

John S. Oliver

Research Faculty, Moss Landing Marine Laboratories, 1982-present

Ecologist, Coastal Conservation and Research, 2000-present

Moss Landing Marine Laboratories, 8272 Moss Landing Road, Moss Landing, CA 95039
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Scripps Institution of Oceanography, U.C. San Diego, Ph.D., Oceanography, 1980

Moss Landing Marine Laboratories, M.S., Marine Sciences, 1973

Whittier College, Biology and Psychology, B.A., 1969

Co-Director, Benthic Lab, Moss Landing Marine Laboratories, 1982-present

Co-Founder, The Watershed Institute, California State University Monterey Bay, 1995

Co-Director, Marine Pollution Studies Group, California Department of Fish and Game and
Moss Landing Marine Laboratories, 1986-1999

Co-Director, Northern Salinas Valley Watershed Restoration Project, Moss Landing Marine
Labs, Watershed Institute, and multiple public agency and private partners, 1997-2003

Co-Director, Central and Northern California regional database project for benthic
macrofaunal invertebrates on the continental shelf and upper slope. Moss Landing
Marine Laboratories and multiple agency partners, 1999-ongoing.

Co-Founder, Coastal Conservation and Research, Inc., 2000

Recent Ongoing Projects

Buoyant Ecologies: a research partnership with the California College of the Arts (CCA),
Kreysler and Associates, and Moss Landing Marine Laboratories focusing on designing
and making floating structures with rich marine communities from barges, houseboats,
docks, islands and breakwaters to floating infrastructure (anaerobic sewers) in the
Maldives. 2014-ongoing

Crissy Marsh Enhancement, Presidio Foundation and CCA, developing floating islands,
enhancing native oyster populations and benthic marine communities. Created one of the
first living sea walls in the world. 2017-ongoing

Float Lab, Port of Oakland and CCA, exploring upside-down benthos using the Float Lab,
2019- ongoing

Science Advisor, Codiga Foundation, enhancing water solutions, including the Codiga
Resource Recovery Center, Department Civil and Environmental Engineering, Stanford
University. 2015-ongoing

Benthic Invertebrates in wastewater treatment, Central Coast Wetlands Group at MLML
and Department Civil and Environmental Engineering, Stanford University. 2015-ongoing.

Salt Marsh Restoration in Extreme Salinities, Moss Landing Wildlife Area, exploring
hydrology and ecology of salt ponds while recovering salt marsh vegetation. 2017-
ongoing

Resilient by Design, Common Ground Team, Rockefeller Foundation grant, designing the
future of San Pablo Bay, 2017-2018

Watershed Research

Project Director for over \$3,000,000 to support restoration of natural waterways in the Salinas Valley. Support came from EPA, Department of Defense, NOAA, Regional and State Water Resources Board, CA Resources Agency, Caltrans, and others. This work was done with the Watershed Institute at CSUMB and now the Central Coast Wetlands Group at MLML.

Relevant Watershed Reports

Northern Salinas Valley Watershed Restoration Plan. Prepared for the Associated Monterey Bay Area Governments and the State Water Resources Control Board, 1997.

The 1995 Flood in the Monterey Bay Area. Technical Report, Watershed Institute, 1995.

Restoration and Enhancement Plan for Natividad Creek. Prepared for the City of Salinas and the Environmental Enhancement and Mitigation Program, 1995.

Restoration and Enhancement of Redwood Creek and Big Lagoon at Muir Beach. Prepared for Caltrans and the Golden Gate National Park, 1992.

Wetland Restoration and Management Plan for Wilder Beach. Prepared for the California Department of Parks and Recreation, 1990.

Comprehensive Wetland Management Plan for Elkhorn Slough. Prepared by ABA Consultants for the State Coastal Conservancy and Monterey County, 1989.

Ecosystem Restoration Projects

Done with multiple partners, especially the Watershed Institute at CSUMB, as a community outreach from Moss Landing Marine Laboratories. The Benthic Lab now helps the Central Coast Wetlands Group at MLML, which spearheads the restoration of living infrastructure.

