

DANIEL D. SNOW

Research Professor, 10% Teaching, 45% Research, 45% Service

Areas of Interest: Environmental Analytical Chemistry, Emerging Contaminants, Isotope Analysis, Bioremediation

Contact: 202 Water Sciences Laboratory, School of Natural Resources and Nebraska Water Center, a part of the Robert B. Daugherty Water for Food Institute, University of Nebraska-Lincoln
Lincoln, NE 68583-0844, p. 402/472-7539, f. 402/472-9599, dsnow1@unl.edu

EDUCATION

B.S. Geology, Missouri State University (1982)

M.S. Geochemistry, Louisiana State University (1988) Thesis: *Pore Water Chemistry in Sediments of an Abandoned Mississippi River Delta Complex*. Louisiana State University. 145 p.

Ph.D. Geochemistry, University of Nebraska-Lincoln (1996). Dissertation: *Geochemistry, Hydrology, and Environmental Applications of Uranium-Series Nuclides in the Platte River Drainage Basin*. University of Nebraska-Lincoln. 159 p.

PROFESSIONAL EXPERIENCE

2018-present Laboratory Director/Research Professor, University of Nebraska

2007-2018 Laboratory Director/Research Associate Professor, School of Natural Resources/Nebraska Water Center, University of Nebraska-Lincoln.

2009-2012 Adjunct Professor. Department of Biology. Nebraska Wesleyan University.

2003-2007 Laboratory Director/Research Assistant Professor, School of Natural Resources/Water Center, University of Nebraska-Lincoln.

1998-2003 Environmental Chemist/Research Assistant Professor, Water Sciences Laboratory, University of Nebraska-Lincoln.

1990-1998 Laboratory Manager, Water, Center/Water Sciences Laboratory, University of Nebraska-Lincoln.

1986-1989 Graduate Research Assistant, Conservation and Survey Division, University of Nebraska-Lincoln.

HONORS AND AWARDS

- Association of Environmental Engineers and Scientists Grand Prize for University Research (2015)
- Water Center Impact Award for USGS104b project, co-PI with Karrie Weber (2011)
- NU College of Engineering Multidisciplinary Research Award- EPA STAR Grant Project (2010)
- District Award of Merit, Cornhusker Council, Boy Scouts of America (2009)
- Certificate of Merit, National Meeting Presentation, American Chemical Society (2002)
- Graduate Faculty Member, Institute of Agriculture and Natural Resources (IANR) (2000)
- IANR Team Effort Award, MSEA Water Quality Project (1997)
- Research Fellowship, Association of Ground Water Scientists and Engineers (1995)
- Research Fellowship, Nebraska Research Initiative Water Resources Program (1988-89)
- Chevron Field Fellowship (1985)
- Gulf Coast Association of Geological Societies Scholarship (1985)

SCHOLARLY SERVICE

Served as manager and subsequently director for the UNL Water Sciences Laboratory for over 30 years, providing technical support and supervising all analyses conducted at the facility.

Developed and implemented extensive quality assurance program. Conducted tours of the

facility, and answered a wide variety of water quality questions from the public and educators.

Selected Pending Grants

AccelNet Implementation: Safe and Sustainable Water for Agroecosystems Network-to-Networks. C. Neal (lead), S. Fassnacht, S.J. Ahmadzai, N. Graham, E.M. Haacker, S.L. Bartelt-Hunt, P. Bitterman, T. Gates, D. K. Hartman, T.C. Martin, J. Qi, J.A. Sinclair, D. Snow, V. V. Tarabara. NSF 21-511 AccelNet Program \$1,999,894. Submitted on 04 January 2021, Project Period 01 October 2021 – 30 September 2025.

Ultrafast Affinity Extraction - Fundamental Studies and Use in Environmental Applications. D. Hage (lead) and D. Snow. National Science Foundation NSF CHE - Chemical Measurement & Imaging, \$493,759. Submitted on 16 November 2020, Project period 01 May 2021 – 30 April 2024.

IRES - Track I: IRES Sites (IS) Water Quality and Availability in the Syr Darya Basin, Central Asia. D. Snow (lead), E. Haacker, S. Bartelt-Hunt and C. Neale. NSF 20-598 International Research Experiences for Students (IRES) program. \$272,181. Submitted on 11 November 2020, Project Period 1 July 2021 – 30 June 2024.

Examining surface and groundwater contamination from use of byproducts derived from ethanol processing of pesticide-treated crop seeds and the potential impacts on biological indicator organisms. J. Wu-Smart and D. Snow. \$20,000. USGS 104b Program. Submitted on 27 October 2020. Project period 01 March 2020 – 28 February 2021.

