CURRICULUM VITAE

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Education:

A.B.	Cornell University, Ithaca, NY	1969	Biological Sciences
Ph.D.	Duke University, Durham, NC	1976	Zoology (Limnology)

Professional Employment:

1987 - present	Professor, University of California, Santa Barbara
1982 - 1987	Associate Professor, University of California, Santa Barbara
1977 - 1982	Assistant Professor, University of California, Santa Barbara
1977	NSF Postdoctoral Fellow, University of Michigan

Fellowships Awarded:

Gleddon Fellowship, Univ. of Western Australia (2001)
Junior Faculty Fellowship, UCSB (1978)
NSF Energy-related Postdoctoral Fellowship (1976)
James B. Duke Fellowship, Duke University (1970-72)
NSF Predoctoral Award, Duke University Marine Laboratory (1970)
Dean's Scholarship, Cornell University (1965-69)

Editorial Service:

Editorial Board, Biogeochemistry (2003 – present)
Editorial Board, Hydrobiologia (1985-present)
Advisory Board, Internationale Revue der gesamten Hydrobiologie (1995 - present)
Editor, International Society for Salt Lake Research (2002 - 2005)
Editorial Board, Ecological Applications (1999 - 2002)
Deputy Editor, Water Resources Research (2000-2002)
Special Topics Editor, Limnology and Oceanography (1995-1998)
Editorial Board, Limnologica (1997- 2001)
Editor, Saline Lakes. Developments in Hydrobiology 44 and 162 (1985-1988 and 1999-2001)
Co-Editor, Special Issue of Limnology and Oceanography dedicated to Peter Kilham (1990-1993)

Reviewer of manuscripts for:
Science, Nature, Ecology, Ecological Monographs, Limnology and Oceanography, Quarternary Research, Ecological Applications, Ecosystems, Aquatic Sciences, Transactions of American Fisheries Society, PNAS, Tellus, American Midland Naturalist, Hydrobiologia, Journal of Phycology, Canadian Journal of Fisheries and Aquatic Sciences, Journal of Geology, American Naturalist, Water Resources Research, Biogeochemistry, Biotropica, Journal of Geophysical

Research, Journal of Paleolimnology, Lake and Reservoir Management, Water, Air and Soil Pollution, Environmental Science and Technology, Archiv fur Hydrobiologie, Lakes and Reservoirs , Journal of the North American Benthological Society, Global Biogeochemical Cycles, Climate Change, Estuaries, Conservation Ecology, International Journal of Remote Sensing, Internationale Revue der gesamten Hydrobiologiie, Amazaniana, Remote Sensing of Environment, IEEE Transactions, Hydrological Processes, Marine Chemistry, Environmental Biology of Fishes, Australian Journal of Ecology, Australian Journal of Marine and Freshwater Research, Revista Ciencias Marinas, California Fish and Game, Nauplius, Boreal Environment Research, Estuarine, Coastal and Shelf Science, Restoration Ecology, Global Change Biology

Service to Professional Societies

U.S. National Representative (elected), Societas Internationalis Limnologiae (1992 - present)
Chair and Member, Conservation Committee. Societas Internationale Limnologiae (1987-present)
Member, Water Quality Committee of Hydrology Section, American Geophysical Union (1996 - present)
Editor and Member of Board, International Society of Salt Lake Research (2003- 2006)
President (elected), International Society of Salt Lake Research (1999 - 2002)
Board of Directors (elected), American Society of Limnology and Oceanography (1999 - 2002)
Member, Electronic Publication Committee, American Society of Limnology and Oceanography (1997 –1999)
Member, California Climate Change Analysis Group for Ecological Society of America (1998 – 2000)
Member, Steering Committee. ASLO-NABS Symposium on Freshwater Ecosystems and Climate Change (1993 – 1996)

Memberships in Professional Societies

American Society of Limnology and Oceanography
Ecological Society of America
American Geophysical Union
American Association for the Advancement of Science
Societas Internationalis Limnologiae
International Association of Hydrological Sciences
Sigma Xi

PUBLICATIONS

Reviewed Publications:

1972 Kilham, P. and J.M. Melack. Primary northupite deposition in Lake Mahega, Uganda. Nature 238: 123.

Melack, J.M. and P. Kilham. Lake Mahega: a mesothermic sulphatochloride lake in western Uganda. Afr. J. Hydrobiol. Fish. 2: 141-150.

1974 Melack, J.M. and P. Kilham. Photosynthetic rates of phytoplankton in East African alkaline, saline lakes. Limnol. Oceanogr. 19: 743-755.

1976 Melack, J.M. Primary production and fish yields in tropical lakes. Trans. Amer. Fish. Soc. 105: 575-580.

1978 Melack, J.M. Morphometric, physical and chemical features of the volcanic crater lakes of western Uganda. Arch. Hydrobiol. 84: 430-453.

1979 Melack, J.M. Photosynthesis and growth of *Spirulina platensis* (Cyanophyta) in an equatorial lake (Lake Simbi, Kenya). Limnol. Oceanogr. 24: 753-760.

Melack, J.M. Temporal variability of phytoplankton in tropical lakes. Oecologia 44: 1-7.

Melack, J.M. Photosynthetic rates in four tropical African fresh waters. Freshwat. Biol. 9:555-571.

1980 Melack, J.M. An initial measurement of photosynthetic productivity in Lake Tanganyika. Hydrobiologia 72:243-247.

Simpson, H.J., R.M. Trier, C.R. Olson, D.E. Hammond, E. Ege, L. Miller and J.M. Melack. Fallout plutonium mobility in an alkaline, saline lake. Science 207: 1071-1072.

1981 Melack, J.M. Photosynthetic activity of phytoplankton in tropical African soda lakes. Pages 71-85 In: W.D. Williams, (ed.), Salt Lakes: Developments in Hydrobiology 5. Dr. W. Junk, Publ. The Hague. (Also appeared in Hydrobiologia 81: 71-85)

Liang, Y., J.M. Melack and J. Wang. Primary production and fish yields in Chinese ponds and lakes. Trans. Amer. Fish. Soc. 110: 346-350.

Schlesinger, W.H. and J.M. Melack. Transport of organic carbon in the world's rivers. Tellus 33: 172-187.

Gaudet, J.J. and J.M. Melack. Major ion chemistry in a tropical African lake basin. Freshwat. Biol. 11: 309-333.

Vareschi, E., J.M. Melack and P. Kilham. Saline waters. Pages 93-102 In: J.J. Symoens, M. Burgis and J.J. Gaudet, (eds.), The Ecology and Utilization of African Inland Waters. United Nations Environmental Programme, Nairobi.

Lemoalle, J.A., A. Adeniji, P. Compere, G.G. Ganf, J.M. Melack and J.F. Talling. Phytoplankton. Pages 37-50 In: J.J. Symoens, M. Burgis and J.J. Gaudet, (eds.), The Ecology and Utilization of African Inland Waters. United Nations Environment Programme, Nairobi.

Melack, J.M., P. Kilham and T.R. Fisher. Responses of phytoplankton to experimental fertilization with ammonium and phosphate in an African soda lake. Oecologia 52: 321-326.

1982 MacIntyre, S. and J.M. Melack. Meromixis in an equatorial African soda lake. Limnol. Oceanogr. 27: 595-609.

Melack, J.M. Photosynthetic activity and respiration in an equatorial African soda lake. Freshwat. Biol. 12: 381- 400.

Melack, J.M., J.L. Stoddard and D.R. Dawson. Acid precipitation and buffer capacity of lakes in the Sierra Nevada, California. Pages 465-471 In: A.J. Johnson and R.A. Clark, (eds.), Proc. Internat. Symp. on Hydrometeorology. Amer. Water Res. Assoc., Bethesda, MD.

1983 Melack, J.M. Large, deep salt lakes: a comparative limnological analysis. Pages 223-230 In: U.T. Hammer, (ed.), Saline Lakes. Developments in Hydrobiology 16. Dr. W. Junk Publ., The Hague (also appeared in Hydrobiologia 105: 223-230).

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Fisher, T.R., J.M. Melack, B. Robertson, E. Hardy and L. Fernando. Vertical distribution of zooplankton and physico-chemical conditions during a 24-hour period in an Amazon floodplain lake (Lago Calado, Brazil). Acta Amazonica 13: 475-487.

