

# Adam M. Milewski

Professor – University of Georgia  
Department Head – Department of Geology  
Director: Water Resources & Remote Sensing Laboratory (WRRS: <http://wrrs.uga.edu>)  
Co-Director: Advancing Research and Capacity in Hydrologic Education and Science (ARCHES: <http://arches.wrrs.uga.edu>)  
President: Geospatial & Hydrologic Services, LLC

**Other Affiliations/Titles:** Institute for Resilient Infrastructure Systems, UGA Water Resources Faculty, IAH Board of Directors, Consortium of Universities for the Advancement of Hydrologic Sciences

## EDUCATION

2005-2008 Doctor of Philosophy in Hydrogeology, Western Michigan University, Kalamazoo, Michigan, Dissertation: Remote sensing solutions for estimating runoff and recharge in arid environments  
2000-2004 Bachelor of Science in Geology, State University of New York at Buffalo, Buffalo, New York

## PROFESSIONAL EXPERIENCE

2023 – Present Professor & Department Head, Hydrogeology & Remote Sensing, Department of Geology, University of Georgia, Athens, Georgia  
2021 – 2023 Professor & Associate Department Head, Hydrogeology and Remote Sensing, Department of Geology, University of Georgia, Athens, Georgia  
2020 Interim Graduate Coordinator, Department of Geology, University of Georgia, Athens, Georgia  
2016 – 2021 Associate Professor & Associate Department Head, Hydrogeology and Remote Sensing, Department of Geology, University of Georgia, Athens, Georgia  
2011 – 2016 Assistant Professor, Hydrogeology & Remote Sensing; Department of Geology, University of Georgia, Athens, Georgia  
2011 – Present Director, Water Resources & Remote Sensing Facility, University of Georgia  
2008 – 2011 Principal Research Associate; Earth Sciences Remote Sensing Facility, Western Michigan University, Kalamazoo, Michigan  
2006 – 2007 Adjunct Professor; Department of Geology, Grand Valley State University, Allendale, Michigan

## ADDITIONAL EDUCATION

2020 USG Chancellor Learning Scholar, University System of Georgia  
2018 Advanced Teaching Symposium, University of Georgia  
2012 Faculty Development Workshop: Integrating Sustainability across the Curriculum, Office of Sustainability, University of Georgia  
2009 Geological Society of America Short Course: Estimating Rates of Groundwater Recharge  
2006 Hydrogeology Field Course, Western Michigan University: Applied Hydrogeology Field Methods  
2004 Argonne National Laboratory Short-Term Scholar: Aquatic Remote Sensing  
2004 University at Buffalo, Buffalo, New York, Field Camp in central Rocky Mountains (Colorado, Utah, and Wyoming), 6 week mapping and sedimentary geology course

## AWARDS & HONORS

2020 USG Chancellor Learning Scholar, University System of Georgia  
2019 FYOS Outstanding Instruction Award, University of Georgia

2013, 2021 Professor of the Year; Department of Geology, University of Georgia  
 2008-2011 ESRS Postdoctoral Fellowship, Western Michigan University  
 2008 All-University Research Scholar, Western Michigan University  
 2007 Future Faculty Award, Academic Keys  
 2007 Gwen Frostic Fellowship, Western Michigan University  
 2006 Geosciences Department Teaching Effectiveness Award, Western Michigan University  
 2005-2008 David W. Kuenzi Award, Department of Geosciences, Western Michigan University; North-Central GSA Grant, Geological Society of America; Graduate Student Research and International Travel Award, Department of Geosciences, Western Michigan University; Advisory Council & W. Richard Laton Scholarships, Department of Geosciences, Western Michigan University  
 2004 Reginald Pegrum Travel Award, Department of Geology, University at Buffalo

