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Dallas M. Williams

Education

Ph.D., Soil Science (Applied Soil Physics and Hydrology) **2022-Present**
Texas A&M University, College Station, TX

M.S., Agronomy (Soil Science) **2021**
University of Nebraska-Lincoln, Lincoln, NE

B.S., Agronomy and Horticulture (Soil Science; minor in Horticulture) **2015**
University of Nebraska-Lincoln, Lincoln, NE

Professional Experience

Graduate Teaching Consultant, Center for Teaching Excellence **August 2025-present**
Texas A&M University, College Station, TX
Description: Instructional coach and peer mentor for teaching assistants on campus; Facilitate Teaching Assistant Institute workshop (5+); Create and facilitate webinars for the Graduate Student Professional Development in Teaching (GSPDT) webinars (10+)

Graduate Research Assistant, Department of Soil and Crop Sciences **January 2022-present**
Texas A&M AgriLife Research, College Station, TX
Dissertation: Urban Soil and Water Management: Field to Watershed Scale

Graduate Research Assistant, Department of Agronomy and Horticulture **2018-2022**
University of Nebraska – Lincoln, Lincoln, NE
Thesis: A Method for Visualizing Water Flow through Modified Root Zones

Teaching Experience

Texas A&M University, College Station, TX

- Analysis of Environmental Systems. Summer 2024. Teaching Assistant, 1 session. Enrollment: 15 students
- Water in Soil and Plants. Spring 2024. Laboratory Teaching Assistant. Enrollment: 42 students
- Intro to Soil Science. Summer 2022. Laboratory Teaching Assistant. Enrollment: 18 students

University of Nebraska-Lincoln, Lincoln, NE

- Principles of Soil Management. Fall 2015. Teaching Assistant. Enrollment: 70 students
- Applied Soil Physics. Fall 2015. Teaching Assistant. Enrollment: 5 students

- Intro to Soil Resources. Fall 2014. Teaching Assistant, Grader. Spring 2015. Enrollment: 150 students

Peer-Reviewed Publications

Published

4. Watson, K.L., J.E. Gignac, A.A. Navarrete, L. Joharzadeh, B. Osei, D. Phuyal, C. Poudyal, M. Wang, L. Watkins, O. Alabi, S.S. Bhattacharyya, N. Boogades, A. Jha, D. Khadka, **D.M. Williams**, A.P. Smith, and B.M. Wyatt. 2026. Low-intensity prescribed fire has no immediate impact on soil physical and chemical properties or enzymatic activity in the Post Oak Savanna ecoregion, Texas, USA. Agrosystems, Geosciences & Environment, 9(1): e70315. http://dx.doi.org/10.1002/agg2.70315

3. **Williams, D.M.,** and B.M. Wyatt. 2026. Technosols offer a suitable replacement for sand-based filter media in rain garden design. Water Environment Research, 98(1): e70268. https://doi.org/10.1002/wer.70268

2. **Williams, D.M.,** C.M. Straw, A.P. Smith, K.L. Watkins, S.G. Hong, W.F. Floyd, and B.M. Wyatt. 2024. Using electromagnetic induction to inform precision turfgrass management strategies in sand-capped golf course fairways. Agrosystems, Geosciences & Environment, 7(4): e70020. https://doi.org/10.1002/agg2.70020

1. **Williams, D.M.,** H. Blanco-Canqui, C.A. Francis, and T.D. Galusha. 2017. Organic farming and soil physical properties: An assessment after 40 years. Agronomy Journal, 109: 600-60. https://doi.org/10.2134/agronj2016.06.0372

Under Review

1. Sapkota, M., O. E. Alabi, W. W. Floyd, S. G. Hong, **D. M. Williams**, B.M. Wyatt, A.P. Smith, and C. M. Straw. *In Review*. Spatial relationship of turfgrass tissue nitrogen content and several vegetation indices on sand-capped golf course fairways.

Grants

Under Review

1. Szerlag, K., B.M. Wyatt, and **D.M. Williams**. 2025. Reducing Phosphorus (P) with Innovative Sorbent in P Removal Structures. U.S. EPA – Gulf of America Program. $977,603. Under Review.

Funded

3. Watkins, L., and **D.M. Williams**. 2025. From Scraps to Sprouts: Eco Garden. Texas A&M University, Aggie Green Fund, Major Grant. $37,251. Funded.

2. **Williams, D.M.,** and B.M. Wyatt. 2022. Evaluation of the Environmental Impact of Using Alternative Materials for Ragin Garden Design. Texas Water Resources Institute, Mills Scholarship. $7,500. Funded.

1. **Williams, D.M.,** and H. Blanco-Canqui. 2015. Effects of Organic Farming on Soil Physical Properties. University of Nebraska-Lincoln, Institute of Agriculture and Natural Resources, Agricultural Research Division, Undergraduate Research Grant. $3,500. Funded.