Evaluation of Nitrogen-based Redox Processes in the Vadose zone. M. Kaiser, D. Snow, D. Miller, M. D'Alessio, A. Malakar. \$9,982. USGS 104b Program. Submitted on 27 October 2020. Project period 01 March 2020 – 28 February 2021.

Know Your Well Northwest. D. Snow (UNL), M. Leite (CSC) and T. Tibbits (CSC). \$5,950. USGS 104b Program. Submitted on 27 October 2020. Project period 01 March 2020 – 28 February 2021.

Improved photocatalytic air treatment for removal of volatile organic compounds. B. Uralbekov (Lead), B. Satybaldiyev, and D. Snow, Kazakh Ministry of Education and Science, (\$25,590 subcontract to Al-Farabi Kazakh National University), \$126,450, Submitted on 12 August 2020, Project Period 01/01/2021-12/31/2023.

Legacy and modern pesticides in Syr Darya, Kazakhstan: sources, transport and risk assessment. B. Satybaldiyev, B. Uralbekov and D. Snow, Kazakh Ministry of Education and Science, (\$30,116 subcontract to Al-Farabi Kazakh National University), \$145,450, Submitted on 10 July 2020, Project Period 01/01/2021-12/31/2023

Funded – Current Research Grants

Deep Vadose Zone Nitrate – Lower Elkhorn Natural Resources District, D. Snow (lead). Lower Elkhorn Natural Resources District, \$34,291. Submitted on 10/21/2020, Project period 11/01/2020 - 06/30/2022.

Characterization of Groundwater Nitrates Area 30 - Lower Loup Natural Resources District. D. Snow (lead). Lower Loup Natural Resources District. \$7,128. Submitted on 12/15/2019, Project period 03/01/2020 - 12/30/2020.

City of Waverly Demonstration Project for Improving Nitrogen Use Efficiency and Reducing Nitrate Leaching. J. Igbal (lead), D. Snow and T. Williams, Nebraska Department of Environment and Energy (NDEE) funding through EPA Section 319 Program. \$15,000. Project Number 56-1688, Submitted on 03/15/2020, project period July 15 2020– June 30 2021.

Sources and occurrence of veterinary pharmaceuticals in the Sandusky River Watershed. L. Johnson (lead) D. Snow and S. Biswas. Ohio Sea Grant Program, \$60,000. subcontract to Heidelberg University. Submitted on 03/14/2019, Project period 07/01/2020 - 06/30/2022

Bazile Groundwater Management Area (BGMA) Vadose Zone Nitrate Monitoring NDEQ Project 56-1785. D. Snow and C. Ray, Environmental Protection Agency, \$123,123. resubmitted on 10/23/2020, Project Period 10/01/2020 - 07/31/2022.

Setting nitrogen surplus benchmarks to control nitrate pollution of groundwater in the northeast Nebraska. M. Mekonnen (lead), D. Snow and D. Miller, Nebraska Water Center USGS 104b Program, \$18,954. Submitted on 10/31/2019, Project Period 03/01/2020 - 02/28/2021.

PFAS Exposure from WWTPs to Surface Waters and Agricultural Fields, T. Messer (lead), S. Bartelt-Hunt, D. Snow, Nebraska Water Center USGS 104b Program, \$19,928, Submitted on 10/31/2019, Project Period 03/01/2020 - 02/28/2021.

Characterization of Vadose Zone Transport and Groundwater Nitrate Attenuation. D. Snow (lead) and C. Ray. Lower Platte South NRD. \$44,663. Project Period 11/01/2019 - 09/30/2021.

Advancing Institutional Capacity for Sustainable Groundwater in with Central Asia with Emphasis on Karakalpakstan, a former Aral Sea Region in Uzbekistan. D. Snow (lead), S. Bartelt-Hunt, E. Haacker, C. Neale, and V. Zlotnik. American Councils for International Education UniCEN 2020. \$22,430. Submitted on 10/11/2019, Project Period 01/01/2020 - 06/30/2021.

Citizen Science: A Valuable Approach for Monitoring Groundwater Quality in the Bazile Groundwater Management Area. M. D'Alessio, C. Ray, D. Snow, Nebraska Environmental Trust, \$172,977. Submitted on 08/30/2019, Project Period 04/01/2019 - 03/31/2021.

