

**David Jay Velinsky**  
**Department of Biodiversity, Earth and Environmental Sciences**  
**and Academy of Natural Sciences of Drexel University**  
**Drexel University**  
1900 Benjamin Franklin Parkway  
Philadelphia, PA. 19103  
215-299-1147  
(e-mail: velinsky@drexel.edu)  
*March, 2024*

**EDUCATION**

Ph.D. in Chemical Oceanography  
Old Dominion University (Norfolk, VA);  
Major Advisor: Dr. Gregory Cutter – Geochemistry of Selenium in a Coastal Wetland

B.S. in Oceanography, minor in Chemistry  
Florida Institute of Technology (Melbourne, FL)

**RESEARCH INTERESTS**

Fate, transport, and cycling of bio-active elements and contaminants in freshwater and marine systems. Geochemical cycling of organic and inorganic constituents in sediments and waters. Biogeochemistry of fresh and marine tidal wetlands. Watershed changes in water quality. Isotope biogeochemistry of carbon, nitrogen, and sulfur. Chemical method development for environmental studies.

**PROFESSIONAL EXPERIENCE**

2012 – Present      Full Professor, Department of Biodiversity, Earth and Environmental Science, College of Arts and Sciences, Drexel University

2020 – Present      Member, New Jersey Science Advisory Board

2021 – Present      Member, Science Committee; Willistown Conservation Trust

2019 – Present      Member, Delaware River Basin Commission, Climate Change Subcommittee

2016 – Present      Board Member, Lacawac Sanctuary Field Station and Environmental Education Center, Lake Ariel, PA; Member of Science Committee and Board

2010 – Present      Member/Chair, Franklin Institution Medal Committee, Earth and Environmental Science Cluster; Franklin Institute

1995 - Present      Senior Scientist, Environmental Biogeochemistry Section, Patrick Center for Environmental Research, The Academy of Natural Sciences, (Philadelphia, PA).

2010 – Present      Adjunct Associate Professor, College of Earth, Ocean and Environment, University of Delaware; Newark, DE.

2012 – 2023 Department Head; Department of Biodiversity, Earth and Environmental Science, College of Arts and Sciences, Drexel University

2012 - 2020 Vice President for the Center of Academy Science, Academy of Natural Sciences of Drexel University

2009 – 2014 Board of Trustees; Partnership for the Delaware Estuary (Wilmington, DE)

2009-2010 Penn Arts and Sciences, Visiting Expert Instructors (Masters of Chemical Education Program)

2007 – 2017 Director- Patrick Center for Environmental Research  
The Academy of Natural Sciences (Philadelphia, PA)

2006 – 2012 Science and Technical Advisory Committee (STAC), Delaware Estuary Program, Partnership for the Delaware Estuary (Wilmington, DE)

2006 – 2007 Acting Vice President/Director- Patrick Center for Environmental Research  
The Academy of Natural Sciences (Philadelphia, PA)

2004 - 2006 Sea Grant Science Advisory Committee Member (New Jersey)

2002 - 2013 Delaware Estuary Program, Toxics Advisory Workgroup, Delaware River Basin Commission (West Trenton, NJ)

1998 – 2004 Visiting Research Professor; School of Environmental Science; Drexel University.

1991 - 2002 Jug Bay Wetlands Sanctuary, Science Advisory Committee; Chairperson.  
Chesapeake Bay Program (EPA); Toxics Subcommittee

1990 - 1995 Environmental Geochemist, Interstate Commission on the Potomac River Basin (Rockville, MD).  
Lecturer, U.S. Department of Agriculture Graduate School, Natural Sciences Department (class: Estuarine Ecosystems).

1987 - 1990 Post-Doctoral Research Fellow, College of Marine Studies, University of Delaware, and Geophysical Laboratory, Carnegie Institution of Washington.  
Visiting Investigator, Geophysical Laboratory, Carnegie Institution of Washington.

1982 – 1984 Research Assistant, Atmospheric Sciences Division, NASA Langley Research Center.

1979 – 1980 Laboratory Technician, Arnold Greene Testing Laboratory (Natick, MA).

## **GRANTS, CONTRACTS and SUPPORT:**

Upon request

## **UNIVERSITY AND ACADEMY SERVICE (See below for more detail)**

Academy of Natural Sciences, President Search Committee; Winter 2017

Drexel University; Provost Search Committee; Fall 2014-Spring 2015

Drexel University; IExE Director Search Committee; Summer 2014-Winter 2104

Drexel University, Member, President's Strategic Task Force 4b: *Research*, 2012-present

Drexel University, Member, President's Strategic Task Force 4: *Create an Innovation Nexus*, 2012-2014

Drexel University, Member, President's Strategic Task Force 1B: *Invest in Academic Excellence - Student Academic Services*, 2012-2013

College, Member, Teaching Faculty Review Committee. 2013-2014. Review candidates for promotion and assisted in development of promotion guideline for College of Arts and Sciences.

University and Academy, Member, President's Integration Council. 2011-2014. Assisted in the integration of Academy and University along with the development of the BEES department.

Drexel University Institutional Advancement. 2013. Presented to entire Parent Donor Group about the development and formation of BEES department.

Drexel University Institutional Advancement. 2012. Presented to entire IA group about the development and formation of BEES department.

## **OTHER PROFESSIONAL ACTIVITIES**

Various journal reviews for Marine Chemistry, Estuaries, Marine Environmental Research, Geochimica Cosmochimica Acta, Limnology and Oceanography, and others.

Various proposal reviews for National Science Foundation, NOAA Sea Grant, U.S. EPA, Chesapeake Bay Program, Hudson River Foundation.

Invited participant: PCBs in Fish Tissue (U.S. EPA); Sediment Contamination Forum (U.S. EPA); Sources of Copper: Brake Pad Forum (Common Ground for the Environment, Stanford Univ.); Sediment Bioaccumulation Forum (U.S. EPA).

Judge at Fairfax County Science Fair (1991-1993)

Session Chairperson (joint with Dr. Greg Foster, GMU): Environmental Geochemistry in Urban Watersheds,

Society of Environmental Toxicology and Analytical Chemistry (San Francisco, CA, November, 1997).

Invited participant: Connecticut/New York Sea Grant Scientific Proposal Review Panel: Lobster/Shellfish Disease Studies of Long Island Sound (2003)

Sea Grant Panel Reviewer: PA and NJ Sea Grant; Proposal Review Panel (2005)

Sea Grant Panel Reviewer: Delaware Sea Grant; Proposal Review Panel (2021)

Session Chairperson, S05 Delaware River/Bay at Society of Environmental Toxicology and Analytical Chemistry (Baltimore, MD, November 2005).

Academy of Natural Sciences' Town Square (Public Forum): Chemicals in the Delaware Estuary. American Philosophical Society (January 2005).

Science on Tap: The Slippery Facts on Oil; Public Forum at National Mechanics Bar (June 2010)

Ad Hoc Review Committee, Technical Qualification Board, US EPA Headquarters, Promotion review for EPA Staff to GS-14 (National Expert) (August 2010).

Regional NOAA Sea Grant Participant: Regional Planning Study Group (July 2011)

### **GRADUATE EXPERIENCE**

1985 - 1987      Research Assistant, Department of Oceanography, Old Dominion University

1983 - 1985      Teaching Assistant, Department of Oceanography, Old Dominion University

1980 - 1983      Research Assistant, Department of Oceanography, Old Dominion University

### **SCHOLARSHIPS AND AWARDS**

Old Dominion University Summer Scholarship (1984)

Outstanding Doctoral Student, Dept. of Oceanography (1987)

Dissertations Symposium on Chemical Oceanography Participant (1987)

Award for Excellence of Program Development-Patrick Center (1998)

STAR Program Award for Mentorship, Drexel University (2018)

Outstanding Research Award – Lacawac Sanctuary; Lake Ariel, PA (2022)

### **MEMBERSHIPS**

American Chemical Society (past)

American Geophysical Union

Society of Environmental Toxicology and Chemistry (past)

Coastal and Estuarine Research Federation

North American Benthological Society (now Soc. Freshwater Science, SfS; past)

Society of Wetlands Scientists

## **STUDENT ADVISEMENT/COMMITTEES**

Sophia Larson, BEES PhD program, expected graduation 2025, Advisor.

