

LISAMARIE WINDHAM-MYERS

Research Ecologist

Earth Systems Processes Division, Water Resources Mission Area

Website: <https://www.usgs.gov/staff-profiles/lisamarie-windham-myers>, [Google Scholar](#)
(<https://scholar.google.com/citations?user=sCfsoAYAAAAJ&hl=en>)

Background:

As an aquatic ecosystem ecologist, I lead research on multi-scale integration of biota, hydrologic flows, and terrestrial influences on carbon, nutrient and trace metal biogeochemistry. My work is collaborative and transdisciplinary by design, with a focus on global changes to terrestrial-aquatic interfaces, a critical and underrepresented component in assessing landscape-scale biogeochemical responses to management actions.

Education:

Ph.D.	Rutgers, The State University of New Jersey	(Ecology)	1999
M.S.	Rutgers, The State University of New Jersey	(Geography)	1995
B.A.	University of California, Los Angeles	(Environmental Engineering)	1991

Research and Professional Experience:

Research Ecologist (National Research Program)		2004-present
Water Mission Area, United States Geological Survey, Menlo Park, CA		
Lecturer, Coastal Wetlands (EARTHSYS 108/208)		2006-2014
Earth Systems Program, School of Earth Sciences, Stanford University, CA		
Assistant Professor		2000-2004
Department of Earth and Environmental Sciences, Lehigh University, Bethlehem, PA		
Sabbatical - Visiting Scholar		2003
Department of Geological and Earth Sciences, Stanford University, Stanford, CA		
Post-doctoral Fellow		1998-2000
Department of Biological Sciences, Rutgers University, Newark, NJ		
NOAA NERR Fellow / NASA Global Change Fellow		1995-1998
Department of Ecology and Evolution, Rutgers University, New Brunswick, NJ		
Geographic Information System Coordinator (part-time)		1992-1999
Natural Heritage Program, New Jersey Department of Environmental Protection		
Remote Sensing Scientist (Hyperspectral)		1989-1992
Airborne Sensor Facility, NASA/Ames Research Center, Moffett Field, CA		

Current Projects (FY23):

Co-PI: NASA Carbon Monitoring System An Alkalinity and Inorganic Blue Carbon Monitoring System: Crediting Wetland-to-Ocean Lateral Fluxes in Carbon Markets and Inventories. Lead PI: USGS K. Kroeger (2022-2025)

Lead PI: DOE PNNL/EMSL (Environmental and Molecular Science Laboratories) Exploratory Research Pore-scale evidence of tidal wetland soil organic carbon stability (2022-2023)

USGS: Water Mission Area (Lead, Water Availability Impacts of Extreme Events: Hurricanes; Partner, Ecoflows /Amphibian Research and Monitoring Initiative (ARMI); Project Lead, Saline Lakes / Great Basin Integrated Water Assessment; OPEN-ET Validation team); Past: LandCarbon (Co-Lead, CONUS Wetland Assessment)

Co-PI: DOE Environmental Systems Science Program - High-frequency Data Integration for Landscape Model Calibration of Carbon Fluxes Across Diverse Tidal Marshes (2021-2024, Lead PI: Patty Oikawa, CSU East Bay)

Co-PI: NASA Carbon Monitoring Systems – (Blue Carbon Monitoring System II) Data-Model Integration for Monitoring and Forecasting Coastal Wetland Carbon Exchanges: Serving Local to National Greenhouse Gas Inventories (2019-2024, Lead PI: J. Holmquist, Smithsonian Environmental Research Center)

Co-PI: California Dept. of Fish and Wildlife Ecosystem Restoration Program: High Resolution Temporal and Spatial Mapping of Mercury in San Francisco Bay-Delta Waters (2019-2023, Lead PI: Erin Hestir, UC Merced)

Recent Projects (FY18-22):

Co-PI: USGS-USFWS Puget Sound, WA: Assessing Carbon Storage and Wildlife Benefits from Restored Coastal Wetlands in the Nisqually River Delta (2014-2019), PNW Ecosystem Service Modeling (2019-2022)

Co-PI: USGS-Global Carbon Project Powell Center: Wetland fluxnet synthesis for methane: (2019-2021)
<https://powellcenter.usgs.gov/view-project/5b1703d0e4b092d9651fcc8c>

Steering Committee, Coastal Carbon Research Coordination Network | Smithsonian Environmental Research Center (si.edu) (<https://serc.si.edu/coastalcarbon>), SBCGLOBAL <http://water.usgs.gov/nrp/blue-carbon/sbc/> (2016-2019; ongoing advisor)

PI: NASA Carbon Monitoring Systems – (Blue Carbon Monitoring System I) Linking Satellite and Soil Data to Validate Coastal Wetland "Blue Carbon" Inventories: upscaled support for developing MRV and REDD+ protocols (2014-2018); 2014-continuing contributor NASA CMS Science Team

Co-PI: California Rice Research Board – Mercury in California Rice Systems (with UC Davis; 2014-2019)

Professional and Public Outreach (selected contributions since 2018)

Department of Interior: 2023 Workgroups for ELT, CEQ and OMB on Nature Based Solutions (NBS, *Prioritize Evidence Building through Research, Innovation, Knowledge, and Adaptive Learning*), and Greenhouse Gas

Measurement Monitoring, Reporting and Verification (GHG MMRV), Ecohydrology Steering Committee

Organizer, Blue Carbon, US Global Change Research Program Carbon Cycle Interagency Working Group

Chair, North American Carbon Program 7th Biennial PI Meeting Planning Committee (NACP 2020, since 2017)

Co-PI, Second Regional Carbon Cycle Assessment and Processes (RECCAP-2)

<https://www.globalcarbonproject.org/reccap/>

Co-Convener, American Geophysical Union Fall Meeting (2014-23): Coastal Wetland Carbon: Recent Advances in Measurements, Modeling, Syntheses <https://agu.confex.com/agu/fm18/preliminaryview.cgi/Session45979>

Co-Convener, Goldschmidt Conference 2018: Controls on the Recalcitrance of Soil Organic Matter Across Diverse Environmental Conditions and Perturbations <https://goldschmidt.info/2018/program/programViewThemes>

U.S. Representative, Tri-National Blue Carbon Program, Commission for Environmental Cooperation

www.cec.org (2014-2019)

U.S. IPCC, expert reviewer for National Greenhouse Gas Inventory Wetland Supplement (2011-current)

Editor: Associate Editor (2014-2018), Wetlands (Society of Wetland Scientists)

Guest Editor, Environmental Research Letters Focus Issue on Carbon Monitoring Systems (2018-2021)

Panelist: Association of State Wetland Managers [Wetlands and Climate Change](#) (2021), CA Delta Science Council [Adapting Restoration for a Changing Climate](#) (2022), Canadian Limnology Seminar (2022), etc.

