

Paul Julian II

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in paul-julian

Professional Summary

I wear many hats. I am an ecosystem and landscape ecologist, and aquatic biogeochemist that uses statistical and empirical modeling to analyze temporal and spatial data.

Education

2018	Ph.D. Soil and Water Science Gainesville, Florida	University of Florida
2010	M.Sc. Environmental Science Fort Myers, Florida	Florida Gulf Coast University
2005	B.Sc. Biochemistry Atchison, Kansas	Benedictine College

• Dissertation: Biogeochemical controls of water column productivity and nutrient cycling in semitropical wetlands. A case study from the Everglades Stormwater Treatment Areas.

• Thesis: Habitat Selection by the Florida Panther in Response to Melaleuca Removal within Big Cypress National Preserve.

• Senior Project: The Quantitative Study of Mercury in Atchison Area Water Sources.

Certifications

2018	Professional Wetland Scientist (#2905)	Society of Wetland Scientists
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Professional Experience

2023 - Present	Biogeochemist Palmetto Bay, Florida (remote)	The Everglades Foundation
	• Participate in cross-discipline synthesis related to the effects of restoration, water management, sea-level rise, water quality, and ecological integrity of the Everglades ecosystem.	
	• Install and operate modeling and statistical software to evaluate restoration and water management activities	
	• Produce analytical summaries of model outputs	
	• Work collaboratively with stakeholders and government agencies to restore, preserve and protect natural resources	
	• Perform periodic project briefings for management and staff across organizations and agencies	
	• Conduct research on drivers of water quality including but not limiting to nutrient control and management, Water management and water quality feedback, Harmful Algae Bloom dynamics (freshwater and marine)	
	• Disseminate research results across a broad range of audiences and media (i.e. peer-review, technical paper, citizen group presentations)	

2021 - 2023	Hydrologic Modeler	Sanibel-Captiva Conservation Foundation
	Sanibel, Florida (remote)	
	<ul style="list-style-type: none">• Participate in cross-discipline synthesis related to the effects of restoration, water management, development, sea-level rise, water quality, and ecological integrity of the Everglades and Southwest Florida estuarine ecosystems.• Produce analytical summaries of model outputs• Evaluate and summarise modeled scenarios• Install and operate modeling and statistical software to evaluate restoration and water management activities• Work collaboratively with stakeholders and government agencies to restore, preserve and protect natural resources• Perform periodic project briefings for management and staff across organizations and agencies• Conduct statistical analysis of data using R• Disseminate research results across a broad range of audiences and media (i.e. peer-review, technical paper, citizen group presentations)• Maintain a daily automated conditions tracking webpage using data across various agencies and organizations (https://sccf-tech.github.io/CRE_Conditions/report/RegionalConditions).	
2022 - 2023	Post-Doctoral Associate	University of Montreal
	Montreal, Quebec (remote)	
	<ul style="list-style-type: none">• Evaluate lake water quality as it relates to algae dynamics, harmful algal blooms, and cyanotoxins.• Perform statistical analysis using R and other programming languages such as Julia and Python.• Disseminate research results	
2011 - 2021	Everglades Technical Lead	Florida Department of Environmental Protection
	Fort Myers/Tallahassee, Florida	
	<ul style="list-style-type: none">• Participate in multi-agency regulatory and science review team.• Perform water quality compliance calculations.• Conduct data mining and analysis of environmental data.• Synthesize and author technical reports.• Technical review of submittals consistent with the Clean Water Act.• Support federal and state restoration planning efforts.• Perform periodic project briefings for management and staff across organizations and agencies• Install and operate modeling and statistical software to evaluate restoration and water management activities• Maintain an Everglades water quality database using R, ODBC and MS Access	

2018 - 2022	Post-Doctoral Associate University of Florida St Augustine, Florida	Whitney Laboratory for Marine Bioscience - University of Florida
	<ul style="list-style-type: none">• Develop manuscripts• Mentor graduate students• Seek funding opportunities	
2016 - 2018	Graduate Research Assistant Gainesville/Fort Pierce, Florida	University of Florida
	<ul style="list-style-type: none">• Analysis of water quality and soil nutrient data.• Aid in writing quarterly and annual reports.• Participate in project workshops and present project-related results to stakeholders, and scientific communities at national and international conferences.	
2015 - 2015	Adjunct Faculty Fort Myers, Florida	Florida Gulf Coast University
	<ul style="list-style-type: none">• Instructor of undergraduate Scientific Process	
2010 - 2011	Biological Scientist Saint Petersburg, Florida	Florida Fish and Wildlife Research Institute
	<ul style="list-style-type: none">• Operation of boats in marine and estuarine environments.• Collect environmental samples (i.e. water, vegetation, sediment/soil) for analysis according to acceptable standardized methods.• Geostatistical analysis, photo-interpretation, spatial analysis, and writing reports/summaries	
2008 - 2009	HLB Lab Manager Immokalee, Florida	University of Florida
	<ul style="list-style-type: none">• Analysis of plant samples for agricultural pathogens including Huanglongbing (HLB; Citrus Greening).• Analyses include advanced molecular biological techniques including DNA/RNA isolations, RFPL, PCR, RT-PCR and qPCR.• Field sampling, data entry and report writing.• Maintain everyday laboratory operation.• Interact and consult with growers.	
2007 - 2008	Graduate Research Assistant Fort Myers, Florida	Florida Gulf Coast University
	<ul style="list-style-type: none">• Analysis of existing water quality data to aid in the selection of water quality targets for southwest Florida.	
2007 - 2008	Technical Director/Chemist Lehigh Acres/Fort Myers, Florida	HBEL Inc.
	<ul style="list-style-type: none">• Analyze drinking water, waste water and environmental samples according approved protocols.• Writing technical reports and grants, data entry and field sampling.• Maintain everyday laboratory operation.• Interact with current and potential clients.	

