

## Dr. Rusty A. Feagin

Coastal Ecology & Management Lab – ‘Sustaining the Nature of Our Coasts’  
Dept. Ecology & Conservation Biology and Dept. Ocean Engineering  
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### Professional Preparation

University of California, Santa Cruz	Environmental Studies	B.A. 1996
Texas A&M University	Rangeland Ecology and Management	Ph.D. 2003

### Appointments

2016-present	Professor, Department of Ecology & Conservation Biology, Department of Ocean Engineering, Texas A&M University
2009-2016	Associate Professor, Texas A&M University
2003-2009	Assistant Professor, Texas A&M University
2015-present	Associate Editor, <i>Frontiers in Ecology and the Environment</i> (Ecological Society of America, IF=13.780)
2014-present	Associate Editor, <i>Estuarine, Coastal and Shelf Science</i> (Elsevier, IF=3.229)
2019-2021	Associate Editor, <i>Journal of Geophysical Research-Biogeosciences</i> (American Geophysical Union/Wiley, IF=3.82 upon completion of service)
2017-2021	Associate Editor, <i>Global Biogeochemical Cycles</i> (American Geophysical Union/Wiley, IF=5.70 upon completion of service)
2012-2014	Special Issue Associate Editor, <i>Geomorphology</i>
2022	Research Associate, School of Geography and the Environment, University of Oxford
2016	Lavern Weber Visiting Scientist, Hatfield Marine Science Center, Oregon State University
2014-present	Graduate Faculty, University of Kentucky
2012-2022	Graduate Jury, Instituto de Ecología, A.C.
2011	Visiting Faculty, Gulf Coast Research Laboratory, University of Southern Mississippi
2010-2013	Fellow, Mexican American and US Latino Research Center
2009-2010	Visiting Faculty, Restoration Institute, Continuing Studies, University of Victoria
2008	Visiting Fellow, Fitzwilliam College, Department of Geography, University of Cambridge

### Awards

2021	Association of Former Students’ Distinguished Achievement Award, College-Level Teaching Award.
2020	Robert G. Dean Coastal Academic Award, American Shore and Beach Preservation Association.
2020	Excellence Award in Discovery/Innovation. Department of Ecosystem Science and Management.
2019	Texas Environmental Excellence Award, Environmental Educator of the Year, Finalist. Texas Commission on Environmental Quality.

- 2018 Excellence Award for Translation/Implementation. Dept. Ecosystem Science and Management.
- 2016 Texas Environmental Excellence Award, Civic/Community. Highest environmental honor in the State of Texas.
- 2016 Texas Senate Proclamation #355. Authored by Senator Charles Schwertner. For contributions to the State of Texas.
- 2016 Outstanding Graduate Professor Award. 2016. Dept. Ecosystem Science and Management.

## Publications

1. **Feagin, R.A.**, Chang, K-A., Huff, T.P., Rodriguez-Iturbe, I., Kim, J-Y., Kaihatu, J., Leonardi, N., Fagherazzi, S. 2023. An asymmetry in wave scaling drives unexpected amounts of coastal wetland erosion. *Science Advances*: In Press.
2. Bond, H., Wengrove, M., Puleo, J., Pontiki, M., Evans, T.M., **Feagin, R.A.** Beach and dune subsurface hydrodynamics and their influence on the formation of dune scarps. *Journal of Geophysical Research: Earth Surface*: In Press.
3. Kang, B., **Feagin, R.A.**, Huff, T., Duran Vinent, O. 2023. Stochastic properties of coastal flooding events – Part 1: CNN-based semantic segmentation for water detection. *Earth Surface Dynamics*: In Press.
4. Kang, B., **Feagin, R.A.**, Huff, T., Duran Vinent, O. 2023. Stochastic properties of coastal flooding events – Part 2: Probabilistic analysis. *Earth Surface Dynamics*: In Press.
5. Whitehead, S.J., Yeager, K.M., **Feagin, R.A.**, Huff, T.P., Paine, J.G., Schindler, K.J., Dixon, T.S. 2023. Growth-fault induced effects on tidal marsh surficial processes and landscape conversion in the Slop Bowl, Brazoria National Wildlife Refuge, Texas. *Journal of Coastal Research*: In Press.
6. Abdullah, M.M., Assi, A.T., Al Ali, Z., **Feagin, R.A.**, Al-Awadi, T., Al-Naabi, S., Mansour, A.T. 2023. Vegetation-rainfall interactions and the probability of receiving maximum vegetation growth in arid landscapes. *Journal of Environment, Development and Sustainability*: In Press.
7. Pontiki, M., Puleo, J.A., Bond, H., Wengrove, M., **Feagin, R.A.**, Hsu, T-J., Huff, T. 2023. Geomorphic response of a coastal berm to storm surge and the importance of sheet flow dynamics. *Journal of Geophysical Research: Earth Surface*, 128, e2022JF006948.
8. **Feagin, R.A.**, Innocenti, R.A., Bond, H., Wengrove, M., Huff, T.P., Lomonaco, P., Tsai, B., Puleo, J., Pontiki, M., Figlus, J., Chavez, V., Silva, R. 2023. Does vegetation accelerate coastal dune erosion during extreme events? *Science Advances* 9: eadg7135.
9. Amer, L., Erkok, M., **Feagin, R.A.**, Kameshwar, S., Mach, K.J., Mitsova, D. 2023. Measuring resilience to sea-level rise for critical infrastructure systems: Leveraging leading indicators. *Journal of Marine Science and Engineering*, 11, 1421.
10. Figlus, J., Sigren, J.M., **Feagin, R.A.**, Armitage, A.R. 2022. The unique ability of fine roots to reduce vegetated coastal dune erosion during wave collision. *Frontiers in Built Environment* 8: 904837.
11. Huff, T.P., **Feagin, R.A.**, Figlus, J. 2022. Delft3D as a tool for living shoreline design selection by coastal managers. *Frontiers in Built Environment* 8: 926662.
12. Patrick, C., Kominoski, J., McDowell, W., Branoff, B.L., Lagomasino, D., Leon, M., Hensel, E., Hensel, M., Strickland, B., Aide, T.M., Armitage, A., Cerqueira, M., Congdon, V., Crawl, T., Devlin, D., Douglas, S., Erisman, B., **Feagin, R.**, Geist, S., Hall, N., Hardison, A., Heithaus, M., Hogan, J.A., Hogan, J., Kinard, S., Kiszka, J., Lin, T-C., Lu, Kaijun, Madden, C., Montagna, P., O’Connell, C., Proffitt, E., Kiel Reese, B., Reustle, J., Robinson, K., Rush, S., Santos, R., Schnetzer, A., Smeed, D.,

- Smith, R., Starr, G., Stauffer, B., Walker, L., Weaver, C., Wetz, M., Whitman, E., Wilson, S., Xue, J., Zou, X. 2022. A universal pattern of trade-offs between ecosystem resistance and resilience to tropical cyclones. *Science Advances* 8: eabl9155.
13. **Feagin, R.A.** 2021. The climate explosion. *Frontiers in Ecology and the Environment* 19: 543.
  14. **Feagin, R.A.**, Bridges, T.S., Bledsoe, B., Losos, E., Ferreira, S., Corwin, E., Lodder, Q., Beck, M.W., Reguero, B., Sutton-Grier, A., Figlus, J., Palmer, R., Nelson, D., Smith, C., Olander, L., Silliman, B., Pietersen, H., Costanza, R., Gittman, R.K., Narayan, S., Pontee, N., Donahue, M., McNeill, D., Guidry, T. 2021. Infrastructure investment must incorporate Nature's lessons in a rapidly changing world. *One Earth* 4: 1361-1364.
  15. **Feagin, R.A.**, Huff, T.P., Yeager, K.M., Whitehead, S. 2021. Can sea level rise help us restore coastal wetlands? The hydrologic restoration of the Slop Bowl, Brazoria National Wildlife Refuge, Texas. *Shore and Beach* 89: 73-82.
  16. Innocenti, R.A., **Feagin, R.A.**, Charbonneau, B.R., Figlus, J., Lomonaco, P., Wengrove, M., Puleo, J., Huff, T.P., Rafati, Y., Hsu, T-J., Moragues, M.V., Tsai, B., Boutton, T., Pontiki, M., Smith, J. 2021. The effects of plant structure and flow properties on the physical response of coastal dune plants to wind and wave run-up. *Estuarine, Coastal and Shelf Science* 261: 107556.
  17. Montalvo, A.E., Lopez, R.R., Parker, I.D., Silvy, N.J., Cooper, S.M., **Feagin, R.A.** 2021. Home range and habitat selection of cave-dwelling North American porcupines (*Erethizon dorsatum*) in Central Texas. *Texas Journal of Science* 73: 1-14.
  18. Kim, J-Y., Kaihatu, J., Chang, K-A., Sun, S-H., Huff, T., **Feagin, R.A.** 2020. Cold front induced waves acting on the wetlands boundary. *Journal of Geophysical Research: Oceans* 125: e2020JC016603.
  19. Hogan, J.A., **Feagin, R.A.**, Starr, G., Ross, M., Lin, T-C., O'Connell, C., Huff, T.P., Stauffer, B.A., Robinson, K.L., Laura, M.C., Xue, J., Giest, S.J., Reese, B.K., Witman, E., Douglas, S., Congdon, V.M., Reustle, J.W., Smith, R.S., Lagomasino, D., Strickland, B.A., Wilson, S.S., Proffitt, C.E., Hogan, J.D., Branoff, B.L., Armitage, A.R., Rush, S.A., Santos, R.O., Campos, M., Montagna, P.A., Erisman, B., Walker, L., Silver, W.L., Crowl, T.A., Wetz, M., Hall, N., Zou, X., Pennings, S.C., Leon, M., Wang, L-J., Chang, C-T., McDowell, W.H., Kominoski, J.S., Patrick, C.J. 2020. A research framework to integrate cross-ecosystem responses to tropical cyclones. *Bioscience* 7: 477-489.
  20. **Feagin, R.A.**, Johns, N., Huff, T.P., Abdullah, M.M., Fritz-Grammond, K. 2020. Restoration of freshwater inflows: The use of spatial analysis for hydrologic planning in the Anahuac National Wildlife Refuge, USA. *Wetlands*: 10.1007/s13157-020-01318-0.
  21. Huff, T.P., **Feagin, R.A.**, Figlus, J. 2020. Enhanced Tide Model: Improving tidal predictions with integration of wind data. *Shore & Beach* 88: 40-45.
  22. Odériz, I., Knöchelmann, N., Silva, R., **Feagin, R.A.**, Martínez, M.L., Mendoza, E. 2020. Reinforcement of vegetated and unvegetated dunes by a rocky core: A viable alternative for dissipating waves and providing protection? *Coastal Engineering* 158: 103675.
  23. **Feagin, R.A.**, Forbrich, I., Huff, T.P., Barr, J.G., Ruiz-Plancarte, J., Fuentes, J.D., Najjar, R.G., Vargas, R., Vázquez-Lule, A., Windham-Myers, L., Kroeger, K.D., Ward, E.J., Moore, G.W., Leclerc, M., Krauss, K.W., Stagg, C.L., Alber, M., Knox, S.H., Schäfer, K.V.R., Bianchi, T.S., Hutchings, J.A., Nahrawi, H., Noormets, A., Mitra, B., Jaimes, A., Hinson, A.L., Bergamaschi, B., King, J.S., Miao, G. 2020. Tidal wetland Gross Primary Production (GPP) across the continental United States, 2000-2019. *Global Biogeochemical Cycles* 34: e2019GB006349.