### **INVITED PRESENTATIONS**

2021 NASA, University of Alabama-Huntsville  
 2021 University of Brawijia, Indonesia  
 2020 College of Earth, Environment, and Ocean, University of Delaware  
 2020 Department of Earth & Geological Sciences, Western Michigan University  
 2020 NASA, University of Alabama-Huntsville  
 2019 College of Science, University of Alabama  
 2018 Department of Geosciences, Kuwait University  
 2016 Department of Geography & Geology, West Virginia University  
 2015 College of Arts & Sciences, Year of the Middle East, University of Kentucky  
 2015 Department of Geology & Geography, Georgia State University  
 2015 Winter Enrichment Program, King Abdullah University of Science & Technology, Saudi Arabia  
 2014 Department of Earth and Environmental Sciences, University of Michigan  
 2013 Department of Crop & Soil Sciences, University of Georgia  
 2013 Department of Agricultural Engineering, Bogor Agricultural University (IPB), Bogor, Indonesia  
 2013 Department of Engineering, University of Brawijaya, Malang, Indonesia  
 2013 Department of Geological Engineering, Middle East Technical University, Ankara, Turkey  
 2012 Department of Geography, University of Georgia  
 2011 Department of Geology, University of Kansas  
 2011 Department of Geology, University of Georgia  
 2011 Department of Geology and Environmental Geosciences, Northern Illinois University  
 2011 Department of Earth and Environmental Science, University of Kentucky

### **TEACHING EXPERIENCE**

#### University of Georgia

GEOL 1120: Environmental Geoscience, 2011-2015 (~90 students/class)  
 GEOL 1120E: Environmental Geosciences Online, Summer 2016-Present (~30 students/class)  
 GEOL 3020: Surficial & Near Surficial Processes, 2012-Present (~35 students/class, co-taught with Paul Schroeder)  
 GEOL 4220/6220: Hydrogeology, 2017-Present, (~50 students/class)  
 GEOL 4530/6530: Principles and Applications of GIS for Geologists, 2015-Present (~25 students/class)  
 GEOL 8710: Watershed-Scale Modeling, 2014-Present (~15 students/class, co-taught with David Radcliffe)  
 GEOL 8720: Geologic & Hydrologic Remote Sensing, 2013-Present (~10 students/class)  
 GEOL 8730: Principles & Environmental Applications of GIS, 2013 (~15 students/class)  
 GEOL 8790: Hydrologic Programming, 2016 (~10 students)  
 FYOS: Water – The Most Interesting Resource in the World, 2014-Present (~15 students/class)

Western Michigan University – Teaching Assistant

GEOS 5270: Principles of Well Drilling and Installation Field Course  
GEOS 5280: Principles and Practices of Ground-water Sampling and Monitoring Field Course  
GEOS 5260: Principles and Practices of Aquifer Testing Field Course  
GEOS 5250: Environmental Surface Geophysics Field Course  
GEOS 1000: Introduction to Physical Geology  
GEOS 5210: Environmental Remote Sensing  
GEOS 5350: Numerical and Spatial Data Analysis

Grand Valley State University – Adjunct Professor

GLY 102: Introduction to Environmental Geology, 2006-2007 (~30 students)

Short Courses

*Field and Computational Techniques in Hydrogeology*, KAUST, Jeddah, Saudi Arabia, 2015  
*GIS & Remote Sensing Applications in Water Resources*, IAH Conference, Marrakech, Morocco, 2014  
*Remote Sensing & GIS Applications in Hydrogeology*, University of Georgia, Athens, Georgia, 2012-13  
*Remote Sensing & GIS Applications in Hydrogeology*, ICWRE Conf., Marrakesh, Morocco, 2011  
*Hydrologic Applications in Kuwait*, Western Michigan University, 2008  
*Advanced Calibration Techniques Using SWAT*, Cairo University, Cairo, Egypt, 2006  
*Developing a Web-based GIS Using ArcIMS*, Cairo University, Cairo, Egypt, 2006  
*Hydrologic Modeling Using SWAT*, Cairo University, Cairo, Egypt, 2005  
*Introduction to Remote Sensing Principles*, Cairo University, Cairo, Egypt, 2005  
*Web-based GIS Applications*, Cairo University, Cairo, Egypt, 2005

**FIELD EXPERIENCE & COURSES**

*Interdisciplinary Field Program*, UGA: A six-week travelling field program on the geology, hydrology, anthropology, and ecology of the continental USA ([www.ipf.uga.edu](http://www.ipf.uga.edu)).

*ARCHES Program*: I've developed and lead over 10 multi-week field trips and courses in Morocco, Egypt, Saudi Arabia, Kuwait, Turkey, and Indonesia as part of this program.