1984 Livingstone, D.A. and J.M. Melack. Some lakes of subsaharan Africa. Chap. 19, pages 467-497 In: F.B. Taub, (ed.), Lake and Reservoir Ecosystems. Ecosystems of the World. v. 23, Elsevier Science Publ.

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1985 Melack, J.M., J.L. Stoddard and C.A. Ochs. Major ion chemistry and sensitivity to acid precipitation of Sierra Nevada lakes. Water Resourc. Res. 21: 27-32.

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1986 Melack, J.M. and J.O. Sickman. Major solute chemistry of stream water and rain in a southern California chaparral watershed. Proc. Chaparral Conference, California Water Resources Center Report 62: 81-87.

Walsh, J., J.M. Melack, E. Fee, L. Slobodkin and J. Estes. Aquatic ecosystems and the biosphere. Pages 80-92 In: Space Science Board, Committee on Planetary Biology (D. Botkin, Chair), Remote Sensing of the Biosphere. National Academy Press, Washington, D.C.

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1987 Melack, J.M. Inland aquatic environments. Chapter 4.5 In: Eos Science Steering Committee, From Pattern to Process: The Strategy of the Earth Observing System. NASA Headquarters, Washington, D.C.

Carder, K., J.M. Melack and M. Abbott. High-resolution Spaceborne Imaging Spectrometry: Science Opportunities for the 1990s -- Oceans and Inland Waters. Chapters 2.B2, 2.C2, 2.E3, 4B In: Imaging Spectrometry Science Advisory Group's Science Plan. NASA-JPL.

Patten, D.T., F.P. Conte, W.E. Cooper, J. Dracup, S. Dreiss, K. Harper, G.L. Hunt, P. Kilham, H.E. Klieforth, J.M. Melack and S.A. Temple (Mono Basic Ecosystem Study Committee, list alphabetically after chair). The Mono Basin Ecosystem - Effects of Changing Lake Level. National Academy Press, Washington, D.C. 272 p.

1988 Melack, J.M. Aquatic plants in extreme environments. Chap. 14, Pages 341-378, In: J.J. Symoens, (ed.), Aquatic Vegetation. Handbook of Vegetation Science. v. 15. Dr. W. Junk Publ.

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Melack, J.M., M. Williams and J.O. Sickman. Episodic acidification during snowmelt in waters of the Sierra Nevada, California. Pages 426-436 In: Poppoff, L., C. Goldman, S. Loeb and L. Leopold (eds.) International Mountain Watershed Symp. Tahoe Resource Conservation District, South Lake Tahoe, California.

1989 McGurk, B.J., N.H. Berg, D. Marks, J.M. Melack and F. Setaro. Monitoring atmospheric deposition in California's Sierra Nevada: a comparison of methods. Pages 71-79. In: J.W. Delleur (ed.) Atmospheric Deposition. IAHS Publ. No. 179.

Williams, M. and J.M. Melack. Effects of spatial and temporal variation in snowmelt on nitrate and sulfate pulses in an alpine watershed. Ann. Glaciol. 13: 285-288.

Barthelmes, D., J.M. Melack, R.T. Oglesby, D.W. Smith and D. Uhlmann. The possibilities for reuse of nutrients. Pages 213-230. In: S.-O. Ryding and W. Rast (eds.). The Control of Eutrophication of Lakes and Reservoirs. UNESCO, Paris.

1990 Engle, D.L. and J.M. Melack. Floating meadow epiphyton: biological and chemical features of epiphytic material in an Amazon floodplain lake. Freshwat. Biol. 23: 479-494.

Dana, G.L., R.S. Jellison and J.M. Melack. *Artemia monica* egg production and recruitment in Mono Lake, California. Pages 233-243. In: F. A. Comin and T.G. Northcote (eds.) Saline Lakes. Developments in Hydrobiology. Dr. W. Junk, Publ., The Hague. (also appeared in Hydrobiologia 197: 233-243.)

Melack, J.M. and T.R. Fisher. Comparative limnology of tropical floodplain lakes with an emphasis on the central Amazon. Acta Limnologia Brasiliensia 3: 1-48.

Barmuta, L.A., S.D. Cooper, S.K. Hamilton, K.W. Kratz and J.M. Melack. Responses of zooplankton and zoobenthos to experimental acidification in a high-elevation lake (Sierra Nevada, California, U.S.A.). Freshwat. Biol. 23: 571-586.

Hess, L.L., J.M. Melack and D. Simonett. Radar detection of flooding beneath the forest canopy: a review. Int. J. Remote Sensing 11: 1313-1325.

Melack, J.M. and S.A. Pilorz. Reflectance spectra from eutrophic Mono Lake, California, measured with the Airborne Visible and Infrared Imaging Spectrometer (AVIRIS). SPIE (International Society for Optical Engineering) - Imaging Spectroscopy of the Terrestrial Environment. 1298: 202-212. (also appearded on Pages 232-242 R.O. Green (ed.). Proc. Second Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop.
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Williams, M., R. Kattelmann and J. Melack. Groundwater contributions to the hydrochemistry of an alpine basin. Pages 741-748. In: H. Lang and A. Musy (eds.) Hydrology in Mountainous Regions I. Hydrological Measurements: Water Cycle. IAHS-AIHS Publ. 193.

1991 Melack, J.M. and J.L. Stoddard. Sierra Nevada. Pages 503-530. In: D.F. Charles (ed.) Acidic Deposition and Aquatic Ecosystems: Regional Case Studies. Springer-Verlag, New York.

Melack, J.M. West overview. Pages 467-470. In: D.F. Charles (ed.). Acidic Deposition and Aquatic Ecosystems: Regional Case Studies. Springer-Verlag, New York.

Melack, J.M., S.K. Hamilton, K.W. Kratz and M.W. Williams. Ecological consequences of acidic deposition in the Sierra Nevada. Pages 47-53 In: Proceedings of Third Biennial Watershed Management Conference - California Watersheds at the Urban Interface. California Water Resources Center Report No. 75.

Williams, M. and J.M. Melack. Precipitation chemistry and ionic loading to an alpine basin, Sierra Nevada. Water Resourc. Res. 27: 1563-1574.

Williams, M. and J.M. Melack. Solute chemistry of snowmelt and runoff in an alpine basin, Sierra Nevada. Water Resourc. Res. 27: 1578-1588.

Stohlgren, T.J., J.M. Melack, A.L. Esperanza and D.J. Parsons. Atmospheric deposition and solute export in Giant Sequoia-mixed conifer watersheds in the Sierra Nevada, Califorina. Biogeochemistry 12: 207-230.

Williams, M., A. Brown and J.M. Melack. Biochemical modifications of

snowpack runoff in an alpine basin. Pages 457-465 In: G. Kienitz and E. Klaghofer (eds.) Hydrological Interactions between Atmosphere, Soil and Vegetation. IAHS Publ. 204 .

Lesack, L.F. and J.M. Melack. The deposition, composition, and potential sources of major ionic solutes in rain of the central Amazon basin. Water Resourc. Res. 27: 2953-2977.

Melack, J.M. Reciprocal interactions among lakes, large rivers and climate. Pages 68-87 In: P. Firth and S. Fisher (eds.). Global Change and Freshwater Ecosystems. Springer-Verlag, New York.

Hamilton, S.K., J.M. Melack, M.F. Goodchild and W.M. Lewis, Jr. Estimation of the fractual dimension of terrain from lake size distributions. Pages 145-163 In: P.A. Carling and G.E. Petts (eds). Lowland Floodplain Rivers: Geomorphological Perspectives. John Wiley & Sons, New York.

Sickman, J.O. and J.M. Melack. Photosynthetic activity of phytoplankton in a high altitude lake (Emerald Lake, Sierra Nevada, California). Hydrobiologia 230: 37-48.

Sippel, S.J., S.K. Hamilton and J.M. Melack. Inundation area and morphometry of lakes on the Amazon River floodplain, Brazil. Arch. Hydrobiol. 123: 385-400.

