

## **Cheryl J. Hapke, Ph.D.**

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**PROFESSIONAL PROFILE:** I am a coastal geologist with over 25 years' experience studying coastal evolution and coastal change processes in a variety of geomorphic settings including barrier islands, rocky, and reef-fringed coasts. My research focuses on morphodynamics of coastal systems on various time scales from storms to multiple decades. I have extensive experience overseeing and mentoring research support staff graduate students, and interns. I have managed multi-million-dollar projects, overseeing staff, budgets, field studies, and publications. My research has been influential in moving the field of coastal evolution and hazards forward and has high societal relevance. My participation in the planning and writing of the Future of Nearshore Processes Research report led to the development of the new U.S. Coastal Research Program.

### **EDUCATION**

**2002**    **Ph.D., Coastal Geology**, University of California, Santa Cruz, California  
**1992**    **M.S., Geology**, University of Maryland, College Park, Maryland  
**1985**    **B.S., Geology**; University of Pittsburgh, Pittsburgh, Pennsylvania

### **PROFESSIONAL EXPERIENCE**

**Research Professor, Coastal Geology** 2021 - present  
University of South Florida, College of Marine Science  
Coordinator of the Florida Coastal Mapping Program (FCMaP) and co-PI on the NOAA-funded Center for Ocean Mapping and Innovative Technologies (COMIT). Broad duties include developing and leading new research programs and teams, including formulation of new research ideas. The Florida Coastal Mapping Program (FCMaP) is an ongoing initiative to coordinate and facilitate modern, high resolution mapping of Florida's coastal waters. As coordinator, I oversee the effort that includes 5 State (FDEP, FDEM, FDOT, FWRI and FIO) and 4 federal (USGS, USACE, BOEM, NOAA) agencies, including running large stakeholder workshops, holding monthly steering committee calls, and writing reports and peer-review journal articles. As a COMIT co-PI, I develop and guide research and activities coastal change, including disaster response and recovery, and the influence of antecedent geology on modern coastal processes.

**Courtesy Professor, Florida Coastal Mapping Program** 2019 - present  
University of South Florida, College of Marine Science  
Broad duties include developing and leading new research programs and teams, including formulation of new research ideas. The Florida Coastal Mapping Program (FCMaP) is a burgeoning effort to coordinate and facilitate modern, high resolution mapping of Florida's coastal waters. As coordinator, I oversee the effort that includes 5 State (FDEP, FDEM, FDOT, FWRI and FIO) and 4 federal (USGS, USACE, BOEM, NOAA) agencies, including running large stakeholder workshops, holding monthly steering committee calls, and writing reports and peer-review journal articles.

**Senior Consultant, Integral Consulting., St Petersburg, FL** 2019-present  
Leader in Integral's Coastal Resilience Practice, which broadly focuses on coastal hazard and vulnerability assessments for coastal communities and facilities to develop climate change adaptation plans. Projects to date include Beach and Dune Assessments in South Padre Island, TX, coastal inundation vulnerability assessments for Captiva Island FL, and working with a team of scientists and engineers to review, evaluate, and comment on a new proposed development project in California that required data analyses, site evaluation, and extensive report writing. Leader on the development of a new modelling-based decision

support framework to assist coastal communities with sea level rise adaptation planning.

**Research Geologist, GS-15**

(6/17-4/2019)

