

Regina M. Buono

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EDUCATION

Lyndon B. Johnson School of Public Affairs, University of Texas, Austin, Texas

Doctoral Candidate in Public Policy

Ph.D. in Public Policy, expected May 2021

Dissertation: *Unlocking Nature's Potential: The Role of Law and Governance in Facilitating the Use of Nature-based Solutions in Urban Environments* (working title)

King's College London, London, England, United Kingdom

M.Sc. with Distinction, Water Science and Governance, 2014

Dissertation (with Distinction): *Is Spain Ready for PES? An Evaluation of the Legal and Institutional Context for Payments for Ecosystem Services in Spain*

The University of Texas School of Law, Austin, Texas

J.D. with Honors, 2004

University of Arkansas, Fayetteville, Arkansas

B.A. *summa cum laude*, Political Science and International Relations, 2000

B.A., Spanish and European Studies, 2000

RESEARCH AND TEACHING INTERESTS

Water law, water governance, nature-based solutions, adaptive governance, payment for ecosystem services, institutional capacity, process tracing, interviews, legal analysis

Water law, legislation, water governance, environmental policy

DISSERTATION

Committee: Dr. Patrick Bixler (co-chair; LBJ School), Dr. William Spelman (co-chair; LBJ School); Dr. Catherine Weaver (LBJ School), Dr. Varun Rai (LBJ School), Dr. David Adelman, J.D., Ph.D (UT Law), and Dr. Elena López Gunn (University of Leeds)

Recent decades have seen a dramatic increase in academic and policy interest in understanding, preserving, and facilitating the benefits that nature provides to humans, often with a focus on improving urban environments. Watershed protection and governance regimes can incorporate policy mechanisms and infrastructure solutions that preserve natural functions, such as the water regulation and filtration functions of wetlands or natural space in floodplains that may buffer flooding impacts. These policy choices, however, are never uncontested and may encounter resistance from powerful development and business interests, as well as governmental entities. Increasingly, it appears that the design, implementation, and upscaling of these solutions benefit from modes of governance that enable partnerships and collaborative working across public, private, and civil society interests. In a 3-part analysis, I ask how governance regimes condition the use of nature-based solutions in urban environments and seek to understand if and how adaptive governance elements may help. The first paper considers the mechanics and suitability of adaptive governance regimes in urban areas. Adaptive governance, which grew out of adaptive management, has historically been considered largely in the context of public lands and other spaces with relatively fewer competing regimes. Cities represent a complex setting for the use of adaptive governance, as they encompass a variety of land

use regimes and competing social interests. The second paper extends and applies a governance assessment framework to examine closely the implications that certain elements or conditions in a particular governance context may have for the adoption and implementation of nature-based solutions, using as case studies Austin, Texas, and Valladolid, Spain, with a particular focus on the role that formal law plays in facilitating or impeding these solutions. The third paper considers how more adaptive governance efforts may be emerging in the context of an effort to implement NbS across the city of Valladolid, Spain, and how those efforts may in turn better facilitate upscaling of NbS in the future.

PUBLICATIONS

Peer-reviewed Journal Articles:

Regina M. Buono, Beatriz Rodriguez Mayor, and Elena López Gunn, “A Comparative Study of Water-related Issues in the Context of Hydraulic Fracturing in Texas and Spain,” *Environmental Science & Policy*, 90: 193-200 (2018)

Katherine R. Zodrow, Qilin Li, **Regina M. Buono**, Wei Chen, Glen Daigger, Leonardo Dueñas-Osorio, Menachem Elimelech, Xia Huang, Guibin Jiang, Jae-Hong Kim, Bruce E. Logan, David L. Sedlak, Paul Westerhoff, and Pedro J. J. Alvarez, “Advanced Materials, Technologies, and Complex Systems Analyses: Emerging Opportunities to Enhance Urban Water Security” *Environmental Science & Technology*, 51(18): 10274-10281 (2017)