1992 Melack, J.M., S.J. Sippel, D.M. Valeriano and T.R. Fisher. Environmental conditions and change on the Amazon floodplain: analysis with remotely sensed imagery. Pages 377-387. 24th Internat. Symp. on Remote Sensing of the Environment. ERIM, Ann Arbor, Michigan.

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Melack, J.M. Eutrophication and water quality in tropical floodplain lakes. (In Spanish.) Ingenieria Hidraulica en México 7: 142-147.

Jellison, R., G.L. Dana and J.M. Melack. Ecosystem responses to changes in freshwater inflow to Mono Lake, California. Pages 107-118. In: C.A. Hall, V. Doyle-Jones and B. Widawski (eds.) The History of Water: Eastern Sierra Nevada, Owens Valley, White-Inyo Mountains. White Mountain Research Station Symposium Vol. 4. Univ. of California, Los Angeles.

Melack, J.M. Wetland ecosystems monitoring - introduction. Pages 535-536. In: D.H. McKenzie, D.E. Hyatt, and V.J. McDonald (eds.) Ecological Indicators. Elsevier Applied Science, New York.

Williams, M.W., K.A. Tonnessen, J.M. Melack and Y. Daqing. Sources and spatial variation of the chemical composition of snow in the Tien Shan, PRC. Ann. Glaciol. 16: 25-32.

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Jellison, R.S. and J.M. Melack. Algal photosynthetic activity and its response to meromixis in hypersaline Mono Lake, California. Limnol. Oceanogr. 38: 818-837.

Williams, M.W., A.D. Brown and J.M. Melack. Geochemical and hydrological controls on the composition of surface water in a high-elevation basin, Sierra Nevada, California. Limnol. Oceanogr. 38: 775-797.

Jellison, R.S. and J.M. Melack. Meromixis in hypersaline Mono Lake, California. I. Vertical mixing and density stratification during the onset, persistence and breakdown of meromixis. Limnol. Oceanogr. 38: 1008-1019.

Jellison, R.S., L. Miller, J.M. Melack and G. Dana. Meromixis in hypersaline Mono Lake, California. II. Nitrogen fluxes. Limnol. Oceanogr. 38: 1020-1039.

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1988 Conte, F.P., R.S. Jellison, and G.L. Starrett. Nearshore and pelagic abundances of *Artemia monica* in Mono Lake, California. Hydrobiologia 158: 173-181.

1989 Engle, D.L. and O. Sarnelle. Algal use of sediment phosphorus from an Amazon floodplain lake--implications for total phosphorus analyses in turbid waters. Limnol. Oceanogr. 35: 483-490.

Murphy, A.M. Effects of insoluble particulates on meltwater in the snowpack at Mammoth Mountain, California. Discovery 12: 1-17.

1990 Hamilton, S.K. and W.M. Lewis. Basin morphology in relation to chemical and ecological characteristics of lakes in the Orinoco River floodplain, Venezuela. Arch. Hydrobiol. 119: 393-425.

Williams, M.W. and D. Clow. Hydrologic and biological consequences of an

avalanche striking an ice-covered lake. Proc. West. Snow Conf. 58: 51-60.

1991 Kattelmann, R. and K. Elder. Hydrologic characteristics and water balance of an alpine basin in the Sierra Nevada. Water Resourc. Res. 27: 1553-1562.

1993 Lesack, L.F.W. Water balance and hydrologic characteristics of a rainforest catchment in the central Amazon basin. Water Resourc. Res. 29:759-773.

Lesack, L.F.W. Export of nutrients and major ionic solutes from a rainforest catchment in the central Amazon basin. Water Resourc. Res. 29:743-758.

Miller, L.G., R. Jellison, R.S. Oremland and C.W. Culberson. Meromixis in hypersaline Mono Lake, California. 3. Biogeochemical response to stratification and overturn. Limnol. Oceanogr. 38:1040-1051.

1995 Lesack, L.F.W. Seepage exchange through the lakebed in an Amazon floodplain lake. Limnol. Oceanogr. 40:598-609.

Hamilton, S.K., O. de Souza and M.E. Coutinho. Dynamicis of floodplain inundation in the alluvial fan of the Taquari River (Pantanal, Brazil). Proc. Internat. Assoc. appl. theoret. Limnol. in press

Calheiros, D.F. and S.K. Hamilton. Limnological conditions associated with natural fish kills in the Pantanal wetland (Baia do Castelo, Paraguay River, Brazil). Proc. Internat. Assoc. appl. theoret. Limnol. in press

Book Reviews:

1975 Review of T.T. Macan, 1973. Ponds and lakes. Crane, Russak and Co., New York. 148p. Quart. Rev. Biol. 50:495-496.

1978 Review of L.C. Beadle. 1974. The inland waters of tropical Africa. Longman Group, London. 365p. Trans. Amer. Fish Soc. 197:642-644.

1981 Lakes, rivers and catchments. Review of B. Moss, 1980. Ecology of Fresh Waters. John Wiley and Sons Inc., New York. 332p. Ecology 62:504-505.

A guide to limnological methods. Review of R.G. Wetzel and G.E. Likens, 1979. Limnological Analyses. W.B. Saunders Co., Philadelphia. 357p. Ecology 62:505.

1982 Phytoplankton ecology. Review of I. Morris (ed.), 1980. The physiological ecology of phytoplankton. Univ. of California Press, Berkeley, California. 625p. Ecology 63:1189-1190.

1984 Limnology in the tropics. Review of C. Serruga and U. Pollinger, 1983. Lakes of the warm belt. Cambridge Univ. Press, New York. 569p. and J.P. Carmouse, J.R. Durand and C. Leveque, 1983. Lake Chad, ecology and productivity of a shallow tropical ecosystem. Junk, The Hague. 575p. Science 224:863-865.

1985 Life as a phytoplankter. Review of C.S. Reynolds, 1984. The ecology of freshwater phytoplankton. Cambridge Univ. Press, New York. 384p. Ecology 66:1392.

1986 The Hubbard Brook Ecosystem. Review of G.E. Likens (ed.),

1985. An ecosystem approach to aquatic ecology. Mirror Lake and Its Environment. Springer-Verlag, New York. 516p. Science 232:1031-1032.

1987 Large rivers. Review of B.R. Davies and K.F. Walker (eds.), 1986. The ecology of river systems. Dr. W. Junk Publ., Dordrecht. 792 p. Ecology 68:756-757.

Saline lakes. Review of U.T. Hammer, 1986. Saline lake ecosystems of the world. Monographiae Biologicae. vol. 59. Dr. W. Junk Publ., Dordrecht. 616p. Ecology 68:755.

1990 The Conservation of Australian wetlands. Review of A.J. McComb and P.F. Lake, 1988. Surrey Beatty. 196 p. Amer. Sci. 78:171.

1991 Review of B.R. Allanson, R.C. Hart, J.H. O'Keefe and R.D. Roberts, 1990. Inland waters of southern Africa: an ecological perspective. Monogr. Biol. 64. Klumer Academic Publ. Dordrecht 458 p. Limnol. Oceanogr. 35:1864-1865.

1997 Review of Committee on Inland Aquatic Ecosystems, 1996. Freshwater Ecosystems: Revitalizing Educational Programs in Limnology by National Research Council, Washington, D.C. 364 p.Trans. Amer. Geophys. Union (EOS) 2 Dec 1997:552 and 557.

1999 Review of Oren, A. (ed.), 1999. Microbiology and biogeochemistry of hypersalin environments. CRC Press 359 p. Limnol. Oceanogr. 44: 1597.

2000 Review of J.F. Talling and J.Lemaolle, 1998. Ecological dynamics of tropical inland waters. Freshwater Biology 44: 663-664.

Committee, Workshop and Technical Reports:

Tundisi, J.G., J.M. Melack, V. Montecino and J.F. Talling. 1983. Primary production in freshwater lakes and reservoirs. Pages 6-11, In: Report of Symposium on Savanna and Woodland Ecosystems in Tropical America and Africa - a Comparison. Internat. BioSciences Network, ICSU, Paris.