U.S. Geological Survey, Coastal and Marine Geology Program, St Petersburg, FL

Senior research scientist, leading and managing all aspects of two collaborative USGS projects: Coastal Cliff Vulnerability Modelling; and lead coordinator and co-chair of the Florida Coastal Mapping Program. Broad duties include developing and leading new research programs and teams, including formulation of new research ideas. The Florida Coastal Mapping Program (FCMaP) is a burgeoning effort to coordinate and facilitate modern, high resolution mapping of Florida's coastal waters. I lead the effort that includes 5 State (FDEP, FDEM, FDOT, FWRI and FIO) and 4 federal (USGS, USACE, BOEM, NOAA) agencies, and have organized and led 4 workshops since January of 2018 to communicate the value of the effort to multiple stakeholders and partner statewide. NOAA has already begun to invest in mapping in areas identified as top priorities as a result of the communication and coordination of FCMaP. The end result will provide data that will explicitly move the science of coastal morphodynamics and resiliency forward by providing detailed information on the morphology of the nearshore zone. The Coastal Cliff Vulnerability Modeling project is a cross-center collaboration with USGS colleagues at the Pacific Science Center in Santa Cruz, CA, as well as academic colleagues at Scripps Institute of Oceanography and Coastal Carolina University. The goal of the effort is to develop a model that can accurately forecast both event-based response and long-term vulnerability of coastal cliffs. The model is being developed and tested along the Central CA coast but is applicable to many areas such as the Pacific Northwest, the Arctic and the Great Lakes. My position has also included hiring of staff (contractors), directing tasks, managing budgets, preparing and publishing research papers and reports, and developing proposals.

**Center Director, GS-15**

(6/15-6/17)

U.S. Geological Survey, St Petersburg Coastal and Marine Science Center, St Petersburg, FL

- Director of research science center with approximately 120 staff overseeing all science and operations of the center with an annual budget exceeding \$10 million. I directly managed a senior leadership team within center, supervised as many as 24 employees concurrently; actively promoted science of center to external partners and collaborators; represented the USGS Coastal and Marine Geology Program at international venues; briefed directors of other science centers, and participated in strategic science planning and organizational development.

**Coastal Science Advisor to FEMA**

(1/13-4/13)

Joint Field Office, Queens, NY

In response to the federal disaster declaration after Hurricane Sandy, I was detailed to the FEMA Federal Disaster Recovery Joint Field Office in Queens, NY. I served as the coastal science expert advisor to the leadership of multiple federal, state and local agencies and was the lead of the Natural and Cultural Resources Recovery Support Function, working with a team comprised of experts from NPS, FWS, EPA, and NOAA to develop a response plan for the State of New York.

**Research Geologist, GS-12-14**

(5/02 -6/15)

U.S. Geological Survey, Coastal and Marine Geology Program, Santa Cruz, CA, Woods Hole, MA, and St Petersburg, FL

- Research scientist with wide range of duties including collaborative research, scientific proposal development, hiring and managing staff, networking and interaction with partners and stakeholders, budget development and management, and publication of peer-review papers, reports and data. During this time I was successfully promoted within the USGS research grade evaluation process. My duty stations included the Pacific Science Center in Santa Cruz, CA, the Geosciences Department at the

University of Rhode Island (as a visiting USGS scientist), the Woods Hole Science Center in MA, and the St Petersburg Coastal and Marine Science Center in FL. My research has included examining the frequency and occurrence of massive coastal landslides along the central California coast, regional historical shoreline change studies covering 1000s of km of coast, predictive models of sea cliff retreat, intensive barrier island evolution analyses, especially in response to extreme storm events. I was on the leadership team of the National Assessment of Coastal Change Hazards project and oversaw the Long-term Coastal Change task. The results of the effort produced data and reports of significant value to managers and planners in the coastal zone and informed numerous policy decisions for the State of CA and the eastern seaboard of the U.S. from ME to NC. A decade of my career was spent analyzing coastal morphodynamics of Fire Island, NY and as a leading researcher of this barrier island I participated as the coastal science expert on numerous panels and teams that included the US Army Corps of Engineers, the State of NY, the NPS, and local and county stakeholders. I also worked internationally in India, Ghana, and Argentina in a science advisory and knowledge transfer capacity.

**Geologist, GS-11**

(5/98-5/02)

U.S. Geological Survey, Coastal and Marine Geology Program, Santa Cruz, CA

- Team scientist contributing to research projects examining coastal change from extreme storm events. Developed airborne camera system and digital photogrammetric techniques to create topographic models before and after storms.

**Photogrammetric Engineer**

(9/94-5/97)

Civil Engineering Department, North Carolina State University

Laboratory manager in a coastal studies lab; developed new digital photogrammetric techniques to derive 3D models of barrier islands to measure historical rates of change and periodically update rates for State management and planning.