Invited Public Outreach: **Association of State Wetland Managers State/Tribal/Federal Coordination Annual Meeting.** Wetlands and Climate Change; **California Council on Science and Technology.** Host, Blue Carbon Sequestration along California's Coast; **National Academies of Sciences, Engineering, and Medicine.** Coastal Blue Carbon Approaches for Carbon Dioxide Removal and Reliable Sequestration; **Arizona State University Global Institute of Sustainability.** Blue Carbon: Can coastal wetlands help combat climate change? **KQED Quest Program.** California's Deadlocked Delta: Is carbon farming the future? **Stanford Global Climate and Energy Program Workshop.** Energy Supply with Negative Carbon Emissions. Wetland restoration for negative emissions.

Scientific Workgroups: Ocean Carbon and Biogeochemistry Lateral Flux, Global Carbon Project (Wetland Mapping, Wetland Methane), Pacific Northwest Blue Carbon Steering Committee, US Blue Carbon National Working Group, Elkhorn Slough Restoration Review, SFEI Blue Carbon Solutions,

Review: **Research Proposals:** DOE EMSL, NOAA NERR, DOE-SPRUCE, DOE-COMPASS, NSF-MRI,

Journal Peer Review: Nature (Geoscience, Communications, Scientific Reports), Science, Estuaries and Coasts, Environmental Research Letters, Environmental Science and Technology, J. Biogeochemical Research (Biogeosci, Oceans), Biogeochemistry, Wetlands, Frontiers in (Ecol and Evol, Env. Science), etc

Training provided: Tableau Software, Leica GS18T RTK-GNSS, High Frequency Field Data Collection/Validation

Advisees (2013-): 5 postdoctoral scientists, 4 Ph.D theses, 4 M.S. theses, 4 B.S. theses, 5 Volunteers (1 international)

Peer Reviewed Publications (n= 104, 5 in review)

Weis, J. and **L. Windham-Myers.** (accepted). Chapter 6: [Environmental Disturbances and Restoration of Salt Marshes](#), Treatise on Estuarine and Coastal Science, 2nd Edition. CRC Press.

Defne, Z., N. Ganju, **L. Windham-Myers**, J. Holmquist, K. Byrd, V. Woltz, C. Stagg, B. Couvillion. 2023. U.S. Coastal Wetland Geospatial Collection (2023) <https://geonarrative.usgs.gov/uscoastalwetlandsynthesis/>

Zhang, Z., **L. Windham-Myers** and 25 others (accepted). Zhang, Z., S. Bansal, K. Chang, E. Fluet-Chouinard, K. Delwiche, M. Goeckede, A. Gustafson, S. H. Knox, A. Leppänen, L. Lieu, J. Liu, A. Malhotra, T. Markkanen, G. McNicol, J. R. Melton, P.A Miller, C. Peng, M. Raivonen, W. J. Riley, O. Sonnentag, T. Aalto, R. Vargas, W. Zhang,

