

Curriculum Vitae

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I. EDUCATION

1984 Ph.D., Woods Hole Oceanographic Institution/Massachusetts Institute of Technology Joint Program in Oceanography and Oceanographic Engineering, Oceanographic Engineering.

1978 Sc.B., magna cum laude, Brown University, Mechanical Engineering major, Economics minor.

II. PROFESSIONAL BACKGROUND

2001-present Professor, University of Maryland Center for Environmental Science, Horn Point Laboratory, Cambridge, MD.

1993-present Associate Professor, University of Maryland Center for Environmental Science, Horn Point Environmental Laboratory, Cambridge, MD.

1987-1993 Assistant Professor, University of Maryland Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratory, Cambridge, MD.

1984-1987 Postdoctoral Research Associate, University of Maryland System Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratory, Cambridge, MD.

1981-1984 Graduate Research Assistant, Woods Hole Oceanographic Institution, Woods Hole, MA.

1978-1981 National Science Foundation Graduate Fellow, WHOI/MIT Joint Program in Oceanography and Oceanographic Engineering, Cambridge, MA and Woods Hole, MA.

III. RESEARCH

A. Areas of professional expertise

Coastal and estuarine physical oceanography: fine sediment transport dynamics, turbulence, geophysical boundary layers, surface and internal waves, experimental design and execution, data analysis, oceanographic instrumentation. Special interest in interdisciplinary studies.

B. Publications (all)

1. Full Papers in Refereed Journals, Book Chapters, and Books

Grant, W.D., L. Boyer, and L.P. Sanford, 1982. The Effects of Bioturbation on the Initiation of Motion of Intertidal Sands, *Journal of Marine Research*, 40, 659-677.

Sanford, L.P. and W.D. Grant, 1987. Dissipation of Internal Wave Energy in the Bottom Boundary Layer on the Continental Shelf. *Journal of Geophysical Research*, 92 (C2), 1828-1844. UMCEES Contribution No. 1725.

Boicourt, W.C., S.-Y. Chao, H.W. Ducklow, P.M. Glibert, T.C. Malone, M.R. Roman, L.P. Sanford, J.A. Furman, C. Garside, and R.W. Garvine, 1987. Physics and Microbial Ecology of a Buoyant Estuarine Plume on the Continental Shelf. *EOS*, 68(31), 666-668.

Sanford, L.P. and W.C. Boicourt, 1990. Wind forced salt intrusion into a tributary estuary. *J. Geophys. Res.*, 95(C8), 13,357-13,371. UMCEES Contribution No. 2098.

Sanford, L.P., K.G. Sellner and D.L. Breitburg, 1990. Covariability of dissolved oxygen with physical processes in the summertime Chesapeake Bay. *J. Mar. Res.*, 48(3), 567-590. UMCEES Contribution No. 2140.

Sanford, L.P., Panageotou, W. and J.P. Halka, 1991. Tidal resuspension of sediments in the Northern Chesapeake Bay. *Marine Geology*, 97, 87-103. UMCEES Contribution No. 2141.

Halka, J.P., W. Panageotou, and L.P. Sanford, 1991. Consolidation and Erosion of Deposited Cohesive Sediments in Northern Chesapeake Bay, U.S.A. *Geo-Marine Letters*, 11(3/4):174-178.

Sanford, L.P., W.C. Boicourt, and S.R. Rives, 1992. Model for estimating tidal flushing of small embayments. *ASCE, J. Waterway, Port, Coastal and Ocean Engineering*, 118(6):635-654, UMCEES contribution no. 2277.