Decommissioning roads on Fort Ord

Natividad Creek and upland in Natividad Creek Park in Salinas

Riparian and upland in Veterans Memorial Park in Salinas

Riparian and upland in Cesar Chavez Park in Salinas

River bank and grassland at the Salinas River Wildlife Area

Stabilization of the McWay landslide in Big Sur

Stabilization of the biggest erosion scar on Fort Ord

Hansen Slough in Watsonville Slough

Moon Glow Marsh

Granite Rock wetlands and uplands

Calcagno's Moro Cojo marsh and uplands

South Finger Marsh on the Dolan Ranch

Upper Moro Cojo Slough and upland around North Monterey County High School- CHESPA grasslands above Upper Moro Cojo

Castroville Slough

Tottino Ponds between Castroville and ML

Walker Valley Creek and uplands in Elkhorn

Elkhorn Heights riparian and uplands

Riparian corridors on Porter Ranch

Tembladero Slough triangle
Blackie Farms riparian and erosion control
Wilder State Park wetlands
Eucalyptus removal in Elkhorn and Prunedale
Sand dune and wetland communities on the marine lab hill
Sand dune communities at the old marine lab site and south

Relevant Local Reports and Papers in Draft and Local Review

Oliver JS, HL Lopez and KK Hammerstrom. 2013. Geomorphology and Ecology of Extreme Tidal Erosion of Elkhorn Slough. Moss Landing Water Reports, Number 2, 93 pp.
Benthic Lab, Moss Landing Marine Laboratories

In Draft—

- Oliver, J.S., Hammerstrom, K.K, Slattery, P.S., Kim, S.L., Oakden, J.M., Kvitek, R.G. and I. W. Aiello. Decadal variations in benthic invertebrate communities in Elkhorn Slough under extreme tidal erosion.
- Oliver, J.S., Hammerstrom, K.K, Oakden, J.M., Slattery, P.S., and S. L. Kim. Decadal variations in sandy beach communities around the head of Monterey Canyon.
- Oliver, J.S., Hammerstrom, K.K, Slattery, P.S., Kim, S.L. Aiello, I.W. and J.M. Oakden. Changes in benthic invertebrate communities along a hydrographic gradient in the peripheral wetlands of Elkhorn Slough.
- Oliver, J.S., Hammerstrom, K.K, Oakden, J.M., Slattery, P.S. and S. L. Kim. Benthic macrofaunal invertebrates living in the subtidal surf zone along a high-energy sandy beach in Monterey Bay, California.
- Oliver, J.S., Hammerstrom, K.K, Slattery, P.S., Kim, S.L., Oakden, J.M. and R. Fairey. Benthic invertebrate communities and introduced species in San Francisco Bay.
- Oliver, J.S., Hammerstrom, K.K, Slattery, P.S., Kim, S.L., Oakden, J.M. and R. Fairey. Invasive benthic invertebrate assemblages in California bays and harbors.
- Oliver, J.S., Hammerstrom, K.K, Oakden, J.M., Slattery, P.S., Kim, S.L. and L.A. Kuhnz. Benthic invertebrate communities at the marine end of the estuarine gradient in San Francisco Bay.
- Melwani, A. Oliver, J.S., Oakden, J.M., Slattery, P.S., Kim, S.L. and K.K. Hammerstrom. Benthic invertebrate communities at the mouths of California rivers.

Publications

- Oliver JS, KK Hammerstrom, LA Kuhnz, PS Slattery, JM Oakden, and SL Kim. 2020. Benthic invertebrate communities in the continental margin sediments of the Monterey Bay area. In: Deep-sea Pycogonids and Crustaceans of the Americas. ME Hendrickx, editor, Springer Latin-America, Chapter 8.
- Dayton, PK, JS Oliver, SF Thrush, and K Hammerstrom. 2019. Bacteria defend carrion from scavengers. *Antarctic Science*, 31(1), 13-15.

