

JOANNA KRYSTYNA YORK

School of Marine Science and Policy
University of Delaware
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EDUCATION

Ph.D., 2006, Biology, Boston University
Dissertation: *A stable isotopic assessment of sources and assimilation of nitrogen by estuarine phytoplankton.*
B.A. with honors, 1997, Environmental Science, University of Virginia

APPOINTMENTS

Professor, 2025 *to present*
School of Marine Science and Policy, University of Delaware, Newark, DE
Director, Delaware Sea Grant College Program, 2021 *to present*
College of Earth, Ocean and Environment, University of Delaware, Newark, DE
Associate Professor, 2020 *to 2025*
School of Marine Science and Policy, University of Delaware, Newark, DE
Assistant Professor, 2017 - 2020
School of Marine Science and Policy, University of Delaware, Newark, DE
Research Assistant Professor, 2011- 2017
School of Marine Science and Policy, University of Delaware, Newark, DE
Research Scientist, 2009 - 2010
Biological Systems Engineering, Virginia Tech, Blacksburg, VA
Post Doctoral Associate, 2006 - 2009
Laboratory of George McManus, Department of Marine Sciences, University of Connecticut, Groton, CT
Instructor, 2005
Quinebaug Valley Community College, Danielson, CT
Research Assistant, 1999 - 2006
Laboratory of Ivan Valiela, Marine Program, Boston University, Woods Hole, MA
Research Assistant, 1997 - 1998
Sea Fisheries Institute, Gdynia, Poland

PUBLICATIONS *student author

*Healey, EM, S Flood, *P Bock, RW Fulweiler, **JK York**, and KJ Coyne. 2023. Effects of nitrate and ammonium on assimilation of nitric oxide by *Heterosigma akashiwo*. Nature Scientific Reports [DOI: 10.1038/s41598-023-27692-3](https://doi.org/10.1038/s41598-023-27692-3)
*Brooks, TW, KD Kroeger, HA Michael and **JK York**. 2021. Direct measurement of submarine groundwater discharge and benthic fluxes of nutrients and trace metals using a novel oxygen-regulated seepage meter. Limnology and Oceanography [DOI: 10.1002/lno.11858](https://doi.org/10.1002/lno.11858)

- *Torre, DM, KJ Coyne, KD Kroeger, and **JK York**. 2019. Phytoplankton Community Structure Response to Groundwater-borne nutrients in the Inland Bays, DE. Marine Ecology Progress Series [DOI:10.3354/meps13012](https://doi.org/10.3354/meps13012)
- *Yoshimura, KM, **J York**, and JF Biddle. 2018. Impacts of Salinity and Oxygen on Particle-Associated Microbial Communities in the Broadkill River, Lewes DE. Frontiers in Marine Science [DOI: 10.3389/fmars.2018.00100](https://doi.org/10.3389/fmars.2018.00100)
- *Fischer, SJ, **JK York**, YG Voynova, and WJ Ullman. 2017. Distance-Based Mixing Models of $\delta^{15}\text{N}_{\text{NO}_3^-}$ and $\delta^{18}\text{O}_{\text{NO}_3^-}$ in a Marsh-lined Estuary with Multiple Distinct NO_3^- Sources (Murderkill Estuary, Delaware, USA). Limnology and Oceanography [DOI: 10.1002/lno.10398](https://doi.org/10.1002/lno.10398)
- Kasper, JW, JM Denver, and **JK York**. 2015. Suburban groundwater quality as influenced by turfgrass and septic sources, Delmarva Peninsula, USA. Journal of Environmental Quality DOI: [10.2134/jeq2014.06.0280](https://doi.org/10.2134/jeq2014.06.0280)
- York JK**, GB McManus, W Kimmerer, AM Slaughter, and TR Ignoffo. 2013. Trophic links in the plankton in the low salinity zone of a large temperate estuary: top-down effects of introduced copepods. Estuaries and Coasts DOI: [10.1007/s12237-013-9698-9](https://doi.org/10.1007/s12237-013-9698-9)
- York JK**, BA Costas, and GB McManus. 2011. Microzooplankton grazing in green water – results from two contrasting estuaries. Estuaries and Coasts [DOI: 10.1007/s12237-010-9336-8](https://doi.org/10.1007/s12237-010-9336-8)
- York JK**, G Tomasky, I Valiela and AE Giblin. 2010. Isotopic approach to determining the fate of ammonium regenerated from sediments in a eutrophic sub-estuary of Waquoit Bay, MA. Estuaries and Coasts. 33:1069–1079; [DOI: 10.1007/s12237-010-9278-1](https://doi.org/10.1007/s12237-010-9278-1)
- York JK**, G Tomasky, I Valiela, and DJ Repeta. 2007. Stable isotopic detection of ammonium and nitrate assimilation by estuarine phytoplankton in the Waquoit Bay estuarine system. Limnology and Oceanography 52: 144-155; DOI: [10.4319/lo.2007.52.1.0144](https://doi.org/10.4319/lo.2007.52.1.0144)
- Kroeger KD, ML Cole, **JK York**, and I Valiela. 2006. Nitrogen loads to estuaries from wastewater plumes: Modeling and isotopic approaches. [Ground Water](https://doi.org/10.1016/j.gwa.2006.05.001) 44: 188-200
- Valiela I, JL Bowen and **JK York**. 2001. Mangrove forests: One of the world's threatened major tropical environments. [BioScience](https://doi.org/10.1016/S0007-1226(00)00111-1) 51: 807-815
- York JK**, Z Witek, S Labudda and S Ochocki. 2001. Comparison of primary production and pelagic community respiration rates in the coastal zone of the Gulf of Gdansk. Oceanologia 43: 365-370

