Dr. Martha Sutula

Department Head
Biogechemistry Department
Southern California Coastal Water Research Project

Education

Ph.D., coastal oceanography, Louisiana State University, 1999

M.S., public health, Tulane University School of Public Health & Tropical Medicine, 1994

B.S., chemistry, Purdue University, 1987

Professional Experience

Department Head, Southern California Coastal Water Research Project. Costa Mesa, CA. 2010-present
Senior Scientist, Southern California Coastal Water Research Project. Costa Mesa, CA. 2001-2010
Post-doctoral Research Associate, Tulane University Institute of Earth and Ecosystem Sciences. New Orleans, LA. 1999-2001
Research Assistant, Louisiana State University Department of Oceanography and Coastal Sciences. Baton Rouge, LA. 1995-1999
Research Assistant, Tulane University School of Public Health and Tropical Medicine. New Orleans, LA. 1993-1994
Project Manager, U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics, Risk Management Division. Washington, D.C. 1991-1993

Honors and Awards

Sigma Xi Scientific Honor Society (1999)
Gulf Estuarine Research Society Conference-Best Student Paper Award (1998)
Vice-President, Marine Environmental Researchers, Louisiana State University (1996-1997)
Chancellor's Fellowship for Doctoral Studies, Louisiana State University (1995)
Phi Beta Kappa (1986)

Chemical Industrial Society of Illinois Scholarship (1986)
Chemical Industrial Society of Illinois Scholarship for Outstanding Junior In Chemistry (1986)
Dean’s List, Purdue University (1983-1987)

Professional Appointments

Associate Editor, Elementa, Ecology and Earth Systems Division

Science Program Co-Chair, Coastal and Estuarine Research Federation Conference, Richmond 2021

National Academy of Sciences, Everglades Restoration Evaluation

Science Advisory Panel, Southern California Wetland Recovery Project

Professional Societies and Certifications

American Society of Limnology and Oceanography
Coastal and Estuarine Research Federation
California Estuarine Research Society
Pacific Estuarine Research Society
Society of Wetland Scientists
American Geophysical Union

Journal Articles

Gillett, D.J., R.D. Mazor, M. Sutula, A. Holt. 2024. Reach-scale models show heterogeneity of stream benthic invertebrate responses to eutrophication stress. *Ecological Indicators* 160:111791.

Ho, M., F. Kessouri, C.A. Frieder, M. Sutula, D. Bianchi, J.C. McWilliams. 2023. Effect of ocean outfall discharge volume and dissolved inorganic nitrogen load on urban eutrophication outcomes in the Southern California Bight. *Scientific Reports* 13:22148.

McLaughlin, K., R.D. Mazor, M. Sutula, K.C. Schiff. 2023. Regional assessment of trash in Southern California coastal watersheds, United States. *Frontiers in Environmental Science* 11:1210201.

Sandoval-Belmar, M., J. Smith, A.R. Moreno, C. Anderson, R.M. Kudela, M. Sutula, F. Kessouri, D.A. Caron, F.P. Chavez, D. Bianchi. 2023. A cross-regional examination of patterns and

environmental drivers of Pseudo-nitzschia harmful algal blooms along the California coast. *Harmful Algae* 126:102435.

Moreno, A.R., C. Anderson, R.M. Kudela, M. Sutula, C. Edwards, D. Bianchi. 2022. Development, calibration, and evaluation of a model Pseudo-nitzschia and domoic acid production for regional ocean modeling studies. *Harmful Algae* 118:102296.

Frieder, C.A., C. Yan, M. Chamecki, D. Dauhajre, J.C. McWilliams, J. Infante, M.L. McPherson, R.M. Kudela, F. Kessouri, M. Sutula, I.B. Arzeno-Soltero, K.A. Davis. 2022. A Macroalgal Cultivation Modeling System (MACMODS): Evaluating the Role of Physical-Biological Coupling on Nutrients and Farm Yield. *Frontiers in Marine Science* DOI:10.3389/fmars.2022.752951.

Walker, J.B., D.J. Gillett, M. Sutula. 2022. Establishing biologically relevant sediment organic matter thresholds for estuaries and embayments of the Southern California Bight, USA. *Ecological Indicators* 143:1-12.