- Q. Zhu, Q. Zhu, Q. Zhuang, **L. Windham-Myers**, R.B. Jackson, and B. Poulter. (2023) Characterizing performance of freshwater wetland methane models at FLUXNET-CH4 sites using wavelet analyses. Preprint available: <https://www.authorea.com/doi/full/10.1002/essoar.10512704.1>
- Windham-Myers, L.** 2023. *Blue Carbon in a Changing Climate and a Changing Context*. In (Kennish, M.J., Paerl, H.W. and Crosswell, J.R. eds.) *Climate Change and Estuaries*. CRC Press. ISBN 9781003126096 (<https://www.taylorfrancis.com/chapters/edit/10.1201/9781003126096-12/blue-carbon-changing-climate-changing-context-lisamarie-windham-myers>)
- McNicol, G, E. Fluët-Chouinard, Z. Ouyang, S. Knox, Z. Zhang, T. Aalto, S. Bansal, K. Chang, M. Chen, K. Delwiche, S. Feron, M. Goeckede, J. Liu, A. Malhotra, J.R. Melton, W. Riley, R. Vargas, K. Yuan, Qing Ying, Qing Zhu, P. Alekseychik, M. Aurela, D.P. Billesbach, D.I. Campbell, J. Chen, H. Chu, A. R. Desai, A. Euskirchen, J. Goodrich, T. Griffis, M. Helbig, T. Hirano, H. Iwata, G. Jurasinski, J. King, F. Koebisch, R. Kolka, K. Krauss, A. Lohila, I. Mammarella, M. Nilson, A. Noormets, W. Oechel, M. Peichl, T. Sachs, A. Sakabe, C. Schulze, O. Sonnentag, R. C. Sullivan, E. Tuittila, M. Ueyama, T. Vesala, E. Ward, C. Wille, G. Xhuan Wong, D. Zona, **L. Windham-Myers**, Benjamin Poulter, Robert B. Jackson. (2023) Upscaling wetland methane emissions from the FLUXNET-CH4 eddy covariance network (UpCH4 v1.0): Model development, network assessment, and budget comparison. (AGU Advances). <http://doi.org/10.1029/2023AV000956>
- Russell, S.J., **Windham-Myers, L.**, Stuart-Haëntjens, E.J., Bergamaschi, B.A., Anderson, F., Oikawa, P. and Knox, S.H., 2023. Increased salinity decreases annual gross primary productivity at a Northern California brackish tidal marsh. *Environmental Research Letters*, 18(3), p.034045. <https://iopscience.iop.org/article/10.1088/1748-9326/acbbdf/pdf>
- Ueyama, M., Knox, S.H., Delwiche, K.B., Bansal, S., Riley, W.J., Baldocchi, D., Hirano, T., McNicol, G., Schafer, K., **Windham-Myers, L.** and Poulter, B., 2023. Modeled production, oxidation, and transport processes of wetland methane emissions in temperate, boreal, and Arctic regions. *Global Change Biology*, 29(8), pp.2313-2334. <https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/gcb.16594>
- Windham-Myers, L.**, P. Oikawa, S. Deverel, J.Z. Drexler, D.S. Chapple, D. Stern (2023). Carbon sequestration and subsidence reversal in the Sacramento-San Joaquin Delta: management opportunities for climate mitigation and adaptation. *San Francisco Estuary and Watershed Science*. Chapter 6 in *State of Bay Delta Science* (eds. Christman, Bashevkin, and Larsen) https://escholarship.org/uc/jmie_sfews
- Windham-Myers, L.**, J.R. Holmquist, K. Kroeger and T. Troxler (2022). Greenhouse gas balances in coastal ecosystems: current challenges in “blue carbon” estimation and significance to national greenhouse gas inventories. Chapter 12 in *Balancing Regional Greenhouse Gas Budgets*, eds Poulter and Canadell, GCP) <https://www.elsevier.com/books/balancing-regional-greenhouse-gas-budgets/poulter/978-0-12-814952-2>
- Holmquist, J.R., and **L. Windham-Myers**. 2022. A Conterminous United States-Scale Map of Relative Tidal Marsh Elevation (Z*). *Estuaries and Coasts*. <https://doi.org/10.1007/s12237-021-01027-9>
- Uhran, B., **L. Windham-Myers**, N. Bliss, A.M. Nahlik, E. Sundquist, and C.L. Stagg. 2021. Improved wetland soil organic carbon stocks of the conterminous U.S. through data harmonization. *Frontiers in Soil Science* (special issue Soil Organic Matter Dynamics and Carbon Sequestration) <https://doi.org/10.3389/fsoil.2021.706701>
- Miller, GJ, I Dronova, P Oikawa, S Knox, **L Windham-Myers**, J. Shahan, E. Stuart-Haentjens. 2021. The potential of satellite remote sensing time series to uncover wetland phenology under unique challenges of tidal setting. *Remote Sensing*. 2021, 13(18) 3589. <https://doi.org/10.3390/rs13183589>
- Irvin, J., Zhou, S., McNicol, G., Lu, F., Liu, V., Fluët-Chouinard, E., Ouyang, Z., Knox, S.H., Lucas-Moffat, A., Trotta, C., Papale, D.,..... 84 others and **L. Windham-Myers** and R. Jackson. 2021. Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH4 wetlands. *Agricultural and Forest Meteorology*, 308, p.108528. <https://doi.org/10.1016/j.agrformet.2021.108528>
- Herbert, E.R., **L. Windham-Myers**, and M. Kirwan. 2021. Sea-level rise enhances carbon accumulation in United States tidal wetlands. *One Earth*. <https://doi.org/10.1016/j.oneear.2021.02.011>
- Holmquist, J.R., and **L. Windham-Myers**. 2021. Relative Tidal Marsh Elevation Maps with Uncertainty for Conterminous USA, 2010. ORNL, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1844>
- Uhran, B., **L. Windham-Myers**, Z. Zhu, B. Sleeter, N. Cavallero, K. Kroeger, and G. Shrestha. 2021. Wetland Carbon in the United States: Conditions and Changes. Chapter 2 in *Wetland Carbon and Environmental Management* (eds. Zhu, Krauss and Stagg) Wiley. Geophysical Monograph Series ISBN-13: 9781119639282. <https://agupubs.onlinelibrary.wiley.com/doi/10.1002/9781119639305.ch2>
- Woo, I., M.J.Davis, S.E.W. De La Cruz, **L. Windham-Myers**, J. Drexler, K. Byrd, E.J. Stuart-Haentjens, and F. Anderson. 2021. Carbon flux, storage and wildlife co-benefits in a restoring estuary: case study at the Nisqually River Delta, WA. Chapter 5 in *Wetland Carbon and Environmental Management* (eds. Zhu, Krauss

