



Education

PhD, Geology (Coastal Processes),
University of South Carolina (USC)
MS, Geology (Coastal Geology), USC
BA, Natural Sciences (Geological Oceanography), The
Johns Hopkins University

Technical and Consulting Reports 1989 to Present

Kana has been senior author of over 250 professional papers and consulting reports since the 1970s on topics including beach management plans, shoreline assessments and monitoring, estuarine circulation and sedimentation, marina design criteria, nourishment feasibility studies, and oil spills. He has co-authored an additional 30 refereed and proceedings papers.

Experience

1984-present: Founder and president, Coastal Science & Engineering (CSE), Columbia, SC

1996-1999: Principal in the office of CSE Baird, a division of WF Baird & Associates LTD, Columbia, SC

1977-1984: Founding partner, Research Planning Institute, Inc. (RPI), Columbia, SC
Director, Coastal Dynamics Division

1981-present: Adjunct professor, Department of Geology, USC, Columbia, SC

1974-1979: Graduate research assistant, Dept. of Geology, USC

1969-1973: Research assistant, Chesapeake Bay Institute, The Johns Hopkins University, Baltimore, MD

1966-1972: U.S. Naval Reserve

Registration

Professional geologist (SC 564, NC 1752)

Professional Memberships

SEPM (since 1974) ASBPA (since 1980)
Sigma Xi (since 1981) ASCE (since 1982)
AGU (since 1987) COPRI (since 2000)
ASBPA Board of Directors (2006 to present)

Affiliation

Coastal Science & Engineering Inc
[160 Gills Creek Parkway 29209]
PO Box 8056 Columbia SC USA 29202
[Tel: 803-799-8949 Fax: 803-799-9481]
[e-mail: tkana@coastalscience.com]

Research Grants

Since 1978, Dr. Kana has received over a dozen research grants and contracts from federal and state agencies, and foreign governments including the U.S. Army Corps of Engineers, Minerals Management Service, National Oceanic and Atmospheric Administration, U.S. Army Research Office, South Carolina Sea Grant, U.S. Coast Guard, South Carolina Coastal Council, South Carolina Department of Parks, Recreation and Tourism, U.S. Environmental Protection Agency, United Nations (UNEP), and Kuwait Foundation for the Advancement of Science. Representative grants and contracts for which Kana was principal investigator include:

U.S. Army Corps of Engineers – Sediment budget for the south shore of Long Island, New York (\$152,000).

U.S. Minerals Management Service – Development and testing of a model for prediction of oil spill movement in the surf zone (\$410,000).

SC Sea Grant – Morphologic evolution and sediment dynamics of a new tidal inlet (\$35,000).

SC Department of Parks, Recreation and Tourism – Feasibility study, design, and construction management of the Hunting Island beach nourishment project (\$190,000).

U.S. Environmental Protection Agency – Potential impacts of sea-level rise in Charleston, South Carolina, and Great Bay, New Jersey (\$45,000).

South Carolina Coastal Council – Development of methodology and delineation of baselines and setback lines for coastal development along the South Carolina coast (\$80,000).

Kuwait Foundation for the Advancement of Science – Evaluation of impacts of the Kuwait Waterfront Project on coastal processes and water quality (co-investigator) (\$65,000).

U.S. Geological Survey – South Carolina Coastal Erosion Study – Sediment budget development (co-investigator) (\$110,000).

U.S. Army Corps of Engineers – (CERC) Performance evaluation of three nourishment projects in South Carolina (\$45,000).



Supervisory Experience

As a founder of Research Planning Institute Inc (RPI) (1977), Dr. Kana was responsible for business, project management, and technical work in connection with the Coastal Dynamics Division. Between 1979 and September 1984, he supervised 2–5 staff scientists and engineers and served on the executive committee of the firm.

With another RPI partner, Kana founded Coastal Science & Engineering (CSE) in October 1984, serving as president and senior scientist. Since 1984, Kana has led the firm in pioneering work related to beach restoration and innovative soft-engineering solutions to coastal erosion. CSE is headquartered in Columbia (SC).

