

## Abbreviated Curriculum Vitae

### Robert S. Young

Western Carolina University  
Old Student Union/PSDS  
Cullowhee, North Carolina 28723

### Education

- Ph.D. in Coastal Geology (*James B. Duke Doctoral Fellow*), Duke University, 1995
- M.S. in Quaternary Studies/Geology, University of Maine, 1990
- B.S. in Geology (*Phi Beta Kappa*), College of William & Mary, 1987

**Licensed Professional Geologist: State of North Carolina Lic. # 1980**  
**State of South Carolina Lic. # 2479**  
**State of Florida Lic. # 2574**

### Employment

- Director, Program for the Study of Developed Shorelines, WCU/Duke University: 2006-present
- Professor of Geology, Western Carolina University: 1997-present
- President and Founder, Sialia Environmental: A coastal science and management consulting firm.
- Assistant Professor, University of Vermont: 1995-1997
- Research Fellow, Duke University: 1989-1995

### Selected Professional Appointments

#### Current:

- Appointed by Governor, State of South Carolina, Coastal Legislative Commission, 2021-present
- Appointed by Governor, State of South Carolina, Floodwater Commission, 2018-present
- Appointed by Governor, State of Virginia, Technical Advisory Com., Coastal Master Plan, 2020-present
- Editorial Board, *Journal of Coastal Research*: 1996-present
- Board Member, Bulgarian Center for Coastal and Marine Studies: 2017-present
- Board Member, American Water Security Project, Florida: 2019- present
- Board Member, Healthy Gulf: 2019- present
- Technical Advisory Board, Environment and Energy Study Institute: 2019- present
- Expert Member, Joint Group of Experts on the Scientific Aspects of Marine Environmental Pollution (UNESCO): 2016-present

#### Past:

- Board Member, Olympic Park Institute (an environmental education center): 2007- 2016
- Appointed by Secretary SC-DHEC, State of South Carolina Blue Ribbon Committee on Shoreline Management: 2011 – 2013
- Board Vice Chair, Mountain Discovery Charter School: 2013-2019
- State of North Carolina Coastal Resources Commission Science Advisory Panel: 2007-2014
- Associate Editor, *Environmental Geosciences*: 1997-2015
- Chairman, Geological Society of America Annual Program Committee: 2010-2011
- Technical Program Director, Geological Society of America Annual Meeting: 2001, 2006, 2008
- Public Policy Committee, Geological Society of America: 2008-2012
- Appointed by Speaker of the NC House, North Carolina Legislative Commission on Offshore Drilling, 2009
- Have served/qualified as an expert witness on coastal science and engineering: Florida, Alabama, Georgia, South Carolina, New Jersey, New Zealand, St. Kitts and Nevis

## Current Projects

- Planning resilience projects for Horry County, SC. Developing flood inundation maps for Horry County as an improvement over existing FEMA FIRMS.
- Developing a beachfront management plan for Fripp Island, SC with the Fripp island Property Owners Association.
- Working with the National Park Service to develop and deploy Vulnerability Assessment tools for all built infrastructure in all coastal parks in the United States. This is a major, ongoing effort funded by the US Dept. of Interior.
- Developing municipal scale vulnerability assessments and adaptation plans. Currently working on The Village of Duck, North Carolina.
- Building a national database of all beach nourishment projects including detailed spatial data and coast/volume data, funded by USGS.
- Building a national, GIS database of all storm surge measurements for use in evaluating models of coastal storm impacts. Funded by NOAA National Climate Data Center.
- Restoring native rivercane, *Arundinaria gigantea* to the landscape of western North Carolina in cooperation with the Eastern Band of the Cherokee Indian.
- Critically evaluating the numerical models used for the design of coastal engineering projects nationwide. Assisting NGOs and communities with evaluating EISs based on these models (e.g. The Nature Conservancy, The Surfrider Foundation, The Sierra Club, South Carolina Coastal Conservation League).
- Examining the coastal impacts of the Elwha River Restoration Project in partnership with the National Park Service and the Lower Elwha Klallam Tribe (recently featured in Smithsonian).
- CoastalCare.org, a website designed for communicating coastal science and conservation to the general public. A project with the Santa Aguila Foundation.
- Examining the impacts of beach sand mining in Morocco, Montserrat, and Cambodia. Building a global database of sand mining activities (recently featured in National Geographic).

## Honors

- Pelican Award for Coastal Sustainability, North Carolina Coastal Federation: 2016
- Fulbright Senior Scholar Award, Bulgaria: 2012-2013
- Paul A. Reid Distinguished Service Award, Western Carolina University: 2013
- Elected Fellow, Geological Society of America: 2011
- Excellence in Environmental Education, Diversity in Action, Washington State: 2012
- Sabbatical Fellow, National Park Service (Coastal Geology): 2004-2005
- University Scholar Award, Western Carolina University: 2001
- James B. Duke Doctoral Fellowship (1989-1995)
- J. Hoover Mackin Award (Awarded by the GSA's Quaternary Geology and Geomorphology Div.): 1991
- Phi Beta Kappa: 1987

## Popular Media (select recent examples)

- Articles and Guest Columns regularly authored: The New York Times, Charleston Post and Courier, USA Today, The Houston Chronicle, Architectural Record, Geotimes, Issues in Science and Technology, Congressional Quarterly, The Raleigh News and Observer, The Charlotte Observer, Popular Science
- Broadcast Media Appearances: PBS Now, CNBC, CNN (Anderson Cooper), WUNC North Carolina Now, NPR Morning Edition and All Things Considered, MSNBC (Rachel Maddow), Science Friday, Marketplace.
- Film: Shored Up, feature length documentary by Ben Kalina. Sand Wars, feature length documentary by Denis Delestrac, DamNation, feature length documentary by Ben Knight and Travis Rummel

