

Brendan F. O’Leary

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Google Scholar: <https://scholar.google.com/citations?hl=en&user=QDSeWmcAAAAJ>

ACADEMIC WORK EXPERIENCE

Post-doctoral Fellow, Center for Leadership in Environmental Awareness and Research (CLEAR), Wayne State University, Carol Miller Ph.D. & Glen Hood Ph.D., Detroit, MI 4/23 – Present

- Interdisciplinary biology and engineering post-doc within the Superfund Research Program.
- Developed field and modeling methods to understand urban environmental exposure pathways.

Program Coordinator, One Health Initiative and Center for Leadership in Environmental Awareness and Research (CLEAR), Wayne State University, Detroit, MI 8/21 – 4/23

- Helped develop and establish the One Health Initiative.
- Coordinated the submission and established the CLEAR center – NIEHS P42 Grant.

Research Assistant (PhD), Wayne State University, Carol Miller Ph.D., Detroit MI 1/18 – 8/21

- Research position situated between NSF-NRT: Transformative Research Experience in Urban Sustainability Training (T-RUST) and Healthy Urban Waters program.
- Topics included urban water infrastructure, contaminant transport, and numerical modeling.

Research Assistant (MS), Wayne State University, Lawrence D. Lemke Ph.D., Detroit MI 8/12 – 7/14

- Conducted geostatistical modeling and mapping.
- Analyzed airborne environmental contaminants.

Summer Research Assistant, Jennifer DeHart Ph.D., Meadville, PA 6/09 – 8/09

- Participated in the Greenhouse Gas Pilot Grant by the Pennsylvania Department of Environmental Protection.
- Led a greenhouse gas emissions reduction program in Meadville, PA.

INDUSTRY WORK EXPERIENCE

Project Manager, Southwest Detroit Environmental Vision, Detroit, MI 5/18 – 8/18

- Created tools for the Clean Diesel Partnership and oversaw urban garden soil sampling in Detroit.

Geologic Specialist 2, Arcadis U.S., Novi, MI 7/14 – 12/17

- Practiced environmental remediation to restore and manage contaminated sites.

Sustainability Intern, Dairy Management Inc., Rosemont, IL 5/12 – 8/12

- Studied nutrient cycling effects on daily farm practices and on-farm sustainability practices.

Environmental Intern, CONSOL Energy, Canonsburg, PA 5/11 – 8/11

- Monitored surface water flow field monitoring overactive mine sites and oversaw contractors.

Geologist/Industrial Engineer Intern, CONSOL Energy, Canonsburg, PA

5/10 – 8/10

- Conducted structural mapping for underground roof/rib integrity rock units in coal mines.

EDUCATION

Ph.D., Dual Titled: Civil Engineering and Urban Sustainability 5/23

Wayne State University, Detroit, MI Chair: Carol Miller, PhD.

Dissertation: *Evaluating volatile organic compound exposure pathways in urban landscape Detroit, MI*

Master of Science: Geology 7/14

Wayne State University, Detroit, MI Advisor: Lawrence D. Lemke, PhD.

Thesis: *Evaluating spatial outliers and integrating temporal data in air pollution models for the Detroit-Windsor airshed*

Bachelor of Science, Double Major: Environmental Geology & Environmental Science 12/11

Minor: Religious Studies

Allegheny College, Meadville, PA

Thesis: *The Relationship between Soil Characteristics, Disturbance and Historical Forest Patterns in Thurston County, Washington*

PUBLICATIONS

Books:

19. Mitra, R., O’Leary, B.F., Dutta, U., Miller, C.J., Lucas, A. (forthcoming). *Infrastructure communication and social justice*. In K. Stephens, & K. Faust (Eds.), *Handbook of Infrastructure Communication*. Wiley.

Publications (In Review):

18. O’Leary, B.F., Straughen, J.K., Cassidy-Bushrow, A.E., Socrates, C., Lu, M., Zhang, Q., Papuga, S.A., Hood, G.R. (In Review) *Phytoscreening the Homes of Pregnant Residents for Volatile Organic Compounds: A Case Study in Metro Detroit*. BMC Research Notes.
17. O’Leary, B.F., Linn, C., Hunt, D., Dabney, B., Hartrick, J., Ekhaton, K., Lyon, N., Miller, C.J., Mitra, R., Serreyn, M., Teimoori, S. (In Review) *Green Stormwater Infrastructure-Informed Urban Groundwater Monitoring Networks*. Environmental Research Communications.

