

**Jennifer Boehme, Ph.D.**

Environmental and Marine Scientist, Expertise in Program Management and Science Policy  
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**Summary of Qualifications**

- US Citizen with a Ph.D. in Marine Science (Chemical Oceanography) from the University of South Florida
- Experienced at binational policy/research interface, assisting governments of the United States and Canada in resolving Great Lakes water quality issues
- Building positive working relationships with Great Lakes rights holders and stakeholders
- Strategic development and project management for government and university research laboratories
- Leadership Education and Development Institute Program (LEAD) Certificate, US Office of Personnel Management, 2022

**Chief Executive Officer, Great Lakes Observing System, Ann Arbor, MI August 2023 – Present**

- Manage overall GLOS resources, ensuring compliance with federal grant requirements.
- Guide and support GLOS Board of Directors.
- Direct strategic planning and annual objectives to meet user needs in a service-oriented approach.
- Manage day-to-day operations of data collection, management, and product development activities.
- Handle human resources, including hiring, evaluations, compensation, and policy establishment.
- Oversee financial functions, including audit, budget, payroll, and policy development.
- Support the design and implementation of recruitment, engagement, and communications strategies for members, clients, and stakeholders.
- Develop and oversee competitive bid processes, proposal reviews, scope of work, and budget negotiations for contracted activities.

**Science Advisor, International Joint Commission, GS-14 July 2012 – July 2023**

- Interprets regulatory and legislative and policy, advising management and Commission leadership on U.S-Canadian environmental-health data harmonization, human health and water quality issues
- Assists with developing and implementing budgets and project operating plans for the Great Lakes Regional Office (GLRO), generating funding from the US and Canadian governments
- Manages recruitment, engagement, project proposals, and budgets for binational Health Professionals Advisory Board, applying the One Health approach and perspectives of Tribes and First Nations to Great Lakes environmental issues
- Internal and external communication and engagement, designs communications plans and advances talking points and products for Commissioners and IJC boards
- Initiated IJC-Sea Grant Fellowship program; secures budgets, supervises and reviews performance of fellows.
- Negotiates and manages contracts originating in US and Canada national systems (US State Department / Global Affairs Canada) to support human resource needs for the office and boards (\$900,000)
- Assist with analysis of Canadian labor policy and its appropriate implementation at GLRO
- Represents IJC on interagency panels and stakeholder boards

**Senior Communications Consultant, National Science Foundation (NSF)      October 2011 - June 2012**

- Strategic communications for congressional affairs, geosciences and science education in Office of Legislative and Public Affairs (OLPA)
- Article writing, visual media development and coordination of two congressional events via OLPA
- Assistant editor for NSF monthly newsletter *Current*
- Speech writing for NSF Director and management

**AAAS Science & Technology Policy Fellow      September 2009-August 2011**

National Science Foundation, Biological Sciences Directorate, Biological Infrastructure Division

- Organized and managed writing committee and intra-directorate approval process for Foundation-wide solicitation, Research Coordination Networks (RCN), to promote international collaborations, encourage interdisciplinary science and broaden participation of underrepresented groups
- Staffing and site visits for the National Ecological Observation Network program
- Developed research strategies and technical content for interagency (NOAA, EPA, NSF) solicitation to develop climate adaptation management tools for water and wastewater utilities
- Planning and portfolio activities for review panels of Biological Infrastructure Division (Instrument Development for Biological Research)
- Implemented the 2010 RCN for Biological Sciences investigator meeting emphasizing network development, international participation and funding opportunities; participants indicated the topics and biannual structure were timely, useful and should be incorporated into RCN framework in other directorates

National Oceanographic and Atmospheric Administration, Climate Program Office, Nov. 2010 – Apr. 2011

- Expanded partnerships among NOAA, the Western Governors Association, Depts. of Interior and Agriculture; drafted preliminary climate adaptation MOU. Adopted June 30, 2011
- Supported development of NOAA's Next Generation Strategic Plan for climate mitigation, adaptation and regional climate initiatives
- Liaison for: USGCRP working group, Interagency Group on Integrative Modeling; Extreme Events Interagency Working Group: Water and Wastewater Utilities

**Ecologist, Smithsonian Environmental Research Center, Edgewater, MD      2005-2009**

- Established the Ballast Water Analytical Laboratory for fluorescence and trace metal analysis, supervising laboratory manager and 16 staff; originated in-house capability for analytical techniques and developed measurable goals, quality control and oversight practices
- Managed \$300,000 multi agency budget (states CA, WA and OR), US Coast Guard (USCG), NOAA Sea Grant, and the New Zealand Ministry of Fisheries
- Conceived and coordinated research and monitoring, and supervised field personnel for 50 ballast water exchange verification (BWEV) field cruise/research operations in four US and four international port and coastal environments
- Refined approach to improve USCG regulation and management of BWEV for commercial ships in US ports to reduce ecological damage by invasive species transport
- Conducted proof-of-concept testing for handheld BWEV fluorometers developed by the USCG; performed comparative fluorometer analysis for setting chemical tracer regulatory thresholds
- Advised and trained stakeholders on the regulatory use of handheld fluorometers for BWEV monitoring and compliance for decision making, including and USCG boarding officers, international shipping companies, US state and federal regulators, and US port representatives