## Books/Edited Volumes

- Pilkey, O.H. and Young, R.S. (2009) The Rising Sea. Island Press. 212p
- Young, R.S., and Norby L. eds. (2009) Geological Monitoring. Geological Society of America. Boulder, Colorado. 303p.
- Young, R.S., and Bush D.M. eds. (2001) The State of the Art in Coastal Hazard Mapping III. A Special Issue of the Journal Environmental Geosciences. 8:2
- Young, R.S., and Bush D.M. eds. (2000) The State of the Art in Coastal Hazard Mapping II. A Special Issue of the Journal Environmental Geosciences. 7:3
- Bush, D.M. and Young, R.S.. eds. (2000) The State of the Art in Coastal Hazard Mapping I. A Special Issue of the Journal Environmental Geosciences. 7:1

## Peer Reviewed Publications

- Crawford, H.T., Beavers, R.L., Peek, K., Tormey, B., West, J., Smith, T., Ford, M., Altman, J., Schwadron, M., and Young, R.S. (2024). Coastal Adaptation of Natural Resources, Cultural Resources, and Infrastructure to Climate Change Along Barrier Islands at Cape Lookout National Seashore (U.S. National Park Service) after Hurricane Dorian. *Southeastern Geology*: 54:4, 235-265.
- Tormey BR, Peek KM, Thompson HL, and Young RS. 2022. Chapter 2: A review of vulnerability assessments for NPS infrastructure Pages 26–62 in Peek, KM, Tormey BR, Thompson HL, Beavers RL, Ellsworth AC, and Hoffman CH (editors) 2022. Climate change vulnerability assessments in the National Park Service: An integrated review for infrastructure, natural resources, and cultural resources (revised). Natural Resource Report NPS/NRSS/CCRP/NRR—2022/2438. National Park Service, Ft. Collins, Colorado.
- Gross JE, Tormey BR, Peek KM, Thompson HL, Michalak JL, and Young RS. 2022. Chapter 1: Overview and Synthesis of Vulnerability Assessments. Pages 1–25 in Peek KM, Tormey BR, Thompson HL, Beavers RL, Ellsworth AC, and Hoffman CH (editors). 2022. Climate change vulnerability assessments in the National Park Service: An integrated review for infrastructure, natural resources, and cultural resources (revised). Natural Resource Report NPS/NRSS/CCRP/NRR—2022/2438. National Park Service, Fort Collins, Colorado.
- Stancheva, M., Stanchev, H., Young, R.S., and Parlichev (2021) Coastal erosion drive Land-Sea interactions in Maritime Spatial Planning- a case of Bulgaria. *Journal of Coastal Conservation*. 25:54.
- Stanchev, H., Stancheva M, Young R. and Palazov, A. (2017) Analysis of shoreline changes and cliff retreat to support Marine Spatial Planning in Shabla Municipality, Northeast Bulgaria. *Ocean & Coastal Management*, 156-127:140.
- Peek, K.M, Schupp, C., and A. Babson. 2016. Chapter 8 Protecting Infrastructure: Costs and Benefits. In: Beavers, R.L., A.L. Babson, and C.A. Schupp [eds.]. 2016. Coastal Adaptation Strategies Handbook. NPS 999/134090. National Park Service. Washington, DC.
- Beavers, R., Norton, S., Eissenberg, M., Peek, K.M., Young, R.S., and S. Quinn. 2016. Chapter 6 Facility Management. In: Beavers, R.L., A.L. Babson, and C.A. Schupp [eds.]. 2016. Coastal Adaptation Strategies Handbook. NPS 999/134090. National Park Service. Washington, DC.
- Stancheva, M., Stanchev, H., Palazov, A. and Young, R.S. (2015) Dune changes under natural/human hazards. *MEDCOAST* 15. 1:385-395.
- Stanchev, H., Stancheva, M., and Young, R.S. (2015) Implications of population and tourism development growth for Bulgarian coastal zone. *Journal of Coastal Conservation*. 19:1;59-72
- Tanner, B.R. Collins, B, Lane, C.S. and Young R.S. (2015) Sedimentary proxy evidence of a mid-Holocene hypsithermal event in the location of a current warming hole, North Carolina, USA. *Quaternary Research* 83:2:315-323.
- Griffith, D.G., Coburn, A.S., Peek, K.L., and Young, R.S. (2014) Hurricane Sandy: Did beach nourishment save New Jersey? *In* Bennington, B.B. and Farmer, E.C. eds. Learning from the Impacts of Superstorm Sandy. Elsevier, Amsterdam. p 57-68.
- Peek, K.M. and Young R.S. (2013) Building a national storm surge database for research and planning. *Journal of Coastal Research*, 29:6a:17-24.
- Pilkey, O.H., Young, R.S., and Cooper, A. (2013) Quantitative modeling of coastal processes: a boon or bust for society. *In* Baker V.R. ed, Rethinking the Fabric of Geology. Geological Society of America Special Paper 502, 135-144.