Publications:

16. O’Leary, B. F., Miller, C. J., Selegan, K., & Hood, G. R. (2025). *Comparing conventional and phytoscreening methods to detect subsurface chemical contaminants: a test case of volatile organic*

compounds in an urban setting. Environmental Pollution, Volume 365, 125374.
<https://doi.org/10.1016/j.envpol.2024.125374>

15. Erickson, M., Hoysh, S., **O’Leary, B. F.**, & Van Stempvoort, D. (2024). Chapter 6: Urban groundwater issues related to Great Lakes Water Quality. In M. Mohammed, H. Reeves, & J. W. Roy (Eds.), *Groundwater science relevant to the Great Lakes Water Quality Agreement: An updated status report*. Prepared by the Annex 8 Subcommittee for the Great Lakes Executive Committee. Published online by Environment and Climate Change Canada and U.S. Environmental Protection Agency.
14. Straughen, J.K., Loveless, I., Chen, Y., Burmeister, C., Lamerato, L., Lemke, L.D., **O’Leary, B.F.**, Reiners, J.J., Sperone, F.G., Levin, A.M., Cassidy-Bushrow, A.E. (2024) *The Impact of Environmental Benzene, Toluene, Ethylbenzene, and Xylene Exposure on Blood-Based DNA Methylation Profiles in Pregnant African American Women from Detroit*. International Journal of Environmental Research and Public Health, 21(3), 256. <https://doi.org/10.3390/ijerph21030256>
13. **O’Leary, B.F.** (2023) *Evaluating volatile organic compound exposure pathways in urban landscapes Detroit, MI*. (Doctoral dissertation, Wayne State University). [Order No. 30309578].
12. **O’Leary, B.F.**, Hill, A.B., Linn, C., Lu, M., Miller, C.J., Newman, A., Sperone, G.F., Zang, Q. (2023) *Exploring the association of Brownfield remediation status with socioeconomic conditions in Wayne County, MI*. Environmental Science and Pollution Research. Volume 30(21), 60768–60776. <https://doi.org/10.1007/s11356-023-26666-2>
11. Raheja, G., Harper, L., Hoffman, A., Gorby, Y., Freese, L., **O’Leary, B.F.**, Deron, N., Smith, S., Auch, T., Goodwin, M., Westervelt, D.M. (2022) *Community-based participatory research for low-cost air pollution monitoring in the wake of unconventional oil and gas development in the Ohio River Valley: Empowering impacted residents through community science*. Environmental Research Letters. Volume 17(6), 065006. <https://doi.org/10.1088/1748-9326/ac6ad6>
10. Steinman, A.D.; Uzarski, D.G.; Lusch, D.P.; Miller, C.; Doran, P.; Zimnicki, T.; Chu, P.; Allan, J.; Asher, J.; Bratton, J.; Carpenter, D.; Dempsey, D.; Drummond, C.; Esch, J.; Garwood, A.; Harrison, A.; Lemke, L.D.; Nicholas, J.; Ogilvie, W.; **O’Leary, B.F.**; Sachs, P.; Seelbach, P.; Seidel, T.; Suchy, A.; Yellich, J. (2022) *Groundwater in Crisis? Addressing Groundwater Challenges in Michigan (USA) as a Template for the Great Lakes*. Sustainability, Volume 14(5), 3008. <https://doi.org/10.3390/su14053008>
9. **O’Leary, B.F.**, Hill, A.B., Akers, K.G., Esparra-Escalera, H.K., Lucas, A., Raoufi, G., Huang, Y., Mariscal, N., Mohanty, S.K., Tummala, C.M., Dittrich, T.M. (2022) *Air quality monitoring and measurement in an urban airshed: Contextualizing datasets from the Detroit Michigan area from 1952 to 2020*. Science of the Total Environment, Volume 809, 152120. <https://doi.org/10.1016/j.scitotenv.2021.152120>.