**Assistant Research Scientist, Darling Marine Center, University of Maine** **2002-09**

- Principal investigator initiating program for paid sample analysis and data presentation; trained undergraduate and graduate interns in analytical techniques
- Co-principal investigator, evaluated physical and environmental origin of observed changes in biological, photochemical and geochemical cycling and particulate size of colloidal carbon in Damariscotta River Estuary and associated watersheds

**Associate in Research, College of Marine Science, University of South Florida** **2000-02**

- Statistical analysis of changes in geochemistry and photochemistry in organic carbon as monitored by fluorescence in Florida watersheds, estuaries and the Gulf of Mexico
- Supervised Marine Fluorescence Laboratory, trained undergraduate and graduate researchers
- Planned and implemented cruises for testing of prototype in-situ fluorescence sensor
- Initiated contracted fluorescence analysis; developed operational and quality control capabilities for paid technical sample analysis and data presentation

**Education**

- 2000** Ph.D., College of Marine Science, University of South Florida, Tampa, FL  
**Dissertation:** Artificial and Natural Fluorescence of Dissolved Organic Matter in the Tampa Bay Estuary  
**Advisor:** Paula Coble
- 1993** B.S., Chemistry, Emory University, Atlanta, Georgia

**Selected Publications, Articles and Media**

1. Graydon, R.C, M. Mezzacapo, J. Boehme, S. Foldy, T. A. Edge, J. Brubacher, H. M. Chan, M. Dellinger, E. M. Faustman, J. B. Rose, T. K. Takaro. (2022) Associations between extreme precipitation, drinking water, and protozoan acute gastrointestinal illnesses in four North American Great Lakes cities (2009–2014). *Journal of Water and Health* 20(16). DOI: 10.2166/wh.2022.018
2. Great Lakes Connection, June 14, 2022. 'Glosapalooza' celebrates data and how it benefits users of the Great Lakes. <https://www.ijc.org/en/glosapalooza-celebrates-data-and-how-it-benefits-users-great-lakes>
3. Great Lakes Connection, February 8, 2022. Heavy Storms Linked to Germs in Great Lakes Drinking Water: IJC Health Professionals Advisory Board Report. <https://www.ijc.org/en/heavy-storms-linked-germs-great-lakes-drinking-water-ijc-health-professionals-advisory-board-report>
4. IJC Health Professionals Advisory Board (2021). The Great Lakes Water Quality Centennial Study - Phase I Report. [https://www.ijc.org/sites/default/files/2021-07/HPAB\\_CentennialStudy\\_PhaseI\\_2021.pdf](https://www.ijc.org/sites/default/files/2021-07/HPAB_CentennialStudy_PhaseI_2021.pdf)
5. Great Lakes Connection, April 14, 2020. IJC Project Aims to Create Fish Consumption Resource for Indigenous Anglers. <https://ijc.org/en/ijc-project-aims-create-fish-consumption-resource-indigenous-anglers>
6. International Joint Commission (2020). Second Triennial Assessment of Progress Report on Great Lakes Water Quality, 2020. <https://www.ijc.org/en/2020-TAP-Report>
7. IJC Health Professionals Advisory Board (2020). A Review of the Human Health Impacts of Selenium in Aquatic Systems. [https://www.ijc.org/sites/default/files/2020-09/HPAB\\_SeleniumHealthReview\\_2020.pdf](https://www.ijc.org/sites/default/files/2020-09/HPAB_SeleniumHealthReview_2020.pdf)
8. IJC Health Professionals Advisory Board (2017) Human Health Effects of Cyanobacterial Toxins in the Great Lakes Region: A Science and Monitoring Assessment. <https://www.ijc.org/sites/default/files/2019-04/HPABAAlgalBloomFinal.pdf>

## **Cassandra Jones**

(586) 876-3407 | cassondrajones403@gmail.com | linkedin.com/in/cassondrajones | Florida, USA

### **Professional Summary**

Grants and program manager with experience overseeing federal and private funding, including budgets, subawards, contracts, and compliance reporting. Skilled in managing the full lifecycle of grants and agreements, supporting audit readiness, and improving internal workflows. Experienced in cross-functional collaboration with leadership, finance teams, and external partners to ensure effective program execution and compliance.

### **Professional Experience**

**Great Lakes Observing System (GLOS) | Ann Arbor, MI (Remote)**

**Grants Manager | Sept 2025 – Present**

**Grant Management Specialist (Contract) | Mar 2025 – Aug 2025**

- Manage the full lifecycle of federal grants and agreements, including subawards, contracts, amendments, and no-cost extensions.
- Coordinate with leadership, finance, and project teams to support budgets, tracking, and deliverables.
- Maintain contract tracking systems and organized documentation to support audit readiness and reporting.
- Support subrecipient and contractor management, including invoice tracking and compliance documentation.
- Contribute to process improvements to strengthen internal workflows and reporting accuracy.

**AARP, Livable Communities | Alexandria, VA (Remote)**

**Program Manager (Contract) | Feb 2024 – Dec 2024**

- Managed a \$3.8M national grant program, overseeing operations and grantee performance.
- Developed and implemented an on-demand grant initiative to expand funding accessibility.
- Prepared reports and funding recommendations to support executive decision-making.

