

TODD M. MONTELLO

Senior Geologist/Senior Project Manager

Mr. Montello is a geologist specializing in coastal geomorphology and the mitigation of coastal and riparian habitat degradation caused by various environmental hazards. He has been affiliated with RPI for 16 years and possesses extensive experience in monitoring and mapping changes in coastline morphology, tidal-channel morphometry/bathymetry, and bedform distribution in tidal-inlet and nearshore environments, sediment provenance and grain size analyses, and sediment borrow area identification for shoreline restoration projects. He provides support to the National Oceanic and Atmospheric Administration and United States Coast Guard on a 24-hour basis regarding a wide-range of oil-spill related topics, including conducting shoreline assessments to support clean-up operations and natural resource damage assessments following response (clean-up) activities, identifying resources at risk, developing on-water protection/containment strategies and shoreline cleanup methodologies, monitoring the progress of shoreline cleanup efforts, and conducting sign-off inspections. He is proficient in all aspects of project management.

EDUCATION

- M.A. Geology, Boston University, Boston, MA, 1992
- B.A. Geology, Boston University, Boston, MA, 1990

PROFESSIONAL EXPERIENCE

- Research Planning, Inc., Columbia, SC - Senior Geologist/Senior Project Manager, 7/2007 to present
- Waterbury Development Corporation, Waterbury, CT - Chief Operating Officer 11/2006 to 10/2007; Executive Director 7/2006 to 11/2006; Senior Project Manager, 6/2005 to 7/2006.
- Naugatuck Valley Development Corporation (was renamed the Waterbury Development Corporation in 6/2005), Waterbury, CT - Senior Project Manager 6/2004 to 6/2005; Project Manager 2/2002 to 6/2004.
- Inland Wetlands and Watercourses Agency, Waterbury, CT - Coordinator, 4/2001 to 2/2002
- Geologic Services Corporation, Windsor, CT - Project Geologist, 8/2000 to 4/2001
- N.O.K. & Associates, Shelton, CT - Geologist 1/1999 to 8/2000
- Research Planning, Inc., Columbia, SC - Geologist, 2/1992 to 6/1998
- Coastal Environmental Research Group, Geology Department, Boston University, Boston, MA - Student Research Assistant, 1988 to 1992

EMERGENCY OIL SPILL RESPONSE

Mr. Montello has provided on-scene support at the following oil spills:

- Colonial Pipeline Break, Reston, VA - 1993
- *T/B Morris J. Berman*, San Juan, Puerto Rico - 1994
- San Jacinto River Spill, Channelview, TX - 1994
- *Buffalo 292*, Galveston, TX - 1996
- *Buffalo 286*, La Porte, TX - 1996
- Colonial Pipeline Break, Greenville, SC - 1996

HABITAT MAPPING

Mr. Montello has performed shoreline classifications for environmental sensitivity index (ESI) and reach sensitivity index (RSI) atlases in the following areas:

ESI Atlases (coastal environments):

- Massachusetts
- Delaware
- Pennsylvania
- New Jersey
- North Carolina
- South Carolina
- Georgia
- Florida
- Mississippi
- Alabama
- San Francisco Bay, CA

RSI Atlas (riverine environments):

- Leaf River, MS

OIL SPILL PROTECTION STRATEGIES

Aside from those developed during emergency response efforts, Mr. Montello developed protection strategies for the following areas:

- California's Outer Coast – 170 strategies
- San Francisco Bay Complex - 144 strategies
- Florida's East Coast - 21 strategies

- Florida Keys - 28 strategies
- Florida's Southwest Coast (Hurricane Pass to Morgan Bay) - 37 strategies
- New Jersey's Outer Coast - 13 strategies
- Delaware - 1 strategy
- Buzzards Bay, Massachusetts - 43 strategies

COASTAL ASSESSMENTS

Mr. Montello has conducted the following coastal assessments:

- Conducted a baseline assessment of the water quality and hydrodynamics offshore Jeddah, Saudi Arabia
- Established the extent and degree of oiling along Saudi Arabia's Persian Gulf/ROPME Sea/Arabian Gulf shoreline as a result of the Gulf War Oil Spill
- Quantified the extent of lingering oil along the Alaskan coast impacted by *T/V Exxon Valdez* oil spill in Prince William Sound, AK, USA
- Analyzed the role of geomorphology/ Holocene stratigraphy in design engineering for beach erosion in Ghana, West Africa
- Determined the stratigraphy and evolution of the barrier system along the Wells-Ogunquit Embayment in Southern ME, USA
- Studied the morphological characteristics of Plum Island, Crane, Coffins, and Wingersheek Beaches, MA, USA
- Mapped the changes in bedform distribution and shoal morphology, sedimentation trends, and inlet hydraulics as a result of the breaching of Nauset Spit and the formation of New Inlet, Cape Cod, MA, USA
- Conducted a sediment provenance study along Plum Island Beach, MA, USA
- Evaluated the shoreline processes and damage resulting from the Halloween Eve storm of 1991 along the north and south shores of Massachusetts Bay, USA

PUBLICATIONS

REFEREED JOURNAL ARTICLES

Risk, M. J., R. Nairn, O. Sherwood, L. Cotsapas, T. M. Montello, and C. Gibbons. In press. Shallow antipatharians map sewage plumes: Jeddah, Saudi Arabia. *American Society of Limnology and Oceanography*.

Al-Mansi, A.M., T.M. Montello, and A.H. Al-Momen. 1995. Seasonal profile changes in exposed beaches in the Western Arabian Gulf. In: Krupp, F., A.H. Abuzinda, and I.A. Nader (Eds). *A marine wildlife sanctuary for the Arabian Gulf: environmental research and conservation following the 1991 Gulf War oil spill*. Forschungsinstitut a.M. and NCWCD, Riyadh, Saudi Arabia.

- FitzGerald, D.M., S. van Heteren, and T.M. Montello. 1994. Shoreline processes and damage resulting from the Halloween Eve storm of 1991 along the north and south shores of Massachusetts Bay, U.S.A. *Journal of Coastal Research* 10(1):113-132.
- FitzGerald, D.M., and T.M. Montello. 1994. Backbarrier and inlet sediment response to the breaching of Nauset Spit and formation of New Inlet, Cape Cod, Massachusetts. In Aubrey, D.G., and G.S. Giese (Eds). *Formation and evolution of multiple tidal inlets. Coastal and Estuarine Studies* 44:158-185.
- Narumalani, S., J.R. Jensen, M.O. Hayes, J. Michel, T.M. Montello, and J. Robinson. 1993. Gulf War legacy using remote sensing to assess habitat in the Saudi Arabian Gulf before the Gulf War oil spill. *GeoInfo Systems* 3(6):33-41.
- Hayes, M.O., J. Michel, T.M. Montello, D.V. Aurand, A.M. Al-Mansi, A.H. Al-Momen, T.C. Sauer, and G.W. Thayer. 1993. Distribution and weathering of shoreline oil one year after the Gulf War oil spill. *Marine Pollution Bulletin* 27:135-142.