24. Hutchings, J.A., Bianchi, T.S., Najjar, R.G., Herrmann, M., Kemp, W.M., Hinson, A.L., **Feagin, R.A.** 2020. Carbon deposition and burial in estuarine sediments of the contiguous United States. *Global Biogeochemical Cycles* 34: e2019GB006376.
25. Martínez, M.L., Silva, R., López-Portillo, J., **Feagin, R.A.**, Martínez, E. 2020. Coastal ecosystems as an ecological membrane. *Journal of Coastal Research* SI 95: 11-15.
26. Meng, W., **Feagin, R.A.**, Innocenti, R.A., Hu, B., He, M., Li, H. 2020. Invasion and ecological effects of exotic smooth cordgrass *Spartina alterniflora* in China. *Ecological Engineering* 143: 105670.
27. Montalvo, A.E., Lopez, R.R., Parker, I.D., Silvy, N.J., Cooper, S.M., Feagin, R.A. 2020. Modeling meso-mammal cave use in Central Texas. *Southwestern Naturalist* 64: 43-52.
28. Abdullah, M.M., Assi, A.T., Abdullah, M.T., **Feagin, R.A.** 2019. Arid ecosystem resiliency to total petroleum hydrocarbons disturbance: A case study from the State of Kuwait associated with the Second Gulf War. *Land Degradation and Development* 31: 155-167.
29. Hinson, A.L., **Feagin, R.A.**, Eriksson, M. 2019. Environmental controls on the distribution of tidal wetland soil organic carbon in the continental United States. *Global Biogeochemical Cycles*: 33: 1408-1422.
30. **Feagin, R.A.** 2019. A good climate for the kids. *Frontiers in Ecology and the Environment* 17: 487.
31. Huff, T.P., **Feagin, R.A.**, Delgado, Jr., A. 2019. Understanding lateral marsh edge erosion with Terrestrial Laser Scanning (TLS). *Remote Sensing* 11: 2208.
32. Maximiliano-Cordova, C., Salgado, K., Martínez, M.L., Mendoza, E., Silva, R., Guevara, R., **Feagin, R.A.** 2019. Does the functional richness of plants reduce wave erosion on embryo coastal dunes? *Estuaries and Coasts* 42: 1730-1741.
33. Meng, W., **Feagin, R.A.** 2019. Mariculture is a double-edged sword in China. *Estuarine, Coastal and Shelf Science* 222: 147-150.
34. Meng, W., **Feagin, R.A.**, Hu, B., Wang, Z., Li, H. 2019. The spatial distribution of blue carbon in the coastal wetlands of China. *Estuarine, Coastal and Shelf Science* 222:13-20.
35. Fagherazzi, S., Anisfeld, S.C., Blum, L.K., Long, E.V., **Feagin, R.A.**, Fernandes, A., Kearney, W.S., Williams, K. 2019. Sea level rise and the dynamics of the marsh-upland boundary. *Frontiers in Environmental Science* 27: 10.3389/fenvs.2019.00025.
36. **Feagin, R.A.**, Furman, M., Salgado, K., Martinez, M.L., Innocenti, R.A., Eubanks, K., Figlus, J., Huff, T.P., Sigren, J., Silva, R. 2019. The role of beach and sand dune vegetation in mediating wave run up erosion. *Estuarine, Coastal and Shelf Science* 219: 97-106.
37. Sun, S-H., Chuang, W-L., Chang, K-A., Kim, J.Y., Kaihatu, J., Huff, T., **Feagin, R.A.** 2019. Imaging based nearshore bathymetry measurement using an unmanned aircraft system. *Journal of Waterway, Port, Coastal, and Ocean Engineering* 145: 04019002, 1-12.
38. Bianchi, T.S., **Feagin, R.A.**, Allison, M., Osburn, C.L., Arellano, A., Oviedo Vargas, D., Hinson, A., Eriksson, M., Morrison, E., Barry, S. 2019. The fate and transport of allochthonous blue carbon in divergent coastal systems. Chapter 4 in *A Blue Carbon Primer: The State of Coastal Wetland Carbon Science, Practice, and Policy* (Eds. Windham-Myers, L., Troxler, T., Crooks, S.), CRC Press, Boca Raton, London.
39. Yeager, K.M., Wolfe, P.C., **Feagin, R.A.**, Brunner, C.A., Schindler, K.J. 2019. Active near-surface growth faulting and late Holocene history of motion: Matagorda Peninsula, Texas. *Geomorphology* 327: 159-169.

40. Innocenti, R.A., **Feagin, R.A.**, Huff, T.P. 2018. The role of *Sargassum* macroalgal wrack in reducing coastal erosion. *Estuarine, Coastal and Shelf Science* 214: 82-88.
41. **Feagin, R.A.** 2018. What is the path forward for ecology? *Frontiers in Ecology and the Environment* 16: 139-140.
42. Najjar, R.G., Herrmann, M., Alexander, R., Boyer, E.W., Burdige, D.J., Butman, D., Cai, W.-J., Canuel, E.A., Chen, R.F., Friedrichs, M.A.M., **Feagin, R.A.**, Griffith, P.C., Hinson, A.L., Holmquist, J.R., Hu, X., Kemp, W.M., Kroeger, K.D., Mannino, A., McCallister, S.L., McGillis, W.R., Mulholland, M.R., Pilskaln, C.H., Salisbury, J., Signorini, S.R., St-Laurent, P., Tian, H., Tzortziou, M.A., Vlahos, P., Wang, Z.A., Zimmerman, R.C. 2018. Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern North America. *Global Biogeochemical Cycles* 32: 389-416.
43. 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: Analysis from Hurricane Ike. *Journal of Coastal Research* 34: 164-173.
44. Yeager, K.M., Schwehr, K.A., Louchouart, P., Santschi, P.H., **Feagin, R.A.**, Schindler, K.J. 2018. Mercury inputs and redistribution in the Penobscot River and Estuary, Maine. *Science of the Total Environment* 622-623: 172-183.
45. **Feagin, R.A.** 2017. Ecology, the optimistic science. *Frontiers in Ecology and the Environment* 15: 351.
46. Hinson, A.L., **Feagin, R.A.**, Eriksson, M., Najjar, R.G., Herrmann, M., Bianchi, T.S., Kemp, M., Hutchings, J.A., Crooks, S., Boutton, T. 2017. The spatial distribution of soil organic carbon in tidal wetland soils of the continental United States. *Global Change Biology* 23: 5468-5480.
47. Montalvo, A.E., Lopez, R.R., Parker, I.D., Silvy, N.J., Cooper, S.M., **Feagin, R.A.** 2017. Quantifying meso-mammal cave use in central Texas. *Wildlife Biology*: DOI: 10.2981/wlb.00320, 1-7
48. Kulawardhana, R.W., Popescu, S.C., & **Feagin, R.A.** 2017. Airborne lidar remote sensing applications in non-forested short stature environments: A review. *Annals of Forest Research* 60: 173-196.
49. Wood, M., Sheridan, R., **Feagin, R.A.**, Lacher, T.E., Castro, P. 2017. Comparison of land use change in payments for environmental services and National Biological Corridor Programs. *Land Use Policy* 63: 440-449.
50. Abdullah, M.M., **Feagin, R.A.**, Musawi, L. 2017. The use of empirical models to estimate soil erosion in arid ecosystems and the importance of native vegetation. *Environmental Monitoring and Assessment* 189: 78, 1-17.
51. Abdullah, M.M., **Feagin, R.A.**, Abdullah, M.T., Al-Musawi, L. 2017. Will autogenic succession be sufficient to recover from vegetation cover loss or will soil condition need to be addressed in the arid lands of Kuwait? *Arabian Journal of Geosciences* 10: 111, 1-14.
52. Huff, T., **Feagin, R.A.** 2017. Hydrological barrier as a cause of salt marsh loss. *Journal of Coastal Research* SI 77: 88-96.
53. Huff, T., **Feagin, R.A.** 2017. Restoring tidal equilibrium: Removing a hydrological barrier and lowering salinity at the Magnolia Inlet, Texas. *Journal of Coastal Research* SI 77: 97-103.
54. Modala, N.R., Ale, S., Goldberg, D.W., Olivares, M., Munster, C.L., Rajan, N., **Feagin, R.A.** 2017. Climate change projections for the Texas High Plains and Rolling Plains. *Theoretical and Applied Climatology* 129: 263-280.

55. Silva, R., Martínez, M.L., Odériz, I., Medoza-Baldwin, E., **Feagin, R.A.** 2016. Response of vegetated dune-beach systems to storm conditions. *Coastal Engineering* 109: 53-62.
56. Abdullah, M.M., **Feagin, R.A.**, Musawi, L., Whisenant, S., and Popescu, S. 2016. The use of remote sensing to develop a site history for restoration planning in an arid landscape. *Restoration Ecology* 24: 91-92.
57. **Feagin, R.A.**, Figlus, J., Zinnert, J.C., Sigren, J., Martínez, M.L., Silva, R., Smith, W.K., Cox, D., Young, D.R., Carter, G. 2015. Going with the flow or against the grain? The promise of vegetation for protecting beaches, dunes, and barrier islands from erosion. *Frontiers in Ecology and the Environment* 13: 203-210.
58. Kulawardhana, R.W., **Feagin, R.A.**, Popescu, S.C., Boutton, T.W., Yeager, K.M., & Bianchi, T.S. 2015. The role of elevation, relative sea level history, and vegetation transition in determining carbon distribution in *Spartina alterniflora* dominated salt marshes. *Estuarine, Coastal and Shelf Science* 154: 48-57.
59. Cooper, S.M., Jhala, S., Rollins, D., **Feagin, R.A.** 2015. Nocturnal movements and habitat selection of mesopredators encountering bobwhite nests. *Wildlife Society Bulletin* 39:138-146.
60. Kulawardhana, R.W., Popescu, S.C., **Feagin, R.A.** 2014. Fusion of lidar and multispectral data to quantify salt marsh carbon stocks. *Remote Sensing of the Environment* 154: 345-357.
61. Cline, M.D., **Feagin, R.A.**, &Yeager, K.M. 2014. Modeling salt marsh cover response to relative water level: Local fault motion versus global eustatic rise. *Journal of Coastal Research* 30: 1045-1054.
62. Colón-Rivera, R.J., **Feagin, R.A.**, West, J.B., Lopez-Figueroa, N., & Benítez-Joubert, R.J. 2014. Hydrological modification, saltwater intrusion, and tree water use of a *Pterocarpus officinalis* swamp in Puerto Rico. *Estuarine, Coastal and Shelf Science* 147: 156-167.
63. **Feagin, R.A.**, Williams, A.M., Popescu, S., Stuke, J., & Washington-Allen, R.A. 2014. The use of Terrestrial Laser Scanning (TLS) in dune ecosystems: The lessons learned. *Journal of Coastal Research* 30: 111-119.
64. **Feagin, R.A.**, Williams, A.M., Martínez, M.L., Pérez-Maqueo, O. 2014. How does the social benefit and economic expenditures generated by a rural beach compare with its sediment replacement cost? *Ocean & Coastal Management* 89: 79-87.
65. **Feagin, R.A.**, Toledo-Rodriguez, F., Colón-Rivera, R.J., Smeins, F., & Lopez, R. 2013. Species composition and differences in diversity among the *Pterocarpus officinalis* forested wetlands of Puerto Rico. *Caribbean Naturalist* 1(4): 1-25.
66. Bianchi, T.S., Allison, M.A., Zhao, J., Li, X., Comeaux, R.S., **Feagin, R.A.**, & Kulawardhana, R.W. 2013. Historical reconstruction of mangrove expansion in the Gulf of Mexico: Linking climate change with carbon sequestration in coastal wetlands. *Estuarine, Coastal and Shelf Science* 119: 7-16.
67. **Feagin, R.A.**, Yeager, K.M., Brunner, C.A., & Paine, J.G. 2013. Active fault motion in a coastal wetland: Matagorda, Texas. *Geomorphology* 199:150-159.
68. Jackson, N.L, Nordstrom, K.F., **Feagin, R.A.**, & Smith, W.K. 2013. Coastal geomorphology and restoration. *Geomorphology* 199: 1-7.
69. **Feagin, R.A.** 2013. Foredune restoration before and after hurricanes: Inevitable destruction, certain reconstruction. 2013. *Restoration of Coastal Dunes* (eds. M.L. Martínez, J.B. Gallego-Fernández, and P.A. Hesp.). Springer-Verlag, New York, pp. 93-106.
70. Pérez-Maqueo, O., Martínez, M.L., Lithgow, D., Mendoza-González, **Feagin, R.A.**, & G., Gallego-Fernández, J.B. 2013. The coasts and their costs. *Restoration of Coastal Dunes* (eds.

