

M. Leslie Fields, CFM, M.S., B.S.

Coastal Geologist/Marine Environmental Analyst

EXPERTISE

Coastal hazards evaluation, GIS development, environmental impact analyses, coastal wetland delineation, sediment transport analyses, tidal inlet hydrodynamics, nearshore wave propagation analyses, storm surge analyses, and permitting (local, state, and federal).

QUALIFICATION SUMMARY

- Over 33 years of experience in multi-jurisdictional environmental studies
- Specializes in floodplain management, coastal hazards assessments and environmental studies of coastal and marine projects, including resource and existing conditions surveys, impact analyses, flood zone mapping, and mitigation/restoration planning for climate change
- Extensive experience with local, state, and federal permitting of coastal projects
- Experience with field data collection of sediments, water, plants, fish, and benthic infauna for environmental studies, and with laboratory services required to analyze such samples
- Skilled at utilizing GIS and database technology to display and analyze spatially related data for coastal and marine projects
- Strong written, communication, and organizational skills, including expert testimony

WORK EXPERIENCE

1989-Present	Woods Hole Group, Inc., Senior Coastal Geologist
2003-2004	Massachusetts Coastal Zone Management, Special Project Scientist and GIS Analyst
1984-1989	U.S. Army Corps of Engineers, CERC, Coastal Scientist
1981-1984	Rutgers University, Teaching and Research Assistant
1980-1981	Sun Energy and Development Co., Intern



Education

1984 – M.S.

Coastal Geology
Rutgers University

1981 – B.S.

Geology
Southern Methodist University

Licenses and Registrations

CFM Certified Floodplain
Manager, US, Certificate# US-
14-07618

Professional Affiliations

N/A

Publications & Presentations

66

KEY PROJECTS

Environmental Review and Coastal Permitting for General Dynamics, Electric Boat Corporation, Groton, CT – Coastal Geologist and Environmental Analyst

Worked on a project for General Dynamics, Electric Boat Corp. (EB) to provide environmental assessment services required for Connecticut DEEP, US Army Corps of Engineers, and Federal Consistency permitting for improvements to EB's South Yard facility to support construction of a new class of submarine for the US Navy. Improvements included landside and in-water work, including a waterfront deck structure to support an assembly building, a floating dry dock and sinking basin that required dredging 984,000 cubic yards of material. This work included evaluation of project impacts on wetlands, benthic habitat, fisheries, water quality, tidal circulation, as well as review of sediment chemistry, bioaccumulation, bioassay, and elutriate chemistry data to evaluate ecological and human health risks associated with dredging and dredge material disposal. A dredge material management plan was also prepared to evaluate alternatives for placement of the dredged sediment.

Technical Review of FEMA's Southwest Florida Risk MAP Process for Lee County, FL – Project Manger

Managed a multi-year project to provide technical review of FEMA's Risk MAP development process for Lee County, FL. The work included review of the Coastal Discovery Report, Intermediate Data Submittal Reports #1 through #5, and FEMA's Work Maps. The Woods Hole Group team is presently reviewing the ADCIRC/SWAN modeling, CHAMP database and associated modeling, wave runup and overtopping calculations, and the FEMA Preliminary FIRMs. The technical reviews evaluated the assumptions and decisions made by FEMA and FEMA's contractors to develop the Risk MAP products, identification of issues with the methods employed, including the application of coupled numerical models for evaluating base flood levels, hydrodynamics, and wave impacts. Results from evaluation of the Preliminary FIRMs will be used to determine whether an appeal is warranted.

Technical Evaluation of Preliminary FEMA FIRMs for the Cities of Boston, Revere, Chelsea, and Town of Revere, MA – Project Manager

Managed projects for the Cities of Boston, Revere, Chelsea and the Town of Revere to perform coastal hydrologic and hydraulic evaluations of preliminary FEMA FIRMs released in 2013. The work included assessment of 100-yr stillwater elevations, offshore wave conditions, and wave setup criterion utilized by FEMA in the coastal modeling. Woods Hole Group worked with the communities to select specific transects for detailed evaluation using FEMA's models and methods for erosion, PFD delineation, overland wave transformation, wave runup, and overtopping. Results from the analyses were used as the basis for appeals of the Preliminary FIRMs to FEMA. The appeals were approved and revised FIRMs were issued in March 2016.