- Francisco Barros, Hugues Blanchet, Kamille Hammerstrom, Pierre-Guy Sauriau, John Oliver. 2014. A framework for investigating general patterns of benthic b-diversity along estuaries. *Estuarine, Coastal and Shelf Science* 149 (2014) 223e231
- Dayton, P.K., Kim, S., Jarrell, S., Oliver, J.S., Hammerstrom, K., Fisher, J., O'Connor, K., Barber, J., Robilliard, G., Barry, J., Thurber, A., and Conlan, K. 2013. Recruitment, growth, and mortality of an Antarctic Hexactinellid sponge, *Anoxycalyx joubini*. *PLoS ONE* 8(2): e56939. doi:10.1371/journal.pone.0056939
- Hammerstrom, K. K., Ranasinghe, J. A., Weisberg, S. B., Oliver, J. S., Fairey, W. R., Slattery, P. N., & Oakden, J. M. 2010. Effect of sample area and sieve size on benthic macrofaunal community condition assessments in California enclosed bays and estuaries. *Integrated Environmental Assessment and Management* 8(4):649-658.
- John Oliver, Kamille Hammerstrom, Erika McPhee-Shaw, Peter Slattery, James Oakden, Stacy Kim & S. Ian Hartwell. 2011. High species density patterns in macrofaunal invertebrate communities in the marine benthos. *Marine Ecology* 32: 278-288.
- John S. Oliver, Stacy L. Kim, Peter N. Slattery, James A. Oakden, Kamille K. Hammerstrom, and Ethan M. Barnes. 2008. Sandy bottom communities at the end of a cold (1971-1975) and warm regime (1997-98) in the California Current: impacts of high and low plankton production. *Nature Precedings*
<<http://dx.doi.org/10.1038/npre.2008.2103.1>>
- Weisberg, S.B., B. Thompson, J.A. Ranasinghe, D.A. Montagne, D.B. Cadien, D.M. Dauer, D. Diener, J. Oliver, D. Reish, R. Velarde and J. Word. 2008. The level of agreement among experts in application of best professional judgment for assessing the condition of benthic infaunal communities. *Ecological Indicators* 8(4): 389-394.
- Conlan, K.E., S.L. Kim, H.S. Lenihan, and J.S. Oliver. 2004. Benthic changes during 10 years of organic enrichment by McMurdo Station, Antarctica. *Marine Pollution Bulletin* 49: 43-60.
- Conlan, K.E., Kim, S.L., Lenihan, H.S., Oliver, J.S. 2003. Benthic community changes at McMurdo Station, a response to sewage abatement. In: Huiskes, A.H.L., Gieskes, W.W.C., Rozema, J., Schorno, R.M.L., van der Vies, S.M., Wolff, W.J. (Eds.), *Antarctic Biology in a Global Context*. Backhuys Publishers, Leiden, The Netherlands, pp. 264-270.
- Lenihan, H.S., Peterson, C.H., Kim, S.L., Conlan, K.E., Fairey, R., McDonald, C., Grabowski, J.H., and J.S. Oliver. 2003. Variations in marine benthic community composition allow discrimination of multiple stressors. *Marine Ecology Progress Series* 261: 63-73.
- Carney, D., J.S. Oliver and C. Armstrong. 1999. Sedimentation and composition of wall communities in Alaskan fjords. *Polar Biology* 22: 38-49.
- Conlan, K.E., H.S. Lenihan, R.G. Kvitek and J.S. Oliver 1998. Ice scour disturbance to benthic communities in the Canadian high arctic. *Marine Ecology Progress Series* 166: 1-16.
- Lenihan, H.S. and J.S. Oliver. 1995. Impacts of anthropogenic and natural disturbances to marine benthic communities in Antarctica. *Ecological Applications* 5:311-326.
- Lenihan, H.S., K.A. Keist, K.E. Conlan, P.N. Slattery, B.H. Konar, and J.S. Oliver. 1995. Patterns of survival and behavior in Antarctic benthic invertebrates exposed to contaminated sediments: field and laboratory bioassay experiments. *J. Exp. Mar. Biol. Ecol.* 192:233-255.
- Kennicutt, M.C., S.J. McDonald, J.L. Sericano, P. Boothe, J.S. Oliver, S. Safe, B.J. Presley, H. Liu, D. Woulfe, T.L. Wade, A. Crockett and D. Bockus. 1995. Human contamination of the marine environment - Arthur Harbor and McMurdo Sound, Antarctica. *Environmental*