- Stanchev, H., Young, R., and Stancheva M. (2013) Integrating GIS and high-resolution orthophoto images for the development of a geomorphic shoreline classification and risk assessment: a case study of cliff/bluff erosion along the Bulgarian coast. *Journal of Coastal Conservation*, 17:4:719-728.
- Russell S. Vose, Scott Applequist, Mark A. Bourassa, Sara C. Pryor, Rebecca J. Barthe Imie, Brian Blanton, Peter D. Bromirski, Harold E. Brooks, Arthur T. DeGaetano, Randall M. Dole, David R. Easterling, Robert E. Jensen, Thomas R. Karl, Richard W. Katz, Katherine Klink, Michael C. Kruk, Kenneth E. Kunkel, Michael C. MacCracken, Thomas C. Peterson, Karsten Shein, Bridget R. Thomas, John E. Walsh, Xiaolan L. Wang, Michael F. Wehner, Donald J. Wuebbles, and Robert S. Young (2014) Monitoring and Understanding Changes in Extremes: Extratropical Storms, Winds, and Waves. *Bulletin of the American Meteorological Society*, 95:3, 377-386.
- Stanchev, H., Young, R., Palazov, A., and Stancheva, M. (2011) GIS as a tool to study and preserve sand dunes (Bulgarian Coast). *CoastGIS2011*, 3: 8-15.
- Tanner, B.R., Kinner, D.A., Griffith, A.D., Young, R.S. and Sorrell, L.M. (2011) Presence of *Arundinaria gigantea* (rice cane) on numerous non-wetland sites suggests improper ecological classification of the species. *Wetlands Ecology and Management*, 19(6): 521-532.
- Mathews, K. G., J. Huguelet, M. Lanning, T. Wilson, and R. S. Young. (2009) Clonal diversity of fruiting culms within stands of *Arundinaria gigantea* (Poaceae; Bambusoideae) in western North Carolina *astanea* article
- Griffith, A. D., Kinner, D. A., Tanner, B. R., Moore, A., Mathews, K. G., & Young, R.S. (2009). Nutrient and Physical Soil Characteristics of River Cane Stands, Western North Carolina. *Castanea*, 74(3): 224-235.
- Bush, D.M. and Young, R.S. (2009) Coastal features and Processes, *In* (R.S. Young and L. Norby eds.) *Geologic Monitoring*, Geological Society of America. Boulder, pp 47-67.
- Young, R.S. (2007). The importance of carbon loss through wetland erosion in the Albemarle-Pamlico-Currituck Sound system, North Carolina. *Southeastern Geology*, 45:2:51-58
- Bush, D.M., Neal, W.J., and Young, R.S. (2004). After the Storms: Geologists look at coastal zone building. *Architectural Record*, 11/2004:65-66.
- Mehrtens, C., B. Rosenheim, M. Modley, R. Young, R.S. (2001) Reef Morphology and Sediment Attributes, Roatan, Bay Islands, Honduras. *Carbonates and Evaporites*, vol. 16, no.2, pp. 131-140.
- Young, R.S. and Bush, D.M. (2000) Will Coastal Communities Ever Effectively Utilize the Scientist's Growing Understanding of Coastal Hazards? *Environmental Geosciences*, 7:3:1-2
- Bush, D.M. and Young, R.S. (2000) The state of coastal hazard mapping. *Environmental Geosciences*, 7:1:1-2
- Thieler, E.R., Pilkey, O.H., Young, R.S., Bush, D.M., and Chei, F. (2000). The use of mathematical models to predict beach behavior for coastal engineering: a critical review. *Journal of Coastal Research*, 16:1:48-70
- Young, R.S., Bush, D.M., Coburn, A.S., Pilkey, O.H., Cleary, W.J. (1999). Hurricanes Dennis and Floyd: Coastal effects and policy implications. *GSA Today*, 9:12:1-6
- Bush, D.M., Neal, W.J., Young, R.S., and Pilkey, O.H. (1999). Utilization of geoindicators for rapid assessment of coastal hazard risk and mitigation. *Ocean and Coastal Management*, 42:647-670.
- Pilkey, O.H., Thieler, E.R., Young, R.S., and Bush, D.M. (1999) Reply to: Houston, J.R., A discussion of the Generalized Model for Simulating Shoreline Change (GENESIS). *Journal of Coastal Research*, 15:1:277-279.
- Cahoon, D.R., Day, J.W., Reed, D.J., and Young, R.S. (1998) Global climate change and sea level rise: estimating the potential for submergence of coastal wetlands. *In* *Vulnerability of coastal wetlands in the Southeastern United States: climate change research results, 1992-1997* (Guntenspergen, G.R. and Vairin, B.A., eds). USGS, Biological Resources Division Biological Science Report USGS/BRD/BSR-1998-0002, 101p
- Young, R.S., Bush, D.M., Pilkey, O.H., and Thieler, E.R. (1997). Reply to: Bodge, K. R., A discussion of the Generalized Model for Simulating Shoreline Change (GENESIS). *Journal of Coastal Research*, 13:3:954-955.
- Webb, C., Bush, D.M., and Young, R.S. (1997). Property damage mitigation lessons from Hurricane Opal: the Panhandle Coast of Florida. *Journal of Coastal Research*, 13:1:246-252.
- Young, R.S., Bush, D.M., Pilkey, O.H., and Neal, W.J. (1996) Geo-indicators of coastal processes. *In* (Berger, A. R. ed.) *Geo-Indicators of Rapid Environmental Change*. Balkema. Amsterdam, p 193-206.

- Bush, D.M., Young, R.S., Webb, C. and Thieler, E.R. (1996). Soundside storm impacts of a northward tracking tropical cyclone: Cape Hatteras Area, Outer Banks of North Carolina. *Journal of Coastal Research*, 12:1:229-239.
- Pilkey, O.H., Young, R.S., Thieler, E.R., Jacobs, B.S., Katuna, M.P., Lennon, G., and Moeller, M.E. (1996) Reply to: Houston, J.R. 1996. A discussion of the Generalized Model for Simulating Shoreline Change (GENESIS). *Journal of Coastal Research*, 12:4:1044-1050.
- Young, R.S., Pilkey, O.H., Bush, D.M., and Thieler, E.R. (1995). A discussion of the Generalized Model for Simulating Shoreline Change (GENESIS). *Journal of Coastal Research*, 11:3:875-886.
- Pilkey, O.H., Young, R.S., Bush, D.M., and Thieler, E.R. (1994). Replenished beach design: alternatives to models. *In* (Soares de Carvalho, G., and Gomes, C.S.F. eds.) *Littoral 94*. Eurocoast Portugal, Volume 1, p. 53-60.
- Young, R.S., Thieler, E.R., and Pilkey, O.H. (1993). Geologic and oceanographic factors mitigating the storm surge and flood damage of Hurricane Andrew in South Florida. *Geology*, 21:2:99.
- Pilkey, O.H., Young, R.S., Riggs, S.R., Smith, A.W.S., Wu, H., and Pilkey, W.D. (1993). A critical appraisal of the concept of equilibrium profile and its practical application. *Journal of Coastal Research*, 9:1:255-278.
- Pilkey, O.H., Young, R.S., Riggs, S.R., and Smith, A.W.S. (1993). Reply to: Dubois, R., A critical appraisal of the concept of equilibrium profile and its practical application. *Journal of Coastal Research*, 9:4:1146-1148.
- Young, R.S., Belknap, D.F., and Sanger D. (1992). The paleogeography and geoarchaeology of Johns Bay, Maine. *Geoarchaeology*, 7:3:209-249.
- Thieler, E.R., Young, R.S., and Pilkey, O.H. (1992). Discussion of: "Boundary conditions and long-term shoreline change rates for the southern Virginia ocean coastline." *Shore and Beach*, 0:4:29-30.
- Thieler, E.R. and Young, R.S. (1991). Aerial survey of coastal geomorphic change along the barrier island coast of South Carolina after Hurricane Hugo. *Journal of Coastal Research*, Special Issue 9:187-200.
- Hall, M.J., Young, R.S., Thieler, E.R., Priddey, R.D., and Pilkey, O.H., Jr. (1990). The effects of Hurricane Hugo on the South Carolina coast. *Journal of Coastal Research*, 6:1:211-221.