**GrantWorks | Austin, TX (Remote)**

**Grant Manager (Contract) | June 2022 – Sept 2023**

- Managed \$11.6M+ in federal grant funding, ensuring compliance with program requirements.
- Provided training and technical assistance to grantees to improve performance and reporting.
- Streamlined internal processes to improve grant administration and reporting efficiency.

**BluBinder** | Falls Church, VA (Remote)

**Grant & Outreach Manager (Contract)** | June 2022 – Sept 2022

- Developed grant tracking systems and supported proposal development for private funding.

**United Way for Southeastern Michigan** | Detroit, MI

**Health & Basic Needs Project Manager** | July 2020 – June 2022

**Health & Basic Needs Specialist** | May 2019 – June 2020

**Early Childhood Specialist** | Apr 2018 – May 2019

- Managed \$12M+ in federal funding (including FEMA EFSP), ensuring compliance across the grant lifecycle.
- Served as liaison between federal agencies, subrecipients, and internal teams.
- Led improvements to grant systems, reporting processes, and documentation practices.
- Supported administration of additional federal and community-based grant programs.

## **Education**

**Master of Social Work (MSW), Clinical**

Michigan State University | East Lansing, MI

Certificate: Social Work in Health Care | GPA: 4.0 | Phi Alpha Honors Society

**Bachelor of Arts, Human Development**

Michigan State University | East Lansing, MI

Minors: Sociology; Women & Gender Studies

## **Technical Skills**

- **Grant & Contract Management:** Subawards, procurement contracts, compliance, reporting
- **Systems:** Salesforce, eRA Commons, SurveyMonkey Apply, OpenWater
- **Financial Tools:** Excel, Bill.com, budget tracking and reconciliation
- **Other:** Microsoft Office, Google Workspace

**SHELBY BRUNNER, Ph.D.**  
Science and Observations Manager  
Great Lakes Observing System  
906-440-0224  
shelby@glos.org

## **Education**

**Ph.D. Freshwater Sciences** University of Wisconsin-Milwaukee *Fall 2016* Dissertation: *A multi-faceted biogeochemical approach to analyzing hypoxia in Green Bay, Lake Michigan*

**B.S. Environmental Chemistry**, *magna cum laude* Lake Superior State University *May 2011* Senior Thesis: *A Pilot Study to Determine an Effective Technology to Remove Geosmin and 2-Methylisoborneol for the City of Fairmont*

## **Professional Experience**

2024-Pres. Science and Observing Manager, Great Lakes Observing System, Ann Arbor, MI  
2020-2023 Observing Technology Manager, Great Lakes Observing System, Ann Arbor, MI  
2018-2020 Program Specialist, Global Ocean Monitoring and Observing Program, NOAA/UCAR, Silver Spring, MD  
2017-2018 Knauss Fellow, Global Ocean Monitoring and Observing Program, NOAA, Silver Spring, MD  
2011-2017 Graduate Research Assistant, School of Freshwater Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI  
2010 Hollings Scholar, Atlantic Oceanographic and Meteorological Lab, NOAA, Miami, FL  
2009-2011 Environmental Lab Technician, Lake Superior State University, Sault Ste. Marie, MI  
2009-2011 Tutor and Group Instructor, Learning Center, Lake Superior State University, Sault Ste Marie, MI  
2008 Harbor Attendant, MI Dept. of Natural Resources, Port Austin, MI

## **Selected Fellowships and Awards**

- Sea Grant John A. Knauss Marine Science-Policy Fellowship, 2017
- Cooperative Institute for Limnology and Ecosystems Research (CILER) Graduate Fellowship, 2015-16
- UWM Distinguished Dissertator Graduate School Fellowship, 2014-15
- UWM Distinguished Graduate School Fellowship, 2013-14
- UNOLS Early Career Chief Scientist Training Program Participant, November 2012
- Oceans and Human Health NOAA Fellowship, 2011-2012
- Ernest F. Hollings NOAA Scholarship, 2009-11

## **Field Experience**

R/V Neeskay, University of Wisconsin-Milwaukee, Milwaukee, WI Several

- Deploy, maintain, and calibrate several seasonal water quality/sonde stations in Green Bay
- Perform a variety of sediment core experiments, including oxygen incubations and porewater extractions
- Assist in adaptation of eddy correlation benthic system to Great Lakes environment

R/V Oceanus, Oregon State University, Newport, Oregon July 2013

- Deploy eddy correlation and microelectrode profiler landers to study sediment-water processes of coastal Pacific sediments
- Perform microelectrode preparation, maintenance, and calibration
- Assist with multicorer and CTD deployments/recovery, provide other help as needed

- Design research plan for 7-day cruise and coordinate efforts with 12 scientists across U.S.
- Attend 2-day UNOLS workshop on chief scientist preparations and execute cruise plan including mobilization, sample collection and demobilization, assist with a variety of research tasks

R/V Ronald H. Brown, National Oceanic and Atmospheric Administration (NOAA) July-August 2011

- Operate underway-CTD (uCTD), CTD and XBT, collect CTD samples for oxygen and salinity
- Assist in repairs of scientific equipment including uCTD, CTD, and XBT
- Assist in ozone sonde launches, provide other meteorological experiment help as needed