Lance Butler, BEES PhD Program, , expected graduation 2026, Committee Chair

Jacob Brauner, BEES PhD program, expected graduation 2025, Committee Chair

Lena Champlin; BEES PhD program, Chair and Committee Member, Graduated Summer 2023.

Christine Sealing, BEES PhD program, Committee Member, Graduated Summer 2023.

Katrine Fiocca, BIO PhD Program, Committee Member, Graduated Fall 2021.

LeeAnn Haaf, BEES PhD program, 2022, Chair and Committee Member; Graduated Spring 2022

Michelle Gannon, BEES PhD program, 2021, Major Advisor; Graduated Summer 2021

Johannes Krause, BEES PhD program, March 2021, Committee Chair; Graduated Spring 2021

Elizabeth Lang, Ph.D., 2019; Department of Chemistry and Biochemistry; George Mason University; Graduated, 2019 (External Committee Member)

Elisabeth Powell, MS, 2018; Department of Biodiversity, Earth and Environmental Science; Drexel University (Graduated, Currently at UMD; College Park)

Raffaella Marano, BS/MS, 2017; Department of Biodiversity, Earth and Environmental Science; Drexel University (Graduated; Currently at US EPA, Region III)

Anna Jaworski, Ph.D., 2016; Department of Biodiversity, Earth and Environmental Science; Drexel University (Graduated)

Kaitlin Tucker, M.S., 2015; College of Earth, Oceans and the Environment, University of Delaware (Graduated)

Steven Pearson, Ph.D.; 2013, Department of Biodiversity, Earth and Environmental Science; Drexel University (Graduated)

Youness Sharfi, Ph.D.; 2011, Department of Civil and Environmental, College of Engineering; Temple University (Graduated)

Niveen Ismail, M.S., 2010, Department of Biology, Temple University (Graduated; attended Stanford University; presently at Smith College)

Dack Stuart, M.S., 2010, College of Earth, Ocean, and Environment, University of Delaware (Graduated)

Matthew Gray, M.S., 2010, Department of Bioscience and Biotechnology; Drexel University (Graduated, presently at Oregon State University)

Erin McKinley, BS, 2010, Department of Environmental Studies, Northland College, Ashland, WI (NSF REU 2008)

Angie Huff, MES, 2007, College of General Studies, Master of Environmental Studies, University of Pennsylvania, Philadelphia, PA.

Marcel Vasquez, BS 2008, Philadelphia University, Department of Chemistry. NSF REU Student 2007 and Chemistry Intern (2007-2008).

Ashley Smyth; B.S., 2006 (Highest Honors), Department of Marine Sciences, Carolina Environmental Program, University of North Carolina at Chapel Hill (NSF REU 2005 Advisor and Senior Thesis Co-Advisor; Post-doc Fellow, VA Institute of Marine Science; (Currently at University of Florida; Homestead).

Lisa Methratta, Ph.D. 2002, Department of Biology; University of Pennsylvania. (Graduated)

Ms. Anne-Marie Compton-O'Brien, M.S., 2002, Department of Chemistry, Northern Arizona University, Flagstaff, Az.

Chris Osburn, Ph.D., 2000, Department of Earth and Environmental Sciences, Lehigh University (Currently at North Carolina State University)

Dana Dugan; Department of Chemistry, Philadelphia University, Summer Intern and Senior Thesis; 1999-2000

Alison Potash, Department of Oceanography, Coastal Carolina University, Summer Intern; 1999

Karin Werner, BS. 1996, Biology Department, Haverford College, Summer Intern

Nathaniel E. Ostrom, Ph.D., 1992, Department of Earth Sciences, Memorial University of Newfoundland, April, 1992. (Currently at Michigan State University; Associate Professor)

Susan Ziegler, BS, Senior Thesis, University of Massachusetts, Amherst; 1992 (Currently at Memorial University, St. Johns, Newfoundland).

### **CRUISE EXPERIENCE (selected)**

1990 to Present	Numerous small boats for tidal wetland research	Many days
2003	<b>R/V Bay Eagle</b> ; Anacostia River	2 days
1999	<b>R/V Discovery</b> ; Delaware and Schuylkill Rivers	Many Days
1995	<b>R/V Aquarius</b> ; Anacostia and Potomac River Chief Scientist: Dr. David Velinsky	3 days
1989	<b>R/V Clifford Barnes</b> . Saanich Inlet, B.C. Chief Scientist: Dr. Bradley M. Tebo	6 days

1989	<b>R/V Trygve Braarud.</b> Framvaren Fjord, Norway Chief Scientist: Dr. Jens Skei	10 days
1987 - 1988	<b>R/V Cape Henlopen.</b> Delaware River/Bay/Shelf Chief Scientist: Dr. Jonathan H. Sharp	30 days
1985	<b>R/V Cape Henlopen.</b> Chesapeake Bay/Shelf. Chief Scientist: Dr. Tom Church	5 days
1983	<b>USNS Bartlett.</b> Gulf Stream/Exuma Sound Chief Scientist: Dr. Adam Zsolany	10 days
1982	<b>USNS Lynch.</b> Sargasso Sea. Chief Scientist: Dr. David Reid	20 days

## **PUBLICATIONS**

- Velinsky, D.J. and T. Wilson. 202X. Nutrient and Carbon Fluxes to Barnegat Bay from Marginal Saline Wetlands. *Estuaries and Coasts* (In preparation).
- Aughenbaugh, K\*., M. Gannon and D. J. Velinsky 2024. The Influence of Bedrock Composition on Surface Water Chemistry in the Delaware River Basin (in preparation, Applied Aquatic Geochemistry; \*student)
- Brown, R, D. Charles, R. Horwitz, J.E. Pizzuto, K. Skalak, D.J. Velinsky and D.D. Hart. 2024. Size dependent effects of dams on river ecosystems, and implications for dam removal outcomes. (In press, *Ecological Applications*)
- Else-Quirk, T., E.B. Watson, K. Raper, D. Kreeger, B. Paudel, L. Haaf, M. Maxwell-Doyle, A. Padeletti, E. Reilly and D.J. Velinsky. 2022. Relationships between ecosystem properties and sea-level rise vulnerability of tidal wetlands of the U.S. Mid-Atlantic. *Environmental Monitoring and Assessment* 194, 292. <https://doi.org/10.1007/s10661-022-09949-y>
- Haaf, L., E.B. Watson, T. Else-Quirk, K. Raper, A. Padeletti, M. Maxwell-Doyle, D. Kreeger, D.J. Velinsky. 2022. Sediment accumulation, elevation change, and the vulnerability of tidal marshes in the Delaware Estuary and Barnegat Bay to accelerated sea level rise. *Estuaries and Coasts*, 45, 413-427 (<https://doi.org/10.1007/s12237-021-00972-9>)
- Velinsky, D.J. and J.F. Wehmiller 2020. 2018 Benjamin Franklin Medal in Earth and Environmental Science presented to Susan Trumbore. *Journal of the Franklin Institute*. 357(5): 2603-2611 (<https://doi.org/10.1016/j.jfranklin.2020.01.039>.)
- Fiocca, K., K. Capobianco, E. Fanwick, K. Moynahan, R. Congdon, P. Zelanko, D.J. Velinsky and S.O'Donnell. 2020. Reproductive physiology corresponds to adult nutrition and task performance in a Neotropical paper wasp: a test of dominance-nutrition hypothesis predictions. *Behavior Ecology and Sociobiology* 74 (114) 1-8 (online).