Technical Evaluation of Preliminary 2013 FEMA FIRMs for the Towns of Scituate, Marshfield, and Duxbury, MA – Project Manager

Managed projects for the Towns of Scituate, Marshfield, and Duxbury to perform coastal hydrologic and hydraulic evaluations of preliminary FEMA FIRMs released in May 2013. The work included assessment of 100-yr stillwater elevations, offshore wave conditions, and wave setup criterion utilized by FEMA in the coastal modeling. Woods Hole Group worked with the communities to select specific transects for detailed evaluation using FEMA's models and methods for erosion, PFD delineation, overland wave transformation, wave runup, and overtopping. The work was performed on an accelerated schedule and resulted in an appeal to FEMA for revisions the FIRMs. The appeals were approved and revised FIRMs were issued in November 2016.

KEY PROJECTS (CONTINUED)

Technical Evaluation of Preliminary 2013 FEMA FIRMs for areas in Barnstable County, MA – Project Manager
Managed three (3) separate projects in Barnstable County to perform coastal hydrologic and hydraulic evaluations of preliminary FEMA FIRMs released in May 2013. The work included sites in the Towns of Chatham, Barnstable, and Falmouth. Elevations for the 100-yr stillwater conditions, offshore wave conditions, and wave setup criterion utilized by FEMA in the coastal modeling were evaluated. FEMA’s models and methods for erosion, PFD delineation, overland wave transformation, wave runup, and overtopping were used to assess the 100-yr flood conditions at each site. Results from the analyses indicated that an appeal of the preliminary FIRMs was warranted for the Chatham site, but not for the sites in Barnstable or Falmouth. The Chatham appeal was accepted by FEMA and the map revisions were reflected in the Effective FIRMs.

Nauset Estuary Dredging Feasibility Assessment – Project Manager

Managed a project for the Town of Orleans, MA to evaluate the feasibility of dredging a navigation channel in Nauset Estuary for improved access between the town landings and mooring fields and the Atlantic Ocean. The feasibility of establishing a dredging program for the estuary was evaluated based on environmental impacts, expected project lifetime, costs and schedule for environmental permitting, and costs for project construction.

Risk and Vulnerability Assessment for the Martha’s Vineyard Hospital, Oak Bluffs, MA; Board of Trustees MV Hospital and MV Commission - Project Manager/Floodplain Analyst

Managed and conducted an extensive risk and vulnerability assessment for reconstruction of the Martha’s Vineyard Hospital. The analysis considered risks of the existing hospital site to various natural hazards including storm surge, flooding, wind, snowfall, wildfire, coastal erosion, sea-level rise, and earthquakes. Vulnerability of the site and impacts to critical hospital services were considered. Results from the risk and vulnerability analysis were used to provide recommendations for reconstruction of the hospital facilities.

Town of Palm Beach Technical Review of Proposed Coastal Management Program; Town of Palm Beach – Coastal Geologist

Worked on the WHG team to conduct a technical review of the Palm Beach CCMP. Reviewed a broad range of reference documents and data describing the history of coastal management and coastal processes at Palm Beach. Developed island-wide recommendations for inlet management, evaluation of beach nourishment project performance and feeder beach strategies, sand source alternatives, maintenance of coastal structures, and protection of hardbottom resources. A selection of shore protection alternatives were also evaluated in terms of performance and value to help formulate recommendations for improved coastal management.

Long Island Sound Dredged Material Management Plan (LISDMMP) Potential Dredged Material Containment Sites and Investigation of Nearshore Placement Sites for Materials Suitable for Beneficial Use as Nourishment – Environmental Scientist

Worked with a team of Woods Hole Group scientists to assess candidate sites in the Long Island Sound area for disposal of dredged materials from surrounding waterways. The assessments evaluated capacity for dredged material, preliminary engineering design, and potential environmental and community impacts. Site types included Confined Aquatic Disposal sites, nearshore Confined Disposal Facilities, Island Confined Disposal

KEY PROJECTS (CONTINUED)

Facilities, and nearshore placement sites. Potential impacts to cultural, infrastructure, physical, and environmental resources were assessed on a site by site basis.