*USA*: I've performed and lead field work in Georgia, Florida, Michigan, New York, Blue Ridge Mountains, and Mojave Desert

*International*: I've lead research excursions in the Middle East, Turkey, and Indonesia. I've also been a part of research trips in the Simpson Desert of Australia.

**GRADUATE STUDENTS**

Michael Stefanou, M.S., expected Spring 2025, Thesis: TBD.

Amy Laubenstein, M.S., expected Spring 2025, Thesis: Characterization of the Geology and Hydrogeology of the Claiborne Aquifer System.

Fabian Zoham, Ph.D., expected Spring 2024, Dissertation: The Speeding of the Hydrologic Cycle.

Lea Davidson, Ph.D., expected Summer 2024, Dissertation: Evaluation of Stream Intermittency in Arid Environments.

Yannie Donaldson, Ph.D., expected Spring 2024, Dissertation: Geophysical Analysis of Lateral Flow Contributions to Inland Freshwater Lens

David Richards, Ph.D.. expected Fall 2023, Dissertation: Coastal System Responses to Climate Change.

Steffan Becker, M.S., Spring 2021, The Influence of Lateral Flow on Inland Freshwater Lens Development.

Cleveland Tarp, M.S. expected Spring 2021, Multi-regression Analysis of Transmission Losses in Arid Environments.

Sarah Asher, M.S. expected Spring 2021, Impacts of Extreme Events on Groundwater Resources within the Southeast.

Yannie Donaldson, M.S., 2020, Thesis: Identification of Inland Freshwater Lens in Central Florida Using Remote Sensing and Geostatistics.

Rachel Rotz, Ph.D., expected Summer 2020, Dissertation: Geomorphic-Geologic Indicators and Controls of Groundwater Accumulation and Flux in Drylands on Earth and Mars.

Melissa Creviston, M.S., Thesis: Hydrologic and Climate Investigation of National Wildlife Refuges in Florida Using Water Resource Inventories and Assessments.

Michael Durham, Ph.D. expected Spring/Summer 2021. Assessment of Satellite-based Hydrologic Models within the Middle East & North Africa (MENA) Region Using Soil Temperature Probes and the Soil and Water Assessment Tool (SWAT) Model.

Matthew Thomas, M.S., 2019, Thesis: Spatial Downscaling of GRACE TWSA Data to Identify Spatiotemporal Groundwater Level Trends in the Dougherty Plain, South Georgia

Holly Hutcheson, M.S., 2019 Thesis: Trends in Water Resources within USFWS National Wildlife Refuges in the Southeast

Abigail Knapp, M.S. 2018. Thesis: Spatiotemporal Dynamics of the Hydrologic Drivers of Harmful Algal Blooms in Two Piedmont Reservoirs, Georgia.

Khalil Lezzaik, Ph.D., 2016. Dissertation: An Integrated Approach to Water Scarcity Assessment and Adaptation Options in the Middle East and North Africa Region.

Wondwosen Seyoum, Ph.D., 2016. Dissertation: Spatial Disaggregation of GRACE Water Storage Change: An Application for Understanding Water Cycle Dynamics at Local Scales.

Rachel Rotz, M.S., 2016. Thesis: Understanding the Role of Precipitation Dynamics on the Formation and Sustainability of Freshwater Lenses.

Matthew Cahalan, M.S., 2015. Thesis: An Integrated Approach for Sinkhole Identification and Triggering Mechanisms.

Racha El Kadiri, Ph.D., 2015. (Co-Advised). Dissertation: GIS and Remote Sensing Applications for Assessing, Modeling, and Mitigating Environmental Hazards in Mountainous Areas: A Case Study from Jazan, Saudi Arabia.

#### **UNDERGRADUATE STUDENTS**

Baylen

Roman

Quentin Cambell, Spring 2023, Hydrologic Environmental Justice Indicators in Georgia

Jay Mrazek, expected Spring 2022, Senior Thesis: Assessment of Climate Change Impacts on Groundwater Resources in Georgia

Liza Garber, expected Spring 2022, Agent Analyst-based Investigation of Groundwater Risk

Katelyn LaPine, expected Spring 2021, Senior Thesis: Building a GIS-based Model for Water Resource Assessment

Frank Holmes, expected Spring 2021, Senior Thesis: Temperature-based Analysis of Transmission Losses

Raquel Olivia, expected Spring 2021, Senior Thesis: Thermal Analysis of Henbury Meteorite Impact Crater

Morgan Lewis, Spring 2020, Senior Thesis: Hydrogeomorphic Indicators on Mars and Earth

Kelsey Luke, Spring 2020, Senior Thesis: Using Hydroseismicity to Understand Aquifer Connections

Claire Webster, Spring 2017. Senior Thesis: Climatic Changes across the National Wildlife Refuges

Sage Maher, Fall 2016. CURO Thesis: Comparative Analysis of Runoff and Erosion in Varying Conditions.

