

Wesley Eric Highfield

Associate Professor, Department of Marine & Coastal Environmental Science
Texas A&M University at Galveston
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EDUCATION

- Ph.D. Urban and Regional Science, Texas A&M University, College Station, TX, 2008
Research Focus on spatial sciences, natural hazards, environmental planning/policy,
- MUP Urban Planning, Texas A&M University, College Station, TX, 2004
Certificate in Environmental Hazards Management
- B.S. Renewable Natural Resources, Texas A&M University, College Station, TX, 2001
Coursework focus on Geographic Information Sciences

POSITIONS HELD

- September 2016 - Present *Associate Professor, Department of Marine & Coastal Environmental Science, Texas A&M University at Galveston*
- September 2020-Present *Program Coordinator, Marine and Coastal Management and Science Ph.D. Program, Texas A&M University at Galveston*
- September 2014-September 2020 *Program Coordinator, Master's in Marine Resource Management Program, Texas A&M University at Galveston*
- September 2010-Present *Associate Director, Center for Texas Beaches and Shores, Texas A&M University at Galveston*
- September 2011-August 2016 *Assistant Professor, Department of Marine Sciences, Texas A&M University at Galveston*
- September 2009-August 2011 *Research Scientist, Department of Marine Sciences, Texas A&M University at Galveston*
- August 2008-August 2009 *Post Doctoral Research Associate, Environmental Planning & Sustainability Research Unit, Texas A&M University*
- August 2007-August 2008 *Research Associate, Environmental Planning & Sustainability Research Unit, Texas A&M University*

EXTERNAL GRANTS AND CONTRACTS

2020	Co-Principal Investigator, Texas General Land Office, \$1,500,000, Texas Disaster Information System (TDIS). PI: Sam Brody
2020-2023	Principal Investigator, National Science Foundation, \$228,417, Collaborative Research: Probabilistic Debris Modeling in Coastal Storm Events: A Case of Complex Coupling Between Human-Built-Natural Systems.
2019 to 2021	Co-Principal Investigator, Texas General Land Office, \$2,000,000, Measuring, Mapping, and Managing Urban Flood Risk: A Pilot Program in Southeast Texas. PI: Sam Brody
2018 to 2019	Principal Investigator, Texas Comprehensive Research Fund, \$22,200, Interdisciplinary project to develop a rapid, accurate, and scalable digital methodology to determine building (first floor) elevation survey for hazard mitigation planning efforts. Co-PI: Sam Brody, Brent Fortenberry.
2018 to 2019	Principal Investigator, Texas General Land Office, \$1,594,189, Evaluating the Effects of a Coastal Spine: National-Level Economic Ripples and Effects on Flood Insurance. Co-PI: David Retchless, Meri Davlasheridze, Sam Brody, Ashley Ross.
2017	Principal Investigator, Texas General Land Office, \$127,182, Identifying the future costs of floods in the Houston-Galveston Area. Co-PI: Sam Brody.
2015 to 2020	Co-Principal Investigator, National Science Foundation, \$3,594,924, PIRE-Coastal Flood Risk Reduction Program: Integrated, Multi-scale Approaches for Understanding How to Reduce Vulnerability to Damaging Events. PI: Sam Brody; Co-PI: Meri Davlasheridze, Jens Figlus, Bill Merrell, Phil Berke, Galen Newman, Eric Bardenhagen.
2014	Co-Principal Investigator, West Galveston Island Property Owners Association, \$50,000, An Integrated Assessment of Flood Risk Reduction on the West End of Galveston Island. PI: Sam Brody.
2013 to 2014	Co-Principal Investigator, Houston Advanced Research Center, \$132,146, Survey of Preferences for Wave Based Flood Risk Reduction Strategies in Harris County, Texas. PI: Sam Brody.
2013	Co-Principle Investigator, National Science Foundation, \$27,230, Flood Risk Reduction Colloquium with Delft University, Netherlands. PI: Sam Brody; Co-PI: Mike Lindell
2011 to 2013	Co-Principal Investigator, National Science Foundation, \$312,801, Examining the 100-year floodplain as a metric of risk, loss, and household adjustment. PI: Sam Brody; Co-PI: Mike Lindell
2011	Principal Investigator, Texas Commission on Environmental Quality/Texas Sea Grant, \$136,585, On-Site Sewage Facility Mitigation Optimization in Dickinson Bayou. Co-PI: Sam Brody.