- Sanford, L.P., 1992. New Sedimentation, Resuspension, and Burial. *Limnology and Oceanography*, 37(6):1164-1178, UMCEES contribution no. 2326.
- Sanford, L.P., and J.P. Halka, 1993. Assessing the paradigm of mutually exclusive erosion and deposition of mud, with examples from upper Chesapeake Bay. *Marine Geology*, 114:37-57. UMCEES contribution no. 2429.
- Sanford, L.P., 1994 Wave forced resuspension of upper Chesapeake Bay muds. *Estuaries*, 17(1B):148-165. UMCEES contribution no. 2476.
- Sanford, L.P., and M.-L. Chang, 1997. The bottom boundary condition for suspended sediment deposition. *J. Coastal Res.*, Special Issue 25:3-17. UMCEES contribution no. 2723.
- Fujiwara, T., Sanford, L.P., Nakatsuji, K., and Y. Sugiyama, 1997. Anticyclonic circulation driven by the estuarine circulation in a Gulf Type ROFI. *Journal of Marine Systems*, 12:83-99.
- Sanford, L.P., 1997. Turbulent Mixing in Experimental Ecosystem Studies. *Marine Ecology Progress Series*, 161:265-293, UMCES contribution no. 2796.
- Maa, J. P.-Y., L. P. Sanford, and J. P. Halka, 1998. Sediment resuspension characteristics in the Baltimore Harbor. *Marine Geology*, 146:137-145.
- Ward, J.E., L.P. Sanford, R.I.E. Newell, and B.A. MacDonald, 1998. A new explanation of particle capture in suspension-feeding bivalve molluscs. *Limnology and Oceanography*, 43(5):741-752.
- Petersen, J.E., Sanford, L.P. and Kemp, W.M., 1998. Coastal plankton responses to turbulent mixing in experimental ecosystems. *Marine Ecology Progress Series*, 171: 23-41. UMCES contribution no. 3205.
- Kennedy, V.S., and L.P. Sanford, 1999. Characteristics of relatively unexploited beds of the Eastern Oyster, *Crassostrea virginica*, and of early restoration programs. *in* Luckenbach, M., R. Mann and J. Wesson (eds), *Oyster Reef Habitat Restoration. A Synopsis and Synthesis of Approaches*, Virginia Institute of Marine Science Press, Gloucester Point, VA, 25-46. UMCES contribution no. 3001.
- Porter, E.T., L.P. Sanford, and S.E. Suttles, 2000. Gypsum dissolution is *not* a universal integrator of 'water motion'. *Limnology and Oceanography*, 45(1):145-158. UMCES contribution no. 3256.
- Sanford, L.P., and S.M. Crawford, 2000. Mass transfer versus kinetic control of uptake across solid-water boundaries. *Limnology and Oceanography*, 45(5):1180-1186. UMCES contribution no. 3311.

- Hagy, J.D., L.P. Sanford, and W.R. Boynton, 2000. Estimation of Net Physical Transport and Hydraulic Residence Times For a Coastal Plain Estuary Using Box Models. *Estuaries*, 23(3):328-340. UMCES contribution no. 3292.
- Ward, J.E., L.P. Sanford, R.I.E. Newell, and B.A. MacDonald, 2000. The utility of in vivo observations for describing particle capture processes in suspension-feeding bivalve molluscs. *Limnology and Oceanography*, 45(5): 1203-1210. UMCES contribution no. 3278.
- Crawford, S.M., and L.P. Sanford, 2001. Boundary shear velocities and fluxes in the MEERC experimental ecosystems. *Marine Ecology Progress Series*, 210:1-12. UMCES Contribution No. 3395.
- Roman, M.R., Holliday, D.V. and Sanford, L.P., 2001. Temporal and Spatial Patterns of Zooplankton in the Chesapeake Bay Turbidity Maximum. *Marine Ecology Progress Series*, 213: 215-227. UMCES Contribution No. 3411.
- Scheurer, D.L., Schneider, D.C. and Sanford, L.P., 2001. Scaling Issues in Marine Experimental Ecosystems: the Role of Patchiness. In: R.H. Gardner, W.M. Kemp, V.S. Kennedy and J.E. Petersen (Editors), *Scaling Relations in Experimental Ecology*. Columbia University Press, New York, pp. 331-360.
- Sanford, L.P. and Maa, J.P.-Y., 2001. A unified erosion formulation for fine sediments. *Marine Geology*, 179(1-2): 9-23. UMCES Contribution No. 3466.
- Sanford, L.P., Suttles, S.E. and Halka, J.P., 2001. Reconsidering the physics of the Chesapeake Bay Estuarine Turbidity Maximum. *Estuaries*, 24(5): 655-669. UMCES Contribution No. 3469.
- Lin, W., L.P. Sanford, and S.E. Suttles, 2002. Wave measurement and modeling in Chesapeake Bay. *Continental Shelf Research*, 22 (18-19): 2673-2686. UMCES Contribution No. 3487.
- Lin, W., Sanford, L.P., Suttles, S.E. and Valigura, R.A., 2002. Drag Coefficients with Fetch Limited Wind Waves. *Journal of Physical Oceanography*, 32: 3058-3074. UMCES Contribution No. 3577.
- Ko, F.-C., Sanford, L.P. and Baker, J.E., 2003. Internal recycling of particle reactive organic chemicals in the Chesapeake Bay water column. *Marine Chemistry*, 81 (3-4): 163-176. UMCES Contribution No. 3650.
- Petersen, J.E., Kemp, W. M., Bartleson, R., Boynton, W. R., Chen, C., Cornwell, J. C., Gardner, R. H., Hinkle, D. C., Houde, E. D., Malone, T. C., Mowitt, W. P., Murray, L., Sanford, L. P., Stevenson, J. C., Sundberg, K. L., and Suttles, S. E., 2003. Multiscale Experiments in Coastal Ecology: Improving Realism and Advancing Theory. *BioScience*, 53, (12): 1181-1197. UMCES Contribution No. 3727.