2005 - 2007 **Staff Chemist II** Mote Marine Laboratory
 Sarasota, Florida

- Operation of boats in marine and estuarine environments.
- Collect and analyse sediment and water samples from marine, estuarine and freshwater environments.
- Maintain a variety of instruments, manage field operations, and data entry.

Funding

1. Osborne TZ, P Julian. 2021. Taylor Slough Soil Phosphorus Assessment. Everglades National Park. \$80,000. Everglades National Park.
2. Osborne TZ, KR Reddy, P Julian. 2020. Sediment and Nutrient Mapping of Lake Okeechobee. South Florida Water Management District. \$200,000. South Florida Water Management District.

Informatics and Programming

Expertise: R, R-Studio, Git/Github, Markdown, LaTex, MS Access

Familiarity: Python, QGIS, HTML, Inkscape, Google Earth Engine

Learning: Julia, Fortran, Java Script

R-Packages

1. Julian, P. (2025). *AnalystHelper*: Helper functions developed over the years to extract and format data. <https://github.com/swampthingpaul/AnalystHelper>
2. Julian, P., Helsel, D., & Lee, L. (2025). *NADA2*: Data analysis for censored environmental data. <https://github.com/SwampThingPaul/NADA2>
3. Julian, P. (2023). *EPGMr*: Implementation of the everglades phosphorus gradient model. <https://github.com/swampthingpaul/EPGMr>
4. Julian, P. (2021). *CalSalMod*: Caloosahatchee estuary salinity model. <https://github.com/SwampThingPaul/CalSalMod>
5. Julian, P. (2021). *LORECOVER*: Lake okeechobee stage envelope performance measure calculation. <https://github.com/SwampThingPaul/LORECOVER>
6. Julian, P. (2020). *LimnoPalettes*: A limnology themed palette generator. <https://github.com/SwampThingPaul/LimnoPalettes>

Publications

Google Scholar Citations = 436 H-Index = 11 i10-Index = 15

In Prep/Submitted (1)

1. Julian, P., Osborne, T. Z., & Jones, P. A. (2025). The Mud Remembers: Sediment Phosphorus Accumulation and Loading Synchrony in a Shallow Subtropical Lake. *Freshwater Science*.

Book Chapters (1)

1. Marazzi, L., Julian, P., & Mazebedi, R. R. (2023). Wetland monitoring: Understanding variability and change in ecological condition. In P. A. Gell, N. C. Davidson, & C. M. Finlayson (Eds.), *Ramsar wetlands* (pp. 307–334). Elsevier. <https://doi.org/10.1016/B978-0-12-817803-4.00007-3>

Peer Review (43)

1. Julian, P., Walker, W. W., Surratt, D., & Davis, S. E. (2025). Planning for the future, algae bloom dynamics in water management and ecosystem restoration efforts. *Frontiers in Water*, 7. <https://doi.org/10.3389/frwa.2025.1619838>
2. Abiy, A. Z., Lagerwall, G. L., Julian, P., Aguirre, N. M., & Davis, S. E. (2025). Phosphorus trends and hot spots—a spatio-temporal data analysis of phosphorus derived from Everglades Agricultural Area (EAA) farms (Florida, USA). *Environmental Monitoring and Assessment*, 197(4), 388. <https://doi.org/10.1007/s10661-025-13794-0>
3. Medina, M., Julian, P., Chin, N., & Davis, S. E. (2024). An early-warning forecast model for red tide (*Karenia brevis*) blooms on the southwest coast of Florida. *Harmful Algae*, 139, 102729. <https://doi.org/10.1016/j.hal.2024.102729>
4. Julian, P., Husk, B., Baulch, H. M., Simon, D. F., Tromas, N., & Sauvé, S. (2024). Beneath the ice: Exploring winter's impact on nutrient and phytoplankton dynamics in a shallow eutrophic lake. *Hydrobiologia*. <https://doi.org/10.1007/s10750-024-05739-4>
5. Julian, P., Fourqurean, J. W., Davis, S. E., Surratt, D., Gaiser, E. E., Kominoski, J. S., Troxler, T. G., Boyer, J. N., Thomas, S., Briceño, H. O., Madden, C. J., Montes, E., & Kelble, C. R. (2024). Long-term patterns and trends in water column biogeochemistry in a changing environment. *Estuarine, Coastal and Shelf Science*, 306, 108896. <https://doi.org/10.1016/j.ecss.2024.108896>
6. Husk, B., Julian, P., Simon, D., Tromas, N., Phan, D., Painter, K., Baulch, H., & Sauvé, S. (2024). Improving water quality in a hypereutrophic lake and tributary through agricultural nutrient mitigation: A Multi-year monitoring analysis. *Journal of Environmental Management*, 354, 120411. <https://doi.org/10.1016/j.jenvman.2024.120411>
7. Julian, P., Thompson, M., & Milbrandt, E. C. (2024). Dark waters: Evaluating seagrass community response to optical water quality and freshwater discharges in a highly managed subtropical estuary. *Regional Studies in Marine Science*, 69, 103302. <https://doi.org/10.1016/j.rsma.2023.103302>
8. Smith, M. C., Julian, P., DeAngelis, D., & Zhang, B. (2024). Ecological benefits of integrative weed management of *Melaleuca quinquenervia* in Big Cypress National Preserve. *BioControl*, 69(3), 293–304. <https://doi.org/10.1007/s10526-023-10229-y>
9. Julian, P., & Davis, S. E. (2024). Evaluating water quality change with hydrologic restoration in the Western Everglades (Florida, USA), an application of WAM. *Watershed Ecology and the Environment*, 6, 70–83. <https://doi.org/10.1016/j.wsee.2024.05.001>
10. Julian, P., & Reidenbach, L. (2024). Upstream water management and its role in estuary health, evaluation of freshwater management and subtropical estuary function. *Watershed Ecology and the Environment*, 6, 84–94. <https://doi.org/https://doi.org/10.1016/j.wsee.2024.05.002>
11. Johnson, K., Jankowski, K. J., Carey, J., Lyon, N. J., McDowell, W. H., Shogren, A., Wymore, A., Sethna, L., Wollheim, W. M., Poste, A. E., Kortelainen, P., Heindel, R., Laudon, H., Räike, A., Jones, J. B., McKnight, D., Julian, P., Bush, S., & Sullivan, P. L. (2024). Establishing fluvial silicon regimes and their stability across the Northern Hemisphere. *Limnology and Oceanography Letters*, 9(3), 237–246. <https://doi.org/10.1002/lol2.10372>