## **Publications**

- Brunner, S. L., Grunert, B., Weckerly, K., Anderson, P., and Klump, J. V. *In review*. *Limnology and Oceanography. A whole ecosystem perspective of hypoxia and its drivers in a large temperate estuary*.
- Brunner, S. B., Dorton, J., Chardon-Maldonado, P., Farrugia, T. J., Ford, M. Y., et al. 2025. OCEANS 2025 - Great Lakes, Chicago, IL, USA. *The ongoing evolution of ocean observing: Aligning with regional priorities*. doi: 10.23919/OCEANS59106.2025.11245150
- Yeo, A., Henderson, H., Anderson, E. J., Fiorentino, L. A., Brunner, S. 2025. IEEE. *Building capacity to measure and assess offshore, full-frequency water level fluctuations to support coastal hazard observation and prediction*. doi: 10.23919/OCEANS59106.2025.11245121
- Smith, N. S., Kessler, W.S., Cravatte, S., ... Brunner, S.L. 2019. *Frontiers in Marine Science. Tropical Pacific Observing System*. doi:10.3389/fmars.2019.00031
- Klump, J. V., Brunner, S. L., Grunert, B. K., Kaster, J. L., et al. 2018. *J. Great Lakes Res. Evidence of persistent, recurring summertime hypoxia in Green Bay, Lake Michigan*. doi: 0.1016/j.jglr.2018.08.002
- Bartlett, S. L., Brunner, S. L., Klump, J. V., Houghton, E. M., and Miller, T. R. 2018. *J. Great Lakes Res. Spatial analysis of toxic or otherwise bioactive cyanobacterial peptides in Green Bay*.
- LaBuhn, S. and Klump, J.V. 2016. *J. Great Lakes Res. Estimating summertime primary production via in-situ monitoring in an eutrophic freshwater embayment, Green Bay, Lake Michigan*.

## **Selected Presentations**

- Brunner, S., Henderson, H., Johnson, K., Klump, J., Miller, R., and Zorn, M. 2026. *Twenty+ years of (un)intentional Great Lakes observing co-design*. AGU Ocean Sciences Meeting. Glasgow, Scotland.
- Brunner, S., Klump, J., Bootsma, H., and Grow, J. 2025. *Primary production rates across Lake Michigan*. International Association for Great Lakes Research. Milwaukee, WI.
- Brunner, S., Anderson, E., Wu, C., Henderson, H., Anderson, J., and Meadows, G. 2025. *Building capacity to support coastal hazard observation and prediction*. International Association for Great Lakes Research. Milwaukee, WI.
- Brunner, S., et al. 2019. *The Tropical Pacific Observing System and 2020. Lightning talk*. Ocean Obs '19.
- Brunner, S., Klump, V. 2017. *Understanding the balance of oxygen consumption in Green Bay, Lake Michigan*. State of Lake Michigan. Green Bay, WI.
- Brunner, S., Smith, E., Thurston, S., Todd, J., Piotrowicz, S., Tedesco, K., and Legler, D. 2017. *Sustained ocean observations to understand climate: A look at NOAA's Ocean Observing and Monitoring Division*. JCOMM-5 Technical Conference. Geneva, Switzerland.
- LaBuhn, S. and Klump, V. 2017. *The biogeochemistry of dissolved oxygen in Green Bay, Lake Michigan*. Great Lakes Environmental Research Lab. *Invited seminar*. Ann Arbor, MI.

# Connor Lauren Brooks

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## Education

UNIVERSITY OF WISCONSIN-MADISON

2018 - 2023

B.S, Atmospheric & Oceanic Sciences *with Honors in the Major*, International Studies

## Research Experience

NELSON INSTITUTE, CENTER FOR CLIMATIC RESEARCH, UW-MADISON

*Undergraduate Research Assistant, PI: Dr. Hannah Zanowski*

Jan 2021 – Aug 2023

- Acquired, processed, and analyzed data from global coupled climate models using Python to investigate ocean and atmospheric circulation around Greenland in future warming scenarios.
- Created a poster and presented research at several UW functions to various audiences.
- Summarized and wrote up findings to submit an Honors Thesis and for eventual publication.

GULF OF MAINE RESEARCH INSTITUTE, PORTLAND, ME

*Undergraduate Research Fellow, PI: Dr. Hannah Baranes*

Summer 2022

- Used GIS data and field measurements to conduct a sea level rise vulnerability assessment for a portion of Portland's working waterfront using uniquely calculated local sea level rise projections and site-specific infrastructure concerns.

## Work Experience

GREAT LAKES OBSERVING SYSTEM, ANN ARBOR, MI

*Observing Data Specialist*

Nov 2025 - present

- Maintain IOOS-compliant data infrastructure by leading platform onboarding, metadata management, partner communication, and periodic records review for the Seagull repository and dashboard
- Produce and present observing network communications across newsletters and regional/national conferences
- Conduct beta and user testing on GLOS products, identifying actionable recommendations aligned with data management best practices

GULF OF MAINE RESEARCH INSTITUTE, PORTLAND, ME

*Coastal Hazards Research Technician*

Sep 2023 – Aug 2024

- Led the development of a working waterfront risk analysis tool that guides adaptation decisions under various sea level rise projections.
- Co-led field campaigns to install tide gauges and conduct GNSS surveying under guided protocols with a high degree of accuracy while also supporting community science and education projects centered on interpreting and using the generated tidal data.
- Interviewed stakeholders, conducted vulnerability assessments, and created GIS flood inundation maps to support Maine's working waterfront in preparing for sea level rise.

