

Kevin Urbanczyk  
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**EDUCATION:** Ph.D. May, 1994 (Washington State University); M.S. Geology 1987 (Sul Ross State University); B.S. Geology 1984 (Sul Ross State University)

**PROFESSIONAL EXPERIENCE:** Sul Ross State University, 1991 to present

**TEACHING AND RESEARCH INTERESTS:**

My teaching and research are focused on the hydrology and geology of the Big Bend region. I teach a variety of classes including GIS, Igneous Petrology, Hydrogeology and Aqueous Geochemistry. These are all components of my local research, which includes field-based studies of the hydrology and geochemistry of the Rio Grande and springs that flow into it in the Lower Canyons area. I also utilize modern techniques (LiDAR and UAVs) for mapping geomorphology along the Rio Grande and its tributaries, and for creating classification maps of riparian areas of the river. These projects are designed to assess the environmental condition of specific areas, and to detect changes in these conditions over time. My other research interests include the geochemistry and field relations of the igneous rocks of the Big Bend region.

**TRAINING AND CERTIFICATION:**

- Modern X-Ray Fluorescence Spectrometry Short Course, Gold Certificate, June, 2019, London X-Ray Consulting group
- Swift Water Rescue Technician (SRT-I), Swift Water Safety Institute, June, 2019
- SW1321: Streamflow Measurements using ADCP's, 6/24/2016, United States Geological Survey
- Wilderness Advanced First Aid (WAFA), 1/2018, National Outdoor Leadership School
- Campus GIS database and Local Government data model training, 2012, Environmental Systems Research Institute and Dallas Community College
- Geomorphic Change Detection / Stream Restoration workshop, 2011, Utah State University
- Estimating Groundwater Recharge, Geological Society of America, 11/7/2012
- ESRI Authorized Instructor, 1/17/2006, Environmental Systems Research Institute
- MODFLOW: Introduction to Numerical Modeling, 10/15/2005, Colorado School of Mines
- Applications of Environmental Isotopes to Watershed Hydrology and Biogeochemistry, 11/4/2001, Geological Society of America

## **PROFESSIONAL ASSOCIATIONS:**

- Geological Society of America, 2 time Chair of South Central Section (annual appointments in 2002 and 2012)
- American Geophysical Union

## **PUBLICATIONS:**

### Books and Book Chapters:

Urbanczyk, Kevin, 2016, Chapter 2: Monitoring and Diagnosis, in Chen, Daniel, Sustainable Water Management and Technologies, Volume I: Sustainable Water Management, CRC Press, ISBN 9781482215236.

Urbanczyk, Kevin 2016, Chapter 4: GIS, GPS, and Satellite Data, in Chen, Daniel, Sustainable Water Management and Technologies, Volume II: Sustainable Water Technologies, CRC Press, ISBN 9781482215236.

Erdlach, R.E. and Urbanczyk, K.M., 2013, Field Trip Guidebook to the Solitario, West Texas Geological Society, 79 pp.

Upper Rio Grande Basin and Bay Expert Science Team, 2012. Environmental Flows Recommendations Report. Final Submission to the Environmental Flows Advisory Group, Rio Grande Basin and Bay Area Stakeholders Committee and Texas Commission on Environmental Quality.

Urbanczyk, K.M., 2003, Contemporaneous Water Supply in the Northern Chihuahuan Desert, in Garrett, G.P., and Allan N.L., eds., Special Publication of the Museum of Texas Tech University, Number 46, Contributed Papers from a special Session with the Thirty-Third Annual Symposium of the Desert Fishes Council

Urbanczyk, K.M. and White, J.C., 1997, Guidebook to the Geology of the Bofecillos Volcano, Big Bend Ranch State Park, prepared for the Spring, 1997, Field Trip of the Southwestern Association of Student Geological Societies.

### Refereed Journal Articles:

White, John C., Benker, S, Ren, M, Urbanczyk, K, and Corrick, D., 2006, Petrogenesis of peralkaline quartz trachyte, rhyolite, and high-silica rhyolite via fractional crystallization, assimilation, crustal melting, and volatile enrichment and implications for tectonics: the Pine Canyon caldera, Trans-Pecos Texas, USA, Lithos, Vol. 91, pp. 74-94.