Regina M. Buono, Katherine Zodrow, Qilin Li, and Pedro Alvarez, “A New Frontier in Texas: Managing and Regulating Brackish Groundwater,” *Water Policy*, 18(3) 727-749 (2016)

Regina M. Buono and Gabriel Eckstein, “Minute 319: A Cooperative Approach to Mexico-U.S. Hydro-Relations on the Colorado River,” *Water International*, 30(3): 263-276 (2014)

Regina M. Buono, “Delimiting Culture: Implications for Individual Rights in the Basque Country Today,” *Texas International Law Journal* 39(1): 143-161 (2003)

Books and Book Chapters:

Regina M. Buono, Elena López Gunn, Jennifer McKay, and Chad Staddon, eds. *Regulating Water Security in Unconventional Gas and Oil*. Springer International Publishing (2019)

Doug Kenney, Michael Cohen, John Berggren, and **Regina M Buono**, “The Colorado River Basin.” In *Sustainability of Engineered Rivers in Arid Lands: Challenge and Response* (Jurgen Schmandt and Aysegül Kibaroglu, eds.) (2021)

Alejandro Posadas and **Regina M. Buono**, “Looming Conflicts? Energy Reform Priorities and the Human Right of Access to Water in Mexico.” In *The Rule of Law and Mexico’s Energy Reform* (T. Payan and S. Zamora, eds.) (2016)

In Progress:

Regina M. Buono, Jill Baggerman and Lindsay C. Sansom, “Got a Minute for the Future of the Rio Grande? Considering the Prospects for a Sustainability Minute in the Wake of the Colorado’s Minute 323,” under review at *Water International*.

“Structuring Emergence: How Does Law Impact the Adoption and Implementation of Nature-based Solutions to Enhance Urban Resilience in Valladolid, Spain?” in preparation for submission.

“The Rio Grande Basin,” (with Gabriel Eckstein). To be included in *Water Resources Allocation and Agriculture: Transitioning from Open to Regulated Access* (Josselin Rouillard, Christina Babbitt, Ed Challies, and Jean-Daniel Rinaudo, editors).

“Opportunity Out of Natural Disaster: How Might Climate Resilience Informed Decision Analysis Make Houston Stronger After Harvey?” (working title)

“Toward a Water Sensitive (Mega-)City? A Qualitative Assessment of Urban Water Policy Trends in Mexico City” (working title)

OTHER MEDIA

“After Paris, A More Fluid Approach to Climate Change” (with John H. Matthews), Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Apr. 26, 2016)

“Brackish Groundwater: Current Status and Potential Benefits for Water Management” (with Katherine R. Zodrow), Issue Brief, Rice University’s Baker Institute for Public Policy (Apr. 11, 2016)

“Confronting Climate Change: Policies and Opportunities” (with Kenneth B. Medlock III and Shih Yu Hung), Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Feb. 4, 2016)

“Economy Vs. Environment Doesn’t Have to be a Zero-Sum Game,” Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Dec. 28, 2015)

“Emerging Legal Issues in Hurricane Damage Risk Abatement” (with Jim Blackburn and Larry Dunbar), Research Paper, James A. Baker III Institute for Public Policy of Rice University (Nov. 2015)

“The WOTUS Rule: Overdue Necessity or Unnecessary Overburden?” (with Katherine R. Zodrow), Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Aug. 19, 2015)

“Texas should ease regulatory hurdles for aquifer storage and recovery programs” (with Katherine R. Zodrow), Blog Post, Baker Institute Blog (May 18, 2015)

“Congressional Interference Undermines Efforts to Conserve the Greater Sage-grouse,” Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Dec. 22, 2014)

“Water: The Old but New Piece of the Energy Puzzle,” Blog Post, Forbes.com Baker Institute Center for Energy Studies Blog (Oct. 22, 2014)