- Velinsky, D.J., B. Paudel and C.K. Sommerfield. 2020. Long term sediment accretion record in a tidal marsh of Delaware Bay. *Proceeding of the Academy of Natural Sciences* 167(1):83-103.
- Champlin, L, D.J. Velinsky, K. Tucker, C. Sommerfield, K. St. Laurent, and E.B. Watson, 2020. Carbon sequestration rate estimates in Delaware and Barnegat Bay tidal wetlands using interpolation mapping. *Data*, 5, 11; doi:10.3390/data5010011
- Keller, D.H, P.M Zelanko, J.E. Gagnon, R.J. Horwitz, H.S. Galbraith and D.J. Velinsky. 2018. Linking otolith microchemistry and surface water contamination from natural gas mining. *Environmental Pollution* 240: 437-465.
- Parette, R., D.J. Velinsky and W.N. Pearson. 2018. Reconstruction of historical 2,3,7,8 tetrachlorodibenzo-p-dioxin discharges from a former pesticides manufacturing plant to the Lower Passaic River. *Chemosphere*. 212: 1125-1132
- Holmquist, J.R., L. Windham-Myers, S. Crooks, J. Morris, J.P. Megonigal, T. Troxler, D. Weller, N. Bliss, J. Callaway, J. Drexler, M. Ferner, M. Gonneea, K. Kroeger, L. Schile, I. Woo, K. Buffinton, J. Breithaupt, B. Boyd, L. Brown, N. Dix, L. Hice Dutton, B. Horton, G. MacDonald, R. Moyer, T. Shaw, E. Smith, J.D. Smoak, C. Sommerfield, K. Thorne, D.J. Velinsky; E.B. Watson, K. Wilson, and M. Woodrey. 2018. Simple Empirical Relationships Estimate Tidal Wetland Soil Carbon Stock More Accurately and Precisely than High Resolution Soil Maps. *Nature Scientific Reports* 8: 947
- O'Donnell, S., K. Fiocca, M. Campbell, S. Bulova, P. Zelanko and D. Velinsky. 2018. Adult nutrition and reproductive physiology: a stable isotope analysis in a eusocial paper wasp (*Mischocyttarus mastigophorus*, Hymenoptera: Vespidae). *Behavioral Ecology and Sociobiology* 72: 86 [1–8]. <https://doi.org/10.1007/s00265-018-2501-y>
- Velinsky, D.J.; B. Paudel; T. Quirk; M. Piehler and A. Smyth, A., 2017. Salt marsh denitrification provides a significant nitrogen sink in Barnegat Bay, New Jersey. *Journal of Coastal Research* SI78 70-78.
- Paudel, B., N. Weston, L. Sutter, J O'Connor, and D.J. Velinsky. 2017. Phosphorus dynamics in the water column and sediments of Barnegat Bay, New Jersey. *Journal of Coastal Research* SI78: 60-69.
- Velinsky, D.J., B. Paudel, and C.K. Sommerfield. 2017. Tidal marsh record of nutrient loadings in Barnegat bay, New Jersey. *Journal of Coastal Research* SI78: 79-88.
- Desianti, N. M. Potapova, M. Enache, T. Belton, D.J. Velinsky, R. Thomas, and J. Mead. 2017. Sediment diatoms as environmental indicators in New Jersey coastal lagoons. *Journal of Coastal Research* SI78: 127-140.
- Unger, V., T. Elsey-Quirk, C. Sommerfield and D.J. Velinsky. 2016. Stability of organic carbon accumulating in *Spartina alterniflora*-dominated salt marshes of the mid-Atlantic US. *Estuarine Coastal and Shelf Science*. 182: 179-189.
- Nyphus, R. and others. 2016. Environmental Deans and Directors Call for NSF Climate Funding. *Science*. 352: 755-756.



- Ashley, J.T.F, R. Soroka, Y. Cintron, A. Sarno, L. Zaoudeh, D. J. Velinsky and J. Baker. 2016. Can polychlorinated biphenyls be removed from Chesapeake Bay by a commercial fishery? *Integrated Environmental Assessment and Management*, 2(12); 397–406.
- Paudel, B., D.J. Velinsky, T. Belton, and H. Pang. 2016 Spatial variability of estuarine environmental drivers and response by phytoplankton: A model based approach. *Ecological Informatics* 34 (2016) 1–12.
- Velinsky, D.J., H. Holland, and F.N Scatena. 2015. 2013 Benjamin Franklin Medal in Earth and Environmental Science presented to Robert Arbuckle Berner. *Journal of the Franklin Institute* 352(7): 2591-2595.
- Rowell, H.C, R.F. Bopp, F. Peng, D.J. Velinsky, and J.A. Bloomfield. 2015. Annually Laminated Sediments in Onondaga Lake, NY: high resolution stratigraphy for interpreting lake degradation and recovery. *Journal of Paleolimnology* 53: 107-121 (DOI 10.1007/s10933-014-9811-5)
- Weston, N.B, S.C. Neubauer, D.J. Velinsky and M.A. Vile. 2014. Net Ecosystem Carbon Exchange and the Greenhouse Gas Balance of Tidal Marshes along an Estuarine Salinity Gradient. *Biogeochemistry*: 120: 163-189. (August)
- Pearson, S.H., S.S. Kilham, D.J. Velinsky, J.R. Spotila, and H.W. Avery. 2013 Stable isotopes of C and N reveal habitat dependent dietary overlap between native and introduced turtles *Pseudemys rubriventris* and *Trachemys scripta*. *PLOS One* 8(5): e62891 (doi:10.1371/journal.pone.0062891)
- Smith, A.J., R.L. Thomas, J.K. Nolan, D.J. Velinsky, S. Klein, and B.T. Duffy. 2013. Regional nutrient thresholds in wadeable streams of New York State protective of aquatic life. *Ecol. Ind.* 29: 455-467.
- Elsley-Quirk, T., A. Smyth, M. Piehler, J. Mead and D.J. Velinsky 2013. Exchange of nitrogen through an urban tidal freshwater wetland in Philadelphia, PA. *Jour. Environ. Qual.* 42: 1-12.
- Ismail, N.S., D.J. Velinsky, J.T.F. Ashley and R.W. Sanders. 2013. Chorioallantoic membrane as a non lethal sampling method for polychlorinated biphenyls analysis in the northern diamondback terrapin (*Malaclemys terrapin terrapin*). *Chemistry and Ecology* 29(5): 391-4023.
- Ashley, J.T.F, J.S. Ward, C.S. Anderson, M.W. Schafer, L. Zaoudeh, R.J. Horwitz and D.J. Velinsky 2013. Children's daily exposure to polychlorinated biphenyls from dietary supplements containing fish oils. *Food Additives & Contaminants: Part A* (in press; online, DOI:10.1080/19440049.2012.753161)
- Ashley, J.T.F., M. A. Vasquez, P. Zelanko, E. McKinley, M. Schafer, L. Zaoudeh, R. Horwitz, H.M. Stapleton and D.J. Velinsky. 2012. Accumulation of polybrominated diphenyl ethers (PBDEs) and polychlorinated biphenyls (PCBs) in a tidal freshwater marsh. *Chemistry and Ecology* 28: 305-326.
- Bushaw-Newton KL, Ewers E, Fortunato CS, Ashley JT, Velinsky DJ, SE MacAvoy. 2012. Bacterial community profiles from sediments of the Anacostia River using metabolic and molecular analyses. *Environmental Science and Pollution Research* 19 (4): 1271-1279.
- Zelanko, P.M., N.H. Rice and D.J. Velinsky. 2011. Using carbon and nitrogen stable isotopes to distinguish the location of feather growth in Osprey. *Proceed. Academy of Natural Sciences* 161: 1-10.