8. Teimoori, S.; **O’Leary, B.F.**; Miller, C.J. (2021) *Modeling Shallow Urban Groundwater at Regional and Local Scales: A Case Study in Detroit, MI*. Water, Volume 13(11), 1515. <https://doi.org/10.3390/w13111515>
7. Cassidy-Bushrow, A.E., Burmeister, C., Birbeck, J., Chen, Y., Lamerato, L., Lemke, L.D., Li, J., Mor, G., **O’Leary, B.F.**, Peters, R.M., Reiners Jr, J.J., Gianluca Sperone, F., Westrick, J., Wiewiora, E., Straughen, J. K. (2021) *Ambient BTEX exposure and mid-pregnancy inflammatory biomarkers in pregnant African American women*. Journal of Reproductive Immunology, Volume 145, 103305. <https://doi.org/10.1016/j.jri.2021.103305>
6. Miller, C.J., Runge-Morris, M., Cassidy-Bushrow, A.E., Straughen, J.K., Dittrich, T.M., Baker, T.R., Petriello, M.C., Mor, G., Ruden, D.M., **O’Leary, B.F.**, Teimoori, S., 2020. *A Review of Volatile Organic Compound Contamination in Post-Industrial Urban Centers: Reproductive Health Implications Using a Detroit Lens*. International Journal of Environmental Research and Public Health, Volume 17(23), 8755. <https://doi.org/10.3390/ijerph17238755>
5. Cassidy-Bushrow, A.E., Burmeister, C, Lamerato, L, Lemke, L.D., Mathieu, M., **O’Leary, B.F.**, Sperone, F.G., Straughen, J.K., Reiners, J.R. Jr. (2020) *Prenatal Airshed Pollutants and Preterm Birth in an Observational Birth Cohort Study in Detroit, Michigan, USA*, Environmental Research, Volume 189, 109845. <https://doi.org/10.1016/j.envres.2020.109845>
4. Howard, J. L., **O’Leary, B.F.**, & Shuster, W. D. (2020). *Corrigendum to “Experimental Order 1 soil survey of vacant urban land, Detroit, Michigan, USA” Catena 126 (2015) 220–230*. CATENA, 185, 104246. <https://doi.org/10.1016/j.catena.2019.104246>
3. **O’Leary, B.F.**, Reiners J.J. Jr., Xu, X., Lemke, L.D. (2016) *Identification and influence of spatio-temporal outliers in urban air quality measurements*, Science of The Total Environment, Volume 573, 55-65, <https://doi.org/10.1016/j.scitotenv.2016.08.03>
2. **O’Leary, B.F.**, (2014) *Evaluating spatial outliers and integrating temporal data in air pollution models for the Detroit-Windsor airshed*. (Thesis, Wayne State University). ID: 1564791.
1. **O’Leary, B.F.** and Lemke, L.D. (2014) *Modeling Spatiotemporal Variability of Intra-Urban Air Pollutants in Detroit: A Pragmatic Approach*, Atmospheric Environment, Volume 94, 417-427. <https://doi.org/10.1016/j.atmosenv.2014.05.010>

PROFESSIONAL PRESENTATIONS with ABSTRACTS

Invited Seminars:

- O’Leary, B.F.** (2024) *Assessing the Legacy of Subsurface Contaminants and Their Impact on Urban Neighborhoods*, Integrative Environmental Health Sciences Seminar Series, Wayne State University, Detroit, MI.