Kirk, J.T.O., E.G.J. Akhurst, B.R. Allanson, J.U. Grobbelaar, J.R. Hely-Hutchinson, J.M. Melack, J.C. Patterson, R.D. Robarts and A.B. Viner. 1984. Turbidity and suspensoids. Chapter 5, Pages 108-133. In: R.C. Hart and B.R. Allanson (eds.) Limnological Criteria for Management of Water Quality in the Southern Hemisphere. South African. Nat. Scient. Program Report No. 93.

Science and Mission Requirements Working Group. 1984. Earth Observing System. NASA Tech. Memorandum 86129. Vol. 1, 51 p. + Appendix 55 p.

Melack, J.M. and F. Setaro. 1986. Survey of sensitivity of southern California lakes to acid deposition. Final Report, California Air Resources Board Contract A3-107-32. 73 p.

Earth Observing System Science Steering Committee. 1987. From Pattern to Process: The Strategy of the Earth Observing System. NASA. 140 p.

Imaging Spectrometry Science Advisory Group. 1987. High Resolution Imaging Spectrometer: Science Opportunities for the 1990s. NASA. 74 p.

Working Group on Great Lakes Research. 1987. Basic Issues in Great Lakes Research. Spec. Rep. No. 123. Great Lakes Research Division, Univ. of Michigan, Ann Arbor. 174 p.

Melack, J.M., S.D. Cooper and R.W. Holmes. 1987. Chemical and biological survey of lakes and streams located in the Emerald Lake watershed; Sequoia National Park. Final Report, California Air Resources Board Contract A3-096-32. 345 p.

Committee on Great Lakes Research Issues. 1988. Great Lakes Unified Ecosystem Studies. University of Michigan. 12 p.

Dozier, J., J.M. Melack, D. Marks, K. Elder, R. Kattelmann and M. Williams. 1987. Snow deposition, melt, runoff and chemistry in a small alpine watershed, Emerald Lake basin, Sequoia National Park. Final Report, California Air Resources Board Contract A3-106-32. 349 p.

Melack, J.M., R.S. Jellison, G.L. Dana, P.H. Lenz and D.B. Herbst. 1988. Limnological conditions at Mono Lake. Appendix D. The Future of Mono Lake. Community and Organization Research Inst. University of California, Santa Barbara.

Jellison, R.S., G.L. Dana and J.M. Melack. 1988. Phytoplankton and brine shrimp dynamics in Mono Lake, California. Final Report, Los Angeles Dept. of Water and Power. 189 p.

Cooper, S.D., K. Kratz, R.W. Holmes and J.M. Melack. 1988. An integrated watershed study: an investigation of the biota in the Emerald Lake system and stream channel experiments. Final Report, California Air Resources Board Contract A5-139-33. 89 p.

Sickman, J.O. and J.M. Melack. 1989. Characterization of year-round sensitivity of California's montane lakes to acidic deposition: Final Report, California Air Resources Board Contract A5-203-32. 104 p.

Melack, J.M., S.D. Cooper and T.M. Jenkins, Jr. 1989. Biological and chemical characteristics of Emerald Lake and the streams in its watershed, and responses of the lakes and streams to acidic deposition. Final Report, California Air Resources Board Contract A6-184-37. 377 p.

Jellison, R.S., G.L. Dana and J.M. Melack. 1989. Phytoplankton and brine shrimp dynamics in Mono Lake, California. Final Report, Los Angeles Department of Water and Power. 174 p.

Berg, N., B. McGurk, J.M. Melack, D. Marks and D. Dawson. 1989. Evaluation of methods for measurement of snowfall and collection of snow for chemical analysis. Final Report, California Air Resources Board Contract A6-078-32.124p.

Dozier, J. and J.M. Melack. 1989. Snow, snowmelt, rain, runoff and chemistry in a Sierra Nevada watershed. Final Report, Califorina Air Resources Board. Contract A6-147-32. 268p.

Melack, J.M., S. Hamilton, J. Sickman and S. Cooper. 1989. Effects of atmospheric deposition on ecosystems in Sequoia National Park: Ecological impacts of aquatic

habitats. Final Report, U.S. National Park Service, Cooperative Agreement 8006-2-0002. 168 p.

Dana, G.L., R. Jellison and J.M. Melack. 1990. Mono Lake database. Report to the Los Angeles Department of Water and Power. 32 p.

Dana, G.L., R. Jellison and J.M. Melack. 1990. Methods manual. Report to the Los Angeles Department of Water and Power. 110 p.

Jellison, R., G.L. Dana, J. Romero and J.M. Melack. 1990. Phytoplankton and brine shrimp dynamics in Mono Lake, California. Annual report to the Los Angeles Department of Water and Power. 218 p.

Dana, G.L., R. Jellison, J. Romero, and J.M. Melack. 1991. Mixing and plankton dynamics in Mono Lake, California. Annual report to the Los Angeles Department of Water and Power. 288 p.

Melack, J.M., J.O. Sickman, F.V. Setaro, and D. Engle. 1993. Long-term studies of lakes and watersheds in the Sierra Nevada: patterns and processes of surface-water acidification. Final Report, California Air Resources Board, Contract A932-060. 185 p.

Melack, J.M. 1993. Ecology of the offshore waters of Mono Lake, California. Direct testimony, California Water Resources Control Board. 28 p.

Melack, J.M., J. O. Sickman, F. Setaro and D. Dawson. 1994. Monitoring of wet deposition in alpine areas in the Sierra Nevada. Final Report. Contract A932-081. California Air Resources Board

Kasischke, E. and J. M. Melack. 1995. Ecology. Pages 2-1 to 2-31. In Spaceborne synthetic aperture radar: current status and future directions. Report to Committee on Earth Sciences, Space Science Board, National Academy of Sciences. NASA Tech. Memorandum 4679

Jellison, R., J. Romero, J. Melack, D. Heil and G. Dana. 1995. Mixing and plankton dynamics in Mono Lake, California. Final report (1993-1994) to Los Angeles Department of Water and Power

Richey, J., R. Victoria, J. Melack, S. Wilhelm, M. McClain, A. Devol and L. Martinelli. 1995. Organic matter and nutrient dynamics in river corriders of the Amazon basin and their response to anthropogenic change. Synthesis paper (Surface water chemistry group) for Workshop on the Ecological Component of the Integrated Amazon Study: Effects of Forest Conversion (INPA, CENA and NASA)

Novo, E., M. Gastil and J.M. Melack. 1995. An algorithm for chlorophyll using first difference transformation of AVIRIS reflectance spectra. Pages 121-124. In Summaries of the Fifth Annual JPL Airborne Earth Science Workshop, Pasadena, CA

Jellison, R., J. Romero, J. Melack, and D. Heil. 1996. Mixing and plankton dynamics in Mono Lake, California. Final report (1995) to Los Angeles Department of Water and Power

Engle, D.L. and J.M. Melack. 1997. Assessing the potential impact of acid deposition on high altitude aquatic ecosystems in California: Integrating ten years of

investigation. Final Report. California Air Resources Board. Contract 093-312

Jellison, R., J. Romero, J. Melack and D. Heil. 1997. Mixing and plankton dynamics in Mono Lake, California. Final report (1996) to Los Angeles Department of Water and Power

Melack, J.M., J.O. Sickman, F. Setaro and D. Dawson. 1997. Monitoring of wet deposition in alpine areas in the Sierra Nevada. Final Report. California Air Resources Board contract A932-081, 209 p

Melack, J.M., J.O. Sickman, A. Leydecker and D. Marrett. 1998. Comparative analyses of high-altitude lakes and catchments in the Sierra Nevada: Susceptibility to acidification. Final Report. California Air Resources Board contract A032-188, 615 p

Sahagian, D. and J.M. Melack (eds.). 1998. Global wetland distribution and functional characterization: Trace gases and the hydrologic cycle. IGBP Report 46, 92 p

Gastil, M. and J.M. Melack. 1998. Improved atmospheric correction for AVIRIS spectra from inland water. Pages In Summaries of the Eighth Annual JPL Airborne Earth Science Workshop, Pasadena, CA

Jellison, R., J.M. Melack, and D. Heil. 1998. Mixing and plankton dynamics in Mono Lake, California. Annual Report (1997) to Los Angeles Department of Water and Power