Investigation of Upland, Beneficial Reuse, and Sediment Dewatering Sites for Dredged Materials Management in Long Island Sound; US Army Corps of Engineers – Environmental Scientist

Conducted investigations at 104 upland, beneficial reuse, and sediment dewatering sites for potential dredged materials management in the Long Island Sound area. Site summaries provided information on general location, ownership, surrounding land use, zoning, wetland resources, proximity to habitat for rare and endangered species, sediment type, site access, and staging areas. Conceptual engineering designs were evaluated and site capacities were determined.

Management of the New Bedford Harbor Superfund Site Environmental Management Information System; US Army Corps of Engineers – Project Manager

Served as project manager for the New Bedford Harbor superfund site information system containing environmental measurements and geographic information generated for contaminant identification, delineation, and regulatory compliance during the Corps remediation activities. The information management system incorporates an Oracle environmental database, a web-based front-end that provides data access for project team members, and data management methods and procedures for quality assurance and data validation. The database holds over 300,000 analytical, biological, toxicological, and geotechnical results generated by a team of field and laboratory contractors.

Comprehensive 10-Yr Permitting for Town of Falmouth Dredging and Beach Nourishment Projects; Town of Falmouth – Project Manager

Managed a project for the Town of Falmouth Harbormaster and Department of Public Works offices to secure comprehensive 10-yr permits for dredging and beach nourishment throughout the town. The purpose of the project was to consolidate and manage environmental permits for 25 dredging and beach nourishment sites associated with maintenance of the Town's waterways, harbors, salt ponds, and public beaches. The work involved sediment sampling and analyses, wetland delineation, impact analyses, plan preparation, and permitting. Applications were secured from the appropriate local, state, and federal agencies.

Coordination, Design, and Permitting for the Vineyard Haven Harbor Dredging and Beach Nourishment Project; Town of Tisbury- Project Manager/Coastal Scientist

Coordinated, designed, and permitted a dredging and beneficial reuse beach restoration project in Vineyard Haven Harbor, Martha's Vineyard. Shoaling at the western entrance to Vineyard Haven Harbor created problems for navigation and threatened water quality in the Inner Harbor. Sandy dredge material was permitted for restoration of critically eroded beaches. Work on the project included preparation and filing for the full range of environmental permits from local, state, and federal agencies.

KEY PROJECTS (CONTINUED)

Evaluation of Beach Replenishment Alternatives for Narragansett Beach, Rhode Island; Town of Narragansett – Project Manager/Coastal Scientist

Managed a project to evaluate a range of alternatives for beach replenishment at Narragansett Town Beach. Erosion of the beach has historically been managed by trucking in small quantities of sand immediately prior to the summer beach season. The Town was interested in identifying longer-term solutions that would enhance the recreational resource and provide improved storm damage protection. This project evaluated quantities of sand needed for various beach nourishment scenarios involving different berm widths, elevations, nearshore slopes, and beach lengths. Levels of storm protection and project performance were evaluated. Potential sand sources and associated construction costs were also identified, and permitting requirements were addressed.

Development of a Plan to Address Beach Erosion at Chapin Beach, Dennis, MA; Town of Dennis – Coastal Geologist

Worked to develop a plan addressing long-term erosion at the Town of Dennis public beach area known as Chapin Beach. Concern over high erosion rates along the barrier beach prompted the Town to commission a study of causes and potential remedial actions. The work involved mapping of critical resources, analysis of historical shoreline change, investigation of site specific erosion processes, as well as an analysis of alternatives for mitigating the erosion. Planning level cost estimates and regulatory requirements for a series of recommended solutions were identified.

Preparation of a Waterways Asset and Resources Master Plan for Dredging and Beach Nourishment for the Town of Dennis, MA; Town of Dennis – Project Manager/Coastal Scientist

Documented existing conditions and management practices at the four waterways and eight primary public beach sites within the Town of Dennis. The project resulted in a master plan for dredging activities in the waterways, as well as associated beach nourishment to restore the public coastal resources. Available information from town records and permit documents was used to evaluate dredging needs and environmental resources in the different waterways. The beach sites were evaluated using a combination of information from town records, permit documents, State and Federal agencies, and survey data collected specifically for this study. Recommendations were developed and prioritized for improved management of the Towns waterways and beach resources.