Consulting Contracts

Dr. Kana has received consulting contracts from a variety of federal, state, municipal, development, and industrial clients since 1979, including:

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| Alabama Dept of Environmental Control | Melrose Development Corporation | The Scott Company |
| Bellemead Development Corp (FL) | Metcalf & Eddy | Scruggs & Hammond (KY) |
| Brevard County (FL) | Municipalities | Seabrook Island Company |
| Carteret County (NC) | City of Myrtle Beach (SC) | Seabrook Island POA |
| Charleston County (SC) PRC | City of North Myrtle Beach (SC) | The Sea Island Company |
| Charleston Harbor Marina | Town of Atlantic Beach (SC) | SeeWeed Company |
| Collins Engineers Inc | Town of Edisto Beach (SC) | Solomon Zauderer Ellenhorn Frischer & Sharp |
| DeBordieu Colony (SC) | Town of Emerald Isle (NC) | South Carolina |
| Dewberry & Davis | Town of Hilton Head Island (SC) | Office of Ocean and Coastal |
| Drake Development Corporation | Town of Indian Beach (NC) | Resource Mgmt |
| Dresdner-Robin Associates | Town of Isle of Palms (SC) | Dept Parks Recreation & Tourism |
| Edens & Avant Company | Town of Kiawah Island (SC) | Sea Grant Consortium |
| Fripp Island Property Owners Association | Town of Kitty Hawk (NC) | Suffolk County Parks Department (NY) |
| Fripp Island Public Service District | Town of Nags Head (NC) | Sugar Beach POA (St. Croix, VI) |
| Greenman Pedersen Inc | Town of Ocean Isle Beach (NC) | Sverdrup Corporation |
| Greenwood Development Corporation | Town of Pawleys Island (SC) | Taylor Construction (VA) |
| Han-Padron Associates | Town of Pine Knoll Shores (NC) | Trammell Crow Hotel Company |
| Hilton International Corporation | Town of Topsail Beach (NC) | United Nations-UNEP |
| Holiday Inn Corporation | Town of Southampton (NY) | U.S. Army Corps of Engineers |
| ICF Corporation | Village of Asharoken (NY) | U.S. Army Research Office |
| Jupiter USA Company | Village of Quogue (NY) | U.S. Coast Guard |
| Kemron Corporation | New York Coastal Partnership | U.S. Department of Commerce |
| Kiawah Island Community Association | New York State–Department of State | NOAA-NOS |
| Kiawah Island Company | North Inlet Corporation | U.S. Department of Interior |
| Kuwait Foundation | Owens-Corning Corporation | Minerals Management Service |
| for the Advancement of Science | Pawlowski Associates | Geological Survey |
| Kuwaiti Engineers Office | Perception & Decision Systems | U.S. Environmental Protection Agency |
| La'Ala Al Kuwait Real Estate Company | Prince George Community Association | Wilbur Smith Associates |
| Mayes, Sudderth & Etheridge | Sands Investment Corporation | Wild Dunes Associates |
| McLaren-Hart/ChemRisk Company | Sasaki Associates | |

Conference Coordination

- 2010 Co-chair — ASBPA Fall Meeting, Charleston, South Carolina — 12–15 October 2010
 American Shore & Beach Preservation Association, Ft Myers, Florida — 200 attendees
 Responsibilities included lead board member for planning program (80 papers), guest speaker invitations, program theme, sponsorships, field-trip and short-course coordination.
- 2011 Co-chair — Special Symposium in honor of Miles O Hayes, Columbia, South Carolina
 6–9 October 2011 — 80 attendees
 Responsibilities included planning, call for presentations, program, field trip, and post-conference co-editor for special issue of Journal of Coastal Research (in preparation) in honor of the career of Miles O Hayes.