- North, E.W., Chao, S.-Y., Sanford, L.P. and Hood, R.R., 2004. The influence of wind and river pulses on an estuarine turbidity maximum: numerical studies and field observations. *Estuaries* 27(1): 132-146. UMCES Contribution No. 3715.
- Porter, E.T., Sanford, L.P., Gust, G. and Porter, F.C., 2004. Combined Water Column Mixing and Benthic Boundary Layer Flow in Mesocosms: Key for Realistic Benthic-Pelagic Coupling Studies. *Marine Ecology Progress Series* 271:43-60. UMCES Contribution No. 3700.
- Porter, E.T., Cornwell, J.C., Sanford, L. P., Newell, R.I.E., 2004, Effect of Oysters *Crassostrea virginica* and Bottom Shear Velocity on Benthic-Pelagic Coupling and Estuarine Water Quality. *Marine Ecology Progress Series* 271:61-75. UMCES Contribution No. 3701.
- Sanford, L. P., P. Dickhudt, L. Rubiano-Gomez, M. Yates, S. Suttles, C. T. Friedrichs, D. D. Fugate, and H. Romine, 2005. Variability of suspended particle concentrations, sizes and settling velocities in the Chesapeake Bay turbidity maximum. *in* Flocculation in Natural and Engineered Environmental Systems. I. G. Droppo, G. G. Leppard, P. Liss and T. Milligan, eds. Boca Raton, Florida, CRC Press, LLC: 211-236. UMCES Contribution No. 3597.
- Chang, M.-L. and Sanford, L.P., 2005. Modeling the effects of tidal resuspension and deposition on early diagenesis of contaminants. *Aquatic Ecosystem Health and Management* 8 (1): 41-51.
- North EW, Hood RR, Chao S-Y, Sanford LP. 2005. The influence of episodic events on transport of striped bass eggs to the estuarine turbidity maximum nursery area. *Estuaries* 28(1):108-123. UMCES Contribution No. 3808.
- Li M, Sanford L, Chao S-Y. 2005. Effects of time dependence in unstratified tidal boundary layers: results from large eddy simulations. *Estuarine, Coastal and Shelf Science* 62(1-2):193-204. UMCES Contribution No. 3799.
- Sanford L.P., 2006. Uncertainties in Sediment Erodibility Estimates Due to a Lack of Standards for Experimental Protocols and Data Interpretation. *Integrated Environmental Assessment and Management*, 2(1):29-34. UMCES Contribution No. 3876.
- Stoecker, D. K. Long, A., Suttles, S.E., Sanford, L.P., 2006. Effect of Small-Scale Shear on Grazing and Growth of *Pfiesteria piscicida*. *Harmful Algae, Harmful Algae*, 5 (4): 407-418.. UMCES Contribution No. 3958.
- North, E. W., R. R. Hood, S.-Y. Chao, L. P. Sanford, 2006. Using a random displacement model to simulate turbulent particle motion in a baroclinic frontal zone: a new implementation scheme and model performance tests. *J. Marine Systems*, 60 (3-4):365-380. UMCES Contribution No. 3875.