- Bushaw-Newton K.L., E.C. Ewers, D.J. Velinsky, J.T.F. Ashley and S. MacAvoy. 2012. Bacterial community profiles from sediments of the Anacostia River using metabolic and molecular analyses. *Environmental Science and Pollution Research* 19: 1271-1279
- Velinsky, D.J., G.R. Riedel, J.T. Ashley and J.Cornwell 2011. A contamination history of the Anacostia River, Washington, D.C. *Environmental Assessment and Monitoring* 183(1): 307-328.
- Weston, N.B., M.A. Vile, S.C. Neubauer and D.J. Velinsky. 2011. Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. *Biogeochemistry* 102 (1-3):135-151.
- Stansley, W., D.J. Velinsky and R. Thomas. 2010. Mercury and halogenated organic contaminants in river otters (*Lontra Canadensis*) in New Jersey USA. *Environmental Toxicology and Chemistry*; 29: 2235-2242.
- Ashley, J.T.F., J.S. Ward, M.W. Schafer, H.M. Stapleton, and D.J. Velinsky. 2010 Polychlorinated biphenyls and polybrominated diphenyl ethers in fish oil supplements: Evaluating exposure and health risks. *Food Additives and Contaminants* 27(8): 1177-1185.
- Ashley, J.T.F., M.L. Webster, J.E. Baker, R. Horwitz, and D.J. Velinsky. 2009. Polychlorinated biphenyls in sediment and biota from the Delaware River estuary. *Proceedings of the Academy of Natural Sciences*. 158: 89-105
- McGee, B.L, A.E. Pinkney, D.J. Velinsky, J.T.F. Ashley, D.J. Fisher, L.C. Ferrington and T.J Norberg-King. 2009. Using the sediment quality triad to characterize baseline conditions in the Anacostia River, Washington, DC. *Environmental Monitoring and Assessment*: 156: 51-67
- Bushaw-Newton, K.L, D.A. Kreeger, S. Doaty, and D.J. Velinsky. 2008. Utilization of *Spartina*-and *Phragmites*-derived dissolved organic matter by bacteria and ribbed mussels (*Geukensia demissa*) from Delaware Bay salt marshes. *Estuaries and Coasts* 31: 694-703.
- Fairchild, G.W. and D.J. Velinsky. 2006. Effects of small ponds on headwater stream water chemistry. *Lake and Reservoir Management*. 22: 22(4): 321-330.
- Church, T.M., C. Sommerfield, D.J. Velinsky, D. Point, C. Benoit, D. Amouroux, D. Plaa and O. Donard. 2006. Marsh sediments as records of sedimentation, eutrophication and Metal pollution in the urban Delaware Estuary. *Marine Chemistry* 102(1-2): 72-95.
- Velinsky, D.J., K. Bushaw-Newton, T.E. Johnson and D.A. Kreeger. 2006. Effects of a dam removal in SE Pennsylvania on stream chemistry. *Journal of the North American Benthological Society (JNABS)* 25(3):569-582.
- Ashley, J.T.F., K. Bushaw-Newton, M. Wilhelm, A. Boettner, G. Drames, and D.J. Velinsky. 2006. The effects of small dam removal on the distribution of sedimentary contaminants. *Environmental Monitoring and Assessment* 114(1-3): 287-312.

- Fairchild, G.W., J.N. Anderson and D.J. Velinsky. 2005. The trophic state "chain of relationships" in ponds: does size matter? *Hydrobiologica* 539: 35-46.
- Bushaw-Newton, K.L., J. T. Ashley, and D.J. Velinsky. 2005. A Process for Assessing the Ecological Effects of a Proposed Dam Removal. *Hydroreview* 24(3): 36-44.
- Ashley, J.T.F., A. Moore, H. Stapleton, and D.J. Velinsky. 2003. Sedimentary nonylphenol contamination in an urbanized/industrialized segment of the Delaware River Estuary, USA. *Bull. Environ. Cont. Toxicol.* 70: 978-984.
- Hart, D.D., T.E. Johnson, K. Bushaw-Newton, R.J. Horwitz, A. Bednarek, D.F. Charles, D.A. Kreeger and D.J. Velinsky. 2002. Dam Removal: Challenges and Opportunities for Ecological Research and River Restoration. *Bioscience* 52(8): 669-681.
- Bushaw-Newton, K.L., D. D. Hart, T. E. Johnson, J. Pizzuto, J. Egan, M. Keeley, J. Lawrence, J. Thomson, J.T. Ashley, R.J. Horwitz, D. Charles, C. Gatenby, D.A. Kreeger, T. Nightengale, R.L. Thomas and D.J. Velinsky. 2002. An Integrative Approach Towards Understanding Dam Removal: The Manatawny Creek Study. *Jour. American Water Resources Association* 38(6): 1581-1600.
- Johnson T.E., W.C. Hession, D.F. Charles, R.J. Horwitz, D.A. Kreeger, B.D. Marshall, J.D. Newbold, J.E. Pizzuto and D.J. Velinsky. 2001. An interdisciplinary study of the ecological benefits of riparian reforestation in urban watersheds. In: *Proceedings of the World Water and Environmental Resources Congress* (ASCE), May 20-24, 2001, Orlando, FL, Section 1, Chapter 242.
- Foster, G.D., E.C. Roberts, B. Gruessner and D.J. Velinsky. 2000. Hydrogeochemistry and transport of organic contaminants in an urban watershed of Chesapeake Bay. *Applied Geochemistry* 15: 901-915.
- Hession, W.C., T.E. Johnson, D.F. Charles, D.D. Hart, R.J. Horwitz, D.A. Kreeger, J.E. Pizzuto, D.J. Velinsky, J.D. Newbold, T. Clason, A.M. Compton, N. Coulter, L. Fuselier, B.D. Marshall, and J. Reed. 2000. Ecological benefits of riparian reforestation in urban watersheds: Study design and preliminary results. *Environ. Monitor. Assess.* 63(1): 211-222.
- Velinsky, D.J. and M.L. Fogel 1999. Cycling of dissolved and particulate nitrogen and carbon in the Framvaren Fjord, Norway: Isotopic variations. *Marine Chemistry* 67: 161-180.
- Huanxin, W., B.J. Presley, and D.J. Velinsky. 1997. Distribution and sources of phosphorus in tidal river sediments in the Washington, D.C. area. *Environmental Geology* 30(3/4): 224-230.
- Pennock, J.R., D.J. Velinsky, J.L. Ludlam, J.H. Sharp, and M.L. Fogel. 1996. Isotopic fractionation of nitrogen during the uptake of ammonium and nitrate by *Skeletonema costatum*. *Limnology and Oceanography*. 41(3): 451-459.
- Velinsky, D.J., T.L. Wade, C. Schlekot and B.J. Presley. 1994. Tidal river sediments in the Washington, D.C. area. I. Distribution and sources of trace metals. *Estuaries*, 17: 305-320.
- Wade, T.L., D.J. Velinsky, E. Reinharz, and C.E. Schlekot. 1994. Tidal river sediments in the Washington, D.C. area. II. Distribution and sources of chlorinated and non-chlorinated aromatic hydrocarbons. *Estuaries*, 17: 321-333.

- Schlekat, C.E., B.L. McGee, D.M. Boward, E. Reinharz, T.L. Wade, and D.J. Velinsky. 1994. Tidal river sediments in the Washington, D.C. area. III. Biological effects associated with sediment contamination. *Estuaries*, 17: 333-344
- Fogel, M.L., L.A. Cifuentes, D.J. Velinsky, and J.H. Sharp. 1992. Carbon limitation during photosynthesis by estuarine phytoplankton. *Marine Ecology Progress Series*, 82: 291-300.
- Velinsky, D.J., D.J. Burdige and M.L. Fogel. 1991. Nitrogen diagenesis in marine sediments: Isotope effects. Carnegie Institution Yearbook; *Annual Report of the Director*, Geophysical Laboratory, 1990-1991, 2250, 154-162.
- Velinsky, D.J., J.F. Todd, B.M. Tebo and M.L. Fogel. 1991. Isotopic fractionation of dissolved ammonium in anoxic waters. *Geophy. Res. Letters*: 18(4): 649-652.
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## **ABSTRACTS AND PRESENTATIONS**

Johnston, M\*, S. Larson, M. Gannon, L. Champlin and D. Velinsky 2024. Project-based pedagogy as a tool for monitoring water quality in local Philadelphia Watersheds. Society of Freshwater Science Annual Meeting, Philadelphia, June 2024. \* Student

Aughenbaugh, K\*, M. Gannon and D. Velinsky 2024. The Influence of Bedrock Composition on Surface Water Chemistry in the Delaware River Basin. Society of Freshwater Science Annual Meeting, Philadelphia, June 2024. \* Student

Newman, M., D. Ward, D. Velinsky, K Longwill and R. Thomas. 2024. Freshwater mussel survey of shallow-water habitats within Lake Lacawac, USA. Society of Freshwater Science Annual Meeting, Philadelphia, June 2024.