Reviewer (Professional Articles)

Reviews of Manuscripts/Proposals (1988 to present)

| | | |
|----------------------------|------|---|
| Hoan et al | 2010 | Journal of Coastal Engineering |
| Al-Shaalan | 2010 | Kuwait University |
| Jackson et al | 2010 | Journal of Ecological Engineering |
| Al-Zanel | 2004 | Kuwait University |
| Peterson & Wells | 2003 | North Carolina Sea Grant |
| Posey et al | 2003 | North Carolina Sea Grant |
| Peterson | 2001 | North Carolina Sea Grant |
| Judge & Overton | 1999 | Journal of Coastal Research |
| Al-Sarawi & Al-Zamel | 1996 | Kuwait University |
| Spencer & Terchunian | 1996 | Shore & Beach |
| Ebersole et al | 1995 | Shore & Beach |
| Moriarity | 1995 | New England Marine Aquarium |
| Lawrence & Davidson-Arnott | 1995 | Journal Coastal Research |
| Conley | 1995 | New York State Sea Grant |
| Pizzuto & Kraft | 1994 | Delaware Sea Grant |
| Yamashita et al | 1994 | Marine Geology |
| Wijnberg & Terwindt | 1994 | Marine Geology |
| Pompé, J | 1993 | Journal of Ocean and Coastal Management |
| Prestedge, C | 1992 | Shore & Beach |
| Joyner, L | 1991 | <i>The Southern Coast</i> , Southern Living |
| Leatherman, SJ | 1990 | Shore & Beach |
| Goldsmidt, PM, et al | 1990 | Shore & Beach |
| Davis, RA, Jr | 1988 | Sea Grant (proposal) |
| Matsushita and McCann | 1988 | Earth Surface Processes and Landforms |

MS/PhD Committee Advisor (USC)

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|----------------|------|----|----------------|------|-----|
| Vogel, M | 1981 | MS | Frankenburg, A | 1990 | PhD |
| Svetlichny, M | 1982 | MS | Barua, D | 1992 | PhD |
| Mason, J | 1986 | MS | MacMahan, J | 1997 | MS |
| Frankenburg, A | 1987 | MS | Gaudiano, D | 1998 | MS |

Courses Taught (USC) GEO 772 (Coastal Dynamics) GEO 854 (Readings in Coastal Processes)
 GEO 757 (Coastal Processes)

Instructor – Recent Activities

- ASBPA Field Trip Leader – 15 October 2010 – Guidebook for Sullivan’s Island, Isle of Palms, and Dewees Island (with Pete Seidle, ATM)
- ASBPA Short Course – 12 October 2010 – Sand Resources and Coastal Law (Joan Pope and Todd Roessler, convenors) – Sediments, geologic framework, erosion and beach restoration
- Carolina Geological Society Field Trip Leader – 18-19 September 2010 – Coastal Processes: Kiawah Island, Seabrook Island, and Edisto Beach State Park
- Professional Engineers of North Carolina (Wrightsville Beach) – 19 June 2010 – Preserving Carolina Beaches (2 pdh credit hours)

Journal Subscriptions

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|---------------------|---|
| Coastal Engineering | Journal of Coastal Research |
| Coastal Management | Journal of Sedimentary Petrology |
| Shore & Beach | Journal of Waterways, Port, Coastal & Ocean Engineering |



Refereed Publications (RP), Book Chapters (BC), Booklets (B), Articles (A)

Dr. Kana has been senior author for over 75 and co-author of about 30 journal articles, book chapters, guidebooks, and proceedings papers since 1970s. Topics include beach nourishment, coastal processes, tidal inlets, sea-level rise, coastal structures, oil-spill impacts, and suspended sediment in the surf zone.

