LYNETTE MALECKI BROWN, Ph.D.

Areas of Specialization:

Soil science; federal, state, and local environmental permitting; wetland delineation; sector planning; biogeochemical cycling of nutrients in aquatic systems including coastal and freshwater wetlands, estuaries, lakes, and riverine systems; treatment performance and management of constructed wetlands for nutrients; internal nutrient loading dynamics of lakes and rivers; effects of alum in aquatic ecosystems.

Experience:

Senior Scientist, Breedlove, Dennis & Associates, Inc., Winter Park, Florida. 2013 to Present.
Associate Scientist IV, Breedlove, Dennis & Associates, Inc., Winter Park, Florida. 2011 to 2013.
Associate Scientist III, Breedlove, Dennis & Associates, Inc., Winter Park, Florida. 2007 to 2011.

- Performed state and federal wetland delineation in Florida, Southeastern United States, and Northeastern United States, environmental site assessments, surface water and wetland hydroperiod establishment, site-specific soil surveys, experimental designs, and baseline soil profile descriptions for agency submittals. Performed current and historical aerial photointerpretation for land use and cover type mapping and wetland delineation with selective field reconnaissance.

- Designed, permitted, and implemented permittee-responsible mitigation projects. Coordinated and oversaw adaptive management of mitigation areas.

- Established transects and monitored wetland mitigation sites for vegetation composition, aerial coverage, hydrology, and wildlife species. Established success criteria, created oyster reefs, and conducted oyster reef monitoring for mitigation. Interpreted data and completed monitoring reports for agency submittals.

- Assisted in environmental analysis and reports for local Comprehensive Plan Amendments and Rezoning. Prepared agency-approved mitigation plans and due diligence environmental constraint reports. Conducted local, state, and federal permitting in Florida, New Jersey, and Alabama. Assisted in preparation of large-scale environmental plans and drafting goals, objectives, and policies for Florida Sector Plans.

- Researched and interpreted local, state, and federal rules, guidelines, and procedures related to environmental regulations and applied interpretations in a regulatory context.

- Experienced project manager coordinating with clients, engineers, surveyors, and attorneys, preparing proposals, tracking budgets, and conducting client, local, state, and federal agency site reviews.

- Completed soils analysis on various projects for state and federal jurisdiction, ordinary high water line determination, gopher tortoise (*Gopherus polyphemus*) and sand skink (*Neoseps [=Plestiodon] reynoldsi*) habitat suitability. Determined site-specific seasonal high water table elevations and reported to state agencies.

- Performed listed species database reviews and field surveys for federally and state listed wildlife species including wood storks (*Mycteria americana*), red-cockaded woodpeckers

(*Picoides borealis*) and their cavity trees, Florida scrub-jays (*Aphelocoma coerulescens*), burrowing owls (*Athene cunicularia*), Audubons crested caracaras (*Caracara cheriway*), eastern indigo snakes (*Drymarchon corais couperi*), and gopher tortoises. Performed gopher tortoise permitting and relocations.

- Passed 2013, 2011, and 2010 Florida Department of Environmental Protection Lake Vegetation Index proficiency testing.
- Performed habitat assessment, water quality sampling, and U.S. Environmental Protection Agency Rapid Bioassessment Protocols for fish, benthic macroinvertebrate, and periphyton in Florida streams.

Postdoctoral Researcher, Louisiana State University, Baton Rouge, Louisiana. 2007.

- Drafted and revised manuscripts associated with wetland biogeochemistry.

Predoctoral Fellow, University of Florida, Gainesville, Florida. 2002 to 2007.

- Conducted field and laboratory work associated with dissertation including intact core incubation studies, mesocosm study, and transect field study analyzing wetland biogeochemistry, microbial ecology, water quality, and macrophytes.
- Researched literature on chemical amendments extensively, particularly alum, for phosphorus sequestration in lakes and wetlands.
- Managed and analyzed data, published and presented results.
- Conducted weekly/biweekly water quality sampling at the Orlando Easterly Wetland and all nutrient laboratory analysis.
- Managed laboratory assistant assigned to the project.

Student Intern, St. Johns River Water Management District, Palatka, Florida. 2000 to 2001.

- Performed monthly water quality sampling.
- Conducted sediment restoration experiment on soil cores from Newnans Lake, Gainesville, Florida.
- Performed data entry, organization, and analysis. Researched literature as identified by project leaders.