White, J.C., and Urbanczyk, K.M., 2001, Geochemical Evolution of the Leyva Canyon Member of the Rawls Formation, a trachytic shield volcano in Big Bend Ranch State Park, Trans-Pecos Magmatic Province, Texas, JVGR, 111, 155-182.

Urbanczyk, K.M., White, J.C., Rohr, D.R., 2001, Geologic History of West Texas, in Mace, R.E., Mullican, W.F., and Angle, E.S., eds. Aquifers of West Texas, Texas Water Development Board Report 356, pp. 17-25.

Hooper, P.R., Steele, W., Conrey, R.M., Bailey, D.G., Smith, G.A., Tolan, T., and Urbanczyk, K.M., The Prineville Basalt, North-Central Oregon, Oregon Geology, vol. 55, no. 1, p. 3-12, 1993.

Davis, L.E., Eves, L.E., Corner, H.M., and Urbanczyk, K.M., 1991, Student Abstract Writing and Holistic Grading as a Tool for Writing Across the Geology Curriculum: Journal of Geological Education, v. 39, Number 3, pp. 178-180.

Recent Research Reports:

Urbanczyk, Kevin, 2014, Spring Inventory for Source Area Analysis, Final Project Report, National Park Service.

Urbanczyk, Kevin 2014, Hydrogeologic investigation of springs providing base flow to streams of the Rio Grande Basin – Geochemical Tracers, Final Project Report, National Park Service.

Urbanczyk, Kevin and Bruecher, Taylor, 2014, Hydrogeologic investigation of springs providing base flow to streams of the Rio Grande Basin in West Texas, Final Project Report, National Park Service.

Urbanczyk, Kevin and Ball, Jonas, 2014, Compilation of hydrogeologic Investigation of the Edwards Trinity Plateau Aquifer in connection with the Big Bend Reach of the Rio Grande, the Lower Pecos river and the Devils River, Final Project Report, National Park Service.

Other:

Participated in the filming of the movie “Bravo y Grande” about the Lower Canyons region of the Rio Grande (2019, <https://vimeo.com/333388010>)

Participated in the Bullock Museum *Journey Into Big Bend* exhibition (2016). This included the recording of a verbal interview and my submission of objects for the museum display

Participated in the videodocumentary “Treading West Texas Waters” (<http://video.basinpbs.org/video/2365700295/>)

Participated in the videodocumentary “Confluence”, directed by Chris Hillen (<https://vimeo.com/67777246>).

**RECENT RESEARCH AND PROFESSIONAL PRESENTATIONS:**

Aquifer contributions to the Rio Grande in the Lower Canyons, Rio Grande Wild and Scenic River, invited presentation at the West Texas Water Symposium, Big Bend Conservation Alliance, Marfa, Texas, July, 2019

Groundwater contributions to the Lower Canyons, Rio Grande Wild and Scenic River, invited presentation to the Desert Fishes Council meeting, Alpine, Texas, November, 2019

West Texas Groundwater, invited presentation, Big Bend group, Lone Star Chapter, Sierra Club, 2018

Urbanczyk, Kevin, and Bennett, Jeffery, 2016, Environmental Assessment of the Rio Grande in Big Bend National Park and the Rio Grande Wild and Scenic River, Geological Society of America, *Abstracts with Programs*, Fall 2016.

Urbanczyk, Kevin, 2016, Environmental Assessment of the Rio Grande in the Big Bend region of Texas, Texas State University Christmas Mountains Research Symposium.

Urbanczyk, 2016, Photogrammetry and geomorphic change detection, Texas State University Christmas Mountains Research Symposium.

Urbanczyk, Kevin, Bennett, Jeffery, and Smith, Lydia, 2015, Collection of Flow Dependent Biological and Habitat Data to Inform Instream Flow Requirements for the Big Bend Reach of the Rio Grande, Texas State University Christmas Mountains Research Symposium.