M.L. Martínez, J.B. Gallego-Fernández, and P.A. Hesp.). Springer-Verlag, New York, pp. 289-306.

71. Colón-Rivera, R.J., **Feagin, R.A.**, West, J.B., & Yeager, K.M. 2012. Salt marsh connectivity and freshwater versus saltwater inflow: Multiple methods including tidal gauges, water isotopes, and LIDAR elevation models. *Canadian Journal of Fisheries and Aquatic Sciences* 69: 1420-1432.
72. Yeager, K.M., Brunner, C.A., Kulp, M.A., Fischer, D., **Feagin, R.A.**, Schindler, K.J., Prouhet, J., & Bera, G. 2012. Significance of active growth faulting on marsh accretion processes in the lower Pearl River, Mississippi. *Geomorphology* 153-154: 127-143.
73. Parkes, M.L., Mora, M.A., & **Feagin, R.A.** 2012. Using scale, cover type, and GIS to evaluate nuisance cattle egret colony site selection. *Waterbirds* 35: 56-63.
74. Martínez, M.L., **Feagin, R.A.**, Yeager, K.M., Day, J., Costanza, R., Harris, J.A., Hobbs, R.J., López-Portillo, J., Walker, I.J., Higgs, E., Moreno-Casasola, P., Sheinbaum, J., & Yáñez-Arancibia, A. 2012. Artificial modifications of the coast in response to the Deepwater Horizon oil spill: Quick solutions or long term liabilities? *Frontiers in Ecology and the Environment* 10: 44-49.
75. Cline, M., **Feagin, R.A.**, Yeager, K.M., & Van Alstyne, J.M. 2011. Fault-induced wetland loss at Matagorda, Texas, USA: Land cover changes from 1943 to 2008. *Geocarto International* 26: 633-645.
76. **Feagin, R.A.**, Irish, J.L., Möller, I., Williams, A.M., Mousavi, M.E., & Colón-Rivera, R.J. 2011. Engineering properties of wetland plants with application to wave attenuation. *Coastal Engineering* 58: 251-255.
77. Alhamad, M.N., Alrababah, M.A., **Feagin, R.A.**, & Gharaibeh, A. 2011. Mediterranean drylands: The effect of grain size and domain of scale on landscape metrics. *Ecological Indicators* 11: 611-621.
78. **Feagin, R.A.**, Gonzalez, G., Martínez, M.L., & Costanza, R. 2010. Salt marsh zonal migration and ecosystem service change in response to global sea level rise: A case study from an urban region. *Ecology and Society* 15: 14.
79. **Feagin, R.A.**, Smith, W.K., Psuty, N.P., Young, D.R., Martínez, M.L., Carter, G.A., Lucas, K.L., Gibeaut, J.C., Gemma, J.N., & Koske, R.E. 2010. Barrier islands: Coupling anthropogenic stability with ecological sustainability. *Journal of Coastal Research* 26: 987-992.
80. Williams, A.M. & **Feagin, R.A.** 2010. *Sargassum* as a natural solution to enhance dune plant growth. *Environmental Management* 46: 738-747.
81. Costanza, R., Batker, D., Day, J., **Feagin, R.A.**, Martínez, M.L., & Roman, J. 2010. The perfect spill: Solutions for averting the next Deepwater Horizon. *Solutions* 1(5): 17-20.
82. **Feagin, R.A.**, Mukherjee, N., Shanker, K., Baird, A.H., Cinner, J., Kerr, A.M., Koedam, N., Sridhar, A., Arthur, R., Jayatissa, L.P., Lo Seen, D., Menon, M., Rodriguez, S., Shamsuddoha, M., & Dahdouh-Guebas, F. 2010. Shelter from the storm? Use and misuse of coastal vegetation bioshields for managing natural disasters. *Conservation Letters* 3: 1-11.
83. Nicolai, N., **Feagin, R.A.**, & Smeins, F.E. 2010. Spatial patterns of grass seedling recruitment imply predation and facilitation by harvester ants. *Environmental Entomology* 39: 127-133.
84. Benjamin, L.A., Fosgate, G.T., Ward, M.P., Roussel, A.J., **Feagin, R.A.**, & Schwartz, A.L. 2010. Attitudes towards biosecurity practices relevant to Johne's disease control on beef cattle farms. *Preventive Veterinary Medicine* 94: 222-230.

85. Benjamin, L.A., Fosgate, G.T., Ward, M.P., Roussel, A.J., **Feagin, R.A.**, & Schwartz, A.L. 2009. Benefits of obtaining test-negative Level 4 classification for beef producers in the Voluntary Bovine Johne's Disease Control Program. *Preventive Veterinary Medicine* 91: 280-284.
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88. Williams, A.M., **Feagin, R.A.**, Smith, W.K., & Jackson, N.L. 2009. Ecosystem impacts of Hurricane Ike: Perspectives of the Coastal Barrier Island Network (CBIN). *Shore & Beach* 77: 71-76.
89. **Feagin, R.A.**, & Williams, A.M. 2008. Sediment spatial patterns in a Hurricane Katrina overwash fan on Dauphin Island, Alabama, USA. *Journal of Coastal Research* 24: 1063-1070.
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91. **Feagin, R.A.** 2008. Vegetation's role in coastal protection. *Letters. Science* 320: 176-177.
92. LaFever, D.H., Lopez, R.R., **Feagin, R.A.**, & Silvy, N.J. 2007. Predicting the impacts of sea-level rise on an endangered lagomorph. *Environmental Management* 40: 430-437.
93. **Feagin, R.A.**, & Wu, X.B. 2007. The spatial patterns of functional groups and sand dune plant community succession. *Journal of Rangeland Ecology & Management* 60: 417-425.
94. He, W., **Feagin, R.A.**, Lu, J., Liu, W., Yan, Q., Xie, Z. 2007. Impacts of introduced *Spartina alterniflora* along an elevational gradient at the Jiuduansha Shoals in the Yangtze Estuary, suburban Shanghai, China. *Ecological Engineering* 29: 245-248.
95. **Feagin, R.A.**, Wu, X.B., & Feagin, T. 2007. Edge effects in lacunarity analysis. *Ecological Modelling* 201: 262-268.
96. Tong, C., **Feagin, R.A.**, Lu, J., Zhang, X., Zhu, X., Wang, W., & He, W. 2007. Ecosystem service values and restoration in the urban Sanyang Wetland of Wenzhou, China. *Ecological Engineering* 29: 249-258.
97. **Feagin, R.A.** & Wu, X.B. 2006. Spatial pattern and edge characteristics in restored terrace versus reference salt marshes in Galveston Bay. *Wetlands* 26: 1004-1011.
98. **Feagin, R.A.** 2005. Heterogeneity versus homogeneity: A conceptual and mathematical theory in terms of scale-invariant and scale-covariant distributions. *Ecological Complexity* 2: 339-356..
99. **Feagin, R.A.**, Sherman, D.J., & Grant, W.E. 2005. Coastal erosion, global sea-level rise, and the loss of sand dune plant habitats. *Frontiers in Ecology and the Environment* 3: 359-364.
100. **Feagin, R.A.** 2005. Artificial dunes created to protect property on Galveston Island, Texas: The lessons learned. *Ecological Restoration* 23: 89-94.
101. **Feagin, R.A.**, Wu, X.B., Smeins, F.E., Whisenant, S.G. & Grant, W.E. 2005. Individual versus community processes and pattern formation in a model of sand dune succession. *Ecological Modelling* 183: 435-449.
102. **Feagin, R.A.** & Wu, X.B. 2005. An experimental approach for quantifying the spatial interactions of plants under different treatment conditions. *Ecoscience* 21: 44-52.
103. **Feagin, R.A.** 2003. Relationship of second order lacunarity, Brownian motion, Hurst exponent, and pattern organization. *Physica A* 328: 315-321.



### **In Prep/Review/Revision Publications**

104. **Feagin, R.A.**, You, W., Kishné, A.Sz. The protective role of ‘green’ urban landscapes during extreme coastal disasters.
105. Maximiliano-Cordova, C., Silva, R., Mendoza, E., Chavez, V., Martinez, M.L., **Feagin, R.A.** Morphological performance of coastal dunes with a rocky vs. a geotextile core under storm conditions. *Journal of Marine Science and Engineering*.

### **Grants and Contracts**

- Saving the Integrity of Keller Bay and Sand Point Peninsula, \$394,313, Matagorda Bay Mitigation Trust, 2022-2025, PI.
- Hydrologic Monitoring and Modeling to Aid Restoration of the Welder Flats Marsh for Whooping Cranes, \$213,837, TxGLO, 2022-2025, PI.
- Freshwater Inflow Standards for East Matagorda Bay Wetlands: Lake Austin, \$99,669, NOAA/TxGLO, 2022-2024, PI.
- Integrated and Convergent Sea Level Adaptation for Urban and Rural Systems in the Gulf of Mexico Coastal Regions. \$9,999 out of ~\$149,577, NSF Sustainable Regional Systems program, 2022, co-PI.
- Short-Term Vulnerabilities and Long-Term Shifts in Tidal Wetland Productivity: A Big-Data, Remote-Sensing Approach. \$730,000, NASA, Ocean Biology and Biogeochemistry program, 2021-2024, PI.
- Informing Environmental Flow Standards for the Sustainability of Wetlands in East Matagorda Bay: Phase I Big Bogy. \$75,000, TWDB, 2020-2021, PI.
- Carancahua Bay Habitat Preservation and Enhancement (TX), Including Full Surveys, Design, and Permitting. \$421,993, NFWF/CEPRA-GLO, 2019-2022, PI.
- Essex Bayou Habitat Restoration Engineering: Phase I. \$200,000, NRDA/TPWD, 2018-2020, PI.
- Collaborative Research: Physics of Dune Erosion during Extreme Surge and Wave Events. \$225,969 out of \$1,134,514. NSF, Physical Oceanography program, 2018-2022, PI.
- Engineering with Nature: The Fusion of Coastal Engineering and Ecology. \$35,834, T3 Program, TAMU, 2018-2020, PI.
- In-Situ Measurements of Physical Forces and Biological Parameters in Coastal and Estuarine Systems, Galveston District. \$16,516 out of \$99,972. US Army Corps of Engineers. 2017-2018, co-PI.
- Restoration scoping and historical assessment along West Matagorda Bay, from Carancahua to Keller Bay. \$49,941. USFWS. 2017-2021, PI.
- Restoration of the Slop Bowl Marsh, Brazoria National Wildlife Refuge: Phase I Planning. \$92,442, NOAA/TxGLO, 2017-2019, PI.
- Study of Wetland Erosion Due to Storms through Combined Field, Laboratory, and Numerical Investigations, \$60,071 out of \$200,000, Texas Sea Grant, 2016-2018, co-PI.