- 2011 to 2014 Co-Principal Investigator, National Aeronautics and Space Administration, \$399,857, Examining the relationships between land use change, wetland alteration, and carbon sequestration in the Gulf of Mexico. PI: Patrick Loucharn; Co-PI: Anna Armitage, Sam Brody
- 2009 to 2011 Co-Principal Investigator, Houston Advanced Research Center, \$40,000, Natural and Human Hydrologic Interactions: Development of an Integrated Conceptual Model and Empirical Testing in the Greater Houston –Galveston Region. PI: Sam Brody.
- 2009 to 2011 Co-Principal Investigator, National Science Foundation, \$374,036, Developing a Living Laboratory for Examining Community Recovery and Resilience after Disaster. PI: Shannon Van Zandt; Co-PI: Sam Brody, Yu Xiao, Walter Peacock.
- 2008 to 2009 Co-Principal Investigator, National Science Foundation, \$167,210, Social Vulnerability and Urban Development Patterns: Impacts on Community Resilience. PI: Shannon Van Zandt; Co-PI: Yu Xiao
- 2005 to 2008 Principal Investigator, U.S. Environmental Protection Agency, \$99,547, Examining the Effects of Wetland Loss on Flooding: A Spatial and Temporal Analysis

PEER-REVIEWED PUBLICATIONS (*denotes student)

- *Mobley, W. Atoba, K. & **Highfield, W.** Uncertainty in Flood Mitigation Practices: Assessing the Economic Benefits of Property Acquisition and Elevation in Flood Prone Communities. *Sustainability*, Under Review.
- Atoba, K., Brody, S.D., **Highfield, W.E.**, Shepard, C. & Verdone, L. Strategic Property Buyouts to Enhance Flood Resilience: A Multi-Criteria Spatial Approach for Incorporating Ecological Values into the Selection Process. *Environmental Hazards*, Under Review.
- *Mobley, W., Sebastian, A., **Highfield, W.**, & Brody, S. D. (2019). Estimating flood extent during Hurricane Harvey using maximum entropy to build a hazard distribution model. *Journal of Flood Risk Management*, 12, e12549.
- Blessing, R., Brody, S.D., **Highfield, W. E.** (2019). Valuing Floodplain Protection and Avoidance in a Coastal Watershed. *Disasters*, 43(4), 906-925.
- Davlasheridze, M., Atoba, K. O., Brody, S., **Highfield, W.**, Merrell, W., Ebersole, B., ... & Gilmer, R. W. (2019). Economic impacts of storm surge and the cost-benefit analysis of a coastal spine as the surge mitigation strategy in Houston-Galveston area in the USA. *Mitigation and Adaptation Strategies for Global Change*, 24(3), 329-354.
- Sterne, T. K., Retchless, D., Allee, R., & **Highfield, W.** (2018). Predictive modelling of mesophotic habitats in the north-western Gulf of Mexico. *Aquatic Conservation: Marine and Freshwater Ecosystems*.
- *Walters, H. M., Brody, S., & **Highfield, W.** (2018). Examining the relationship between development patterns and total phosphorus in the Galveston Bay Estuary. *Environmental Science & Policy*, 88, 10-16.