AMERICAN INSTITUTE OF PAKISTAN STUDIES, MADISON, WI

*Programming Assistant*

*Feb 2019 – May 2023*

- Database management, including member profiles and fellowship applications.
- Updated and maintained website to provide a clear and organized space for sharing news and events related to the non-profit and its members.
- Collaboratively wrote grants and reports to secure funding for future programming.

**Professional Involvement**

- American Meteorological Society, UW-Madison Chapter | *2021 – 2023*
- Geological Society of America | *2024 - present*
- Phi Beta Kappa, Member | *2020 – present*
- Marine Technology Society | *2026 - present*

**Skills**

- Computer: Python, R, Gempak, QGIS, SQL, AWS
- Grant technical writing, public communication
- First Aid/CPR certified (2024), Safety at Sea certification
- Conversationally fluent in French

## Experience

### Cyberinfrastructure Engineer - Great Lakes Observing System

Ann Arbor, MI, May 2021 - present - about 5 years

- Worked with organization partners on long-term procedures (NDBC and NCEI)
- Producing high level documentation for critical operational certification and overall operations
- Re-engineered caching for data endpoints of interest for speed
- Assembled and successfully demonstrated an application for key partner
- Maintaining operations during the organization's migration to cloud computing
- Providing technical guidance for the organization's project portfolio
- Worked with development partners through scrum sprints to improve products
- AWS, Terraform, Kubernetes, Pythonic Docker, R, Shell, SQL (PostgreSQL, RedShift), JavaScript

### General Programmer/Analyst - Cooperative Institute for Great Lakes Research (CIGLR)

Ann Arbor, MI, January 2012 - April 2021

- Developed, maintained over *10* data driven web pages for projects being performed by NOAA-GLERL in partnership with CIGLR, effectively communicating scientific observations
- Produced plots and tables of processed data which supported over *20* publications, presentations, and scientific posters (average about *2-3 per year*)
- Slurm, Python, R, Shell, SQL, JavaScript, PHP, FORTRAN, WordPress, Drupal
- [ORCID: 0000-0002-1896-1390](https://orcid.org/0000-0002-1896-1390), [CIGLR Profile](#)

## Skills

- LLM Software development with GitHub Co-Pilot and Claude Code
- Document drafting with Google Gemini followed up with manual review, editing
- Kubernetes administration - pod management, logging, exec, cluster upgrades
- Terraform infrastructure as code
- AWS Codebuild, deployment connected to GitHub/Git
- Full-stack web development: JavaScript, PHP, composer, BASH, PostgreSQL
- REST(ful) APIs and database ORMs - Django
- Big data ETL (Extract, Transform, Load) - R, Python, FORTRAN

## Community

Sheffield Square I Condominium Association Board - President 2021 - Present

City of Saline - Parks Commissioner since 2023, Chair since 2025

## Education

B.S. - 2012 - University of Michigan, Ann Arbor, MI - Data Science

# MICHAEL G. SUTHERLAND

## EDUCATION

Master of Science, Environmental Studies; 2010  
College of Charleston, Charleston, SC

Bachelor of Arts, Political Science; Minor, Environmental Studies; 2005  
University of Florida, Gainesville, FL

Additional graduate level coursework in remote sensing, geomatics, geospatial programming, and data analytics taken at the University of Colorado (Boulder and Denver campuses) and Pennsylvania State University between 2011 and 2020.

## PROFESSIONAL EXPERIENCE

Great Lakes Observing System, Ann Arbor, MI

Marine Geospatial Analyst; April 2024-Present

- Technical subject matter expert supporting GLOS bathymetric mapping programs and projects (e.g. crowd-sourced bathymetry, Lakebed2030, etc.)
- Support GLOS communications team via development of geospatial visualizations
- Provide operational support to GLOS DMAC team regarding geospatial data processing, visualization and data management of observational assets

Cooperative Institute for Research in Environmental Sciences (CIRES),

National Snow and Ice Data Center, Boulder, CO

Associate Scientist III; May 2022-April 2024

- Data Management Team Lead at the NASA Distributed Active Archive Center (DAAC)
- Coordinated day to day activities of a matrixed data management team supporting the NASA SMAP satellite mission and cryospheric data products
- Developed and achieved data management goals and deliverables through coordination with internal and external stakeholders
- Ensured data products were ingested, archived, and distributed according to NASA and NSIDC DAAC requirements
- Ensured data and supporting metadata and documentation conform to NASA and NSIDC DAAC data standards and best practices (i.e. FAIR data principles)
- Provided on-site data management support during the 2023 NASA SnowEx Campaign (Fairbanks, AK)

Dewberry, Denver, CO

Senior Geospatial Analyst; May 2019-April 2022

- Technical subject matter expert supporting airborne lidar bathymetry acquisition projects for federal partners (NOAA, USGS, USACE)