- and Stagg) Wiley. Geophysical Monograph Series ISBN-13: 9781119639282
<https://agupubs.onlinelibrary.wiley.com/doi/10.1002/9781119639305.ch5>
- Kolka, R., C. Trettin and **L. Windham-Myers**. 2021. The importance of wetland carbon dynamics to society; Insight from the Second State of the Carbon Cycle Report. Chapter 28 in Wetland Carbon and Environmental Management (eds. Zhu, Krauss and Stagg) Wiley. Geophysical Monograph Series ISBN-13: 9781119639282
<https://agupubs.onlinelibrary.wiley.com/doi/10.1002/9781119639305.ch24>
- Delwiche, K., S.H. Knox,..... 94 others and **L. Windham-Myers**. 2021. FLUXNET-CH4: Describing a global, multi-ecosystem database, with an analysis on seasonality of methane emissions from freshwater wetlands. MDPI. Earth Syst. Sci. Data (pp. 1–111) <https://doi.org/10.5194/essd-2020-307>
- Byrd, K.B., L. Ballanti, N. Thomas, D. Nguyen, J.R. Holmquist, M. Simard, and **L. Windham-Myers**. 2021. Aboveground Biomass High-Resolution Maps for Selected US Tidal Marshes, 2015. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1879>
- Chang, K, W.J. Riley, S.H. Knox, R.B. Jackson, G. McNicol, B. Poulter, M. Aurela, D. Baldocchi, S. Bansal, G. Bohrer, D. I. Campbell, A. Cescatti, H. Chu, K.B. Delwiche, A. Desai, E. Euskirchen, T. Friborg, M. Goekede, M. Kang, T. Keenan, K.W. Krauss, A. Lohila, I. Mammarella, A. Miyata, M.B. Nilsson, A. Noormets, D. Papale, B. Runkle, Y. Ryu, T. Sachs, K.V.R. Schäfer, H.P. Schmid, N. Shurpali, O. Sonnentag, A.C.I. Tang, M.S. Torn, C. Trotta, M. Ueyama, R. Vargas, T. Vesala, **L. Windham-Myers**, Z. Zhang, and D. Zona. 2021. Substantial hysteresis in temperature sensitivity of global wetland methane emissions. Nature Climate Change 12(1). 2021.
<https://doi.org/10.1038/s41467-021-22452-1>
- Bogard, M., **L. Windham-Myers**, D. Butman, F. Anderson, S. Knox, and B. Bergamaschi. 2020. Hydrologic Export Offsets High CO₂ Uptake in Coastal Wetlands. Global Biogeochemical Cycles.
<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019GB006430>
- Knox, S. H., Bansal, S., McNicol, G., Schafer, K., Sturtevant, C., Ueyama, M., Valach, A. C., Baldocchi, D., Delwiche, K., Desai, A. R., Euskirchen, E., Liu, J., Lohila, A., Malhotra, A., Melling, L., Riley, W., Runkle, B. R. K., Turner, J., Vargas, R., ... **Windham-Myers, L.** and Jackson, R. B. (2021). Identifying dominant environmental predictors of freshwater wetland methane fluxes across diurnal to seasonal time scales. Global Change Biology.
<https://doi.org/10.1111/gcb.15661>
- Windham-Myers, L.**, B. Bergamaschi. Science Base Data Release: Tidal hydrologic and constituent loads from First Mallard Water Quality Station in the Rush Ranch Marsh Complex of the San Francisco Bay Estuarine Research Reserve (SFBNERR) 2016-2018. <https://doi.org/10.5066/P9660C55>
- Ward, N.D., B. Bond-Lamberty, V. Bailey, D. Butman, E.A. Canuel, H. Diefenderfer, N.K. Ganju, M.A. Goñi, C.S. Hopkinson, T. Khangaonkar, J.A. Langley, N.G. McDowell, A.N. Myers-Pigg, R.B. Neumann, C.L. Osburn, R.M. Price, J. Rowland, A. Sengupta, M. Simard, M. Tzortziou, R. Vargas, P.B. Weisenhorn, and **L. Windham-Myers**. 2020. Representing the Function and Sensitivity of Coastal Interfaces in Earth System Models. Nature Reviews <https://www.nature.com/articles/s41467-020-16236-2>
- Van Metre, P.C., S. Qi, J. Deacon, C. Dieter, J.M. Driscoll, M. Fienen, T. Kenney, P. Lambert, D. Lesmes, CA. Mason, A. Mueller Solger, M. Musgrove, J. Painter, D. Rosenberry, L. Sprague, A.J. Tesoriero, **L. Windham-Myers**, and D. Wolock. 2020. Prioritizing River Basins for Intensive Monitoring and Assessment by the U.S. Geological Survey. Environmental Monitoring and Assessment. <https://link.springer.com/article/10.1007/s10661-020-08403-1>
- Feagin, R.A., I. Forbrich, T.P. Huff, J.G. Barr, J. Ruiz-plancarte, J.D Fuentes, R.G. Najjar, R. Vargas, A. Vazquez-lule, **L. Windham-Myers**, K. Kroeger, E.J. Ward, G.W. Moore, M. Leclerc, K.W. Krauss, C.L. Stagg, M. Alber, S.H. Knox, K.V.R. Schafer, T.S. Bianchi, J.A. Hutchings, H.B. Nahrawi, A. Noormets, B. Mitra, A. Jaimes, A.L. Hinson, B. Bergamaschi, J. King, and G. Miao. 2020. Gross Primary Production Maps of Tidal Wetlands across Conterminous USA, 2000-2019. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1792>
- Feagin, R.A., Forbrich, I., Huff, T.P., Barr, J.G., Ruiz-Plancarte, J., Fuentes, J.D., Najjar, R.G., Vargas, R., Vázquez-Lule, A., **Windham-Myers, L.**, Kroeger, K.D., Ward, E.J., Moore, G.W., Leclerc, M., Krauss, K.W., Stagg, C.L., Alber, M., Knox, S.H., Schäfer, K.V.R., Bianchi, T.S., Hutchings, J.A., Nahrawi, H., Noormets, A., Mitra, B., Jaimes, A., Hinson, A.L., Bergamaschi, B., King, J.S., Miao, G. 2020. Tidal wetland Gross Primary Production (GPP) across the continental United States, 2000-2019. Global Biogeochemical Cycles 34: e2019GB006349.
<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019GB006349>
- Knox, S.H., Jackson, R.B., Poulter, B., McNicol, G., Fluet-Chouinard, E., Zhang, Z., Hugelius, G., Bousquet, P., Canadell, J.G., Saunio, M. Papale, D., 20 others and **L. Windham-Myers**, 2019. FLUXNET-CH4 Synthesis Activity:

- Objectives, Observations, and Future Directions. Bulletin of the American Meteorological Society (BAMS), <https://doi.org/10.1175/BAMS-D-18-0268.1>
- Thomas, N., Simard, M., Castañeda-Moya, E., Byrd, K., **Windham-Myers, L.**, Bevington, A. and Twilley, R.R., 2019. High-resolution mapping of biomass and distribution of marsh and forested wetlands in southeastern coastal Louisiana. International Journal of Applied Earth Observation and Geoinformation, 80, pp.257-267. <https://doi.org/10.1016/j.jag.2019.03.013>
- Bansal, S., S.C. Lishawa, S. Newman, B.A. Tangen, D. Wilcox, D. Albert, M. J. Anteau, M.J. Chimney, R.L. Cressey, E. DeKeyser, K. J. Elgersma, S.A. Finkelstein, J. Freeland, R. Grosshans, P.E. Klug, D.J. Larkin, B. A. Lawrence, G. Linz, J. Marburger, G. Noe, C. Otto, N. Reo, J. Richards, C. Richardson, ... and **L. Windham-Myers**. 2019. Typha (Cattail) Invasion in North American Wetlands: Biology, Regional Problems, Impacts, Ecosystem Services, and Management. Wetlands 39(645-684). Invited review <https://link.springer.com/article/10.1007/s13157-019-01174-7>
- Windham-Myers, L.**, S. Crooks and T.G. Troxler 2019. A Blue Carbon Primer: The State of Coastal Wetland Carbon Science, Practice and Policy. 28 chapters, 93 contributing authors. 496 pp. CRC Press, Boca Raton, Florida. <https://www.crcpress.com/CRC-Marine-Science/book-series/CRCMARINESCI>
- Windham-Myers, L.**, S. Crooks, and T. Troxler. 2019. Blue Carbon Futures: Moving Forward on Terra Firma. Chapter 28 in A Blue Carbon Primer: The State of Coastal Wetland Carbon Science, Practice and Policy. CRC Press, Boca Raton, FL <https://www.crcpress.com/CRC-Marine-Science/book-series/CRCMARINESCI> 391-401
- Crooks, S., **Windham-Myers, L.**, and T. Troxler. 2019. Defining blue carbon: The emergence of a climate context for coastal carbon dynamics. Chapter 1 in A Blue Carbon Primer: The State of Coastal Wetland Carbon Science, Practice and Policy. CRC Press, Boca Raton, FL <https://www.crcpress.com/CRC-Marine-Science/book-series/CRCMARINESCI> p. 1-8.
- Holmquist, J.R., **L. Windham-Myers**, B. Bernal, K.B. Byrd, S. Crooks, M.E. Gonneea, N. Herold, S.H. Knox, K. Kroeger, J. McCombs, P.J. Megonigal, L. Meng, J.T. Morris, A.E. Sutton-Grier, T. Troxler, and D. Weller. 2019. Coastal Wetland Elevation and Carbon Flux Inventory with Uncertainty, USA, 2006-2011. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAAC/1650>
- Windham-Myers, L.**, W.-J. Cai, S. Alin, A. Andersson, J. Crosswell, K. H. Dunton, J. M. Hernandez-Ayon, M. Herrmann, A. L. Hinson, C. S. Hopkinson, J. Howard, X. Hu, S. H. Knox, K. Kroeger, D. Lagomasino, J.P. Megonigal, R. Najjar, M.-L. Paulsen, D. Peteet, E. Pidgeon, K. Schäfer, M. Tzortziou, Z. A. Wang, and E. B. Watson, 2018: Chapter 15: Tidal wetlands and estuaries. In Second State of the Carbon Cycle Report (SOCCR2): A Sustained Assessment Report. [Cavallaro, N., G. Shrestha, R. Birdsey, M. A. Mayes, R. Najjar, S. Reed, P. Romero-Lankao, and Z. Zhu (eds.)]. U.S. Global Change Research Program, Washington, DC, USA <https://carbon2018.globalchange.gov/>
- Holmquist, J.R., **L. Windham-Myers**, B. Bernal, K. B. Byrd, S. Crooks, M.E. Gonneea, N. Herold, S.H. Knox, K. Kroeger, J. McCombs, J.P. Megonigal, L Meng, J.T. Morris, A.E Sutton-Grier, T. G Troxler and D. Weller. 2018. Uncertainty in United States coastal wetland greenhouse gas inventorying. Environmental Research Letters: Focus Issue on Carbon Monitoring Systems. <https://doi.org/10.1088/1748-9326/aae157>
- Holmquist, J.R., **Windham-Myers, L.**, Bliss, N., Crooks, S., Morris, J.T., Megonigal, J.P., Troxler, T., Weller, D., Callaway, J., Drexler, J. and Ferner, M.C., 2018. Accuracy and Precision of Tidal Wetland Soil Carbon Mapping in the Conterminous United States. Scientific Reports, 8(1), p.9478. <https://doi.org/10.1038/s41598-018-26948-7>
- Holmquist, J.R., **L. Windham-Myers**, N. Bliss, S. Crooks, J.T. Morris, P.J. Megonigal, T. Troxler, D. Weller, J. Callaway, J. Drexler, M.C. Ferner, M.E. Gonneea, K. Kroeger, L. Schile-beers, I. Woo, K. Buffington, B.M. Boyd, J. Breithaupt, L.N. Brown, N. Dix, L. Hice, B.P. Horton, G.M. Macdonald, R.P. Moyer, W. Reay, T. Shaw, E. Smith, J.M. Smoak, C. Sommerfield, K. Thorne, D. Velinsky, E. Watson, K. Grimes, and M. Woodrey. 2019. Tidal Wetland Soil Carbon Stocks for the Conterminous United States, 2006-2010. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAAC/1612>
- Tollefson, J., 2018. Climate scientists unlock secrets of 'blue carbon'. Nature, 553(7687), pp.139-140.
- Tanner, K.C., **Windham-Myers, L.**, Mark Marvin-DiPasquale, M., Fleck, J.A., Tate, K.W., and Linnquist, B.A., 2018, Methylmercury dynamics in upper Sacramento Valley rice fields with low background soil mercury levels: Journal of Environmental Quality, 47:830–838. <https://doi:10.2134/jeq2017.10.0390>
- Marvin-DiPasquale, M., **Windham-Myers, L.**, Fleck, J.A., Ackerman, J.T., Eagles-Smith, C., and McQuillen, H., 2018, Mercury on a landscape scale—Balancing regional export with wildlife health: U.S. Geological Survey Open-File Report 2018–1092, 93 p., <https://doi.org/10.3133/ofr20181092>.