**Special Assignments and Activities**

Field Campaigns

Fire Island, 2007-2015: extensive GPS surveys of beaches and dunes; collection of shallow water bathymetry and subbottom data; multiple surveys of inlet

Big Sur, 1999-2004: geologic field mapping, collection of ground control points for photogrammetric processing

Monterey Bay, 1998-2002; geologic field mapping; collection of ground control points for photogrammetric processing

Special Assignments

FEMA Joint Field Office, NY, coastal science subject matter expert, 2013:

Department of Interior coastal science subject matter expert; 2007-2017: primary representative on DOI team on Fire Island to Montauk Point Reformulation Plan (FIMP)

USGS coastal science expert on Fire Island Breach Contingency Plan team, 2012-2017; National Park Service

California Department of Transportation, Coastal science subject matter expert, 1999-2004: served as scientific liaison to Monterey Bay National Marine Sanctuary in Discussions with Caltrans regarding coastal landslides

Congressional and Other Testimony

Congressional Briefing to Senator Charles Schumer's staff on Fire Island (July 2013)

Congressional Briefing: David Wegner, senior democratic staffer to House Subcommittee on Water

Resources and Environment, Obama Administration (July 2013)  
Briefing to Congressman Zeldin (R – NY) and Senators Schumer and Gillibrand (D-NY) staffers on Fire Island EIS (Sept 2016)

## **Grants**

- 2018 *Big Bend Demonstration Study*: NOAA Hurricane Irma Supplemental Funding, 2 year, \$50,000.
- 2014 *Investigating Coastal Vulnerability and Processes*: Hurricane Sandy Supplemental Funding, 3 year, \$4,100,000.
- 2011 *Investigating Morphologic Change in Response to Environmental Forcings and Anthropogenic Modifications on Fire Island Beaches*: USGS National Park Research, 3 year, \$359,000. Competitive proposal ranked #1 nationally.
- 2010 *Coastal Processes Program Development* at the University of Ghana, Accra, Ghana: Office of Naval Research Coastal Geosciences Program, \$76,000.
- 2009 *Marsh Sedimentation Study, Bluff Volumetric Contribution Analysis*: National Park Service, Boston Harbor Islands National Recreation Area, \$34,000.
- 2009 *Coastal Processes Program Development* at the University of Ghana, Accra, Ghana: Office of Naval Research Coastal Geosciences Program, \$6,254.
- 2009-11 *Impacts of Beach Scraping on the Natural Resources of Fire Island National Seashore, NY, Phases II-III*: USGS Natural Resources Preservation Program, \$299,961.
- 2008 *Development of Historical Topographic Models of the Beach/Dune System in Northeast Coastal and Barrier Network Parks*: National Park Service Inventory and Monitoring Program, \$162,645
- 2007 *Impacts of Beach Scraping on the Natural Resources of Fire Island National Seashore, NY, Supplemental I*: National Park Service Northeast Region, \$35,598.
- 2006 *Long-term, Seasonal, and Storm-related Shoreline Change Trends in the Florida Gulf Islands National Seashore*: National Park Service Natural Resource Preservation Program, \$26,391.
- 2006 *Wetlands and Coastal Environments: Impacts, Protection, and Restoration - elevation change and environmental assessment*: U.S. Geological Survey Hurricane Katrina Supplemental Funding 2006, co-investigators Don Cahoon and Glenn Guntenspergen, \$200,000.
- 2006 *Impacts of Beach Scraping on the Natural Resources of Fire Island National Seashore, NY, Phase I*: National Park Service Northeast Region, \$38,000.
- 2003-04 *Interim Analysis of Landslide Hazards and Processes Along the Big Sur Coast, California*, California Department of Transportation, Coastal Highway Management Plan, co-investigator Dr. Gary Griggs, \$45,300.
- 2001-03 *Historical Assessment of Landslide Volume Contribution to the Monterey National Marine Sanctuary Along the Big Sur Coast, California*, California Department of Transportation, Coastal Highway Management Plan, co-investigator Dr. Gary Griggs, \$67,800.