Mazor, R.D., M. Sutula, S. Theroux, M. Beck, P.R. Ode. 2022. Eutrophication thresholds associated with protection of biological integrity in California wadeable streams. *Ecological Indicators* 142:109180.

Elko, N., D. Foster, G. Kleinheinz, B. Raubenheimer, S. Brander, J. Kinzelman, J.P. Kritzer, D. Munroe, C. Storlazzi, M. Sutula, A. Mercer, S. Coffin, C. Fraioli, L. Ginger, E. Morrison, G. Parent-Doliner, C. Akan, A. Canestrelli, M. DiBenedetto, J. Lang, J. Simm. 2022. Human and ecosystem health in coastal systems. *Shore & Beach* 90:64-91.

Kessouri, F., K. McLaughlin, M. Sutula, D. Bianchi, M. Ho, J.C. McWilliams, L. Renault, J. Molemaker, C. Deutsch, A. Leinweber. 2021. Configuration and validation of an oceanic physical and biogeochemical model to investigate coastal eutrophication in the Southern California Bight. *Journal of Advances in Modeling Earth Systems* 13:e2020MS002296.

Bednarsek, N., R. Ambrose, P. Calosi, R.K. Childers, R.A. Feely, S.Y. Litvin, W.C. Long, J.I. Spicer, J. Strus, J. Taylor, F. Kessouri, M. Roethler, M. Sutula, S.B. Weisberg. 2021. Synthesis of Thresholds of Ocean Acidification Impacts on Decapods. *Frontiers in Marine Science* 8:651102.

McLaughlin, K., M.D.A. Howard, G. Robertson, C.D.A. Beck, M. Ho, F. Kessouri, N.P. Nezlin, M. Sutula, S.B. Weisberg. 2021. Influence of anthropogenic nutrient inputs on rates of coastal ocean nitrogen and carbon cycling in the Southern California Bight, United States. *Elementa: Science of the Anthropocene* 9:00145.

Sutula, M., M. Ho, A. Sengupta, F. Kessouri, K. McLaughlin, K. McCune, D. Bianchi. 2021. A baseline of terrestrial freshwater and nitrogen fluxes to the Southern California Bight, USA. *Marine Pollution Bulletin* DOI:10.1016/j.marpolbul.2021.112669 .

Kessouri, F., J.C. McWilliams, D. Bianchi, M. Sutula, L. Renault, C. Deutsch, R.A. Feely, K. McLaughlin, M. Ho, E.M. Howard, N. Bednarsek, P. Damien, J. Molemaker, S.B. Weisberg. 2021. Coastal eutrophication drives acidification, oxygen loss, and ecosystem change in a major oceanic upwelling system. *Proceedings of the National Academy of Sciences of the United States of America* DOI:10.1073/pnas.2018856118.

Bednarsek, N., P. Calosi, R.A. Feely, R.F. Ambrose, M. Byrne, K.Y. Chan, S. Dupont, J.L. Padilla-Gamino, J.I. Spicer, F. Kessouri, M. Roethler, M. Sutula, S.B. Weisberg. 2021. Synthesis of Thresholds of Ocean Acidification Impacts on Echinoderms. *Frontiers in Marine Science* DOI:10.3389/fmars.2021.602601.

Sutula, M., M. Ho, A. Sengupta, F. Kessouri, K. McLaughlin, K. McCune, D. Bianchi. 2021. Dataset of terrestrial fluxes of freshwater, nutrients, carbon, and iron to the Southern California Bight, U.S.A.. *Data in Brief* DOI:10.1016/j.dib.2021.106802.

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Paul, M.J., B. Jessup, L.R. Brown, J.L. Carter, M. Cantonati, D.F. Charles, J. Gerritsen, D.B. Herbst, R. Stancheva, J. Howard, B. Isham, R. Lowe, R.D. Mazor, P.K. Mendex, P.R. Ode, A. O'Dowd, J. Olson, Y. Pan, A.C. Rehn, S. Spaulding, M. Sutula, S. Theroux. 2020. Characterizing benthic macroinvertebrate and algal biological condition gradient models for California wadeable Streams, USA. *Ecological Indicators* DOI:10.1016/j.ecolind.2020.106618.

Howard, E.M., J.L. Penn, H. Frenzel, B.A. Seibel, D. Blanchi, L. Renault, F. Kessouri, M. Sutula, J.C. McWilliams, C. Deutsch. 2020. Climate-driven aerobic habitat loss in the California Current System. *Science Advances* DOI:10.1126/sciadv.aay3188 .

