

Dan Wen, Ph.D., P.E.

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PROFESSIONAL SUMMARY

Strategic Professional Engineer (PE) and Ph.D. with 6+ years of experience in water resources engineering, drainage, and civil infrastructure. Proven leader in hydrologic and hydraulic (H&H) modeling, vulnerability assessments, and infrastructure planning. Demonstrated ability to translate complex technical analyses into actionable insights that support regulatory approval, enable infrastructure funding, and guide capital improvement priorities. Experienced in team leadership, project pursuits, and leveraging AI-driven automation to improve workflow efficiency and scalability.

CORE COMPETENCIES

- **H&H Modeling:** Stormwise (ICPR4), Pre/Post Modeling, Pond Siting, Risk & Vulnerability Analysis
- **GIS & Automation:** ArcGIS Pro (Expert), Python (ArcPy), R, AI-Assisted Scripting
- **Leadership & Strategy:** Technical Mentorship, Team Development, Workflow Optimization
- **Regulatory Compliance:** Environmental Permitting (SFWMD, SWFWMD, SJRWMD)

PROFESSIONAL EXPERIENCE

Michael Baker International

Senior Civil Engineer / Technical Lead | 2023 – 2026

- Led large-scale vulnerability assessment (VA) modeling for municipal clients, delivering defensible analyses that supported regulatory approval processes, enabled eligibility for infrastructure funding, and guided prioritization of high-risk areas for capital improvement planning
- Contributed to project pursuits by supporting proposal development, advising on budget considerations, and providing technical input that strengthened competitive positioning for municipal infrastructure projects
- Automated GIS and data processing workflows using AI-assisted R and ArcPy scripting, enabling batch processing of large datasets and one-click generation of 40–50 maps, significantly improving team efficiency and reducing manual effort
- Managed and mentored junior engineers; delegated tasks, conducted technical training, and ensured modeling accuracy and timely project delivery
- Led drainage design for major infrastructure projects (US 98 Design-Build, SR 20 Widening), including pond siting, ditch design, and pre/post-development modeling
- Served as subject matter expert (SME) for ArcGIS Pro and Stormwise, resolving technical challenges across multidisciplinary teams
- Navigated complex environmental permitting processes across multiple Water Management Districts to ensure full regulatory compliance

Geosyntec Consultants, Inc.

Water Resource Engineer | 2019 – 2023

- Evaluated BMP performance using monitoring data and developed retrofit strategies for municipal clients
- Developed H&H models for urban and natural systems, integrating research insights into practical engineering solutions
- Led research projects for municipalities (Orange County, City of Casselberry, City of Orlando), including planning, sampling, and data analysis
- Translated technical findings into actionable recommendations for water quality improvement and infrastructure planning

University of Central Florida

Lab & Vehicle Manager / Project Team Leader | 2015 – 2019

- Led graduate research teams at the Stormwater Management Academy; coordinated fieldwork and laboratory operations
- Published 10+ peer-reviewed journal articles and developed Bold&Gold sorption media, widely adopted in Florida applications
- Led report writing for FDOT and EPA-funded projects and contributed to proposal development
- Managed laboratory assets and ensured compliance with safety and research protocols

EDUCATION

- **Ph.D., Environmental Engineering** – University of Central Florida, 2019
- **M.S., Ecology** – Shanghai Jiao Tong University, 2013
- **B.S., Agricultural Structure & Energy Engineering** – China Agricultural University, 2011

LICENSES & CERTIFICATIONS

- Professional Engineer (PE), Florida (License No. 98344)

PUBLICATIONS & RESEARCH

Full publication list and citation metrics available via Google Scholar