PROCEEDINGS AND TECHNICAL REPORTS

- Hayes, M.O., T.M. Montello, L. Cotsapas, and M. White. 2004. Buzzards Bay geographic response plan for oil-spill mitigation. Prepared for the Coalition for Buzzards Bay, New Bedford, MA, 28 pp.
- Hayes, M.O., T.M. Montello, R.J. Schrader, and E.A. Levine. 1999. Tidal inlets – a major hurdle to effectively protecting sensitive coastal resources. In: *Proceedings of the 1997 International Oil Spill Conference*. Publication 4686B of the American Petroleum Institute, Washington, D.C., pp. 1239-1243.
- Hayes, M.O., J. Michel, and T.M. Montello. 1997. The reach sensitivity index (RSI) for mapping rivers and streams. In: *Proceedings of the 1997 International Oil Spill Conference*, Publication 4651 of the American Petroleum Institute, Washington, D.C., pp. 343-350.
- Hayes, M.O., and T.M. Montello. 1997. Tidal inlet protection strategies for oil-spill response: Coast of New Jersey. Prepared for the New Jersey Department of Environmental Protection, Trenton, NJ, 178 pp.
- Hayes, M.O., and T.M. Montello. 1997. Tidal inlet protection strategies for oil-spill response: Coast of Delaware, Indian River Inlet. Prepared for the Delaware Department of Natural Resources and Environmental Control, Dover, DE, 22 pp.
- Hayes, M.O., J. Michel, and T.M. Montello. 1996. Final report: Strategy for mapping sensitive resources of rivers and streams in EPA Region 4. Prepared for the Hazardous Materials Response and Assessment Division, NOAA, HAZMAT Report No. 96-11, Seattle, WA, RPI/R/96-5, 35 pp.
- Levine, E.A., J. Pinckney, and T.M. Montello. 1995. Follow-up study on oiled vegetation cutting along the Delaware River. In: *Proceedings of the 1995 International Oil Spill Conference*, Publication 4620 of the American Petroleum Institute, Washington, D.C., pp. 465-472.
- Hayes, M.O., J. Michel, T.M. Montello, D.V. Aurand, T.C. Sauer, A.M. Al-Mansi, and A.H. Al-Momen. 1995. Distribution and weathering of oil from the Iraq-Kuwait Conflict oil spill within intertidal habitats-two years later. In: *Proceedings of the 1995 International Oil Spill*

- Conference, Publication 4620 of the American Petroleum Institute, Washington, D.C., pp. 443-451.
- Hayes, M.O., and T.M. Montello. 1995. Tidal inlet protection strategies for oil-spill response: Southwest Coast of Florida, Hurricane Pass to Morgan Bay. Prepared for the Marine Spill Response Corporation, Washington, D.C., and the Florida Department of Environmental Protection, Tallahassee, FL, 268 pp.
- Hayes, M.O., J. Michel, T.M. Montello, and T.C. Sauer. 1994. ROPME Sea oil spill nearshore geochemical process study, distribution and weathering of oil in intertidal sediments for year 2 (1993). Prepared for the Marine Spill Response Corporation, Washington, D.C., Technical Report Series 94-009, 140 pp.
- Hayes, M.O., J. Michel, and T.M. Montello. 1994. ROPME Sea oil spill nearshore geochemical process study, volume 1, distribution and weathering of oil in intertidal and subtidal sediments for year 1 (1992). Prepared for the Marine Spill Response Corporation, Washington, D.C., Technical Report Series 93-002.1, 230 pp.
- Hayes, M.O., and T.M. Montello. 1994. Potential oil-spill protection strategies for San Francisco Bay, California. Prepared for the Marine Spill Response Corporation, Washington, D.C., and the California Department of Fish and Game, Office of Oil Spill Prevention and Response, Sacramento, CA, 3 vols.
- Hayes, M.O., and T.M. Montello. 1994. Tidal inlet protection strategies for oil-spill response: volume I. east coast of Florida. Prepared for the Marine Spill Response Corporation, Wash., D.C., and the Florida Department of Environmental Protection, Tallahassee, FL, 268 pp.
- Hayes, M.O., and T.M. Montello. 1994. Tidal inlet protection strategies for oil-spill response: volume II. Florida Keys. Prepared for the Marine Spill Response Corporation, Washington, D.C. and the Florida Department of Environmental Protection, Tallahassee, FL, 220 pp.
- Hayes, M.O., J. Michel, T.M. Montello, D.V. Aurand, G.W. Thayer, A.M. Al-Mansi, and A.H. Al-Momen. 1993. Mechanisms for the enhancement of the preservation of subsurface oil at the Gulf War spill site. In: Proceedings of the 1993 International Oil Spill Conference, Publication 4580 of the American Petroleum Institute, Washington, D.C., 23 pp.
- Hayes, M.O., J. Michel, T.M. Montello, D.V. Aurand, A.M. Al-Mansi, A.H. Al-Momen, J.R. Jensen, and G.W. Thayer. 1993. Distribution of oil from the Gulf War oil spill within intertidal habitats – one year later. In: Proceedings of the 1993 International Oil Spill Conference, Publication 4580 of the American Petroleum Institute, Washington, D.C., pp. 373-381.
- Hayes, M.O., and T.M. Montello. 1993. Coastal inlet protection strategies for oil-spill response. Prepared for the Marine Spill Response Corporation, Washington, D.C. and the California Department of Fish and Game, Office of Oil Spill Prevention and Response, Sacramento, CA, 3 volumes.
- Montello, T.M., M.O. Hayes, and J. Michel. 1993. Results of beach monitoring surveys – northern and central California. Prepared for the Hazardous Materials Response and Assessment Division, NOAA, Seattle, WA and the California Department of Fish and Game, Office of Oil Spill Prevention and Response, Sacramento, CA, RPI/R/93-7, 53 pp. plus appendices.