- Maa, J.P.-Y., Sanford, L.P. and Schoellhamer, D. (Editors), 2006. *Estuarine And Coastal Fine Sediment Dynamics*. Elsevier, Amsterdam, 540 pp.
- Fugate, D.C., Friedrichs, C.T. and Sanford, L.P., 2007. Lateral dynamics and associated transport of sediment in the upper reaches of a partially mixed estuary, Chesapeake Bay, USA. *Continental Shelf Research*, 27(5): 679–698, UMCES Contribution No. 4137.
- Chen, S.N., Sanford, L.P., Koch, E.W., Shi, F. and North, E.W., 2007. A Nearshore Model to Investigate the Effects of Seagrass Bed Geometry on Wave Attenuation and Suspended Sediment Transport. *Estuaries and Coasts*, 30(2): in press, UMCES Contribution No. 4077.
- Sanford, L.P., 2008. Modeling a dynamically varying mixed sediment bed with erosion, deposition, bioturbation, consolidation, and armoring. *Computers and Geosciences*, in press, UMCES Contribution No. 4087.
- Chen, S.N. and Sanford, L.P., 2008. Lateral Circulation Driven by Boundary Mixing and the Associated Transport of Sediments in Idealized Partially-Mixed Estuaries. *Continental Shelf Research*, in press. UMCES Contribution No. 4141.
- Rinehimer, J.P., Harris, C.K., Sherwood, C.R., and Sanford, L.P., 2008. Estimating Cohesive Sediment Erosion and Consolidation in a Muddy, Tidally-Dominated Environment: Model Behavior and Sensitivity. *Proceedings of the 10th International Conference on Estuarine and Coastal Modeling*, Newport, RI Nov. 2007. ASCE, Reston, VA. In press.
- Dickhudt, P.J., Friedrichs, C.T., and Sanford, L.P., in review. Mud matrix solids fraction and bed erodibility in the York River, USA, and other muddy environments. *Continental Shelf Research*, INTERCOH 2007 Volume.
- Chen, S.N. and Sanford, L.P., in review. Axial wind effects on stratification and longitudinal salt transport in an idealized, partially mixed estuary. *Journal of Physical Oceanography*.

2. Published first author abstracts

- Sanford, L.P. and W.D. Grant, 1982. Bottom mixed layer velocity fluctuations due to internal waves in CODE I, Fall AGU Meeting, Transactions, American Geophysical Union, 63(45).
- Sanford, L.P. and W.D. Grant, 1984. Dissipation of Internal Wave Energy in the Bottom Boundary Layer on the Continental Shelf, Transactions, American Geophysical Union, 65(45), 975.
- Sanford, L.P. and W.C. Boicourt, 1985. Drifter Observations of the Chesapeake Plume, Transactions, American Geophysical Union, 66 (51), 1277.