## Published Reports

- Tormey BR, Peek KM, Thompson HL, Young RS. 2025. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Sleeping Bear Dunes National Lakeshore**: Summary of Results. NPS 634/195672. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek, KM, Thompson HL, Tormey BR, and Young RS. 2023. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for the **Manhattan Sites**: Summary of Results. National Park Service Report. NPS 665/189833. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2023. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Assateague Island National Seashore** Summary of Results. National Park Service Report. NPS 622/188380. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2023. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Independence National Historical Park, Edgar Allen Poe National Historic Site, Thaddeus Kosciuszko National Memorial, and Gloria Dei Church National Historic Site** Summary of Results. National Park Service Report. NPS 391/188379, NPS 478/188379, NPS 455/188379, NPS 004/188379. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2023. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Cape Cod National Seashore**: Summary of Results. NPS 609/187575. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Tormey BR, Peek KM, Thompson HL, and Young RS. 2023. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Cape Lookout National Seashore**: Updated Summary of Results. NPS 623 187597. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2022. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Timucuan Ecological & Historic Preserve and Fort Caroline**

- National Memorial:** Summary of Results. NPS 006/186750, NPS 396/186750. Program for the Study of Developed Shorelines, Western Carolina University. Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2022. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Castillo de San Marcos National Monument and Fort Matanzas National Monument:** Summary of Results. NPS 343/186743, NPS 347/186743. Program for the Study of Developed Shorelines, Western Carolina University, Cullowhee, N.C.
- Peek KM, Thompson HL, Tormey BR, and Young RS. 2022. Coastal Hazards & Sea-Level Rise Asset Vulnerability Assessment for **Everglades National Park:** Summary of Results. NPS 160/186783. Program for the Study of Developed Shorelines, Western Carolina University. Cullowhee, N.C.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Cape Lookout National Seashore (CALO)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 25p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Acadia National Park (ACAD)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 20p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Cabrillo National Monument (CABR)** Coastal Hazards and Climate Change Asset Exposure Analysis and Case Study: Cliff Retreat Exposure. NPS Sustainable Operations and Climate Change Summary Report. 23p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Colonial National Historical Park (COLO)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 20p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Canaveral National Seashore (CANA)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 22p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **George Washington Memorial Parkway (GWMP) and Theodore Roosevelt Island (THIS)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 23p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Jean Lafitte National Historical Park and Preserve (JELA)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 29p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **National Mall and Memorial Parks (NAMA)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 20p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Olympic National Park (OLYM)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 22p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Padre Island National Seashore (PAIS)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 22p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **Sitka National Historical Park (SITK)** Coastal Hazards and Climate Change Asset Vulnerability Assessment Results and Tsunami Vulnerability Case Study. NPS Sustainable Operations and Climate Change Summary Report. 28p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., McNamee, J., Scavo, R. (2017) **War in the Pacific National Historical Park (WAPA)** Coastal Hazards and Climate Change Asset Vulnerability Assessment. NPS Sustainable Operations and Climate Change Summary Report. 21p.
- Peek, K. M., A. Coburn, E. Stafford, B. Tormey, R. Young, H. Thompson, L. Bennett, and A. Fowler. (2016). Marine vulnerability assessment of Cumberland Island National Seashore: Determining the vulnerability of marine habitats at Cumberland Island National Seashore to climate change stressors. Natural Resource Report NPS/CUIS/NRR—2016/1281. National Park Service, Fort Collins, Colorado. 99pp.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., Scavo, R., Koslow, M. and Binns, B. (2015) **Big Cypress National Preserve (BICY)** Vulnerability Assessment Report: Coastal Hazards and

- Climate Change Asset Vulnerability Assessment Tool. NPS Sustainable Operations and Climate Change Summary Report. 16p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., Scavo, R., and Koslow, M. (2015) **Biscayne National Park (BISC)** Vulnerability Assessment Report: Coastal Hazards and Climate Change Asset Vulnerability Assessment Tool. NPS Sustainable Operations and Climate Change Summary Report. 14p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., Scavo, R. (2015) **Fort Sumter National Monument (FOSU)** Vulnerability Assessment Report: Coastal Hazards and Climate Change Asset Vulnerability Assessment Protocol. NPS Sustainable Operations and Climate Change Summary Report. 18p
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., Scavo, R., and Koslow, M. (2015) **Outer Banks Group (CAHA, WRBR, FORA)** Vulnerability Assessment Report: Coastal Hazards and Climate Change Asset Vulnerability Assessment Tool. NPS Sustainable Operations and Climate Change Summary Report. 15p.
- Peek, K., Tormey, B., Thompson, H., Young, R., Norton, S., Scavo, R., Koslow, M., and Binns, B. (2015) **Gulf Islands National Seashore (GUIS)** Vulnerability Assessment Report: Coastal Hazards and Climate Change Asset Vulnerability Assessment Tool NPS Sustainable Operations and Climate Change Summary Report. 18p.
- Peek, K. M., Young, R.S., Beavers, R.L., Hawkins-Hoffman, C., Diethorn, B.T., and Norton, S. (2014) Adapting to Climate Change in Coastal Parks: Estimating the Exposure of FMSS-Listed Parks Assets to 1 m of Sea-Level Rise. Natural Resource Technical Report NPS/NRSS/GRD/NRTR-2014/916 , National Park Service, Ft. Collins, CO. 176 pp.
- Coburn, A.S., Griffith, A.D. and Young, R.S. (2010) Inventory of Coastal Engineering Projects in Coastal National Parks. Natural Resource Technical Report NPS/NRPC/GRD/NRTR-2010/373. National Park Service, Ft. Collins, CO. 138pp.
- Bush, D.M., Webb, C.A., Young, R.S., Johnson, B.D., and Bates, G.M. (1996). Impact of Hurricane Opal on the Florida/Alabama Coast. Natural Hazards Research and Applications Information Center, Quick Response Report No. 84., 16p.