- Led topo-bathymetric lidar data preparation team responsible for exploratory data analysis and initial processing of acquired lidar data
- Developed operational decision support tools for topo-bathymetric lidar projects to ensure optimal data acquisition conditions
- Responsible for quality control review on acquired raw data to determine adequacy for subsequent production processing
- Conceived and developed new and improved data processing workflows/tools to improve processing efficiency
- Performed final quality control review on client deliverables to ensure contract compliance

Cooperative Institute for Research in Environmental Sciences (CIRES),  
 NOAA National Centers for Environmental Information (NCEI), Boulder, CO  
 Associate Scientist II/III; October 2012–April 2019

- Technical task lead for coastal digital elevation model (DEM) development projects at NOAA NCEI
- Helped design and implement an improved framework for the creation of coastal DEMs on a national scale (e.g. CUDEM Program)
- Developed and improved open-source data processing workflows to enable automated DEM development and facilitate continuous data updates to support NOAA mission critical activities (operational hydrodynamic modeling, hazards mapping)
- Represented NOAA NCEI in various inter- and intra-agency coastal mapping working groups to establish elevation data processing best practices, facilitate data sharing and avoid duplication of effort
- Coordinated the transfer of coastal lidar data from federal providers to NOAA NCEI's long term data repository
- Validated and packaged received data for long term archive
- Created and improved data documentation (i.e. standards-compliant metadata)

I.M. Systems Group (contracted to the NOAA Coastal Services Center), Charleston, SC Geospatial Analyst; January 2010-August 2012

- Technical staff member supporting various elevation mapping and coastal hazards related projects
- Created lidar-derived coastal DEMs in support of the NOAA Sea Level Rise Viewer web mapping application
- Processed airborne lidar data for public dissemination via the NOAA Digital Coast Data Access Viewer
- Helped develop and implement raster modeling workflows to depict various inundation scenarios for the NOAA Sea Level Rise Viewer web mapping application
- Performed quality control of subcontracted lidar data and associated DEMs
- Participated in multiple GNSS field surveys to support accuracy assessment of contracted lidar acquisitions

## **TECHNICAL SKILLS**

Operating Systems: Windows, Linux

Programming/Scripting Languages: Python, bash

Geospatial Software: Python Geospatial Stack (e.g. GDAL, geopandas, rasterio), ArcGIS Pro, QGIS, Global Mapper, Generic Mapping Tools (GMT)

Elevation Mapping Software: LAStools, LP360, PDAL, MB-System, Terrascan, Qimera, Fledermaus

## **HONORS AND AWARDS**

Dewberry At Work Award (Peer Recognition), Dewberry, October 2021

Silver Medal for Meritorious Service to Science in support of Advances in Coastal Digital Elevation Model Development, CIRES/CU-Boulder, July 2020

Outstanding Achievement Award in support of Coastal Elevation/Inundation projects, NOAA Coastal Services Center, November 2011

Outstanding Achievement Award in support of Marine Spatial Planning and Coastal Elevation/Inundation projects, NOAA Coastal Services Center, December 2010

## **PUBLICATIONS**

Amante, C.J., Love M, Carignan K, Sutherland MG, MacFerrin M, Lim E. Continuously Updated Digital Elevation Models (CUDEMs) to Support Coastal Inundation Modeling. Remote Sensing. 2023; 15(6):1702. <https://doi.org/10.3390/rs15061702>

Westington, M., Varner, J., Johnson, P., Sutherland, M., Armstrong, A., and Jencks, J. 2019. Assessing Gaps via Bathymetric Sounding Density. The International Hydrographic Review, 20, 41-44.

Sutherland, M.G., Amante, C.J., Carignan, K. and Love, M. 2019. NCEI Continuously Updated Digital Elevation Models. Coastal Geotools Conference, February 11-14, Myrtle Beach, SC.

Sutherland, M.G., Amante, C.J. and Stroker, K. 2017. Towards an Accurate and Consistent National Coastal Digital Elevation Dataset. Coastal Geotools Conference, February 6-9, Charleston, SC.

Sutherland, M.G., McLean, S.J., Eakins, B., Beasley, L. and Love, M. 2015. High-Resolution Modeling of Coastal Elevations along Hurricane Sandy-Impacted Coasts: New Methods and Early Results. Coastal Geotools Conference, March 30-April 2, Charleston, SC.

Eakins, B.W., Danielson, J.J., Sutherland, M.G. and McLean, S.J. 2015. A Framework for a Seamless Depiction of Merged Bathymetry and Topography along U.S. Coasts. Proceedings of U.S. Hydro, March 16-19, National Harbor, MD.

Love, M.R., Sutherland, M.G., Eakins, B., Marcy, D. and McLean, S. 2013. Development of High Resolution, Lidar-Derived Digital Elevation Models for the U.S. Great Lakes. Geological Society of America, Abstracts with Programs, 45(7), 755.

Eakins, B.W., Danielson, J., Sutherland, M.G. and McLean, S. 2013. Creating a Framework for Integrated U.S. Digital Elevation Models. Geological Society of America, Abstracts with Programs, 45(7), 649.