- Linked Satellite and Soil Data to Validate Coastal Wetland “Blue Carbon” Inventories: Upscaled Support for Developing MRV REDD+ Protocols, \$5,820 out of \$1,496,498, NASA, 2014-2017, co-PI.
- Can Vegetation Reduce Sand Dune Erosion in the Gulf of Mexico? A Bi-national Research Experiment and Student Exchange, \$12,000 out of \$24,000, CONACyT/TAMU, 2014-2015, PI.
- Coastal Dynamics. \$6,700 out of \$40,000, Yucatan State/TAMU, 2014-2016, co-PI.
- The Carbon Budget of Tidal Wetlands and Estuaries of the Contiguous United States: A Synthesis Approach, \$162,236 out of \$1,214,388, NASA, 2014-2017, co-PI.
- Coastal Geomorphology and Restoration: 44th Annual Binghamton Geomorphology Symposium, \$31,900, NSF, 2013, co-PI.
- Fish Pass Tidal Hydrology Restoration, \$160,746, NOAA Restoration Center/Gulf of Mexico Sea Grant Tidal Hydrology Restoration program, 2014-2015, PI.
- Magnolia Inlet, \$99,064, CEPRA/TxGLO, 2014-2015, PI.
- Restoration of multiple wetlands in the Magnolia Beach area, Calhoun County: Phase I Planning, \$57,630, NOAA/TxGLO, 2013-2015, PI.
- Restoration and Management for Damaged Ecosystems in Kuwait, \$35,000, Kuwait Foundation for the Advancement of Sciences, 2013-2015, PI.
- Graduate Certificate in Natural Sustainability for Military Readiness, \$35,000, College of Agriculture & Life Sciences, TAMU, 2012, co-PI.
- Sea level rise impacts to a rare wetland forest and the Puerto Rican community, \$6,000, Mexican American and US Latino Research Center (MALRC), 2010-2012, PI.
- Collaborative Research: Eco-Geomorphic Coupling: Vegetation Transition and Sedimentary Responses to Faulting, \$113,414 out of \$315,098, NSF, Geomorphology and Landuse Dynamics Prgm, 2009-2012, PI.
- CBIN/BINET: Research Network for Sustaining Barrier Island Ecosystems in a Changing Global Environment, \$476,170, NSF, Research Coordination Networks Program, 2008-2013, co-PI.
- Vegetation Transition and Sedimentary Responses to Fault-induced Sea Level Rise, \$60,000, Dept. of Energy (DOE)- NICCR Program, 2008-2010, PI.
- Quantification of Hurricane Flooding Reduction by Vegetation along the Texas Coast, \$90,208 out of \$205,110 total, Texas Sea Grant, 2008-2010, co-PI.
- Linking Freshwater Inflows and Marsh Community Dynamics in San Antonio Bay to Whooping Cranes II, ~\$20,000 out of \$275,380 total, Guadalupe Blanco River Authority and San Antonio River Authority, 2007-2008, co-PI.
- Restoration of Sea Oats with Mycorrhizae on Galveston Island, \$52,780, NOAA/TxGLO, 2007-2009, PI.
- Sand dune plant inventory, \$10,000, USGS/HARC, 2006-2007, PI.
- Sargassum: Erosion and Biodiversity at the Beach, \$25,996, NOAA/TxGLO, 2006-2008, PI.
- Marsh accretion rates at restored and natural sites in Galveston Bay: Will sea-level rise drown them? \$60,150, NOAA/TxGLO, 2006-2008, PI.
- Computer Access/Instructional Technology Funds, \$25,000, TAMU, 2006, co-PI.

- Salt Marsh and Sand Dune Biological Erosion Control: Experimentation and Dissemination to Stakeholders, \$82,913, NOAA/TxGLO, 2005-2007, PI.
- Sargassum and Beach Erosion: Potential Costs and Benefits for Coastal Managers, \$20,253, NOAA/TxGLO, 2005-2007, PI.
- Remote Sensing: Picture the Future, \$5,000, TexasView/AmericaView, 2005, co-PI.
- ITS Center Cohort III Project – Landscape Ecology and Conservation, ~\$20,000 out of \$192,000, NSF, The Information Technology in Science (ITS) Center for Teaching and Learning, 2003-2006, co-PI.

### **Proceedings/Abstracts/Symposia/Invited**

- Najjar, R., Herrman, M., Fuentes, J.D., Feagin, R.A., Huff, T., Lerner, J. 2023. Long-term trends in tidal wetland gross primary production observed from satellite. American Geophysical Union Conference, San Francisco, CA.
- Lerner, J., Feagin, R.A., Huff, T. 2023. Which biomes on Earth are the most resistant and resilient to disturbance? American Geophysical Union Conference, San Francisco, CA.
- Najjar, R., Herrman, M., Fuentes, J.D., Feagin, R.A., Huff, T., Lerner, J. 2023. Long-term trends in tidal wetland gross primary production observed from satellite. American Geophysical Union Conference, San Francisco, CA.
- Erkoç, M., Feagin, R., S. Kameshwar, Mach, K., Mitsova, D. 2023. Integrated and convergent sea level rise adaptation for urban and rural systems in the Gulf of Mexico coastal regions. NSF workshop on Sustainable Regional Systems, Washington, D.C., invited.
- Herrmann, M., Najjar, R., Feagin, R., Fuentes, J., Huff, T., Lerner, J. 2023. Long-term trends in tidal wetland gross primary production from remote sensing. Coastal & Estuarine Research Foundation Conference 2023, Portland, OR.
- Lerner, J.E., Feagin, R.A., Huff, T.P., Najjar, R., Herrmann, M., Fuentes, J.D. 2023. Evidence of ecosystem-level adaptation to disturbance in tidal wetlands. Coastal & Estuarine Research Foundation Conference 2023, Portland, OR.
- Lerner, J.E., Feagin, R.A., Huff, T.P. 2023. Scaling patterns in ecosystem-level resistance and resilience. Ocean Biology and Biogeochemistry/Land Ocean Continuum Lightning Talk. NASA Carbon Cycle & Ecosystems Joint Science Workshop, College Park, MD.
- Lerner, J.E., Feagin, R.A., Huff, T.P. 2023. Tradeoffs in resilience and resistance in biomes to perturbation. Ocean Biology and Biogeochemistry/NASA Carbon Cycle & Ecosystems Joint Science Workshop, College Park, MD.
- Najjar, R., Herrmann, M., Fuentes, J.D., Feagin, R.A., Huff, T.P., Lerner, J.E. 2023. Long-term trends in tidal wetland gross primary product observed from satellite. Ocean Biology and Biogeochemistry/NASA Carbon Cycle & Ecosystems Joint Science Workshop, College Park, MD.
- Lerner, J.E., Feagin, R.A., Huff, T.P., Najjar, R., Herrmann, M., Fuentes, J.D. 2023. Evidence of ecosystem-level adaptation to disturbance. Ocean Biology and Biogeochemistry/NASA Carbon Cycle & Ecosystems Joint Science Workshop, College Park, MD.
- Feagin, R.A. 2023. Coastal ecosystems as a model for the design of resilient engineered systems. Workshop on Convergent Sea Level Rise Adaptation for Urban and Rural Systems in the Gulf of Mexico. University of Miami, Miami, FL. Invited.

- Lerner, J.E., Feagin, R.A., Huff, T.P. 2023. Alternative strategies in biomes to resist perturbation, yet convergence across biomes to a common resilience strategy. Life on a Dynamic Planet Symposium. Texas A&M University, College Station, TX.
- Huff, T.P., Feagin, R.A. 2022. Coastal engineering with Nature. Environmental & Water Resources Institute Houston Chapter Conference, American Society of Civil Engineers. Invited.
- Lerner, J.E., Feagin, R.A., Huff, T.P. 2022. Evidence of ecosystem-level adaptation to disturbance. Ocean Carbon & Biogeochemistry (OCB) C-saw extreme events workshop, North Carolina State University, Raleigh, NC.
- Feagin, R.A. 2022. Can we reduce coastal erosion by promoting healthy ecosystems? University of Liverpool, United Kingdom. Invited.
- Feagin, R.A. 2022. Coastal ecosystems as a model for the design of resilient engineered systems. University of Oxford, United Kingdom. Invited.
- Madewell, M.J., Feagin, R.A., Huff, T.P., Balboa, W. 2022. High times and dry times in a salt marsh: Budgeting for supplemental freshwater needs at the Big Boggy National Wildlife Refuge, USA. American Shore and Beach Preservation Association- Texas Coastal Summit. Corpus Christi, TX.
- Feagin, R.A., Huff, T.P., Collins, G.B., von Gynz-Guethle, L. 2022. A “sand engine” of dredged material to save Keller Bay, Texas. Western Dredging Association (WEDA), Dredging Summit and Expo '22, Houston, Texas. Invited.
- Lerner, J.E., Feagin, R.A., Huff, T.P. 2022. Ecosystem-level patterns in tidal wetland resistance and resilience. Ecological Society of America (ESA), 2022 ESA & CSEE Joint Meeting, Montreal, Canada.
- Feagin, R.A., Innocenti, R.A., Bond, H., Wengrove, M., Huff, T.P., Lomonaco, P., Chavez Ceron, V., Silva, R., Tsai, B., Figlus, J., Pontiki, M., Puleo, J., Hsu, T. 2022. Does coastal dune vegetation accelerate wave erosion during extreme events? Ocean Sciences Meeting - 2022, Honolulu, HI.
- Najjar, R., Herrmann, M., Arriola, J., Hutchings, J., Testa, J., Feagin, R. 2022. Organic carbon budget of estuaries and tidal wetlands of the contiguous United States. Ocean Sciences Meeting - 2022, Honolulu, HI.
- Kim, J.Y., Kaihatu, J., Chang, K-A., Huff, T., Feagin, R.A. 2021. Sediment transport and morphodynamics at salt marsh boundary in the shallow bay during cold front passages. AGU 2021, New Orleans.
- Pontiki, M., Puleo, J.A., Bond, H., Lee, S-B., Wengrove, M., Innocenti, R., Feagin, R.A. 2021. Simulating Montoloking dune erosion under hydrodynamics driven by Hurricane Sandy. AGU 2021, New Orleans. Invited.
- Madewell, M.J., Feagin, R.A., Huff, T.P., Balboa, W. 2021. Developing hydrologic flow standards to support saltwater wetlands. Young Coastal Scientists and Engineers Conference – Americas 2021, Myrtle Beach, South Carolina.
- Pontiki, M., Puleo, J.A., Bond, H., Lee, S-B., Wengrove, M., Feagin, R. 2021. Linkages between dune morphosedimentary processes and erosive hydrodynamics. AGU 2021, New Orleans, LA.
- Tsai, B., Rafati, Y., Hsu, T-J., Pontiki, M., Puleo, J.A., Lee, S-B., Wengrove, M., Cox, D.T., Feagin, R.A. 2021. Large-eddy simulation of cross-shore hydrodynamics under random waves in the surf and swash zones. Coastal Dynamics 2021, virtual.
- Innocenti, R.A., Feagin, R.A., 2021. TLP: Ecological/environmental considerations and select case studies. Western Dredging Association (WEDA) 2021, virtual, invited.