Graduate Research Assistant, University of Florida, Gainesville, Florida. 1999 to 2002.

- Executed *in situ* and laboratory nutrient flux studies on sediment from the Lower St. Johns River.
- Operated as field assistant and data manager for the Lower St. Johns River project. Managed laboratory assistants assigned to the project.

Education:

Ph.D. University of Florida, Gainesville, Florida, 2007. Soil and Water Science.
M.S. University of Florida, Gainesville, Florida, 2002. Soil and Water Science. Minor in Environmental Engineering.
B.S. Saint Mary's College, Notre Dame, Indiana, 1999. Biology. Minor in Chemistry and Mathematics.

Additional Training:

Nossaman LLP. Regulatory Uncertainty and Linear Infrastructure Projects: Where Are We and What's Ahead Webinar. September 1, 2022.
U.S. Geological Survey. Hydrography Community Webinar. The 3D Hydrography Program – Transition Timelines. August 23, 2022.
Florida Fish and Wildlife Conservation Commission. Gopher Tortoise Technical Assistance Group Biannual Meeting. July 15, 2022.
Environmental Law Institute Summer School. Basics of the Clean Water Act Webinar. June 16, 2022.
U.S. Environmental Protection Agency. EPA Tools & Resources Training Webinar: Visualizing Ecosystem Land Management Assessments (VELMA). June 2, 2022.
South Florida Water Management District. Flood Impact Assessment Tool Public Workshop Webinar. May 31, 2022.
Florida Department of Environmental Protection. Public Meeting Webinar on the Framework for TMDL Prioritization 2.0. May 24, 2022.
Florida Department of Environmental Protection. Draft Rule Workshop Webinar for ERP Applicants Handbook Volume I. May 18, 2022.
Southeast Conservation Adaptation Strategy. 2022 Southeast Blueprint Workshop for Piedmont & Atlantic Coastal Plain. May 11, 2022.
Southeast Conservation Adaptation Strategy. 2022 Southeast Blueprint Workshop for GA, AL & FL. May 4, 2022.
Natural Resources Conservation Service. State Technical Committee Meeting Webinar. January 26, 2022.
Nossaman LLP. Linear Infrastructure Redux: Adapting Your Projects to Meet the New Regulatory Climate Webinar. June 15, 2021.
Environmental Law Institute Summer School. NEPA, ESA, and Fundamentals of Environmental Law Webinar. June 15, 2021.
Association of State Wetland Managers. Members' Webinar: Technology for Manual Delineation, Confirmation and Characterization of Wetlands: ESRI's Wetland Identification Model (WIM) and More. April 28, 2021.
U.S. Geological Survey. Hydrography Dataset Advisory Webinar. Generalizing the NHDPlus HR for National Applications. April 27, 2021.
Ecobot. Conducting Hyper-Efficient Wetland Delineations Webinar. April 21, 2021.
Ecobot. The Mobile Mapping Landscape. Conducting Hyper-Efficient Wetland Delineations Webinar. April 10, 2021.
Florida Fish and Wildlife Conservation Commission. Gopher Tortoise Technical Assistance Group Virtual Meeting. March 12, 2021.
Florida Department of Environmental Protection. Virtual Bioassessment Training. March 9, 2021.
Florida Department of Environmental Protection. State 404 Program Public Webinar Part 2. December 14, 2020.
Florida Department of Environmental Protection. State 404 Program Public Webinar Part 1. December 10, 2020.
South Florida Water Management District. Northern Everglades Program Planning Webinar and Amendments to Chapter 40E-61 F.A.C. November 17, 2020.

Association of State Wetland Managers. State Assumption Webinar Series: Florida's Assumption Process – Planning, Decisions, and Lessons Learned. November 4, 2020.

Orange County Public Works Department. Orange County Code Amendments Virtual Developer's Forum. November 3, 2020.

U.S. Environmental Protection Agency. Florida's Request to Assume Administration of Clean Water Act Section 404 Program Virtual Public Hearing. October 21, 2020.

Association of State Wetland Managers. State Assumption Webinar Series: Mitigation Banking Considerations for States and Tribes Exploring Assumption of the CWA Section 404 Program. September 23, 2020.