Beck, M., R.D. Mazor, S. Johnson, K. Wisenbaker, J. Westfall, P.R. Ode, R. Hill, C. Loflen, M. Sutula, E.D. Stein. 2019. Prioritizing Management Goals for Stream Biological Integrity Within the Developed Landscape Context. *Freshwater Science* DOI:10.1086/705996.

Bednarsek, N., R.A. Feely, E.L. Howes, B.P.V. Hunt, F. Kessouri, P. Leon, R. Lischka, A.E. Maas, K. McLaughlin, N.P. Nezlin, M. Sutula, S.B. Weisberg. 2019. Systematic Review and Meta-Analysis Toward Synthesis of Thresholds of Ocean Acidification Impacts on Calcifying Pteropods and Interactions With Warming. *Frontiers in Marine Science* 6:227.

Bittick, S.J., M. Sutula, P. Fong. 2018. A tale of two algal blooms: Negative and predictable effects of two common bloom-forming macroalgae on seagrass and epiphytes. *Marine Environmental Research* 140:1-9.

Sutula, M., R. Kudela, J.D. Hagy III, L.W. Harding Jr, D. Senn, J.E. Cloern, S. Bricker, G.M. Berg, M. Beck. 2017. Novel analyses of long-term data provide a scientific basis for chlorophyll-a thresholds in San Francisco Bay. *Estuarine, Coastal and Shelf Science* 197:107-118.

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Magrann, T., M.D.A. Howard, M. Sutula, D.S. Boskovic, W.K. Hayes, S.G. Dunbar. 2015. Screening Assessment of Cyanobacteria and Cyanotoxins in Southern California Lentic Habitats. *Macrothink Institute Environmental Management and Sustainable Development* 4:91-111.

Fetscher, A.E., M.D.A. Howard, R. Stancheva, R.M. Kudela, E.D. Stein, M. Sutula, L.B. Busse, R.G. Sheath. 2015. Wadeable streams as widespread sources of benthic cyanotoxins in California, USA. *Harmful Algae* 49:105-116.

Boehm, A.B., M.Z. Jacobson, M.J. O'Donnell, M. Sutula, W.W. Wakefield, S.B. Weisberg, E. Whiteman. 2015. Ocean acidification science needs for natural resource managers of the North American west coast. *Oceanography* 28:170-181.

Booth, J.A.T., C.B. Woodson, M. Sutula, F. Micheli, S.B. Weisberg, S.J. Bograd, A. Steele, J. Schoen, L.B. Crowder. 2014. Patterns and potential drivers of declining oxygen content along the Southern California coast. *Limnology and Oceanography* 59:1127-1138.

Sutula, M., L. Green, G. Cicchetti, N. Detenbeck, P. Fong. 2014. Thresholds of Adverse Effects of Macroalgal Abundance and Sediment Organic Matter on Benthic Habitat Quality in Estuarine Intertidal Flats. *Estuaries and Coasts* 37:1532-1548.

Howard, M.D.A., M. Sutula, D.A. Caron, Y. Chao, J.D. Farrara, H. Frenzel, B. Jones, G. Robertson, K. McLaughlin, A. Sengupta. 2014. Anthropogenic nutrient sources rival natural sources on small scales in the coastal waters of the Southern California Bight. *Limnology and Oceanography* 59:285-297.

McLaughlin, K., M. Sutula, L. Busse, S. Anderson, J. Crooks, R. Dagit, D. Gibson, K. Johnston, L. Stratton. 2014. A regional survey of the extent and magnitude of eutrophication in Mediterranean estuaries of Southern California, USA. *Estuaries and Coasts* 37:259-278.

Green, L., P. Fong, M. Sutula. 2014. How much is too much? Identifying benchmarks of adverse effects of macroalgae on the macrofauna in intertidal flats. *Ecological Applications* 24:300-314.

Solek, C.W., M. Sutula, E.D. Stein, C. Roberts, R. Clark, K. O'Connor, K.J. Ritter. 2012. Determining the health of California's coastal salt marshes using rapid assessment. *Wetland Science and Practice* 29:8-28.