- Science and Technology 29: 1279-1287.
- Kvitek, R. G. and J. S. Oliver. 1992. The influence of sea otters on prey communities in southeast Alaska. *Marine Ecology Progress Series* 82:103-113.
- Kvitek, R.G., J.S. Oliver, A.R. DeGange and B.S. Anderson. 1992. Changes in soft-bottom prey communities along a gradient in sea otter predation. *Ecology* 73:413-428.
- Foster, M.S., A.P. De Volgelaere, J.S. Oliver, J.S. Pearse and C. Harold. 1991. Intertidal and littoral ecosystems of the northeast Pacific. In, A.C. Mathieson and P. Nienhuis (eds), *Ecosystems of the World*, vol. 24, Intertidal and littoral ecosystems. Elsevier Scientific Publishing Company, Amsterdam.
- Lenihan, H.S., J.S. Oliver, J.M. Oakden, and M.A. Stephenson. 1990. Intense and localized benthic marine pollution at McMurdo Station, Antarctica. *Marine Pollution Bulletin* 21(9): 422-430.
- Lenihan, H.S., J.S. Oliver and M.A. Stephenson. 1990. Changes in hard bottom communities related to boat mooring and tributyltin in San Diego Bay: a natural experiment. *Marine Ecology Progress Series* 60: 147-159.
- Dauben, A., J.S. Oliver and R.G. Kvitek. 1990. Disturbance of bottom communities by gray whales, walrus and ice gouging in the Bering Sea and Chukchi Sea. *National Geographic Research Journal* 6: 470-484.
- Kim, A.L. and J. S. Oliver. 1989. Swarming benthic crustaceans in the Bering Sea and Chukchi Sea and their relation to geographic patterns in gray whale feeding. *Canadian Journal of Zoology* 67: 1531-1542.
- Kvitek, R.G. and J.S. Oliver. 1988. Sea otter foraging habits in soft-bottom environments. In: Community Ecology of the Sea Otter, G.R. VanBlaricom and J.A. Estes (eds.), Springer-Verlag, N.Y. pp. 22-47.
- Slattery, P.N. and J.S. Oliver. 1987. Barnacle settlement on *Pleustes tuberculata* (Amphipoda) in the Chukchi Sea. *Journal of Crustacean Biology*. 7: 358-363.
- Dayton, P.K., D. Watson, A. Palmisano, J.P. Barry, J.S. Oliver and D. Rivera. 1986. Distribution patterns of benthic microalgal standing stock at McMurdo Sound, Antarctica. *Polar Biology* 6:207-213.
- Slattery, P.N. and J.S. Oliver. 1986. Scavenging and other feeding habits of lysianassid amphipods (*Orchomene* spp.) from McMurdo Sound, Antarctica. *Polar Biology* 6:171-177.
- Kvitek, R.G. and J.S. Oliver. 1986. Side-scan sonar descriptions of gray whale feeding grounds along Vancouver Island, British Columbia. *Continental Shelf Research* 6:639-654.
- Oliver, J.S. and P.N. Slattery. 1985. Effects of crustacean predators on species composition and population structure of the soft-bodied infauna from McMurdo Sound, Antarctica. *Ophelia* 24:155-175.
- Oliver, J.S. and P.N. Slattery. 1985. Destruction and opportunity on the sea floor: effects of gray whale feeding. *Ecology* 66: 1965-1975.
- Oliver, J.S., R.G. Kvitek and P.N. Slattery. 1985. Walrus feeding disturbance: scavenging habits and recolonization of the Bering Sea benthos. *Journal of Experimental Marine Biology and Ecology* 91:233-246.
- Fukuyama, A.F. and J.S. Oliver. 1985. Walrus and sea star predation on benthic bivalves in Norton Sound, Bering Sea, Alaska. *Ophelia* 24: 17-36.
- Oliver, J.S. and R. G. Kvitek. 1984. Side-scan sonar records and diver observations of gray