## **ACADEMIC SERVICE**

### Technical Advisor

Katherine Wilson, 2013 – 2015: M.S. student, Depart of Geosciences, University of Florida: *Probabilistic Forecasting of Coastal Morphodynamic Storm Response at Fire Island, New York*

### Major Academic Advisor

Erika Lentz, 2006 – 2010: Ph.D. student, Department of Geosciences, University of Rhode

Island: *A Spatial and Temporal Assessment of Topographic Change on a Barrier Island: Fire Island National Seashore, Fire Island, New York*

Meredith Kratzmann, 2006 – 2008: M.S. student, Department of Geosciences, University of Rhode Island: *Anthropogenic influences on the dune/beach morphology of a moderately developed barrier island: Fire Island, New York*

Graduate Academic Committee Member

Katy Croff, 2008 - 2012, Ph.D. Dissertation Committee member, Graduate School of Oceanography, University of Rhode Island: *The Relationship Between Seafloor Physiography and Holocene History in the Southern Aegean Sea*

Nicole Kinsman, 2008 – 2012, PhD Dissertation Committee, Earth Sciences Department, University of California, Santa Cruz: *Improved Approaches for Effective Beach Nourishment*

Bryan Oakley, 2007 – 2011, Ph.D. Dissertation Committee member, Department of Geosciences, University of Rhode Island: *Late Quaternary and Modern Depositional Environments: Narragansett Bay Rhode Island and Massachusetts*

Chris DiPerna, 2007-08, M.S. Thesis Committee member, Graduate School of Oceanography, University of Rhode Island: *A Paleoeological Assessment of Urbanized Coastal Lagoons: Moriches Bay and Great South Bay, Long Island, New York*

Mark Borrelli, 2005-08, Ph.D. Dissertation Committee member, Department of Geosciences, University of Rhode Island: *Sediment Transport, Inlet Evolution and Shoreline Change Associated With a Coastal Lagoon: Pleasant Bay and Chatham Harbor, Cape Cod, Massachusetts*

Rachel Hehre, 2005-07, M.S. Thesis Committee member, Department of Geosciences, University of Rhode Island: *A Photogrammetric and Spatial Analysis Survey of Shoreline Change - Narragansett Bay, Rhode Island: 1939-2002*

Dave Reid, 2004, M.S. Thesis Committee member, Earth Sciences Department, University of California, Santa Cruz: *Long-term Beach Width Change in Monterey Bay, California*

Undergraduate Senior Theses – Principal Advisor

Kate Dallas, 2002: Undergraduate Senior Thesis, University of California, Santa Cruz: *Assessment of Long-term Beach Change Along the Big Sur Coast, CA*

Christina Dell, 2002: Undergraduate Senior Thesis, University of California, Santa Cruz: *The Analysis of Physical and Chemical Properties Influencing the Morphology of the Santa Cruz coastline*

Branden Johannesen, 2001, Undergraduate Senior Thesis, University of California, Santa Cruz: *The Lithologic Variations in the Purisima Formation Uncovered Through Intrinsic Property Analysis: Northern Monterey Bay, CA*

**PROFESSIONAL MEMBERSHIPS**

American Geophysical Union  
American Shore and Beach Preservation Association  
Association of Environmental and Engineering Geologists

### **AWARDS AND ACHIEVEMENTS**

Invited Expert Reviewer, UN 2<sup>nd</sup> World Ocean Assessment 2020, Chapter 13: Changes in Erosion and Sedimentation