- Sanford, L.P. and W.C. Boicourt, 1986. Estuarine Flow Measurements Using Bottom-Mounted Acoustic Doppler Current Profiler, Transactions, American Geophysical Union, 67(44), 1060.
- Sanford, L.P., K.G. Sellner, and M.H. Bundy, 1987. Moored measurements of dissolved oxygen in the Chesapeake Bay during the summer of 1987. Transactions, Am. Geophys. Union, 68(50), 1692.
- Sanford, L.P., K.G. Sellner, and M.H. Bundy, 1988. Variability of Dissolved Oxygen in the Mesohaline Chesapeake Bay. In: Understanding the Estuary: Advances in Chesapeake Bay Research, USEPA CBP/TRS 24/88, 607.
- Sanford, L.P. and W.C. Boicourt, 1988. Bathymetric control of tributary-mainstem interaction: the case of the Choptank River. Transactions, Am. Geophys. Union, 69(44), 1256.
- Sanford, L.P., K.G. Sellner and D.L. Breitburg, 1989. Covariability of dissolved oxygen with physical processes in the mid-Chesapeake Bay. Abstracts of the tenth biennial international estuarine research conference, Estuarine Research Federation, September, 1989.
- Sanford, L.P., 1990. On new sedimentation, resuspension, and burial. Abstracts of the 1990 Annual Meeting of the American Society of Limnology and Oceanography., June, 1990.
- Sanford, L.P., and J.P. Halka, 1991. Sediment Resuspension in the Northern Chesapeake Bay. Abstracts of the 11th International Estuarine Research Conference, San Francisco, CA, November, 1991.
- Sanford, L.P., V.S. Kennedy, and L. Hastings, 1992. Effects of turbulence on prey capture rates of the sea nettle, Chrysaora Quinquecirrha. Abstracts of the Aquatic Sciences Meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February, 1992.
- Sanford, L.P., D.J. Conley, J.C. Cornwell, J.E. Baker, W.R. Boynton, H.R. Harvey, J.P. Halka, J.M. Hill, and F. Mohlenberg, 1992. Resuspension and Sediment-Water Exchange in mid-Chesapeake Bay. Transactions, Am. Geophys. Union, 73(43; Supplement), 220.
- Sanford, L.P., and J.P. Halka, 1993. Assessing the paradigm of mutually exclusive erosion and deposition of mud, with examples from upper Chesapeake Bay. Abstracts of the 12th Biennial International Estuarine Research Federation Conference, Hilton Head, SC, November, 1993.
- Sanford, L. P., 1994. Wave Forced Erosion of Bottom Sediments in Upper Chesapeake Bay, Transactions, Estuaries 17 (1B): 148-165.

- Sanford, L.P., and M.-L. Chang, 1994. The bottom boundary condition for suspended sediment deposition. Abstracts of the 7th International Biennial Conference on the Physics of Estuaries and Coastal Seas, Woods Hole, MA, November 28-30, 1994.
- Sanford, L.P., 1995. Scaling Turbulent Mixing in Aquatic Mesocosms Abstracts of the ESA annual meeting, Snow Bird, UT, August, 1995.
- Sanford, L.P., S.E. Suttles, E.T. Porter, and R.V. Calabrese, 1995. Generating and Scaling Turbulent Mixing in Laboratory Mesocosms. Abstracts of the ASLO Spring meeting, Reno, NV, June, 1995.
- Sanford, L., Suttles, S., Halka, J., Ortt, R., Maa, J. P.-Y., and Conley, D., 1995. Field Studies of Suspended Sediment Transport in Baltimore Harbor, MD. Abstracts of the Biennial ERF meeting, Corpus Christi, TX, November, 1995.
- Sanford, L.P. and Boicourt, W.C., 1997. Physics of the Chesapeake Bay turbidity maximum. Abstracts of the ASLO Aquatic Sciences meeting, Santa Fe, NM, February, 1997.
- Sanford, L.P., Suttles, S.E., and Crawford, S.M., 1997. Generating and quantifying turbulence in experimental ecosystem tanks. Abstracts of the Biennial ERF meeting, Providence, R.I., October, 1997, p. 162.
- Sanford, L.P., Suttles, S.E., and Crawford, S.M., 1998. Turbulence measurements in laboratory tanks stirred by two different mechanisms. Abstracts of The Oceanography Society meeting, Paris, France, June, 1998. p. 9.
- Sanford, L.P. and S.M. Crawford, 1999. Diffusional versus kinetic control of uptake across solid-water boundaries. Abstracts of the ASLO Aquatic Sciences meeting, Santa Fe, NM, February, 1999.
- Sanford, L.P. and J. P.-Y. Maa, 1999. A unified erosion formulation for cohesive sediments. In "Coastal Ocean Processes: A Tribute to William D. Grant, Abstracts of a Symposium held in Woods Hole, MA, September 27-30, 1998. WHOI Technical Rept. WHOI-99-04: 199-203.
- Sanford, L., J. Baker, M.-L. Chang, S.-Y. Chao, J. Cornwell, J. Halka, and Y. Nakagawa, 1999. Modeling fluid, sediment and contaminant transport in Baltimore Harbor, MD. Abstracts of the Biennial ERF meeting, New Orleans, LA, September, 1999.
- Sanford, L.P., S.-Y. Chao, M.-L. Chang, J.E. Baker, J.C. Cornwell, J.P. Halka, and Y. Nakagawa, 2000. Modeling Contaminated Sediment Transport in Baltimore Harbor, MD, USA. Abstracts of the INTERCOH 2000 meeting, Delft, the Netherlands, September 2000.