- O’Leary, B.F.**, Straughen, J.K., Cassidy-Bushrow, A.E (2024) *From Vision to Impact – Collaborative Science for the Common Good*, 2024 Annual Symposium CLEAR Collaborations: Expanding Connections, Wayne State University, Detroit, MI.
- O’Leary, B.F.** (2024) *Investigating Groundwater Contamination through Phytoscreening in Neighborhoods of the Great Lakes Region*, Community Science Workgroup - Clear the Air, Ecology Center, Detroit, MI.
- Westrick, J.A., Gordon, B., Harper, L., Hunkler, J., **O’Leary, B.F.**, Peraino, N., Southwell, B., Stolz, J. (2023) *How a VOC Community Monitoring Project led to Emergency Readiness in the East Palestine, OH, Train Derailment*. Public Health Research and Surveillance Priorities from the East Palestine Train Derailment: A Workshop. National Academies of Sciences, Engineering, and Medicine. <https://clear.wayne.edu/news/dr-westrick-joins-nasem-public-workshop-on-east-palestine-oh-train-derailment-60325>
- O’Leary, B.F.**, Petrillo, M.C., Backer, T.R. (2023) *Wayne State University SRP Center*. SRP Progress in Research Webinar: Session IV — Chemical Exposures Across the Life Course. Contaminated Site Clean-Up Information (CLU-IN). https://clu-in.org/training/webinar/SRPP22_051923/
- O’Leary, B.F.** (2023) *Urban sampling strategies and numerical models to understand subsurface vapor intrusion exposure pathways – WSU Superfund Center*. American Institute of Professional Geologists – Michigan Chapter. Ann Arbor, MI.
- O’Leary, B.F.** (2023) *Building aboveground strategies to identify and address belowground hot spots for VOC vapor intrusion in complex urban settings*, Center for Leadership in Environmental Awareness and Research Advisory Board Meeting, Detroit, MI.
- O’Leary, B.F.** (2021) *A community science approach to assessing the water chemistry of tributaries in the Mahoning River Watershed*; Dr. Ray’s Energy & Environment Speaker Series; Youngstown State University, Youngstown, OH.
- O’Leary, B.F.** (2019) *Understanding urban water flow: Neighborhood scale shallow groundwater migration*, Healthy Urban Waters Symposium: A Dip in the Water, Wayne State University, Detroit, MI.
- O’Leary, B.F.**, (2019), *Recovery Park Groundwater*, Healthy Urban Waters Symposium: A Dip in the Water, Wayne State University, Detroit, MI.
- O’Leary, B.F.** (2019) *Learn EJSCREEN: Environmental Justice Screening and Mapping Tool*, Wayne State University, Detroit, MI.

Conference presentations:

- O’Leary, B.F.**, Hood, G.R., Miller, C.J. (2024) *Integrating Plant and Residential Screening Methods for Detecting Subsurface Contamination in Complex Urban Settings*, American Geophysical Union Fall Meeting, Washington D.C., American Geophysical Union, Abstract ID: H06-69.

- O'Leary B.F.**, Miller, C.J., Black, S., Dittrich, T., Hood, G.R., Wager, Y., Wang, Q., Treemore-Spears, L. (2024) *Evaluating the Prevalence and Impact of Legacy Volatile Organic Contaminants (VOCs) in Urban Neighborhoods*, Association of Vapor Intrusion Professionals. Anaheim, CA.
- O'Leary, B.F.**, Hood, G.R., Miller, C.J., Black, S.M., (2024) *Investigating Groundwater Contamination through Phytoscreening in Neighborhoods of the Great Lakes Region*, Shared Lakes: One Water, One Health. IAGLR's 67th Annual Conference on Great Lakes Research. Windsor, ON.
- O'Leary, B.F.**, Hood, G.R., MacDonald Gibson, J., Long, H.C., Miller, C.J., Wager, Y. (2024) Sampling strategies and numerical models to understand subsurface vapor intrusion exposure pathways and risk. 2024 Battelle Chlorinated Conference. Denver, CO.
- O'Leary, B.F.**, Hood, G.R., Lu, M., Bunting, E., Zhang, Q., Hossain, M., Sperone, G.S., Miller, C.J., Hussain, Y., Wu, T., Melkonian C., (2024) *Integrating Fieldwork Approaches to Uncover the Environmental Health Impact of Brownfields on Urban Communities*. Climate Change and Environmental Justice: Engaging Diverse Teams. NIEHS Partnerships for Environmental Public Health. Durham, NC.
- O'Leary, B.F.**, Hood, G.R., Lu, M., Bunting, E., Zhang, Q., Hossain, M., Sperone, G.S., Miller, C.J., Hussain, Y., Wu, T., Melkonian C., (2023) *Use of Innovative Methods to Uncover Hidden Stories of Legacy Brownfield Sites*, Superfund Research Program Annual Meeting 2023, Albuquerque, NM.
- O'Leary, B.F.**, Hood, G.R., Miller, C.J., Wager, Y. (2023) *Neighborhood-scale sampling strategies and numerical models to understand subsurface environmental exposure pathways*, Sustainable Detroit Forum 2023, Detroit, MI.
- O'Leary, B.F.**, Salah, H., Straughen, J., Thompson, L. (2023) *Volatile Organic Compound Learn Shop*. Great Lakes Bioneers Detroit Conference. Detroit, MI.
- O'Leary, B.F.**, Westrick J., Salah, H., Linn, C. (2023) *Center for Leadership in Environmental Awareness and Research Bioneers Tour*. Great Lakes Bioneers Detroit Conference. Detroit, MI.
- O'Leary, B.F.**, Hood, G.R., Miller., C.J. (2023) *Phytoscreening and Modeling VI in Urban Centers*. Brownfields 2023, Detroit, MI.
- O'Leary, B.F.**, Miller, C.J., Selegean, K.J., Hood, G.R (2022) *Exploring the differences between alternative VOC sampling methods at abandoned urban brownfield locations*. Superfund Research Program Annual Meeting 2022, Raleigh, NC.
- O'Leary, B.F.**, Miller, C.J., Selegean, K.J., Hood, G.R. (2022) *Urban groundwater pollution: Using vegetation to evaluate impacts*. Joint Aquatic Sciences Meeting, Grand Rapids, MI.
- O'Leary, B.F.**, Hill, A.B., Linn, C., Lu, M., Miller, C.J., Newman, A., Sperone, G.F., Zang, Q. (2022) *Environmental remediation at leaking underground storage tanks: Exploring spatial patterns in Wayne County, MI*, American Geophysical Union Fall Meeting, Chicago, IL. American Geophysical Union, Abstract ID: GH15B-0460. <https://ui.adsabs.harvard.edu/abs/2022AGUFMGGH15B0460/abstract>