12. Schafer, T. B., Julian, P., Villapando, O., & Osborne, T. Z. (2023). Abiotic mineralization of dissolved organic phosphorus for improved nutrient retention in a large-scale treatment wetland system. *Ecological Engineering*, 195, 107078. <https://doi.org/10.1016/j.ecoleng.2023.107078>
13. Julian, P., Osborne, T. Z., & Ellis, R. (2023). Evaluation of Biogeochemical Changes in Channelized and Restored Portions of a Subtropical Floodplain. *Hydrobiology*, 2(1), 1–18. <https://doi.org/10.3390/hydrobiology2010001>
14. Julian, P., Schafer, T., Cohen, M. J., Jones, P., & Osborne, T. Z. (2023). Changes in the spatial distribution of total phosphorus in sediment and water column of a shallow subtropical lake. *Lake and Reservoir Management*, 39(3), 213–230.
15. Jankowski, K. J., Johnson, K., Sethna, L., Julian, P., Wymore, A. S., Shogren, A. J., Thomas, P. K., Sullivan, P. L., McKnight, D. M., McDowell, W. H., Heindel, R., Jones, J. B., Wollheim, W., Abbott, B., Deegan, L., & Carey, J. C. (2023). Long-Term Changes in Concentration and Yield of Riverine Dissolved Silicon From the Poles to the Tropics. *Global Biogeochemical Cycles*, 37(9), e2022GB007678. <https://doi.org/10.1029/2022GB007678>
16. Julian, P., & Welch, Z. (2022). Understanding the ups and downs, application of hydrologic restoration measures for a large Subtropical Lake. *Lake and Reservoir Management*, 38(4), 304–317. <https://doi.org/https://doi.org/10.21203/rs.3.rs-1739423/v2>
17. Julian, P., Osborne, T. Z., Bhomia, R. K., & Villapando, O. (2021). Knowing your limits: Evaluating aquatic metabolism in a subtropical treatment wetland. *Hydrobiologia*. <https://doi.org/10.1007/s10750-021-04617-7>
18. Kominoski, J. S., Gaiser, E. E., Castaneda-Moya, E., Davis, S. E., Dessu, S., Julian, P., Lee, D. Y., Marazzi, L., Rivera-Monroy, V. H., & Sola, A. (2020). Disturbance legacies increase and synchronize nutrient concentrations and bacterial productivity in coastal ecosystems. *Ecology*, 101(5). <https://doi.org/https://doi.org/10.1002/ecy.2988>
19. Julian, P. (2020). Getting the science right to protect and restore our environment. A critique of Lapointe et al. (2019) Nitrogen enrichment, altered stoichiometry, and coral reef decline at Looe Key, Florida Keys, USA: A 3-decade study. *Marine Biology*, 167(5), 68. <https://doi.org/10.1007/s00227-020-3667-1>
20. Schafer, T., Ward, N., Julian, P., Reddy, K. R., & Osborne, T. Z. (2020). Impacts of Hurricane Disturbance on Water Quality across the Aquatic Continuum of a Blackwater River to Estuary Complex. *Journal of Marine Science and Engineering*, 8(6), 412. <https://doi.org/10.3390/jmse8060412>
21. Julian, P., Gerber, S., Bhomia, R. K., King, J., Osborne, T. Z., & Wright, A. L. (2020). Understanding stoichiometric mechanisms of nutrient retention in wetland macrophytes: Stoichiometric homeostasis along a nutrient gradient in a subtropical wetland. *Oecologia*. <https://doi.org/10.1007/s00442-020-04722-9>
22. Julian, P., Gerber, S., Bhomia, R. K., King, J., Osborne, T. Z., Wright, A. L., Powers, M., & Dombrowski, J. (2019). Evaluation of nutrient stoichiometric relationships among ecosystem compartments of a subtropical treatment wetland. Do we have “Redfield wetlands”? *Ecological Processes*, 8(1), 20. <https://doi.org/10.1186/s13717-019-0172-x>
23. Julian, P. (2019). Spatial Ecology and Conservation Modeling. Applications with R. Robert Fletcher, Marie-Josée Fortin: Book Review. *Austral Ecology*. <https://doi.org/10.1111/aec.12791>