- Sanford, L.P., 2000. Processes controlling variability of suspended sediment transport in Northern Chesapeake Bay, MD, USA. Abstracts of the 10th Physics of Estuaries and Coastal Seas meeting, Norfolk, VA, October, 2000.
- Sanford, L.P., Chang, M.-L., and E.T. Porter, 2001. Influences of Resuspension-Deposition Cycling and Boundary Layer Diffusion on Benthic-pelagic Fluxes in Muddy Environments. Abstracts of the ASLO 2001 Aquatic Sciences Meeting, Albuquerque, NM, February 2001.
- Sanford, L.P., and S.R. Werner, 2001. Cohesive sediment transport modeling of Baltimore Harbor. Abstracts of the 7th Estuarine and Coastal Modeling Meeting, St. Petersburg, FL, November, 2001.
- Sanford, L.P., 2001. A New Method For Characterizing And Modeling Erosion Of Muddy Estuarine Sediments. Abstracts of the Biennial ERF meeting, St. Petersburg, FL, November, 2001.
- Sanford, L.P., 2002. A Comparison of Different Approaches to Modeling Erosion and Deposition of Fine Sediments. Abstracts of the AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, February, 2002.
- Sanford, L. P., 2003. A Simplified, Time- and Stress-Dependent Model of the Muddy Sediment-Water Interface. Abstracts of the INTERCOH 2003 Meeting, Williamsburg, VA, October 2003.
- Sanford, L. P., 2003. Particle Dynamics in Estuaries: An Overview (and some examples). Abstracts of the Biennial ERF Meeting, Seattle, WA, September, 2003.
- Sanford, L.P. and J.H. Churchill, 2003. Limited Bottom Sediment Erodibility as a Control on Storm-Induced Sediment Resuspension in Lake Superior. Abstracts of the annual IAGLR Great Lakes Research Conference, Chicago, IL, June 2003.
- Sanford, L.P., 2004. Linking Erosion Measurements and Erosion Models. Abstracts of the Physics of Estuaries and Coastal Seas Meeting, Merida, Mexico, October 2004.
- Sanford, L.P., 2005. Uncertainties in Sediment Erodibility Estimates Due to a Lack of Standards for Experimental Protocols and Data Interpretation. Proceedings of the Third International Conference on Remediation of Contaminated Sediments, New Orleans, LA, January, 2005.
- Sanford, L.P. and A. Blumberg, 2005. Modeling resuspension and deposition with a dynamically varying mixed sediment bed. Abstracts of the Biennial ERF Meeting, Norfolk, VA, October, 2006.
- Sanford, L.P. and E.W. North, 2006. "Interactions between suspended sediment, salt stratification, turbulence, and flocculation in the Chesapeake Bay Turbidity

Maximum”, abstracts of the Coastal Oceanography Symposium honoring John Simpson, Bangor, Wales, April 2006.

Sanford, L.P. and J.P. Halka, 2006. Short-term sediment dynamics and long-term shoreline erosion rates in Chesapeake Bay. Abstracts of the Geological Society of America Meeting, Philadelphia, PA, October 2006.

Sanford, L.P., 2006. A coupled model for flocculation, deposition, compaction, and resuspension of fine sediments with a mixed sediment bed. Abstracts of the Physics of Estuaries and Coastal Seas Meeting, Astoria, OR, September 2006.

Sanford, L.P., Y.H. Kim, S.E. Suttles, 2007. High Frequency Physical Variability in the Chesapeake Bay Estuarine Turbidity Maximum, abstract of ERF2007 Meeting, Providence, Rhode Island, November 2007.

