

Michael C. Alfieri, PG, PHg, CGWP

PRINCIPAL



Michael (Mike) Alfieri, PG, PHg, CGWP is a professional geologist licensed in 13 states, including Florida, and a nationally certified/registered hydrogeologist with almost 30 years of experience. Mr. Alfieri manages hydrogeological/water resource engineering teams in the evaluation, planning design, testing, permitting, and construction of wells for potable supply, deep injection, and managed aquifer recharge. He is one of four groundwater professionals in the State of Florida to be registered by the National Groundwater Association (NGWA) as a Certified Groundwater Professional (CGWP) and one of five professionals in the State of Florida to be registered as a Professional Hydrogeologist (PHg.) by the American Institute of Hydrology (AIH). He has been on the Florida Board of Professional Geologists for over 13 years and has been Chair and Vice Chair of the Board multiple times. He is also the past Chairman of ASTM Sub-Committee D18.21.03: Well Design, Maintenance & Construction, founding member of ASTM Sub-Committee D18.27: Karst, and is a member of the NGWA's Managed Aquifer Recharge work group.

Over his professional career, Mr. Alfieri managed and completed numerous large and small-scale geologic, hydrogeologic, and karst science project investigations across the U.S. He has also provided third-party review and professional geologic opinions regarding a wide breadth of geologic projects completed by others. Mr. Alfieri is a published lead and/or co-author to numerous peer-reviewed journal articles, conference proceedings such as *NCKRI Field Guide 3: Florida's Karst Landscapes and Roles of Karst in Flood Control and Water Supply Management in West-Central Florida*, and an academic textbook, *The Karst Systems of Florida: Understanding Karst in a Geologically Young Terrain*, which is used across the Florida university system.

Mr. Alfieri is an established subject matter expert recognized in the U.S. Federal Court and state/county court systems, as well as the Florida Department of Administrative Hearings, being retained over three hundred times by legal counsel for their clients. He has testified as a fact and as an expert witness. Mr. Alfieri has provided professional expert opinions regarding geology and hydrogeology; karst; groundwater quality and monitoring; contaminate fate and transport of organic and non-organic chemicals; groundwater flow and contaminant fate and transport modeling; well design, maintenance, and construction; reuse/reclaimed water; and underground injection control (UIC) permitting.

Mr. Alfieri is greatly invested in his career and always offers his time back to the profession. The following provides some career highlights:

- Mr. Alfieri was first appointed by Florida Governor Rick Scott as a Board Member of the Florida Board of Professional Geologists for a term beginning July 15, 2013, and ending October 31, 2015, and was reappointed by the Governor on January 5, 2016 for a second term beginning January 5, 2016, and ending October 31, 2019. He previously served as a Board Member, Vice Chair, Chair of the Board. He is the current Chair of the Board. The Board of Professional Geologists is responsible for licensing and regulating the practice of professional geology.
- Mr. Alfieri has previously served as an executive board member for the New York State Council of Professional Geologists and the Buffalo Association of Professional Geologists.
- He is currently an active member and past Executive Board Secretary (2010 to 2011) of the Florida Association of Professional Geologists, a Section of the American Institute of Professional Geologists (FAPG-AIPG).
- For ASTM International (ASTM), which maintains jurisdiction of standards utilized by the geotechnical and geoenvironmental industries, he is a voting committee member for ASTM Committee D18 on Soil and Rock, as well as a voting sub-committee member for ASTM Committee D18.01 Surface and Subsurface Characterization, D18.21.01 Direct Push Sampling, D18.21.03 Well Design, Maintenance & Construction (currently Chair) D18.21.05 Hydrogeologic Properties, Modeling, and Data Analysis, D18.21.06 Design of Groundwater Monitoring Networks, D18.26 on Hydraulic Fracturing, and D18.27 on Karst. Mr. Alfieri will be receiving the Richard S. Ladd Standards Development Award from ASTM International on June 13, 2022 at the Main Committee Meeting of D18 in Seattle, Washington. This recognition acknowledges the extensive time and effort Mr. Alfieri dedicated in developing ASTM Standard Designation D6169 "Standard Guide for Selection of Subsurface Soil and Rock Sampling Devices for Environmental and Geotechnical Investigations."
- For the National Ground Water Association (NGWA), the leading professional society for groundwater scientists, engineers, and contractors, Mr. Alfieri was the inaugural Chair of the NGWA's Deep Groundwater Investigations