Beach Management Plan for Town of Falmouth Public Beaches; Office of the Town Manager and Falmouth Beach Committee - Project Manager/Coastal Scientist

Managed and prepared a comprehensive Beach Management Plan for 10 public beaches in the Town of Falmouth. The project involved collection of beach profile data, sediment analyses, resource area delineations, and infrastructure assessments. Dominant coastal processes, directions of sediment transport, historical shoreline change, and history of human alterations were all addressed. Recommended management activities were provided for infrastructure maintenance, beach monitoring, routine maintenance, restoration activities, education, enforcement, and fund raising. Results from the Beach Key Projects Management Plan were used to file for and secure a local permit from the Falmouth Conservation Commission for a number of the recommended management activities.

KEY PROJECTS (CONTINUED)

Coordination, Design, and Permitting for the Menauhant Beach and Dune Restoration Project, East Falmouth, MA; Town of Falmouth - Project Manager/Regulatory Specialist

Coordinated, designed, and permitted a beneficial reuse dune and beach restoration project at Menauhant Beach in East Falmouth. Through extensive interagency coordination and cooperation, the Town of Falmouth was able to secure sand from a nearby dredging project that created a deepwater port in Great Harbor Woods Hole for a new NOAA research vessel. Dredged sand was dumped at a temporary, nearshore rehandling site offshore of Menauhant Beach, and then hydraulically pumped to Menauhant public beach to form a protective dune. The project required the full range of environmental permits from local, state, and federal agencies. Coordination between local Town of Falmouth representatives, DEP regulatory officials, the Barnstable County Dredge office, NOAA, and USACE project managers was required to construct this beneficial reuse project.

Environmental Impact and Risk Assessments for Proposed Natural Gas Pipelines Offshore of Trinidad and Tobago; National Gas Company of Trinidad and Tobago Limited - Project Manager/Environmental Analyst

Managed a large-scale environmental impact and risk assessment project for two proposed natural gas pipelines offshore of Trinidad and Tobago. The work involved extensive field data collection and laboratory analysis of oceanographic, coastal, and terrestrial data. Detailed descriptions of the projects were provided along with alternatives analyses, existing conditions reports, and environmental impact analyses. Recommendations were provided to the project applicant and the regulatory agencies of Trinidad and Tobago for minimizing adverse impacts and for long-term monitoring.

Analysis of Historical Shoreline Change and Management Alternatives for Nauset Beach, Orleans, MA; Orleans Parks and Beaches Department - Project Manager/GIS Analyst

Managed and performed a comprehensive analysis of shoreline change and management alternatives for Town of Orleans public beach areas located on Nauset Beach. The project involved a quantitative analysis of historical shoreline change using ArcGIS, as well as an analysis of barrier breaching and inlet formation. Results from the study were utilized to develop recommendations for short- and long-term management of the public beach facilities and the extensive off-road vehicle trails and barrier spit to the south.

Design, Environmental Impact Analysis and Permitting for Chapoquoit Beach Replenishment, West Falmouth, MA; Chapoquoit Associates - Project Manager/Coastal Geologist

Managed a large private/public partnership project to replenish eroding beaches along the Chapoquoit Beach section of West Falmouth, MA using sand dredged from the Cape Cod Canal by the US Army Corps of Engineers. The project involved detailed design computations for the replenishment, as well as wave and sediment transport modeling to evaluate spreading and potential impacts of the project. Extensive project management was required to facilitate permitting on a fast track basis and to coordinate construction with the USACE's schedule.

KEY PROJECTS (CONTINUED)

Design, Environmental Impact Analysis, and Permitting for the Centerville River Dredging Project, Centerville, MA; Town of Barnstable - Project Manager/Coastal Geologist

Managed a large-scale municipal project to dredge the Centerville River for the purposes of improving navigation. This project involved extensive field investigations of the physical environment, biology, wetland resources, and sediments within the river. The nature of the sediments required identification of two types of reuse sites for the dredged material. The design included beach replenishment at the adjacent barrier beach for the sand sized material, and a variety of upland reuse sites for the fine-grained sediments. The project required the full range of environmental permits from local, state, and federal agencies.