U.S. Environmental Protection Agency Navigable Waters Protection Rule – State and Tribal Webinar Series: Exclusions and More. July 7, 2020.

Association of State Wetland Managers. Compensatory Mitigation Webinar 9: An Ecological Framework for Reviewing Compensatory Mitigation: How interests in property may affect mitigation projects. February 20, 2020.

Association of State Wetland Managers. Members' Webinar: Identifying Listed Species and Streamlining Section 7 Consultation for Wetland Permitting (And More): Introduction to the US Fish and Wildlife Service's Online IPaC Tool. June 12, 2019.

Association of State Wetland Managers. Members' Webinar: Wetland Restoration Contractor Selection 101. January 30, 2019.

Association of State Wetland Managers. Members' Webinar: Using Living Shorelines Prioritization Tools for Wetland Improvements. December 19, 2018.

Environmental Law Institute. Restoration Approaches/Techniques – Emerging Issues and Topics: Barrier Removal Webinar. October 29, 2018.

Association of State Wetland Managers. Energy Project Webinar Series: Horizontal Directional Drilling: Understanding the Role of Context when Reviewing Permit Applications. October 29, 2018.

Association of State Wetland Managers. Building Wetland Water Quality Monitoring Analysis Capacity Utilizing EPA's Water Quality "eXchange" Tools and Services Webinar. October 24, 2018.

1000 Friends of Florida. Trouble in Paradise – Six Critical Environmental Issues Facing Florida Webinar. September 19, 2018.

Association of State Wetland Managers-Natural Resources Conservation Service. Wetland Training Webinar 2: Wetlands in a Watershed at the Landscape Scale. August 15, 2018.

Association of State Wetland Managers Energy Project Webinar Series: Cumulative Adverse Effects of Pipeline Development on Wetlands and Other Aquatic Resources. July 24, 2018.

Association of State Wetland Managers Energy Project Webinar Series: Working with Consultants during Oil and Gas Pipeline Permitting Processes. July 18, 2018.

Association of State Wetland Managers. An Ecological Framework for Reviewing Compensatory Mitigation Webinar: Abiotic Processes (Part 2 of 4). July 16, 2018.

National Aeronautics and Space Administration. Discover and Access Landsat Analysis Ready Data from the U.S. Geological Survey Archive Webinar. June 28, 2018.

Association of State Wetland Managers. An Ecological Framework for Reviewing Compensatory Mitigation Webinar (Part 1 of 4). June 19, 2018.

Soil Science Society of America. The Leadership Webinar Series: Getting (Better) Feedback. May 17, 2018.

Soil Science Society of America. The Leadership Webinar Series: Taking it to the Next Level. The Art of Delegation. April 19, 2018.

Society for Conservation GIS. Improved Conservation Outcomes through Distribution Modeling of Threatened and Endangered Species Webinar. April 12, 2018.

Soil Science Society of America. The Leadership Webinar Series. Managing Conflict. March 15, 2018.

Association of State Wetland Managers. Hot Topics Webinar Series: Taking it to the Next Level. What's Next for Waters of the U.S. (WOTUS)? February 9, 2018.

Florida Department of Environmental Protection. Uniform Mitigation Assessment Method Rule Development Workshop Webinar. July 28, 2017.

Florida Department of Environmental Protection. Statewide Environmental Resource Permitting Phase 2 Public Workshop Webinar. July 25, 2017.

Association of State Wetland Managers. Hot Topics Webinar Series. What's Next for Clean Water Act Jurisdiction. July 11, 2017.

Conservation Biology Institute. Navigating the Data Basin Platform: A Guided Tour. February 23, 2017.

1000 Friends of Florida. Implementing Water 2070: Water Conservation Planning for Florida Communities. February 15, 2017.

Environmental Law Institute In-Lieu Fee Mitigation Training Webinar Series. Project Development. March 11, 2016.

Environmental Law Institute In-Lieu Fee Mitigation Training Webinar Series. Performance Standards. December 10, 2015.

Florida Department of Environmental Protection. Uniform Mitigation Assessment Method Rule Development Workshop Webinar. February 5, 2015.

1000 Friends of Florida. Planning for Greenways: Florida's Expanding System of Regional Connectors Webinar. December 10, 2014.

East Central Florida Corridor Task Force Webinar. June 24, 2014.