TEACHING

MAST100: Marine Science Colloquium I	Fa 2010-2025
MAST101: Marine Science Colloquia II	Sp 2012-2021
MAST201: Marine Science Colloquium III	Sp 2012-2014
MAST301: Junior Marine Science Seminar	Sp 2014-2025
MAST314: Comparative Terrestrial and Marine Ecology	Fa 2011-2021
MAST382: Intro to Ocean Science	Fa 2018
MAST427: Marine Biology	Fa 2017-2025
MAST492: Marine Environmental Studies	Fa 2018-2025

Graduate Advisees

Lead Advisor

Student	Degree	Year	Current position
Thomas Brooks	MS	2018	Research Technician at USGS, Woods Hole, MA
Dan Torre	MS	2016	Chemistry Data Management Lead, Pfizer, Groton, CT
Claudia Shuman	MS	2014	Remedial Project Manager, USEPA, Trenton, NJ

HONORS AND AWARDS *Honors at UD

*Excellence in Undergraduate Mentoring award from UD Faculty Senate, 2018

EPA STAR Graduate Fellowship 2003-2006

Palmer-McLeod Graduate Fellowship, Boston University. 2002-2004

National Estuarine Research Reserve (NOAA) Graduate Fellowship 2001-2004

Humes Alumni Award, Boston University. 2000

Presidential University Graduate Fellowship, Boston University. 1999-2000

Kosciuszko Foundation Grant, for research in Poland. 1997

Raven Society Fellowship, University of Virginia, for research in Poland. 1997

Dean's List, University of Virginia. All semesters 1993-1997

Phi Beta Kappa

GRANTS

Summary

Education focused grants to York as PI: \$1,228,094

Research focused grants to York as PI: \$806,703

Participant in funded grants as Co-PI: \$1,244,177

Delaware Sea Grant funding to York, as PI in role as Director of DESG: \$16,551,282

Currently Awarded

National Science Foundation REU Site: Summer REU Program in Marine Science at the University of Delaware. PI: JK York 1/15/2025-12/31/2028. \$557,767.

Previously awarded

National Science Foundation, REU Site: Summer REU Program in Marine Science at the University of Delaware, **PI: York** 3/1/2021 to 2/29/2025 \$515,934.

National Science Foundation, REU Site: Summer REU Program in Marine Science at the University of Delaware, **PI: York**, 3/1/18 to 2/28/21 \$368,207.

Woods Hole Group, Subcontract to Philadelphia Water Department. Ammonium Regulation of Primary Production in the Delaware River. **PI: York**, 7/1/17 to 6/30/20 \$351,335.

NOAA Aquaculture, ECOHAB 2017: The role of nitric oxide in promoting Heterosigma blooms, PI: K Coyne, **Co-PI: York**. 9/1/2018 to 8/31/2021, \$746,354.

National Science Foundation, REU Site: Summer REU Program in Marine Science at the University of Delaware, **PI: York**, 3/15/15 to 2/28/18 \$343,953.

NOAA Sea Grant, Investigating the role of groundwater-borne nutrients in structuring the phytoplankton community of the Inland Bays, DE, **PI: York**, 2/1/2014 to 1/31/2017 \$140,000 + 2 years student funding (+ ~\$49,000).

NOAA Sea Grant Aquaculture, Economics of Ecosystem Services from Oyster Aquaculture, PI: S. Jardine, **CoPI: JK York** 8/1/2014 to 7/31/2016. \$475,823.

NOAA Sea Grant, Forecasting watershed loading and lagoon response along the Delmarva Peninsula due to changing land use and climate, **PI: York**, 2/1/2012 to 1/31/2015 \$139,996 + 2 years student funding (+ ~\$49,000).

University of Delaware Research Foundation, Tracing land-derived nitrogen into Inland Bays: a stable isotopic assessment, **PI: York**, 6/1/2011 to 12/31/2013, \$35,000.

University of Delaware Research Foundation, Tracing land-derived nitrogen into Inland Bays: a stable isotopic assessment (in support of summer intern), **PI: York**, 6/1/2011 to 5/31/2013, \$3,500.

NOAA Sea Grant, Nitrogen Cycling in the Marsh-Dominated Murderkill Estuary, PI: WJ Ullman, **CoPI: JK York**, 5/1/2012 to 4/30/2014, \$40,000.