Bala PR, A Bauer, D Velinsky, K Morrison. 2021. Using Stable Carbon and Nitrogen Isotopes to Understand Paleoenvironments and Historical Land-Use Around a Culturally Modified Hill-Top Reservoir at Kadabakele, Tungabhadra ...American Geophysical Union Fall Meeting.

Gannon ME, Watson EB, Oczkowski A, Raper K, Velinsky DJ. 2019. Stable Isotope (CNS) variability in modern and historical fauna of Barnegat Bay, NJ. Geological Society of America Annual Meeting, Phoenix, AZ. Poster Presentation

Gannon ME, Velinsky DJ, Romanek CS . 2019. Detangling stable carbon isotopes in giant clam shells: Discrepancies between shell layers and the Suess Effect. Geological Society of America Annual Meeting, Phoenix, AZ. Poster Presentation

Gannon ME, Watson EB, Oczkowski A, Raper K, Velinsky DJ. 2019. Spatial and temporal variability of CNS stable isotope systematics in flora and fauna of Barnegat Bay, NJ. Coastal and Estuarine Research Federation Biennial Conference. Oral Presentation

Champlin, L., D.J. Velinsky, K. Collins, C.S. Sommerfield, K. St Laurent, and E.B. Watson. 2019. A comparison of annual and decadal-scale carbon sequestration rates in New Jersey, Pennsylvania, and Delaware tidal wetlands using interpolation mapping. Society of Wetland Scientist Annual Meeting, May 28, Baltimore, MD.

Fiocca, K; E. Fanwick, K. Moynahan, K. Capobianco, P. Zelanko, D.J. Velinsky, S. O'Donnell 2019. Effects of nutritional physiology on reproductive caste in a eusocial tropical paper wasp (*Mischocyttarus pallidipectus*). Joint Ecological Society of America and USSEE Meeting, August. 2019. Louisville, Ky.

Champlin, L., D.J. Velinsky, C. Sommerfield, K. Raper, L. Haaf, K. St. Laurent, T. Quirk, and E.B. Watson. 2018. A comparison of annual and decadal-scale carbon sequestration rates in New Jersey, Pennsylvania, and Delaware tidal wetlands using interpolation mapping. Poster presentation at the Delaware Wetlands Conference, January 31 – February 2, 2018, Wilmington, DE.

Raper, R. L. Haaf, T. Quirk, M. Maxwell-Doyle, E.B. Watson, D. J. Velinsky, D. Kreeger, and A. Padeletti. 2018. The relative importance of elevation change and hypsometry as benchmarks for coastal wetland vulnerability to sea level rise. Poster presentation at the Delaware Wetlands Conference, January 31 – February 2, 2018, Wilmington, DE.

- Raper, R. L. Haaf, T. Quirk, M. Maxwell-Doyle, E.B. Watson, D. J. Velinsky, D. Kreeger, and A. Padeletti. 2018. The relative importance of elevation change and hypsometry as benchmarks for coastal wetland vulnerability to sea level rise. Poster presentation at the Atlantic Estuarine Research Society, March 21, 2018, Rehoboth Beach, DE.
- Velinsky, D.J., J. Cornwell, M. Owens, D. Walsh, and J. Kardos. 2017. Extensive Biogeochemical Sampling of the Sediment and Water Column in the Tidal Freshwater Delaware River, 2012-2014. Presentation delivered at the Delaware Estuary Science and Environmental Summit meeting, Cape May, NJ, January 2017.
- Watson, E, R. Martin, K. Wasson, K. Beheshti, E. Powell, D. Velinsky and C. Wigand. 2017. Do Nitrous Oxide Emissions Offset Potential Greenhouse Gas Mitigation Benefits of Wetland Restoration in Eutrophic Estuaries? Presentation delivered at the Delaware Estuary Science and Environmental Summit meeting, Cape May, NJ, January 2017
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- Rahman, F.R. Watson, E.B., A.J. Oczkowski, K. Raper, A.B. Gray, C. Wigand, and D. Velinsky, F.I. Rahman. 2016. Impacts of episodic storms on coastal wetland processes in the Northeastern U.S. American Geophysical Union Fall Meeting, 12-16 December 2016, San Francisco, CA.
- Raper, K., T. Elsey-Quirk, D. Velinsky, D. Kreeger, A. Padeletti, and M. Maxwell-Doyle, and E.B. Watson. 2016. Intensive long-term monitoring in tidal wetlands of Delaware and Barnegat Bays. Fall Meeting of the New England Estuarine Research Society: Block Island, RI, 20-22 October 2016.
- Raper, K., E.B. Watson, and D.J. Velinsky. 2016. Impacts of episodic storms on an urban freshwater wetland. The Atlantic Estuarine Research Society Fall Meeting: Baltimore, MD, 18-20 November, 2016.
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- Paudel, B., D.J. Velinsky, N. Weston, and G. Keighton (student). 2015. Phosphorus Dynamics in the Barnegat Bay. Oral Presentation at Coastal and Estuarine Research Federation, Bi-annual Meeting, Portland, OR (November, 2015)
- Tucker, K.J., C.K. Sommerfield, and D.J. Velinsky. 2015. Time dependence of carbon accumulation in Delaware tidal marshes. Oral Presentation at Coastal and Estuarine Research Federation, Bi-annual Meeting, Portland, OR (November, 2015)
- Velinsky, D.J., C.K. Sommerfield and T. Quirk. 2015. Carbon, nitrogen and phosphorus sequestration in Delaware River tidal wetlands. Poster Presentation at Coastal and Estuarine Research Federation, Bi-annual Meeting, Portland, OR (November, 2015)
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- Soroka, R., A. Sarna, Y. Cintron, J.T.F. Ashley, L. Zaoudeh, D.J. Velinsky and J.E. Baker. 2015. Quantifying Polychlorinated Biphenyl Removal from the Chesapeake Bay by a Commercial Fishery. CPRC SETAC Annual Spring Meeting; Friday April 24th, 2015; Robinson Nature Center, Columbia, MD
- Raper, K., T. Elsey-Quirk, D.J. Velinsky, D. Kreeger, A. Padeletti, and M. Maxwell-Doyle. Variation in Recent Marsh Accretion along Delaware and Barnegat Bays. Poster presentation delivered at the Delaware Estuary Science and Environmental Summit meeting, Cape May, NJ, January 2015. <http://delawareestuary.org/node/243>
- Raper, K and D.J. Velinsky. Continued Monitoring of the Largest Freshwater Tidal Wetland in Pennsylvania with Implications for Sea Level Rise and Conservation Strategies. Oral presentation to the Delaware Valley Regional Planning Commission for potential funding under the Coastal Zone Management Program, Philadelphia, PA, December 2014.
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- Zelanko, P., E. McKinley, J.T.F. Ashley, M. Vasquez, R. Horwitz, and D.J. Velinsky. 2009 Trophic Relationships within Tinicum Marsh, Philadelphia, PA: Insights from the Stable Isotopes of Carbon and Nitrogen. Presented at the 2009 Delaware Estuary Science Conference, Cape May, NJ.
- Velinsky, D.J. 2008. Impact of Climate Change on the Water Quality and Biogeochemical Processes. Presented at workshop hosted by Academy and Partnership for the Delaware Estuary (May, 2008); *Climate Change in the Delaware Estuary*. The Academy of Natural Sciences (Forum and Town Square) (Invited).
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- Velinsky, D.J., G.F. Riedel, J. Ashley, G. Foster, and C. Schultz. 2004. Spatial and temporal changes in trace contaminants in the tidal Anacostia River after precipitation events. Pg. 148 (talk 668). Presented at the 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Portland, OR, November, 2004.
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- Velinsky, D.J., Riedel, G.F., Foster, G.D. 1999. The effects of stormwater runoff on the Anacostia River, America's archetypical urban river. Society of Environmental Toxicology and Chemistry; 20<sup>th</sup> Annual Meeting. November 1999.
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- Doelling Brown, P., B.S. Crimmins, D. Kelso, G.D. Foster and D. J. Velinsky. 1999. Differential PCB bioaccumulation as a function of dietary composition in fish from an urban tidal river. Society of Environmental Toxicology and Chemistry; 20<sup>th</sup> Annual Meeting. November, 1999.