- Kana, TW. 2012. (RP) A brief history of beach nourishment in South Carolina. *Shore & Beach*, Vol 80(4), pp 1-13.
- Kana, TW. 2012. (A) Beach building in South Carolina — by natural processes. *Coastal News Today*, 3 June 1012, www.coastalnewstoday.com.
- Kana, TW, SB Traynum, D Gaudiano, HL Kaczowski, and T Hair. In Review. (RP) The physical condition of South Carolina beaches 1980–2010. *Journal of Coastal Research*, Special Issue.
- Kana, TW, HL Kaczowski, SB Traynum, and PA McKee. 2012. (RP) Impact of Hurricane *Irene* during the Nags Head beach nourishment project. *Shore & Beach*, Vol 80(2), pp 6-18.
- Kana, TW. 2011. (B) *Coastal Erosion and Solutions – A Primer*. 2nd Edition, Coastal Science & Engineering, Columbia, SC, 40 pp.
- Kana, TW, JD Rosati, and SB Traynum. 2011. (RP) Lack of evidence for onshore sediment transport from deep water at decadal time scales: Fire Island, New York. *Journal of Coastal Research*, Special Issue 59, pp 61-75.
- Kana, TW. 2009. (A) Let's put sea-level rise in perspective. Op-Ed piece, *News & Observer*, Raleigh, NC, February.
- Kana, TW. 2006. (A) Myrtle Beach restoration: a success story? *South Carolina Business & Economic Review*, Moore School of Business, USC, Div of Research, Vol 52(4), pp 19-22.
- Kana, TW, TE White, and PA McKee. 2004. (RP) Management and engineering guidelines for groin rehabilitation. *Journal of Coastal Research*, Special Issue 33 (NC Kraus and KL Rankin, eds), pp 57-82.
- Kana, TW. 2003. (B) *Coastal Erosion and Solutions – A Primer*. Coastal Science & Engineering, Columbia, SC, 25 pp.
- Kana, TW, EJ Hayter, and PA Work. 1999. (A) Mesoscale sediment transport at Southeastern U.S. tidal inlets: conceptual model applicable to mixed energy settings. *Journal of Coastal Research*, Vol 15(2), pp 303-313.
- Kana, TW, and RK Mohan. 1998. (RP) Analysis of nourished profile stability following the fifth Hunting Island (SC) beach nourishment project. *Journal of Coastal Engineering*, Vol 33, pp 117-136.
- Kana, TW, RE Katmarian, and PA McKee. 1997. (RP) The 1986-1995 Myrtle Beach nourishment project: ten-year performance summary. *Shore & Beach*, Vol 65(1), pp 8-23.
- Kana, TW. 1996. (BC) Chapter 4.45. United States: South Carolina: soft engineering beach restoration. In J.R. Clark, *Coastal Zone Management Handbook*, CRC Lewis Publishers, Boca Raton, FL, pp 622-626.
- Kana, TW. 1995. (RP) A mesoscale sediment budget for Long Island, New York. *Marine Geology*, Vol 126(1995), pp 87-110.
- Kana, TW. 1992. (A) Hurricane *Hugo* poststorm beach reconstruction. *The South Carolina Engineer*, Vol XLII(1), pp 9-11.
- Kana, TW. 1991. (BC) Chap. 3.14. Treating the coast as a dynamic system. In J.R. Clark (ed), *The Status of Integrated Coastal Zone Management: A Global Assessment*. CAMPNET, Coastal Area Management and Planning Network, Miami, FL, pp 60-61.
- Kana, TW, FD Stevens, and G Lennon. 1990. (RP) Beach and dune restoration following *Hugo*. *Shore & Beach*, Vol 58(4), pp 57-63.
- Kana, TW. 1990. (B) *Conserving South Carolina Beaches Through the 1990s: A Case for Beach Nourishment*. South Carolina Coastal Council, Charleston, SC, 33 pp (est. 2,500 copies in print).
- Kana, TW. 1989. (A) Coastal hazards (global warming and hazards policy: three perspectives). *Natural Hazards Observer*, Vol XIII(6), pp 2-4.
- Kana, TW. 1989. (RP) Erosion and beach restoration at Seabrook Island, South Carolina. *Shore & Beach*, Vol 57(3), pp 3-18.
- Kana, TW. 1988. (B) *Beach Erosion in South Carolina*. M Goodwin and F Rogers (eds), South Carolina Sea Grant Consortium, Charleston, SC, SCSG-SP-88-1, 55 pp (estimated 5,000 copies in print).
- Kana, TW. 1988. (A) Barrier islands in South Carolina. In *South Carolina Public Beach and Coastal Access Guide*, South Carolina Parks, Recreation & Tourism, pp 113-114.
- Kana, TW, and WJ Sexton. 1988. (BC) Barrier beaches and tidal inlets of South Carolina. In DT Secor Jr (ed), *Southeastern Geological Excursions, Field Trip Guidebook*, Geological Society of America, SE Section, pp 185-203.
- Kana, TW. 1988. (BC) USA — South Carolina. Chap 62, *Artificial Structures and Shorelines* (HJ Walker, ed), Kluwer Academic Publ, Dordrecht, Netherlands, pp 593-605.
- Kana, T.W, and M. Al-Sarawi. 1988. (BC) Kuwait. Chap 29, *Artificial Structures and Shorelines* (HJ Walker, ed), Kluwer Academic Publ, Dordrecht, Netherlands, pp 261-268.
- Kana, TW, and JE Mason. 1988. (RP) Evolution of an ebb-tidal delta after an inlet relocation. In DG Aubrey (ed), *Hydrodynamics and Sediment Dynamics of Tidal Inlets*, Springer-Verlag, New York, NY, pp 382-411.
- Kana, TW, WC Eiser, BJ Baca, and ML Williams. 1988. (BC) New Jersey case study. In JG Titus (ed), *Greenhouse Effect, Sea Level Rise, and Coastal Wetlands*. US Environmental Protection Agency, Wash, DC, pp 61-86.
- Kana, TW, BJ Baca, and ML Williams. 1988. (BC) Charleston case study. In JG Titus (ed), *Greenhouse Effect, Sea Level Rise, and Coastal Wetlands*. EPA-230-05-86-013, US Environmental Protection Agency, Wash, DC, pp 37-60.
- Kana, TW, BJ Baca, and ML Williams. 1986. (B) *Potential Impacts of Sea Level Rise on Wetlands Around Charleston, South Carolina*. EPA Report 230-10-85-014, Wash, DC, 65 pp.