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Interest Group, as well as a former Chair of the NGWA's Groundwater Modeling Interest Group. He was also a committee member of the Advisory Committee on Water Information/Water Information Coordination Program (Office of Management and Budget/Department of the Interior/U.S. Geological Survey Program) Sub-Committee on Ground Water Data Standards and Data Management Work Group. Mr. Alfieri is a contributing author to the NGWA's Manual of Water Well Standards and Best Suggested Practices for Aquifer Storage and Recovery.

- On behalf of the National Cave and Karst Research Institute (NCKRI), he reviewed submitted manuscripts for publication for the 13th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst™. He also presented at the conference. He was a Program Chairman and the Proceedings Copy Editor on the organizing committee for the 14th annual conference in Rochester, Minnesota. Additionally, he was an author of the conference proceedings, *NCKRI Field Guide 3: Florida's Karst Landscapes and Roles of Karst in Flood Control and Water Supply Management in West-Central Florida*, and field trip guide for the 17th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, which was held in Tampa, Florida in March 2023.

Education

- MA, Geological Sciences, Binghamton University (2000)
- BA, Geology and Environmental Studies, Alfred University (1998)

Professional Registrations/Certification/Training

- Professional Geologist No. 1275, Alabama
- Professional Geologist No. 45476, Arizona
- Professional Geologist No. 2476, Florida
- Professional Geologist No. 1950, Georgia
- Professional Geologist No. 237, Louisiana
- Professional Geologist No. 2325, North Carolina
- Professional Geologist No. GEO2667, South Carolina
- Professional Geologist No. 1033, Texas
- Professional Geologist No. 2801 00189, Virginia
- Licensed Professional Geologist No. 196001180, Illinois
- Licensed Professional Geologist No. IN2181, Indiana
- Registered Professional Geologist No. 0754, Mississippi
- Registered Geologist No. 2005016827, Missouri
- Professional Hydrogeologist No. 05-HG-1629, American Institute of Hydrology
- Certified Groundwater Professional No. 302753, National Groundwater Association

Affiliations

- ASTM International
- American Institute of Hydrology
- American Water Research Association
- American Water Works Association
- FAPG – The Florida Section of AIPG
- International Association for Mathematical Geology
- National Groundwater Association
- Southeastern Geological Society

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Technical Presentations

Moderator American Groundwater Trust, 2024 Florida Groundwater Conference, January 24, 2024.

Field Guide, 2023 17th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst Tampa, Florida, March 2023.

"Florida Keys Injection Wells... Hindsight is 2020" American Groundwater Trust Deep Injection Well Conference, March 2020.

"Groundwater Quality Source Evaluation: Rainbow Springs Group, Marion County, Florida" American Water Resource Association National Conference, November 2019.

"Karst of Western Alachua County, Florida" Alachua County Board of County Commissioner Meeting, April 9, 2019.

"Groundwater Quality Source Evaluation: Rainbow Springs Group, Marion County, Florida" 6th UF Water Institute Symposium, February 2018.

"Photolinears, fractures, and fallacies: What can we assume about the structures of ASR host strata?" National Groundwater Association Groundwater Summit, December 4-5, 2017.

"Photolinears, fractures, and fallacies: What can we assume about the structures of ASR host strata?" 16th Annual Aquifer Storage Recovery Conference American Groundwater Trust September 22, 2016.

"Shallow Depressions in the Florida Coastal Plain: Karst and Pseudokarst" 30th Florida SME and Dreyer Conference: Minerals for Agriculture, October 7, 2015.

"Development of sinkholes in a thickly covered karst terrane" 13th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst™, May 9, 2013.