Elizabeth Dwyer, Spring 2015. CURO Thesis: Understanding the Role of Streamflow and Lake Temperature in Forming Harmful Algal Blooms in Lake Lanier, GA.

Caroline Potterf, Spring 2015. CURO Thesis: Overview of the Water Quality on the UGA Campus

Rachel Rotz, Spring 2014. Senior Thesis: Verification of Rapid Focused Recharge in Depressions Located in Kuwait and the Arabian Peninsula Using Thermal and VNIR Remote Sensing.

#### **COMMITTEE MEMBER**

Gavon

Tracy

Parker Whitley, Fall 2022, Barrier Island's Shallow Coastal Aquifer response to Storms and Tidal Fluctuations: Case of Sapelo Island, M.S.

Scott Raulerson, expected Spring 2024, Dissertation: Understanding Solute Transport in a Porous Low Relief Landscape, Ph.D.

Abdullah Al Nahian, expected Spring 2021, Thesis: Dynamics of Entrapped Air in the Vadose Zone in Relation to Flooding Events: Pore-Scale Experiments and Modeling.

Peter Steiner, expected Spring 2021. Dissertation: Nutrient Cycling of Potassium in Temperate Environs over Periods of Changing Land Use.

Lucas Favero, 2020, Thesis: Biochemical Immobilization of Oxyanionic Species in Coal Combustion Residuals.

David Flynn, 2019. Thesis: Flow-Impact Offer Evaluation for Incorporating Groundwater Permits into Future Irrigation Reduction Auctions in the Flint River Basin

James Deemy, Spring 2017. Dissertation: Isolated Wetland Mapping, Connectivity Assessment and Water Quality in the Dougherty Plain of Georgia.

Ike Astuti, Fall 2017. Dissertation: Characterizing the Long Term Impacts of Watershed Level Land Use Changes on the Ecosystem Dynamics of Tropical Reservoirs in Java, Indonesia.

Corbin Kling, 2016, Thesis: Topographic Expressions of Large Thrust Faults on Mars

Adam Forsberg, Fall 2015. Thesis: Comparison of Model-based (SWAT) against field-based (TBET) Phosphorus Index Predictions

Ryan Jubran, Spring 2015. Thesis: Electrical Resistivity Methods for Detecting Sinkholes in Georgia

Don Lundy, Fall 2014. Dissertation: An Investigation of the Relationship Between Lateral Spreading and Mass Depletion of an LNAPL Plume in Contact with Groundwater

Kirk Fraley, Fall 2014. Thesis: A Variable-Density Model to Determine Possible Sources of Elevated Total Dissolved Solids in Suwannee River Basin Springs, North-Central, Florida.

Bill Wylie, Spring 2014. Thesis: Drainage Patterns and Characterization of the Mobile Body of the Allison Creek Landslide in Macon County, North Carolina.

Kimberly Coke, Spring 2013. Thesis: DNA Tracers in Hydrology.

## SERVICE

2023 – present IDC Committee

2023 – present Data Science +X Committee

2022 - present Treasurer, International Association of Hydrogeologists

2023 - present Service Equity Pilot Committee, Franklin College of Arts & Sciences, University of Georgia

2021 - present Promotion & Tenure Committee, Franklin College of Arts & Sciences, University of Georgia

2021-2022 NSF Panelist, IRES Track I

2019-present Associate Editor; *Remote Sensing*

2019 NASA Panelist, Precipitation Measurement Mission

2019-present Associate Editor; *Water*

2016-2019 Chair, Early Career Hydrogeologist Network, US Chapter of the International Association of Hydrogeologists

2013-2016 Environmental Literacy Committee; University Curriculum Committee Sub-committee, University of Georgia

2013-Present Search Committees: Structural Geology; Hydrogeology; Petrology; Department of Geology, University of Georgia