- O'Leary, B.F.**, Miller, C.J., Dittrich, T.M., Hood, G.R., Papuga, S.A., Shuster, W. (2021) *Evaluating volatile organic compound exposure pathways and risk in a variably saturated, urban landscape*. American Geophysical Union Fall Meeting, New Orleans, LA, American Geophysical Union. Abstract ID: H52D-02O. <https://ui.adsabs.harvard.edu/abs/2021AGUFM.H52D..02O/abstract>
****Awarded 2nd Place for the 'Outstanding Student Presenter' from the Unsaturated Zone Technical Committee****
- O'Leary, B.F.**, Esparra-Escalera, H., Lucas, A., Raoufi, G., (2021) *Designing a Community Science Platform: Detroit AirNet*; EDRA52; University of Detroit Mercy; Detroit, MI.
- Linn, C., **O'Leary, B.F.** (2021) *Interdisciplinary Research on the Hydro-social Cycle in Southeast Michigan*. Presented online at the Society for Applied Anthropology Annual Conference.
- O'Leary, B.F.**, and Miller, C.J., (2020) *Exploring mechanism and pathways of VOC migration beneath Detroit's urban landscape*, Superfund Research Program 2020, Texas A&M University, College Station, TX.
- O'Leary, B.F.**, Anderson, L., Armstrong, F., Fowler, D., Ludwig, D., Harper, L., McLean, C., Spiese, C., Stolz, J., (2020) *Assessing the water chemistry of tributaries in the Mahoning River Watershed, Youngstown, Ohio*, American Geophysical Union Fall Meeting, Online, American Geophysical Union, Abstract ID: H110-0005. <https://agu.confex.com/agu/fm20/meetingapp.cgi/Paper/771489>
- O'Leary, B.F.**, Teimoori, S., and Miller, C.J., (2020) *Evaluating neighborhood-scale urban groundwater in Detroit, MI*. Wayne State University Graduate Research Symposium, Wayne State University, Detroit, MI.
- Linn, C., **O'Leary, B.F.**, and Akemann, C., (2020) *Interdisciplinary Urban Sustainability Research: Seeking Comprehensive Knowledge About Groundwater Contamination and Its Effects on Drinking Water Quality in SE Michigan*. Society for Applied Anthropology Annual Meeting, Albuquerque, NM.
- O'Leary, B.F.**, Teimoori, S., Miller, C.J., (2019) *Using an urban water budget to understand urban shallow groundwater processes for sustainable neighborhood development*, American Geophysical Union Fall Meeting, San Francisco, CA, American Geophysical Union, Abstract ID: GH13D-1074. <https://ui.adsabs.harvard.edu/abs/2019AGUFM.GH13D1074O/abstract>
- O'Leary, B.F.**, Cassidy-Bushrow, A.E., Lemke, L.D., Sperone, F.G. Straughen, J.K., Reiners, J.J. Jr., (2019) *Airshed Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Preterm Births in Detroit*, Superfund Research Program 2019, Seattle, WA.
- Teimoori, S., **O'Leary, B.F.**, Miller, C.J., (2019) *Characteristics and health implications of Detroit's Shallow Groundwater*, Superfund Research Program 2019, Seattle, WA.
- O'Leary, B.F.**, Teimoori, S., Miller, C.J., (2019) *Developing an urban water budget and groundwater models in Detroit, MI*, Great Lakes Water Authority Symposium, Detroit, MI.