Refereed Publications (RP), Book Chapters (BC), Booklets (B), Articles (A) — continued

- Kana, TW, J Michel, MO Hayes, and JR Jensen. 1984. (BC) The physical impact of sea-level rise in the area of Charleston, SC. In MC Barth and JG Titus (eds), *Greenhouse Effect and Sea Level Rise: A Challenge for this Generation*, Van Nostrand Reinhold Co, New York, NY, pp 105-150.
- Kana, TW. 1979. (RP) Suspended sediment in breaking waves. Tech. Rept. No. CRD-18, Coastal Res. Div, Univ. South Carolina, Columbia, 153 pp.
- Kana, TW, and JS Knoth. 1977. (BC) Longshore transport rates in South Carolina. In D Nummedal (ed), *Beaches and Barriers of the Central South Carolina Coast*, 5th Symposium, Coastal Sediments'77 (guidebook for a field trip in conjunction with conference), ASCE, New York, NY, pp 25-32.
- Kana, TW. 1977. (A) Getting started as an independent instructor. *The Undersea Journal*, PADI, Vol X(4), pp 8-9.
- Kana, TW. 1976. (RP) A new apparatus for collecting simultaneous water samples in the surf zone. *Jour Sedimentary Petrology*, Vol 46, pp 1031-1034.
- Kana, TW. 1976. (BC) Littoral processes and sediment transport at Price Inlet, South Carolina. In MO Hayes and TW Kana (eds), *Terrigenous Clastic Depositional Environments*, Tech Rept No 1-CRD, Coastal Research Div, Geology Dept, Univ South Carolina, Columbia, pp II-158 to II-171.
- Co-Author**
- Nordstrom, KF, NL Jackson, NC Kraus, TW Kana, R Bearce, A Hecht, LM Bocamazo, DR Young, and HA De Butts. 2011. (RP) Enhancing geomorphic and biologic functions and values on backshores and dunes of developed shores: a review of opportunities and constraints. *Environmental Conservation*, Vol 38(3), pp 288-302.
- Traynum, SB, TW Kana, and DR Simms. 2010. (RP) Construction and performance of six template groins at Hunting Island, South Carolina. *Shore & Beach*, Vol 78(3), pp 21-32.
- Gaudio, DJ, and TW Kana. 2001. (RP) Shoal bypassing in South Carolina tidal inlets: geomorphic variables and empirical predictions for nine mesotidal inlets. *Jour Coastal Research*, Vol 17, pp 280-291.
- Leatherman, SP, RG Dean, TW Kana, and FJ Anders. 1997. (RP) Goldsmith Inlet and adjacent areas, north shore of Long Island, New York: erosion problems and suggested modifications. *Shore & Beach*, Vol 65(3), pp 13-16.
- Barua, D, and TW Kana. 1995. (RP) Deep-water wave hindcasting, wave-refraction modeling, and wind and wave-induced motions in the least Ganges-Brahmaputra delta coast. *Journal of Coastal Research*, Vol 11(3), pp 834-848.
- ASCE Task Committee. 1992. (RP) Effects of sea-level rise on bays and estuaries. *Journal of Hydraulic Engineering*, ASCE, Vol 118(1), pp 1-10.
- Reed, M, ER Gundlach, TW Kana. 1989. (RP) A coastal zone oil spill model: development and sensitivity studies. *Oil and Chemical Pollution*, Vol 5, pp 411-449.
- Davidson, MW and TW Kana. 1988. (BC) Future sea level rise and its implications for Charleston, South Carolina. In MH Glantz, *Societal Responses to Regional Climatic Change: Forecasting by Analogy*, Westview Press, Colorado, pp 197-214.
- Hayes, MO, J Michel, and TW Kana. 1986. (BC) Coastal processes and geomorphology along the Kuwait City waterfront. In R Halwagy, D Clayton, and M Behbehani (eds), *Marine Environment and Pollution*, Proc First Arabian Gulf Conf on Environment and Pollution (Feb'82), Kuwait University, Safat, pp 25-41.
- Kennedy, SK, R Ehrlich, and TW Kana. 1981. (RP) The non-normal distribution of intermittent suspension sediments below breaking waves. *Journal of Sedimentary Petrology*, Vol 51(4), pp 1103-1108.
- Hayes, MO, and TW Kana (eds). 1976. (B) *Terrigenous Clastic Depositional Environments*, Tech. Rept. No. 11-CRD, Univ. South Carolina, Columbia, 306 pp (~10,000 copies in print).
- Schubel, JR, E Schiemer, TW Kana, and GM Schmidt. 1972. (RP) A new filtering water bottle. *Jour Sedimentary Petrology*, Vol 42(2), pp 482-484.
- Schubel, JR and TW Kana. 1971. (RP) Agglomeration of fine-grained suspended sediment in northern Chesapeake Bay. *Powder Tech*, Vol 6, pp 9-16.