"Spring Source BMPs" 2012 Joint Southeast Bottled Water Association and Mid-America Bottled Water Association Convention and Trade Show, June 2012.

"Fouling... Or what happened to my well? A Primer on Water Well Fouling for the Bottled Water Industry" 2012 Joint Southeast Bottled Water Association and Mid-America Bottled Water Association Convention and Trade Show, June 2012.

"When are Sinkhole Indicators Valid?" International Facility Managers Association – Tampa Section, August 2011.

"Spring Source Development," the 2011 Joint Southeast Bottled Water Association and Mid-America Bottled Water Association Convention and Trade Show, February 2011.

"Spring Source Development" International Bottled Water Association's 2009 Convention and Tabletop Trade Show, October 2009.

"The 7 Habits of Highly Effective Consulting Hydrogeologists Conducting Permit Applications and Renewals in Florida," National Ground Water Association's Ground Water Expo: Ground Water Policy and Regional Management in Florida: A Changing World - Topical Session, December 2007.

"Progress Toward a Nationwide Ground Water Monitoring Network" National Ground Water Association's Ground Water Expo: Ground Water Availability and Sustainability - Topical Session, December 2007.

"Producing higher qualified professional candidates for careers—how the industry can help" National Ground Water Association's Ground Water Expo: Roundtable, December 2007.

"Modeling Environmental Solutions" Alfred University, October 2000.

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Publications

Upchurch SB, Scott TM, Portell R, **Alfieri MC**, Williams C (2023) National Cave and Karst Research Institute Field Guide 3: Florida's Karst Landscapes and Roles of Karst in Flood Control and Water Supply Management in West-Central Florida

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2020) D5787-20 Standard Practice for Monitoring Well Protection At or Near Land Surface.

Upchurch SB, Scott TM, **Alfieri MC**, Fratesi SE, Dobecki TL (2019) The Karst Systems of Florida: Understanding Karst in a Geologically Young Terrain. New York, New York: Springer International Publishing (ISBN 978-3-319-69635-5).

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5299-18 Standard Guide for Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5521-18 Standard Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5781-18 Standard Guide for Use of Dual-Wall Reverse-Circulation Drilling for Geoenvironmental Exploration and the Installation of Subsurface Water-Quality Monitoring Devices.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5784-18 Standard Guide for Use of Hollow-Stem Augers for Geoenvironmental Exploration and the Installation of Subsurface Water-Quality Monitoring Devices.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5872-18 Standard Guide for Use of Casing Advancement Drilling Methods for Geoenvironmental Exploration and Installation of Subsurface Water Quality Monitoring Devices.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2018) D5875-18 Standard Guide for Use of Cable-Tool Drilling and Sampling Methods for Geoenvironmental Exploration and Installation of Subsurface Water Quality Monitoring Devices.

Alfieri MC, Upchurch SB, and Dobecki TL (2018) Photolinears, fractures, and fallacies: A post hoc study of photolinears, Hillsborough County, Florida. Proceedings, 15th Multidiscip Conf on Sinkholes and Engineering and Environ Impacts of Karst, Shepherdstown, West Virginia.

Kromhout C and **Alfieri MC** (2018) Assessment of historical aerial photography as initial screening tool to identify areas at possible risk to sinkhole development. Proceedings, 15th Multidiscip Conf on Sinkholes and Engineering and Environ Impacts of Karst, Shepherdstown, West Virginia.

NGWA Contributing Author (2017) Preface for Groundwater Modeling Advisory Panel White Papers: A Decision Framework for Minimum Levels of Model Complexity.

Upchurch SB, Scott TM, **Alfieri MC**, and Dobecki TL (2015) Shallow Depressions in the Florida Coastal Plain: Karst and Pseudokarst (abs). Abstracts with Programs, 14th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst™, Rochester, Minnesota.

ASTM International, Chairman, ASTM Sub-Committee D18.21.03, **Technical Lead Author** (2014) ASTM D5787 – 14 Standard Practice for Monitoring Well Protection.