- Tanner, K.C., **Windham-Myers, L.**, Marvin-DiPasquale, M., Fleck, J.A., and Linnquist, B.A., 2017, Alternate Wetting and Drying Decreases Methylmercury in Flooded Rice (*Oryza sativa*) Systems: *Soil Science Society of America Journal*. [early on-line], <https://doi:10.2136/sssaj2017.05.0158>
- Windham-Myers, L.**, B. Bergamaschi, F. Anderson, S. Knox, R. Miller and R. Fujii (2018) Potential for negative emissions of greenhouse gases through coastal peatland re-establishment. *Environmental Research Letters* 13 045005 <https://doi.org/10.1088/1748-9326/aaae74>
- Byrd, K.B., L.R. Ballanti, N. Thomas, D. Nguyen, J. Holmquist, M. Simard, and **L. Windham-Myers**. 2018. A remote sensing-based model of tidal marsh aboveground carbon stocks for the conterminous United States. *ISPRS Journal of Photogrammetry and Remote Sensing* 139, 255-271. <https://doi.org/10.1016/j.isprsjprs.2018.03.019>.
- Knox, S.H., **L. Windham-Myers**, F. Anderson, C. Sturtevant, and B. Bergamaschi (2017). Direct and indirect effects of tides on ecosystem-scale CO₂ exchange in a brackish tidal marsh in Northern California. *JGR-Biogeosciences* <https://doi.org/10.1002/2017JG004048>
- Byrd, K. B., **L. Windham-Myers**, T. Leeuw, B. Downing, J. T. Morris, and M. C. Ferner (2016) Forecasting tidal marsh elevation and habitat change through fusion of Earth observations and a process-based model. *Ecosphere* 7(11): e01582. [10.1002/ecs2.1582](https://doi.org/10.1002/ecs2.1582)
- Anderson, F., B. Bergamaschi, **L. Windham-Myers**, I. Woo, S. De La Cruz, J. Drexler, K. Byrd, K. M. Thorne (2016) Assessing wildlife benefits and carbon storage from restored and natural tidal marsh of Nisqually River Delta: Determining marsh net ecosystem carbon balance. *FactSheet3042*. <http://dx.doi.org/10.3133/fs20163042>
- Anderson, F., B. Bergamaschi, **L. Windham-Myers**, C. Sturtevant, M. Matteo, J. Drexler, S. Knox, J. Matthes, D. Baldocchi, J. Verfaillie, R. L. Snyder, L. Hastings, and R. Fujii. (2016) Variation of energy and carbon fluxes from a restored temperate freshwater wetland and implications for carbon market verification protocols. *JGR-Biogeosciences*. <http://dx.doi.org/10.1002/2015JG003083>
- He, S., S. Malfatti, J. Tremblay, M. Waldrop, **L. Windham-Myers**, F. Anderson, T. Glavina del Rio, S. Tringe (2015). Patterns in wetland microbial community composition and functional gene repertoire of biogeochemical gradients and methane emissions. *mBio* 6(3):e00066-15. <http://dx.doi.org/10.1128/mBio.00066-15>
- Fichot, C.G., B. Downing, B. Bergamaschi, **L. Windham-Myers**, M. Marvin-DiPasquale, D. R. Thompson, and M. Gierach. (2015) High-resolution remote sensing for water quality monitoring in the California Bay-Delta. *Environmental Science and Technology*. <http://dx.doi.org/10.1021/acs.est.5b03518>
- Ewing, S. A., J.A. O'Donnell, G.R. Aiken, K. Butler, D. Butman, **L. Windham-Myers**, and M.Z. Kanevskiy. (2015) Labile C and N in Pleistocene permafrost: Long-term anoxia may drive the magnitude of DOC loss upon permafrost thaw. *Geophysical Research Letters*. <http://dx.doi.org/10.1002/2015GL066296>
- Crooks, S., J. Callaway, L.M. Schile, J.Z. Drexler, **L. Windham-Myers**, and S. Deverel. (2015). Chapter7: Carbon Accounting and Greenhouse Gas Flux. In (eds. P. Hickey and L. Grenier) *Bay Ecosystem Habitat Goals Update*. <http://www.sfei.org/content/bayland-ecology-habitat-goals-update-climate-change>
- Zhang, H., K.B. Moffett, **L. Windham-Myers**, and S.M. Gorelick. (2014) Hydrological Controls on Methylmercury Distribution and Flux in Tidal Marsh. *Environmental Science Technology* <http://dx.doi.org/10.1021/es500781g>
- Rothenberg, S.E., **L. Windham-Myers**, and J.E. Creswell. (2014) Rice Methylmercury Exposure and Mitigation: A Comprehensive Review. *Environmental Research* 133:407-423. <http://dx.doi.org/10.1016/j.envres.2014.03.001>
- Windham-Myers L.** (2014), Guest Editor Preface: Methylmercury cycling in wetlands managed for rice agriculture and wildlife: Implications for methylmercury production, transport, and bioaccumulation, *Science of The Total Environment*. 484, 219-220 <http://dx.doi.org/10.1016/j.scitotenv.2014.01.046>
- Bachand, P.A.M., S. Bachand, J. Fleck, F. Anderson, and **L. Windham-Myers**. (2014) Differentiating transpiration from evaporation in seasonal agricultural wetlands and the link to advective fluxes in the root zone. *Science of the Total Environment* 484, 232-248 <http://dx.doi.org/10.1016/j.scitotenv.2013.11.026>
- Bachand, P.A.M., S.M. Bachand, J.A. Fleck, C.N. Alpers, M. Stephenson and **L. Windham-Myers**. (2014). Methylmercury production in and export from agricultural wetlands in California, USA: The need to account for physical transport processes into and out of the root zone. *Science of the Total Environment* 484, 249-262 <http://dx.doi.org/10.1016/j.scitotenv.2013.11.086>
- Drexler, J.Z., J. Paces, C.N. Alpers, **L. Windham-Myers**, L. Neymark, T. Bullen, and H.E. Taylor (2014). ²³⁴U/²³⁸U and ⁸⁷Sr/⁸⁶Sr in Peat as Tracers of Paleosalinity in the Sacramento-San Joaquin Delta of California. *Applied Geochemistry* 40, 164-179 <http://dx.doi.org/10.1016/j.apgeochem.2013.10.011>
- Windham-Myers, L.**, J.T. Ackerman, J.A. Fleck, M. Marvin-DiPasquale, C.A. Stricker, P. Bachand, C.A. Eagles-Smith, D. Feliz, G. Gill, M. Stephenson, C.N. Alpers. (2014). Mercury cycling in agricultural and managed wetlands: synthesis