- O'Leary, B.F.**, Linn, C., Akemann, C., (2019) *Groundwater in SE Michigan: Understanding groundwater processes for sustainable urban development*, Detroit Sustainability Forum, Detroit, MI.
- O'Leary, B.F.**, Teimoori, S., Miller, C.J., (2019) *Characterization of Shallow Groundwater in Detroit: Recovery Park*, Society of Environmental Toxicology and Chemistry, Toronto, ON.
- O'Leary, B.F.**, Teimoori, S., Miller, C.J., (2019) *Characterization of Shallow Groundwater in Detroit: Environmental and Hydraulic Considerations*, SEDHYD, Reno, NV.
https://www.sedhyd.org/2019/openconf/modules/request.php?module=oc_program&action=view.php&id=354&file=1/354.pdf
- O'Leary, B.F.** and Miller, C. J., (2019) *Characterization of Shallow Groundwater in Detroit: Environmental and Hydraulic Considerations*, International Association of Great Lakes Research, Brockport, NY.
- Miller, C.J., **O'Leary, B.F.**, Kashian, D.R., Zhang, Y.L., (2019) *Tailoring sustainability training for urban environmental research*, International Association of Great Lakes Research, Brockport, NY.
- O'Leary, B.F.**, Miller, Carol J., Striz Calnin, Maggie, Sagovac, Simone, (2018) *Michigan Clean Diesel Collaborative: Improving air quality through community driven initiatives in Southwest Detroit*, American Geophysical Union Fall Meeting, Washington D.C., American Geophysical Union, Abstract ID: 446875. <https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/446875>
- Miller, Carol J., **O'Leary, B.F.**, Kashian, Donna, Guerra-Lopez, Ingrid, (2018) *Center for Leadership in Environmental Awareness and Research (CLEAR): Bridging the elements of ecology, health, education, and outreach in an urban context*; American Geophysical Union, Washington D.C., American Geophysical Union, Abstract ID: 464852. <https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/464852>
- O'Leary, B.F.**, Rios, O., Aregbesola, O., Papuga, S., Miller, C.J., (2018) *Spatial Considerations in Quantifying the Risk of VOC Exposure via Vapor Intrusion, Water at Wayne Symposium*, Detroit, MI.
- Rios, O., Papuga, S., Sperone, G., Miller, C.J., **O'Leary, B.F.**, Aregbesola, O., (2018) *Spatial Considerations in Quantifying the Risk of VOC Exposure via Vapor Intrusion, Water at Wayne Symposium*, Detroit, MI.
- O'Leary, B.F.** and Lemke, L.D., (2015) *Identification and influence of spatial outliers in air quality measurements*; American Geophysical Union Fall Meeting, San Francisco, CA, American Geophysical Union, Abstract ID: 80581. <http://fallmeeting.agu.org/2015/abstract/identification-and-influence-of-spatial-outliers-in-air-quality-measurements/>
- O'Leary, B.F.**; Miller, C.J., Katrib, L.T., Abkenar, S.M., Pruehs, A.M., Alighalehbabakhani, F., Wayne, A.M., Fowler, S., Steis, J.D., Afzal, M.; Baskaran, M., (2014), *Groundwater/Surface Water Interactions in Lake St. Clair Watershed*, 4th Annual AIPG Workshop on: The Groundwater/Surface Water Interface – Characterization, Evaluation and Compliance, Roscommon, MI.
- O'Leary, B.F.**, Abkenar, S.M, (2014) *Using GIS technology to prepare and process data for groundwater modeling at Lake St. Clair Metropark*, IMAGIN Conference, Livonia, MI.