Upchurch SB, Dobecki TL, Scott TM, Meiggs SH, Fratesi SE, and **Alfieri MC** (2014) Development of sinkholes in a thickly covered karst terrain (abs). 29th Regional Phosphate Conference, Society for Mining, Metallurgy, and Exploration, Lakeland, Florida.

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NGWA Contributing Author (2014) Best Suggested Practices for Aquifer Storage and Recovery.

NGWA Contributing Author (2014) National Ground Water Association Manual of Water Well Standards: Chapters on Well Testing for Performance and Water Sampling and Analysis.

Dobecki TL, Upchurch SB, Scott TM, Meiggs SH, Fratesi SE, and **Alfieri MC** (2012) Subbottom profiling investigation of sinkhole lake structure in Bay and Washington Counties, Florida (abs). Abstracts with Programs, Geological Society of America Annual Meeting, Charlotte, North Carolina. p. 298.

Upchurch SB, Dobecki TL, Scott TM, Meiggs SH, Fratesi SE, and **Alfieri MC** (2012) Development of sinkholes in a thickly covered karst terrane (abs). Abstracts with Programs, Geological Society of America Annual Meeting, Charlotte, North Carolina. p. 298.

Contributing Author to the Pasco County Geologic Hazard Ordinance No. 08-016 (Section 704) Amending the Pasco County Land Development Code (Ordinance No. 89-21 Section 306). Passed by Pasco County Board of County Commissioners March 11, 2008.

Kastrinos, J.R., M.D. Kelly, and **M.C. Alfieri**. 2005. "Hustle and Flow." Water & Wastewater Products, Vol. 6, No. 2.

Alfieri, M.C. 1999. "Hydrogeology and Steady-State Simulation of Groundwater Flow in a Glacial Aquifer System in the Factory Brook Valley, Cortland County, New York," Master's Thesis, SUNY at Binghamton University.

Alfieri, M.C. 1998. "The Tully (Valley Heads) Moraine: A Hydrogeochemical Study," Bachelor's Thesis, Alfred University.

Honors and Awards

Chair/Vice Chair/Board Member – Florida Board of Professional Geologists, which is responsible for licensing and regulating the practice of professional geology. The board meets regularly to consider applications for licensure, to review disciplinary cases, and to conduct informal hearings relating to licensure and discipline. The board engages in rulemaking to implement the provisions set forth in its statutes and conducts other general business, as necessary.

Voting Member, ASTM International ASTM Subcommittee D18 on Soil and Rock, which develops standards and promotes knowledge related to geoenvironmental, geologic, and geotechnical aspects regarding the development of specifications and methods for sampling and testing; and the development of terminology, definitions, and practices relating to the physical and chemical properties and behavior of soil, rock, and the fluids contained therein. Included are the physical and chemical properties and behavior of: soil-like materials and fluids occupying the pore spaces, fissures and other voids in soil and rock insofar as such fluids may influence the properties, behavior and uses of the soil and rock materials. January 2013 to Present.

Voting Member, ASTM International ASTM Subcommittee D18.01 on Surface and Subsurface Characterization, which develops standards and promotes knowledge related to geoenvironmental, geologic, and geotechnical regarding the development of specifications and methods for geological/geotechnical sampling, testing, and characterization. January 2013 to Present.

Member and Voting Member, ASTM International ASTM Subcommittee D18.21.01, D18.21.05, and 21.06 on Direct Push Sampling; Hydrogeologic Properties, Modeling, and Data Analysis; and Design of Groundwater Monitoring Networks, respectively, which develop standards and promotes knowledge related to geoenvironmental, geologic, and geotechnical regarding the development of specifications and methods for well construction/construction monitoring, drilling methodologies, hydrogeologic testing and evaluation, and groundwater modeling. January 2013 to Present.