Proceedings Papers

- Kana, TW and HL Kaczowski. 2012. Planning, preliminary design, and initial performance of the Nags Head beach nourishment project. In Proc 33rd International Conference on Coastal Engineering (ICCE July 2012, Santander, Spain, 12 pp).
- Kaczowski, HL, and TW Kana. 2012. Final design of the Nags Head beach nourishment project using longshore and cross-shore numerical models. In Proc 33rd International Conference on Coastal Engineering (ICCE July 2012, Santander, Spain, 15 pp).
- Kana, TW, HL Kaczowski, and PA McKee. 2011. Myrtle Beach – another decade of beach monitoring surveys after the 1997 federal shore-protection project. In Proc Coastal Engineering Practice '11 (San Diego, CA), ASCE, New York, NY, pp 753-765.
- Kana, TW, SB Traynum, and JD Jordan. 2011. Barrier island habitat creation at decadal scales. In Proc Coastal Sediments '11, World Scientific Publishing Company, Vol 2, pp 1162-1175.
- Kana, TW, and DJ Gaudiano. 2009. Regional beach volume changes at decadal to century time scales – central South Carolina USA. In JM Smith (ed), Proc 31st Intl Conf on Coastal Engineering (Hamburg, Germany: 31 Aug–5 Sep 2008), World Scientific, pp 2340–2351.
- Kana, TW. 2007. Evolution of grain-size distribution on Bogue Banks: implications for selection of borrow material. In Proc Coastal Sediments '07, NC Kraus and JD Rosati (eds), ASCE, New York, NY, pp 2229–2241.
- Kana, TW. 2005. Hurricane *Hugo* – 15 years later: beach response and relation to damages. In Proc Coastal Disasters '05, ASCE, New York, NY, pp 136–145.
- Kana, TW, G Rudolph, JW Forman Jr, PA McKee. 2005. The restoration of Bogue Banks North Carolina 1999 – 2004. In Proc Beach Preservation 2005, 18th Natl Conf on Beach Preservation Technology.
- Baca, BJ, M Al-Sarawi, and TW Kana. 2005. Recent bioremediation results on oil spilled during the 1991 Gulf War. In Proc Oil Spill Conf, Paper 374, 14 pp.
- Kana, TW, and PM McKee. 2003. Relocation of Captain Sams Inlet – 20 Years Later. In Proc 5th Intl Symposium on Coastal Engineering and Science of Coastal Sediment Processes, Book of Abstracts, Coastal Sediments '03; East Meets West Productions, Corpus Christi, TX; pp 168-169 (paper on CD, 12 pages).
- Kana, TW, TE White, JW Forman Jr, PA McKee. 2002. Shoreline erosion along Bogue Banks, North Carolina. In L Ewing and L Wallendorf (eds), Proc Solutions to Coastal Disasters '02, ASCE, Reston, VA, pp 561-575.
- Kana, TW. 2002. Reclaiming the coast for sustainable development – lessons from Arabia. In Proc Intl Conf on Coastal Zone Management & Development (18–20 March 2002), Environment Public Authority, State of Kuwait, pp III-1 to III-14.
- Kana, TW. 2002. Barrier island formation via channel avulsion and shoal bypassing. JM Smith (ed), In Proc 28th Intl Conf Coastal Engineering 2002 (Cardiff, Wales), World Scientific Publishing Company, pp 3438–3448.