- Atoba, K., Brody, S.D., Davalasheridze, M., **Highfield, W. E.** (2018). Estimating Residential Property Loss Reduction from a Proposed Coastal Barrier System in the Houston-Galveston Region. *Natural Hazards Review*, 19(3), 05018006.
- Highfield, W. E.**, Brody, S. D., & Shepard, C. (2018). The effects of estuarine wetlands on flood losses associated with storm surge. *Ocean & Coastal Management*, 157, 50-55.
- Sigren, J. M., Figlus, J., **Highfield, W.**, Feagin, R. A., & Armitage, A. R. (2018). The effects of coastal dune volume and vegetation on storm-induced property damage: A hurricane Ike case study. *Journal of Coastal Research*, 34:1, 164-173.
- Reja, Md, Brody, S.D., **Highfield, W.E.**, Newman, G.D. (2017). Hurricane Recovery and Ecological Resilience: Measuring the impacts of wetland alteration post Hurricane Ike on the upper TX coast. *Environmental Management*. 60(6), 1116-1126.
- Brody, S.D. **Highfield, W.E.**, *Blessing, R., Makino, T., and Shepard, C. (2017). Evaluating the Effects of Open Space Configurations in Reducing Flood Damage along the Gulf of Mexico Coast, *Landscape and Urban Planning*, 167, 225-231.
- Highfield, W.E.**, Brody, S.D. (2017). Determining the Effects of the FEMA Community Rating System Program on Flood Losses in the United States, *International Journal of Disaster Risk Reduction*, 41: 396-404.
- Brody, S. D., Lee, Y., and **Highfield, W. E.** (2016). Household Adjustment to Flood Risk: A survey of coastal residents in Texas and Florida. *Disasters*, doi:10.1111/disa.12216.
- Brody, S. D., **Highfield, W. E.**, *Wilson, M., Lindell, M., *Blessing, R. (2016). Understanding the motivations of coastal residents to voluntarily purchase federal flood insurance. *Journal of Risk Research*, 1-16.
- Armitage, A., **Highfield, W. E.**, Loucharn, P. and Brody, S.D. (2015). Sea level rise and mangrove expansion drive long-term changes in the western Gulf of Mexico coastal landscape. *PLoS ONE*, 10(5): e0125404. doi:10.1371/journal.pone.0125404.
- Brody, S. D., **Highfield, W.E.**, and Blessing, R. (2015). An Empirical Analysis of the Effects of Land Use/Land Cover on Flood Losses along the Gulf of Mexico Coast. *Journal of the American Water Resources Association*. Forthcoming.
- Peacock, W. G., Van Zandt, S., Zhang, Y., **Highfield, W. E.** (2014). Inequities in Long-term Housing Recovery after Disasters. *Journal of the American Planning Association*, 80(4): 356-371.
- Highfield, W.E.**, Brody, S.D., Blessing, R. (2014). Measuring the impact of mitigation activities on flood loss reduction at the parcel level: the case of the clear creek watershed on the upper Texas coast. *Natural Hazards*, 1-18.
- Highfield, W.E.** and Brody, S.D. (2013). Evaluating the Effectiveness of Local Mitigation Activities in Reducing Flood Losses. *Natural Hazards Review*, 14(4): 229-236.
- Brody, S.D. and **Highfield, W. E.** (2013). Open Space Protection and Flood Mitigation: A National Study. *Land Use Policy*. 32: 89-95.