Design, Environmental Impact Analysis, and Permitting for the Mashpee River Dredging Project, Mashpee, MA; Town of Mashpee - Project Manager/Coastal Geologist

Managed a large-scale municipal project to dredge the Mashpee River for the purposes of improving navigation. This project involved extensive field investigations of the physical environment, biology, wetland resources, and sediments within the river. A detailed alternatives analysis was performed to identify potential dewatering and beneficial reuse sites. The fine-grained nature of the proposed dredge sediments coupled with the lack of nearby staging sites for dewatering and storage has presented a number of unique and difficult challenges to this project. The WHG is currently working with the Town of Mashpee to identify and scope several alternative technologies for dredging and dewatering the sediments.

Federal Emergency Management Agency (FEMA) Flood Insurance Restudy for the Town of Hampton, NH, FEMA - Project Manager/Coastal Geologist

Performed and managed a Flood Insurance Restudy (FIS) for the Town of Hampton, NH. This project involved updating the FEMA Flood Insurance Rate Maps (FIRM) for the Town of Hampton by re-establishing the flood zone boundaries. Numerical models were utilized to simulate nearshore wave transformation and wave runup, and were combined with estimates of erosion potential to determine the location of the flood zones. The FIRMs were updated using quantitative information on waves, wave runup, and flooding, and were graphically displayed using GIS techniques.

Assessment of Sand Resources in Northern and Central San Francisco Bay, CA; Hanson Aggregates - GIS Analyst

Worked with a team of WHG professionals to assess sand resources in Northern and Central San Francisco Bay, and to evaluate Hanson Aggregate and RMC leased sand borrow regions to determine their viability as a renewable sand resource. The work was accomplished using available hydrodynamic, geophysical, sediment, and geological data as well as digital terrain modeling tools available with the GIS software ArcInfo. Historical changes in bottom topography were evaluated using an acoustic survey of the bedrock surface, coupled with NOS bathymetric surveys and a high resolution multibeam survey collected by the USGS. Isopach maps showing changes in sediment thickness were generated and used to compute variations in sediment volume within specified borrow sites.

KEY PROJECTS (CONTINUED)

Historical Shoreline Change Analysis: Western Town Line to Horton Point, Southold, NY, Town of Southold - Project Manager/Coastal Geologist

Managed and performed a comprehensive historical analysis of a 10-mile segment of shoreline within the western portion of the Town of Southold, NY. The analysis was performed using historical T-sheets, traditional aerial photography, and low-altitude, high-resolution digital photography. Rates of shoreline change were computed at 100-ft intervals throughout the study area. The impacts of shoreline protection structures and storms on the historical rates of shoreline change were evaluated. Estimates of longshore sediment transport rates were obtained from the shoreline data.

Beach Nourishment Design, Permitting, and Oversight at Long Beach, Centerville, MA, Long Beach Association, Inc. - Project Manager/Coastal Geologist

A beach nourishment project was designed and permitted at Long Beach, Centerville, MA to alleviate long-term erosion of the shoreline and to provide improved storm damage protection and flood control. The beach was designed with a berm elevation of +9 ft MLW and a width of 100 ft. Sediment was dredged from shoals seaward of the East Bay tidal inlet, and hydraulically pumped to Long Beach. Approximately 2,100 ft of beach was nourished with 60,000 cubic yards of clean, compatible sand. This was a multi-disciplinary project involving analysis of coastal processes, environmental sensitivity, coordination with regulatory officials and marine contractors, and management of project funds.

Federal Emergency Management Agency (FEMA) Flood Insurance Restudy for the Town of Greenwich, CT, FEMA - Project Manager/Coastal Geologist

Performed and managed a Flood Insurance Restudy (FIS) for the Town of Greenwich, CT. This project involved updating the FEMA Flood Insurance Rate Maps (FIRM) for the Town of Greenwich by adding the effects of wave runup to the designation of flood zone boundaries. Numerical models were utilized to simulate nearshore wave transformation and wave runup, and combined with estimates of erosion potential to determine the location of flood zones. The FIRMs were updated using quantitative information on waves, wave runup, and flooding, and were graphically displayed using GIS techniques.