- whale feeding grounds. *Biological Bulletin* 167: 264-269.
- Oliver, J.S. 1984. Selection for asexual reproduction in an Antarctic polychaete worm. *Marine Ecology Progress Series* 19:33-38.
- Oliver, J.S., P.N. Slattery, M.A. Silberstein and E.F. O'Connor. 1984. Gray whale feeding on dense ampeliscid amphipod communities near Bamfield, British Columbia. *Canadian Journal of Zoology* 62:41-49.
- Oakden, J.M., J.S. Oliver and A.R. Flegal. 1984. EDTA chelation and zinc antagonism with cadmium in sediment: effects on the behavior and mortality of two infaunal amphipods. *Marine Biology* 84:125-130.
- Oliver, J.S., P.N. Slattery, E.F. O'Connor and L.F. Lowry. 1983. Walrus, *Odobenus rosmarus*, feeding in the Bering Sea: a benthic perspective. *Fishery Bulletin* 81:501-512.
- Oliver, J.S., P.N. Slattery, M.A. Silberstein and E.F. O'Connor. 1983. A comparison of gray whale, *Eschrichtius robustus*, feeding in the Bering Sea and Baja California. *Fishery Bulletin* 81:513-522.
- Oakden, J.M., J.S. Oliver and A.R. Flegal. 1983. Behavioral responses of a phoxocephalid amphipod to organic enrichment and trace metals in sediment. *Marine Ecology Progress Series* 14:253-257.
- Nerini, M.K. and J.S. Oliver. 1983. Gray whales and the structure of the Bering Sea benthos. *Oecologia* 59:224-225.
- Oliver, J.S., J.M. Oakden and P.N. Slattery. 1982. Phoxocephalid amphipod crustaceans as predators on larvae and juveniles in marine soft-bottom communities. *Marine Ecology Progress Series* 7:179-18
- Dayton, P.K., W.A. Newman and J.S. Oliver. 1982. The vertical zonation of the deep-sea Antarctic acorn barnacle, *Bathylasma corolliforme* (Hoek): experimental transplants from the shelf into shallow water. *Journal of Biogeography* 9:95-109.
- Hulberg, L.W. and J.S. Oliver. 1980. The exclusion of demersal fish from a soft-bottom community: the role of biological interactions or sedimentary habitat modifications. *Canadian Journal of Fisheries and Aquatic Science* 37:1130-1139.
- Oliver, J.S., P.N. Slattery, L.W. Hulberg and J.W. Nybakken. 1980. Relationships between wave disturbance and zonation of benthic invertebrate communities along a high-energy subtidal beach in Monterey Bay, California. *Fishery Bulletin* 78: 437-454.
- Dayton, P.K. and J.S. Oliver. 1980. Problems in the experimental analyses of population and community patterns in benthic marine environments. In: Tenore, K.R. and B.C. Coull (eds.), *Marine Benthic Dynamics*, Univ. of South Carolina Press. Columbia.
- Hulberg, L.W. and J.S. Oliver. 1979. Prey availability and the diets of two co-occurring flatfish. In: Simenstad and Lipovsky (eds.), *Fish Food Habit Studies*, 2nd Pac. Northwest Tech. Workshop Proceedings, Oct. 10-13, 1978, Univ. Wash.
- Oliver, J.S., E.F. O'Connor and D.J. Watson. 1978. Observations on submerged glacial ice in McMurdo Sound, Antarctica. *Journal of Glaciology* 20: 115-121.
- Dayton, P.K. and J.S. Oliver. 1978. Long-term experimental benthic studies in McMurdo Sound. *Antarctic Journal of the U.S.* 13:136-37.
- Dayton, P.K. and J.S. Oliver. 1977. Antarctic soft-bottom benthos in oligotrophic and eutrophic environments. *Science* 191: 55-58.
- Dayton, P.K. and J.S. Oliver. 1977. Processes organizing contrasting Antarctic benthic communities. *Antarctic Journal of the U.S.* 12: 20-21.
- Oliver, J.S., P.N. Slattery, L.W. Hulberg and J.W. Nybakken. 1977. Patterns of succession in

benthic infaunal communities following dredging and dredge spoil disposal in Monterey Bay, California. Tech. Rept. D-77-27, Dredged Material Research Program, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Miss. 186p.

Barrett, P.J., S.B. Treves, C.G. Barnes, H.T. Brady, S.A. McCormick, N. Nakai, J.S. Oliver and K.J. Sellars. 1976. Dry valley drilling project: first core drilling in McMurdo Sound. Antarctic Journal of the U.S. 11: 78-80.

Oliver, J.S. and P.N. Slattery. 1976. Effects of dredging and disposal on the benthos in Monterey Bay, California. Tech. Paper 76-15, U.S. Army Corps of Engineers Coastal Engineering Research Center, Va.

Oliver, J.S., D.J. Watson, E.F. O'Connor and P.K. Dayton. 1976. Benthic communities of McMurdo Sound. Antarctic Journal of the U.S. 11: 58-59.

Decade Old List of Collaborators on Projects and Peer-Reviewed Papers at That Time

Ivano Aiello, Adjunct Professor, Geology, Moss Landing Marine Laboratories (MLML)

Rob Burton, Manager, Lower San Pedro River Program, The Nature Conservancy

Gregor Cailliet, Professor, Ichthyology, MLML

Kathy Conlan, Section Head, Life Sciences, Canadian Museum of Nature

Gage Dayton, Research Associate, Watershed Restoration, MLML

Rusty Fairey, Co-Director, Marine Pollution Studies Group, MLML

Mike Foster, Professor Emeritus, Phycology, MLML

Ken Israel, Vice-President, Sea Engineering Inc.