Chair Member and Voting Member, ASTM International ASTM Subcommittee D18.21.03 on Well Design, Maintenance & Construction, which develop standards and promotes knowledge related to geoenvironmental, geologic, and geotechnical regarding the development of specifications and methods for well construction/construction monitoring, drilling methodologies, hydrogeologic testing and evaluation, and groundwater modeling. January 2013 to Present;

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Chair June 2013 to Present. Recipient of the Richard S. Ladd Standards Development Award from ASTM International on June 13, 2022 at the Main Committee Meeting of D18 in Seattle, Washington.

Voting Member, ASTM International ASTM Subcommittee D18.26 on Hydraulic Fracturing, which develops standards and promotes knowledge related to geoenvironmental, geologic, and geotechnical aspects of hydraulic fracturing activities. January 2013 to Present.

Reviewer, on behalf of the National Cave and Karst Research Institute, of submitted manuscripts for publication for the 13th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst™.

Contributing Author to the Pasco County Geologic Hazard Ordinance No. 08-016 (Section 704) Amending the Pasco County Land Development Code (Ordinance No. 89-21 Section 306). Passed by Pasco County Board of County Commissioners March 11, 2008.

Reviewer, on behalf of the National Ground Water Association, of the U.S. Environmental Protection's Sanitary Survey Guidance Manual for Ground Water Systems (Draft EPA 815-D-07-006, 2007), February 2007.

Beta Tester of HydroGeoAnalyst Version 3.0 for Waterloo Hydrogeologic, Inc., December 2005.

Passed both the National Association of State Boards of Geology (ASBOG®) Fundamentals of Geology and ASBOG Practice of Geology Exams, October 2005.

Beta Tester of GW Contour Version 1 for Waterloo Hydrogeologic, Inc., August 2005.

Beta Tester of Visual MODFLOW Pro Version 4.1 for Waterloo Hydrogeologic, Inc., March 2005.

Haley & Aldrich's 2005 Pathfinder Award, The Atlantic Richfield Former Anaconda Site Remedial Design Services, Operable Unit 1 Project Team.

Beta Tester of Visual MODFLOW Pro Version 4.0 for Waterloo Hydrogeologic, Inc., February 2004.

Haley & Aldrich's 2004 Pathfinder Award (recognition to teams of non-shareholder staff members who make extraordinary contributions to the achievement of the firm's vision, mission, critical success factors, and/or guiding principles under the Company Charter), Tesoro North Hollywood project.

Alfred University's Hitchcock Award for Geology and Related Sciences, 1998.

Honorary Appointments

Advisory Committee on Water Information/Water Information Coordination Program Sub-Committee on Ground Water (ACWI/WICP SOLGW) – Office of Management and Budget (OMB/Department of the Interior (DOI)/U.S. Geological Survey (USGS) Program OMB Memorandum Mandate 92-01, Data Standards and Data Management Work Group Committee Member (2007 to 2008)

ASTM International, Voting Member Committee D18 on Soil and Rock and Subcommittees D18.01 Surface and Subsurface Characterization, Hydrogeologic Properties, Modeling, and Data Analysis, and D18.26 on Hydraulic Fracturing (2013 to Present)

ASTM International, Chair Member ASTM International ASTM Subcommittee D18.21.03 on Well Design, Maintenance & Construction (2013 to Present)

Buffalo Association of Professional Geologists (BAPG), Secretary (2004), Executive Vice President (2005), President (2006)

FAPG – The Florida Section of AIPG, Secretary (2010 to 2011)

Florida Department of Business & Professional Regulation, Board of Professional Geologists, Member/Vice Chair/Chair (July 15, 2013 to Present)

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National Ground Water Association (NGWA), Ground Water Modeling Interest Group Committee Secretary (2006 to 2007), Chair (2007 to 2008)

National Ground Water Association (NGWA), Deep Ground Water Investigation Interest Group Committee Chair (2007 to 2008)

National Ground Water Association (NGWA) Water Well Standard Development Task Group (2007 to 2013)

New York State Council of Professional Geologists (NYSCPG), Director (2004), Vice President (2005 to 2006), Chairman of the Scholarship Committee (2004 to 2006), Chairman of the Communications Committee (2005 to 2006)