2012-present Associate Editor; Environmental Earth Sciences

2012-present Conference Sessions Chaired: Geological Society of America, American Geophysical Union, International Association of Hydrogeologists, CUAHSI Webinar

2012-present Faculty Affiliate, Center for Integrative Conservation Research, University of Georgia

2012 Search Committee: Remote Sensing; Department of Geography, University of Georgia

2012 Space Committee, Department of Geology, University of Georgia

2014-present Watts-Wheeler Committee, Department of Geology, University of Georgia  
 2011-2012 Admissions & Awards Committee, Department of Geology, University of Georgia  
 2011-2014 Computer Committee, Department of Geology, University of Georgia  
 2011 Employment Committee, Department of Geology, University of Georgia  
 2011-present CUAHSI, University of Georgia representative  
 2011-present American Geophysical Union, Student Poster Judge  
 2009-present Proposal reviewer for National Science Foundation, National Institute for Water Resources, National Aeronautics and Space Administration, Illinois Geological Survey, Georgia Water Resources, numerous international governments/universities.  
 2007-present Manuscript reviewer for Journal of Hydrology, Environmental Earth Sciences, Computers & Geosciences, Hydrologic Processes, Groundwater, Environmental Science & Technology, Journal of Remote Sensing, Computers and Electronics in Agriculture, Journal of Applied Remote Sensing, Journal of Spatial Hydrology, Earth Interactions, International Journal of Water, Water Resources Research, Advances in Water Resources, Water

#### **ADMINISTRATIVE/LEADERSHIP ACTIVITIES**

2023-present Department Head, Department of Geology, University of Georgia  
 2023-present IDC Committee, Franklin College of Arts & Sciences, University of Georgia  
 2023-present Data Science Committee, Franklin College of Arts and Sciences, University of Georgia  
 2021-present Treasurer, Board of Directors, International Association of Hydrogeologists  
 2018-present Lead Research Facilitator, Summer Leadership Institute, University of Georgia  
 2017-present Associate Department Head, Department of Geology, University of Georgia  
 2017-2019 Co-Facilitator, Faculty Learning Community, University of Georgia  
 2017-present Franklin College International Studies Committee, University of Georgia  
 2016-present Board of Directors, US Chapter, International Association of Hydrogeologists  
 2016-2019 Chair, Early Career Hydrogeologist Network, US Chapter of the International Association of Hydrogeologists  
 2016-present Office of the Vice Provost of Instruction (OVPI), Faculty Advisory Board, University of Georgia  
 2015-present Department of Geosciences Advisory Board, Western Michigan University

#### **PROFESSIONAL SOCIETIES**

CUAHSI, Representative for UGA, 2011-Present  
 Geological Society of America, member, 2003-Present  
 American Geophysical Union, member, 2003-Present  
 International Association of Hydrogeologists, 2011-Present

#### **GRANTS**

2022-2027 Milewski, A., P.I., Resilient and Sustainable Water-Resources Development Using Deep Groundwater in the Lower Flint River Basin, (2022-2027; Total: **\$1,400,000**).  
 2021-2024 Milewski, A., Co-P.I. - Risk-Informed, Performance-Based Evaluation of Local and Regional Surface and Groundwater Hydrology using Alternative Conceptual Models, Chemours, (2021-2024; Total: **\$355,400**)  
 2020-2023 Milewski, A., P.I. - Collaborative Research (IRES Track I): A Multi-Faceted Approach for Understanding Hydrologic Controls on Transmission Losses in Dryland Environments, National Science Foundation, (2020-2024; Total: **\$299,500**)  
 2020-2022 Milewski, A., P.I. – UAV-based Analysis of Coastal Salt Marshes, National Park Service, (2020-2021; Total: **\$45,400**).