Influence of Agrochemical Mixtures on Treatment Wetland Ecosystems Services. S. Bartelt-Hunt (lead), T. Messer, R.L. Smith, D.D. Snow, J. Ali, D. Repert. USDA AFRI Foundational Program, \$499,999. Submitted on 08/01/2018. Project period 05/01/2019-4/30/2023.

SusCHEM: Collaborative Research: Persistence of Antibiotic Resistance Genes in the Soil-Plant Ecosystem. X. Li, D. Snow, H. Walia, NSF CBET – Environmental Engineering. Proposal 1805990. \$330,000, Submitted on 10/20/2017. Project Period 07/01/2018 - 06/30/2021.

Measurement of glyphosate and AMPA in samples of surface runoff. D. Snow and S. Biswas. \$101,085. Ohio State University. Subcontract to Heidelberg University. 2/01/2018 - 01/31/2020.

Novel approaches for controlling nitrate leaching and protecting Nebraska ground water. Nebraska Environmental Trust. \$164,306. D. Snow (lead), C. Ray, A. Schmidt and D. Miller. Period 5/1/2018-6/30/2021. Submitted on 9/5/2018.

Photodegradation of Insecticides in Rivers Adjacent to Agricultural Intensive Regions: A Novel Water Quality Monitoring Approach. \$499,547. T. Messer (lead), D. Snow and M. Doyle (Duke). USDA NIFA Program. Period: 01/01/2018 - 12/31/2021.

Investigating Mobile Genetic Elements and Resistance Gene Reservoirs towards Understanding the Emergence and Ecology of Antimicrobial Resistance in Beef Cattle Production Systems. S. Fernando (lead), S. Bartelt-Hunt, D. Loy, T. Messer, G. Morota, H. Manzona, A. Schmidt, D. Snow, R. Stowell. USDA NIFA Program, \$830,751. Submitted on 06/21/2017, Project Period 02/15/2018 - 02/14/2022.

SELECTED PUBLICATIONS (*Total of 120 refereed journal articles - Italics indicates student authors*)

Chakraborty, P., Shappell, N.W., *Mukhopadhyay, M.*, Onanong, S., Rex, K.R. and **Snow, D.** 2021. Surveillance of plasticizers, bisphenol A, steroids and caffeine in surface water of River Ganga and Sundarban wetland along the Bay of Bengal: occurrence, sources, estrogenicity screening and ecotoxicological risk assessment. *Water Research* 190, 116668. Online 20 Nov 2020.