2020 Jahns Distinguished Lecturer Award, Geological Society of America and Association of Engineering Geologists

2007-2017 yearly USGS Superior or Exceptional Performance Awards

### **LECTURES AND INVITED PRESENTATIONS**

- 2020 Prioritizing Mapping of Florida's Coastal Seafloor: Program Development and Sea-level Rise Adaptation Applications, University of South Florida Geosciences Department Colloquium Series, Tampa FL, February 14, 2020.
- 2019 Progress in Understanding Seacliff Evolution Using Remote Sensing Techniques and Historical Data Sources, American Geophysical Union Fall Meeting (Invited), San Francisco, CA December 2019.
- 2019 A Federal-State Partnership for Mapping Florida's Coast and Seafloor, 2019 BioBase Aquatic Mapping technology Symposium (Keynote), Orlando, FL, February 2019.
- 2018 Why You Need Coastal Mapping (and Probably Don't Know It), St Petersburg Innovation District State of the Science Conference (Invited), St Petersburg, FL, October 2018.
- 2017 Decoupling Processes and Scales of Shoreline Morphodynamics: Fire Island, NY, Woods Hole Oceanographic Institute Colloquim Series, Woods Hole, MA, August 2017.
- 2016 National Assessment of Coastal Change Hazards, Puerto Rico Climate Change Summit (Invited), San Juan, Puerto Rico, April 2016.
- 2016 Morphologic Change Studies at Fire Island in a Post-Sandy World, Fire Island Biennial Science Meeting (Invited), Patchogue, NY, April 2016.
- 2015 Coastal Change at Fire Island, NY: Influences of Storms, Geology and People (and Politics), University of Pittsburgh, Department of Planetary Sciences Seminar Series, October 2015.
- 2015 Morphologic Response and Recovery Related to Hurricane Sandy at Fire Island, NY, Coastal Carolina University, Department of Marine Science and Geology Seminar Series, February 2015.
- 2014 Controls on Barrier Island Response and Recovery to Hurricane Sandy and Beyond, Fire Island Biennial Science Meeting (Invited), Patchogue, NY, March 2014.
- 2014 Geologic Constraints on the Morphologic Response to Hurricane Sandy at Fire Island, NY, University of Puerto Rico, Mayaguez, Department of Geology Seminar Series, March 2014.
- 2014 Morphologic Response and Recovery Related to Hurricane Sandy at Fire Island, NY, Texas A & M University, Department of Geography Colloquim Series, October 2014.

- 2013 Geomorphic and Human Influence on Large-scale Coastal Change, Binghamton Geomorphology Symposium (Invited), Newark, NJ, March 2013.
- 2013 Barrier island morphologic response to Hurricane Sandy: Fire Island, NY; American Association of Petroleum Geology Annual Meeting (Invited), Pittsburgh, PA, May 2013.
- 2013 Coastal Response to Hurricane Sandy at Fire Island, NY, Long Island Natural History Symposium (Invited), Stony Brook, NY, December, 2013.
- 2013 Influences on the Morphologic Response to Hurricane Sandy: Fire Island, NY, American Geophysical Union Fall Meeting (Invited), December 2013.
- 2012 Scaling Controls of Barrier Island Evolution and Morphology: Fire Island, New York, University of Florida, Department of Geology Seminar Series, October 2012.
- 2011 Multi-scale Coastal Change Analyses: regional trends, local processes and coastal response; USGS St Petersburg Coastal and Marine Science Center Seminar, April 2011.
- 2011 Multi-Scale Coastal Change Analyses in U.S. National Parks: Regional Trends and Local Processes; National Park Service Coastal Geology Webinar (Invited), June 2011.
- 2011 Long-term Coastal Change and Hurricane Sandy Response and Recovery, Fire Island, NY, City College of New York Undergraduate Diversity in the Sciences Seminar Series, November 2011.
- 2010 Investigating Coastal Processes and Hazards Along the Coastline of Ghana, West Africa, American Geophysical Union Fall Meeting (Invited), December 2010.
- 2007 Unraveling the Impacts of Severe Storms in the Long-term Shoreline Change Record, Gulf Islands National Seashore, University of Rhode Island, Department of Geosciences
- 2006 Historical Shoreline Rates and Trends along the California Coast, University of Rhode Island, Kingston, Department of Geosciences
- 2005 Multi-scale Approaches to Measuring Coastal Change and Mapping Coastal Geomorphology, University of Rhode Island, Kingston, Department of Geosciences.
- 2005 Decadal-Scale Analysis of Coastal Landslides along the Big Sur Coast: Rates and Processes USGS Coastal Seminar, Santa Cruz.
- 2003 Determining Landslide Volume Input to the Coastal Zone along the Big Sur Coastline, California, USGS Coastal Seminar, Menlo Park.
- 2002 Determining Landslide Volume Input to the Coastal Zone along the Big Sur Coastline, California, California State University, Sacramento, Department of Earth Science.
- 2002 Controls and Processes of Coastal Landslide Volume Influx to the Nearshore: Big Sur, California, University of Pittsburgh, Pittsburgh, Department of Earth and Planetary Sciences.
- 2001 The Impact of Climatic and Seismic Events on the Short-term Evolution of Seacliffs: Northern Monterey Bay, California, University of California, Santa Cruz, Earth and Marine Sciences Department.