- of observations from an integrated field study of methylmercury production, hydrologic export, and bio-accumulation. Science of the Total Environment 484:221-231 <http://dx.doi.org/10.1016/j.scitotenv.2014.01.033>
- Marvin-DiPasquale, M.C., **L. Windham-Myers**, J.L. Agee, E. Kakouros, L.H. Kieu, and J. A. Fleck. (2014) Methylmercury production in sediment from agricultural and non-agricultural wetlands in the Yolo Bypass, California. Science of the Total Environment 484, 288-299 <http://dx.doi.org/10.1016/j.scitotenv.2013.09.098>
- Windham-Myers, L.**, Marvin-DiPasquale, M., Stricker, C., Agee, J.L., Kieu, L., and Kakouros, E. (2014) Mercury cycling in agricultural and managed wetlands of California, USA: Experimental evidence of vegetation-driven changes in sediment biogeochemistry and methylmercury production. Science of the Total Environment 484, 300-307 <http://dx.doi.org/10.1016/j.scitotenv.2013.05.028>
- Eagles-Smith, C.A., Ackerman, J.T., Fleck, J.A., **Windham-Myers, L.**, McQuillen, H., and Heim, W., 2014, Wetland management strategies to decrease methylmercury bioaccumulation and loads from the Cosumnes River Preserve, California: U.S.G.S. Open-File Report 2014-1172, 42 p., <http://dx.doi.org/10.3133/ofr20141172>
- Windham-Myers, L.**, M. Marvin-DiPasquale, E. Kakouros, J.L. Agee, L.H. Kieu, C. Stricker, J.A. Fleck, C.N. Alpers, and J.T. Ackerman (2014) Mercury cycling in agricultural and managed wetlands, Yolo Bypass, California: Mercury cycling in agricultural and managed wetlands of California, USA: Seasonal influences of vegetation on mercury methylation, storage, and transport. Science of the Total Environment 484, 308-318 <http://dx.doi.org/10.1016/j.scitotenv.2013.05.027>
- Windham-Myers, L.** (2013). Tidal Marsh Restoration: a Synthesis of Science and Management. Book Review (invited). Ecological Restoration 31(3): 338-339. <http://dx.doi.org/10.3368/er.31.3.338>
- Schile, L., K.B. Byrd, **L. Windham-Myers**, and M. Kelly. (2013) Accounting for non-photosynthetic vegetation in remote sensing based estimates of carbon flux in wetlands: Remote Sensing Letters 4(6):542-551. <http://dx.doi.org/10.1080/2150704X.2013.766372>
- Windham-Myers, L.** and J.T. Ackerman. 2012. A Synthesis of Mercury Science to Support Methylmercury Control Studies for Delta Wetlands and Irrigated Agriculture. CAWSB Report. 50 pp. http://delta-mercury-nps.org/documents/NPSWorkgroup_Memo_KnowledgeBase.pdf
- Windham-Myers, L.** and T. Jabusch. 2012, Yolo Bypass Findings Could Help Wetland Managers Reduce the Methylmercury Problem. Pulse of the Delta, October 2012 (http://www.waterboards.ca.gov/rwqcb5/water_issues/delta_water_quality/comprehensive_monitoring_program/2012_pulseofthedelta.pdf)
- Anderson, F., B. Bergamaschi, **L. Windham-Myers**, R. Miller, and R. Fujii. 2012. Observations of the Atmospheric Carbon Cycle in Restored Wetlands. FluxNet Newsletter 4: 17-22 http://bwc.berkeley.edu/FluxLetter/FluxLetter_Vol4_No3.pdf
- Windham-Myers, L.**, K. Ward, M. Marvin-DiPasquale, J.L. Agee, L.H. Kieu, and E. Kakouros. 2011. Biogeochemical Implications of Episodic Impoundment in a Restored Tidal Marsh of San Francisco Bay, California. Restoration Ecology <http://dx.doi.org/10.1111/j.1526-100X.2011.00849.x>
- Windham-Myers, L.**, Marvin-DiPasquale, M., Fleck, J.A., Alpers, C.N., Ackerman, J., Eagles-Smith, C., Stricker, C., Stephenson, M., Feliz, D., Gill, G., Bachand, P., Rice, A. and Kulakow, R., 2010, Methylmercury cycling, bioaccumulation, and export from natural and agricultural wetlands in the Yolo Bypass; Cooperator Report prepared for the State Water Resources Control Board, by the U.S.G.S., CA Department of Fish and Game, Moss Landing Marine Lab, Battelle Marine Sciences, Bachand and Associates, and the Yolo Basin Foundation. September 30, 2010, 266 p.
- Jones, S.A., D. Bornholdt, A. DeGange, D. Lavoie, D. Myers, R. Poore, J. Powell, J. Smith, A.B. Wade, **L. Windham-Myers**. 2010. USGS Long-Term Science Strategy in Response to the Deepwater Horizon Oil Spill Submitted to USGS Management for Council of Environmental Quality Gulf Restoration Plan
- Windham-Myers, L.**, Marvin-DiPasquale, M.C. , Erikson, L., Agee, J.L., Kieu, L.H., Kakouros, E., and Ward, K., 2010, Biogeochemical processes in an urban, restored wetland of San Francisco Bay, California, 2007-2009; Methods and Data for Plant, Sediment and Water Parameters: U.S. Geological Survey Open-File Report 2010-1299, 40 p. <http://pubs.usgs.gov/of/2010/1299/>
- Windham-Myers, L.**, G. Aiken, J. Bales, B. Bekins, J. E Cloern, C. A Eagles-Smith, R. P Eganhouse, E. Kakouros, D. P. Krabbenhoft, J. R Lacy, L. G Larsen, L. Lucas, M. Marvin-DiPasquale, N. B Rybicki, A. Slowey, R. Stewart, C. Swarzenski, J. K Thompson, M. P Waldrop. Conceptual Model Framework for a Long-Term Science Plan Response to the Deepwater Horizon Oil Spill. Submitted July 9, 2010
- Grenier, L., Marvin-DiPasquale, M., Drury, D., Hunt, J., Robinson, A., Bezalel, S., Melwani, A., Agee, J., Kakouros, E., Kieu, L., **Windham-Myers, L.**, and Collins, J.. 2010. South Baylands Mercury Project. Cooperator Report