The Florida Bar, Environmental Land Use Law Section, Natural Resources Committee. What's New and What's Next for Clean Water Act Jurisdiction. April 16, 2014.

American Society of Agronomy. Introduction to Experimental Design and Analysis Online Statistics Course. March 31, 2014 - April 21, 2014

Florida Department of Environmental Protection. New Statewide Environmental Resource Permitting Rules Public Training Webinar. September 24, 2013.

Environmental Law Institute. Compensation Planning Framework. 2013 In-Lieu Fee Mitigation Training Webinar Series. June 19, 2013.

Environmental Law Institute. Long-Term Financing. 2013 In-Lieu Fee Mitigation Training Webinar Series. June 3, 2013.

Environmental Law Institute. Short-Term Financial Assurances. 2013 In-Lieu Fee Mitigation Training Webinar Series. May 21, 2013.

Environmental Law Institute. Advanced Credits. 2013 In-Lieu Fee Mitigation Training Webinar Series. April 22, 2013.

Central Florida Cooperative Invasive Species Management Area Aquatics Workshop – Invasive Species ID and Management. Orlando, Florida. August 5, 2011.

Soil Science Society of America. Determination of the Seasonal High Water Table Live Webcast. April 27, 2011.

21st Annual Florida Lake Management Society Workshop. Application of the Lake Vegetation Index for Accurate Assessment. Crystal River, Florida. 2010.

Florida Department of Environmental Protection Stream Condition Index Training. Quincy, Florida. 2010.

23rd Annual Florida Chamber Environmental Permitting Summer School. Marco Island, Florida. 2009.

Florida Association of Environmental Soil Scientists Soil Taxonomy and the Classification of Florida Soils Workshop. Gainesville, Florida. 2009.

Florida Association of Environmental Soil Scientists Hydric Soils Workshop. Florida. 2008, 2009, 2010.

Associations:

Florida Association of Environmental Soil Scientists (Lifetime member)
Society of Wetland Scientists (2006 to Present)
Soil Science Society of America (2001 to Present)
National Association of Wetland Managers (2022)

Association of State Wetland Managers (2018 to 2021)
Association of Women Soil Scientists (2006 to 2016)
Florida Lake Management Society (2001 to 2016)

Honors:

Journal of Environmental Quality manuscript reviewer (2014)
2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (Wetland Supplement) expert reviewer (2013)
Soil Science Society of America Journal manuscript reviewer (2011)
University of Florida Master's Supervisory Committee Member (2009-2011)
University of Florida, College of Agriculture and Life Sciences, Council of Graduate Schools/UMI® Distinguished Dissertation Award Nominee (2007)
British Petroleum Student Travel Grant to 9th International Symposium on Biogeochemistry of Wetlands (2005)
PADI Foundation Grant Recipient (2004)
University of Florida Alumni Fellowship (2002 to 2006)
University of Florida, IFAS Master's Thesis of the Year Award (2002)
Elected to the Honor Society of Phi Kappa Phi (2002)
Graduated from Saint Mary's College *summa cum laude* (1999)
Sigma Xi Award for Outstanding Research (1999)

Publications:

Malecki-Brown, L. M., J. R. White, and H. Brix. 2010. *Alum application to improve water quality in a municipal wastewater treatment wetland: Effects on macrophyte growth and nutrient uptake*. Chemosphere 79: 186-192.

Malecki-Brown, L. M. and J. R. White. 2009. *Effect of aluminum-containing amendments on phosphorus sequestration of wastewater treatment wetland soil*. Soil Science Society of America Journal 73: 852-861.

Malecki-Brown, L. M., J. R. White, and M. Sees. 2009. *Alum application to improve water quality in a municipal wastewater treatment wetland*. Journal of Environmental Quality 38: 814-821.

Brown, L. M. 2007. *Effect of alum on phosphorus sequestration, macrophytes, microbial community and mineralogy in a municipal wastewater treatment wetland*. Ph.D. dissertation. University of Florida, Gainesville, Florida.

Malecki-Brown, L. M., J. R. White, and K. R. Reddy. 2007. *Soil biogeochemical characteristics influenced by alum application in a municipal wastewater treatment wetland*. Journal of Environmental Quality 36:1904-1913.

Malecki, L. M., J. R. White, and K. R. Reddy. 2004. *Nitrogen and phosphorus flux rates from sediment in the Lower St. Johns River Estuary*. Journal of Environmental Quality 33: 1545-1555.