PRESENTATIONS AND PARTICIPATION

“Impediments and Opportunities: Understanding the Legal Context for the Implementation of Nature-Based Solutions in Valladolid, Spain,” Association for Public Policy Analysis & Management International Conference, Barcelona, Spain (July 30, 2019)

“Structuring Emergence? How Does Law Impact the Emergence Frontier for Nature-based Solutions to Enhance Urban Resilience?” Oil and Gas, Natural Resources, and Energy Journal (ONE-J) Symposium, University of Oklahoma College of Law, Oklahoma City, Oklahoma (Apr. 5, 2019)

Speaker, Roundtable: “La Quebradora Hydric Park - A Step Toward a Water Sensitive City?” Association for Public Policy Analysis & Management International Conference, Mexico City, Mexico (July 21, 2018)

“The Law and Climate Change Adaptation: Evolving Legal Institutions to Support Resilience in Uncertainty,” NAIAD Capturing Value Workshop, Montpellier, France (July 12, 2018)

Participant and Organizer, Sustainability of Engineered Rivers in Arid Lands (SERIDAS) Workshop, Rockefeller Foundation Bellagio, Italy (Nov. 13-16, 2017)

Session Organizer and Panel Member, Special Session: “Water Security and Hydraulic Fracturing,” XVIth World Water Congress, Cancun, Mexico (May 30, 2017)

“Trading Securities: A comparative study of the impact of hydraulic fracturing on water security in Texas (U.S) and Spain,” Scientific Forum on Understanding the Water-Energy-Food Nexus and its Implications for Governance, Osnabrück, Germany (June 15-16, 2016)

Conference Lead and Discussant, Conference on Water and Energy: Challenges and Opportunities in the Nexus, Center for Energy Studies, Baker Institute for Public Policy, Rice University (Oct. 14, 2015).

“Regulatory Aspects of Water (and Energy),” Invited lecture to Energy Economics II class at Rice University, Houston, Texas (Jan. 29, 2016)

“Environment and Energy at The Baker Institute: An Introduction,” Phillips 66 Environmental Affairs Quarterly Meeting, Houston, Texas (Aug. 4, 2015)

“A New Frontier in Texas: Managing and Regulating Brackish Groundwater,” XVth World Water Congress, Edinburgh, Scotland (May 28, 2015)

Moderator, “Considering System Solutions and Enabling New Technology,” and Workshop Organizer, Water and Energy Workshop: Understanding Impacts and Trade-Offs to Facilitate Transitions, Center for Energy Studies, Baker Institute for Public Policy, Rice University (May 14, 2015)

“How to Draft That Bill and Get it Filed,” (with Jack Gullahorn, Sharon Carter, and Hugh Brady) presentation to the Legislative Committee of the Austin Bar Association, Austin, Texas (Jan. 26, 2011)

“The Art of Legislative Drafting,” (with Jack Gullahorn, Sharon Carter, and Hugh Brady) presentation to the Professional Advocacy Association of Texas, Austin, Texas (Sept. 27, 2010)

“Apertura vs. Ruptura: Reconciliation in Argentina, Chile, and Uruguay” Annual Meeting of the Arkansas Political Science Association, Little Rock, Arkansas (Feb. 18-19, 2000)

HONORS AND AWARDS

Rice University’s Baker Institute for Public Policy, Houston, Texas
Non-resident Scholar, Center for Energy Studies

2016 - present

International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria Young Scientists Summer Program Participant (YSSP), Risk and Resilience Group	2019
Washington Foreign Law Society Robert H. Jackson Award, Submission of Merit	2004
Texas International Law Journal Best Note Award	2003
The Review of Litigation Best Brief Award	2002
Phi Delta Phi International Legal Fraternity	2001
Phi Beta Kappa	2000
University of Arkansas First-ranked Senior Scholar	2000
Henry M. Alexander Memorial Award	2000
Phi Kappa Phi Honor Society	1997