- White, TE, and TW Kana. 2002. Dredging at tidal inlets and examples of beneficial and harmful practices. In Proc Dredging '02 (Orlando), ASCE, Abstract (2 pp).
- Kana, TW. 1999. Long Island's south shore beaches: a century of dynamic sediment management. In Proc Coastal Sediments '99. ASCE, New York, NY, pp 1584-1596.
- Kana, TW, and R. Mohan. 1997. Profile volumes as a measure of erosion vulnerability. In B.L. Edge (ed), Proc 25th Intl. Coastal Engineering Conf., ASCE, NY, pp 2732-2745.
- Mohan, R.K., and TW Kana. 1997. The effect of grain sorting on profile stability of nourished beaches. In B.L. Edge (ed), Proc 25th Intl. Coastal Engineering Conf., ASCE, NY, pp 4756-4769.
- Katmarian, R.E., P.A. McKee, and TW Kana. 1997. Hydraulic controls on tidal wetlands. In BL Edge (ed), Proc 25th Intl Coastal Engineering Conf, ASCE, NY, pp 4314-4324.
- Kana, TW. 1996. Signatures of coastal change at mesoscales. In W.R. Dally and R.B. Zeidler (eds), Proc Coastal Dynamics '95, ASCE, NY, pp 987-997.
- Kana, TW. 1995. What shapes the south shore coastline? In Proc 6th Annual Conf. The Economics (and Politics) of Shore Protection. Long Island Coastal Alliance, Coastal Reports, Inc., New York, NY, pp 28-32.
- Kana, TW, and C.J. Andrassy. 1995. Beach profile spacing: practical guidance for monitoring nourishment projects. In B.L. Edge (ed), Proc 24th Intl. Conf. Coastal Engineering, ASCE, NY, Chap. 152, pp 2100-2114.
- Kana, TW. 1993. Coastal processes and Long Island's south shore after the storms of 1992-1993. In JR Schubel and J Isarocca (eds), Long Island (NY) Coastal Conference — Scenario Planning, MSRC Spec Rept No 105, SUNY Stony Brook, New York, pp 27-32.
- Kana, TW. 1993. The profile volume approach to beach nourishment. In DK Stauble and NC Kraus (eds), *Beach Nourishment Engineering and Management Considerations*, ASCE, New York, NY, pp 176-190.
- Kana, TW. 1993. South Carolina beach nourishment projects: successes and failures. In P. Bruun (ed), Proc Hilton Head Island Intl. Coastal Symposium; co-sponsors Jour. Coastal Research, South Carolina Coastal Council, and South Carolina Shore & Beach Pres. Assoc., 6-9 June 1993, Hilton Head Island, SC, pp 255-260.
- Kana, TW, and FD Stevens. 1992. Coastal geomorphology and sand budgets applied to beach nourishment. In SA Hughes (ed), Proc Coastal Engineering Practice '92, ASCE, New York, NY, pp 29-44.
- Kana, TW, FD Stevens, and G Lennon. 1991. Post-*Hugo* beach restoration in South Carolina. In Proc Coastal Sediments '91, ASCE, New York, NY, Vol II, pp 1697-1711.
- Kana, TW, FD Stevens, and G Lennon. 1991. Emergency beach and dune restoration following Hurricane *Hugo*. In Proc 4th Beach Preservation Tech. Conf., Florida Shore & Beach Pres. Assoc., Tallahassee, FL, pp 1-13.
- Kana, TW. 1989. Beach nourishment through inlet relocation. In Proc Beach Preservation Technology '89, Florida Shore & Beach Pres Assoc, Tallahassee, pp 293-302.