Nezlin, N.P., M. Sutula, R.P. Stumpf, A. Sengupta. 2012. Phytoplankton blooms detected by SeaWiFS along the central and southern California coast. *Journal of Geophysical Research* 117:C07004.

Solek, C.W., E.D. Stein, M. Sutula. 2011. Demonstration of an integrated watershed assessment using a three-tiered assessment framework. *Wetlands Ecology and Management* 19:459-474.

Brown, J.S., M. Sutula, C. Stransky, J. Rudolph, E. Byron. 2010. Sediment contaminant chemistry and toxicity of freshwater in urban wetlands in southern California. *Journal of the American Water Resources Association* 46:367-384.

Fetscher, A.E., M. Sutula, J.C. Callaway, V.T. Parker, M.C. Vasey, J.N. Collins, W.G. Nelson. 2010. Patterns in estuarine vegetation communities in two regions of California: Insights from a probabilistic survey. *Wetlands* 30:833-846.

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Sutula, M., E.D. Stein, J.N. Collins, A.E. Fetscher, R. Clark. 2006. A practical guide for the development of a wetland assessment method: the California experience. *Journal of the American Water Resources Association* 42:157-175.

Sanders, B.F., F. Arega, M. Sutula. 2005. Modeling the dry-weather tidal cycling of fecal indicator bacteria in surface waters of an intertidal wetland. *Water Research* 39:3394-3408.

Schiff, K.C., M. Sutula. 2004. Organophosphorus Pesticides in Storm-Water Runoff from Southern California (USA). *Setac Press* 23:1815-1821.

Sutula, M., T. Bianchi, and B. McKee. 2004. Effect of seasonal sediment storage and diagenesis in the lower Mississippi River on bio-availability of particulate phosphorus flux to Gulf of Mexico. Limnology and Oceanography 49:2223-2235.

Schiff, K. and M. Sutula. 2004. Organophosphorus pesticides in stormwater runoff from Southern California watersheds. Water Resources Management 23:1815-1821

Sutula, M., B. Perez, E. Reyes, J.W. Day Jr., and D. Childers. 2003. Spatio-temporal variability in material exchange between the Southeastern Everglades Wetlands and Florida Bay. Estuarine, Coastal, and Shelf Science 57:757-781.

Mitra, S., T. Bianchi, B. McKee, and M. Sutula. 2002. Black Carbon in the Mississippi River: Quantities and Sources. Environmental Science and Technology 11:2296-2302.

Sutula, M., J. Day, and J. Cable. 2001. Hydrological and nutrient budgets of freshwater and estuarine wetlands of Taylor Slough in Southern Everglades, Florida (USA). Biogeochemistry 56:287-310.

Book Chapters

Reed, D.J., C. Brown, A.D. Steinman, M. Sutula, D.H. Wardrop. 2022. Restoration in the Context of Climate Change. in: D.H. Wardrop, W.G. Boggess, C. Brown, C.B. Burke, P.M. Dixon, C.T. Driscoll, K.R. Reddy, D.J. Reed, A.D. Steinman, M. Sutula, J.R. Walters (eds.), *Progress Toward Restoring the Everglades: The Ninth Biennial Review—2022* pp. 137-168. National Academies of Sciences, Engineering and Medicine. Washington, D.C..

Cloern, J.E., P.J. Barnard, E. Beller, J.C. Callaway, L. Grenier, E.D. Grosholz, R. Grossinger, K. Hieb, J.T. Hollibaugh, N. Knowles, M. Sutula, S. Veloz, K. Wasson, A. Whipple. 2016. Estuaries: Life on the edge. in: H. Mooney, E. Zavaleta (eds.), *Ecosystems of California* pp. 133-137. University of California Press. Berkeley, CA.

Day, J., F. Sklar, J. Cable, D. Childers, C. Coronado-Molina, S. Davis, S. Kelly, C. Madden, B. Perez, E. Reyez, D. Rudnick, M. Sutula. 2013. The salinity transition zone between the Southern Everglades and Florida Bay. in: J.W. Day, A. Yanez-Arancibia (eds.), *Gulf of Mexico: Origin, Waters, and Biota - Volume 4: Ecosystem-Based Management* pp. 1-24. Texas A&M University Press. College Station, TX.

Collis, H., J. Cable, M. Sutula. 2006. Evaluating Sediment Depositional Patterns Using Be-7 in Upper Newport Estuary, California. in: V.P. Singh, Y.H. Xu (eds.), *Coastal Hydrology and Processes* pp. 369-382. Water Resources Publications. Lone Tree, CO.