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- Velinsky, D.J., G.F. Riedel, and G.D. Foster. 1998. Effects of Stormwater Runoff on the Water Quality of the Tidal Anacostia River. Presented at *Federally Supported Science and The Chesapeake Bay Program*, Patuxent National Wildlife Center, December 9-10, 1998.
- Velinsky, D.J., W.C. Hession, D.A. Kreeger, H. Hertler, P. Kiry, L. Misuria, R.T. Field and K.R. Philipp. 1998. Mass Balance of Nitrogen and Phosphorus in Tidal Freshwater Wetlands of the Upper Delaware Estuary. Presented at *Concepts and Controversies in Tidal Marsh Ecology*, Vineland NJ, April 5, 1998.
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- Velinsky, D.J., T.L. Wade, E. Reinharz, C.E. Schlekat, and B.L. McGee. 1992. Sources of organic contaminants to the sediments of the Anacostia and Potomac rivers around Washington, D.C. *Transactions of the American Geophysical Union (EOS)* 73(14):164.
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- Velinsky, D.J. 1987. Geochemistry of selenium in a coastal salt marsh. Dissertations Symposium on Chemical Oceanography (DISCO VII), East-West Center, Honolulu, Hawaii. (Invited)
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- Velinsky, D.J., T. Quirk, M. Piehler, and A. Smyth. 2013. Ecosystem Services of Tidal Wetlands in Barnegat Bay: Nitrogen removal. Final Report submitted to NJ Department of the Environment. PCER Report No. 13-06The Academy of Natural Sciences of Drexel University, Philadelphia, PA.
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- Velinsky, D.J., C. Sommerfield, M. Enache, and D.Charles. 2010. Nutrient and Ecological Histories in Barnaget Bay, New Jersey. PCER Report No. 10-5; Final Report submitted to New Jersey Department of the Environment (Trenton, NJ).
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- Velinsky, D.J., J.T.F. Ashley and G.R.Riedel. 2005. River Sediment Investigation near Poplar Point in the tidal Anacostia River, Washington, DC. Submitted to Ridolfi Engineers (Seattle, WA) and NOAA (Seattle, WA).
- Pinkney, A.E., B.L. McGee, P.C. McGown, D.J. Fisher, J.T.F. Ashley and D.J. Velinsky. 2004. Using the Sediment Quality Triad to Characterize Toxic Conditions in the Chesapeake Bay (2002): An assessment of tidal river segments in the Bohemia, Elk, Northeast, and Severn Rivers. Submitted by the US Fish and Wildlife Service, Chesapeake Bay Program Office to US EPA Chesapeake Bay Program, Annapolis, MD.

- Ashley, J., D.J. Velinsky, M. Wilhelm, J. Baker, D. Secor and M. Toaspern. 2003. Bioaccumulation of Polychlorinated Biphenyls in the Delaware River Estuary. Submitted to Delaware River Basin Commission.
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- Fairchild, G.W., D.J. Velinsky and J. Bowers. 2003. Small Pond Ecology and Management: The effects of nutrients on shallow-water ecosystems in Chester County, PA. Submitted to the State of Pennsylvania as part of a Growing Greener Project.
- Johnson, T.E., W.C. Hession, D.F. Charles, D.D. Hart, R.J. Horwitz, T.E. Johnson, D.A. Kreeger, B. Marshall, J.E. Pizzuto & D.J. Velinsky. 2002. Riparian Reforestation in an Urbanizing Watershed: Effects of Upland Conditions on Instream Ecological Benefits. Final Report to the U.S. EPA. STAR Program, Contract # R 825798-01-0.
- Velinsky, D.J. and J.T.F. Ashley. 2001. Deposition and Spatial Distribution of Sediment-bound Contaminants in the Anacostia River, District of Columbia. Report No. 01-30. Final Report Submitted to the District of Columbia. Patrick Center for Environmental Research, The Academy of Natural Sciences, Philadelphia, PA.
- Schultz, C. and D.J. Velinsky. 2001. Collection of Field Data for the Transport of Sediments in the Anacostia River. District of Columbia, Department of Health, Environmental Health Administration. Washington, DC.
- Bouchard, R., F. Acker, D. Charles, T. Nightengale, R. Horwitz, D.J. Velinsky, R. Davis, R. Thomas & J. McNair. 2001. 2000 Sabine River Studies for the Eastman Chemical Company, Texas Operations. Rept. No. 01-8F. Patrick Center for Environmental Research, ANSP, Philadelphia, PA. 249 pp.
- Bouchard, R., F. Acker, D. Charles, T. Nightengale, R. Horwitz, D.J. Velinsky, R. Davis & R. Thomas. 2001. Biological and Chemical Studies of the Guadalupe River, 2000. Rept. No. 01-10F. Patrick Center for Environmental Research, ANSP, Philadelphia, PA. 136 pp.
- Velinsky, D.J., S. Gibbons, P. May, and J. Ducnuigeen. 2000. Seasonal Transformation and Fluxes of Nitrogen, Carbon and Phosphorus in a Tidal Freshwater Marsh. Final Report. Submitted to: USGS Patuxent Wildlife Research Center, Laurel, MD.
- Velinsky, D.J. and A. Potash. 1999. Atmospheric deposition of nitrogen and phosphorus in the Philadelphia region. Final Report. Submitted to the Environmental Associates, Academy of Natural Sciences, Philadelphia, PA.
- Horwitz, R.J., D.J. Velinsky, P. Overbeck and P. Kiry. 1999. Phase II assessment of total mercury concentrations in fishes from rivers, lakes and reservoirs of New Jersey. Report No. 99-7R. Prepared for NJ DEP, Office of Science and Research. June, 1999. Patrick Center for Environmental Research, The Academy of Natural Sciences, Philadelphia, PA.