- Michel, J., M.O. Hayes, T.M. Montello, A.M. Al-Mansi, A.H. Al-Momen, and D.V. Aurand. 1992. The occurrence of oil in the intertidal and subtidal sediments of the Saudi Arabian coast as a result of the Gulf War oil spill – one year later. In: Proceedings of Coastal Zone '93, New Orleans, LA.
- Montello, T.M., D.M. FitzGerald, S. van Heteren, D.W. Caldwell, and L.K. Fink, Jr. 1992. Stratigraphy and evolution of the barrier system along the Wells-Ogunquit Embayment in Southern Maine. Technical Report 15, Coastal Environmental Research Group, Department of Geology, Boston University, Boston, MA, 142 pp. plus appendices.
- FitzGerald, D.M., and T.M. Montello. 1990. A preliminary study of changes in bedform distribution and shoal morphology, sedimentation trends, and inlet hydraulics at New Inlet, Cape Cod, Massachusetts. Technical Report 14, Coastal Environmental Research Group, Department of Geology, Boston University, Boston, MA, 99 pp.
- Goodbread, S., and T.M. Montello. 1989. Study of the morphological characteristics of Plum Island, Crane's, Coffin, and Wingaersheek Beaches, Massachusetts. Technical Report, Coastal Environmental Research Group, Department of Geology, Boston University, Boston, MA., 15 pp.

ABSTRACTS

- Hayes, M.O., T.M. Montello, and R.B. Nairn. 1997. Role of geomorphology/ Holocene stratigraphy in design engineering for beach erosion in Ghana. (Abstract) In: Geological Society of America, Abstracts with Programs, Northeastern Section.
- Hayes, M.O., and T.M. Montello. 1995. The development of potential protection strategies for tidal inlets. (Abstract) In: Proceedings of the 1995 International Oil Spill Conference, Publication 4620 of the American Petroleum Institute, Washington, D.C., pp. 1012-1013.
- Montello, T.M., A.M. Al-Mansi, A.H. Al-Momen, M.O. Hayes, J. Michel, D.V. Aurand, and G.W. Thayer. 1993. Persistence of Gulf War oil verses intertidal morphology and sediments – one year later: (Abstract) In: Proceedings of the 1993 International Oil Spill Conference, Publication 4580 of the American Petroleum Institute, Washington, D.C., pp. 894-895.
- Montello, T.M., D.M. FitzGerald, S. van Heteren, D.W. Caldwell, and L.K. Fink, Jr. 1992. Stratigraphy and evolution of the Wells barrier system, Maine. (Abstract) In: Geological Society of America, Abstracts with Programs, Northeastern Section.
- van Heteren, S., D.M. FitzGerald, T.M. Montello, and L.K. Fink, Jr. 1992. Stratigraphy and inferred development of the Scarborough barrier, Maine. (Abstract) In: Geological Society of America, Abstracts with Programs, Northeastern Section.

MASTER'S THESIS

- Montello, T.M. 1992. The stratigraphy and evolution of the Wells-Ogunquit barrier island system, Wells, Maine. Boston University Graduate School, Boston, MA, 229 pp. plus appendices.