Malecki, L. M. and J. R. White. 2002. *Temporal and spatial variability of nutrient fluxes from sediment in the Lower St. Johns River Estuary*. Soil and Water Science Research Brief. University of Florida. Gainesville, Florida.

Malecki, L. M. 2002. *Temporal and spatial variability of nutrient fluxes from sediment in the Lower St. Johns*

River. Master's Thesis. University of Florida, Gainesville, Florida.

Presentations:

Malecki-Brown, L. M. and J. R. White. November 2007. *Effects of alum in a municipal wastewater treatment wetland*. Oral presentation at the American Society of Agronomy (ASA)-Crop Science Society of America (CSSA)-Soil Science Society of America (SSSA) International Annual Meeting, New Orleans, Louisiana.

Malecki-Brown, L. M. March 2007. *Effects of alum in a municipal wastewater treatment wetland*. Soil and Water Science Department Ph.D. Oral presentation at Exit Seminar, Gainesville, Florida.

Malecki-Brown, L. M., J. R. White, and K. R. Reddy. November 2006. *Phosphorus sequestration: Using alum in municipal wastewater treatment wetland mesocosms*. Oral presentation at ASA-CSSA-SSSA International Annual Meeting, Indianapolis, Indiana.

Malecki-Brown, L. M., J. R. White, and K. R. Reddy. September 2006. *Phosphorus sequestration: Using alum in municipal wastewater treatment wetland mesocosms*. Oral presentation at the University of Florida, IFAS, Soil and Water Science Department 7th Annual Graduate Research Forum, Gainesville, Florida.

Malecki, L. M. and J. R. White. November 2005. *Efficacy of chemically amended organic soils on P sequestration in a municipal wastewater treatment wetland*. Lead author at ASA-CSSA-SSSA International Annual Meeting, Salt Lake City, Utah.

Malecki, L. M. and J. R. White. June 2005. *Phosphorus sequestration using Al-containing amendments in organic soils from a municipal wastewater treatment wetland*. Oral presentation at the 16th Annual Florida Lake Management Society Conference, Duck Key, Florida.

Malecki, L. M. and J. R. White. March 2005. *Phosphorus sequestration using Al-containing amendments in organic soils from a municipal wastewater treatment wetland*. Oral presentation at the 9th International Symposium on Biogeochemistry of Wetlands, Baton Rouge, Louisiana.

White, J. R., **L. M. Malecki**, and K. R. Reddy. 2004. *Flux of N and P from sediments in the St. Johns River Estuary*. Co-author at the American Society of Limnology and Oceanography/The Oceanography Society Ocean Research Conference, Honolulu, Hawaii.

White, J. R. and **L. M. Malecki**. 2003. *Nitrogen and Phosphorus Flux from sediments in a Blackwater River Estuary, Florida, USA*. Co-author at the 8th International Symposium on Biogeochemistry of Wetlands, Ghent, Belgium.

Malecki, L. M. May 2003. *Temporal and spatial variability of nutrient fluxes from sediment in the Lower St. Johns River*. Invited oral presentation at St. Johns River Water Management District, Environmental Science seminar series, Palatka, Florida.

Malecki, L. M., J. R. White, and K. R. Reddy. November 2002. *Temporal and spatial variability of nutrient fluxes from sediments in the Lower St. Johns River*. Poster presentation at the ASA-CSSA-SSSA Annual Meeting, Indianapolis, Indiana.

Malecki, L. M. and J. R. White. 2002. *Trends in Sediment Composition and Flux in the Lower St. Johns River Estuary*. Invited Oral Presentation at the Lower St. Johns River Research Coordination Conference, Jacksonville, Florida.

Malecki, L. M., J. R. White, and K. R. Reddy. September 2002. *Investigation of nutrient fluxes from sediment in the Lower St. Johns River*. Oral presentation at the University of Florida, IFAS, Soil and Water Science Department 3rd Annual Graduate Research Forum, Gainesville, Florida.

Malecki, L. M., J. R. White, and K. R. Reddy. October 2001. *Influence of sediment dredging on the internal phosphorus load in Lake Okeechobee*. Poster presentation at the ASA-CSSA-SSSA Annual Meeting, Charlotte, North Carolina.