- Richards, G., Gilmore, T.E., Mittelstet, A.R., Messer, T.L. and Snow, D.D. 2021. Baseflow nitrate dynamics within nested watersheds of an agricultural stream in Nebraska, USA. *Agriculture, Ecosystems & Environment* 308, 107223. Online
- Bedi, S., Samal, A., Ray, C. and **Snow, D.** 2020. Comparative evaluation of machine learning models for groundwater quality assessment. ***Environmental Monitoring and Assessment*** 192(12), 776.
- Malakar, A., M. Kaiser, D. D. Snow, H. Walia, B. Panda and C. Ray (2020). Ferrihydrite Reduction Increases Arsenic and Uranium Bioavailability in Unsaturated Soil. ***Environmental Science & Technology*** 54(21): 13839-13848.
- Kanel, Sushil, Arindam Malakar; Chittaranjan Ray; **D. D Snow**; Mallikarjuna N Nadagouda. 2020. Nanomaterials in the Environment, Human Exposure Pathway, and Health Effects: A Review. ***Science of the Total Environment***. 143470, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2020.143470>.
- Jawadi, H.A.**, Sagin, J. and **Snow, D.D.** 2020. A Detailed Assessment of Groundwater Quality in the Kabul Basin, Afghanistan, and Suitability for Future Development. *Water* 12(10), 2890.
- Snow, D.D.**, Chakraborty, P., Uralbekov, B., Satybaldiev, B., Sallach, J.B., Thornton Hampton, L.M., Jeffries, M., Kolok, A.S. and Bartelt-Hunt, S.B. 2020. Legacy and current pesticide residues in Syr Darya, Kazakhstan: Contamination status, seasonal variation and preliminary ecological risk assessment. ***Water Research*** 184, 116141. <https://doi.org/10.1016/j.watres.2020.116141>
- Gilley, J.E., Bartelt-Hunt, S.L., Eskridge, K.M., Li, X., Schmidt, A.M. and **Snow, D.D.** 2020. Retention of Swine Slurry Constituents in Soil and Crop Residue as Affected by Setback Distance. ***Water, Air, & Soil Pollution*** 231(7), 322
- Barrios, R.E., Akbariyeh, S., Liu, C., Gani, K.M., Kovalchuk, M.T., Li, X., Li, Y., Snow, D., Tang, Z., Gates, J. and Bartelt-Hunt, S.L.* 2020. Climate change impacts the subsurface transport of atrazine and estrone originating from agricultural production activities. ***Environmental Pollution*** 265, 115024.
- Al-Mashaqbeh, O., Alsafadi, D., Dalahmeh, S., Bartelt-Hunt, S. and **Snow, D.** 2020. Removal of Selected Pharmaceuticals and Personal Care Products in Wastewater Treatment Plant in Jordan. *Water* 12(4).
- Beni, N.N., Snow, D.D., Berry, E.D., Mittelstet, A.R., Messer, T.L., Bartelt-Hunt, S.,* 2020. Measuring the occurrence of antibiotics in surface water adjacent to cattle grazing areas using passive samplers. *Sci. Total Environ.*, 138296.
- Hall, M.C., Mware, N., Gilley, J., Bartelt-Hunt, S.L., Snow, D.D., Schmidt, A., Eskridge, K., Li, X.,* 2020. Influence of Setback Distance on Antibiotics and Antibiotic Resistance Genes in Runoff and Soil Following the Land Application of Swine Manure Slurry. ***Environmental Science & Technology*** 54, 4800-4809.
- Duerschner, J., Bartelt-Hunt, S., Eskridge, K.M., Gilley, J.E., Li, X., Schmidt, A.M., Snow, D.D.,* 2020. Swine slurry characteristics as affected by selected additives and disinfectants. ***Environ. Pollut.*** 260, 114058. <https://doi.org/10.1016/j.envpol.2020.114058>
- Barrios RE, Khuntia HK, Bartelt-Hunt SL, Gilley JE, Schmidt A, Snow DD, Li X.* 2020. Fate and transport of antibiotics and antibiotic resistance genes in runoff and soil as affected by the timing of swine manure slurry application. ***Science of The Total Environment***. Volume 712, 10 April 2020. 136505.
- Juntakut P, Haacker EM, Snow DD, and Ray, C.* 2020. Risk and Cost Assessment of Nitrate Contamination in Domestic Wells. 2020. ***MDPI Water***. Feb;12(2):428.