- Highfield, W. E.**, Van Zandt, S. and Peacock, W.G. (2013). Mitigation Planning: Why Hazard Exposure, Structural Vulnerability, and Social Vulnerability Matter. *Journal of Planning Education and Research*, 34(3): 287-300.
- Highfield, W. E.**, Norman, S. and Brody, S. D. (2012). Examining the 100-Year Floodplain as a Metric of Risk, Loss, and Household Adjustment. *Risk Analysis*, 33(2):186-91.
- Highfield, W. E.** (2012). Longitudinal Analysis of the Relationship between Section 404 Permit Activity and Peak Streamflow in Coastal Texas. *Environmental Management*, 49 (4): 892-901.
- Van Zandt, S., Peacock, W. G., *Henry, D., Grover, H., **Highfield, W. E.**, Brody, S.D. (2012). Mapping Social Vulnerability to Enhance Housing and Neighborhood Resilience. *Housing Policy Debate* 22(1): 29-55.
- Brody, S.D., Gunn, J., Peacock, W.G., and **Highfield, W.E.** (2011). Examining the Influence of Development Patterns on Flood Damages along the Gulf of Mexico. *Journal of Planning Education and Research* 31(4): 438-448.
- Zahran, S., Brody, S.D., **Highfield, W.**, Vedlitz, A. (2010). Nonlinear Incentives, Plan Design, and Flood Mitigation: The Case of the Federal Emergency Management Agency's Community Rating System. *Journal of Environmental Planning and Management* 53(2): 219-239.
- Zahran, S., Brody, S., Weiler, S., Lindell, M., **Highfield, W.** (2009). Modeling National Flood Insurance Policy Holding at the County Scale in Florida, 1999-2005. *Journal of Ecological Economics* 68(10): 2627-2636.
- Brody, S. D., Zahran, S., **Highfield, W. E.**, Bernhardt, S., and Vedlitz, A. (2009). Policy Learning for Flood Mitigation: A Longitudinal Assessment of CRS Activities in Florida. *Risk Analysis*, 29(6): 912-929.
- Brody, S. D., Davis, S. E. III, **Highfield, W. E.** and Bernhardt, S. (2008). A Spatial-Temporal Analysis of Section 404 Wetland Permitting In Texas and Florida: Thirteen Years of Impact along the Coast. *Wetlands*, 28: 107-116.
- Brody, S. D., Zahran, S., **Highfield, W. E.**, Grover, H. and Vedlitz, A. (2008). Identifying the Impact of the Built Environment on Flood Damage in Texas. *Disasters*, 32: 1 – 18.
- Brody, S. D., Zahran, S., Maghelal, P., Grover, H. and **Highfield, W. E.** (2007). The Rising Costs of Floods: examining the impact of planning and development decisions on property damage in Florida. *Journal of the American Planning Association*, 73: 330-345. ***Awarded Best Article of the Year by the American Planning Association**
- Highfield, Wesley E.** and Brody, Samuel D. (2006). The Price of Permits: Measuring the Economic Impacts of Wetland Development on Flood Damages in Florida. *Natural Hazards Review*, 7: 123 – 130.
- Brody, S.D., **Highfield, Wesley E.**, Hyung-Cheal, Ryu and Spanel-Weber, Laura. (2006). Examining the Relationship Between Wetland Alteration and Watershed Flooding in Texas and Florida. *Natural Hazards*, 40: 413-428.

- Brody, Samuel D., **Highfield, Wesley E.** and Thornton, Sara. (2006). Planning At the Urban Fringe: Examining the Factors Influencing Nonconforming Development Patterns in Florida. *Environment and Planning B*, 33: 75-96.
- Brody, Samuel D. and **Highfield, Wesley E.** (2005). Does Planning Work? Testing the Implementation of Local Environmental Planning in Florida. *Journal of the American Planning Association*, 71: 159-175.
- Peacock, Walter G., Brody, S. D. and **Highfield, W.** (2004). Hurricane Risk Perceptions Among Florida's Single Family Homeowners. *Landscape and Urban Planning* 73: 120-135.
- Brody, Samuel D., **Highfield, Wesley E.** and Peck, Mitchell. (2004). Exploring the Mosaic of Perceptions for Water Quality across Watersheds in San Antonio, Texas. *Landscape and Urban Planning* 73: 200-214.
- Brody, Samuel D., Peck, Mitch and **Highfield, W.** (2004). Examining Localized Perceptions of Air Quality in Texas: A Spatial and Statistical Analysis. *Risk Analysis*, 24: 1561 - 1574.
- Brody, Samuel D., **Highfield, W.** and Alston, Letitia. (2004). Does Location Matter? Measuring Environmental Perceptions of Creeks in Two San Antonio Watersheds. *Environment and Behavior*, 36: 220-250.
- Brody, Samuel D., **Highfield, W.** and Carrasco, Virginia. (2004). Measuring the Collective Capabilities of Local Jurisdictions to Manage Ecological Systems in Southern Florida. *Landscape and Urban Planning*, 69: 33-50.
- Brody, Samuel D., **Highfield, W.**, Lee, L., Arlikatti, S., Bierling, D. H., Ismailova, R., Butzler, R. (2004). Conflict on the Coast: Using Geographic Information Systems to Map Potential Environmental Disputes in Matagorda Bay, Texas. *Environmental Management*, 34: 11-25.