Marcy, D., Brooks, W., Draganov, K., Hadley, B., Haynes, C., Herold, N., McCombs, J., Pendleton, M., Ryan, S., Schmid, K., Sutherland, M. and Waters, K. 2011. New Mapping Tool and Techniques for Visualizing Sea Level Rise and Coastal Flooding Impacts. Solutions for Coastal Disasters 2011, American Society of Civil Engineers, pp. 474-490. [https://doi.org/10.1061/41185\(417\)42](https://doi.org/10.1061/41185(417)42)

Sutherland, M.G. and Sautter, L.R. 2010. Monitoring of a Discrete Shoal Bypassing Event and Resultant Effects upon Beach Morphology, Dewees Island, SC. Geological Society of America, Abstracts with Programs, 42(1), 94.

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# Kathryn Rousseau

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katie@glos.org

## 20 YEARS OF EXPERIENCE SPECIALIZING IN DEVELOPING AND EXECUTING PROGRAMS IN THE GREAT LAKES REGION

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Dedicated, resourceful and organized professional building and fostering relationships with a diverse set of partners to advance science, policy and management in the Great Lakes region.

### SKILLS

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Internal and external collaboration	Grant and report writing
Leadership	Budget development and management
Strategic planning	Event and meeting planning
Facilitation and conflict management	Virtual communication skills
Listening and relationship building	Microsoft 365
Attention to detail	Google Workspace
Contract oversight and management	Salesforce and Leadership Connect

### PROFESSIONAL EXPERIENCE

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Strategic Initiatives Manager, Great Lakes Observing System, Ann Arbor, Michigan. January 2024 – Present.

- Provided internal coordination and communication to draft language for the Great Lakes Mapping Act introduced by Representatives Lisa McClain (MI-9) and Debbie Dingell (MI-6) in January 2024. The bill was reintroduced in April 2025. Supported testimony development that was presented before the House Natural Resources Subcommittee on Water, Wildlife and Fisheries.
- Supported fundraising strategies for individuals through online giving and at events.
- Served as point person for new opportunities, initiatives and projects.
- Developed and managed the communications department's budget.

Smart Great Lakes Liaison, Great Lakes Observing System, Ann Arbor, Michigan. July 2019 – January 2024.

- Coordinated with over seventy binational Great Lakes science, data and policy experts to write the *Common Strategy for Smart Great Lakes*.
- Managed GLOS funding support to develop the Indigenous Great Lakes Network Initiative.
- Communicated to Congress both national and regional observation and data priorities through the Appropriations process as well as ongoing education and advocacy.
- Provided leadership to the Integrated Ocean Observing System's Diversity, Equity, Inclusion, and Accessibility Committee.
- Managed communications and program related projects.

Director, Clean Water Supply Program, Great Lakes, American Rivers, Waterville, Ohio. January 2014 – June 2019.

- Supervision and management of three remote employees in the Great Lakes region.
- Advanced Integrated Water Management and green stormwater infrastructure initiatives in multiple cities across the Great Lakes region through partnerships, community engagement, policy modifications, and on-the-ground implementation of projects.

- Developed and coordinated the Great Lakes Community Partners community of practice, which also served as a One Water Summit delegation. Provided subgrants to partners to support common mission goals and objectives.
- Served as Healing Our Waters Great Lakes Coalition Co-Chair during the implementation of the Equity, Advisory and Action committee as well as the hiring of the present Coalition Director.
- Coproduced the 2019 report *Protecting Drinking Water in the Great Lakes: A Primer on Existing State Policies and Using the Safe Drinking Water Act* with the Great Lakes Environmental Law Center.
- Led strategic planning efforts in the Great Lakes for American Rivers.
- Built and maintained relationships with Great Lakes funders.
- Spokesperson and representative of American Rivers at conferences, workshops, and meetings.

Associate Director, American Rivers, Toledo, Ohio. July 2010 – December 2013.

- Worked with environmental nonprofit partners in Ohio and Michigan to revise state stormwater policies including State Revolving Loan funds.
- Code and Master Plan review project with Trout Unlimited.
- Hosted and organized several local workshops. Tasks included agenda development, speaker invitations, coordinating materials for handouts, and overall logistics.

Conservation Associate, American Rivers, Toledo, Ohio. September 2007 – June 2010.

- Worked with a Toledo City Councilman to remove policy barriers and write ordinance language to utilize green stormwater infrastructure practices in the City of Toledo.
- Provided leadership to the Rain Garden Initiative of Toledo – Lucas County.

## **EDUCATION:**

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**Master of Arts in Geography**, May 2007. University of Toledo, Toledo, Ohio. Research focus: Watershed Management, Land Use Planning, Geographic Information Systems.

**Bachelor of Science in Education**, June 2002. Ohio University, Athens, Ohio. Secondary Education with an Earth/Space Science Area of Concentration.

## **CERTIFICATIONS AND TRAINING:**

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- 4 Seasons of Indigenous Learning Certificate (2025)
- NOAA's Facilitation Basics for Coastal Managers training (2023)
- Race Forward's Building Racial Equity training
- Institute for Conservation Leadership training – Leading from Within (2013/2014)
- Geographic Information Sciences and Applied Geographics Certification (2007)

## **COMMUNITY SERVICE:**

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Advisory Board, (2022 – present) University of Toledo's Geography and Planning Department.