O’Leary, B.F., Lemke, L.D., (2013) *Modeling Spatiotemporal Variability of Intra-Urban Air Contaminants in the Detroit Airshed: A Pragmatic Approach*, GSA Annual Meeting and Exposition, Denver, CO. Geological Society of America. Abstracts with Programs. Vol. 45, No. 7, p.664, Abstract: <https://gsa.confex.com/gsa/2013AM/webprogram/Paper229265.html>

FUNDED RESEARCH AND GRANT PARTICIPATION

10. **O’Leary, B.F.** (2024) K.C. Donnelly Externship from NIEHS SRP, Wayne State University's Center for Leadership in Environmental Awareness and Research (\$10,000) (CLEAR – Award #P42ES030991)
Role: PI
<https://research.wayne.edu/news/wayne-state-postdoctoral-trainee-awarded-kc-donnely-externship-from-niehs-srp-63120>
9. Hood G.R., Black S., **O’Leary B.F.**, Shaible, T.M. (2023) Food equity in Detroit, Michigan: exposure of crops grown at urban gardens to anthropogenic volatile compounds (VOCs). United Health Care’s Health Equity Challenge.
(\$5,000 – honorable mention)
Role: Co-PI
8. **O’Leary, B.F.** (2022) Assessment of VOC transport through neighborhoods along sewer corridors: use of phytoscreening and gas sampling. Connecting CLEAR, Wayne State University, Detroit, MI. (\$10,000)
Role: PI
7. **O’Leary, B.F.**, Lucas, A., Mariscal, N., Pickering, S., Salah, H., Raoufi, G., Shakoor, A., Zundel, C. (2022) Health Equity Challenge Application: T-RUST. United Health Care’s Health Equity Challenge. (\$2,500– honorable mention)
Role: MPI
6. **O’Leary, B.F.** (2021) Graduate Student Professional Travel Award. Wayne State University, Detroit, MI. (\$400)
Role: PI
5. **O’Leary, B.F.**, Akers, R., Diehl, A., Esparra, H., Kakaris, D., Lucas, A., Raoufi, G. (2021) Ecology Center - Audit of Air Quality Monitors in Wayne County – sub-award. Erb Family Foundation. (\$40,000)
Role: PI
4. Miller, C., Mitra, R., Dabney, B., Ekhaton, K., Hunt, D., Linn, C., Lyon, N., **O’Leary, B.F.**, Pruett, A., Teimoori, S. (2020) GSI-Informed Urban Groundwater Monitoring Networks, EPA People, Prosperity, Planet EPA Grant Number: SU840160 (\$25,000)
Role: MPI
https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract_id/11118/report/0

3. **O’Leary, B.F.**, Akers, R., Diehl, A., Esparra, H., Kakaris, D., Lucas, A., Raoufi, G. (2020) Detroit AirNet. Wayne State University STEAM Challenge (\$12,000)
Role: MPI
<https://trust.wayne.edu/airnet.html>
2. **O’Leary, B.F.**, (2019-2022) American Geophysical Union – Thriving Earth Exchange Community Science Fellowship (\$1,000)
Role: PI
<https://thrivingearthexchange.org/project/youngstown-oh/>
1. **O’Leary, B.F.**, Linn, C., Akemann, C. (2018) Interdisciplinary Urban Sustainability Development. AGU Celebrate100 Grant. American Geophysical Union. (\$10,000)
Role: PI

Additional Grant Participation:

- **National Institute of Environmental Health Sciences (NIEHS) P42: *Center for Leadership in Environmental Research and Awareness*** (\$11,200,000)
Role: Key Research Personnel and Program Coordinator
Activities: Helped facilitate the application and program development of a new Superfund Research Program at Wayne State University. Research activities include spatial modeling of subsurface contamination and fieldwork in urban brownfields.
- **Erb Family Foundation: *Healthy Urban Waters*** (\$600,000)
Role: Graduate Research Assistant & Post-Doctoral Research Assistant
Activities: Performed urban groundwater field research, developed GIS urban soil and groundwater maps, and helped with WSU Healthy Urban Water programing.

SERVICE

Academic Teaching:

Pharmacology 7650: Volatile Solvents in the Environment (Winter 2020)

- Self-designed course taught with co-T-RUST students on volatile organic compounds (VOC). Topics included VOC environmental impact and public health.

ESG 5650 - Applied Geologic Mapping (Winter 2025)

- Course on applying geographic information systems (GIS) to geological applications with an emphasis on spatial analysis, geologic mapping, and topographic analysis.