Center for the Inland Bays/ EPA, Isotopic Analysis of Nitrate in Groundwater, PI: York, 5/1/11 to 8/31/11, \$12,000

NOAA Sea Grant, Tracing land-derived nitrogen into Indian River Bay Macroalgae: a stable isotopic assessment, **PI: York**, 9/1/10 to 1/31/11, \$10,000

PRESENTATIONS AT CONFERENCES: ABSTRACTS AND POSTERS

* student author

Parker, AE, **JK York**, M Dolan*, and D Walsh. 2021. Does Ammonium Supplied from Municipal Wastewater Suppress Primary Production in the Urban Delaware River? Partnership for the Delaware Estuary Summit

York, JK, T Brooks*, K Kroeger, and D Torre*. 2015. Groundwater-borne nutrient fluxes to the Delaware Inland Bays. Coastal and Estuarine Research Federation, Portland, OR.

Torre, D*, **JK York**, K Coyne, and K Kroeger. 2015. Phytoplankton community response to groundwater-borne nutrients in the Delaware Inland Bays. Coastal and Estuarine Research Federation, Portland, OR.

Fischer, SJ*, W Ullman, and **JK York**. 2013. Seasonal patterns of $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ of NO_3^- in the Murderkill River Watershed and Estuary, DE. Coastal and Estuarine Research Federation, San Diego, CA.

Shuman, CR*, **JK York**, and K Kroeger. 2013. Tracing agriculturally derived nitrogen through groundwater into Delaware's Indian River Estuary. Coastal and Estuarine Research Federation, San Diego, CA.

Shuman, CR*, and **JK York**. 2013. Tracing agriculturally-derived nitrogen through groundwater into Delaware's Indian River Estuary. Delaware Geological Survey Symposium, Newark, DE.

Gagne-Maynard, W*, **JK York**, and WJ Ullman. 2013. Determination of Nutrient Sources and Sinks within the Murderkill Estuary Using In-Situ Chemical Analysis and Nitrate Isotope Fractionation. ASLO 2013 Aquatic Sciences Meeting, New Orleans, LA.

Fischer, SJ*, W Gagne-Maynard*, WJ Ullman, and **JK York**. 2013. Seasonal patterns of $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ of NO_3^- in the Murderkill River Watershed and Estuary, DE. Partnership for the Delaware Estuary Summit, Cape May, NJ.

York, JK. 2012. Tracing land-derived nitrogen into the Delaware Inland Bays: a stable isotopic assessment. Coastal and Estuarine Research Federation. Mar del Plata, Argentina.

Schoener, DM*, GB McManus, J Tomaras, and **JK York**. 2010. Grazing and direct inorganic nitrogen uptake in a mixotrophic ciliate. In Proceedings of the American Geophysical Union. San Francisco, CA.

- York JK**, BA Costas*, and GB McManus. 2010. Microzooplankton grazing in green water – results from two contrasting estuaries. Ocean Sciences Meeting. Portland, OR.
- York, JK**, G McManus, and W Kimmerer. 2007. Microzooplankton dynamics in the Upper San Francisco Estuary. In Conference Abstracts of the Estuarine Research Federation. Providence, RI.
- McManus GB, **JK York**, W Kimmerer. 2007. Microzooplankton dynamics in the low salinity zone of the San Francisco Estuary. Verhandlungen Internationale Vereinigung für theoretische und angewandte Limnologie (Proceedings of the 30th Congress of the International Association of Theoretical and Applied Limnology [SIL])
- York JK**, I Valiela and DJ Repeta. 2005. Estuarine response to nitrogen loading: Comparison of Childs River, MA and Tijuana River, CA. In Conference Abstracts of the Estuarine Research Federation. Norfolk, VA.
- York JK**, I Valiela and DJ Repeta. 2005. Stable isotopic assessment of phytoplankton nitrogen preferences in estuaries. American Society of Limnology and Oceanography. Santiago de Compostela, Spain.
- York JK** and I Valiela. 2005. Determining primary producer N use by comparison of nitrogen isotopic patterns in Waquoit Bay, MA. New England Estuarine Research Society. Eastham, MA.
- York JK**, I Valiela and DJ Repeta. 2004. Stable isotopic detection of ammonium and nitrate assimilation by estuarine phytoplankton. In Proceedings of the American Geophysical Union. San Francisco, CA.
- York JK**, I Valiela and DJ Repeta. 2004. Does NH_4^+ or NO_3^- drive phytoplankton production? An isotopic assessment. In Proceedings of the American Society of Limnology and Oceanography. Honolulu, HI.
- York JK** and I Valiela. 2003. Isotopic signatures of regenerated ammonium: evidence for subsequent nitrification. In Conference Abstracts of the Estuarine Research Federation. Seattle, WA.
- York JK**, Z Witek, S Labudda and S Ochocki. 1998. Comparison of primary production and pelagic community respiration rates in the coastal zone of the Gulf of Gdansk. In: Book of Abstracts of the International Council for the Exploration of the Seas Brackish Water Ecosystems symposium. Helsinki, Finland.