BOOKS AND CHAPTERS

- Highfield, W.** (2019). GIS and Spatial Information in Hydrology. In Philip Bedient, Wayne C. Huber and Baxter E Vieux *Hydrology and Floodplain Analysis*. Prentice-Hall, NJ.
- Brody, S. D., **Highfield, W. E.**, Merrell, W., & Lee, Y. (2019). Recovery Versus Protection-Based Approaches to Flood Risk Reduction: Working Towards a Framework for More Effective Mitigation in the United States. In *The Routledge Handbook of Urban Disaster Resilience* (pp. 144-156). Routledge.
- Lindell, M.K, Brody, S.D. and **Highfield, W.** 2016. Financing Housing Recovery Through Hazard Insurance: The Case of the National Flood Insurance Program. In A. Sapat and A-M Esnard (Eds). *Post-Disaster Housing*. Boca Raton FL: CRC Press.
- Peacock, W.G., S. Van Zandt, D. Henry*, H. Grover and **W. Highfield.** (2012). Social Vulnerability and Hurricane Ike: Using Social Vulnerability Mapping to Enhance Coastal Community Resiliency in Texas. Chapter 7 in P. B. Bedient (Ed.), *Lessons from Hurricane Ike*. College Station, Texas: Texas A&M Press.

Brody, S., **Highfield, W.** and Kang, J. 2011. *Flooding in the United States: Causes, Consequences, and Policy Implications*. Cambridge University Press.

PROCEEDINGS

Highfield, W. E., Van Zandt, S. and Peacock, W.G. (2011). Determinants and Characteristics of Damage in Single-Family Island Households. In *Proceedings of the National Science Foundation Engineering Research and Innovations Conference*. January 4 – 7, 2011 Atlanta, GA.

Peacock, W.G., Van Zandt, S. Henry, D. Grover, H., and **Highfield, W.** (2011). Social Vulnerability and Hurricane Ike: Using Social Vulnerability Mapping to Enhance Coastal Community Resiliency in Texas. In *Proceedings of the National Science Foundation Engineering Research and Innovations Conference*. January 4 – 7, 2011 Atlanta, GA.

Highfield, W. E. (2006). Flood Damages and Development: The Economic Impacts of Cumulative Wetland Alteration in Florida and Texas. In *Proceedings for the International Disaster Reduction Conference*. August 27-September 1, Davos, Switzerland. Davos: Swiss Federal Research Institute.

Brody, S.D. & **Wesley E. Highfield.** (2006). Examining the Relationship between Wetland Alteration and Watershed Flooding in Texas and Florida: Causes, Consequences, and Policy Implications. In *Proceedings for the International Disaster Reduction Conference*. August 27-September 1, Davos, Switzerland. Davos: Swiss Federal Research Institute.

Brody, S.D., Carrasco, V. & **Highfield, W.** (2003). Evaluating Ecosystem Management Capabilities at the Local Level in Florida: A Policy Gap Analysis Using Geographic Information Systems. In *The Network Society: The New Context for Planning*. Proceedings from the ACSP-AESOP Third Joint Congress, July 8-12, 2003, Leuven, Belgium.

CONFERENCE PRESENTATIONS

A Brief Perspective on Hurricane Harvey. Presentation and panel discussion at the Texas Land Conservation Conference. March 1, 2018. Austin, TX.

Risk, Mitigation and Planning: Lessons Learned from Flooding in the Houston Area. Association of State Floodplain Managers Conference. Kansas City, MO, May 2, 2017.

Measuring the Effect of the FEMA Community Rating System Program on Flood Losses across the United States. Association of Collegiate Schools of Planning, October 22, 2015, Houston, TX.