Sediment Transport Study - Evaluation of Causeway on Coastal Processes, Westport, MA, Massachusetts Department of Environmental Management - Coastal Geologist

Team member involved in a comprehensive evaluation of regional sediment transport processes along Horseneck Beach, Gooseberry Neck, East Horseneck Beach, and Little Beach in the Towns of Westport and Dartmouth, MA. Sediment transport patterns and alternatives for beach stabilization were evaluated along with various management and engineering alternatives for the causeway connecting Gooseberry Neck to the mainland. The historical evolution of the coastal system was evaluated, and an analysis of shoreline change was performed using historical maps and aerial photography. A combination of field data and numerical modeling was used to provide a detailed evaluation of the littoral processes. Nearshore wave transformation was modeled to provide the necessary data to drive the longshore sediment transport model. Cross-shore sediment transport was also modeled and combined with the longshore sediment transport model results to provide an estimate of the net annual longshore sediment transport.

PUBLICATIONS & PRESENTATIONS

Fields, M.L., E. Leduc. 2016. "Management Plan Update for the Knob, Quissett, MA." Woods Hole Group Technical Report 2014-0213. Prepared for the Quissett Harbor Preservation Trust and Salt Pond Areas Bird Sanctuaries, Inc., 35 pp. plus Appendices.

Fields, M.L., E. Leduc. 2016. "Nauset Estuary Dredging Feasibility Assessment." Woods Hole Group Technical Report 2015-0121. Prepared for the Town of Orleans, MA, 50 pp. plus Appendices.

Fields, M.L., E. Leduc. 2016. "Orleans Outer Beach Management Plan, Orleans, MA." Woods Hole Group Technical Report 2015-0029. Prepared for the Town of Orleans, MA, 46 pp.

Cura, J.J., M.L. Fields, Famely, J.J., and H. Clark. 2012. "Draft Long Island Sound Dredged Material Management Plan (LISDMMP) Potential Dredged Material Containment Sites and Investigation of Nearshore Placement Sites for Materials Suitable for Beneficial Use as Nourishment." Woods Hole Group Technical Report USACE TO-0040. Prepared for the US Army Corps of Engineers, 94 pp, plus Appendices.

Marden, T.P., M.L. Fields, J.J. Famely, and R.P. Hamilton. 2012. "Chapin Beach Erosion Management Plan." Woods Hole Group Technical Report 2011-063. Prepared for the Town of Dennis, MA, 59 pp, plus Appendices.

Fields, M.L. and B. Payne. 2011. "Narragansett Town Beach Replenishment Feasibility Project." Woods Hole Group Technical Report 2011-004. Prepared for the Town of Narragansett, Rhode Island, 55 pp, plus Appendices.

Clark, H., M.L. Fields, and J.J. Famely. 2010. "Upland, Beneficial Use, and Sediment Dewatering Site Investigations Phase 2 – Long Island Sound Regional Dredged Material Management Plan." Woods Hole Group Technical Report USACE TO-0024. Prepared for the US Army Corps of Engineers, 36 pp, plus Appendices.

Fields, M.L. and P. Dragos. 2010. "Transition Plan – New Bedford Harbor Superfund Project Environmental Management Information System" Woods Hole Group Technical Report USACE TO-0012-01. Prepared for the US Army Corps of Engineers, 54 pp.

Fields, M.L. 2010. "Recommendations to Facilitate Implementation for the Long Island South Shore Estuary Reserve." Woods Hole Group Technical Report 2007-140-5. Prepared for the New York State Department of State, 15 pp.

Fields, M.L. 2010. "Investigation of Beneficial Use Opportunities for the Long Island South Shore Estuary Reserve." Woods Hole Group Technical Report 2007-140-4. Prepared for the New York State Department of State, 18 pp.

Fields, M.L. 2010. "Investigation of Opportunities for Improved Sediment Management for the Long Island South Shore Estuary Reserve." Woods Hole Group Technical Report 2007-140-3. Prepared for the New York State Department of State, 33 pp.

PUBLICATIONS AND PRESENTATIONS (CONTINUED)

Fields, M.L. 2010. "Final Inventory and Distribution Assessment of Sediment Chemistry for the Long Island South Shore Estuary Reserve." Woods Hole Group Technical Report 2007-140-2. Prepared for the New York State Department of State, 50 pp.

Fields, M.L. 2010. "Final Assessment of Current Dredging Conditions and Future Needs for the Long Island South Shore Estuary Reserve." Woods Hole Group Technical Report 2007-140-1. Prepared for the New York State Department of State, 43 pp, plus Appendices.