## Published Abstracts

- Young RS, Coburn A, Peek KM, Tormey BR, and Thompson H. (2024.) A critical review of coastal retreat in the USA, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-13579
- Peek KM, Thompson HL, Tormey BR, and Young RS. (2024) Assessing the Vulnerability of National Park Service Infrastructure to Coastal Hazards. Sea Grant North Carolina Coastal Conference, November 2024.
- Tormey BR, Peek KM, and Young RS. (2021) Climate Change and Coastal Hazard Vulnerability of Infrastructure in National Parks: Adaptation along the Southeast and Gulf Coasts: GSA Abstracts with Programs, Vol. 53, No. 2.
- Beavers R, Young RS, Peek KM, Tormey BR, Crawford H, Schwadron M, Smith T., Ford M., Hallac D, and West J. (2020) Managing US National Park Service Resources on Barrier Islands in Action: Cape Lookout and Cape Hatteras National Seashores after Hurricane Dorian. Conference: AGU Ocean Sciences Meeting 2020, San Diego, CA.
- Young, R., (2019) Beach nourishment as storm protection: its impact on sediment budgets and ecosystems: Geophysical Research Abstracts, Vol. 21. EGU2019-11652.
- Hartman, C., Hurding-Jones, H., Pedigo, R., Hurst, E., Tormey, B., Waters-Tormey, C., Peek, K., Bilderback, E., Anderson, D., Hungerford, J., Young, R. (2018) Mapping Landslide and Rock Fall Hazards in Yellowstone National Park Using the Unstable Slope Management Program's Slope Assessment Mobile Application: GSA Abstracts with Programs, Vol. 50, No. 6.
- Young, R., Peek, K., Tormey, B., Thompson, H. (2018) Assessing the Vulnerability of Infrastructure to Coastal Hazards in U.S. National Parks and Monuments: Geophysical Research Abstracts, Vol. 20. EGU2018-10461.
- Young, R. and Coburn, A. (2017) Beach nourishment in the USA, the history, the impacts, and the future. Geophysical Research Abstracts, Vol. 19. EGU2017-17999.
- Tormey, B.R., Peek, K.M. and Young, R.S. (2015) Assessing climate change and hazard vulnerability in the built environment: a methodology for coastal national parks. GSA Abstracts with Programs. 47:7:26.

- Young, R., Stancheva, M., Stanchev, H., Palazov, A., Peek, K., Coburn, A., Griffith, A. (2014) Adapting to Sea Level Rise and Storms: Missed Opportunities and Continuing Development (case studies from USA and Bulgaria): Geophysical Research Abstracts, Vol. 16. EGU2014-3108.
- Griffith, A., Coburn, A., Peek, K.M. and Young, R.S. (2013) Hurricane Sandy: did beach nourishment save New Jersey? GSA Abstracts with Programs, 45:7:53.
- Griffith, A., Young, R.S., Staton, J., and Morgan D. (2012) Examining the physical and economic impacts of sea-level rise at the community level: Hilton Head Island, SC. GSA Abstracts with Programs, 44:4:75.
- Young, R.S. (2011) Are there any natural beaches remaining in the United States? Geophysical Research Abstracts, Vol. 13, EGU2011
- Young, R.S. and McDowell, K.L. (2011) Cataloging all available storm surge measurements for the state of North Carolina: the national Storm Surge Database. GSA Abstracts with Programs, 41:3.
- McDowell, K.L., Young, R. S., Holliday, M. A., Gaskey, R. T., Korb, C. E., Lenau, B. M., Dalton, A. R., and Krehling, W. (2011) The national Storm Surge Database: public access through the storm surge viewer and mobile application. GSA Abstracts with Programs, 43:7.
- Griffith, A., Young, R.S., and Staton, J. (2011) Potential impacts of sea level rise on Hilton Head, SC. GSA Abstracts with Programs, 43:7.
- Johnson, J.R., Petrucci, R.F., Bush, D.M., Young R.S., Maloof, A., and McDowell, K.L. (2010) Historical storm surge tables: one-stop shopping for all your storm surge data needs. GSA Abstracts with Programs, 42:7.
- Griffith, A., Tanner, B., Kinner, D. and Young R.S. (2009) Restoration of *Arundinaria gigantea* (rivercane) to the Oconaluftee river floodplain, Cherokee, NC. GSA Abstracts with Programs, 42:7.
- Kinner, F., Young R.S., Skerbeck, T., and Hanson, K (2009) Student cultural and science engagement through place-based teaching: lessons learned from the Elwha Science Education Project. GSA Abstracts with Programs, 41:7.
- Griffith, A. Young R.S. and Pilkey, O.H. (2009) The global extent of beach sand mining. GSA Abstracts with Programs, 41:7.
- Young R.S. (2008) Restoring coastal Louisiana will not guarantee the protection of infrastructure from storms: policy makers should also plan for strategic relocation of critical infrastructure and vulnerable communities. GSA Abstracts with Programs, 40:7.
- Bush, D.M. and Young R.S. (2008) Sea level is risen. Storms are a certainty. Now what? GSA Abstracts with Programs, 40:7.
- Bush, D.M., Neal, W.J. and Young R.S. (2008) Student based coastal hazards research in the Caribbean. GSA Abstracts with Programs, 40:7.
- Maloof, A., Legaspi, R.F., Young R.S. and Bush, D.M. (2008) A Comprehensive Database of Storm Surge Data for Use In Coastal Hazards Research and Storm Surge Model Calibration. GSA Abstracts with Programs, 40:7.
- Pilkey O.H. and Young, R.S. (2008) Future shoreline retreat cannot be predicted with accuracy. GSA Abstracts with Programs, 40:7.
- Young R.S., Kinner, F., Staab, D., and Sanford, T. (2007) The Elwha Science Education Project (ESEP): increasing the relevancy of the geosciences for native american youth through participation in environmental restoration projects on tribal lands. GSA Abstracts with Programs, 39:7.
- Griffith, A., Kinner, D., McDowell, K., Tanner, B. and Young R.S. (2007) Soil characterization for Rivercane (*Arundinaria Gigantea* (Walter) Muhl.) restoration in Western North Carolina. GSA Abstracts with Programs, 39:7.
- McDowell, K.L., Griffith, A.D., Kinner, D.A., Tanner, B.R., and Young, R.S., 2007, Restoration of Rivercane (*Arundinaria Gigantea*) in Western NC: A Step Towards the Identification of Ideal Environmental Conditions, Geological Society of America Abstracts with Programs v. 39, no. 2, p. 29.
- Legaspi, R.F., Jackson, C.J., Bush, D.M. and Young R.S. and (2007) A quantitative method for ranking the geomorphic controls on storm surge penetration along the Mississippi coast during hurricane Katrina. GSA Abstracts with Programs, 39:7.
- Bush, D.M. and Young R.S. (2006) The need for evaluating the relative importance of geomorphic features on hurricane damage at the coast. GSA Abstracts with Programs, 38:7.
- Young R.S. and Bush, D.M. (2006) Developing a science-based policy for a federal pullback from vulnerable coastal areas. GSA Abstracts with Programs, 38:7:540.