Evaluating the Flood Loss Effectiveness of the Community Rating System: A National Analysis. Association of State Floodplain Managers, June 2, 2015, Atlanta, GA.

Evaluating the Effectiveness of the Community Rating System: A Comparative Analysis. Association of State Floodplain Managers, June 3, 2014, Seattle, WA.

Geographical and Historical Shifts in Blue Carbon Sequestration in Texas Wetlands. Association for the Sciences of Limnology and Oceanography. February 22, 2013, New Orleans, LA.

Flood Mitigation & the Community Rating System: Evidence from Two Studies. Texas American Planning Association Conference. October 2-5, 2013, Galveston, TX.

Evaluating the Effectiveness of Planning Activities in Reducing Flood Losses: A National Study. Association of State Floodplain Managers, May 22, 2012, San Antonio, TX.

Evaluating the Effectiveness of Planning Activities in Reducing Flood Losses: A National Study. National Flood Workshop, March 1, 2012, Houston, TX.

Section 404 Permitting in Coastal Texas: A Longitudinal Analysis of the Relationship between Wetland Alteration and Peak Streamflows. Association of Collegiate Schools of Planning. July 8-11, 2008, Chicago, IL

Policy Learning for Flood Mitigation: A Longitudinal Assessment of CRS Activities in Florida. Association of Collegiate Schools of Planning, October 17 – 21, 2007, Milwaukee, WI.

Section 404 and Wetland Alteration in Texas: Explaining the Issuance of Wetland Permits. Association of Collegiate Schools of Planning, November 10 – 12, 2006, Fort Worth, TX.

The Economic Impacts of Cumulative Wetland Alteration on Flood Damages in Texas and Florida. International Disaster Reduction Conference, August 27 – 30, 2006, Davos, Switzerland.

The Price of Permits: Measuring the Economic Impacts of Wetland Development on Flood Damages in Florida. Association of Collegiate Schools of Planning, October 27 – 30, 2005, Kansas City, MO.

Does Planning Work? Testing the Implementation of Local Environmental Planning in Florida. Association of Collegiate Schools of Planning, October 21 – 24, 2004, Portland, OR.

INVITED PRESENTATIONS & WORKSHOPS

Resilience H2Ouston: Living in Flood Plains. Presentation and panel discussion convened by Rice Design Alliance Civic Forums. March 8, 2017, Houston, TX.

Flood Risk Management. Symposium/workshop convened by the Texas Floodplain Management Association. May 10, 2016, San Antonio, TX.

Using Nature in Floodplains and Watersheds to Reduce Risk and Build Resilience: A workshop to advance integrated science for state and regional decision-making in the US. Workshop convened by SNAP/The Nature Conservancy. February 25-26, 2016, Boston, MA.

Watershed Impacts and Planning: A Sampling of Applied Research. Coastal Waters Institute Professional Development Course. July 17, 2014; Flower Garden Banks National Marine Office, Galveston, TX.

Development Policies and Risk. Hazard Reduction and Recover Center 25th Anniversary Symposium. April 5, 2014, College Station, TX

Mitigation: What works and what doesn't. Houston-Galveston Area Regional Flood Management Council and Floodplain Awareness in Texas. August 1, 2013, Houston, TX

Determinants and Characteristics of Damage in Single-Family Island Households. Cascading Disasters and Resilience to Hurricanes Workshop. March 25, 2011. Rice University, Houston, TX.

Housing Inequality and Social Vulnerability: Toward Housing Resilience. Invited participant on Panel Discussion. Urban Affairs Association, March 17, 2011, New Orleans, LA.

Policy Indicators of Flood Damage: The Community Rating System and Section 404 Permitting. July 21, 2010. Joint meeting of the Houston-Galveston Area Regional Flood Management Council and Floodplain Awareness in Texas.

TECHNICAL REPORTS

Wesley E. Highfield, Meri Davlasheridze, Ashley Ross, Samuel D. Brody, Russell Blessing. 2019. Evaluating the Effects of a Coastal Spine: National-Level Economic Ripple Effects of Storm Surge Events. Final Report Submitted to the Texas General Land Office.