Fields, M. L. 2010. "Final Waterways Assets and Resources Survey Master Plan for Dredging and Beach Nourishment." Woods Hole Group Technical Report 2009-093. Prepared for the Town of Dennis, MA, 87 pp.

Dill, N., K. Bosma, and M.L. Fields. 2009. "Fate and Transport Analysis Associated with Proposed Drilling Operations Offshore of Trinidad Within the Mora Block." Woods Hole Group Technical Report 2008-152. Prepared for Environmental Sciences Ltd., San Fernando, Trinidad, 34 pp.

Marden, T.P., and M. L. Fields. 2008. "Beach Management Plan Sylvia State Beach, Edgartown, MA." Woods Hole Group Technical Report 2006-163. Prepared for County of Dukes County, Edgartown, MA, 39 pp, plus Appendices.

Fields, M.L., and K. Bosma. 2008. "Final Report Hydraulic Analysis for Mill Pond and Vicinity, Woods Hole, Massachusetts." Woods Hole Group Technical Report 2007-085. Prepared for the Town Falmouth, Department of Public Works, Engineering Division, 11 pp.

Environmental Sciences Ltd, M.L. Fields, A. Shepherd, and H. Elwany. 2008. "Environmental Impact and Risk Assessment for Tobago Pipeline Project." Environmental Sciences Ltd. Technical Report R 3023. Prepared for the National Gas Company of Trinidad and Tobago Limited.

Environmental Sciences Ltd, M.L. Fields, A. Shepherd, and H. Elwany. 2008. "Environmental Impact and Risk Assessment for Northeast Offshore Pipeline Project." Environmental Sciences Ltd. Technical Report R 3023B. Prepared for the National Gas Company of Trinidad and Tobago Limited.

Fields, M.L. 2007. "Beach Management Plan, Town of Falmouth Beaches." Woods Hole Group, Inc. Technical Report 2007-158. Prepared for Town of Falmouth, Office of the Town Manager and Falmouth Beach Committee, 94 pp.

Fields, M.L., and H. Clark. 2007. "Nitrogen Loading Assessment Forest Cove Development, Gifford Street & Trotting Park Road, Falmouth, Massachusetts." Woods Hole Group, Inc. Technical Report 2007-066. Prepared for Abby Real Estate Development LLC, Azusa, CA, 23 pp.

Fields, M.L. and B. Caufield. 2006. "Risk and Vulnerability Assessment Martha's Vineyard Hospital Oak Bluffs, Massachusetts." Woods Hole Group, Inc. Technical Report 2006-123. Prepared for Board of Trustees – Martha's Vineyard Hospital and Martha's Vineyard Commission, 71 pp.

PUBLICATIONS AND PRESENTATIONS (CONTINUED)

Fields, M.L. 2006. "Beach Nourishment Feasibility Investigation Western Shoreline Vineyard Haven Harbor, Martha's Vineyard, Massachusetts." Woods Hole Group, Inc. Technical Report 2006-109. Prepared for Consortium of Property Owners: Gagnon, Jewett, Sayre, Smith, Cohan, Lautenberg, 60 pp.

Fields, M.L. 2006. "Shoreline and Beach Evolution Pohogonot Area Edgartown Martha's Vineyard, Massachusetts." Woods Hole Group, Inc. Technical Report 2005-010. Prepared for Rackemann, Sawyer and Brewster, 31 pp.

Fields, M.L. and B. Caufield. 2006. "Analysis for Physical Changes and Management Alternatives for the Nauset Beach Area, Cape Cod, Massachusetts." Woods Hole Group, Inc. Technical Report 2005-32. Prepared for Town of Orleans, 52 pp.

Fields, M.L., K. Bosma, and T. Marden. 2006. "Final Report – Shoreline and Beach Evaluation Chappaquiddick Outer Harbor Coastline Edgartown Martha's Vineyard, Massachusetts." Woods Hole Group, Inc. Technical 2005-121. Prepared for Chappaquiddick Outer Harbor Coastline Conservation Group, 22 pp.

Fields, M.L. and L. Weishar. 2005. "Site Assessment Van Greenfield Property." Woods Hole Group, Inc. Technical Report 2004-093. Prepared for Mr. Van Greenfield, 22 pp.