Schimel, D., D. Glover, J.M. Melack, R. Beer, R. Myneni, Y. Kaufman, C. Justice and J. Drummond. 1999. Greenhouse gases and atmospheric chemistry. Pages 163-193 In M.D. King (ed.). EOS Science Plan. NASA

Jellison, R., J.M. Melack, and D. Heil. 1999. Mixing and plankton dynamics in Mono Lake, California. Annual Report (1998) to Los Angeles Department of Water and Power

Jellison, R. and J.M. Melack. 2000. Mixing and plankton dynamics in Mono Lake, California. Annual Report (1999) to Los Angeles Department of Water and Power

Jellison, R., S. Roll and J.M. Melack. 2001. Mixing and plankton dynamics in Mono Lake, California. Annual Report (2000) to Los Angeles Department of Water and Power

Jellison, R., S. Roll and J.M. Melack. 2002. Mixing and plankton dynamics in Mono Lake, California. Annual Report (2001) to Los Angeles Department of Water and Power

Jellison, R., S. Roll and J.M. Melack. 2003. Mixing and plankton dynamics in Mono Lake, California. Annual Report (2002) to Los Angeles Department of Water and Power

Jellison, R., K. Rose and J.M. Melack. 2003. Assessment of internal nutrient loading to Crowley Lake, Mono County. Final Report to California State Water Resources Control Board (contract #00-196-160-0)

Jellison, R., S. Roll and J.M. Melack. 2004. Mixing and plankton dynamics in Mono Lake, California. Annual Report (2003) to Los Angeles Department of Water and Power

PROFESSIONAL ACTIVITY

Co-convenor, Societas Internationalis Limnologiae, Workshop on African Limnology, Phytoplankton and primary productivity and Saline lakes groups, Nairobi, Kenya. 1979.

Invited participant, NSF sponsored workshop on carbon transport and processing in the Amazon Basin, Friday Harbor, Washington. 1980.

Invited speaker, Public Hearing for Kapiloff Acid Deposition Bill, San Francisco, California. 1980.

Invited participant, U.S. Geological Survey - National Parks Water Quality Program Development Workshop, Sequoia and Yosemite National Parks, California. 1981.

Expert witness to California Assembly Committee on Water, Parks and Wildlife at Public Hearing - The Future of Mono Lake, Sacramento. 1981.

Organizer and Chairman of Symposium/Workshop on Mono Lake, Santa Barbara, California. 1982.

Chairman, Phytoplankton section, Second International Symposium on Salt Lakes, Saskatoon, Saskatchewan. 1982.

Member, Mono Lake Research Steering Committee, Sacramento, California. 1983-84.

Member, AIBS Review Panel for proposals submitted to NASA's Global Biology Program, Washington, D.C. 1983 - 84.

Invited participant, Planetary Biology Committee's (Space Science Board) Workshop to write Towards a Science of the Biosphere under auspices of NAS/NRC, Snowmass, Colorado. 1983.

Member, Science and Mission Requirements Working Group for NASA's System Z, a permanent, adaptable, space facility for scientific study of the earth in the 1990s, Washington, D.C. 1983-84.

Invited speaker and rapporteur, Symposium on Savanna and Woodland Ecosystems in Tropical America and Africa, Brasilia, Brazil. 1983.

Invited speaker and participant, International Workshop on Transport of Carbon and Minerals in Major World Rivers. Caracas, Venezuela. 1984.

Invited speaker, Mono Lake: Beyond the Public Trust Doctrine - Public Policy Program, UCLA. Los Angeles. 1984.

Member, Science Steering Committee for NASA's Earth Observing System, Washington, D.C. 1984-87.

Organizer and Chairman of Third International Symposium on Inland Saline Waters, Nairobi, Kenya. 1985.

Member, EPA National Surface Water Survey: Eastern Lake Survey - Phase II, Peer Review Panel. 1985.

Member, Imaging Spectrometer Science Advisory Group, Jet Propulsion Lab (NASA). 1985-87.

Invited participant, Tropical Ecosystem Project, NASA - Ames Research Center. 1985-87.

Member, National Academy of Science - Mono Basin Ecosystem Study Committee. 1985-87.

Invited participant and speaker. Workshop on Ecological Principles for Watershed Management, East-West Center, Honolulu, Hawaii. 1986.

Member, Review Committee for Remote Sensing Research Program, Space Sciences Laboratory, University of California, Berkeley. 1986.

Organizer and co-chairman. Special symposium, 50th ASLO meeting. Remote sensing of lakes and coastal environments.

Invited participant and group leader. Basic issues in Great Lakes research. NSF (ocean sciences) sponsored workshop. Kellogg Biological Station, Michigan. 1986.

Invited contributor. Regional Case Studies, EPA sponsored project for National Acid Precipitation Assessment Program. 1986-1989.

Invited participant. Complex interactions in lake communities. NSF (ecology) sponsored workshop. Notre Dame, Indiana. 1987.

Invited participant. Factors controlling community structure and function in tropical versus temperate streams. NSF (ecology) sponsored workshop. Flathead Lake Biological Station, Montana. 1987.

Visiting scientist. Centers for Water Research, Environmental Fluid Dynamics and Limnological Modeling, University of Western Australia, Perth, Australia. 1987-88.

Invited plenary speaker. Second Symposium on International Satellite Land Surface Climatology Project, Niamey, Niger. 1988.

Invited plenary speaker. Second Congress of Brazilian Limnology, Cuiaba, Brazil. 1988. (presentation in Portuguese).

Member and subpanel Chair. NASA Eos Interdisciplinary Science Peer Review Panel, Washington, D.C. 1988.

Invited speaker and participant. Lotic Ecosystem Recovery, EPA sponsored symposium. Duluth, Minnesota. 1988.

Invited participant. Workshop on Ecosystem Risk Assessment and Monitoring, National Research Council, Washington, D.C. 1989.

Member. High Resolution Imaging Spectrometer Science Team, NASA. 1989-1995.

Member. Shuttle Imaging Radar Experiment Science Team. NASA. 1989-1998.

Invited participant. Cary Conference on Comparative Analyses of Ecosystems:

Patterns, Mechanisms and Theories, Institute of Ecosystem Studies, Millbrook, N.Y. 1989.

Member. EPA Direct/Delayed Response Project. Peer Review Panel. Corvallis, OR. 1989.

Invited speaker and participant. Implementation group for lake studies of US/USSR. Earth Sciences Joint Working Group. Leningrad, USSR. 1989.

Invited plenary speaker. Troubled waters of the greenhouse Earth. NABS-EPA-NASA symposium. Blacksburg, Virginia. 1990.

Co-organizer, Special Symposium - A tribute to Peter Kilham, Biology and Geology - Life at the Interface. Annual Meeting, American Society of Limnology and Oceanography, 1990.

Deputy chairperson. US/USSR Earth Sciences Joint Working Group. Leningrad, USSR. 1990.

Chairperson, Wetlands Monitoring session, International Symposium on Ecological Indicators. Ft. Lauderdale, Florida, 1990.

Invited speaker, Eutrophication of tropical waters. World Bank and SCOPE. Washington, D.C., 1990.

Invited plenary speaker, 2nd International Limnology Week. National Water Commission. Guadalajara, Mexico, 1991.

Invited speaker, Phosphorus cycles in terrestrial and aquatic ecosystems. Regional workshop 4: Africa. SCOPE and UNEP. Nairobi, Kenya, 1991.

Member, Science Steering Committee. Lake Biwa Transport Experiment. Planning meetings Kyoto, Japan and Barcelona, Spain, 1992.

Chair, Remote sensing and modeling session, ISLSCP Americas Workshop, Remote Sensing of Land Surface for Studies of Global Change. Washington, D.C., 1992.

Invited plenary speaker, Investigators' Working Group of NASA's EOS Program. Keystone, CO, 1992.

Co-Chair, SIL Working Group on Saline Inland Waters. 1992-2001.

Member, Review Panel for proposals submitted to NASA's Sea-Viewing Wide-Field-of-View Sensor program. Washington, D.C., 1992.

Member, Review Panel for proposals submitted to EPA's Environmental Monitoring and Assessment Program, Washington, D.C., 1993

Invited speaker and chair, Phosphorus cycles in terrestrial and aquatic ecosystems. SCOPE Synthesis Meeting. Budapest, Hungary, 1993.