- Whitehead, S., Yeager, K.M., Feagin, R.A., Huff, T.P., Schindler, K.J. 2021. Fluxes and inventories of particulate organic carbon in a rapidly evolving growth-faulted coastal wetland. Coastal and Estuarine Research Federation (CERF) 2021, virtual.
- Feagin, R.A., Forbrich, I., Huff, T.P., Barr, J.G., Ruiz-Plancarte, J., Fuentes, J.D., Najjar, R.G., Vargas, R., Vázquez-Lule, A., Windham-Myers, L., Kroeger, K.D., Ward, E.J., Moore, G.W., Leclerc, M., Krauss, K.W., Stagg, C.L., Alber, M., Knox, S.H., Schäfer, K.V.R., Bianchi, T.S., Hutchings, J.A., Nahrawi, H., Noormets, A., Mitra, B., Jaimes, A., Hinson, A.L., Bergamaschi, B., King, J.S., Miao, G. 2020. Tidal wetland Gross Primary Production (GPP) across the continental United States, 2000-2019. Coastal and Estuarine Research Federation (CERF) 2021, virtual. Invited.
- Pontiki, M., Puleo, J.A., Lee, S-B., Wengrove, M., Huff, T., Feagin, R.A., Rafati, Y., Hsu, T. 2021. Sediment flux variability in the proximity of dunes. Coastal Dynamics 2021, TU Delft, Netherlands.
- Bond, H., Wengrove, M., Pontiki, M., Puleo, J., Feagin, R. 2020. Beach dune subsurface hydrodynamics and the formation of dune scarps. AGU 2020, virtual.
- Pontiki, M., Bond, H., Lee, S-B., Puleo, J.A., Wengrove, M.E., Feagin, R.A. 2020. Quantifying sediment transport across a rapidly eroding berm. AGU 2020, virtual.
- Pontiki, M., Bond, H., Lee, S-B., Puleo, J.A., Wengrove, M.E., Feagin, R.A. 2020. Physical modeling on dune erosion: Design, instrumentation and experimental observations. AGU 2020, virtual.
- Innocenti, R.A., Feagin, R.A., Charbonneau, B., Figlus, J. 2020. On the physical response of coastal foredune plants to wind and wave run-up. ASBPA National Conference 2020, virtual.
- Pontiki, M., Puleo, J.A., Bond, H., Wengrove, M., Innocenti, R., Feagin, R.A. 2020. Quantifying sediment transport across a rapidly eroding berm. ASBPA National Conference 2020, virtual.
- Feagin, R.A., Forbrich, I., Huff, T.P., Barr, J.G., Ruiz-Plancarte, J., Fuentes, J.D., Najjar, R.G., Vargas, R., Vázquez-Lule, A.L., Windham-Myers, L., Kroeger, K.D., Ward, E.J., Moore, G.W., Leclerc, M., Krauss, K.W., Stagg, C.L., Alber, M., Knox, S.H., Schäfer, K.V.R., Bianchi, T.S., Hutchings, J.A., Nahrawi, H., Noormets, A., Mitra, B., Jaimes, A., Hinson, A.L., Bergamaschi, B., King, J.S. 2020. Tidal wetland Gross Primary Production (GPP) across the continental United States, 2000-2018. AGU Ocean Sciences 2020, San Diego, California.
- Pontiki, M., Puleo, J.A., Feagin, R.A., Wengrove, M., Hsu, T-J., Cox, D. 2020. Wave-induced sediment transport in a coupled berm-dune system: a near prototype experiment. AGU Ocean Sciences 2020, San Diego, California.
- Bond, H., Wengrove, M., Puleo, J., Feagin, R., Montoya, B. 2020. Observations of water content and fluid pressure within the interior of an eroding beach dune. AGU Ocean Sciences 2020, San Diego, California.
- Kim, J-Y., Kaihatu, J.M., Chang, K-A., Feagin, R.A., Huff, T. 2020. Calculation of wetlands erosion rates using UAS and comparison with hindcast results from the hydrodynamic model. AGU Ocean Sciences 2020, San Diego, California.
- Pontiki, M., Puleo, J.A., Feagin, R.A., Wengrove, M., Hsu, T-J., Cox, D. 2020. Laboratory study of swash-zone dynamics on dune erosion. International Conference for Coastal Engineers 2020, Sydney, Australia.
- Feagin, R.A. 2019. Coastal erosion: Nature-based solutions. Resiliency Rising Conference. College Station, Texas. Invited.
- Kim, J-Y., Kaihatu, J.M., Chang, K-A., Feagin, R.A., Huff, T. 2019. Estimation of wind-wave induced erosion rates in wetlands on Galveston Island based on UAV photogrammetry. American Geophysical Union Conference. San Francisco, CA.

- Innocenti, R.A., Feagin, R.A., Charbonneau, B., Huff, T., Figlus, J., Puleo, J.A., Wengrove, M., Cox, D., Hsu, T., 2019. Relating dune grass structure to wind- and wave-induced lift forces and drag moments, and the propensity to uproot during extreme events. 6<sup>th</sup> Young Coastal Scientists and Engineers Conference- Americas. Corvallis, OR.
- Pontiki, M., Innocenti, R., Bond, H., Huff, T., Puleo, J.A., Feagin, R.A., Wengrove, M., Cox, D. 2019. Experimental investigation of the response of vegetated dunes to extreme wave conditions. 6<sup>th</sup> Young Coastal Scientists and Engineers Conference- Americas. Corvallis, OR.
- Feagin, R.A., Huff, T.P., 2019. Hydrological restoration of a large area of salt marshes from Magnolia Beach to Indianola, Texas. Texas Sea Grant Conference. College Station, TX. Invited.
- Sun, S-H., Chuang, W-L., Chang, K-A., Kim, J.Y., Kaihatu, J.M., Huff, T., Feagin, R.A. 2019. Imaging based nearshore bathymetry measurement using an unmanned aircraft system. Texas Sea Grant Conference. College Station, TX.
- Huff, T.P., Feagin, R.A., Sun, S-H., Kim, J.Y., Chang, K-A., Kaihatu, J. 2019. Insight into the physical signatures of marsh erosion. Texas Sea Grant Conference. College Station, TX.
- Kim, J.Y., Kaihatu, J.M., Chang, K-A., Feagin, R.A., Huff, T. 2019. Effects of cold-front induced waves on the erosion of Galveston Island wetlands: Wave-hydrodynamic-sediment transport model. Texas Sea Grant Conference. College Station, TX.
- Weber, C.K., Feagin, R.A., Buzan, D., Huff, T.P., Tram, T., Kirk, N. 2019. Monitoring for understanding. The ecological and morphologic response to a broad low-crested rock breakwater. Coastal Sediments '19. Tampa/St. Petersburg, FL, 2019.
- Feagin, R.A., Duran Vinent, O., Figlus, J., Rodriguez-Iturbe, I. 2018. Scientific framework for EWN and related research. ASBPA Conference, Galveston, TX, 2018.
- Innocenti, R., Feagin, R., Huff, T. 2018. The role of Sargassum macrotidal wrack in reducing coastal erosion. ASBPA Conference, Galveston, TX, 2018.
- Huff, T., Feagin, R., Figlus, J. 2018. Enhanced Tide Model: Improving tidal predictions with integration of wind data. ASBPA Conference, Galveston, TX, 2018.
- Feagin, R.A. 2018. Engineering With Nature: Ecosystem Basics. USACE Philadelphia District. Rehoboth, DE. Invited.
- Huff, T.P., Feagin, R.A., Chang, K-A., Kaihatu, J. 2018. Insight into the physical signature of marsh erosion. Seminar in Geospatial Sciences. College Station, TX. Invited.
- Feagin, R.A. 2018. What is the scientific framework for Engineering With Nature? Ocean Engineering Seminar. College Station, TX. Invited.
- Feagin, R.A. 2017. Harvey aftermath: Examples of collaborative opportunities. CSEC meeting. Galveston, TX. Invited.
- Huff, T.P., Feagin, R.A. 2017. Wind tides. CSEC meeting. Galveston, TX. Invited.
- Feagin, R.A. 2017. Living shorelines. Engineering With Nature workshop. Vicksburg, MS. Invited.
- Huff, T.P., Feagin, R.A., Chang, K-A., Kaihatu, J. 2017. Marsh edge erosion. Engineering With Nature workshop. Vicksburg, MS. 2017.
- Najjar, R., Herrmann, M., Alexander, R., Boyer, E.W., Burdige, D., Butman, D., Cai, W.-J., Canuel E.A., Chen, R.F., Friedrichs M.A.M., Feagin, R.A., Griffith, P., Hinson, A.L., Holmquist, J.R., Hu, X., Kemp, W.M., Kroeger, K.D., Mannino, A., McCallister, S.L., McGillis, W.R., Mulholland, M.R., Pilskaln, C., Salisbury, J., Signorini, S., St-Laurent, P., Tian, H., Tzortziou, M.A., Vlahos, P., Wang, Z.A., Zimmerman, R.C. 2017. Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern

North America. Coastal and Estuarine Research Federation Conference, Providence, Rhode Island. Invited.

- Kim, J.Y., Huff, T.P., Feagin, R.A., Chang, K-A, Kaihatu, J.M., Sun, S-H. 2017. Investigations of barrier island wetland erosion due to wind-induced waves through combined field, laboratory, and numerical simulation: Is the water level change related to the erosion rate of salt marsh edge? AGU Conference, New Orleans.
- Feagin, R.A., Huff, T.P., 2017. Hydrological restoration of a large area of salt marshes from Magnolia Beach to Indianola, Texas. Coastal and Estuarine Research Federation Conference. Providence, Rhode Island, 2017. Invited.
- Johns, N., Garmany, K., Guillen, G.J., Feagin, R.A., White, E., Wang, Y., Fritz-Grammond, K., Walther, P. 2017. Bring the freshwater: The Anahuac Wetlands Restoration Project. Coastal and Estuarine Research Federation Conference. Providence, Rhode Island, 2017. Invited.
- Feagin, R.A. 2017. The future of our coasts. TAMU Office of Sustainability workshop. Invited.
- Hinson, A.L., Feagin, R.A. 2017. Coastal wetland soil organic carbon fates and fluxes in the conterminous United States. Society of Wetland Scientists Conference 2017. San Juan, Puerto Rico. Invited.
- Huff, T.P., Feagin, R.A. 2016. Hydrologic effects of a tidal barrier on a Texas salt marsh. Restore America's Estuaries Conference 2016. New Orleans. 2016
- Gallego-Fernández, J.B., Martínez, M.L., Feagin, R., Zunzunegui, M. 2016. Germination patterns of native and invasive *Oenothera drummondii* populations. XIV International Society of Mediterranean Ecology (MEDECOS) and XIII Spanish Association for Terrestrial Ecology (AEET) Conference. Seville, Spain. 2016.
- Feagin, R.A., Najjar, R.G., Fuentes, J.D., Ruiz-Plancarte, J., Coleman, G. 2016. Mapping the production and storage of blue carbon across tidal wetlands of the contiguous United States. AGU Conference. San Francisco. 2016.
- Windham-Myers, L., Holmquist, J.R., Woo, I., Bergamaschi, B.A., Byrd, K.B., Crooks, S., Drexler, J.Z., Feagin, R.A., Ferner, M.C., Gonnee, M.E., Kroeger, K.D., Megonigal, P., Morris, J.T., Schile, L.M., Simard, M., Sutton-Grier, A., Takekawa, J., Troxler, T., Weller, D. Leveraging field and remotely sensed data to reduce uncertainty in national inventories of wetland carbon fluxes: Year 2 findings from NASA "Blue" Carbon Monitoring System. AGU Conference. San Francisco. 2016.
- Wei, J., Yeager, K.M., Matocha, C.J., Feagin, R.A. 2016. Short-term surface elevation variations at Matagorda Peninsula, Texas: A response produced by shrink-and-swell clays? AGU Conference. San Francisco. 2016.
- Feagin, R.A. 2016. The promise of vegetation for shoreline protection. Laverne Weber Fellowship seminar speaker. Hatfield Marine Science Center, Oregon State University. Invited.
- Feagin, R.A. 2016. The future of our beaches, dunes, and wetlands. Science on Tap speaker. Hatfield Marine Science Center, Oregon State University. Invited.
- Feagin, R.A., Kishné, A.Sz., You, W. 2016. What landscape features provide the greatest protection during extreme coastal storms? Invited seminar, Cascadia Lifelines Program, Coastal and Ocean Engineering, Oregon State University. Invited.
- Ortiz, J., Comoto, J., Feagin, R., Popescu, S., Lonesome, M., Huff, T. 2016. Using drones for monitoring crop growth and measuring waves. CANIETI Closing Workshop, College Station, Texas. Invited.
- Feagin, R.A. 2016. Artificial islands: Engineering novel ecosystems. ESA Conference, Fort Lauderdale, Florida. Invited.