Trustee, (2011 – 2019) Black Swamp Conservancy. Executive committee 2013 - 2017.

Board member, (2015 – 2017) Ohio Stormwater Association.

Volunteer, (2004 – 2012) Junior League of Toledo. Various placements including Vice President of Community Projects on the Board of Directors.

# Samuel W. Johnson

Ann Arbor, MI, 48103 | 608-482-3972 | sam@glos.org

## Education

### **MASTER OF ARTS | JANUARY 2023 | DEPAUL UNIVERSITY**

- Master of International Studies: with emphasis on international law and energy equity
- A rigorous program involving in-depth analysis of critical economic, social, and political theory
- My master's thesis research focused on social apparatuses and legal structures surrounding oil pipelines and the politics of energy in the Great Lakes region

### **BACHELOR OF ARTS | MAY 2016 | UNIVERSITY OF WISCONSIN-MADISON**

- Double Major in German and International Studies
- Achieved a GPA of 3.4/4.0 in four years while consistently working parttime and taking on an immersive yearlong study abroad program in Germany

## Work Experience

### **COMMUNICATIONS SPECIALIST | GREAT LAKES OBSERVING SYSTEM (GLOS) |**

#### **NOVEMBER 1, 2023 - PRESENT**

- Coordinated and streamlined inter-organization and external communications via multiple digital platforms
- Curated outward facing communications and partner relations by managing all GLOS's social media accounts, CRM and project tracking accounts, and website development and maintenance
- Created original graphic design content and captured original photography and video for multiple uses that included social media, physical flyers and brochures, video productions, and web ads
- Managed email responses and outreach campaigns that included regular, scheduled newsletters and targeted updates for multiple email groups consisting of varying audiences
- Established and maintained lines of communications with regional businesses, organizations, academic bodies, local and state government, regional journalists and members of the media
- Initiated external projects and planned subsequent individual and group events and travel
- Led marketing and outreach projects and meeting with various groups to create informational products to address multiple organizational needs, e.g. Lakebed 2030
- Initiated and managed the organizations donations-receiving/tracking and response processes

### **CREW MEMBER | TRADER JOE'S | SEPTEMBER 2019 - October 2023**

- Transported, organized, and merchandized mass amounts of produce and grocery product
- Acted as the Flower/Plant section lead, overseeing the writing of the daily order and marketing of the product
- Operated cash registers and addressed customer questions and concerns

### **STUDENT MARKETING COORDINATOR | INTERNATIONAL ACADEMIC PROGRAMS |**

#### **SEPTEMBER 2015- MAY 2016**

- Regularly conducted informational presentations to university classes
- Designed and sent out mass emails promoting study abroad programs
- Worked with other team members to organize promotional materials and informational events
- As a team, achieved record high program exposure numbers

# Samuel W. Johnson

Ann Arbor, MI, 48103 | 608-482-3972 | sam@glos.org

## Skills

### **LEADERSHIP**

· One of my many roles at Bassett Street Brunch Club was as a shift manager. I independently oversaw the staff and operations of the restaurant during weekday morning and weekend night shifts. During that time, I was responsible for the restaurant finances and for managing the front- and back-of-house employees. Most recently, I have taken on project management roles on many long term, team initiatives that involved managing members of the organization's team within the context of the project structure.

### **COMMUNICATION**

· My many different roles in many different disciplines have required me to be well versed in all different types of communication. My customer service jobs have given me extensive experience in one-on-one customer relations, challenging me to problem-solve and address immediate concerns. My time in academia honed my ability to communicate amongst peers, with professors, and to larger, unknown audiences. In my role as the Communication Specialist, I have been responsible for the organization of internal communications and the overall strategy and enactment of external communications, outreach, and media relations including educational, government, and industry interaction. This communication on every level has required expertise in every medium: writing copy; creating original, informational visual aides; and producing photography and film to convey projects' progress and success.

### **MEDIA AND PHOTOGRAPHY**

· I have proficient experience and ever-evolving skills in graphic design and social media. Having been responsible for the web presence and social media activity of GLOS, I regularly created original digital design and created and organized branding programs. The social media responsibility led to increased experience in video editing and sound design through new roles, such as producer for the informational livestream productions. As a longtime hobby-photographer, I have segued my skills into being the primary photographer and videographer for most GLOS-produced media.

### **RESEARCH AND WRITING**

· Throughout my academic career, I have completed many comprehensive independent research projects. Having double-majored for my bachelor's degree at UW-Madison, I took on two separate capstone projects, one of which was researched and written fully in German. Furthermore, at the beginning of my graduate program at DePaul University, I made the choice to write a master's thesis. This challenged me to write many independent-research term papers in addition to and in preparation for the distillation of my self-prompted thesis. My thesis, on the Socio-material construction of oil pipelines, led me to implement many different types of research methods. These included, but were not limited to, fieldwork, interviews, and local, short-term ethnography.

## Community Involvement

- Youth Education Volunteer | Huron River Watershed Council | April 2025 - Present
- Volunteer Canoe Guide | Friends of the Chicago River | June 2023 - March 2023