Invited speaker, Current research and future perspectives, California Air Resources Board Conference. Sacramento, 1993.

Co-Chair and Member, User Working Group, Oak Ridge National Laboratory-Data Active Archive Center, 1993- 1999

Invited plenary speaker, North American Benthological Society, Orlando, FL . 1994

Invited speaker and session co-chair, Committee on Space Research (COSPAR) Scientific Assembly, Hamburg, Germany. 1994

Co-Chair. Surface water chemistry group for the Ecological Component of the Integrated Amazon Study. 1993 - 1997

Invited participant, Working Group for UNESCO project: Surface water typologies at global scale. 1993

Co-Chair, Ecology working group: Spaceborne synthetic aperture radar: current status and future directions. Report to Committee on Earth Sciences, Space Science Board, National Academy of Sciences. 1994-1995

Invited plenary speaker, International Congress of Societas Internationalis Limnologiae, São Paulo, Brazil. 1995

Chair, Biogeochemistry Panel, and Member, Executive Committee, Investigators' Working Group of NASA's Earth Observing System. 1995 to 2000

Co-Chair, International Geosphere Biosphere Program wetlands project. 1995 - 2001

Member, Science Advisory Panel for LightSAR, 1996 - 1999

Co-Chair, Inter-American Institute workshop on experimental and time series analyses in limnology, Manitoba, Canada, and follow up activities 1996 - 1998

Invited participant, SCOPE workshop on nitrogen in terrrestrial and aquatic systems, Termas do Chillan, Chile and follow up activities 1996 - 1997.

Invited participant, EPA/NASA workshop on water monitoring, remote sensing and advanced technologies, Washington, D.C., 1996

Member, NCEAS Working Group on Intrinsic and Extrinsic Variability in Community Dynamics, 1997 - 1998

Member, Expert Panel for Environmental Defense Fund on Paraguay-Pantanal Hidrovia, 1996-1997

Member, Data Information System Working Group for Large-scale Atmosphere-Biosphere Experiment in the Amazon, 1997-2000

Member, National Research Council sponsored Panel to Review the Alaska Distributed Active Achive Center, Fairbanks, Alaska, and follow up activities. 1997-1999

Member, Review Panel for Industrial Research Chair proposal, Natural Sciences and Engineering Research Council of Canada, Victoria, British Colombia 1998

Chair, Review Committee for Ecotoxicology Program at UC Davis, Toxic

Substances Research and Training Program, 1998

Organizer, Special Session on Earth System Science and Public Policy at Investigators' Working Group Meeting of NASA's Earth Observing System, Durham, N.H., 1998

Invited plenary speaker, International Symposium of the North American Lake Management Society, Banff, Canada 1998

Member, SCOPE/NCEAS Working Group on Regional and Landscape-Scale Nitrogen Budgets, 1998 - 1999.

Invited participant, ESA workshop on Atmospheric Deposition: the Ecological Response, Washington, D.C., 1999

Co-organizer, LBA workshop on remotely sensed land surface properties, Cachoeira Paulista, Brazil, 1999

Organizer and Chairman of Seventh International Symposium on Inland Saline Waters, Death Valley, California, 1999.

Member, External Review of Centre for Water Research and Department of Environmental Engineering, University of Western Australia, Perth. 1999

Session Chair, INTECOL Wetlands Symposium, Quebec City, Canada, 1999

Plenary speaker, International Symposium on High Mountain Lakes and Streams, Innsbruck, Austria, 2000

External Reviewer, Global Change program, Oak Ridge National Laboratory, 2002

Invited speaker and participant, N fluxes and processes in tropical and temperate systems, PiraCena VII workshop, Ubatuba, Brazil, 2003

Science Advisory Committee, Center for Ecological Health Research (UC Davis), 1999 – 2002

Member, Medea (Advisory group on environmental science to federal agencies), 1996 – 2003

External Reviewer, CALFED In-Delta Storage project, 2002-2003

Member, Science Advisory Committee, Tropical Rivers Alliance, 2003

Member, Independent Science Board, California Bay-Delta Authority's CALFED Bay-Delta Program, 2003 – 2006

Invited plenary speaker, International symposium entitled "Water: histories, cultures, ecologies", University of Western Australia, Perth, Australia, 2003

Member, Water Management Science Board, California Bay-Delta Authority's CALFED Bay-Delta Program, 2005 – 2006

Member, NRC/NAS Committee on Geophysical and Environmental Data, 1999 - 2005.

Member, Hydroecology Committee of National NEON Committee, 2005

Member, LTER Planning Committee, 2005-2006

Member, Science Advisory Panel, Eros Data Center-Data Active Archive Center. 1994 – present

Member, Standard Methods Committee, American Water Works Association, 1999 – present

Member, Science Steering Committee, Large-scale Atmosphere-Biosphere Experiment in the Amazon. 1996-present

Member, NCEAS working group on aquatic-terrestrial linkages in carbon dynamics, 2005 - present

Member, NCEAS working group on methane dynamics, 2006 - present

Member, Board of Community Environmental Council, 2006 - present

Reviewer of proposals for NSF, NASA, AIBS, California Space Institute, Universities Council on Water Resources, University-wide Energy Research Group, NOAA, DOE, MAB, EPA, NERC (U.K.), NSERC (Canada), InterAmerican Institute

Presented over 170 papers at professional meetings, universities and government laboratories.

UNIVERSITY SERVICE and TEACHING:

Systemwide:

Faculty Manager, Sierra Nevada Aquatic Research Laboratory and Valentine Reserve, Mammoth Lakes, California. 1979-present.
Member, University Committee on Research Policy (2003 – 2004)
Member, Coordinating Board for UC Water Resources Center. 1995- 2002
Member, Science Advisory Committee, EPA Center for Ecological Health Research. 1999- 2002
Member, Executive Committee of UC Toxic Substances Research and Teaching Program.
1991-1999
Member, Advisory Committee on Professional Education. 1988-1989.

Campus:

Associate Dean, Bren School, 2006-present
Acting Dean, Bren School, 2005
Member, Natural Reserve System Campus Advisory Committee. 1979-present.
Chair and Member, Advisory Committee for Institute for Computational Earth System Science. 1992-1996, 2001-present
Exexcutive Committee, Santa Barbara Channel LTER. 2001- present
Chair, Academic Senate Council of Research and Instructional Resources, 2002-2004
Chair, Search Committee for Dean of Bren School, 2004-2005
Member, Task Force on Environmental Studies, 2005-2006

Member, Academic Senate Executive Committee, 2002-2004
Chair and Member, Academic Senate Committee on Research. 1990-1994, 1995- 1997.
Member, Academic Senate Committee on Educational Policy and Academic Planning. 2000-2001
Member, Academic Senate Committee on Capital Projects, 1996 – 2000
Chair, Executive Committee (Bren School). 2001 - 2004
Chair, Building and Space Committee (Bren School). 1990-2003.
Member, Search Committee, Associate Vice Chancellor for Design, Construction and Physical Facilities. 2001-2002.
Chair and Member, Committee on Recruitment and Admissions (Bren School). 1999-2001
Member, North Campus Housing Committee, 1998-2003
Chair, Campus Wetlands Committee. 1985-1990, 1993-2001.
Chair, Academic Development Committee for School of Environmental Science and Management. 1993 - 1994.
Chair, Chancellor's Task Force for a School of Environmental Science and Management. 1988-1991.
Member, Search Committee for Dean of School of Environmental Science and Management. 1991-1993.
Member, Building Committee for School of Engineering, 1998-2000
Member, Rates and Recharge Committee. 1988-1991.
Chair and Member, Advisory Committee for Computer Systems Laboratory. 1988-1991.
Member, Advisory Committee for Marine Science Institute. 1988-1995.
Chair and Member, Valentine Eastern Sierra Reserve Advisory Committee 1978-1995.
Member, Pacific Rim Committee. 1991-1994, 1995-1997
Member, Environmental Studies Advisory Committee. 1993-1995.