- Feagin, R.A., Furman, M., Salgado, K., Martinez, M.L., Huff, T., Silva, R., Sigren, J., Figlus, J., Cox, D.T. 2016. The promise of vegetation for beach and dune protection. ASBPA Conference, New Jersey.
- Eubanks, K., Feagin, R.A., Furman, M., Salgado, K., Martinez, M.L. Coastal plant attributes and its effect on erosion along the Gulf of Mexico. Ecological Integration Symposium, College Station, Texas. April 1, 2016.
- Sigren, J., Figlus, J., Highfield, W., Armitage, A., Feagin, R.A. 2015. Evaluating the economic effects of coastal dunes in reducing storm-induced property damage: Hurricane Ike and Texas coast case study. ASCE Coastal Structures and Solutions to Coastal Disasters Conference. Sept. 9, 2015.
- Furman, M.R., Salgado, K., Martinez, M.L., Feagin, R.A., Huff, T., Silva, R., Cox, D. 2015. Can vegetation reduce sand dune erosion in the Gulf of Mexico? A bi-national research experiment and student exchange. CONACyT Conference. Invited.
- Feagin, R.A. 2015. Sea level rise and coastal sustainability in the Caribbean. Caribbean and Atlantic Studies at Texas A&M Conference. Oct. 2, 2015. Invited.
- Feagin, R.A. 2015. Coastal geomorphic effects of sea level rise. University of Houston, Texas A&M University, many others as part of distributed on-line course entitled “Sea level rise and saline intrusion into coastal habitats”. Sept. 18, 2015. Invited.
- Feagin, R.A., Figlus, J., Zinnert, J.C., Sigren, J., Martínez, M.L., Silva, R., Smith, W.K., Cox, D., Young, D.R., Carter, G. 2015. The promise of vegetation for protecting constructed dunes and coastal infrastructure from erosion. Dune Management Challenges on Developed Coasts, American Shore and Beach Association. Kitty Hawk, NC. October 2015. Invited.
- Feagin, RA, Eriksson, ME, Hinson, AL, Najjar, RG, Kroeger, KD, Herman, M, Holmquist, J, Windham-Myers, L, Bianchi, TS. 2015. A blue carbon soil database: Tidal wetland stocks for the US National Greenhouse Gas Inventory. AGU 2015. San Francisco, CA. Invited.
- Windham-Myers, L., Holmquist, J., Bergamaschi, B., Byrd, K., Callaway, J., Crooks, S., Drexler, J., Feagin, R., Ferner, M., Gonneea, M., Magonigal, P., Morris, J., Schile, L., Simard, M., Sutton-Grier, A., Takekawa, J., Troxler, T., Weller, D., Woo, I. 2015. A carbon monitoring system approach to US coastal wetland carbon fluxes: Progress towards a Tier II accounting method with uncertainty quantification. AGU 2015. San Francisco, CA.
- Feagin, RA, Kulawardhana, RW, Hinson, AL, Popescu, SC, Bianchi, TS, Yeager, KM, Najjar, RG, Kroeger, KD, Windham-Myers L. 2015. Spatial quantification of blue carbon at landscape and continental scales. Conference on Capitalizing on Coastal Blue Carbon. 2015. Brockton, MA. May 4, 2015.
- Sekoni, T., Feagin, R. 2015. Point pattern analysis to elucidate secondary successional patterns during Chinese Tallow Tree invasion. Invited presentation to US Army Corps of Engineers, Engineering Research and Development Center.
- Kulawardhana, R.W., Feagin, R.A., Popescu, S.C., Boutton, T.W. & Tchounwou, P. B. 2015. The role of elevation, relative sea level history, and land cover conversions in determining carbon distributions in *Spartina alterniflora* dominated salt marshes in Galveston, Texas. Third International Conference on Oceanography, June 22-24, 2015, Philadelphia, Pennsylvania, USA.
- Feagin, RA, Kulawardhana, RW, Hinson, AL, Popescu, SC, Bianchi, TS, Yeager, KM, Najjar, RG, Kroeger, KD, Windham-Myers L. 2015. Spatial quantification of blue carbon at landscape and continental scales. NASA Carbon Cycle & Ecosystems Joint Science Workshop. College Park, MD.
- Popescu, S., Sheridan, R., Zhao, K., Ku, N-W., Vogel, J., Moore, G., Feagin, R., Kulawardhana, R. 2015. Lidar remote sensing of vegetation canopy structure and biophysical parameters at multiple scales. NASA Carbon Cycle & Ecosystems Joint Science Workshop. College Park, MD.



- Najjar, R., Bianchi, T., Fuentes, J., Hermann, M., Cai, W.-J., Feagin, R., Kemp, M., Kroeger, K., Tzortziou, M., Alin, S., Hu, C., Evans, W. 2015. The carbon budget of tidal wetlands and estuaries of the contiguous United States: a synthesis approach. NASA Carbon Cycle & Ecosystems Joint Science Workshop. College Park, MD.
- Windham-Myers, Bergamaschi, B., Drexler, J., Byrd, K., Ferner, M., Megonigal, P., Schile, L., Weller, D., Kroeger, K., Crooks, S., Morris, J., Sutton-Grier, A., Callaway, J., Simard, M., Woo, I., Takekawa, J., Feagin, R., Troxler, T. 2015. Developing Policy-Relevant 'Blue Carbon' Protocols for Monitoring and Verification - Linking soil and satellite data to reduce uncertainty in coastal wetland carbon storage fluxes for national GHG inventories and market incentives. NASA Carbon Cycle & Ecosystems Joint Science Workshop. College Park, MD.
- Abdullah, M.M., Feagin, R.A., Musawi, L. 2015. The use of empirical models to estimate soil erosion in arid ecosystems and the importance of native vegetation. International Conference on Resource Conservation and Restoration Ecology, 2015. Dubai, United Arab Emirates.
- Abdullah, M.M., Feagin, R.A., Musawi, L. 2015. Will autogenic succession be sufficient to recover from vegetation cover loss or will soil condition need to be addressed in the arid lands of Kuwait? Society for Ecological Restoration Conference, 2015. Manchester, England.
- Abdullah, M.M., Feagin, R.A., Musawi, L., Whisenant, S., and Popescu, S. 2015. The use of remote sensing to develop a site history for restoration planning in an arid landscape: Umm Nigga, Kuwait. United Nations Convention to Combat Desertification Conference 2015. Mexico.
- Feagin, R., Kulawardhana, W., Hinson, A., Popescu, S., Bianchi, T., Yeager, K., Najjar, R., Kroeger, K., Windham-Myers, L. 2015. Spatial quantification of blue carbon at landscape and continental scales. North American Carbon Program Conference 2015. Washington, DC.
- Hinson, A., Feagin, R.A. 2015. The geographic concentration of blue carbon in the continental US: Specific estuaries, states, and wetland types for carbon sequestration projects. North American Carbon Program Conference 2015. Washington, DC.
- Kulawardhana, R.W., Popescu, S.C., & Feagin, R.A. 2014. Carbon distributions in *Spartina alterniflora* dominated salt marshes in Galveston, Texas: The role of elevation, relative sea level history, and land cover conversions. American Geophysical Union Conference 2014.
- Brunner, C.A., Yeager, K.M., Feagin, R.A. 2014. Foraminiferal evidence for sediment deformation caused by late Holocene faulting in a backbarrier lagoon, Matagorda Texas, USA. American Geophysical Union Conference 2014.
- Feagin, R.A., Hinson, A. 2014. The geographic concentration of blue carbon in the continental US: Specific estuaries, states, and wetland types for carbon sequestration projects. American Geophysical Union Conference 2014.
- Hinson, A., Feagin, R.A. 2014. The concentration of blue carbon in the continental US: The potential of specific estuarine basins, states, and wetland types for carbon sequestration projects. Restore America's Estuaries Conference 2014.
- Hinson, A., Feagin, R.A. 2014. The geographic concentration of blue carbon in soil across the continental US: The early results. Coastal CARBON Synthesis Workshop, Ocean Carbon & Biogeochemistry Program, North American Carbon Program.
- Abdullah, M., Feagin, R.A., Al Musawi, L., & Whisenant, S.G. 2014. Assessing the current condition of damaged ecosystem – Case study for Umm Negga in the State of Kuwait. Conference on Ecological and Ecosystem Restoration 2014.
- Feagin, R.A., Huff, T., Hinson, A., Biedenharn, A., and Moya, J. 2014. Removing barriers to tidal hydrology at marshes in Magnolia Beach and Indianola, Texas. Conference on Ecological and Ecosystem Restoration 2014.
- Feagin, R.A. 2014. Ecología de la costa. Invited by Gobierno de Estado de Yucatán, México.
- Feagin, R.A. 2013. Can salt marsh plants attenuate waves and reduce soil erosion? Invited at Universidad Nacional Autónoma de México.