- prepared for the California State Coastal Conservancy by San Francisco Estuary Institute, U.S. Geological Survey, and Santa Clara Valley Water District, February 10, 2010, 97 p.
- Windham-Myers, L.**, Marvin-DiPasquale, M., Agee, J.L., Cox, M.H. and Kakouros, E. 2009. Monitoring of Vegetation Characteristics for Methylmercury Production in Reference Marshes for Salt Pond Restoration in South San Francisco Bay. Final Report, The San Francisco Foundation, 18 p.
- Windham-Myers, L.**, M. Marvin-DiPasquale, D.P. Krabbenhoft, J.L. Agee, M.H. Cox, P. Heredia-Middleton, C. Coates, and E. Kakouros. 2009. Experimental removal of wetland emergent vegetation leads to decreased methylmercury production in surface sediments. Journal of Geophysical Research 114, G00C05, <http://dx.doi.org/10.1029/2008JG000815>
- Yee, D., J. Collins, L. Grenier, J. Takekawa, D. Tsao-Melcer, I. Woo., S. Schwarzbach, M. Marvin-DiPasquale, **L. Windham-Myers**, D. Krabbenhoft, S. Olund, and J. Evans, 2008. Mercury and Methylmercury Processes in Northern San Francisco Bay Delta Bay Tidal Wetlands Ecosystems. Project ERP-02D-P62 Final Report. Submitted to the California Bay-Delta Authority Ecosystem Restoration Program. 65 p.
- Marvin-DiPasquale, M., Stewart, A.R., Fisher, N.S., Pickhardt, P., Mason, R.P., Heyes, A., and **Windham-Myers, L.**, 2007, Evaluation Of Mercury Transformations and Trophic Transfer in the San Francisco Bay/Delta: Ecosystem Restoration Program: Final Report for Project # ERP-02-P40. Submitted to California Bay Delta Authority 40 p.
- Alpers, C.N., C. Eagles-Smith, C.Foe, S. Klasing, M. Marvin-DiPasquale, D.G. Slotton, **L. Windham-Myers**. 2007. Mercury Conceptual Model — Delta Regional Ecosystem Restoration Implementation Plan (DRERIP). Submitted http://www.science.calwater.ca.gov/pdf/drerip/drerip_mercury_conceptual_model_final_012408.pdf 65 p).
- Windham-Myers, L.** 2005. Effects of plant species on surficial tidal exchanges and porewater concentrations of dissolved inorganic nitrogen in brackish tidal marsh. Biogeochemistry 75:289-304. <http://dx.doi.org/10.1007/s10533-004-7587-9>
- Windham, L.**, M. Laska, and J. Wollenberg. 2004. Evaluating the progress of wetland restorations in urban landscapes: Case studies for assessing connectivity and function. Urban Habitats 2(1):140-158. http://www.urbanhabitats.org/v02n01/evaluating_full.html
- Windham, L.**, J.S. Weis, and P. Weis. 2004. Metal dynamics of plant litter of *Spartina alterniflora* and *Phragmites australis* in metal-contaminated salt marshes. Part 1: Patterns of decomposition and metal uptake. Environmental Toxicology and Chemistry 23:1520-1528 <http://dx.doi.org/10.1897/03-284>
- Windham, L.** and J. Ehrenfeld. 2003. Conflicting effects of a plant invasion on nitrogen cycling processes within brackish tidal marshes. Ecological Applications 13(4): 883-896. <http://dx.doi.org/10.1890/02-5005>
- Windham, L.** and L. Meyerson. 2003. Impacts of *Phragmites australis* expansions on nitrogen dynamics of tidal marshes. Estuaries 26 (2B): 452-464 (Invited Paper)
- Lathrop, R.G., **L. Windham**, and P. Montesano. 2003. Does *Phragmites* expansion alter the structure and function of marsh landscapes? Patterns and processes revisited. Estuaries 26 (2B): 423-435 (Invited Paper)
- Weis, J., **L. Windham**, and P. Weis. 2003. Patterns of metal accumulation in leaves of the tidal marsh plants *Spartina alterniflora* Loisel and *Phragmites australis* Cav. Trin ex Steud. over the growing season. Wetlands 23: 246-250
- Windham, L.**, Weis, J. and P. Weis. 2003. Uptake and distribution of metals in two dominant salt marsh macrophytes, *Spartina alterniflora* (cordgrass) and *Phragmites australis* (common reed). Estuarine, Coastal and Shelf Science 56:63-72
- Weis, P., **L. Windham**, D. J. Burke and J. S. Weis. 2002. Release into the environment of metals by two vascular salt marsh plants. Marine Environmental Research. 54(3): 325-329
- Weis, J.S., **L. Windham** and P. Weis. 2002 Growth, survival and metal content in marsh invertebrates fed diets of detritus from *Spartina alterniflora* Loisel and *Phragmites australis* Cav. Trin. Ex Steud. from metal-polluted and clean sites. Wetlands Ecology and Management 10(1): 71-84.
- Windham, L.**, Weis, J.S. and P. Weis. 2001. Patterns and processes of mercury (Hg) release from leaves of two dominant salt marsh plants: *Spartina alterniflora* (salt cordgrass) and *Phragmites australis* (common reed). Estuaries 24(5): 787-799
- Windham, L.**, J. S. Weis and P. Weis. 2001. Lead uptake, distribution, and effects in two dominant salt marsh macrophytes, *Spartina alterniflora* (cordgrass) and *Phragmites australis* (common reed). Marine Pollution Bulletin 42(10): 811-816
- Windham, L.** 2001. Comparison of biomass production and decomposition between *Phragmites australis* (common reed) and *Spartina patens* (salt hay) in brackish tidal marsh of New Jersey. Wetlands 21(2): 179-188
- Weis, J.S., **L. Windham**, C. Santiago-Bass and P. Weis. 2001. Growth, survival, and metal accumulation by marsh invertebrates fed diets of detritus from *Spartina alterniflora* Loisel and *Phragmites australis* Cav. Trin. Ex Steud from metal-contaminated and clean sites. Wetland Ecology and Management 9(1): 1-14

Rooth, J., and **L. Windham**. 2000. *Phragmites* on death row: Is biocontrol really warranted? Wetland Journal 12(1):29-37

Windham, L. 2000. Microscale spatial distribution of *Phragmites australis* (common reed) invasion into *Spartina patens* (salt hay)-dominant communities. Biological Invasions 1(2/3):137-147

Meyerson, L., K. Saltonstall, **L. Windham**, E. Kiviat, and S. Findlay. 2000. A comparison of *Phragmites australis* ecology in freshwater, brackish and salt marshes of North America. Wetland Ecology & Management 8:89-103

Windham, L. and R. Lathrop. 1999. Effects of *Phragmites australis* (common reed) invasion on aboveground biomass and soil properties in brackish tidal marsh. Estuaries 22(4): 927-935

Windham, L. and T. Breden. 1999. A GIS-based threat analysis of *Helonias bulatta* (swamp-pink) populations of the Big Timber Creek watershed, New Jersey. Bartonia 60:37-48

Presentations: >200 presentations at scientific meetings, >20 invited or keynotes. Info available upon request.