2020-2022 Milewski, A., P.I. - Building a Bridge to Planetary Science Research – Investigating Fluvial & Aeolian Interactions in Hyper-Arid Deserts, UGA Franklin College, (2020-2022: Total: **\$22,500**)

2018-2021 Milewski, A., P.I. – Hydrologic and Landscape Analysis within the Southeast, National Fish and Wildlife Service (NFWS), (2018-2022; Total: **\$81,000**)

2019-2020 Milewski, A., Co-P.I. – (PI – Ellen McCullough) – Understanding the Dynamics of Agropastoral Decision-Making in Response to Changing Water Infrastructure and Climate Change, (2019-2020: Total: **\$14,200**)

2018-2019 Milewski, A., P.I. – Design, Integrate, and Apply: Using Unmanned Aerial Vehicles for Enhanced Student Learning, Learning Technologies Grants, (2018-2019: Total: **\$21,900**)

2018-2019 Milewski, A., P.I. – Ground Validation of Remote Sensing-based Precipitation Products in Kuwait, Kuwait University, (2018-2019; Total: **\$13,500**)

2017-2019 Milewski, A., P.I. – Impacts of Hydrologic Extremes on Natural Resources, National Parks Service (NPS), (2017-2019; Total: **\$61,000**)

2017-2018 Milewski, A., Co-P.I. – (PI – Liz Kramer; University of Georgia) - Capacity Building for Research and Training for Food System Sustainability and Security, University of Georgia, (2017-2018; Total: **\$15,000**)

2016-2021 Milewski, A., P.I. – Water Resource Inventories and Assessments for National Wildlife Refuges within the Southeast Region, National Fish and Wildlife Service (NFWS), (2016-2019; Total: **\$188,000**)

2016-2017 Milewski, A., Co-P.I., (PI – David Leigh; University of Georgia) – Investigating the Paleohydrology and Flood Risk in the Southeastern US, Electric Power Research Institute (EPRI), (2016-2018; Total: **\$35,000**)

2016-2017 Milewski, A., P.I. – Multi-Touch Open Education Resources (OER): A New Pedagogy for Geoscience Education and Research, Learning Technologies Grants, (2015-2016: Total: **\$24,768**)

2016-2021 Milewski, A., P.I., ERASMUS+ Higher Education Student and Staff Mobility, European Union ERASMUS program, (2016-2021; Total: \$1,800,000; UGA: **~\$150,000**)

2015-2016 Milewski, A., P.I. - Utilizing NASA Earth Observations to Monitor Sinkhole Development and Identify Risk Areas, NASA DEVELOP, (2015-2016; Total: **\$15,000**)

2014-2015 Milewski, A., P.I. – ARCHES: An Innovative Workshop Combining Hydrogeology, Satellite Remote Sensing/GIS, and Modeling to Better Understand Water Resources, KAUST Winter Enrichment Program, (2014-2015; Total: **\$25,000**)

2013-2014 Milewski, A., P.I., Assessment and Characterization of TRMM Satellite Precipitation Products in Varying Climatic, Topographic, and Hydrologic Regimes, University of Georgia Provost Summer Fund, (2013-2014; Total: **\$5,000**)

2012-2014 Milewski, A., Co-P.I., (PI – Alan Fryar; University of Kentucky) – Building Opportunity Out of Science and Technology (BOOST): Helping Hydrologic Research (H2O) in Indonesia and Turkey, US State Department – Bureau of Oceans and International Environmental and Scientific Affairs, (2012-2014; Total: **\$198,000**; UGA: \$85,000)

2012-2013 Milewski, A., P.I., Using Radar Interferometry (InSAR) to Evaluate Land Subsidence Caused by Excessive Groundwater Withdrawal in Morocco, University of Georgia Provost Summer Fund, (2012-2013; Total: **\$5,000**)

2011-2013 Milewski, A., Co-P.I., (PI – Alan Fryar (University of Kentucky) – Building Opportunity Out of Science and Technology (BOOST): Energizing Young Middle Eastern and North African Scientists – Enhancing Capacity for Water Resource Studies in Egypt and Morocco, US State Department, (2011-2013; Total: **\$250,000**, UGA: \$80,000)

