## NAME: Michael T. Koterba

**CONTACT INFORMATION (Address, tel. Fax, email)**

U.S. Geological Tel: (443) 498-5540

5522 Research Park Drive Fax:(443) 498-5510

Baltimore, Maryland 21228 Email: mkoterba@usgs.gov

# PROFESSIONAL PREPARATION

Ph.D. Hydrology, including Watershed Management minor

 University of Arizona, (1980-1987)

M.S. Hydrology, Including Soils minor

University of New Hampshire, 1977

B.S. Chemistry, emphasis Analytical, with Highest Honors, minor in Mathematics

 St. Cloud State University, 1973

# CERTIFICATIONS: Secret Security Clearance obtained in 2003

# PPROPOSAL RELEVANT AREAS of EXPERTISE/RESEARCH INTERESTS

**Coastal Zone Hazards and Resiliency: Integrating mutli-institutional and multi-disciplinary earth and physical science knowledge and processes to describe and recognize natural and human-induced hazards to help develop resilient coastal communities.** Work includes co-development of interoperable and integrated ensemble approaches to develop end-end storm-surge and inundation forecast systems, and interoperable observational-monitoring systems to support coastal hazard assessments, the design and implementation of large-scale ground, surface, and biotic water water-quality assessments, studies on the quality, hydrochemistry, fate, and transport of natural and human induced contaminants, the bioaccumulation of heavy metals in aquatic and terrestrial organisms, and the development of national security plans for water and dams.

**RELEVANT CENT EMPLOYMENT HISTORY**

**2007-Present:** USGS Hydrologist GS 13 Grade Level, also

* Member Chesapeake Bay Observing System (CBOS), IOOS Subregional Association of Mid-Atlantic Coastal Ocean Observing Regional Association
* Past Chair of the CBOS Affiliate (Federal) Members (2008-2010)
* Past Director of the CBOS (2007)
* Detailed to National Oceanographic and Atmospheric Administration (NOAA) Chesapeake Bay Office (2007)
* Member of the Chesapeake Inundation Prediction System Development Team (2007-present)

### SELECTED PEER-REVIEWED PRESENTATIONS-PUBLICATIONS

Lotspiech, R.R., Wicklien, S.M., and Koterba, M.T., 2010, Monitoring Inland Storm Surge: The USGS Mobile Storm-Surge Sensor Network and Response to the Veteran’s Day Nor’easter, Presentation, abs. *In:* Exceptional Atmospheric and Hydrodynamic Processes and Events: Observations, Models, Forecasts, Response and Communication, Chesapeake Modeling Symposium, May 10-11, 2010, Annapolis, MD.

Meyers, E., Burke, D, Dunn, J., Johnson, Z., Jasinski, P., Wilson, D., Wang, W., Forrest, D, Stamey, B., Garbin, D., Sellner, K., Smith, E., Mckay, L., and Koterba, M., 2010, Storms, climate change, and the Chesapeake Bay, Chesapeake Sea-Level Rise and Storm-Surge Awareness Response, National Geographic Special Report (Available at <http://www.chesapeakeadaptation.org/>)

S.M. Wicklein, Koterba, M.T., Berenbrock, C, Mason, R.R., Jr. and Lotspiech, R.R., 2009, Mapping Hurricane Inland Storm Surge, Presentation and abs. In: Proceedings Mid-Atlantic Coastal Ocean Observing System (MACOORA) Annual Meeting, November 17-18, Portsmith, VA.

Koterba, M.T., 2007, Integrated Ocean Observing Systems: An Example from the Chesapeake Bay (Plenary Speaker Presentation, Abs.) *In:* Proceedings of the Delaware Estuary Conference, January 22-24, 2007, Cape May, New Jersey.

Stamey, B., Wang, H., and Koterba, M., 2007, Predicting the next storm surge flood: Rapid prototype development of a regional capability to address a national problem, Sea Technology, Vol. 48 Num. 8 p. 10-14.

Koterba, M.T. and Smith, E., 2006, Chesapeake Bay Observing System—Subregional association of IOOS (Technical Presentation, abs) *In*: Proceedings of the American Water Resources Association, 2006 Annual Conference, December 6-9, Baltimore, MD.

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Koterba, M.T., Waldron, M.C., and Kraus, T.E.C., *In review*, Retrospective evaluation of the design and monitoring program for the City of Baltimore, Maryland, drinking-water supply reservoirs and watersheds,

U.S. Geological Survey, Scientific Investigations Report 2010-XXXX, Baltimore, MD, 193 p. with additional Appendices.

Koterba, M.T., Dieter, C.A., and Miller, C.V., 2010, Pesticides in groundwater in the Anacostia River and Rock Creek watersheds in Washington, D.C., 2005 and 2008, U.S. Geological Survey, Scientific Investigations Report 2010-5130, Baltimore, MD, 90 p. (Available at md.water.usgs.gov/publications/sir-2010.../FINAL\_sir2010-5130.508.pdf)

Albers, P., H., Koterba, M.T., Rossmann, R, Link, W.A., French, J.B., Bennett, R.S. and Bauer, W.C., 2007, Effect of methyl mercury on reproduction in American Kestrels, Environmental Toxicology and Chemistry, Vol. 26, Num. 9, p. 1856-1866.

Apodaca, L.E., Mueller, D.K., and Koterba, M.T. , 2006, Review of trace element blank and replicate data collected in ground and surface water for the National Water-Quality Assessment Program, 1991–2002, U.S. Geological Survey Scientific Investigations Report 2006-5093, 43 p. (Available at http://pubs.usgs.gov/sir/2006/5093/).

Koterba, M.T., Andres, A.S.; Vrabel., J.; Crilley, D.M.; Szabo, Z., DeWild, J.F., Aiken, G.R.; Reyes, Padro, B., 2006, Occurrence and distribution of mercury in the surficial aquifer, Long Neck Peninsula, Sussex County, Delaware, 2004-05, U.S. Geological Survey, Scientific Investigation Report 2006-5011, 163 p. (Available at http://md.water.usgs.gov/publications/sir-2006-5011/sir-2006-5011.pdf )

Koterba, M.T., 2006, A overview of U.S. Geological Survey contributions to fate and transport modeling of contaminants with focus on surface water., abs. *In*: Proc. Workshop on Functional Requirements for the Modeling of Fate and Transport of Waterborne CBRN Materials, Oak Ridge National Laboratory Rep. ORNL/TM-2005/6, 14 p.

Koterba, M.T., and Olsen, L., 2003, Use of historical water-quality data in the contiguous United Sates to guide the development and testing of sensors for streams and aquifers used for military and civilian water supplies. abs. *In:* Proc. of the Joint Universities Council on Water Resources, National Institutes for Water Resources, and Environmental and Water Resources Institute Conference, “Water Security in the 21st Century”, Washington DC, July 30-Augut 1, 2003, 4p.

Olsen, L. and Koterba, M.T. , 2003, Incorporating Emerging Sensor Technologies into Existing Near-Real-Time Water-Quality Monitoring Stations. ext. abs. *In:* Proc. of the Joint Universities Council on Water Resources, National Institutes for Water Resources, and Environmental and Water Resources Institute Conference, “Water Security in the 21st Century”, Washington DC, July 30-Augut 1, 2003. 4 p.