24. Carey, J., Jankowski, K., Julian, P., Sethna, L., Thomas, P., & Rohweder, J. J. (2019). Exploring Silica Stoichiometry on a Large Floodplain Riverscape. *Frontiers in Ecology and Evolution*, 7, 346.
25. Julian, P., & Osborne, T. Z. (2018). From lake to estuary, the tale of two waters: A study of aquatic continuum biogeochemistry. *Environment Monitoring and Assessment*, 190(96), 1–24. [https://doi.org/https://doi.org/10.1007/s10661-017-6455-8](https://doi.org/10.1007/s10661-017-6455-8)
26. Marazzi, L., Finlayson, C. M., Gell, P. A., Julian, P., Kominoski, J. S., & Gaiser, E. E. (2018). Balancing wetland restoration benefits to people and nature. *Solutions Journal*, 9(3).
27. Julian, P., Chambers, R., & Russell, T. (2017). Iron and Pyritization in Wetland Soils of the Florida Coastal Everglades. *Estuaries and Coasts*, 40(3), 822–831. <https://doi.org/10.1007/s12237-016-0180-3>
28. Julian, P. (2017). Assessment of Upper Taylor Slough water quality and implications for ecosystem management in Everglades National Park. *Wetlands Ecology and Management*, 25(2), 191–209. <https://doi.org/10.1007/s11273-016-9509-8>
29. Julian, P. (2017). Letter to the Editor regarding Surratt D, Shindle D, Yongshan W, et al. Letter to the Editor regarding: Julian P, 2017. Assessment of Upper Taylor Slough water quality and implications for ecosystem management in Everglades National Park. *Wetlands Ecology and Management*, 1–3. <https://doi.org/10.1007/s11273-017-9571-x>
30. Julian, P., Gerber, S., Wright, A. L., Gu, B., & Osborne, T. Z. (2017). Carbon pool trends and dynamics within a subtropical peatland during long-term restoration. *Ecological Processes*, 6(1), 43–57. <https://doi.org/10.1186/s13717-017-0110-8>
31. Julian, P., Gu, B., & Wright, A. L. (2016). Mercury Stoichiometric Relationships in a Subtropical Peatland. *Water, Air, & Soil Pollution*, 227(12), 472. <https://doi.org/10.1007/s11270-016-3180-9>
32. Julian, P. (2016). Commentary on Mitsch et al., 2015, Protecting the Florida Everglades wetlands with wetlands: Can stormwater phosphorus be reduced to oligotrophic conditions? *Ecological Engineering*, 108, 333–337.
33. Julian, P., Wright, A. L., & Osborne, T. Z. (2016). Iron and sulfur porewater and surface water biogeochemical interactions in subtropical peatlands. *Soil Science Society of America Journal*, 80(3), 794–802.
34. Julian, P., Gu, B., & Redfield, G. (2015). Comment on and Reinterpretation of Gabriel et al. (2014) Fish Mercury and Surface Water Sulfate Relationships in the Everglades Protection Area. *Environmental Management*, 55(1), 1–5. <https://doi.org/10.1007/s00267-014-0377-9>
35. Julian, P., & Gu, B. (2015). Mercury accumulation in largemouth bass (*Micropterus salmoides* Lacépède) within marsh ecosystems of the Florida Everglades, USA. *Ecotoxicology*, 24(1), 202–214. <https://doi.org/10.1007/s10646-014-1373-9>
36. Julian, P. (2015). South Florida Coastal Sediment Ecological Risk Assessment. *Bulletin of Environmental Contamination and Toxicology*, 95(2), 188–193.
37. Julian, P. (2014). Reply to Mercury Bioaccumulation and Bioaccumulation Factors for Everglades Mosquitofish as Related to Sulfate: A Re-Analysis of Julian II (2013). *Bulletin of Environmental Contamination and Toxicology*, 93(5), 517–521. <https://doi.org/10.1007/s00128-014-1389-0>
38. Julian, P., & Cunningham, M. W. (2013). Total mercury concentration in Florida black bear (*Ursus americanus floridanus*). *Florida Scientist*, 76(1).

39. Julian, P. (2013). Comment on Spatial and temporal phosphorus distribution changes in a large wetland ecosystem by X. Zapata-Rios et al.: Commentary. *Water Resources Research*, 49(4), 2312–2313. <https://doi.org/10.1002/wrcr.20162>
40. Julian, P. (2013). Mercury Bio-concentration Factor in Mosquito Fish (Gambusia spp.) In the Florida Everglades. *Bulletin of Environmental Contamination and Toxicology*, 90(3), 329–332. <https://doi.org/10.1007/s00128-012-0939-6>
41. Julian, P. (2013). Mercury hotspot identification in Water Conservation Area 3, Florida, USA. *Annals of GIS*, 19(2), 79–88. <https://doi.org/10.1080/19475683.2013.782469>
42. Julian, P., Everham III, E. M., & Main, M. B. (2012). Influence of a Large-scale Removal of an Invasive Plant (Melaleuca quinquenervia) on Home-range Size and Habitat Selection by Female Florida Panthers (Puma concolor coryi) within Big Cypress National Preserve, Florida. *Southeastern Naturalist*, 11(2), 337–348.
43. Julian, P. (2011). Home range dynamics of female Florida panthers in response to kitten production. *Florida Scientist*, 74(4).