- McDowell, K.L, Griffith, A, and Young R.S. (2006) Restoring river cane *Arundinaria gigantea* to the landscape in western North Carolina: an environmental and cultural restoration. GSA Abstracts with Programs, 38:7:.
- Young, R.S., Winter, B., Warrick, J., and Gelfenbaum, G. (2005) The Elwha River restoration project: A unique opportunity for science, policy, and environmental restoration. GSA Abstracts with Programs, 37:7:329.
- Young, R.S., Means, C., Turchy, M. A., and Fradkin, S. (2005) Systematic, inexpensive coastal monitoring in Olympic National Park: Meeting resource management goals. GSA Abstracts with Programs, 37:7:489
- Warrick, J. A., Gelfenbaum, G., Johannessen, J, Beirne, M., Young, R.S., and Winter, B. (2005) Dam removal as nearshore restoration – patterns and processes of the Elwha River coastal system. GSA Abstracts with Programs, 37:7:329.
- Bush, D.M. and Young R.S. (2005) Media, hurricanes and loss of life: It's wind, not water . GSA Abstracts with Programs, 37:7:540.
- Boothe, T.A., Friedrich, J.E., Bush, D.M., Young R.S., and Jackson, C.W. (2005) Continuation of development of a new hurricane impact scale: WCI, the shelf width/shoreline curvature index. GSA Abstracts with Programs, 37:7:65.
- Bush, D.M., Young, R.S, and Neal, W.J. (2005) Low cost coastal assessment techniques: from Georgia to the Caribbean. GSA Abstracts with Programs, 37:7:489.
- Conkle, L. and Young, R.S.(2004) New research on heath balds in Great Smoky Mountains National Park: Surprising results for resource management and for science. GSA Abstracts with Programs, 36:6.
- Young, R.S. (2004) Conducting research in the national parks: Addressing needs as a pathway to opportunities. GSA Abstracts with Programs, 36:6.
- Young, R.S. and the WCU Senior Seminar (2004) A new method for examining the natural controls on the distribution of overwash from Hurricane Isabel: Cape Lookout National Seashore, North Carolina. GSA Abstracts with Programs, 36:6.
- Young, R.S. (2003) Models on trial: a case study. GSA Abstracts with Programs, 35:6:35.
- Conkle, L., Young, R.S., Boicchio, C.J., Khil, A. (2003) Why go Bald? Understanding the age and origin of southern Appalachian heath balds in Great Smoky Mountains National Park. GSA Abstracts with Programs, 35:6:330.
- Barret, S.R., Boothe, T.A., Bush, D.M., Young R.S., Neal, W.J., and Jackson, C.J. (2003) A two-phase evaluation plan for hazard risk assessments: an example from Cumberland Island, Georgia. GSA Abstracts with Programs, 35:6:491.
- Bush, D.M. and Young R.S. (2003) A new hurricane impact scale - continued work. GSA Abstracts with Programs, 35:6:468.
- Young, R.S. and Bush, D.M. (2003) "P" as in "Papa": The impact of Orrin H. Pilkey on U.S. coastal engineering and management, an ongoing saga. GSA Abstracts with Programs, 35:6:468.
- Young, R.S., Bush, D.M., and Turchy, M.A.,. (2002) A new, quantitative method for ranking the factors that control coastal hazards. GSA Abstracts with Programs, 34:3.
- Turchy, M. and Young, R.S (2002) A new model for southern Appalachian wetland evolution. GSA Abstracts with Programs, 34:3.
- Young, R.S. and Bush, D.M. (2001) Problems with using mathematical models to predict beach behavior for coastal engineering. GSA Abstracts with Programs, 33:3.
- Bush, D.M., Young, R.S, and Jackson, C.W.,. (2001) Development of a Hurricane Impact Scale. GSA Abstracts with Programs, 33:3.
- Young, R.S., Newberry, R, and Turchy, M. (2000) Wetlands on the southern Appalachian landscape: unique, ephemeral, climate-driven systems. GSA Abstracts with Programs, 32:7.
- Bush, D.M., Young, R.S, and Jackson, C.W.,. (2000) Recent North Carolina hurricane experience and the need for a new Hurricane Impact Scale. GSA Abstracts with Programs, 32:7.
- Mehrtens, C. J., Modley, M., Rosenheim B., Newberry R., and Young, R.S. (2000) Reef morphology and sediment attributes, Roatan, Bay Islands, Honduras. GSA Abstracts with Programs, 32:7.
- Peterson, V.L. Mehrten, C.J. Hedrick, T. Young, R.S., Allison, B., Burr, J., and Miller, J.W. (2000) Links between bedrock geology, stream sediment composition, and offshore sedimentation, Roatan, Bay Islands, Honduras. GSA Abstracts with Programs, 32:7.
- Jackson, C.W., Bush, D.M., and Young, R.S. (2000) Recent North Carolina hurricane experience and the need for a new Hurricane Impact Scale. GSA Abstracts with Programs, 32:3.
- Bush, D.M. and Young R.S. (2000) Property damage mitigation through coastal restoration. GSA Abstracts with Programs, 32:3.