FELLOWSHIPS /GRANTS

University of Texas at Austin Graduate School Dissertation Writing Fellowship (\$19,317)	Spring 2021
U.S. National Academy of Science grant to support IIASA YSSP participation (\$5,500)	2019
Planet Texas 2050 Travel Grant in support of IIASA YSSP participation (\$1700)	2019
Planet Texas 2050 Grant to attend Duck Family Environmental Governance Workshop (\$700)	2019
LBJ School of Public Affairs Graduate Studies Fellowship (\$70,000 over 4 semesters)	2016 - 2019
Barbara Jordan Professional Development Grants (varying amounts)	2017, 2018, 2019
King's College London Department of Geography Scholarship (£1000)	2013
Texas Law Fellowships Summer Fellowship (\$3900)	2002
The University of Texas School of Law Dean's Scholarship (full tuition and fees)	2001 - 2004
University of Arkansas Chancellor's Scholarship (full tuition, fees, room and board)	1996 - 2000
Arkansas Governor's Scholarship Recipient (\$16,000 over 4 semesters)	1996 - 2000

SERVICE AND MEMBERSHIPS

<i>Water International</i> Editorial Board Member	2019 - present
Reviewer for <i>Water International</i> , <i>Water Alternatives</i> , <i>Landscape Architecture Frontiers</i>	

Abstract Reviewer for IWRA Online Conference: Addressing Groundwater Resilience under Climate Change (29-30 October 2020)	2020
NAIAD (NAture Insurance value: Assessment and Demonstration) Board of External Advisor	2017 - 2020
International Water Resources Association, member	2015 - present
Association for Public Policy Analysis & Management, member	2018 - present
Water Environment Federation Water Leadership Institute, participant	2013
Austin Public Library Friends Foundation Board of Directors	2011 - 2017
Tutor, Austin Public Library Victory Program	2007 - 2009
State Bar of Texas	admitted November 2004
<i>Texas International Law Journal</i> , Articles and Notes Editor	2003 - 2004
Texas Law Fellowships President	2003 - 2004
Texas Law Fellowships Pledge Drive Coordinator	2002 - 2003
Texas Law Fellowships Section Representative	2001 - 2002

RESEARCH EXPERIENCE

Rice University's Baker Institute for Public Policy, Houston, Texas	2014 - 2016
Baker Botts Fellow in Energy and Environmental Regulatory Affairs, Center for Energy Studies	
Graduate Research Assistant to Dr. Patrick Bixler, LBJ School of Public Affairs	Fall 2019; Fall 2020
Research and Editorial Assistant to Dr. Jurgen Schmandt. <i>Sustainability of Engineered Rivers in Arid Lands: Challenge and Response</i> (J. Schmandt and A. Kibaroglu, editors)	2017 - 2020
Research Assistant to Prof. Karen Engle, The University of Texas School of Law	2003 - 2004

OTHER PROFESSIONAL EXPERIENCE

Natural Resources Solutions, L.C., Austin, Texas Consultant (part-time; work remotely from London, England)	2013 - 2014
McGinnis, Lochridge & Kilgore, L.L.P., Austin, Texas Associate Attorney (water, environmental, and legislative law)	2008 - 2013
Employees Retirement System of Texas, Austin, Texas Legislative and Policy Consultant	2008
Office of the Governor of Texas, Austin, Texas Assistant General Counsel	2007

Texas Legislative Council, Austin, Texas
Legislative Counsel

2004 - 2007

Office of the Attorney General of Arkansas, Little Rock, Arkansas
Law Clerk

Summer 2002

Fulbright School of Public Affairs, Fayetteville, Arkansas
Program Coordinator

2000 - 2001

CERTIFICATIONS, SOFTWARE, LANGUAGES AND CITIZENSHIP

University of Texas Teaching Preparedness Series Certificate

2020

Microsoft Office, NVIVO, MaxQDA, ArcGIS

English (native speaker), Spanish (professional proficiency)

Citizenships: USA and Italy