Craig Jones, Senior Geologist, Sea Engineering Inc.

Stacy Kim, Research Professor, Benthic Ecology, MLML

Rikk Kvitek, Dean of Science, California State University Monterey Bay

Ian Hartwell, Senior Scientist, NOAA, NCCOS, Center for Coastal Ocean Science

James Harvey, Professor, Vertebrate Ecology, MLML

Hunter Lenihan, Assistant Professor, University of California, Santa Barbara

Ed Mercurio, Professor, Biology, Hartnell College

Tom Okey, Research Scientist, CSIRO Marine and Atmospheric Research, Australia

Charles Peterson, Professor, Ecology, University of North Carolina

Ananda Ranasinghe, Senior Scientist, SCCWRP

Erika McPhee-Shaw, Assistant Professor, Physical Oceanography, MLML

Jonny Stark, Research Scientist, Australian Antarctic Program

Bruce Thompson, Senior Scientist, San Francisco Bay Estuary Institute

Fred Watson, Research Associate, California State University Monterey Bay

Steven Weisberg, Director, SCCWRP

Jack Ward, Senior Scientist, MEC Analytical Systems

Nicholas Welschmeyer, Professor, Biological Oceanography, MLML

Postgraduate-Scholars Sponsored

Rikk Kvitek, Director, Sea Floor Mapping Lab, California State University Monterey Bay

Stacy Kim, Research Faculty, Benthic Ecology, Moss Landing Marine Laboratory

Rob Burton, Ecologist, California State University Monterey Bay

Gage Dayton, Director, UC Natural Reserves, UC Santa Cruz

Selected Research Programs: Not updated since 2009

- Project Co-Director, Introduced species patterns in coastal marine waters of California. With the Marine Pollution Studies Group, Supported by CDFG, 2004-2008
- Project Co-Director, Understanding the effects of tidal wetland management on estuarine invertebrate communities. Supported by the Sanctuary Foundation. 2007-2009
- Project Director, Evaluation of the effects of different sampling gear on benthic community patterns. Supported by SCCWRP, 2006-2008
- Project Director, Benthic communities in and outside submarine canyons in Central California. Supported by NOAA Center for Coastal Ocean Science, 2006-2008
- Co-Investigator, Restoring natural water systems in rural residential landscapes. Supported by RWQCB, 2006-2009.
- Project Co-Director, Restoration of freshwater ecosystems in central Monterey Bay. Environmental Enhancement and Mitigation Program, Caltrans, 2007-2009.
- Co-Investigator, Support of the Central Coast Wetland Working Group Program Objectives. Supported by EPA, 2007-2008
- Co-Investigator, Implementation of the Moro Cojo Slough Management and Enhancement Plan: Restoration of the core of the watershed. Supported by SWRCB, 2004-2008.
- Co-Investigator, Assessment of State Funded Wetland Restoration Projects in Region 3. Supported by SWRCB, 2007-2010.
- Co-Investigator, Evaluating California's No Net Wetland Loss Policy. Supported by SCCWRP, 2005-2008.
- Co-Investigator, Citizens Monitoring Project. Supported by SWRCB, 2007-2009.
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- Project Co-Director, Characterization of benthic and pelagic communities in Elkhorn Slough. Supported by the Sanctuary Foundation. 2003-2007 (co-investigator)
- Project Co-Director, Development of a Regional Monitoring Program for Central California Wetlands. Supported by EPA, 2004-2007 (co-investigator)
- Project Director, Agricultural Management Practices and Treatment Wetlands in the Gabilan Watershed. Supported by SWRCB, 2004-2007 (co-director)
- Project Co-Director, Ecological effects of the Moss Landing thermal discharge. Supported by the Sanctuary Foundation. 2003-2006 (co-investigator)
- Co-Investigator, Community dynamics in a polar ecosystem: Benthic recovery from organic enrichment in Antarctica. National Science Foundation, 2002-2005 (with S. Kim).
- Project Director, Effects of sediment movement on benthic ecosystems in Monterey Canyon. Supported by US Army Corps of Engineers and Moss Landing Harbor District. 2003-2005
- Project Co-Director, Geographic patterns in introduced species of benthic marine invertebrates in California. CDFG, Office of Spill Prevention and Response, 2001-2002.
- Project Co-Director, Benthic soft sediment communities on the continental shelf- a centennial benthic survey. MCI Inc., 1999-2000.
- Project Director, Benthic invertebrate communities in river mouths and other coastal lagoons from Santa Barbara to the Oregon Border. SWRCB and EPA, 1999-2000.
- Project Director, Using recycled wastewater to enhance wetland restoration. California Department of Water Resources, 1999-2000.