- Ali, J.M., Montecinos, A., Schulze, T.T., Allmon, L.G., Kallenbach, A.T., Watson, G.F., Davis, P.H., Snow, D.D., Bertin, A., Gouin, N., Kolok, A.S., 2019. Assessment of Gene Expression Biomarkers in the Chilean Pencil Catfish, *Trichomycterus areolatus*, from the Choapa River Basin, Coquimbo Chile. **Archives of Environmental Contamination and Toxicology**./10.1007/s00244-019-00678-x*
- Levine, Rachel; Zhang, Yuping; Leng, Yifei; Snow, Daniel; Cassada, David; Durso, Lisa; Li, Xu. 2019 Microbial Transformation of A Sulfonamide Antibiotic under Various Background Nutrient Conditions. **Bulletin of Environmental Toxicology and Contamination**. Volume 103, Issue 6, pp 808–813.*
- Ayuba, R, N. T. Moshood, and D. Snow. 2019. Hydrochemistry and stable isotopes (¹⁸O and ²H) characteristics of groundwater in Lokoja and its environs, central Nigeria. **Environmental Earth Sciences**. 78:582 Doi.org/10.1007/s12665-019-8582-8*
- Al-Mashaqbeh, O. D. Alsafadi, S. Dalahmeh, S. Bartelt-Hunt, and D. Snow. 2019. Removal of Selected Pharmaceuticals in Wastewater Treatment Plant in Jordan. **MDPI Water**. Vol. 11, Issue 10, 13 p. doi:10.3390/w11102004*
- Gouin, N.; A. Bertin, M. Espinosa, D. Snow, J. Ali, A. Kolok. 2019. Pesticide contamination drives adaptive genetic variation in the endemic mayfly *Andesiops torrens* within a semi-arid agricultural watershed of Chile. **Environmental Pollution**. 255. 113099. <https://doi.org/10.1016/j.envpol.2019.113099>*
- Malakar, A., D. D. Snow and C. Ray. 2019. Irrigation Water Quality—A Contemporary Perspective. **MDPI Water**, 11(7), 1482; <https://doi.org/10.3390/w11071482>*
- Kumar, M., D. D. Snow, Y. Li, and P.J. Shea. 2019. Perchlorate behavior in the context of black carbon and metal cogeneration following fireworks emission at Oak Lake, Lincoln, Nebraska, USA. **Environmental Pollution**. Volume 253, 930-938, ISSN 0269-7491, <https://doi.org/10.1016/j.envpol.2019.07.038>.*
- Camargo, C., Snow, D.D., Onanong, S., Hunt, T.E. and Siegfried, B.D., 2019. Residues of thiamethoxam and mefenoxam in vegetative and floral tissue of soybean at the early reproductive stage resulting from seed treatments. **Crop Protection**, 119, pp.134-140.*
- Barrios, R. E., O. Gaonkar, D. Snow, Y. Li, X. Li, and S.L. Bartelt-Hunt. 2019. Enhanced biodegradation of atrazine at high infiltration rates in agricultural soils. **Environmental Science: Processes & Impacts**. 21:6, 999-1010, DOI: 10.1039/C8EM00594J.*
- Juntakut, P.; Snow, D. D.; Haacker, E. M. K.; Ray, C. 2018. The long term effect of agricultural, vadose zone and climatic factors on nitrate contamination in the Nebraska's groundwater system. **Journal of Contaminant Hydrology**, Volume 220, Pages 33-48 <https://doi.org/10.1016/j.jconhyd.2018.11.007>*
- D'Alessio, M.; Durso, L. M.; Miller, D. N.; Woodbury, B.; Ray, C.; Snow, D. D. 2018. Environmental fate and microbial effects of monensin, lincomycin, and sulfamethazine residues in soil. **Environ. Pollution**. 246, 60-68. <https://doi.org/10.1016/j.envpol.2018.11.093>*
- Chakraborty, P.; Mukhopadhyay, M.; Sampath, S.; Ramaswamy, B. R.; Katsoyiannis, A.; Cincinelli, A.; Snow, D. (2019) Organic micropollutants in the surface riverine sediment along the lower stretch of the transboundary river Ganga: Occurrences, sources and ecological risk assessment. **Environ. Pollut.**, 249, 1071-1080. <https://doi.org/10.1016/j.envpol.2018.10.115>*
- Wells, M., Gilmore, T., Mittelstet, A., Snow, D., Sibray, S., 2018. Assessing Decadal Trends of a Nitrate-Contaminated Shallow Aquifer in Western Nebraska Using Groundwater Isotopes, Age-Dating, and Monitoring. **Water** 10, 1047. <https://doi.org/10.3390/w10081047>*
- D'Alessio, M., S. Onanong, D. Snow, C. Ray. 2018. Occurrence and removal of three classes of*