Technical (26)

1. Julian, P., Gilhooly, A. R., Payne, G. G., & Xue, S. K. (2021). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2021 South Florida Environmental Report*. South Florida Water Management District.
2. Julian, P., Gu, B., & Weaver, K. (2021). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2021 South Florida Environmental Report*. South Florida Water Management District.
3. Julian, P. (2021). *Technical Review: FDEP DRAFT Evaluation of Waters for Dissolved Oxygen Site Specific Alternative Criteria (SSAC) Development* (p. 29). Sanibel-Captiva Conservation Foundation. <https://doi.org/10.5281/zenodo.4776313>
4. Julian, P. (2021). *DRAFT: Evaluation of Algal bloom potential for the Caloosahatchee River Estuary* (p. 12). Sanibel-Captiva Conservation Foundation. <https://doi.org/10.5281/zenodo.4876353>
5. Julian, P., Gilhooly, A. R., Payne, G. G., & Xue, S. K. (2020). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2020 South Florida Environmental Report*. South Florida Water Management District.
6. Julian, P., Gu, B., & Weaver, K. (2020). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2020 South Florida Environmental Report*. South Florida Water Management District.
7. Julian, P., Frietag, A. R., Payne, G. G., & Xue, S. K. (2019). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2019 South Florida Environmental Report*. South Florida Water Management District.
8. Julian, P., Gu, B., & Weaver, K. (2019). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2019 South Florida Environmental Report*. South Florida Water Management District.
9. Julian, P. (2018). *Biogeochemical controls of water column productivity and nutrient cycling in semitropical wetlands: A case study from the everglades stormwater treatment areas* [PhD thesis]. University of Florida.
10. Julian, P., Frietag, A. R., Payne, G. G., & Xue, S. K. (2018). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2018 South Florida Environmental Report*. South Florida Water Management District.
11. Julian, P., Gu, B., & Weaver, K. (2018). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2018 South Florida Environmental Report*. South Florida Water Management District.

12. Julian, P., Payne, G. G., & Xue, S. K. (2017). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2017 South Florida Environmental Report*. South Florida Water Management District.
13. Julian, P., & Bhomia, R. (2017). Transect Study: Surface Water Quality Monitoring and Analysis. In K. R. Reddy (Ed.), *Evaluation of Soil Biogeochemical Properties Influencing Phosphorus Flux in the Everglades Stormwater Treatment Areas (STAs): 2016-17 Annual Report* (pp. 317–444). University of Florida.
14. Julian, P. (2017). *Numeric Interpretation of Narrative Standards for the L-28 Interceptor Canal and Big Cypress National Preserve*. (p. 21). Florida Department of Environmental Protection.
15. Julian, P., Gu, B., & Weaver, K. (2017). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2017 South Florida Environmental Report*. South Florida Water Management District.
16. Julian, P., Payne, G. G., & Xue, S. K. (2016). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2016 South Florida Environmental Report*. South Florida Water Management District.
17. Julian, P., Gu, B., Redfield, G., & Weaver, K. (2016). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2016 South Florida Environmental Report*. South Florida Water Management District.
18. Julian, P., Payne, G. G., & Xue, S. K. (2015). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2015 South Florida Environmental Report*. South Florida Water Management District.
19. Julian, P., Gu, B., Redfield, G., Weaver, K., Lange, T., Federick, P., McCray, J. M., Wright, A. L., Dierberg, F. E., DeBusk, T. A., Jerauld, M., DeBusk, W. F., Bae, H., & Ogram, A. (2015). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2015 South Florida Environmental Report*. South Florida Water Management District.
20. Julian, P., Gu, B., Frydenborg, R., Lange, T., Wright, A. L., & McCray, J. M. (2014). Chapter 3B: Mercury and Sulfur Environmental Assessment for the Everglades. In *2014 South Florida Environmental Report*. South Florida Water Management District.
21. Julian, P., Payne, G. G., & Xue, S. K. (2014). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2014 South Florida Environmental Report*. South Florida Water Management District.
22. Julian, P., Payne, G. G., & Xue, S. K. (2013). Chapter 3A: Water Quality in the Everglades Protection Areas. In *2013 South Florida Environmental Report*. South Florida Water Management District.
23. Julian, P., & Hill, S. (2012). *A.R.M. Loxahatchee National Wildlife Refuge Total Phosphorus Outlier Analysis and Proposed Alternative Screening Criterion: Distribution Independent Outlier Analysis*. Everglades Technical Oversight Committee.
24. Carlson, P. R., Yarbro, L., Ritzmann, A., McKnight, H., Viaud, A., Almeida, K., Nosach, C., & Julian, P. (2011). *Seagrass recovery in Tampa Bay: Fine-scale spatial analyses to assess progress and refine restoration targets* (F2698-F). Florida Fish; Wildlife Conservation Commission.
25. Julian, P. (2010). *Habitat Selection by the Florida Panther in Response to Melaleuca Removal Within Big Cypress National Preserve* [PhD thesis]. Florida Gulf Coast University.
26. Dixon, L., & Julian, P. (2005). *Philippi creek optical brightener investigation*. Mote Marine Laboratory.

Presentations

- Numerous technical presentations not listed here have been presented at meetings including technical, environmental policy, restoration project planning and general public audiences at public meetings, workshops and technical meetings.