- Feagin, R.A., & Martinez, M.L. 2013. Blast off on a bi-national beach: The ecological economics of constructing the SpaceX launch facility on the Texas-Mexico border. American Shore & Beach Preservation Association Conference 2013.
- Popescu, S.C., Zhao, K., Feagin, R., Gatziolis, D., Sheridan, R., Srinivasan, S., Ku, N-W, & Kulawardhana, W. 2013. From grass to forest biomass: uncertainty estimates with lidar remote sensing. American Geophysical Union Conference 2013.
- Kulawardhana, R.W., Popescu, S.C., & Feagin, R.A. 2013. Spatial and temporal variation in carbon deposition in a Galveston, Texas salt marsh: The role of elevation and relative sea level history. American Geophysical Union Conference 2013.
- Wolfe, P.C., Yeager, K.M., Schindler, K.J., Feagin, R.A., & Brunner, C.A. 2013. Holocene sedimentary responses to growth faulting in a back-barrier setting: East Matagorda Peninsula, Texas. American Geophysical Union Conference 2013.
- Wolfe, P.C., Yeager, K.M., Schindler, K.J., Feagin, R.A., & Brunner, C.A. 2013. Holocene sedimentary responses to growth faulting in a back-barrier setting: East Matagorda Peninsula, Texas. American Association of Petroleum Geologists/Society of Exploration Geophysicists Student Expo 2013.
- Feagin, R.A., Yeager, K.M., Brunner, C.A., & Paine, J.G. 2013. Active fault motion in a coastal wetland: Matagorda, Texas. Binghamton Geomorphology Symposium 2013.
- Jackson, N.L., Nordstrom, K.F., Feagin, R.A., & Smith, W.K. 2013. Coastal geomorphology and restoration. Binghamton Geomorphology Symposium 2013.
- Abdullah, M., Feagin, R.A., Whisenant, S.G., & Al Musawi, L. 2013. Restoration and management for damaged ecosystems in Umm Nigaa in the State of Kuwait. Society for Ecological Restoration 2013.
- Emmons, R., & Feagin, R.A. 2013. Geographic Information Systems (GIS) analysis of sea level rise impacts on indigenous lands. Texas A&M University Student Research Week, 2013.
- Bianchi, T.S., Allison, M.A., Zhao, J., Li, X., Comeaux, R.S., Feagin, R.A., & Kulawardhana, R.W. 2013. Historical reconstruction of mangrove expansion in the Gulf of Mexico: Linking climate change with carbon sequestration in coastal wetlands. Texas Mangrove Research Symposium. Mission-Aransas National Estuarine Research Reserve. February 28, 2013.
- Kulawardhana, R.W., Popescu, S.C., Feagin, R.A., Reeves, M.C., & Washington-Allen, R.A. 2012. Regional scale assessment of rangeland degradation and its key drivers using remotely sensed vegetation net primary productivity data. Proceedings of the Geo-information Technology for Natural Disaster Management – “Reduce Exposure to Risk” Conference. Sri Lanka.
- Kulawardhana, R.W., Popescu, S.C., & Feagin, R.A. 2012. Vegetation height models to characterize salt marsh vertical structure using airborne Lidar. ILMF 2013.
- Kulawardhana, R.W., Popescu, S.C., & Feagin, R.A. 2012. Fusion of Lidar and multispectral data to quantify carbon stocks in Galveston saltmarshes. ASPRS 2012.
- Kulawardhana, R.W., Popescu, S.C., & Feagin, R.A. 2012. Lidar based vegetation height models to quantify carbon stocks in Galveston saltmarshes. AGU 2012.
- Feagin, R.A., Yeager, K.M., Brunner, C.A., & Paine, J.G. 2012. Fault-driven sea level rise, accretion, and land loss in a barrier island salt marsh. University of Kentucky. Invited.
- López-Figueroa, N.B., Colón-Rivera, R.J., West, J.B., & Feagin, R.A. Using isotope hydrology to understand climate change impacts on a coastal wetland in Puerto Rico. ASLO 2012.
- Feagin, R.A., Yeager, K.M., Brunner, C.A., & Paine, J.G. 2011. Fault-driven sea level rise, accretion, and land loss in a barrier island salt marsh. CERF 2011.
- Zayas, C.M., Colón-Rivera, R.J., & Feagin, R.A. 2011. Bioluminescence in the Humacao Natural Reserve? Population dynamics of *Pyrodinium bahamense*. ESA 2011.

- Colón-Rivera, R.J., Feagin, R.A., & West, J.B. 2011. Effects of sea level rise on a rare forested wetland in Puerto Rico. ESA 2011.
- Colón-Rivera, R.J., Feagin, R.A. 2011. Maximizing research efforts through PhD-mentored UREs: The Humacao Natural Reserve Research Group. ESA 2011.
- Jackson, N.L., Nordstrom, K.F., Smith, W.K., & Feagin, R.A. 2011. The 44<sup>th</sup> Binghamton Geomorphology Symposium: Coastal Geomorphology and Restoration. The 43<sup>rd</sup> Binghamton Geomorphology Symposium. Mobile, Alabama.
- Colón-Rivera, R.J., Feagin, R.A., West, J.B., & Yeager, K.M. 2011. Hydrological connectivity in salt marsh ponds: Multiple methods including tidal gauges, water isotopes, and LIDAR elevation. Isoscapes Conference 2011.
- Feagin, R.A. 2011. Restoration versus restitution: Are there some ecosystems that we can't directly fix? Roadmap to Restoring the Ecological Health of the Gulf of Mexico after the BP Oil Spill, International Union for the Conservation of Nature Symposium, Society of Ecological Restoration International Conference 2011. Invited.
- Feagin, R.A. 2011. Coastal oil spills before and after the Deepwater Horizon: Integrating impact assessment with restoration. Society of Ecological Restoration International Conference 2011 and Society of Environmental Toxicology and Chemistry Conference 2011. Invited.
- Muhl, R.M.W., Roelke, D.L., & Feagin, R.A. 2011. Potential algicidal effects of *Sargassum natans* on *Karenia brevis*. 6<sup>th</sup> Symposium on Harmful Algae in the US. Austin, TX Nov. 13-17, 2011.
- Colón-Rivera, R.J., Feagin, R.A., & West, J.B. 2011. Effects of sea level rise on a rare forested wetland in Puerto Rico. ASLO 2011.
- Zayas, C.M., Colón-Rivera, R.J., & Feagin, R.A. 2011. Bioluminescence in the Humacao Natural Reserve? Population dynamics of *Pyrodinium bahamense*. ASLO 2011.
- Feagin, R.A., Colón-Rivera, R.J., West, J.B., & Yeager, K.M. 2011. Hydrological connectivity in salt marsh ponds: Multiple methods including tidal gauges, water isotopes, and LIDAR elevation models. ASLO 2011.
- Feagin, R.A. (2010). Coastal Restoration Crossroads. Restoration Institute, University of Victoria. Invited.
- Feagin, R.A. (2010). Climate Change and Coastal Restoration. Coastal Restoration Crossroads. Restoration Institute, University of Victoria. Invited.
- Mukherjee, N., Feagin, R.A., Shanker, K., Baird, A.H., Cinner, J., Kerr, A.M., Koedam, N., Sridhar, A., Arthur, R., Jayatissa, L.P., Lo Seen, D., Menon, M., Rodriguez, S., Shamsuddoha, M., & Dahdouh-Guebas, F. (2010). Shelter from the Storm? The Use and Misuse of Bioshields. Society of Conservation Biology Meeting 2010.
- Mukherjee, N., Feagin, R.A., Shanker, K., Baird, A.H., Cinner, J., Kerr, A.M., Koedam, N., Sridhar, A., Arthur, R., Jayatissa, L.P., Lo Seen, D., Menon, M., Rodriguez, S., Shamsuddoha, M., & Dahdouh-Guebas, F. (2010). Shelter from the storm? Use and misuse of coastal vegetation bioshields for managing natural disasters. 10th Young Marine Scientists' Day of the Flanders Marine Institute (VLIZ).
- Smith, W.K., Feagin, R.A., Jackson, N.L., Nordstrom, K. Carter, G. (2010). Coastal Barrier Island Network (CBIN). AGU Meeting of the Americas 2010.
- Prouhet, J., Yeager, K.M., Brunner, C.A., Feagin, R.A., Kulp, M.A., Schindler, K.J. Penrose, B. (2010). Autocompaction Rates Across a Suspected Growth Fault, Pearl River Marsh, Louisiana, USA. AGU Meeting of the Americas 2010.
- Yeager, K.M., Feagin, R.A. Brunner, C.A., Kulp, M.A., Schindler, K.J., Prouhet, J., and Fischer D. (2010). Significance of active growth faulting on northern Gulf of Mexico coastal marsh accretion processes. AGU Meeting of the Americas 2010.
- Feagin, R.A. (2009). Coastal Restoration and Ecosystem Services in a Changing World. Restoration Institute, University of Victoria. Invited.

- Parkes, M.P., Mora, M., & Feagin, R. (2009). Using scale, cover type, and GIS to evaluate nuisance egret colony site selection. Waterbird Society Conference 2009.
- Feagin, R.A., Yeager, K.M., Paine, J., & Brunner, C. (2009). Coastal wetland responses to fault-induced sea level rise. Invited at University of Southern Mississippi.
- Feagin, R.A., Yeager, K.M., Paine, J., & Brunner, C. (2009). Coastal wetland responses to fault-induced sea level rise. Invited at Baylor University.
- Irish, J.L., Feagin, R.A. (2009). Quantification of hurricane flooding reduction by vegetation along the Texas coast. Texas Seagrass Researcher Conference 2009.
- Williams, A.M., Feagin, R.A., Smith, W.K., & Jackson, N.L.. (2009). The future of coastal research and management: Six major themes identified by the Coastal Barrier Island Network (CBIN). America's Shore and Beach Preservation Association National Coastal Conference 2009.
- Williams, A.M., Feagin, R.A., Smith, W.K., & Jackson, N.L.. (2009). The future of coastal research and management: Six major themes identified by the Coastal Barrier Island Network (CBIN). Ecological Society of America Conference 2009.
- Williams, A.M., Feagin, R.A., Smith, W.K., & Jackson, N.L.. (2009). Critical Areas for Future Research & Science-based Management Decisions for Barrier Island Ecosystems: Perspectives of the Coastal Barrier Island Network (CBIN). Texas General Land Office Coastal Conference 2009: Caring for the Coast.
- Williams, A.M., Feagin, R.A., Smith, W.K., & Jackson, N.L.. (2009). Critical Areas for Future Research & Science-based Management Decisions for Barrier Island Ecosystems: Perspectives of the Coastal Barrier Island Network (CBIN). Sargassum Symposium 2009, University of Texas Marine Science Institute.
- Williams, A.M., Feagin, R.A., Smith, W.K., & Jackson, N.L.. (2009). Lessons Learned from Hurricane Ike: Perspectives of the Coastal Barrier Island Network (CBIN). Ecological Integration Symposium, Texas A&M University.
- Irish, J.L., Feagin, R.A., Mousavi, M.E., & Williams, A. (2008). Quantification of hurricane flooding reduction by vegetation along the Texas Coast: Wave basin experimental plans and preliminary findings. Texas Seagrass Researcher Conference 2008.
- Feagin, R.A., & Yeager, K.M. (2008). Salt marsh accretion and vertical erosion rates on the Upper Texas Coast. Caring for the Coast, Texas General Land Office Conference 2008.
- Benjamin, L.A., Fosgate, G.T., Ward, M.P., Roussel, A.J., Feagin, R.A., and Schwartz, A.L. (2008). Attitudes towards biosecurity practices on beef cattle farms with special reference to Johne's disease control. CRWAD Conference 2008.
- Feagin, R.A. (2008). Barrier Islands. Invited at Texas General Land Office.
- Feagin, R.A. (2008). Coastal ecosystems in a changing global climate. Invited at University of Hawaii.
- Williams, A.M., Feagin, R.A., Kreuter, U., Peterson, T. (2008). Public participation through collaboration of the Sargassum Policy Committee in Galveston Island, TX. Abstract at Ecological Society of America Conference 2008.
- Williams A.M., Feagin, R.A. (2008). The Effects of Sargassum sp, a brown algae, on dune plant growth of species *Panicum amarum*. Sargassum Symposium 2008, North Padre Island, Texas.
- Williams A.M., Feagin, R.A. (2008). The Effects of Sargassum sp, a brown algae, on dune plant growth of species *Panicum amarum*. Texas A&M's Student Research Week.
- Feagin, R.A. (2008). Plants and salt marsh erosion. Invited at University of Cambridge. Cambridge, UK.
- Feagin, R.A., Lozada-Bernard, S., Ravens, T., & Irish, J. (2007). Do plants really prevent salt marsh erosion? Abstract at Estuarine Research Federation Conference, Providence, RI.