- pharmaceutical compounds at four wastewater treatment plants in Hawaii and their environmental fate. **Science of The Total Environment**, vol. 631-632, 1360-1370.
<https://doi.org/10.1016/j.scitotenv.2018.03.100>
- Zhang, Y., Jewett, C., Gilley, J., Bartelt-Hunt, S.L., **Snow, D.D.**, Hodges, L., Li, X., 2018. Microbial communities in the rhizosphere and the root of lettuce as affected by Salmonella-contaminated irrigation water. **FEMS Microbiology Ecology** 94, fiy135-fiy135.
<https://doi.org/10.1093/femsec/fiy135>
- Khuman, S.N., Chakraborty, P., Cincinelli, A., **Snow, D.**, Kumar, B., 2018. Polycyclic aromatic hydrocarbons in surface waters and riverine sediments of the Hooghly and Brahmaputra Rivers in the Eastern and Northeastern India. **Science of the Total Environment** 636, 751-760.
<https://doi.org/10.1016/j.scitotenv.2018.04.109>
- Akbariyeh, S. Bartelt-Hunt, S.; **Snow, D**; Li, X.; Tang, Z.; Li, Y. 2018. Three-Dimensional Modeling of Nitrate-N Transport in Vadose Zone: Roles of Soil Heterogeneity and Groundwater Flux. **Journal of Contaminant Hydrology**. Volume 211, April 2018, Pages 15-25.
<https://doi.org/10.1016/j.jconhyd.2018.02.005>
- Satkowski, L.; K. Goyne; S. Anderson; R. Lerch; E. Webb; **D. Snow**. 2018. Imidacloprid Sorption and Transport in Cropland, Grass Buffer and Riparian Buffer Soils. **Vadose Zone Journal**. Vol 17, no. 1. <http://doi:10.2136/vzj2017.07.0139>.
- Sallach, J.B. **D. D. Snow**, X. Li, L. Hodges, and S. L. Bartelt-Hunt. 2018. Influence of soil texture on the uptake of antibiotics and their toxicity to lettuce. **Environmental Engineering Science**. Published Online:13 Apr 2018<https://doi.org/10.1089/ees.2017.0376>
- Rosi-Marshall, E.J, H. Bechtold, **D. D. Snow**, M. Rojas, A.J. Reisinger, J.J. Kelly. 2018. Urban stream microbial communities show resistance to pharmaceutical exposure. **Ecosphere**. Volume 9, no. 1. 9 January 2018 <https://doi.org/10.1002/ecs2.2041B>
- Baral, D. Fisher, J.R., M. J. Florek, B. I. Dvorak, **D. D. Snow**, and D. M. Admiraal, 2018. Atmospheric Contributions of Nitrate to Stormwater Runoff from Two Urban Watersheds. **Journal of Environmental Engineering**. Volume 144 Issue 2 - February 2018.
- Papastavros, E., R. A. Remmers, **D.D. Snow**, D.A. Cassada and D.S. Hage. 2017. Affinity Extraction of Emerging Contaminants from Water Based on Bovine Serum Albumin as a Binding Agent. **Journal of Separation Science**. 26-35. DOI: 10.1002/jssc.201701170.
- Ali, JM, MT Palandri, AT Kallenbach, E Chavez, J Ramirez, S Onanong. **D. D. Snow**, A. S. Kolok. 2017. Estrogenic effects following larval exposure to the putative anti-estrogen, fulvestrant, in the fathead minnow (*Pimephales promelas*). **Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology**. 204, 26-35.
- Ali, J. M., D'Souza, D., Schwarz, K.; Allmon, L., Singh, R. P.; **Snow, D.**; Bartelt-Hunt, S., Kolok, A. 2017. Response and recovery of fathead minnows (*Pimephales promelas*) following early life exposure to water and sediment found within agricultural runoff from the Elkhorn River, Nebraska, USA. **Science of the Total Environment**. 017 Oct 17. pii: S0048-9697(17)32611-6. doi: 10.1016/j.scitotenv.2017.09.259.
- J.E. Gilley, S. L. Bartelt-Hunt, K.M. Eskridge, X. Li, A.M. Schmidt, and **D.D. Snow**. 2017. Setback distance requirements for removal of swine slurry constituents in runoff. **Transactions of the ASABE**. doi: 10.13031/trans.12310.
- Dungan, R.S., **Snow, D.D.**, Bjerneberg, D.L., 2017. Occurrence of Antibiotics in an Agricultural Watershed in South-Central Idaho. **Journal of Environmental Quality**.doi:10.2134/jeq2017.06.0229.
- Ali, J.M., Sangster, J.L., **Snow, D.D.**, Bartelt-Hunt, S.L., Kolok, A.S., 2017. Compensatory response