INVITED COURSE LECTURES

2006: Guest Lecturer, Applied Coastal Ecology, University of Rhode Island

2000, 2001, 2002: Guest Lecturer, GIS and Remote Sensing Course, University of California Santa Cruz.

## PUBLICATIONS

1. Seymour, A.C., C.J. Hapke, and J. Warrick. 2020. Cliff Feature Delineation Tool and Baseline Builder Tool, Version 1.0 User Guide: U.S. Geological Survey Open File Report 2020–1070. 54 pp.
2. van Ormondt, M., Nelson, T.R., Hapke, C.J. and Roelvink, D., 2020. Morphodynamic Modelling of the Wilderness Breach, Fire Island, New York. Part I: Model Set-up and Validation. *Coastal Engineering*, p.103621.
3. Hapke, C.J., Druyor, R., Baumstark, R.D., Kramer, P.A., Fitos, E., Fredericks, X., and Fetherston-Resch, E.H., 2019, A Federal-State Partnership for Mapping Florida’s Coastal Waters, Processing of Coastal Sediments 2019, American Society of Civil Engineering, 10p.
4. Hapke, C.J., Kramer, P.A., Fetherston-Resch, E.H., Baumstark, R.D., Druyor, R., Fredericks, X., and Fitos, E., 2019, Florida Coastal Mapping Program—Overview and 2018 workshop report: *U.S. Geological Survey Open-File Report 2019–1017*, 19 p., <https://doi.org/10.3133/ofr20191017>.
5. Bennett, V.C., Mulligan, R.P. and Hapke, C.J., 2018. A numerical model investigation of the impacts of Hurricane Sandy on water level variability in Great South Bay, New York. *Continental Shelf Research*, 161, pp.1-11.
6. Brenner, O.T., Lentz, E.E., Hapke, C.J., Henderson, R.E., Wilson, K.E. and Nelson, T.R., 2018. Characterizing storm response and recovery using the beach change envelope: Fire Island, New York. *Geomorphology*, 300, pp.189-202.
7. Locker, S.D., Miselis, J.L., Buster, N.A., Hapke, C.J., Wadman, H.M., McNinch, J.E., Forde, A.S., and Stalk, C.A., 2017, Nearshore sediment thickness, Fire Island, New York: *U.S. Geological Survey Open-File Report 2017–1024*, 21 p.
8. Hapke, C.J., Plant, N.G., Henderson, R.E., Schwab, W.C. and Nelson, T.R., 2016. Decoupling processes and scales of shoreline morphodynamics. *Marine Geology*, 381, pp.42-53.
9. Wilson, K.E., Adams, P.N., Hapke, C.J., Lentz, E.E. and Brenner, O., 2015. Application of Bayesian Networks to hindcast barrier island morphodynamics. *Coastal Engineering*, 102, pp.30-43.
10. Nelson, T.R. and Hapke C.J., 2015. Shoreface response and recovery to Hurricane Sandy: Fire Island, NY. Coastal Sediments 2015, San Diego, CA.
11. Van Ormondt, M., Hapke, C., Roelvink, D., and Nelson, T., 2015. The effects of geomorphic changes at Fire Island on inundation during and after Hurricane Sandy. Coastal Sediments 2015, San Diego, CA. doi:10.1142/9789814689977\_0221
12. Hapke, C.J., Brenner, Owen, Henderson, Rachel, 2015. Beach response and short-term evolution: Quantifying the geomorphic resiliency of barrier island beaches: Coastal Sediments 2015, San Diego, CA.
13. Hapke, C.J., Adams, P.N., Allan, J., Ashton, A., Griggs, G.B., Hampton, M.A., Kelly, J., and Young, A.P., 2014. Rocky Coast Geomorphology: A Global Synthesis – The USA. *In*