Departmental:
Chair, Section of Aquatic and Population Biology. 1989-1991.
Member, Aquatic Biology Oversight Committee. 1997-2004
Member, Noble Hall Renovation Committee. 2003 - 2004
Member, FTE Committee (Biology). 1993, 1995- 1997.
Chair and Member, Academic Personnel Review Committees. 1982-present.
Member, Long-range Planning Committee (Biology). 1990-1991.
Graduate Advisor, Section of Aquatic and Population Biology. 1985-1987.
Member, Budget and Space Committee (Biology). 1982-1984
Education Abroad Advisor (Biology). 1970-1991, 1997
Member, Building Committee (EEMB). 1998
Chair and Member, Resources Committee (EEMB). 1998-2001
Seminar Chairperson, Section of Aquatic and Population Biology. 1982.
Faculty Search Committees
Aquatic Ecologist (Biology) 1978-1980.
Plant Ecologist (Biology) 1981-1983.
Terrestrial Remote Sensing Geographer (Geography) 1993.
Ecosystem Ecologist (Biology) 1993-1994.
Earth System Scientist and Environmental Economist (ESM) 1995
Biogeochemist, Earth System Scientist, Applied Ecologist and Environmental Economist (ESM) 1996
Environmental Microbiologist (ESM). 1996-1997
Applied Ecologist (ESM) 1997-1998
Environmental Economist and Environmental Policy Analyst (ESM), 1998-2000
Corporate Environmental Management (ESM), 1999-2000

Ecosystem Ecologist (EEMB) 2000-2003
Freshwater Ecologist (EEMB) 2003-2004

Courses Taught:

Ecological Processes in Aquatic Environments (upper class course for Aquatic Biology majors), 1977- 2001.
Chemical and Physical Methods in Aquatic Environments (upper class lab), 1977-2000.
Biological Limnology (upper class and graduate course), 1978-1986.
Aquatic Biology (non-major course), 1986.
Tropical Ecology (upper class and graduate course), 1987-1996.
Stream Ecology (upper class and graduate course), 1993-1995.-2004
Graduate Seminar in Aquatic Biology, 1977-present.
Graduate Seminar in Environmental Science, 1996 - present.
Environmental Biogeochemistry (Masters of Environmental Science and Management course), 1997 - present

Supervision of Graduate Students (Chair or Co-Chair)

Petra H. Lenz, Ph.D 1982 (Research Scientist, University of Hawaii)
"Population studies on *Artemia* in Mono Lake, California" 230 p.

Stephen G. Njuguna, Ph.D. (Univ. of Nairobi) 1983 (University of Nairobi, Nairobi, Kenya)
"Nutrient - productivity relationships in tropical Naivasha basin lakes, Kenya" 300 p.

John L. Stoddard, Ph.D. 1986 (Research Scientist, EPA, Corvallis, Oregon)
"Nutritional status, microcrustacean communities and susceptibility to acid precipitation of high elevation lakes in the Sierra Nevada, California" 189 p.

Lance F.W. Lesack, Ph.D. 1988 (Professor, Simon Fraser University, British Columbia, Canada)
"Mass balance of nutrients, major solutes and water in an Amazon floodplain lake and its biogeochemical implications for the Amazon basin" 494 p.

Mark W. Williams, Ph.D. 1991 (Professor, University of Colorado Boulder)
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Osni de Sousa, Ph.D. 1998. (Research Scientist, EMBRAPA, Brazil; deceased)
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"The effects of natural and anthropogenic perturbations on stream primary producer communities in southern California " 249 p.

Darcie Goodman, 2002 - present: Ph.D.

Craig Nelson, 2002 - present: Ph.D.

Steve Sadro, 2005 – present: Ph.D.

Alexios Monopolis, 2006 – present: Ph.D.

Frank V. Setaro: M.A. 1983
"Responses of phytoplankton to experimental fertilization with nitrogen and phosphorus in an Amazon floodplain lake" 119 p.

Patricia Pinheiro, M.Sc.: (Fed. Univ. of Amazonas) 1985
"Estudio sazonal dos efeitos das adicoes de nutrientes sobre o crescimento do fitoplankton en um lago de varzeo (Lago Calado--Amazonia central)" 88 p.

Luis Rodrigues: M.A. 1986
Masters by course work.

James O. Sickman: M.A. 1991
"Planktonic primary productivity and responses of phytoplankton to acid and nutrient additions in Emerald Lake, Sierra Nevada, California" 143 p.

Suzanne Sippel: M.A. 1993
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Scott Coombs, M.Sc.: 2006.
"The impact of fire on hydrology and suspended sediment and nutrient export in southern California chaparral watersheds" 117 p.

Jana Carey, Mark de la Garza, Tyra Gebhard, Julie Harris and Gwen Heistand. Bren School MESM 1998
"Investigating the cumulative impacts of land use change on local wetland watersheds: Goleta and Devereux Sloughs, Santa Barbara County, California"

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"Offshore oil platform decommissioning: A comparative study of strategies and ecological, regulatory, political and economic issues involved in decommissioning planning" 123 p.

Dana L. Armanino, Jon A.G. Clemens, Chris H. Coburn, Noah P. Molotch, Stephanie A. Oakes and Jill K. Richardson. Bren School MESM 2000
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"Mammoth groundwater extraction: A hydrological analysis of potential recharge to an eastern Sierra Nevada watershed" 160 p.

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"Assessment of seawater desalination as a water supply strategy for San Diego County"

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Kristi Birney, Amber Griffin, Jonathan Gwiazda, Johnny Kefauver, Takehiko Nagai and Douglas Varchol. Bren School MESM 2006.
"Potential Deep-Sea Mining of Seafloor Sufides: A Case Study in Papua New Guinea"

Mike Rossiter, Maya Debner, Joanne Siew, Christy Ciarametaro and Drew Beckwith. Bren School MESM 2007.
"Evaluation of Rainfall-Runoff Relationships to Inform Development of an Incentive Program for Stormwater Pollution Reduction in South Coast Watersheds"

RESEARCH GRANTS (active grant in italics at top of each section)

1. **Tropical limnology and remote sensing of tropical wetlands**

Linking remote sensing of variations in inundation and aquatic vegetation with regional analyses of carbon dynamics in Amazon wetlands
NASA, 2006-2008, $424,800

Hydrologic modeling of the central Amazon basin using remotely sensed data
Ohio State Univ. (NASA), 2005-2007, $72,700.

Nutrient dynamics in Amazon lakes.
National Science Foundation, 1979-1981; $189,000.
Co-Principal Investigator with T.R. Fisher (Univ. of Maryland)

Nutrient supply and primary productivity in Amazon floodplain lakes.
National Science Foundation, 1981-1985; $549,000.
Co-Principal Investigator with T.R. Fisher (Univ. of Maryland)

Nutrient dynamics on the Amazon floodplain: rates of input and recycling.
National Science Foundation, 1985-1987; $190,000.
Co-Principal Investigator with T.R. Fisher (Univ. of Maryland)

Periphyton on the Amazon River's floodplain: biomass, productivity and nutrient exchanges.
National Science Foundation, 1987-1990; $750,000.
Co-Principal Investigator with T.R. Fisher (Univ. of Maryland)

Analysis of floodplain dynamics in the Amazon River basin and coastal Georgia using synthetic aperature radar (SIR-B experiment).
NASA - Land Processes Program, 1984-1989; $113,000.
Principal Investigator with D. Simonett (UCSB) as Co-PI.

Methane flux measurements during the Amazon Ground Emissions Experiment
NASA - Biospheric Research Program, 1985-1986; $100,000.
Co-Principal Investigator with R.C. Harris as PI. (NASA, Langley).

Biogenic gas emissions and source dynamics along the Amazon River floodplain.
NASA - Biospheric Research Program, 1987; $21,000.
Co-Principal Investigator with S. MacIntyre (UCSB).

Amazon floodplain habitats and methane emissions to the atmosphere: an application of Landsat TM imagery.
California Space Institute, 1987-88; $20,500.

Determining the extent of inundation on subtropical and tropical river floodplains beneath vegetation of varying types and densities. (SIR-C experiment).
NASA - Land Processes Program, 1989-1997; $750,000.

Regional Amazon Model: Synoptic scale hydrological and biogeochemical cycles
NASA, 1994-1996; $60,000
Co-investigator with J. Richey (Univ. of Washington) as PI.