Center for Disaster Resilience, University of Maryland, & Center for Texas Beaches and Shores, Texas A&M - Galveston. (2018). The Growing Threat of Urban Flooding (Rep.). College Park, MD: Center for Disaster Resilience, University of Maryland.

Eye of the Storm. 2018. Report of the Governor's Commission to Rebuild Texas.

Wesley E. Highfield, Samuel D. Brody, Kayode Atoba, and Russell Blessing. 2017. Identifying the Future Costs of Flooding in the Houston-Galveston Region. Final Report Submitted to the Texas General Land Office.

Wesley Highfield and Samuel Brody. 2017. Sheltering the Storm: The effects of estuarine wetlands on flood losses associated with storm surge. Prepared for The Nature Conservancy Gulf Program. Center for Texas Beaches and Shores. Texas A&M University, Galveston Campus.

Joshua Gunn, Wesley Highfield, Sam Brody, Jayton Rainey, Gerald Galloway. 2017. An Initial Analysis of the Extent of Urban Flooding in the United States and Possibilities for Mitigation. Center for Texas Beaches and Shores. Texas A&M University, Galveston Campus.

Kayode, A., Brody, S., **Highfield, W.** and Merrell, W. (2016). Measuring the Economic Impacts of Storm Surge on Residential Structures. Center for Texas Beaches and Shores. Texas A&M University, Galveston Campus.

Davlasheridze, M., Atoba, K. Brody, S., **Highfield, W.**, Merrell, W., Purdue, A. and Gilmer, W. (2016). Economic Feasibility of a Coastal Spine. Center for Texas Beaches and Shores. Texas A&M University, Galveston Campus.

Brody, S.D. and **Highfield, W.E.** 2014. *Evaluating the Flood Loss Effectiveness of the Community Rating System*. Floodplain Management Branch, Risk Reduction Division, Federal Insurance and Mitigation Administration, FEMA: Washington, DC.

Brody, Samuel D., **Highfield, W.E.** 2011. Evaluating the Effectiveness of the FEMA Community Rating System in Reducing Flood Losses. Final Report for FEMA Mitigation Division Study, Phase I.

Highfield, W., Jacob, J. and Blessing, R. 2011. *Dickinson Bayou On-Site Sewage Facility Alternatives Analysis*. Written for the Texas Commission on Environmental Quality, Contract No 582-8-77058

Highfield, W., Brody, S.D., Peacock, W.G., Ndubisi, F., and Prosodjo, D. *Land Use Change Early Warning System II*. Written for the National Park Service Gulf Coast Cooperative Ecosystem Studies Unit. College Station, TX: Texas A&M University.

Brody, S.D., Peacock, W.G., Ndubisi, F., **Highfield, W.**, Wunneburger, D. and Prosodjo, D. *Land Use Change Early Warning System I*. Written for the National Park Service Gulf Coast Cooperative Ecosystem Studies Unit. College Station, TX: Texas A&M University.

Ellis, C., Brody, S.D., Peacock, W., Wunneburger, D., Ndubisi, F., Maghelal, P., Shin, W.J., and **Highfield, W.** 2007. *Development of a Land Use Change Early Warning System*. Written for the National Park Service Gulf Coast Cooperative Ecosystem Studies Unit. College Station, TX: Texas A&M University.

Kyle, G., Shafer S., Culpepper, J., Watts, C., Crompton, J.L., **Highfield, W.**, and Brody, S.D. 2007. *Land Evaluation Report for the Lower Colorado River Authority*. College Station, TX: Texas A&M University.

Highfield, W. E. 2004. *Ground Level Ozone in the Dallas/Fort Worth Region: An Environmental Justice Analysis*. Hazard Reduction and Recovery Center Research Report 04-05R. Texas A&M University.