- Young, R.S., Newberry, R., and Mehrtens, C.J. (1999) Hurricane Mitch: Can a devastating category five hurricane benefit coral reef ecosystems: an example from Roatan, The Bay Islands, Honduras. *GSA Abstracts with Programs*, 31:7:131.
- Mehrtens, C. J., Young, R.S., Rosenheim, B.E., Duni, M., Barnett, E., and Winchester, A. (1999) Land-use variation reflected in nearshore sediment: Roatan, Bay Islands, Honduras. *American Geophysical Union 1999 Spring Meeting*. EOS, 80:S186.
- Rosenheim, B.E., Mehrtens, C.J., Lini, A., and Young R.S. (1999) Freshwater dilution observed in stable oxygen isotope record of Scleractinian coral *Montastrea Annularis*: Roatan, Honduras. *GSA Abstracts with Programs*, 31:2.
- Young, R.S. and Mehrtens, C.J. (1998) Monitoring sediment accumulation and water quality to link reef degradation with land-use change: Roatan, Bay Islands, Honduras. *GSA Abstracts with Programs*, 30:7:227.
- Bush, D.M., Young, R.S., and Neal, W.J. (1998) A geoindicators-based coastal hazards and risk assessment: Roatan, Honduras. *GSA Abstracts with Programs*, 30:7:227.
- Lizee, T.R., Manooch, C.S., and Young, R.S. (1998) Saproliite-controlled, wetland geomorphology: an example from Flat Laurel Gap in the North Carolina Blue Ridge. *GSA Abstracts with Programs*, 30:7:139.
- Bates, G.M., Young, R.S., and Walker, L.J. (1997) Logisitic regression analysis of post-storm process mapping to rank factors controlling coastal hazards. *GSA Abstracts with Programs*, 29:6:148.
- Young, R.S., Thieler, E.R., Pilkey, O.H., and Bush, D.M. (1997) Applied predictive modeling in the coastal zone: we can't model what we don't understand. *GSA Abstracts with Programs*, 29:6:283.
- Astley, B.N. and Young, R.S. (1997) Mechanisms of Holocene lake-level change in Lake Champlain. *GSA Abstracts with Programs*, 29:6:217.
- Bush, D.M. and Young, R.S. (1997) Coastal risk mapping teaches geologic processes. *GSA Abstracts with Programs*, 29:6:426.
- Bush, D.M., Pilkey, O.H., Neal, W.J., and Young, R.S. (1997) PAR for the Shore: Preserve, Augment, Restore to Mitigate Coastal Property Damage. *American Geophysical Union 1997 Spring Meeting*. EOS, 76:17:S47.
- Young, R.S., Bates, G.M., Walker, L.J. and Bush, D.M. (1997) GIS-Based coastal hazard mapping. *American Geophysical Union 1997 Spring Meeting*. EOS, 76:17:S56.
- The University of Vermont Coastal and Wetland Processes Class (Bates, G., Brown, S., Cartwright, S., Mallard, L., Mazza, N., Nadeau, B., Unger, T., Walker, L., Weisiger, G., Witherell, K., and Young, R.S.) (1997) A qualitative assessment of long- and short-term lake-level change in Lake Champlain. *GSA Abstracts with Programs*, 29:1:29.
- Unger, T.S. and Young, R.S. (1996) Using GIS to predict large-lake shoreline energy and erosion potential: Lake Champlain. *GSA Abstracts with Programs*, 28:7:94.
- Nadeau, B.M. and Young, R.S. (1996) Holocene wetland evolution in response to long-term lake-level rise in Lake Champlain. *GSA Abstracts with Programs*, 28:7:303.
- Bush, D.M. and Young, R.S. (1996) Coastal hazards, risk assessment, and coastal zone management in the Caribbean: the essential role of the geologist. *GSA Abstracts with Programs*, 28:7:260.
- Young, R.S. and Milligan, L.A. (1995) The importance of carbon loss through wetland erosion in the Albemarle-Pamlico-Currituck Sound system, North Carolina. EOS, 76:46:F84.
- Young, R.S. (1995) A new model for disturbance-driven, punctuated, marsh transgression from eastern North Carolina. *GSA Abstracts with Programs*, 27:6:448.
- Thieler, E. R., Pilkey, O. H., Bush, D. M., and Young, R. S., (1995) The validity of coastal processes models for predicting beach behavior. *Proceedings, 21st Assateague Shelf and Shore Workshop*, Pomona, New Jersey, p. 8.
- Young, R.S. (1994) Understanding and managing coastal marsh transgression in response to sea-level rise: an example from eastern North Carolina. *Plenary Session on "Physical, Ecological, and Societal Responses to Global Environmental Change," American Geophysical Union 1994 Fall Meeting*. EOS, 75:44:52.
- Young, R.S. (1994) A model for coastal marsh transgression from Pamlico Sound, North Carolina. *GSA Abstracts with Programs*, 26:7:473.
- Young, R.S., Bush, D.M., and Pilkey, O.H. (1994) A simple, qualitative assessment of coastal geologic hazards. *NAGT Theme Session on "Geologic Hazards Education for K-12 Students," Geological Society of America 1994 Annual Meeting*. *GSA Abstracts with Programs*, 26:7:419.