- Velinsky, D.J. and J.E. Baker. 1999a. Relative importance of point and non-point sources of chemical contaminants to Chesapeake Bay. Chapter 8. In: *Chesapeake Bay Basin Toxics Loading and Release Inventory*. EPA 903-R-99-006/ CBP/TRS 222-100, May 1999, Chesapeake Bay Program, Annapolis, MD.
- Velinsky, D.J. and J.E. Baker. 1999b. Mass balance of chemical contaminants within Chesapeake Bay. Chapter 9. In: *Chesapeake Bay Basin Toxics Loading and Release Inventory*. EPA 903-R-99-006/ CBP/TRS 222-100, May 1999, Chesapeake Bay Program, Annapolis, MD.
- Velinsky, D.J. and A.M. Compton. 1999. Distribution and Cycling of Nitrogen and Phosphorus in the Jackson River, Covington, VA. Submitted to Westvaco Corporation, Covington, VA. Patrick Center for Environmental Research, The Academy of Natural Sciences, Philadelphia, PA.
- Velinsky, D.J., G.F. Riedel and G.Foster. 1999. Effects of Stormwater Runoff on the Water Quality of the Tidal Anacostia River. PCER Report #99-6. Submitted to U.S. EPA Region III. The Academy of Natural Sciences, Patrick Center for Environmental Research, Philadelphia, PA.
- Velinsky, D.J., D.A. Kreeger, W.C. Hession, R.T. Field and K.R. Philipp. 1998. Impact of Aquatic Vegetation on Water Quality of the Delaware River Estuary. ANSP Report #98-5. Prepared for the Delaware River Basin Commission. The Academy of Natural Sciences, Patrick Center for Environmental Research, Philadelphia, PA.
- Boyd, T. J., M. T. Montgomery, B. J. Spargo, R. B. Coffin, J. K. Steele, J. P. Pohlman, and D. Velinsky. 1999. Characterization of intrinsic bioremediation within the Philadelphia Naval Complex Reserve Basin. NRL technical report. NRL/PU/6115-99-374. Naval Research Laboratory, Washington, D.C.
- Hession, W.C and D.J. Velinsky. 1997. Nutrient and contaminant loads from the San Antonio and Guadalupe Rivers. ANSP Report 97-3. Academy of Natural Sciences, Philadelphia, PA, 54 pp.
- Gruessner, B., D.J. Velinsky, G.Foster, J. Scudlark, T.M. Church and R. Mason. 1997. Dissolved and particulate transport of chemical contaminants in the Northeast and Northwest Branches of the Anacostia River. ICPRB Report #97-2. Prepared for the DCRA, District of Columbia. Interstate Commission on the Potomac River Basin, Rockville, MD.
- Velinsky, D.J., M. Ziegenfuss and R. Horwitz. 1997. Characterization of the Aquatic Habitats and Resources near the Philadelphia Naval Complex Part II: Recommendations for Identification of Data Needs for Sediment Risk Management. Department of the Navy, Northern Division; Naval Facilities Engineering Command. Under contract to: EA Engineering, Science, and Technology, Hunt Valley, MD.
- Velinsky, D.J., T.L. Wade, B. Gammisch, and J. Cornwell. 1997. Sediment Deposition and Inventory of Chemical Contaminants in the Tidal Anacostia River, Washington, D.C. ICPRB Report #97-2. Interstate Commission on the Potomac River Basin, Rockville, MD.
- Velinsky, D.J. 1997. A Chemical Contaminant Mass Balance Framework for Chesapeake Bay. EPA 903-R-97-016, CBP/TRS 176/97. Chesapeake Bay Program Office, U.S. Environmental Protection Agency, Annapolis, MD.

Velinsky, D.J., R. Horwitz, P. Kiry, P. Overbeck and M. Ziegenfuss. 1996. Characterization of the Aquatic Habitats and Resources near the Philadelphia Naval Complex. Report No. 96-18. The Academy of Natural Sciences of Philadelphia, Patrick Center for Environmental Research, Philadelphia, PA.

Velinsky, D.J. and J.C. Cummins. 1996. Distribution of Chemical Contaminants in 1993-1995 Wild Fish Species in the District of Columbia. ICPRB Report # 96-1. Interstate Commission on the Potomac River Basin, Rockville, MD.

Velinsky, D.J. 1994. Loading estimates for specific chemical contaminants to Chesapeake Bay. Chesapeake Bay Environmental Effects Studies: Toxics Research Program, 1993 Workshop Report, Virginia and Maryland Sea Grant College Programs, VSG-94-14 and UM-SG-TS-94-03.

Velinsky, D.J. and J.C. Cummins. 1994. Distribution of chemical contaminants in wild fish species in the Washington, D.C. area. ICPRB Report # 94-1. Interstate Commission on the Potomac River Basin, Rockville, MD.

Velinsky, D.J., J. Cornwell, and G. Foster. 1994. Effects of dredging on the water quality of the Anacostia River. ICPRB Report # 94-2; Interstate Commission on the Potomac River Basin, Rockville, MD

Velinsky, D.J., C.H. Haywood, T.L. Wade, and E. Reinharz. 1992. Sediment contamination studies of the Potomac and Anacostia Rivers around the District of Columbia. Interstate Commission on the Potomac River Basin Report # 92-2. ICPRB, Rockville, MD.

Pang, T.K., D.J. Velinsky, S. Schwartz, and H.C. Haywood. 1990. The Potomac River Model: Data Report. Interstate Commission on the Potomac River Basin Report # 90-9. ICPRB, Rockville, MD.

## **PUBLIC OUTREACH**

Multiple interviews for WHYY, Inquirer, Fox News and others (2016-2023)  
GRID Magazine, FOX29 News, KYW, others

What's In the Water: Article in *Boston Herald American*; 1978

Mercury in Fish from the Local Area; Article in *Philadelphia Inquirer*; 2003

Remains of the Monitor Faces a Corrosive Enemy: Article in *Philadelphia Inquirer*; 2005

Muck tells a story for scientists to read. Article in *Wilmington News Journal*, November 4, 2007.

Interviews for articles in *Time*, NPR, *Philadelphia Inquirer*, *Metro* Newspaper (Philly) and others.

Lectures for public including ANSP's Town Square; High School Teacher Workshops, Har Zion Day School; Friends Central School (2001-2019).

Quoted in article in *The Press of Atlantic City* "EPA Climate Change Study to target the Delaware

Estuary”, June 30, 2008.

Quoted in article in *The Philadelphia Inquirer*, December 7, 2009: “Assessing Delaware River with dynamic diatoms” by Tom Avril.

Introduced the Philadelphia movie premiere of “The End of the Line” a film shown at the Sundance Film Festival focusing on the depletion of fish in the world’s oceans (June 2009).

Moderated Town Square at the Academy of Natural Sciences entitled: “*Health Care, Food Safety, and Antibiotics*.” Sponsored by the The Pew Charitable Trusts (July 2009)

Moderated Town Square at the Academy of Natural Sciences entitled: “*Marcellus Shale: The Science and The Policy*”. Sponsored by the Academy of Natural Science (April, 20, 2010).

Science on Tap: The Slippery Facts about Oil Spills at the National Mechanics Pub (May 25, 2010).

Quoted in article in *The Philadelphia Inquirer*, August 16, 2010; “What will gobble the spilled oil” by Faye Flam

Quoted in article in *The Philadelphia Inquirer*, October 12, 2010; “Study sees threat in shale gas drilling” by Sandy Bauers (front page, above the fold!)

Interviewed by WHYY, KYW and AP for articles about the Marcellus Shale and Climate Change (2010-2011).

Interviewed for video about the Academy and research (D. Keller); video hosted on Vermont Public Radio (Fall, 2010)

Philadelphia Magazine, Was Al Gore Right? How to Buy a Shore House Now. May 24, 2015.

Op-ed; Philadelphia Inquirer (September 23, 2015); Papal Visit brings Climate Change Home

### **INVITED SEMINARS**

2018 Friends Central School, Wynnewood, PA  
Sponsor: Emma Velinsky

2017 Drexel University; Chemistry Department  
Sponsor: Dr. Fraser Flemings

2016 New Jersey Institute of Technology, Newark NJ  
Sponsor: Dr. Michel Boufadel

Stockton University; Department of Geosciences  
Sponsor: Dr. Susanne Moskalski

Pinelands Commission of New Jersey

- Sponsor: Dr. John Bunnell
- 2012 Chinese Academy of Science; Geographical Institute; Beijing, China  
Sponsor: Dr. Li
- 2011 University of Pennsylvania, Perelman School of Medicine/Center for Excellence in Environmental Toxicology  
Sponsor: Dr. Trevor Penning
- 2010 Villanova University, Department of Environmental Sciences,  
Sponsor: Dr. Nat Weston
- 2009 St. Joseph's University, Department of Biology, 8<sup>th</sup> McGroddy Science Lecture Series.  
Sponsor: Dr. Jonathan Fingerut
- US Environmental Protection Agency, Region III. Water Resources Group.  
Sponsor: Mr. Thomas Belton
- 2008 Zhejiang Ocean University at 2008 Zhoushan National Symposium on Mariculture, Zhejiang, China
- Academy of Natural Sciences; Climate Change in the Delaware Estuary  
Presented at workshop hosted by Academy and Partnership for the Delaware Estuary
- 2007 Philadelphia University, Department of Biology  
Sponsor: Dr. Jeff Ashley
- University of Pennsylvania, Department of Biology, EcoLunch  
Sponsor: Ms. Emma Aronson
- 2006 American University. Department of Biology,  
Sponsor: Dr. Karen Bushaw-Newton
- Pennsylvania State University, York. Department of Biology  
Sponsor: Dr. Matt Hotch
- 2005 American Philosophical Society, Town Square  
Sponsor: Dr. D. James Baker
- Philadelphia Water Department; Environmental Section  
Sponsor: Ms. Paula Connolly
- 2003 George Mason University, Department of Chemistry  
Sponsor: Dr. Gregory Foster
- 2002 Johns Hopkins University, Advanced Academic Graduate Program; Environmental Science and Policy Program. Class Lecture  
Sponsor: Mr. Chris Swarth

