE
Los Angeles County Sanitation Districts
Taxonomy and Ocean Sampling

DANIEL E. MORSE, Ph.D.
University of California, Santa Barbara
Toxicity

ROBERT A. MURCHELANO, Ph.D.
National Marine Fisheries Service, Oxford, Maryland
Fish Health

JOE NAGANO
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling/Fisheries/Plankton

SCHARLEEN OLSEN, Ph.D.
Washington State Department of Fisheries
Toxicity

ROBERT OLSON
Inter-American Tropical Tuna Commission
Food Web Studies

DAVID O. PARKER
California Department of Fish and Game
Sea Urchins/Toxicity

RICHARD E. PEIPER, Ph.D.
University of Southern California
Plankton Interactions

JAMES E. PHELAN
California Department of Fish and Game
Food Web Studies

TOM PESICH
Orange County Sanitation District
Ocean Sampling and Fisheries

STEVE PETRICH
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling/Fisheries/Plankton

CHARLES PHILLIPS
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling/Fisheries/Plankton

KENNETH W. PHILLIPS
City of Long Beach, Engineering Department
Los Angeles River Run-off Study

HAROLD W. PUFFER, Ph.D.
University of Southern California
Harbor Food Web Studies

GREG RAU, Ph.D.
University of California, Los Angeles
Marine Geochemistry

DONALD J. REISH, Ph.D.
California State University, Long Beach
Student/Intern Program Coordinator

ROBERT A. RISEBROUGH, Ph.D.
Bodega Bay Institute of Pollution Ecology
Synthetic Organics Analysis

BRUCE H. ROBISON, Ph.D.
University of California, Santa Barbara
Food Web Sampling

EUGENE W. SANBORN
Washington State Department of Fisheries
Toxicity

MICHAEL H. SCHONZEIT
Scripps Institution of Oceanography
Current Meter Studies

DON W. SCHULTS
Environmental Protection Agency, Newport, Oregon
Ocean Sampling

SHARON L. SEIDEL
University of California, San Diego
Organic Tin Analysis

ROBIN A. SIMPSON
Los Angeles County Museum of Natural History
Editing and Publications Production

MELDOM L. SJOSTEDT
Los Angeles County Flood Control
Los Angeles River Run-off Study

JAN SOOHOO
University of Southern California
Plankton Patchiness

ROBERT SPIES, Ph.D.
University of California, Lawrence Livermore Laboratory
Fish Health

JOHN S. SUNADA
California Department of Fish and Game
Food Web Studies

RICHARD C. SWARTZ, Ph.D.
Environmental Protection Agency, Newport, Oregon
Ocean Sampling

ROBERT E. SWEENEY, Ph.D.
University of California, Los Angeles
Marine Geochemistry

PAUL TAYLOR, Ph.D.
California Analytical Laboratories, Inc.
Trace Organics Analysis

FRANK WADA
City of Los Angeles, Hyperion Treatment Plant
Ocean Sampling/Fisheries/Plankton

ROBERT R. WARE
Marine Biological Consultants, Inc.
Newport Bay Run-off/Food Web Studies

ANTHONY WEST
Fishing Vessel: "Loretta Marie"
Food Web Studies

STUDENT INTERNS/VOLUNTEERS

Geoff Brosseau
Kurt Burmeister
Robert Moore
Margaret Savage
Bruce Teter
Charles Ward
Rachel Parker