Minna Ho

Scientist
Biogechemistry Department
Southern California Coastal Water Research Project

Education

Ph.D., atmospheric and ocean sciences, University of California, Los Angeles. In progress.

M.S., civil engineering, University of California, Los Angeles. 2019

B.S., mathematics/atmospheric and oceanic sciences Interdepartmental Program, University of California, Los Angeles. Minor, environmental engineering. 2017

Professional Experience

Scientist, Southern California Coastal Water Research, CA. 2020-present

Senior Research Technician, Southern California Coastal Water Research, CA. 2019-2020

Research Technician, Southern California Coastal Water Research, CA. 2018-2019

Laboratory Assistant, Southern California Coastal Water Research, CA. 2017-2018

Staff Research Associate, James C. McWilliams Laboratory, University of California, Los Angeles, CA. 2017-2018

Research Assistant, Richard F. Ambrose Laboratory, University of California, Los Angeles, CA. 2015-2017

Computer Applications

Python, Linux, High-performance Computing, Cloud Computing, GitHub, Regional Ocean Modeling System (ROMS)

Selected Presentations and Conference Proceedings

Ho, M. Molemaker, P. Damien, M. Long, D. Bianchi, and J. McWilliams. Ocean alkalinity enhancement in an estuary. Eastern Pacific Ocean Conference. September 21-24, 2025. Fallen Leaf, CA.

Ho, B. Vanderplow, M. Lalime, T. Vance, P. Tripp, and J. Ducker. The Future of Modeling is in the Cloud: Improving the Coastal Modeling Cloud Sandbox for Enhanced Forecasting and Accessibility. The William M. Lapenta - NOAA Student Internship Program Presentations. August 7-8, 2025. Silver Spring, MD.

Ho, M. Molemaker, P. Damien, M. Long, D. Bianchi, and J. McWilliams. Ocean alkalinity enhancement in an estuary. California Estuarine Research Society. April 10-11, 2025. Costa Mesa, CA.

Ho, M. Molemaker, and J. McWilliams. Effects of coastal ocean dynamics on buoyant plumes. California Geophysical Fluid Dynamics Conference. September 4-5, 2024. Stanford, CA.

Ho, F. Kessouri, M. Sutula, C.A. Frieder, D. Bianchi, and J. McWilliams. Using coastal modeling to predict how wastewater recycling and nitrogen management actions impact coastal acidification and hypoxia. Ocean Sciences Meeting. February 18-23, 2024. New Orleans, LA.

Ho, F. Kessouri, M. Sutula, C.A. Frieder, D. Bianchi, and J. McWilliams. Ocean modeling as a decision support tool to manage eutrophication. Southern California Coastal Water Research Project Symposium. May 24, 2023. Costa Mesa, CA.

M. Ho, F. Kessouri, M. Sutula, C. Frieder, D. Bianchi, and J. McWilliams. Using coastal modeling to predict how wastewater recycling and nitrogen management actions impact coastal acidification and hypoxia. Ocean Sciences Meeting. Feb 24 - Mar 4, 2022. Virtual.

M. Ho, F. Kessouri, M. Sutula, D. Bianchi, and J. McWilliams. Can potable-use wastewater recycling and nitrogen management reduce acidification and oxygen loss in Southern California? Conference of the Coastal and Estuarine Research Federation. Nov 1-11, 2021. Virtual.

M. Ho, F. Kessouri, M. Sutula, J. McWilliams. Applying Particle Tracking Modeling in Wastewater Plumes to Support Monitoring Programs. CalCOFI Conference. Dec 1-2, 2020. Virtual.

M. Ho, F. Kessouri, D. Bianchi, J. McWilliams, M. Molemaker, T. Gallien and G. Robertson. Impact of water recycling on wastewater effluent plumes in drought-stricken regions in ocean acidification and hypoxia contexts. Ocean Sciences Meeting. February 16-21, 2020. San Diego,

CA.

M. Ho, F. Kessouri, M. Sutula, J. McWilliams, D. Bianchi, T. Gallien, G. Robertson, J. Molemaker. 2019. High resolution numerical ocean outfall plume modeling in the southern California bight. Conference of the Coastal and Estuarine Research Federation. Nov 3-7, 2019. Mobile, AL.

M. Ho, 2019. Modeling and validation of coastal wastewater effluent plumes using high-resolution nonhydrostatic regional ocean modeling system. M.S. Thesis, University of California, Los Angeles. Los Angeles, CA.

Journal Articles

Kessouri, F., M. Sutula, J. Smith, J. McWilliams, M. Sandoval-Belmar, D. Bianchi, P. Damien, M. Ho, R. Kudela, C. Anderson. 2026. Anthropogenic, climate, and meso and submesoscale influences on diatom productivity in the Southern California Bight, with implications for domoic acid producing harmful algal blooms. *Frontiers in Marine Science* 13:1729816.

Ho, M., J. Molemaker, P. Damien, M.C. Long, D. Bianchi, J.C. McWilliams. 2026. Ocean alkalinity enhancement in an estuary. *Frontiers in Climate* 7:1665329.

Sandoval-Belmar, M., F. Kessouri, J. Smith, A.R. Moreno, C. Anderson, R.M. Kudela, M. Sutula, M. Ho, P. Damien, C. Benitez-Nelson, J.C. McWilliams, D. Bianchi. 2026. Urban eutrophication enhances domoic acid production by Pseudo-nitzschia in the Southern California Bight. *Harmful Algae* 151:103023.

Frieder, C.A., F. Kessouri, M. Ho, M. Sutula, D. Bianchi, J.C. McWilliams, C. Deutsch, E. Howard. 2024. Effects of urban eutrophication on pelagic habitat capacity in the Southern California Bight. *Frontiers in Marine Science* 11:1392671.

Kessouri, F., M. Sutula, D. Bianchi, M. Ho, P. Damien, J.C. McWilliams, C.A. Frieder, L. Renault, H. Frenzel, K. McLaughlin, C. Deutsch. 2024. Cross-shore transport and eddies promote large scale response to urban eutrophication. *Scientific Reports* 14:7240.

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.

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.

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 .

Ho, M., J.M. Molemaker, F. Kessouri, J.C. McWilliams, T.W. Gallien. 2021. High-Resolution Nonhydrostatic Outfall Plume Modeling: Cross-Flow Validation. *Journal of Hydraulic Engineering* DOI:10.1061/(ASCE)HY.1943-7900.0001896.

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.

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.

Winfrey, B.K., M. Ho, W. Wang, Y.J. Li, R.F. Ambrose. 2020. Design aspects and plant species affect pollutant removal in Southern California stormwater biofilters. *Blue-Green Systems* DOI:10.2166/bgs.2020.012.

Technical Reports

Sutula, M., F. Kessouri, M. Ho, C.A. Frieder. 2026. Numerical Simulation of Potential Eutrophication Effects of Oil and Gas Produced Water Discharges on the Southern California Bight. Technical Report 1446. Southern California Coastal Water Research Project. Costa Mesa, CA.

Sutula, M., D. Senn, L. Fono, M. Ho, F. Karimpour, F. Kessouri, A. King, A. Latker, P. Markle. 2021. Approaches to Quantifying Uncertainty in Coastal Eutrophication Numerical Modeling: A Workshop Summary. Technical Report . Southern California Coastal Water Research Project. Costa Mesa, CA.