- 2011-2015 Milewski, A., Co-I., (PI - Mohamed Sultan) - Use of GRACE, Remote Sensing, and Traditional Datasets for Modeling Time-Dependent Water Partitioning on Continental Scales: A Case Study from Africa, Funded by NASA. (2011-2015; Total: **\$453,000**)
- 2010-2013 Milewski, A., Co-P.I., (PI –Mohamed Sultan) - Detailed Studies on Landslides in Jazan Area (Saudi Arabia), Saudi Geological Survey, (2010-2013; Total: **\$300,000**)
- 2010-2011 Milewski, A., Co-P.I., (PI - Ahmad Al-Dousari) - Groundwater Potentiality Studies in Kuwait, Kuwait Institute for Scientific Research, (2010; Total: **\$5,000**)
- 2009-2011 Milewski, A., Co-P.I., (PI – Richard Laton), Identifying Areas for Artificial Recharge in the Mojave Desert, Mojave Water Agency & University of California State at Fullerton, (2009-2012; Total: **\$200,000**, WMU: \$75,000)
- 2009-2010 Milewski,A., P.I., Hydroinformatics: Bridging the Gap Between Technology and Hydrology, Funded by Western Michigan University, (2009-2010; Total: **\$20,000**)
- 2008-2010 Milewski,A., P.I, Developing Cost-effective Methodologies for Groundwater Assessment and Exploration in Sinai, Funded by National Institute of Standards and Technology (NIST) in cooperation with USDA, (2008-2010; Total: **\$8,500**)

#### **Pending Grants**

- 2021-2023 Milewski, A., Co-PI, Understanding Hydrologic Processes in Namibia, SEG GWB Program, Selected for Phase II (2022-2024; Total: **\$99,400**)
- 2022-2025 Milewski, A., Co-PI, Testing Models of Linear Dune Formation, NASA Solar Systems Working, (2020-2023; Total: \$450,000, UGA: **\$200,000**).

#### **In-Kind Data Grants**

- 2014-2015 Milewski, A., P.I. – Analysis of Geologic and Hydrologic Controls for Subsidence Monitoring and Sinkhole Hazard Assessment in Dougherty Plain, Georgia, USA, European Space Agency (ESA), (2014-2015; Total In-Kind: **\$15,000**)
- 2013-2014 Milewski, A., P.I. – Verification of Rapid Focused Recharge in Depressions Located in Kuwait and the Arabian Peninsula Using Thermal and VNIR Remote Sensing, European Space Agency (ESA), (2013-2014; Total In-Kind: **\$20,000**)
- 2012-2013 Milewski, A., P.I. – Using Radar Interferometry (InSAR) to Evaluate the Land Subsidence Caused by Excessive Groundwater Withdrawal in Morocco, European Space Agency (ESA), (2013-2014; Total In-Kind: **\$25,000**)

#### **PUBLICATIONS**

##### **Peer-Reviewed Journals and Volumes**

\* Denotes student-authored manuscript

##### **Manuscripts in Review or Press:**

- \*Richards, IV., D., **Milewski, A.**, Becker, S., Donaldson, Y., Davidson, L., Zowam, F., Mrazek, J., and Durham, M., 2023, Evaluation of Remote Sensing-Based Approaches for Salt Marsh Monitoring, *Remote Sensing*, In Review.
- Arbabai, S., Taghi Sattari, M., Fathollahzadeh Attar, N., **Milewski, A.**, Sakizadeh, M., 2023, Precipitation Modeling Based on Spatio-Temporal Variation in Urmia Lake Basin using Machine Learning Methods, *Water*, In Review.
- Sakizadeh, M. and **Milewski, A.**, 2023, Spatial distribution pattern of groundwater contamination by cadmium, manganese, lead, and nitrate in groundwater resources of an arid area dominated by mining activity, *Environmental Geochemistry and Health*, In Review.
- \*Rotz, R., **Milewski, A.**, Craddock, B., and Morgan, A., 2023, Identifying Aeolian and Fluvial Interactions in Linear Dunes within a Playa Lake of Australia, *Journal of Arid Environments*, In Review.



Abouelmagd, A., Krishnamurthy, R.V., Sultan, M., Kehew, A., **Milewski, A.**, McCabe, M., and Altaf, M., 2024, Paleoclimatic Insights into the Depleted Isotopic Ratios of Fossil Aquifer Waters, Northern Africa, *Journal of Arid Environments*, In Review.

**Milewski, A.**, Durham, M., Rashed, M., and Abouelmagd, A., 2022, Field-derived Estimates of Ephemeral Channel Transmission Loss Rates and Variability in a Hyper-Arid Environment, *Hydrogeology*, In Review.