Measuring inundation area in tropical wetlands using passive microwave data: a feasibility study.
California Space Institute, 1991-1992, $12,000.

Biogeochemistry of dissolved gases in the Pantanal wetland of Brazil.
NASA-Earth Science and Applications Division, 1991-1994, $360,000.

JERS Amazon Multi-season Mapping Study.
NASA, 1995-1998, $176,000

Multi-scale analysis of inundation with microwave and optical remote sensing in the Amazon Basin: applications to biogeochemical measurements and modeling
NASA, 1998 to 2002, $585,000

Applications and validation of the SRTM DEM in the Amazon.
NASA, 2000-2003, $400,000
Co-Principal Investigator with D. Alsdorf (UCSB) as PI

Linking vegetative cover and inundation in Amazon wetlands with regional analyses of carbon dynamics
NASA, 2003-2006, $791,000.

2. **Ecology of saline lake**

Limnology and plankton in Mono Lake, California.
Los Angeles Department of Water and Power,
1982 - 2008; $3,000,000 (in sequential increments)

Ecology of Mono Lake, California.
National Geographic Society, 1979-1982; $15,000.

Ecology of *Artemia* in Mono Lake, California.
Conservation Endowment Fund and Santa Clara Audubon Society, 1982;

$11,000.
Packard Foundation, 1983-1984; $20,000.

Analysis of aquatic ecology of Mono Lake.
California Dept. of Fish and Game, 1986-1987; $60,000.

Internation

al symposium on inland saline waters - a renewable resource.
National Science Foundation, 1985-1986; $7,600.

Applications of AVIRIS and HIRIS to lakes and reserviors.
NASA, 1989-1996; $550,000.

Responses of a saline lake to environmental change from seasonal to decadal time scales
National Science Foundation, 1995- 2000; $250,000

3. **Atmospheric deposition and limnology of mountain lakes**

Nutrient deposition and alteration of food web structure in high Sierran lakes: Response by microbial communities
California Water Resources Center, 2004-2007, $58,000

Responses of high elevation, aquatic ecosystems to interannual climate variability and trends in nutrient inputs
National Science Foundation, 2007-2012, $420,000

Assessment of acidity of lakes and precipitation in the Sierra Nevada, California.
California Water Resources Center, 1980-1982; $38,000.

Ecological impacts of acid precipitation in the Sierra Nevada, California.
California Water Resources Center, 1982-1984; $37,000.

Effects of atmospheric deposition on ecosystems of Sequoia National Park:
Ecological impacts on aquatic habitats.
U.S. Department of Interior, National Park Service,
1982-1988; $83,000

Long Valley Reservoir eutrophication evaluation.
Los Angeles Department of Water and Power, 1982; $6,000.

Chemical and biological survey of lakes and streams located in the Emerald Lake watershed (Sequoia National Park) of the Sierra Nevada.
California Air Resources Board, 1984-1986; $430,000.

Snow deposition, melt, runoff and chemistry in a small alpine watershed, Emerald Lake basin, Sequoia National Park.
California Air Resources Board, 1984-1987; $390,000.
Co-Principal Investigator with J. Dozier (UCSB) as PI.

Survey of sensitivity of southern California lakes to acid deposition.
California Air Resources Board, 1985-1986; $70,000.

The hydrologic mass balance component of the Emerald Lake basin integrated watershed study.
California Air Resources Board, 1985-1987 $200,000.
Co-Principal Investigator with J. Dracup (UCLA) as PI.

An integrated watershed study: an investigation of the biota in the Emerald Lake system (Sequoia National Park) and stream channel experiments.
California Air Resources Board, 1986-1987; $147,000

Characterization of year-round sensitivity of California's montane lakes to acid deposition.
California Air Resources Board, 1986-1988, $237,000.

Evaluation of methods for measurement of snow for chemical analysis.
California Air Resources Board, 1986-1989; $113,000.
Co-Principal Investigator with N. Berg (US Forest Service) as PI.

Snow melt, rain, runoff and chemistry in a Sierra Nevada watershed.
California Air Resources Board, 1987-1988; $365,000.
Co-Principal Investigator with J. Dozier (UCSB) as PI.

An integrated watershed study: biological and chemical characteristics of Emerald Lake and streams and their responses to acidic deposition.
California Air Resources Board, 1987-1988; $370,000.

Hydrology, hydrochemical modeling and remote sensing in seasonally snow-covered alpine drainage basins.
NASA - Earth Observing System, 1989-2000; $7,500,000.
Co-Principal Investigator with J. Dozier (UCSB) as PI.

Long-term studies of lakes and watersheds in the Sierra Nevada: patterns and processes of surface water acidification.
California Air Resources Board, 1989-1992; $400,000.

Effects of atmospheric deposition on the ecosystems of Sequoia and Kings Canyon National Park: ecological impact on aquatic habitats.
Cooperative Park Service, 1989-1992; $22,800.

Monitoring of wet deposition in alpine areas in the Sierra Nevada.
California Air Resources Board, 1989-1993; $470,000.

Hydrologic and biogeochemical response of alpine catchments to global change.
U.S. Geological Survey, 1990-1992; $166,000.

Watershed biogeochemical processes affecting surface water in the Sierra Nevada, with emphasis on snowmelt episodes.
California Air Resources Board, 1991-1994; $352,600.
Co-Principal Investigator with A. Brown (UCSB) as PI.

Comparative analyses of high-altitude lakes and catchments in the Sierra Nevada: susceptibility to acidification.
California Air Resources Board, 1991-1994, $525,500.

Assessing the potential impact of acid deposition on high altitude aquatic ecosystems in California: integrrating ten years of investigations.
California Air Resources Board, 1994-1996, $54,000

Restoration of riparian habitat and assessment of riparian corridor fencing and other watershed BMP on nutrient loading and eutrophication in Crowley Lake, CA.
Lahontan Regional Water Quality Control Board, 2000 –2002, $245,000

Arsenic sources and the feasibility of using nitrogen isotopes to determine nitrogen sources to Crowley Lake.
Lahontan Regional Water Quality Control Board, 2000-2003, $45,000

Microbial and hydrological controls of nitrogen losses from alpine and chaparral ecosystems during seasonal transitions
National Science Foundation, 2001-2006, $795,000

4. **Coastal California ecosystems**

LTER: Land/Ocean interactions and the dynamics of kelp forest communities.
National Science Foundation, 2007-2012, $4,800,000
Co-Principal Investigator with D. Reed (UCSB) as PI

Development of a stream monitoring program for Santa Rosa Island, Channel Islands National Park
National Park Service, 2005-2006, $30,000

Sustainable Fisheries.
Paul G Allen Charitable Foundation, 2006-2009, $5,000,000
Co-Principal Investigator with S. Gaines (UCSB) as PI

LTER: Land/Ocean interactions and the dynamics of kelp forest communities.
National Science Foundation, 2000-2006, $4,200,000
Co-Principal Investigator with D. Reed (UCSB) as PI

Western Center for Estuarine Ecosystem Indicator Research
UC Davis (NASA), 2001-2006, $200,000

Assessment of coastal water resources and watershed conditions in an adjacent to Channel Islands National Park and Cabrillo National Monument
California Cooperative Ecosystem Studies Unit – National Park Service, 2005-2006, $80,000

5. **Other**

Facilities improvements at the Sierra Nevada Aquatic Research Laboratory.
National Science Foundation, 1985-1986; $95,000.
Co-Principal Investigator with H. Offen (UCSB) as PI.

Experimental stream system at the Sierra Nevada Aquatic Research Laboratory
National Science Foundation, 1989-1991; $175,000.
Co-Principal Investigator with D. Dawson and S. Cooper.

Data base center at the Sierra Nevada Aquatic Research Laboratory.
National Science Foundation, 1996-1998; $100,000.
Co-Principal Investigator with D. Dawson and S. Cooper

Outdoor science education follow-up in the classroom.
Eastern Sierra Interpretive Association, 1997-2002; $4,700
Co-Principal Investigator with D. Dawson

Outdoor science education at Valentine Eastern Sierra Reserve.
US Department of Agriculture, 1997-1999: $17,000
Co-Principal Investigator with D. Dawson