- University of Pennsylvania, Department of Biology.  
Sponsor: Dr. Peter Petratis
- 2000 Drexel University, School of Environmental Science, Engineering, and Policy  
Sponsor: Dr. Clarie Welty  
Patuxent Wildlife Research Center, United States Geological Survey  
Sponsor: Dr. Richard Hammerschlag
- Philadelphia University, Department of Environmental Science  
Sponsor: Dr. William Brendley, Jr.
- 1997 The American University, Department of Biology  
Sponsor: Dr. W.C. Banta
- 1996 Drexel University, School of Environmental Science, Engineering, and Policy  
Sponsor: Dr. Clarie Welty
- 1995 Sigma XI Chapter, The Academy of Natural Sciences  
Sponsor: Dr. Dominique Didier Davit
- 1993 Lehigh University, Department of Earth and Environmental Sciences  
Sponsor: Dr. Gray Bebout
- 1992 National Oceanic and Atmospheric Administration, NOS/ORCA  
Sponsor: Dr. Nathalie Valette-Silver
- Smithsonian Institution, Smithsonian Environmental Research Center  
Sponsor: Dr. David Correll
- University of South Alabama, Department of Marine Sciences  
Sponsor: Dr. Erich Mueller
- 1991 University of Toronto, Department of Geology  
Sponsor: Dr. Jeff Fawcett
- Florida International University; Department of Chemistry  
Sponsor: Dr. William Cooper
- University of Uppsala, Department of Limnology  
Sponsor: Ms. Katarina Vrede/ Dr. Russell Bell
- The Academy of Natural Sciences, Division of Environmental Research;  
Sponsor: Dr. John Sherman
- 1990 Old Dominion University, Department of Oceanography;  
Sponsor: Dr. David J. Burdige

American Chemical Society, Division of Geochemistry, "Progress in Marine Chemistry", Special session in honor of Dr. E. D. Goldberg;  
Sponsor: Dr. Thomas M. Church

Carnegie Institution of Washington, Geophysical Laboratory;  
Sponsor: Dr. Francis Boyd

1989 Chalmers University of Technology and University of Goteborg,  
Department of Analytical and Marine Chemistry.  
Sponsor: Dr. David Dyrssen

University of Florida, Department of Fisheries and Aquaculture.  
Sponsor: Dr. Claire Schelske

1988 Oak Ridge National Laboratory, Environmental Sciences Division.  
Sponsor: Dr. Patrick J. Mulholland

United States Geological Survey, Water Resources Division.  
Sponsor: Dr. Carol Kendall

## **LEADERSHIP ACTIVITIES**

As Department Head, Department of Biodiversity, Earth and Environmental Sciences (BEES; 2012 to September 2023) and as Vice President for the Center of Academy Science (CAS; from 2012 to 2021) at the Academy of Natural Sciences of Drexel University I have worked directly or with a team in these areas

### **Academy Management, Finance and Budget:**

- Work with President and senior leaders of Academy for overall Academy management
- CAS Annual budget ~\$5-6M varies by  $\pm$ \$1M
- Current endowment and bequests to science group ~ \$35.5M
- Work with Museum's development team to align donors with Science and Museum research goals.
- New Department gifts include (direct or assisted in obtaining over the years):
  - Anonymous Donor-1 for staff support (\$2.5M)
  - McLean Endowment for student research (\$500,000)
  - Anonymous donor-2 for environmental research (\$50,000)
  - Bales Endowment of Co-Op support (~\$100k)
  - Various foundation proposals (>\$200,000)

### **Center for Academy Science Development**

- Maintained integration of three units into CAS (Patrick Center, Systematics/Evolution, and Collections and library/archives)
- Developed and implemented CAS Strategic Management Plan
- Encouraged cross-disciplinary research and integration with BEES and other Drexel departments
- Enhanced research direction into broader human impacts



- Developed public engagement and outreach for CAS with Academy (i.e., Town Squares; Academy Conversations, Research Day)

#### **BEES Finance and Budget:**

- Annual budget ~\$3.5M varies by ~±\$0.5M (for BEES)
- Work with Drexel IA on various proposals including MacArthur Fellowship Proposal (\$100M)
- Interface between Academy and Drexel budget process

#### **BEES Faculty Relations:**

- Assisted transition in the transition in teaching remotely for faculty (weekly/quarterly meetings COVID)
- Increased faculty collaboration through creating a common vision, seed grants, and more
- Oversaw and developed Department By-Laws and other department policies
- Oversee 14 faculty, 5 support staff, 2 postdocs, 140 undergraduate and 40 graduate students
- Generated 5 new faculty positions in 4 years (all early to mid-career preeminent scientists with large robust start-up packages; increased faculty diversity)
- Oversee all faculty hiring, promotion and tenure, performance reviews, performance
- Established specific research goals for scientist and faculty, and performance improvement plans for those who do not meet those goals
- Improvement plans, and termination. Mentor pre-tenured faculty
- Resolve personnel disputes; respond to grievances, disciplinary actions and legal issues.

#### **Academic Programs:**

- Helped to form, develop and integrate scientists and curators from Academy into Drexel's Academic environment
- Organized and oversaw the launch of two new majors in department
- Organized and initiated strategic planning process for department
- Stewarded and finalized departments Performance Activity Review (2017 PAR)
- Provide conflict resolution between faculty staff and students (and others)
- Developed plans to better evaluate faculty teaching and potential overlap of course material
- Developed BEES Summer Camp (3 locations) for student outreach and enrollment

#### **External Relations:**

- Coordinated site to increase visibility of research for both CAS and BEES
- Worked with Communications to track outreach in social and traditional media
- Coordinate outreach participation in events like Earth Day, Dinofest, etc at Academy
- Contribute to yearly annual report for Academy

#### **Academy Board Relations:**

- Work directly with Academy Board of Trustees (includes President and CFO of Drexel)
- Staff coordinator for Science Committee of Academy Board (currently being reformed)
- Maintain an active relationship with all board members
- Report on CAS and BEES departmental activities at monthly board meetings
- Member of the Academy strategic planning team 2012-2018 (completed)
- Member of the Academy strategic planning team 2018-2022 (completed; never stops)

- Developed quarterly and annual activity database for CAS (i.e., CAS Dashboard)

**University and College Initiatives:**

- Serve on the two University wide Strategic Planning Committees including that for Research and Sponsored programs
- Interfaced with SVP for Facilities in the development for departmental space for BEES
- In College of Arts and Sciences, initiated broader engagement across departments for the environment (Engaging the Environment).
- Promotion and Review Committee for CoAS department heads

**Student Relations:**

- Oversee ~40 graduate students (27 PhD) and started Curatorial Assistantship for Academy
- Oversee ~150 undergraduate students' performance and worked with Academy Director
- Oversee departmental committees, retreats, student mixers, brownbag lunch seminars, and student grants and awards
- Meet with students who have issues or concern whether personal or professional; maintain open door policy