Invited

1. Julian, P. (n.d.). Multivariate Statistics Tips and Tricks: Intro to PCA. *Newcastle University; Modeling, Evidence and Policy Research Group Seminar.*, 2020. https://github.com/SwampThingPaul/PCA_Workshop

Oral

1. Julian, P., Everham, E. M., & Main, M. B. (2012). Influence of a large-scale removal of an invasive plant (*Melaleuca quinquenervia*) on home range size and habitat selection by female Florida panthers (*Puma concolor coryi*) within Big Cypress National Preserve. *76th Florida Academy of Science Annual Meeting*.
2. Julian, P. (2025). Evaluation of optical water quality, light attenuation, and freshwater discharges in the Caloosahatchee River Estuary. *Greater Everglades Ecosystem Restoration. Coral Springs, FL*.
3. Julian, P., & Stabenau, E. (2025). From sawgrass to reef, changes in water column nutrients over space and time. *Florida Keys Marine Science Conference & Workshop. Coral Springs, FL*.
4. Julian, P., & Davis, S. D. (2024). Reconnecting the dots, evaluating water quality under different hydrologic restoration scenarios in a subtropical wetland. *Society of Freshwater Science*.
5. Julian, P. (2023). Lake Regulation Schedules Impact on the Lake and Downstream Ecology, a Lake Okeechobee System Operating Manual Story. *Florida Lake Management Society Annual Symposium*.
6. Schafer, T., Julian, P., Jones, P., & Osborne, T. Z. (2022). *Spatial Changes of Sediment Distribution and Biogeochemistry Over 30 Years in Lake Okeechobee*.
7. Johnson, K., Carey, J., Jankowski, K., Julian, P., Heindel, R., Jones, J., McDowell, W. H., Abbott, B., McKnight, D., Sethna, L., Shogren, A., Thomas, P., Wymore, A., & Sullivan, P. (2022). *Developing typologies of river silicon seasonality across biomes to understand controls on changing exports*.
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9. Julian, P., Osborne, T. Z., Thorton, A., Schafer, T., & Jones, P. (2021). I'm Calling To You Like A Long Lost Friend: Legacy Phosphorus In Lake Okeechobee. *Greater Everglades Ecosystem Restoration*.
10. Julian, P., Osborne, T. Z., Thorton, A., Schafer, T., & Jones, P. (2021). Big Water, Big Nutrients. The tale of legacy Phosphorus in Lake Okeechobee. *Society of Freshwater Science*.
11. Gu, B., Avila, C., Niemeyer, N., & Julian, P. (2021). Variations in Total Mercury Concentration of Mosquitofish from Everglades Protection Area. *Greater Everglades Ecosystem Restoration*.
12. Hill, T. D., Julian, P., & Surratt, D. (2021). Thirty Years of Water Quality and Salinity Regime Change in Florida Bay. *Greater Everglades Ecosystem Restoration*.
13. Julian, P., Miles, M., Nelson, N., & Milbrandt, E. (2021). The water sustains me without even trying: Influences on nearshore *Karenia brevis* in southwest Florida. *Coastal & Estuarine Research Federation*.

14. Carey, J. C., Jankowski, K., Julian, P., Sethna, L. R., & Thomas, P. K. (2020). Including Si in fluvial stoichiometry: Results from a longitudinal analysis of the Upper Mississippi River. *ASLO-SFS. Madison, WI*.
15. Julian, P., August, K., Simpson, L., Osborne, T. Z., & Surratt, D. (2019). Hydrologic restoration of a shallow oligotrophic marl wetland. What is the soil telling us? *Greater Everglades Ecosystem Restoration. Coral Springs, FL*.
16. Julian, P., Gerber, S., Reisinger, A. J., & Larios, K. (2018). Let's take a ride downstream. Translating nutrient spiraling concepts to wetland ecosystems. *Society of Wetland Scientists Annual Meeting. Denver, CO*.
17. Julian, P., & Fletcher, G. (2018). Don't wave the river red gums goodbye. The role of environmental flows in restoring river water quality and riparian zones along the Wimmera River. *Society of Wetland Scientists Annual Meeting. Denver, CO*.
18. Julian, P., Gerber, S., Bhomia, R. K., King, J., Osborne, T. Z., Wright, A. L., Powers, M., & Dombrowski, J. (2018). Did you guess which thing was not like the others? Evaluation of wetland nutrient stoichiometry and homeostasis in a subtropical treatment wetland. *Society of Wetland Scientists Annual Meeting. Denver, CO*.
19. Julian, P., Gerber, S., Bhomia, R. K., King, J., Osborne, T. Z., Wright, A. L., Powers, M., & Dombrowski, J. (2018). One of these things is not like the other. Evaluation of wetland nutrient stoichiometry and homeostasis in a subtropical treatment wetland. *12th International Symposium on Biogeochemistry of Wetlands. Coral Springs, FL*.
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21. Osborne, T. Z., Clark, M. W., Julian, P., Ward, N., Collins, R., Philips, E. J., & Fletcher, P. (2018). Translating the effects of sea-level rise in urban systems to the coastal ecosystem interface. *12th International Symposium on Biogeochemistry of Wetlands. Coral Springs, FL*.
22. Julian, P., Bhomia, R., Wright, A., & Osborne, T. Z. (2017). Aquatic Productivity in Subtropical Marsh – Observations from the Everglades Stormwater Treatment Areas. *Society of Wetland Scientists Annual Meeting. San Juan, Puerto Rico*.
23. Julian, P., Gu, B., & Freitag, A. (2017). Limiting Factors in Mercury Methylation Hotspot Development: The Tangled Web. *Greater Everglades Ecosystem Restoration. Coral Springs, FL*.
24. Julian, P., Wright, A. L., Bhomia, R., Osborne, T. Z., & Villapando, R. (2017). Aquatic Productivity in a Subtropical Marsh Along a Soil Nutrient Gradient—an Assessment of the Everglades Stormwater Treatment Areas. *ASA, CSSA and SSSA International Annual Meetings. Tampa, FL*.
25. Julian, P., Wright, A. L., Chambers, R., Kominoski, J., Troxler, T., & Osborne, T. Z. (2017). Pyrite Formation in the Coastal Everglades: Can a Fool's Gold Indicate Sea-Level Rise?. *ASA, CSSA and SSSA International Annual Meetings. Tampa, FL*.
26. Ward, N., Dye, T., Julian, P., & Osborne, T. Z. (2017). Examining the effects of hurricanes Matthew and Irma on water quality in the inter-coastal waterway, St. Augustine, FL. *American Geophysical Union, New Orleans, LA*.
27. Osborne, T. Z., Bhomia, R., Julian, P., & Reddy, K. R. (2017). Spatial Distribution of Soil Biogeochemical Properties in Stormwater Treatment Area 3/4 Cells 3A and 3B. *ASA, CSSA and SSSA International Annual Meetings. Tampa, FL*.