- Williams, A., & Feagin, R.A. (2007). The impacts of *Sargassum* algae on beach elevation and dune plant growth. American Shore and Beach Preservation Assoc./ TxGLO Conference, Galveston, TX.
- Williams A.M., Feagin, R.A. (2007). The Effects of *Sargassum* sp, a brown algae, on dune plant growth of species *Panicum amarum*. Ecological Society of America/Society for Ecological Restoration International Joint Conference 2007.
- Feagin, R.A., Lozada-Bernard, S., & Ravens, T. (2007). Do plants really prevent salt marsh erosion? Abstract at Ecological Society of America Conference, San Jose, CA 2007.
- Feagin, R.A. (2007). Coastal landscape ecology from individual to landscape scales. Invited at Univ. California at Riverside.
- Feagin, R.A., Lozada-Bernard, S., & Ravens, T. (2007). Do plants really prevent wave erosion along the edge of a salt marsh? Invited at Ocean Engineering Dept. Coll. Stat., TX.
- Feagin, R.A., Lozada-Bernard, S., & Ravens, T. (2007). Do plants really reduce salt marsh erosion in Galveston Bay? Proceedings of Galveston Bay Estuary Program Conference 2007. Galveston, TX.
- Williams, A.M., & Feagin, R.A. (2006). Sediment spatial patterns in a Hurricane Katrina overwash fan on Dauphin Island, Alabama. Restore America's Estuaries Conference, New Orleans, LA.
- Feagin, R.A., Lozada-Bernard, S., & Ravens, T. (2006). Do plants really reduce salt marsh erosion? Invited NOAA/GLO presentation, Galveston, TX.
- LaFever, D.H., Lopez, R.R., Feagin, R.A., & Silvy, N.J. (2006) Predicted impacts of sea-level rise on the endangered Lower Keys Marsh Rabbit. Society for Conservation Biology, San Jose, CA.
- Feagin, R.A. (2005) The coastal squeeze in Galveston: New models for global sea-level rise, local erosion, and the loss of coastal habitat. Coastal Erosion Technical Conference, 2005.
- Feagin, R.A. and Wu, X.B. (2005) Spatial pattern quantification using remotely-sensed data in restored versus reference marshes. Invited at National Marine Fisheries Service, Southeast Fisheries Science Center, Galveston Laboratory.
- Feagin, R.A., Vernon, Z., Cutrell, C., Yaklin, G., & Morrow, M. (2005) Sea level rise and the loss of marsh habitat in Galveston Bay: A GIS-based planning tool. Abstract in TX Bays & Estuaries 2005.
- Feagin, R.A. (2005) Ecological modeling in coastal and marine science: spatial, temporal, and spatio-temporal domains. Invited at University of Texas Marine Science Institute.
- Feagin, R.A. (2005) Modeling hierarchical structure in a Texas Gulf Coast sand dune plant community. Proceedings of Modeling and Decision Support for Environmental Systems Conference.
- Nicolai, N., Smeins, F.E., & Feagin, R.A. (2005) Do harvester ants (*Pogonomyrmex barbatus*) facilitate semi-arid grassland recovery following drought? Abstract at ESA 2005.
- Feagin, R.A. (2004) Heterogeneity, homogeneity, and critical states in ecological patterns. Invited presentation at New England Complex Systems Institute.
- Feagin, R.A. (2003) Individual versus community processes and the impact of sea-level rise on pattern formation in a model of sand dune plant succession. Invited symposium abstract in "Climate Change and its Consequences on Coastal Dune Patterns and Processes: What are the Future Perspectives" Symposium at the Ecological Society of America Conference 2003.
- Feagin, R.A. (2003) A simulation model of beach erosion and the loss of sand dune plant habitats. Abstract in Coastal Erosion Technical Conference 2003.
- Feagin, R.A. (2003) Coastal sand dune restoration on Galveston Island, Texas. Abstract at the Society for Ecological Restoration Conference 2003.
- Feagin, R.A. (2003) Visions for the Houston Urban Network for Science, Technology, Engineering, and Mathematics. Invited presentation at University of Houston, Downtown.
- Feagin, R.A. & Wu, X.B. (2003) Methods for testing the emergence of spatial patterns among interacting plants. Abstract at International Association of Landscape Ecology Conference 2003.
- Feagin, R.A. & Wu, X.B. (2002) Spatial pattern organization and sand dune succession. IALE Conference 2002.
- Feagin, R.A. & Wu, X.B. (2002) Plant strategies, spatial patterns, and sand dune succession. Abstract at Ecological Society of America Conference 2002.

### Reports/Programs/Etc.

- Feagin, R.A., Forbrich, I., Huff, T.P., Barr, J.G., Ruiz-Plancarte, J., Fuentes, J.D., Najjar, R.G., Vargas, R., Vázquez-Lule, A.L., Windham-Myers, L., Kroeger, K.D., Ward, E.J., Moore, G.W., Leclerc, M., Krauss, K.W., Stagg, C.L., Alber, M., Knox, S.H., Schäfer, K.V.R., Bianchi, T.S., Hutchings, J.A., Nahrawi, H., Noormets, A., Mitra, B., Miao, G., Jaimes, A., Hinson, A.L., Bergamaschi, B., King J.S. 2020. Tidal wetland Gross Primary Production (GPP) across the continental United States, 2000-2019. Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC), Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1792>
- Hinson, A.L., R.A. Feagin, and M. Eriksson. 2019. Tidal Wetlands Soil Organic Carbon and Estuarine Characteristics, USA, 1972-2015. Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC), Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1742>
- Najjar, R.G., M. Herrmann, R. Alexander, E.W. Boyer, D.J. Burdige, D. Butman, W. Cai, E.A. Canuel, B. Chen, M. Friedrichs, R.A. Feagin, P. Griffith, A. Hinson, J.R. Holmquist, X. Hu, W.M. Kemp, K. Kroeger, A. Mannino, S.L. McCallister, W.R. Mcgillis, M. Mulholland, C. Piskaln, J. Salisbury, S. Signorini, P. St-laurent, H. Tian, M.A. Tzortziou, P. Vlahos, Z. Wang, and R. Zimmerman. (2018). Mean Annual Fluxes of Carbon in Coastal Ecosystems of Eastern North America. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1594>
- Feagin, R.A. (2004). Handbook of Ecological Restoration: Volume 1 Principles of Restoration, Volume 2 Restoration in Practice (M.R. Perrow & A.J. Davy, eds.), book review. Ecological Engineering 21: 205-208.
- Feagin, R.A., Feagin T. (2003) LAQUIS: A program for lacunarity/ Hurst function.
- Feagin, R.A., Feagin T., & Wu, X.B. (2002) RIPPER: A program for Ripley's K function.

### Courses Taught

- Coastal Processes and Ecosystem Management (~18 students each time, 2017-pres)
- Fundamentals of Ecology (~400 students each time, 2003, 2023-pres)
- Ecol. Restoration of Wetland & Riverine Systems (~32 students each time, 2017-2021)
- Ecosystem Ecology (~5 students each time, 2015)
- GIS for Natural Resource Management (~150 students each time, 2004-2016)
- Barrier Island Ecology (~20 students each time, 2010)
- Advanced GIS for Natural Resource Management (~5 students each time, 2004)
- Landscape Ecology and Conservation (~5 students each time, 2003-2007)

### Committees

- Chair, Promotion and Tenure Committee, ECCB, 2019-pres.
- Enterprise Technology Committee, COALS, TAMU, 2021-pres.
- University Faculty Development Leave Committee, TAMU/COALS, 2019-pres.
- Climate, Diversity, Equity, and Inclusion Committee, ECCB, 2020-2021.
- Chair, Promotion and Tenure Committee, ESSM/Legacy ESSM, 2019-2021.
- Governor's Blue Ribbon Committee, Texas Commission of Environmental Quality
- Technical Advisory Committee, Texas General Land Office
- Spatial Search Committee, ESSM, TAMU
- Curriculum Revision Committee, ESSM, TAMU
- Undergraduate Scholarship Committee, ESSM, TAMU
- Undergraduate Program Leaders Committee, ESSM, TAMU
- Head Search Committee, WFSC, TAMU

- Visioning Committee, ESSM, TAMU
- Dean's Outstanding Achievement Awards Committee, COALS, TAMU
- College Environmental Grand Challenges, COALS, TAMU
- College Priorities Retreat, COALS, TAMU
- Water Committee, COALS, TAMU

**Synergistic Activities**

- Baseline Assessment Working Group, US National Greenhouse Gas Inventory (NOAA, EPA, RAE). 2015-2016.
- Co-Organizer, Steering Committee, Co-PI, 44<sup>th</sup> Binghamton Geomorphology Symposium: Coastal Geomorphology and Restoration, NSF-GLD funded symposium. 2013.
- Co-Director and Co-PI, Coastal Barrier Islands Network, NSF-funded Research Coordination Network in Biological Sciences (RCN), 2006-2014.
- Sigma Xi, the Scientific Research Society, Former TAMU Chapter President, 2007.
- Taught at University of Southern Mississippi (2011), University of Victoria, CAN (2009-2010), and Fitzwilliam College, University of Cambridge, UK (2008)
- Faculty Member, Informational Technology in Science (ITS) Center, NSF-funded Center for Teaching and Learning, 2003-present. Collaboration with Master Science Teachers and their K-12 students on integrating spatial analysis and GIS into classrooms

**Thesis Advisor and Postgraduate-Scholar Sponsor (total number of chaired is 27)**

Josh Lerner PhD 2021-pres., Sara Stearns MS 2021-2022, Matthew “Jake” Madewell MS 2020-2021 and Research Associate 2022-2023, Alyssa Huddle MNRD 2019-2021, Ashley Cross MS 2018, Nathaniel Gronewald MNRD 2017-2020, Rachel Innocenti PhD 2017-2021, Thomas Huff PhD 2013-2017 and Postdoc 2017-2019 and Assistant Research Scientist 2019-2023, Audra Hinson PhD 2013-2017, Matt Sifuentes, PhD 2011-2018, Meshal Abdullah PhD 2012-2015 and Postdoc 2017-2018, Matt Furman MS 2014-2016, Arturo Delgado MS 2014-2016, Sasa Tapaneeyakul PhD 2014-2015, Ashley Wilson PhD, 2011-2017, Wasantha Kulawardhana, PhD 2011-2013, Ricardo Colón-Rivera PhD 2009-2013, Frances Toledo-Rodriguez MS 2011-2013, Paul Costanzo, MS 2011-2013, Marie Cline MS 2010-2012, Rika Muhl MS 2011, Jeffrey Ross PhD 2010, Andrea Kishne Postdoc 2011, Md. Shahadat Hossain Postdoc 2010, Mark Karnauch MS 2009, Amy Williams, MS and PhD 2005-2010, Starr Lozada-Bernard MS 2005-2007.