TEACHING EXPERIENCE

Texas A&M University at Galveston

- MARB 303: Biostatistics, Fall 2020 – Spring 2012
- MARS 325: Introduction to GIS, Fall 2010 – Present
- MARS 625: GIS for Coastal Modeling, Fall 2010 – Present
- MARS 626: Advanced GIS, Spring 2014 - Present

Texas A&M University

- URSC 642 Analytical Methods II; Texas A&M University, Spring 2009
- URSC 641 Analytical Methods I; Texas A&M University, Fall 2008
- Planning Methods and Techniques; Spring 2008
 - Lectures on incorporating GIS into Land Suitability Analysis
- Analytical Methods for Planning Research; Fall 2007
 - Lectures on an Introduction to Stata statistical software, data coding and recoding, generating descriptive statistics, analysis replication, and multiple linear regression
- Avian Influenza Disease Monitoring & Surveillance, Bucharest, Romania; May 2006
 - Lectures and labs on GPS theory, data collection and integration into GIS; Introduction to GIS theory and software; Theory and application of coordinate systems and transformations.
- Planning Methods and Techniques; Fall 2006
 - Lectures on correlation and simple linear regression analysis
- Introduction to Geographical Information Systems; Fall 2000
 - Responsible for three weekly lab sections covering GIS data types, data management and analysis techniques including data development, data queries, geocoding, geoprocessing, projections and transformations and spatial interpolation

SERVICE

Department of Marine Sciences

- Program Coordinator, Marine and Coastal Management and Science Ph.D. Program, 2020-Present
- Master's in Marine Resources Management Program Coordinator and Committee Chair, 2014 – 2020
- Remote Sensing Faculty Search Committee, 2017 (Co-Chair)
- GIS Librarian Search Committee, 2017-2018 (Member)
- Promotion and Tenure Committee, 2016-Present (Member)
- Marine and Coastal Management and Sciences Ph.D. Committee, 2014 – Present (member)
- Coastal Policy Faculty Search Committee, 2016 (Co-Chair)
- Geospatial Faculty Search Committee, 2015 (member)
- Master's in Marine Resources Management Program External Review Committee, 2014-2015 (member)
- Department Head Search Committee, 2014 (member)
- Texas Sea Grant Research Scientist Search Committee, 2014 (member)
- Coastal Economist Faculty Search Committee, 2013 (member)

Texas A&M University at Galveston

- Graduate Instructional Council (Member), 2016-Present
- Task Force for the Promotion of Synergistic Collaboration (Member), 2018
- TAMUG Student Research Symposium (Co-Chair), 2013 & 2014
- Research Advisory Council, Texas A&M University at Galveston; September 2012 – August 2016, September 2020-Present

Texas A&M University

- Vice President for Information Technology and Chief Information Officer Search Committee, 2016 (member)

External

Ad Hoc Manuscript Reviews:

- | | |
|---|--|
| -Journal of Environmental Planning and Management | -Challenges |
| -Nature Sustainability | -Water |
| -Landscape and Urban Planning | -Risk Analysis |
| -Natural Hazards Review | -Natural Hazards |
| -Geografiska Annaler: Series A | -Journal of Planning History |
| -Journal of Planning Education and Research | -Disasters |
| -PLOS One | -Journal of Coastal Research |
| -International Journal of Disaster Risk Reduction | -Journal of the American Planning Assoc. |

FELLOWSHIPS AND ASSOCIATIONS

- 2011 - Present Associate Faculty Fellow, Hazard Reduction and Recovery Center, Texas A&M University
- 2009 – Present Member, Texas Floodplain Management Association
- 2012 - 2016 Internal Advisory Committee, Institute for Sustainable Coastal Communities

AWARDS

- Environmental Protection Agency STAR Graduate Fellowship, 2005 – 2008
 - *Approximately 100 awarded nationwide; first in a social science discipline at Texas A&M*
- Michael K. Lindell Environmental Hazards Scholarship, 2008
- Wolfgang Roeslar Memorial Scholarship, 2004
- Association of Former Students Distinguished Master's Student in Research, 2004
- Sustainable Coastal Margins Program Graduate Fellow, 2002 – 2004
- David Pugh Planning Law Scholarship, 2002 and 2003