28. Gu, B., & Julian, P. (2017). High Biotic Mercury in South Florida Wetlands: Fish Trophic Position and Wading Bird Redistribution. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
29. Villapando, O., Bhomia, R. K., & Julian, P. (2017). Water Quality Along inflow to Outflow Gradient of the Everglades Stormwater Treatment Areas. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
30. Gerber, S., Larios, K., & Julian, P. (2017). Data Integration and Synthesis Framework for Understanding the Phosphorus Cycling and Reduction Mechanisms in STA Flow-ways. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
31. Julian, P., Gu, B., & Weaver, K. (2016). Status and Trends of Landscape-Scale Mercury in South Florida and the Everglades. *7th SETAC World Congress/SETAC North America 37th. Orlando, FL.*
32. Julian, P., Osborne, T. Z., Sadle, J., & Ellis, L. R. (2016). Effects Of Water Management on Water and Soil Quality in Taylor Slough. *South Florida and Caribbean Cooperative Ecosystem Studies Unit. Homestead, FL.*
33. Julian, P., & Bhomia, R. (2016). Flow way Water Quality Assessment STA-2 Cell 1 and Cell 3. *P-Flux Annual Workshop. West Palm Beach, FL.*
34. Julian, P. (2016). Hydrologic restoration of the Taylor Slough Region of Everglades National Park. Changes in water quality and implications for ecosystem management. *5th University of Florida Water Institute Symposium Gainesville, FL.*
35. Julian, P., Osborne, T. Z., Castro, J., Sadle, J., & Ellis, L. R. (2016). Interpreting effects of water management on soil nutrient cycling in an oligotrophic subtropical wetland. *Society of Wetland Scientists Annual Meeting. Corpus Christi, TX.*
36. Julian, P., & Wright, A. L. (2016). Can soil nutrient stoichiometry determine mercury hotspot formation in a subtropical peatland? An Everglades case study. *Society of Wetland Scientists Annual Meeting. Corpus Christi, TX.*
37. Osborne, T. Z., Simpson, L. T., Schafer, T. B., Camacho, M., Julian, P., Ward, N. D., & Laplaca, L. (2016). Alteration of hydrology by mangrove encroachment in saltmarsh ecosystems and potential impacts to ecosystem services. *Ecological Society of American. Fort Lauderdale, FL.*
38. Osborne, T. Z., Simpson, L. T., Schafer, T. B., Camacho, M., Julian, P., Ward, N. D., & Laplaca, L. (2016). Carbon biogeochemical processes along a Mangrove-Salt Marsh ecotone. *Mangrove & Macrobenthos Meeting 4. St Augustine, FL.*
39. Julian, P., Gu, B., Redfield, G., & Weaver. (2015). An Overview of Everglades Mercury Issues: Critical Questions Remain. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
40. Gu, B., Julian, P., & Redfield, G. (2015). Spatial and Temporal Variation of Total Mercury in Mosquitofish from Everglades Marshes. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
41. Julian, P. (2014). Large-Scale Water Quality Improvement Projects: An Everglades Perspective. *SLER Con. Orlando, FL.*
42. Julian, P., Everham, E. M., Hartley, A. E., Main, M. B., & Burch, J. (2010). Reduction of Home Range Size by the Florida Panther Following Melaleuca Removal in Big Cypress National Preserve. *15th Annual Exotics Species Workshop for Southwest Florida..*
43. Julian, P., Bovard, B., Brooks, B., Cassani, M. K., Ceilley, D. W., Cruz-Alvarez, M., Demers, N. E., Everham, E. M., Hartley, A. E., Knight, T., Leisure, R., Burch, J., & Main, M. B. (2008). Melaleuca research at Florida Gulf Coast University. *13th Annual Exotics Species Workshop for Southwest Florida.. Fort Myers, FL.*

44. Julian, P., Atteberry, M., & Steinbach, P. (2005). The Quantitative Study of Mercury in Atchison Area Water Sources. *Benedictine College Discovery Day. Atchison, KS.*