Technical Reports

Sutula, M., J. Butcher, S. Sarkar, S. Roy. 2022. Science Supporting Decisions on Management of Eutrophication in Elkhorn Slough Estuary. Technical Report 1259. Southern California Coastal Water Research Project. Costa Mesa, CA.

Sutula, M., J. Butcher, M. Schmidt, C. Boschen, R.D. Mazor, D.J. Gillett, K.T. Taniguchi-Quan, K. Irving, D. Shultz. 2022. Science Supporting Decisions on Biostimulatory Targets and Management of Eutrophication in the Main Stem of the Santa Margarita River Watershed. Technical Report 1185. Southern California Coastal Water Research Project. Costa Mesa, CA.

Smith, J., M. Sutula, K. Bourma-Gregson, M. Van Dyke. 2021. California Water Boards' Framework and Strategy for Freshwater Harmful Algal Bloom Monitoring: Full Report with Appendices. Technical Report 1141.B. California State Water Resources Control Board. Sacramento, CA.

Smith, J., M. Sutula, K. Bourma-Gregson, M. Van Dyke. 2021. California Water Boards' Framework and Strategy for Freshwater Harmful Algal Bloom Monitoring: Executive Synthesis. Technical Report 1141.A. California State Water Resources Control Board. Sacramento, CA.

Driscoll, C.T., W.G. Boggess, C. Brown, R.K. Craig, T. Dunne, M.S. Fennessy, J.W. Jawitz, E.A. Meselhe, D.J. Reed, J. Saiers, E.P. Smith, M. Sutula, J.R. Walters, D.H. Wardrop. 2021. Progress Toward Restoring the Everglades: The Eighth Biennial Review - 2020. Technical Report 1198. National Academies of Sciences, Engineering, and Medicine. Washington, DC.

Lowe, J., E.D. Stein, E. Beller, J. Collins, M. Cooper, J. Crooks, H. Dennis, C. Doughty, G. Gauthier, J. Gonzalez, K. Kalchmayr, S. Kelly, K. McKnight, A. Richey, A. Robinson, E. Sloane, M. Sutula, C. Whitcraft. 2018. Wetlands on the Edge: The Future of Southern California's Wetlands: Regional Strategy 2018. Technical Report 1055. California State Coastal Conservancy. Oakland, CA.

Sutula, M., D. Senn. 2017. Scientific Basis to Assess the Effects of Nutrients on San Francisco Bay Beneficial Uses. Technical Report 864. Southern California Coastal Water Research Project. Costa Mesa, CA.

Aminzadeh, S., M. Armsby, N. Bednarsek, J. Bishop, A. Boehm, C. Braby, F. Chan, R. Dunbar, R. Feely, B. Gaylord, L. Jewett, C. Krembs, K. Kroeker, R. Labiosa, T. Maloney, J. Phillips, B. Rappoli, M. Sakashita, D. Sivas, G. Somero, M. Sutula, D. Thomas, G. Waldbusser, S.B. Weisberg. 2016. Ocean Acidification: Setting Water Quality Goals. Technical Report 961. Stanford University. Stanford, CA.

Sutula, M., D.J. Gillett, A. Jones. 2016. Status of Eutrophication in San Elijo Lagoon and its Relevance for Restoration. Technical Report 938. Southern California Coastal Water Research Project. Costa Mesa, CA.

Boehm, A., F. Chan, J. Barth, E. Chornesky, A. Dickson, R. Feely, B. Hales, T. Hill, G. Hofmann, D. Ianson, T. Klinger, J. Largier, J. Newton, T. Pedersen, G. Somero, M. Sutula, W. Wakefield, G. Waldbusser, S.B. Weisberg, E. Whiteman. 2016. The West Coast Ocean Acidification and Hypoxia Science Panel: Major Findings, Recommendations, and Actions. Technical Report 926. California Ocean Science Trust. Oakland, CA.