- Kennedy, Stevenson and Naylor (eds.): Rocky Coast Geomorphology – A Global Synthesis. Geological Society of London Memoir.
14. Barnard, P.L., van Ormondt, M., Erikson, L.H., Eshleman, J., Hapke, C., Ruggiero, P., Adams, P.N. and Foxgrover, A.C., 2014. Development of the Coastal Storm Modeling System (CoSMoS) for predicting the impact of storms on high-energy, active-margin coasts. *Natural Hazards*, Volume 74 (2), p. 1095-1125
  15. Schwab, W.C., Baldwin, W.E., Denny, J.F., Hapke, C.J., Gayes, P.T., List, J.H., and Warner, J.C., 2014, Modification of the Quaternary stratigraphic framework of the inner-continental shelf by Holocene marine transgression: An example offshore of Fire Island, New York: *Marine Geology*, 355, 346-360.
  16. Hapke, C.J., Brenner, Owen, Hehre, Rachel, and Reynolds, B.J., 2013, [Coastal change from Hurricane Sandy and the 2012–13 winter storm season—Fire Island, New York: U.S. Geological Survey Open-File Report 2013–1231](#), 37 p.
  17. Lentz, E.E., Hapke, C.J., Stockdon, H.F. and Hehre, R.E., 2013. Improving understanding of near-term barrier island evolution through multi-decadal assessment of morphologic change. *Marine Geology*, 337, pp.125-139.
  18. Hapke, C.J., Kratzmann, M.G. and Himmelstoss, E.A., 2013. Geomorphic and human influence on large-scale coastal change. *Geomorphology*, 199, pp.160-170.
  19. Hapke, C.J., Kratzmann, M. and Himmelstoss, E.A., 2013, Geomorphic and human influences on regional shoreline change rates. In Nordstrom and Wright (eds.), *Geomorphology of Barrier Island Systems: Geomorphology Special Issue Coastal Geomorphology and Restoration*, 199, 160-170.
  20. Schwab, W.C., Baldwin, W.E., Hapke, C.J., Lentz, E.E., Gayes, P.T., Denny, J.F., List, J.H., and Warner, J.C., 2013, [Geologic evidence for onshore sediment transport from the inner-continental shelf—Fire Island, New York: Journal of Coastal Research](#), v. 29, no. 3, p. 526–54
  21. Hapke, C.J., Stockdon, H.F., Schwab, W.C., and Foley, M.K., 2013, [Changing the Paradigm of Response to Coastal Storms: Eos Trans. AGU](#), 94(21), 189.
  22. Kratzmann, M. and Hapke, C.J., 2012. Quantifying an Anthropogenically Driven Morphologic Changes on a Barrier Island: Fire Island National Seashore, New York: *Journal of Coastal Research*, 28(1), p.76-88.
  23. Lentz, E.E. and Hapke, C.J., 2011, Geologic Framework Influences on the Geomorphology of an Anthropogenically Modified Barrier Island: Fire Island, New York: *Geomorphology*, v. 126, p. 82-96
  24. Hapke, C.J. and Thieler, R.T., 2011, USGS Science for the Nation’s changing coasts; shoreline change research: U.S. Geological Survey Fact Sheet 2011–3073, (<http://pubs.usgs.gov/fs/2011/3073/>).
  25. Thieler, R.T. and Hapke, C.J., 2011, USGS science for the Nation’s changing coasts: shoreline change assessment: U.S. Geological Survey Fact Sheet 2011-3074, (<http://pubs.usgs.gov/fs/2011/3074/>).
  26. Hapke, C.J., Schwab, W.C., Gayes, P.T., McCoy, C., Viso, R., Lentz, E.E., and List, J., 2011. Inner shelf morphologic controls on the morphodynamics of the beach and bar system,