Poster

1. Julian, P., Chambers, R., Kominoski, J., & Troxler, T. (2017). Pyrite in the Coastal Everglades, It's more than Fool's Gold. *Florida Coastal Everglades Long Term Ecological Research Annual Scientist Meeting. Miami, FL.*
2. Osborne, T. Z., Bhomia, R., Julian, P., & Reddy, K. R. (2017). Spatial Distribution of Soil Biogeochemical Properties in Stormwater Treatment Area 3/4 Cells 3A and 3B. *ASA, CSSA and SSSA International Annual Meetings. Tampa, FL.*
3. Julian, P., Kominoski, J. S., Gaiser, E. E., & Wymore, A. (2018). Is the Everglades Ecosystem a stoichiometric deviant? An investigation of ecological stoichiometry along the aquatic continuum of the Everglades ecosystem. *Florida Coastal Everglades Long Term Ecological Research Annual Scientist Meeting. Miami, FL.*
4. Julian, P., Fletcher, G., & Wright, A. L. (2018). River runs through it. Evaluation of groundwater and surface water connectivity and its implications on riparian biogeochemistry and ecology. *12th International Symposium on Biogeochemistry of Wetlands. Coral Springs, FL.*
5. Schafer, T. B., Ward, N., Julian, P., Reddy, K. R., & Osborne, T. Z. (2018). Effects of Hurricane Irma on dissolved organic carbon fluxes along a salinity gradient. *12th International Symposium on Biogeochemistry of Wetlands. Coral Springs, FL.*
6. August, K., Julian, P., & Osborne, T. Z. (2018). Soil nutrient enrichment post hydrologic management: A temporal analysis of Taylor slough. *12th International Symposium on Biogeochemistry of Wetlands. Coral Springs, FL.*
7. Julian, P., Powers, M., Bhomia, R., Wright, A., & Dombrowski, J. (2017). Key Factors Controlling Wetland Aquatic Productivity in the Everglades Stormwater Treatment Areas. *Greater Everglades Ecosystem Restoration. Coral Springs, FL.*
8. Gu, B., Niemeyer, N., & Julian, P. (2016). Removal of mercury from surface water by constructed wetlands in South Florida, USA. *7th SETAC World Congress/SETAC North America 37th. Orlando, FL.*
9. Julian, P., Redfield, G., & Wright, A. (2015). Total Phosphorus and Total Nitrogen trends in Upper Taylor Slough, Everglades National Park, Florida. *24th Annual Southwest Florida Water Resources Conference. Fort Myers, FL.*
10. Julian, P. (2014). Ecosystem Sampling Suitability: Do my monitoring locations represent the water body? *Rookery Bay GIS Symposium. Naples, FL.*
11. Julian, P. (2012). Panthers in EDEN, Florida panther (*Puma concolor coryi*) home range responses to hydrologic change. *75th Florida Academy of Science Annual Meeting. Tampa, FL.*
12. Julian, P., Everham, E. M., Hartley, A. E., Main, M. B., & Burch, J. (2010). Plant community changes in Big Cypress National Preserve in Response to Melaleuca Removal. *15th Annual Exotics Species Workshop for Southwest Florida..*
13. Julian, P., & Naccarato, A. (2010). Latitudinal Photo Documentation of Mangrove response to a prolonged "freeze" event. *Florida Gulf Coast University Research Day. Fort Myers, FL.*
14. Julian, P., & Estevez, E. D. (2009). Historic Bathymetric Analysis of Tampa Bay. *5th Tampa Bay Area Scientific Information Symposium. St Petersburg, FL.* http://www.tbeptech.org/index.php?option=com_content&view=article&id=89:5th-tampa-bay-area-scientific-information-symposium-proceedings&catid=31:basis&Itemid=57

15. Julian, P., Waterman, S., & Claus, M. (2004). Determination of Metal Concentration in the Missouri River, Atchison, Kansas. *Benedictine College Discovery Day. Atchison, KS.*

Professional Service

Several technical and restoration planning projects including Appendix A Water Quality Subteam, Western Everglades Planning Project, Lake Okeechobee Watershed Planning Project, Combined Operations Plan, Lake Okeechobee System Operating Manual and Biscayne Bay Southeastern Everglades Ecosystem Project.

2025 **Restoring the Everglades and the Road to Resilience Special Session organizer**
Greater Everglades Ecosystem Restoration Conference

2020 - 2023 **From Poles to Tropics: A multi-biome synthesis investigating the controls on river Si exports.**
Long Term Ecological Research

2019 - 2021 **Statewide Ecosystem Assessment of Coastal and Aquatic Resources**
Florida Department of Environmental Protection

2016 - 2018 **Biogeochemistry Working Group**
Florida Coastal Everglades Long Term Ecological Research

2019 **Silicon Stoichiometry Working Group**
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2017 **All Scientist Meeting Program Committee**
Long Term Ecological Research

2017 **Student Organization, Off-Campus Representative**
Florida Coastal Everglades Long Term Ecological Research

2017 **Mercury and Sulfur Special Session co-organizer**
Greater Everglades Ecosystem Restoration Conference

2015 **Mercury and Sulfur Special Session co-organizer**
Greater Everglades Ecosystem Restoration Conference

Peer Review

- *Land, Water Research, Communications Earth & Environment, Wetlands, Journal of Agriculture, Ecotoxicology, Lake and Reservoir Management, Environmental Management, Ecological Engineering, Science of the Environment, Ecology and Evolution, Journal of Paleolimnology, Ecosystems, Marine Pollution, Environmental Science and Pollution Research, Lake and Reservoir Management, Annal of GIS and many others*

Technical Review

- *South Florida Environmental Report (2011 - 2021), Florida State Clearinghouse, Everglades Technical Oversight Committee, Aquifer Storage and Recover Pilot Project Technical Data Review, Minnesota Sea Grant, Ohio Sea Grant, NOAA Gulf Ecosystem Initiative*