Proceedings Papers — Continued

- Jones, CP, and TW Kana. 1988. Performance of beach nourishment at Myrtle Beach, South Carolina. In Proc Beach Preservation Technology '88, Florida Shore & Beach Preservation Assoc, pp 75-86.
- Williams, ML, and TW Kana. 1987. Inlet shoal attachment and erosion at Isle of Palms, South Carolina: a replay. In Proc Coastal Sediments '87, ASCE, New York, NY, pp 1174-1187.
- Williams, ML, and TW Kana. 1987. Beach nourishment at Myrtle Beach, South Carolina: an overview. In Proc Coastal Sediments '87, ASCE, New York, NY, pp 1106-1120.
- Kana, TW, M Al-Sarawi, and M Holland. 1987. Design and performance of artificial beaches for the Kuwait Waterfront Project. In Proc 20th Coastal Engineering Conf, ASCE, New York, NY, pp 2545-2558.
- Siah, SJ, and TW Kana. 1987. Preliminary engineering design of an artificial tidal lagoon system in Kuwait. In Proc Hydraulic Engineering Conf, ASCE, New York, NY, pp 366-371.
- Kana, TW, JE Mason, and ML Williams. 1987. A sediment budget for a relocated tidal inlet. In Proc Coastal Sediments '87, ASCE, New York, NY, pp 2094-2109.
- Baca, BJ, and TW Kana. 1986. Methodology for restoring impounded coastal wetlands. In FJ Webb (ed), Proc 13th Annual Conf on Wetlands Restoration and Creation (Tampa FL), pp 36-44.
- Reed, M, ML Spaulding, ER Gundlach, and TW Kana. 1986. Formulation of a shoreline, oil spill interaction model. In Proc Ninth Arctic Marine Oil Spill Conf, Edmonton, Alberta, pp 77-100.
- Gundlach, ER, TW Kana, and PD Boehm. 1985. Modeling spilled oil partitioning in nearshore and surf zone areas. In Proc 1985 Oil Spill Conf, Amer Petrol Inst, Publ No 4385, Wash, DC, pp 379-384.
- Kana, TW, ML Williams, and FD Stevens. 1985. Managing shoreline changes in the presence of nearshore shoal migration and attachment. In Proc Coastal Zone '85, Vol 1, ASCE, New York, NY, pp 1277-1294.
- Kana, TW, BJ Baca, and JG Titus. 1985. Potential impacts of sea-level rise on coastal wetlands. In Proc Estuaries: The Second Water Quality and Wetlands Management Conf (New Orleans), LEPA, pp 115-131.
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- Kana, TW, and ML Williams. 1984. The relocation of Captain Sams Inlet. In Proc Coastal Engineering Abstracts, 19th Conf, ASCE, New York, NY, pp 490-491.
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