Not Funded

2. **Williams, D.M.,** and B.M. Wyatt. 2025. A Social, Ecological, and Technological (SET) Assessment of Watershed Vulnerability. Texas Water Resources Institute, USGS Graduate Student Research Program. $10,000. Not Funded.

1. **Williams, D.M.,** and B.M. Wyatt. 2024. Using Electromagnetic Induction to Inform Precision Turfgrass Management Strategies in Sand-Capped Golf Course Fairways. Texas Turfgrass Research, Education, and Extension Endowment (TTREEE). $15,000. Not Funded.

National and International Presentations

8. **Williams, D.M.,** and B.M. Wyatt. 2025. Modeling the hydrologic impact of Technosol rain garden design on an urban watershed in Houston, TX using the Soil Water Assessment Tool (SWAT). American Geophysical Union (AGU) Annual Meeting. New Orleans, LA.

7. **Williams, D.M.,** and B.M. Wyatt. 2025. Technosols offer a suitable replacement for sand-based filter media in rain garden design. Soil Science Society Annual International Meeting. Salt Lake City, UT.

6. **Williams, D.M.,** and B.M. Wyatt. 2025. Modeling the hydrologic impact of Technosol rain garden design on an urban watershed in Houston, TX using the Soil Water Assessment Tool (SWAT). Soil Science Society Annual International Meeting. Salt Lake City, UT.

5. **Williams, D.M.**, and B.M. Wyatt. 2024. Determining the suitability of waste materials in alternative rain garden design. American Geophysical Union (AGU) Annual Meeting. Washington, D.C.

4. **Williams, D.M.,** B.M. Wyatt, C. Lively, K. Oliver, S. Padala, J. Price, C, Ruth, M. Tavera, and S. Veeraveli. 2023. Determining the suitability of urban waste material in rain garden design. Soil Science Society Annual International Meeting. St. Louis, MO.

3. **Williams, D.M.,** B.M. Wyatt, C.M. Straw, A.P. Smith, K. Watson, S. Hong, T. Jansky, W. Floyd. 2022. Assessing the spatial relationships among apparent electrical conductivity and soil properties in sand-capped golf course fairways. Soil Science Society Annual International Meeting. Baltimore, MD.

2. **Williams, D.M.,** R.E. Gaussoin, H. Blanco-Canqui, and K. Amundsen. 2019. An improved method for visualizing water flow through modified rootzones. Soil Science Society Annual International Meeting. San Antonio, TX.

1. **Williams, D.M.,** H. Blanco-Canqui, T. Galusha, and C. Francis. 2015. Organic farming effects on soil physical quality after 39 years. Soil Science Society Annual International Meeting. Minneapolis, MN.

State and Local Presentations

9. **Williams, D.M.,** and B.M. Wyatt. 2026. Modeling the hydrologic impact of Technosol rain garden design on an urban watershed in Houston, TX using the Soil Water Assessment Tool (SWAT). Texas A&M University, Annual Soil Survey and Land Resources Workshop. College Station, TX
8. **Williams, D.M.,** and B.M. Wyatt. 2025. Substituting sand with waste material and native clay soil in a structural soil approach to rain garden design. Texas Water Resource Institute's Annual Water Day event. College Station, TX
7. **Williams, D.M.,** and B.M. Wyatt. 2025. Adding waste material to native clay soil in alternative rain garden design. Texas A&M University, Annual Soil Survey and Land Resources Workshop. College Station, TX
6. **Williams, D.M.,** and B.M. Wyatt. 2024. Alternative rain garden design for stormwater management. Texas A&M University, Annual Soil Survey and Land Resources Workshop. College Station, TX
5. Price, J.S., and **D.M. Williams**. 2023. Suitability of recycled urban wastes as rain garden media. Undergraduate Student Research Week, Texas A&M University. College Station, TX
4. **Williams, D.M.,** and B.M. Wyatt. 2023. Determining the suitability of recycled urban waste material in rain garden design. Texas Water Resource Institute's annual Water Day event. College Station, TX
3. **Williams, D.M.,** and B.M. Wyatt. 2023. Determining the suitability of recycled urban waste material in rain garden design. Texas A&M University, Annual Soil Survey and Land Resources Workshop. College Station, TX
2. **Williams, D.M.,** and R.E. Gaussoin. 2020. Water movement in turfgrass soils. University of Nebraska- Lincoln Virtual Turfgrass Field Day. Via ZOOM
1. **Williams, D.M.,** and R.E. Gaussoin. 2019. Old technology meets high tech: measuring water infiltration in turfgrass rootzones. University of Nebraska- LincolnAannual Turfgrass Field Day. Lincoln, NE.