- of fathead minnow larvae following a pulsed in-situ exposure to a seasonal agricultural runoff event. **Science of the Total Environment** 603, 817-826.
- Zhang, Y.; Snow, D. D.; Bartelt-Hunt, S. L. 2016. Stereoselective Degradation of Estradiol and Trenbolone Isomers in Alluvial Sediment. **Environmental Science & Technology**. 50 (24), pp 13256–13264 DOI: 10.1021/acs.est.6b02171
- Lee, S. Paspalof, A., Snow, D. Richmond, E., Rosi-Marshall, E. Kelly, J. 2016. Occurrence and potential biological effects of amphetamine on stream communities. **Environmental Science and Technology**. Vol 50 (17), pp 9727–9735. DOI: 10.1021/acs.est.6b03717.
- Gogoi, A., Chaminda, M., A.K.J An, Y. Li, D. Snow. and M. Kumar. 2016. Influence of Ligands on Metal Speciation, Transport and Toxicity in a Tropical River during Wet (Monsoon) Period. **Chemosphere**. Vol. 163, pp. 322-33. doi: 10.1016/j.chemosphere.2016.07.105.
- Bartelt-Hunt, S.L.; Kolok, A.; Snow, D. Snow; Ali, J.; Sangster, J. 2016. Bioavailability and fate of sediment-associated progesterone in aquatic systems. **Environmental Science and Technology**. 50 (7), pp 4027–4036. 10.1021/acs.est.5b06082
- Franklin, A.M., D.S. Aga, E. Cytryn, L.M. Durso, J.E. McLain, A. Pruden, M.C. Roberts, M.J. Rothrock, Jr., D.D. Snow, J.E. Watson, and R.S. Dungan. 2016. Antibiotics in Agroecosystems: An Introduction. **Journal of Environmental Quality (Special Issue)**. 45, Issue 22, 10.2134/jeq2016.01.0023.
- Aga, D.S., M. Lenczewski, D.D. Snow, J. Muurinen, J. B. Sallach, and J.S. Wallace. 2016. Measurement of Antibiotics and Assessment of their Impacts in Agroecosystems: State of the science. **Journal of Environmental Quality (Special Issue)**. 45, Issue 2, 10.2134/jeq2015.07.0393.
- Williams-Nguyen, J., J.B. Sallach, S. Bartelt-Hunt, A. Boxall, L.M. Durso, J.E. McLain, R.S. Singer, D.D. Snow, J.L. Ziles. 2016. Antibiotics and antibiotic resistance in agroecosystems: State of the science. **Journal of Environmental Quality (Special Issue)**. 45, Issue 2, DOI: 10.2134/jeq2015.07.0336
- Zhang, Y., J. B. Sallach, L. Hodges, D. D. Snow, S. L. Bartelt-Hunt, K. M. Eskridge and X. Li. 2016. Effects of soil texture and drought stress on the uptake of antibiotics and the internalization of Salmonella in lettuce following wastewater irrigation. **Environmental Pollution** 208, Part B: 523-531.
- Sallach, J. B., D. Snow, L. Hodges, X. Li and S. Bartelt-Hunt 2015. Development and comparison of four methods for the extraction of antibiotics from a vegetative matrix. **Environmental Toxicology and Chemistry**: Apr;35(4):889-97. DOI: 10.1002/etc.3214
- Jaimes-Correa, J.C., D.D. Snow and S.L. Bartelt-Hunt. 2015. Seasonal occurrence of antibiotics and a beta agonist in an agriculturally-intensive watershed. **Environmental Pollution**, 205: 87-96. doi:http://dx.doi.org/10.1016/j.envpol.2015.05.023.
- Sallach, J.B.; Zhang, Y.; Hodges, L.; Snow, D.D.; Li, X.; Bartelt-Hunt, S.L. 2015. Concomitant Uptake of Antimicrobials and Salmonella in Soil and into Lettuce Following Wastewater Irrigation. **Environmental Pollution**, 197, 269-277. DOI: 10.1016/j.envpol.2014.11.018
- Uralbekov, B.; M. Burkitbayev, B. Satybaldiyev, I. Matveyeva, T. Tuzova and D. Snow. 2014. Spatial and seasonal variability of 234U/238U activity ratios in the Shu River, Kazakhstan. **Environmental Earth Sciences**, DOI 10.1007/s12665-014-3274-x. Published on-line April 23, 2014.
- Pan, D.; Watson, R.; Wang, D.; Tan, Z.H.; Snow, D.D. and K. A. Weber. 2014. Correlation Between Viral production and Carbon Mineralization Under Nitrate Reducing Conditions in Aquifer Sediment. The ISME Journal. **International Society for Microbial Ecology**, Volume 8, 1691-

1703. <http://dx.doi.org/10.1038/ismej.2014.38>. Published on-line March 27, 2014.

Al-Sammak, M., K. Hoagland, D. Cassada, D. D. Snow. 2014. Co-occurrence of the cyanotoxins BMAA, DABA and Anatoxin-a in Nebraska reservoirs, fish, and aquatic plants. *Toxins*, 6 (2), 488-508. doi:10.3390/toxins6020488. ISSN 2072-6651 <http://www.mdpi.com/journal/toxins>. Published on-line: 28 January 2014.

WORKSHOPS, OUTREACH (organizer), and Popular Press

Connecting groundwater quality to the surface: models, monitoring and more. Organized by Daniel Snow. The Nebraska Water Center and with support from a grant from the Nebraska Department of Environmental Quality Holiday Inn Conference Center, Kearney, Nebraska March 7, 2018

From land surface to the aquifer: vadose zone and recharge monitoring in Nebraska. Organized by Daniel Snow, University of Nebraska Water Center, and Troy Gilmore, University of Nebraska School of Natural Resources - Conservation and Survey Division and Biological Systems Engineering. Cosponsored by the Lower Platte South Natural Resources District, the Nebraska Water Center and with support from a grant from the Nebraska Department of Environmental Quality. March 1, 2017.