### **Published Manuscripts:**

Sakizadeh, M., and **Milewski, A.**, 2023, Identifying Source and Health Risk Assessment of Toxic Elements within an Arid Region, Iran, *Modeling Earth Systems and Environment*, In Press

\*Davidson, L., **Milewski, A.**, Holland, S.M., 2023, Quantifying Intermittent Flow Regimes in Ungauged Basins: Optimization of Remote Sensing Techniques for Ephemeral Channels Using a Flexible Statistical Classification, *Remote Sensing*, TBA

Sakizadeh, M., and **Milewski, A.**, 2023, Quantifying Dynamics and Projections of Future Trends of Land use and Land Cover in part of Urmia Lake Basin by Machine Learning Techniques, Intensity Analysis and a Combined Method of Cellular Automata (CA) and Artificial Neural Networks (ANN) (CA-ANN), *Modeling Earth Systems and Environment*, 10.1007/s40808-023-01895-z

\*Zowam, F., **Milewski, A.**, and Richards, D., IV, 2023, A Satellite-Based Approach for Quantifying Terrestrial Water Cycle Intensity, *Remote Sensing*, 15(14), 3632.

Sakizadeh, M., and **Milewski, A.**, 2023, Novel Spatial Models for Analysis of the Long-Term Impact of LULC Changes on Hydrological Components at Sub-basin Level, *Environmental Monitoring and Assessment*, 195(5), 562.

Sakizadeh, M., **Milewski, A.**, and Sattari, M. 2023, Analysis of Long-Term Trend of Stream Flow and Interaction Effect of Landuse and Land Cover on Water Yield by SWAT Model and Statistical Learning in Part of Urmia Lake Basin, Northwest of Iran, *Water*, 15(4).

\*Richards, IV., D., **Milewski, A.**, Gregory, B., 2022, The Use of Airborne LiDAR in Assessing Coastal Erosion in the Southeastern USA, *Journal of Geographical Research*, 5(3), 22-40.

\*Rotz, R., **Milewski, A.**, and Rasmussen, T., 2020, Transient Evolution of Inland Freshwater Lenses: Comparison of Numerical and Physical Experiments, *Water*, 12(4), 1154.

\*Knapp, A., and **Milewski, A.**, 2020, When Blooms Like it Stormy: Spatiotemporal Dynamics of Harmful Algal Blooms in Freshwater Reservoirs, *Water*, 12(2), 404.

**Milewski, A.**, Lezzaik, K., and Rotz, R., 2020, Sensitivity Analysis of the Groundwater Risk Index in the Middle East and North Africa Region, *Environmental Processes*, 7, 53-71.

**Milewski, A.**, Seyoum, W., Elkadiri, R., and Durham, M., 2020, Multi-Scale Hydrologic Sensitivity to Climatic and Anthropogenic Changes in Morocco, *Geosciences*, 10(1), 13.

**Milewski, A.**, Thomas, M., Seyoum, W., and Rasmussen, T., 2019, Spatial Downscaling of GRACE TWSA Data to Identify Spatiotemporal Groundwater Level Trends in the Upper Floridan Aquifer, Georgia, USA, *Remote Sensing*, 11(23), 2756.

Saad, A., **Milewski, A.**, Bennabidate, L., Morjani, Z.E., and Bouchaou, L., 2019, Flood Frequency Analysis and Urban Flood Modelling of Sidi Ifni Basin, Southern Morocco, *American Journal of Geographic Information Systems*, 8(5), 206-212.

Astuti, I., Kamalakanta, S., **Milewski, A.**, and Mishra, D., 2019, Impact of Land Use/Land Cover (LULC) Change on Surface Runoff in an Increasingly Urbanized Tropical Watershed *Water Resources Management*, 33(12), 4087-4103.

Seyoum W., Kwon, D., and **Milewski, A.**, 2019, Downscaling GRACE TWSA Data into High-resolution Groundwater Level Anomaly using Machine Learning-based Models in a Glacial Aquifer System, *Remote Sensing*, 11(7), 824.

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#### In The News:

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**SOFTWARE EXPERIENCE**

Hydrologic Modeling Packages: GMS, SWAT, WMS, HEC-HMS, Visual MODFLOW, MIKE-SHE

GIS Packages: ARC/INFO, ArcGIS, ArcIMS, MapInfo

Image Processing Packages: ERDAS, PCI, ENVI, DORIS, SARscape

Programming Languages: IDL, Python, JAVA, ArcXML, RESDEM

Database & Webpage Experience: Oracle, Access, HTML design and administration