- Fire Island, New York: Proceedings of Coastal Sediments '11, P. 1034 - 1047.
27. Lentz, E.E. and Hapke, C.J., 2011, The development of a probabilistic approach to forecast coastal change: Coastal Sediments 2011.
  28. Hapke, C.J., Himmelstoss, E.A., Kratzmann, M., List, J., and Thieler, E.R., 2010, National Assessment of Shoreline Change: Historical Shoreline Change along the New England and Mid-Atlantic Coasts: *U.S. Geological Survey Open-file Report 2010-1118*.
  29. Hapke, C.J. and Plant, N., 2010, Predicting Coastal Cliff Erosion Using a Bayesian Probabilistic Model: *Marine Geology*, v. 278, p.140-149
  30. Hapke, C.J., Lentz, E.E., Gayes, P.T., McCoy, C.A., Hehre, R., Schwab, W.C. and Williams, S.J., 2010, A review of sediment budget imbalances along Fire Island, New York: can nearshore geologic framework and patterns of shoreline change explain the deficit?: *Journal of Coastal Research*, v.26, n.3, p.510-522
  31. Hapke, C.J., Reid, D. and Richmond, B., 2009, Rates and trends of coastal change in California and the regional behavior of the beach and cliff system: *Journal of Coastal Research*, v.25, n.3, p.603-615.
  32. Hapke, C. J., Malone, S., and Kratzmann, M., 2009, National assessment of historical shoreline change: A pilot study of historical coastal bluff retreat in the Great Lakes, Erie, Pennsylvania: *U.S. Geological Survey Open-File Report 2009-1042*, 25 p.
  33. Hapke, C.J., 2009, Integration of Lidar and Historical Maps to Measure Coastal Change on a Variety of Time and Spatial Scales, Chapter 4, In Wang, Yeqiao (ed.), *Remote Sensing of Coastal Environments*, p.79-102.
  34. Barnard, P.L., O'Reilly, B., van Ormondt, M., Elias, E., Ruggiero, P., Erikson, L.H., Hapke, C., Collins, B.D., Guza, R.T., Adams, P.N., and Thomas, J.T., 2009, The framework of a coastal hazards model; a tool for predicting the impact of severe storms: *U.S. Geological Survey Open-File Report 2009-1073*, 21pp
  35. Houser, C., Hapke, C., and Hamilton, S., 2008, Controls on coastal dune morphology, shoreline erosion and barrier island response to extreme storms: *Geomorphology*, p. 223-240.
  36. Kratzmann, M. and Hapke, C., 2008, Anthropogenic influences on the dune/beach morphology of a moderately developed barrier island: Fire Island, New York, Technical Report NPS/NER/NRTR--2008/131, 45pp.
  37. Lentz, E., Hapke, C. and Schwab, W., 2008, A review of sediment budgets at Fire Island National Seashore, New York: Technical Report NPS/NER/NRTR--2008/114, 40pp.
  38. Hapke, C.J. and Christiano, M., 2007, Long-term and Storm-related Shoreline Change Trends in the Florida Gulf Islands National Seashore: *U.S. Geological Survey Open-file Report 2007-1392*, 18p.
  39. Hapke, C.J., and Reid, D., 2007, The National assessment of shoreline change: Part 4, Historical coastal cliff retreat along the California coast: *U.S. Geological Survey Open-file Report 2007-1133*.
  40. Hapke, C.J., and Reid, D., 2007, Regional Beach/Cliff System Dynamics along the California Coast: Coastal Sediments '07 Conference Proceedings, May 13-17, 2007, New Orleans, LA, 12 pp.

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