- Young, R.S. (1993) Late Quaternary evolution of the transgressing edge of a non-tidal marsh, Cedar Island, North Carolina. Estuarine Research Federation Abstracts with Programs. Hilton Head, South Carolina, 1993.
- Pilkey, O.H. and Young, R.S. (1993) A critical evaluation of the GENESIS shoreline change model. EOS, 74:43:302.
- Thieler, E.R. and Young, R.S. (1993) Measuring shoreline change: The state of the art and how a class can "adopt a beach" and do just as well. GSA Abstracts with Programs, 25:6:307.
- Klein, E.M., Karsten, J.L., Batiza, R., Bailey, J., Bordelon, M., Broda, J., Ferguson, E., Gowen, M., Mukhopadhyay, R., Pichler, T., Sherman, S., Stephani, R., Tassara, A., Thatcher, M., and Young, R.S. (1993) Results from the 1993 Southern CROSS Expedition: morphological variations along the southern Chile Ridge. EOS, 74:43:302.
- Pilkey, O.H., Young, R.S., and Thieler, E.R. (1993) An overview of geologic and oceanographic assumptions required by coastal models. In (List, J.H., ed.) *Large Scale Coastal Behavior '93*. US Geological Survey Open File Report 93-381, p. 160-162.
- Young, R.S., Thieler, E.R., Pilkey, O.H., and Bush, D.M. (1993) Geologic and oceanographic factors mitigating the coastal impact of Hurricane Andrew in South Florida. National Research Conference on Hurricane Hazard Mitigation Abstracts with Programs. University of Miami, Florida.
- Pilkey, O.H. and Young, R.S. (1992) A critical review of the engineering concept of shoreface profile of equilibrium and its inclusion in sophisticated quantitative sedimentological models. EOS, 73:43:302.
- Young, R.S. and Pilkey, O.H. (1992) A critical review of the engineering concept of beach and shoreface profile of equilibrium. GSA Abstracts with Programs, 24:2:74.
- Barber, D.C., Young, R.S., and Pilkey, O.H. (1991) Alteration of barrier island morphology by ungulate grazing: Cedar Island, Pamlico Sound, North Carolina. GSA Abstracts with Programs, 23:1:88.
- Young, R.S., Bush, D.M., and Pilkey, O.H. (1990) Anomalous barrier island stratigraphy of Cedar Island, Pamlico Sound, North Carolina. GSA Abstracts with Programs, 22:7:41.
- Thieler, E.R., Young, R.S., and Morgan, S.B. (1990) Aerial survey of coastal geomorphic change along the barrier island coast of South Carolina after Hurricane Hugo. GSA Abstracts with Programs, 22:7:77.
- Young, R.S. (1989). Holocene evolution of Pemaquid Beach and Johns Bay region of the Maine coast. GSA Abstracts with Programs, 21:2:78.
- Young, R.S. (1989) Geological control on the distribution and completeness of archaeological sites around a glacially sculpted embayment in Maine. GSA Abstracts with Programs, 21:6:212.
- Young, R.S. (1989) Seismic stratigraphy and Holocene evolution of Pemaquid Beach and Johns Bay, Maine. Bulletin of the Maine Geological Society, Summer 1989.

## Recent Research Grants and Awards

- 2016-2018: National Park Service. Hazards Vulnerability Assessment for coastal and inland parks. \$280,000.
- 2014-2015: United States Fish and Wildlife Service. Analysis of the science and economic benefits of the Coastal Barrier Resource System. \$75,000
- 2014-2015: United States Geological Survey. Mapping Beach Nourishment in the Northeastern USA. \$110,000
- 2013-2015: National Park Service. Coastal Hazards and Climate Change Decision-Making Tool for Park Infrastructure. \$436,000.
- 2013-2014: The Nature Conservancy. Beach Nourishment and Hurricane Sandy. \$85,000
- 2011-2012: National Park Service. Adapting to Sea Level Rise in Coastal Parks. \$235,000
- 2009-2011: Educational Foundation of America. Promoting strategic coastal retreat policies. \$150,000
- 2009-2013: NOAA. Storm Surge Database and Community Level SLR Assessments. \$1,450,000
- 2008-2010: Santa Aguila Charitable Trust, Beachcare Program. \$110,000
- 2007-2008: Cherokee Preservation Foundation. Rivercane Research Project Phase 2. \$43,000
- 2007-2008: UNC GA. Coastal Engineering Database. \$22,000
- 2007-2012: National Science Foundation. Elwha Science Education Project. \$1,560,000
- 2006-2007: Cherokee Preservation Foundation. Rivercane Research Project. \$107,000

- 2006-2007: National Park Service. Coastal Engineering Inventory. \$68,000
- 2005-2007: National Science Foundation. Elwha Education Project: Increasing the Interest in, and Relevancy of the Geosciences for Native Youth Through Participation in Environmental Restoration Projects on Tribal Lands. \$90,000
- 2005-2006: National Park Service. Development of a Geologic Monitoring Manual. \$118,000
- 2005-2006: Cherokee Preservation Foundation. Planning for a river cane restoration station. \$18,500
- 2004-2005: Channel Islands National Park. Wetland restoration at Prisoner's Harbor \$12,000
- 2002-2004: National Park Service. Paleoecology of Heath Balds in Great Smoky Mountains National Park. \$9,500
- 2001-2003: National Park Service, Blue Ridge Parkway. Evolution and Management of Pisgah Bog. \$5,000
- 2000-2001: Horowitz Foundation. Addressing the primary public health concern in Roatan, The Bay Islands, Honduras by tracing fecal coliform bacteria from nearshore ocean water to its inland sources. \$8,000
- 1999-2002: Public Entity Risk Institute. A new, quantitative method for ranking the factors that control coastal hazards for use in risk mapping and property damage mitigation planning with internet-based distribution. \$90,000
- 1999-2002: National Park Service. Wetland Evolution in Great Smoky Mountains National Park. \$10,000
- 1998-2000: National Science Foundation, Biological Oceanography, Examining the impact of land-use on offshore sediment transport and reef degradation during a category five hurricane on a mountainous Caribbean Island, Roatan, Honduras. \$20,000

### **Professional Organizations**

American Geophysical Union  
 Geological Society of America  
 SEPM (The Sedimentology Society)  
 Society of Wetland Scientist (Life Member)  
 AAAS  
 European Geosciences Union