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Moore, S.L., M. Sutula, T.V. Bitner, G. Lattin, K.C. Schiff. 2016. Southern California Bight 2013 Regional Monitoring Program: Volume III. Trash and Marine Debris. Technical Report 928. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

Tiefenthaler, L.L., M. Sutula, Y. Cao, J.F. Griffith, M.R. Raith, C. Beck, R. Christoph, J. Shrake. 2015. Wet and Dry Weather Natural Background Concentrations of Fecal Indicator Bacteria in San Diego, Orange, and Ventura County, California Streams. Technical Report 862. Southern California Coastal Water Research Project. Costa Mesa, CA.

Tiefenthaler, L.L., M. Sutula, Y. Cao, J.F. Griffith, M.R. Raith, C. Beck, R. Christoph, J. Shrake. 2015. Wet and Dry Weather Natural Background Concentrations of Fecal Indicator Bacteria in San Diego, Orange, and Ventura County, California Streams (Appendix A). Technical Report 862.A. Southern California Coastal Water Research Project. Costa Mesa, CA.

Tiefenthaler, L.L., M. Sutula, Y. Cao, J.F. Griffith, M.R. Raith, C. Beck, R. Christoph, J. Shrake. 2015. Wet and Dry Weather Natural Background Concentrations of Fecal Indicator Bacteria in San Diego, Orange, and Ventura County, California Streams (Appendix B). Technical Report 862.B. Southern California Coastal Water Research Project. Costa Mesa, CA.

Tiefenthaler, L.L., M. Sutula, Y. Cao, J.F. Griffith, M.R. Raith, C. Beck, R. Christoph, J. Shrake. 2015. Wet and Dry Weather Natural Background Concentrations of Fecal Indicator Bacteria in San Diego, Orange, and Ventura County, California Streams (Appendix C). Technical Report 862.C. Southern California Coastal Water Research Project. Costa Mesa, CA.

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Berg, M., M. Sutula. 2015. Factors Affecting Growth of Cyanobacteria With Special Emphasis on the Sacramento-San Joaquin Delta. Technical Report 869. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

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Sutula, M., M.D.A. Howard, L. Crowder, S. McAfee. 2014. Modeling in Support of Management of Coastal Hypoxia and Acidification in the California Current Ecosystem. Technical Report 829. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

Bailey, H., C. Curran, S. Poucher, M. Sutula. 2014. Science Supporting Dissolved Oxygen Objectives for Suisun Marsh. Technical Report 830. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

McLaughlin, K., M. Sutula. 2014. Estimating Wet and Dry Deposition of Nitrogen to Southern California Streams. Technical Report 837. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

Wang, P.F., M. Sutula, B. Chadwick, W. Choi. 2013. Watershed Loading, Hydrodynamic, and Water Quality Modeling in Support of the Loma Alta Slough Bacteria and Nutrient TMDL. Technical Report 666. Southern California Coastal Water Research Project. Costa Mesa, CA.

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Sutula, M., H. Bailey, S. Poucher. 2013. Science Supporting Dissolved Oxygen Objectives in California Estuaries. Technical Report 684. Southern California Coastal Water Research Project. Costa Mesa, CA.

Howard, M.D.A., G. Robertson, M. Sutula, B.H. Jones, N.P. Nezlin, Y. Chao, H. Frenzel, M.J. Mengel, D.A. Caron, B. Seegers, A. Sengupta, E. Seubert, D.W. Diehl, S.B. Weisberg. 2013. Southern California Bight 2008 Regional Monitoring Program: VII. Water Quality. Technical Report 710. Southern California Coastal Water Research Project. Costa Mesa, CA.

Howard, M.D.A., G. Robertson, M. Sutula, B.H. Jones, N.P. Nezlin, Y. Chao, H. Frenzel, M.J. Mengel, D.A. Caron, B. Seegers, A. Sengupta, E. Seubert, D.W. Diehl, S.B. Weisberg. 2013. Southern California Bight 2008 Regional Monitoring Program: VII. Water Quality (Appendix A). Technical Report 710.A. Southern California Coastal Water Research Project. Costa Mesa, CA.

Howard, M.D.A., G. Robertson, M. Sutula, B.H. Jones, N.P. Nezlin, Y. Chao, H. Frenzel, M.J. Mengel, D.A. Caron, B. Seegers, A. Sengupta, E. Seubert, D.W. Diehl, S.B. Weisberg. 2013. Southern California Bight 2008 Regional Monitoring Program: VII. Water Quality (Appendix B). Technical Report 710.B. Southern California Coastal Water Research Project. Costa Mesa, CA.

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