Fields M.L. and L. Weishar. 2005. "Site Assessment David Hamomoto Property." Woods Hole Group, Inc. Technical Report 2004-092. Prepared for Inter-Science Research Associates, Inc., 26 pp.

Fields, M.L. 2005. "Habitat Change Analysis (Historical and Recent) Final Report." Woods Hole Group, Inc. Technical Report 2005-026. Prepared for Sanborn Solutions, 202 pp.

Fields, M.L., M. Utku. 2002. "Draft Flood Insurance Restudy Town of Hampton, New Hampshire, Rockingham County." Woods Hole Group, Inc. Technical Report 1997-47. Prepared for Federal Emergency Management Agency, J.W. McCormack Post Office & Court House, Boston, MA 02109.

Fields, M.L., K. Bosma. 2002. "Chapoquoit Beach Shoreline Management Phase I – Feasibility Investigation and Conceptual Design." Woods Hole Group, Inc. Technical Report 2000-194. Prepared for Chapoquoit Associates, Associates Rd., West Falmouth, MA.

Marden, T.P. and M.L. Fields. 2001. "Dune Reconstruction Design for William Condren, Southampton, New York." Woods Hole Group, Inc. Technical Report 2000-118. Prepared for Inter-Science Research Associates, Inc., P.O. Box 1201, Southampton, NY.

Cacchione, D.A., K. Israel, and M.L. Fields. 2000. "Assessment of Sand Resources in Northern and Central San Francisco Bay, CA." Woods Hole Group, Inc. Technical Report 2000-125. Prepared for Hanson Aggregate.

PUBLICATIONS AND PRESENTATIONS (CONTINUED)

Marden, T.P., C. Johnsen, M.L. Fields, D. FitzGerald, E. Pendleton, and I. Buynevich. 2000. "Delineation of Historical New Inlet Debidue Island, South Carolina." Woods Hole Group, Inc. Technical Report 1999-210. Prepared for Kenneth Mitchum, Attorney-At-Law, 13 Orange St., Georgetown, SC.

Fields, M.L. 2000. "Coastal Hazard Assessment Shore Road and Atlantic Drive, Amagansett, New York." Woods Hole Group, Inc. Technical Report 2000-94. Prepared for Inter-Science Research Associates, Inc., P.O. Box 1201, Southampton, NY.

Fields, M.L. and M. Utku. 2000. "Dune Reconstruction Design Southampton Bath and Tennis Club Southampton, New York." Woods Hole Group, Inc. Technical Report 1999-100. Prepared for Inter-Science Research Associates, Inc., P.O. Box 1201, Southampton, NY.

Marden, T.P. and M.L. Fields. 2000. "Analysis of Shoreline Change for the Debidue Beach, South Carolina Shoreline." Woods Hole Group, Inc. Technical Report 1999-210b. Prepared for Kenneth Mitchum, Attorney-At-Law, 13 Orange St., Georgetown, SC.

Fields, M.L. and M. Utku. 2000. "Dune Reconstruction Design Parcel 1, Fowler Street, Southampton, New York." Woods Hole Group, Inc. Technical Report 1999-92. Prepared for Inter-Science Research Associates, Inc., P.O. Box 1201, Southampton, NY.

Fields, M.L., and T.P. Marden. 1999. "Evaluation and Management of Coastal Resources at Cow Neck Farm, Southampton, NY." Woods Hole Group, Inc. Technical Report 98-113c. Prepared for Belvedere Property Management, LLC. C/O Barrett, Bonacci and Van Weele, P.C., Hauppauge, NY.

Fields, M.L. 1999. "Historical Shoreline Change Analysis for the Surfside, Nantucket Coastline." Woods Hole Group, Inc. Technical Report 1998-26. Prepared for Earth Tech, 47 East Grove St., Middleborough, MA.

Fields, M.L., T.P. Marden and S.P. Leatherman. 1999. "Evaluation and Management of Coastal Resources at Robins Island, Southold, NY." Woods Hole Group, Inc. Technical Report 98-113. Prepared for Belvedere Property Management, LLC. C/O Barrett, Bonacci and Van Weele, P.C., Hauppauge, NY.

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