Nebraska Association of Resource Districts Short Course. Characterizing sources and transport of nitrate impacting drinking water supplies. Chittaranjan Ray and Daniel Snow, University of Nebraska Water Center, Cosponsored by the Lower Platte South and Central Platte Natural Resources Districts and the Nebraska Water Center. Location: Kearney Holiday Inn Conference Center, March 2, 2016

Dan Snow. Water Scientist (2015). Platte Basin Time Lapse Interview

<http://plattebasintimelapse.com/2015/08/dan-snow/>

Antibiotics in Agroecosystems: State of the Science, Workshop held August 5-8, 2014 at the Biosphere 2 Conference Center, Oracle, AZ. Attended by 42 people, participants included scientists and others from academia, government agencies (including EPA and USDA), and industry. Approximately one-third of registrants were students, and nearly 20% represented international organizations. Organized interdisciplinary workshop, and led discussion evaluating and reviewing literature on analytical methods for analysis of antibiotics in agroecosystems. Funded by AFRI Food Safety Program Area 2, “Effective Mitigation Strategies for Antimicrobial Resistance” (A4171) through the University of Arizona, McLain, J.E. (lead), D.D. Snow, and L.M. Durso. <https://wrrc.arizona.edu/arasos-home>

Nebraska Conversations Conference on Nebraska Environment and Sustainability. State and local water resources coordinator (water expert and facilitator) at four public meetings across the state. Creighton University, Omaha, NE, November 2010. University of Nebraska, Lincoln, NE February 2011. Grand Island Conference Center, Grand Island, NE May 2011 and Harms Technology Center, Scottsbluff, NE August 2011.

Collaborative Approaches for Understanding and Managing- Air and Water Quality issues in Livestock Production. Organize USDA ARS MARC, USDA ARS - Lincoln, UNL, and UNMC Focus Workshop. Nebraska Union East Campus October 13 – 14, 2010. Co-lead with Dr. John Gilley USDA-ARS. Team-building research focused workshop sponsored by IANR Agricultural Research Division.

Groundwater Monitoring for Livestock Producers – Workshop co-taught at 4 locations across the state to help educate livestock feeding operation owners and operators about ground water monitoring fundamentals. Funded by Nebraska Department of Environmental Quality, Spring 2007.

Guest Speaker UNO/UNK/UNMC Department Seminars.

OTHER PROFESSIONAL ACTIVITIES

Associate Editor, Bulletin of Environmental Contamination and Toxicology, Springer, January 2018-present

Associate Editor, Water, MDPI, Basel, Switzerland. July 2018-present.

Invited Conference Session Chair

- Symposium: Use of Rapid Assays for Water Monitoring, 30th Annual Midwest Section AOAC International Meeting and Exposition. Lincoln, NE. June 6 - 9, 2011.
- Special Symposium: Hormones in the Environment at the SETAC North America 2010 Annual Meeting, Portland, OR, November 11-17, 2011.
- 2nd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment, 4-7 August 2009, Colorado State University, Fort Collins, Colorado, USA
- Mapping the Lifecycle of Antibiotics in Southeast Asia 2016. September 14-15, 2016; Singapore. Sponsored by the US State Department.

Society of Toxicologists and Chemists (SETAC) Chemistry Advisory Group. Term 2010-2017. Chair 2014

Association of Analytical Chemists (AOAC) Stakeholder Panel on Endocrine Disruption, 2010-11.

Water Environment Federation Literature Review Committee – 2007-2018.

Nebraska Surface and Ground Water Monitoring Councils – 2008-2018.

Participated in “Environmental Conflict Resolution Workshop” (September 21-22, 2011) facilitated by Dr. Chris Moore, an internationally recognized expert in conflict management. Participants received two days of instruction in such areas as assessing conflict, initiating public participation, conducting public meetings, and collaborative problem solving

Journal Reviewer

Analytical Chemistry, Analytical and Bioanalytical Chemistry, Talanta, Environmental Science and Technology, Journal of Chromatography A, Journal of Environmental Monitoring, Chemosphere, Journal of Environmental Quality, Groundwater Monitoring and Remediation, Great Plains Research.

Professional Memberships

- American Chemical Society (ACS), Division of Environmental Chemistry - since 2001
- American Geophysical Union (AGU), Hydrology Section - since 1996
- National Ground Water Association (NGWA) Association of Ground Water Scientists and Engineers -since 1987
- Groundwater Protection and Management Subcommittee (2011-
- International Association of Geochemistry and Cosmochemistry(IAGC) – 1994-2010.
- Society of Environmental Toxicologists and Chemists (SETAC) – since 2007
- Chemistry Advisory Group (CAG) 1/2010- (chair elect, 2013; chair, 2014)
- Water Environment Federation (WEF) – since 2011
- Literature Review Committee –2007- present