Project Director, Comprehensive watershed management in Monterey Bay. SWRCB, 1998-2000.

Project Director, Restoration of wet corridors in the Monterey Bay area. EPA Wetlands Protection grants, 1996-1998.

Co-Investigator, Assessing the ecological impacts of organic enrichment and metal contamination in a polar benthic community. National Science Foundation, 1997-1999 (with C. Peterson and H. Lenihan)

Project Director, Fort Ord watershed restoration demonstration project. Department of Defense, 1994-1996.

Project Co-Director, Fort Ord watershed restoration scholarship program. Department of Defense, 1994-2001.

Project Director, Restored wetlands as water quality management areas in Monterey Bay. SWRCB, 1995-1996.

Project Co-Director, Ice berg disturbance and the structure of Arctic benthic communities. National Science Foundation. 1994-1997 (co-investigator with R. Kvitek).

Project Co-Director, Long-term monitoring of coastal marine pollution: State Bay Protection Program. SWRCB, 1993-95.

Project Director, Ecological impacts of landslides on marine communities in central and northern California. Caltrans, 1987-1998.

Project Director, Anthropogenic disturbances and marine bottom communities in Antarctica. National Science Foundation, 1988-1994.

Project Co-Director, Restoration of Bolinas Lagoon tideflats. Caltrans, 1991-98.

Project Co-Director, Restoration of Big Lagoon and Redwood Creek at Muir Beach. Caltrans, 1991-93.

Project Co-Director, Restoration of Wilder State Beach wetland. State Parks, 1990-93.

Project Co-Director, Ecological impacts of artificial reefs in Monterey Bay. ABA Consultants, 1989.

Project Director, Sea otter feeding ecology in soft-sediment habitats. National Science Foundation, 1987-90.

Project Director, Ecological impacts of the Exxon Valdez oil spill . Marine Mammal Commission 1989.

Project Director, Ecological history of Elkhorn Slough. NOAA- Sanctuary Programs Division, 1988-1989.

Project Director, Habitat value of California marinas and harbors. Boating and Waterways, 1987-1988.

Project Director, Sea otter foraging on dense clam beds around Kodiak Island, Alaska. Fish and Wildlife Service, 1986.

Project Director, Marine communities and marine mammal feeding around St. Matthew Island, Bering Sea. National Geographic Society, 1986.

Project Director, Pesticide residues in the Moss Landing Harbor drainage. State Water Control Board, 1987.

Project Director, Long-term monitoring of erosion and sedimentation in Elkhorn Slough, CA. NOAA- Sanctuary Programs Office, 1987.

Project Director, Gray whale feeding in the southeastern Bering Sea. National Science Foundation, 1985-87.

Project Director, Ecology of plant invasion in a newly formed salt marsh. NOAA- Sanctuary

Programs Division, 1986.

Project Director, Historical patterns of erosion and deposition in the Elkhorn Slough, CA. NOAA- Sanctuary Programs Division, 1986.

Project Director, Walrus feeding in the Bering and Chukchi Seas. National Science Foundation, 1982-85.

Project Director, Monitoring ecological changes in a restored salt marsh. NOAA- Sanctuary Programs Division, 1984-85.

Project Director, Behavior of gray whales along Vancouver Island, British Columbia. Earthwatch, 1984.

Project Director, Side-scan sonar impressions of gray whale feeding grounds. World Wildlife Foundation, 1983.

Habitat selection and benthic community changes around marine waste discharges. Environmental Protection Agency, 1981-1984.

Project Director, Feeding ecology of walrus in the Norton Sound, Alaska. World Wildlife Foundation and American Cetacean Society, 1981.

Project Director, Designing an experimental wetland in the Elkhorn Slough. Hewlett Foundation, 1981.

Project Director, Restoration of salt marshes in the Elkhorn Slough. California Coastal Commission, 1981.

Project Co-Director, Benthic community succession and dredge material disposal in Monterey Bay, California. U.S. Corps of Engineers, Waterways Experiment Station, 1974-1976.