Conference Sessions Chaired:

O'Leary, B.F. and Vasquez, A. (2022) *One Health in Great Lakes Urban Ecosystems*. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

Mannix, Devin, **O'Leary, B.F.**, Davis, Julianne, Birkenholtz, Trevor, (2020) *Bridging Divides in Social and Hydrologic Science: Integrative Practices and Stakeholder Participation in Hydrologic Research I*, American Geophysical Union Fall Meeting, Online, American Geophysical Union. <https://agu.confex.com/agu/fm20/meetingapp.cgi/Session/109126>

Mannix, Devin, **O'Leary, B.F.**, Davis, Julianne, Birkenholtz, Trevor, (2020) *Bridging Divides in Social and Hydrologic Science: Integrative Practices and Stakeholder Participation in Hydrologic Research II Posters*, American Geophysical Union Fall Meeting, Online, American Geophysical Union. <https://agu.confex.com/agu/fm20/meetingapp.cgi/Session/107718>

Akemann, C., **O'Leary, B.F.**, Linn, C., (2019) *Furthering Interdisciplinary Urban Groundwater Quality and Urban Sustainability Research*, Society of Environmental Toxicology and Chemistry, Toronto, ON.

O'Leary, B.F., Linn, C., Akemann, C., (2019) *Furthering Interdisciplinary Urban Groundwater Quality and Urban Sustainability Research*, International Association of Great Lakes Research, Brockport, NY.

Professional Society Membership and Positions:

American Geophysical Union Hydrology: Student Section Subcommittee 2020

American Institute of Professional Geologists: Secretary – WSU Chapter 2013

American Geophysical Union

American Institute of Professional Geologists

International Association of Great Lakes Research

STEM Community Outreach:

O'Leary, B.F., Linn, C, Mitra, R., Petrillo, M.C. (2024) *Tour 3: Understanding Impact of VOCs on Detroit Public Health*, The 19th Annual Great Lakes Bioneers Detroit Conference; University of Detroit Mercy; Detroit, MI.

O'Leary, B.F., Haniya Yusuf, S., Kakaris-Porter, D., Selegan, K. (2022) *A5. Tour: Urban water management and green stormwater infrastructure at Wayne State University*; The 17th Annual Great Lakes Bioneers Detroit Conference; University of Detroit Mercy; Detroit, MI.

O'Leary, B.F., Dabney, B., Hartrick, J., Linn, C., Serreyn, M (2021) *GSI-Informed Urban Groundwater Monitoring Networks*; Connecting water with our world: A community conversation around stormwater and resilience, Hamilton Rainscape, Detroit, MI.

O'Leary, B.F., Dabney, B., Hartrick, J., Linn, C., Serreyn, M. (2021) *A2. Tour: GSI-Informed Urban Groundwater Monitoring Networks at WSU*, The 16th Annual Great Lakes Bioneers Detroit Conference, University of Detroit Mercy, Detroit, MI.

O'Leary, B.F. (2019) *Helping Hands: Restoring Great Lakes Habitat*. Illinois-Indiana Sea Grant & University of Illinois Extension, Delray Community Center, Detroit, MI.

Reviewer for the Following Journals:

Environmental Pollution (1), BMC Public Health (2)

AWARDS

NIEHS P42 Trainee	2022-Present
Healthy Urban Waters, Erb Family Foundation	2018-Present
American Geophysical Union: Outstanding Student Presenters Mini-Award (\$250)	2021
American Geophysical Union - TEX Community Science Fellowship	2019-2022
Illinois-Indiana Sea Grant - Environmental Educator Stipend (\$1,000)	2019
Tau Beta Pi – Honor Society	2019-2023
WSU Transformative Research in Urban Sustainability Training – NSF-Grant Trainee	2018-2019
WSU Department of Geology Student Merit Award	2013
Highland Bagpipes, Paula Bauer Music Award, Allegheny College, Meadville, PA	2008-2011

RELEVANT SKILLS

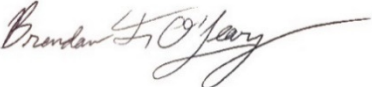
Soil and bedrock boring log programs – gINT and LogPlot

Computer language – R-Programming

Geostatistical and numerical modeling programs – 4-Dim, Earth Volumetric Studio (EVS), HYDRUS, Mining Visualization System (MVS), SGeMs, SpaceStat, Surfer, Visual Modflow Classic, Visual Modflow Flex, VLEACH.

Graphical Information Systems – ESRI ArcGIS Platform

Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA – Project at the Marine Biological Laboratory and Brown University: Studied terrestrial and aquatic ecosystems.

Signature: 

Date: 11/30/2024