Invited Presentations

1. **Williams, D.M.** 2021. An improved method for visualizing water movement through modified root zones. Scotts Miracle Gro, Research and Development Department. Via ZOOM

Peer Reviewer

- Soil Security (2 articles)
- Agrosystems, Geosciences & Environment (1 article)

Awards

5. Urban and Anthropogenic Soils Division, 5-minute rapid presentation, graduate student competition at the ASA-CSSA-SSSA Annual International Meeting. 1st place. Modelling the Hydrological Impact of Technosol Rain Garden Design on an Urban Watershed in Houston, TX Using the Soil Water Assessment Tool (SWAT). **2025**

4. Texas Water Resource Institute's annual Water Day, graduate student poster competition. 3rd place. Substituting Sand with Waste Material and Native Clay Soil in a Structural Soil Approach to Rain Garden Design **2025**

3. Three Minute Thesis (3MT), Texas A&M University. Runner Up and People's Choice. Rethinking Rain Gardens: Sustainable Design for a Resilient Future. **2024**

2. W4188 working group Soil, Water, and Environmental Physics to Sustain Agriculture and Natural Resources for student travel to a scientific conference. Awarded $1,500. **2024**

1. Urban and Anthropogenic Soils Division, poster presentation, graduate student competition at the ASA-CSSA-SSSA Annual International Meeting. 1st place. Determining the Suitability of Urban Waste Materials in Rain Garden Design. **2023**

In the Media

- May 16, 2025. "Precision Turfgrass Management with Dr. Briana Wyatt and Dallas Williams." Field, Lab, Earth podcast https://fieldlabearth.libsyn.com/precision-turfgrass-management-with-dr-briana-wyatt-and-dallas-williams
- November 20, 2024. "Mills Scholar Recipient Dallas Williams studies rain garden best practices." Texas Water Resource Institute News. https://twri.tamu.edu/news/2024/november/mills-scholarship-recipient-dallas-williams-studies-rain-garden-best-practices/

Community Outreach

Darwin Day

2026. Scraps to Sprouts: "Meet the worms driving sustainability" vermicomposting table

Expanding Your Horizons Workshop

2025. "Mystery in the Mud: Using Soil to Solve a Crime". 5th and 6th grade students (18).
2024. "Rain Garden to the Rescue". 5th and 6th grade students (12).
2023. "Get Hands-On with Soil". 5th and 6th grade students (11).

Campus Sustainability Day – Texas A&M University

2025. Scraps to Sprouts: gardening, composting, and hydroponics table

World Soil's Day

2024. First Friday Downtown Bryan, TX. Soil filtering demonstration for the public.
2023. Brazos Valley Farmers Market. Soil filtering demonstration for the public.

STEM in Agriculture Field Day

2024. Soil moisture education and demonstrations table. High school students ().

Volunteer and Service

- Social Media Content Creator. 2025-present. Content curator for the Scraps to Sprouts Instagram page. https://www.instagram.com/scraps.to.sprouts/

- Project Co-manager. 2024-present. Scraps to Sprouts, a community garden, vermicomposting, and hydroponics initiative to alleviate food insecurity and reduce waste on campus.
- Soil Pit Monitor. 2024. Region IV Collegiate Soil Judging competition.
- Final Exam Scribe. 2024. Disability Resources, Texas A&M University.
- Judge. 2024. Texas Junior Academy of Science, Environmental Science Division.
- Judge. 2023. ASA-CSSA-SSSA Annual International Meeting, Soil Physics and Hydrology 5-min Oral and Poster Presentations, Student competition.
- Judge. 2023. Texas Junior Academy of Science, Environmental Science Division.
- Mentor. 2023-2024. Aggie Research Program, Texas A&M University, mentored a total of 15 undergraduate student volunteers working on the "Determining the suitability of recycled urban waste in stormwater management design" project
- Moderator. 2023. LAUNCH Undergraduate Research Scholars Symposium, Texas A&M University.

Professional Development and Certifications

- Certified. 2025. Mental Health First Aid, National Council for Mental Wellbeing.
- Certified. 2025. Center for the Integration of Research, Teaching, and Learning (CIRTL) Associate, Texas A&M University, completion of 7-week course titled *An Introduction to Evidence-Based Undergraduate Teaching*.
- Certified. 2025. Graduate Resources and Development (G.R.A.D.) Aggies Program Explorations Certificate, Texas A&M University, completion of 12+ hours of participation in professional development activities and seminars
- Certified. 2024. Graduate Mentoring Academy Fellow, Graduate and Professional School, completion of seven evidence-based mentorship competencies.
- Certified. 2023. Graduate Resources and Development (G.R.A.D.) Aggies Program, Foundations Certificate, Texas A&M University, completion of 6+ hours of participation in professional development activities and seminars.

Professional Membership

American Geophysical Union	**2024-present**
Crop Science Society of America	**2022-present**
Agronomy Society of America	**2022-present**
Soil Science Society of America	**2015-present**

Programming Languages and Software Experience

- Matlab – fluent
- Python – beginner

- Google Earth Engine Code Editor – beginner
- EM38-MK2 electromagnetic induction sensor
- ESRI ArcGIS/ArcMAp
- Soil Water Assessment Tool (SWAT) hydrological model
- HYDRUS-1D vadose zone flow model
- Visual MINTEQ geochemical model