Urbanczyk, Kevin, Bennett, Jeffery, and Smith, Lydia, 2015, Geomorphic Change Detection to Assess the Impact of Removal of Invasive Species, Boquillas Canyon, Big Bend National Park, Texas State University Christmas Mountains Research Symposium.

Urbanczyk, Kevin and Bennett, Jeffery, 2015, Topographic Change Related to Changing Flow Conditions in the Rio Grande, Big Bend National Park, Texas, USA, Geological Society of America, *Abstracts with Programs*, Fall 2015.

Urbanczyk, Kevin, Bennett, Jeffery, and Woodburn, James, 2013, Hydrogeologic Investigation of Springs along the Lower Pecos River in West Texas, Geological Society of America *Abstracts with Programs*, spring 2013, Vol. 45, No. 1

Urbanczyk, Kevin, Bennett, Jeffery, Bryant, Gary, Dean, David, Sheng, Zhuping, and Smith, Ryan, 2012, Instream Flow Recommendations for the Rio Grande, Pecos and Devils Rivers, Texas, USA, Geological Society of America *Abstracts with Programs*, 2012, Vol. 44, No. 7, p.336

Urbanczyk, Kevin, 2012, Can Small Geology Departments Survive the Texas Higher Education Coordinating Board's Policies on Low Producing Programs? Geological Society of America *Abstracts with Programs*, March 2012, Vol. 44, No. 1, p. 36.

Urbanczyk, Kevin, and Jeffery Bennett, 2012, Geomorphology of Sand Bars in Boquillas Canyon, Big Bend National Park, Geological Society of America *Abstracts with Programs*, March 2012, Vol. 44, No. 1, p. 2.

Urbanczyk, Kevin and Chris Burnett, 2012, Fear and Learning in Big Bend: Is It Safe to Take a Field Trip Down There? Geological Society of America *Abstracts with Programs*, March 2012, Vol. 44, No. 1, p. 34.

Urbanczyk, Kevin, Jeffery Bennett, Gary Bryant, David J. Dean, Zhuping Sheng, and Ryan Smith, Instream Flow Recommendations for the Rio Grande, Pecos and Devils Rivers, Texas, USA, Geological Society of America *Abstracts with Programs*, November 2012, Vol. 44, No. 7, p. 36.

Urbanczyk, Kevin, "Activities of the Upper Rio Grande BBEST", presented at the US Army Corps of Engineers Rio Grande meeting in Austin, TX Fall, 2011.

#### RECENT GRANTS AND CONTRACTS RECEIVED

Ecohydrology and Geomorphology studies along the Big Bend Reach of the Rio Grande within Big Bend National Park and the Rio Grande Wild and Scenic River, 8/2020, \$45,670

Riparian Vegetation Mapping for the Lower White River, Utah, 7/2020, \$33,000

Quantifying Channel Morphologic Change along the Rio Grande in Boquillas canyon within Big Bend National Park, World Wildlife Fund, 9/2/2015, \$28,000

Alamito Creek Assessment, Dixon Water Foundation, 3/2015, \$30,800.

Ecohydrology Studies Along the Big Bend Reach of the Rio Grande within Big Bend National Park and the Rio Grande Wild and Scenic River, National Park Service, 6/11/2015, \$41,771

Ecohydrology Studies Along the Big Bend Reach of the Rio Grande, National Park Service, 8/25/2014, \$26,000

#### **OTHER AFFILIATIONS AND INVOLVEMENT:**

I maintain the GIS laboratory in the Warnock Science Building and am the point of contact for our ESRI GIS site license

Member, Board of Directors, Brewster County Groundwater Conservation District. Our mission is to manage, protect, and conserve the groundwater resources of Brewster county

Board Member of Compadres del Rancho Grande, a friends group for Big Bend Ranch State Park

I am a founding Board member of Big Bend Trails Alliance, an advocacy group to maintain publicly accessible trails in the Big Bend region. My involvement includes annual trail maintenance work and the following publication:

Urbanczyk, Kevin, 2015, Rincon Loop Geology Tour, Texas Parks and Wildlife publication, PWD BR P4501-0152U (6/15)