3. Technical reports and non-refereed publications

Terry, W.E., Jr., W.D. Grant, A.J. Williams, III, and L.P. Sanford, 1980. A laser velocimeter for use in coastal boundary layer studies, IEEE/Oceans 80 Conference Proceedings, pp. 216-219.

Sanford, L.P., 1984. Interaction of High Frequency Internal Waves and the Bottom Boundary Layer on the Continental Shelf. PhD Dissertation, WHOI/MIT Joint Program in Oceanography and Oceanographic Engineering, Woods Hole, MA. WHOI-84-33.

Sanford, L.P., 1987. Intrusion of Low Dissolved Oxygen Water into the Choptank River. *in* G.B. Mackiernan, ed., Dissolved Oxygen in the Chesapeake Bay: Processes and Effects. Maryland Sea Grant College Publ. No. UM-SG-TS-87-03.

Sanford, L.P. and W.C. Boicourt, 1987. Summertime interaction between the Chesapeake Bay and the Lower Choptank River estuary. Report to State of Maryland Department of Natural Resources, Tidewater Administration, UMCEES No. TS-63-87.

Sanford, L.P., K.G. Sellner, M.H. Bundy, and M.C. Marsh. 1988. Utility of the ENDECO Pulsed D.O. Sensor for Estuarine Measurements of Dissolved Oxygen. Report submitted to the Maryland Sea Grant College. 31 pp.

Boicourt, W.C. and L.P. Sanford, 1989. A Hydrodynamic Study of the Patuxent River Estuary. Final Report submitted to the Maryland Department of the Environment, Dec. 1989.

Sanford, L.P. and W.C. Boicourt, 1990. Summertime Interaction Between the Chesapeake Bay and the Lower Choptank River Estuary: 1986 - 1987. Final Report to the Maryland Department of Natural Resources, Tidewater

Administration, UMSCEES Report No. TS-81-89. DNR Report No. CBRM-HI-90-3, 38 pp.

Sanford, L.P., J.P. Halka, and J.M. Hill, 1992. Resuspension and transport of sediment associated toxics in the northern Chesapeake Bay. pp. 39-43 in E.J. Olmi, III and B. Hens, eds., Chesapeake Bay Environmental Effects Studies, Toxics Research Program Workshop Report, Virginia Sea Grant College Program, VSG-92-03.

Sanford, L.P., 1992. Sediment Resuspension in the Northern Chesapeake Bay and the Fate of Dredged Sediment Deposits. Draft report submitted to the Maryland Geological Survey, August, 1992. 30 pp. plus figures.

Halka, J.P., Sanford, L.P., and Ortt, R.A., Jr., 1994. Resuspension studies conducted on dredged sediments placed in Area G-South. Department of Natural Resources, Maryland Geological Survey, Coastal and Estuarine Geology File Report No. 94-3. Maryland Geological Survey, Baltimore. 101 pp.

Halka, J., Panageotou, W, Sanford, L, and Chao, S-Y, 1994, Assessing the Fate of Dredged Sediments Placed in Open-Water Sites, Northern Chesapeake Bay. in, McNair, E. C., Jr., ed., Dredging '94: Proceedings of the Second International Conference on Dredging and Dredged Material Placement, Amer. Soc. Civil Engineers, N.Y., N.Y., pp. 1162-1171.

Sanford, L.P., Chao, S.-Y., Halka, J.P., Maa, J.P.-Y., Suttles, S., Wu, S., Ortt, R., and Chang, M.L.. 1997. Sediment Transport in Baltimore Harbor. UMCES, HPEL, Cambridge, MD, Final Report submitted to the Maryland Department of the Environment, 140 pp.

Lin, W., Sanford, L.P., Alleva, B.J., and Schwab, D.J., 1998. Surface Wind Wave modeling in Chesapeake Bay. Proceedings of WAVES 97, ASCE Conference on Ocean Wave Measurement and Analysis, November 3-7, 1997, Virginia Beach, VA, UMCES Contribution No. 3303.

Sanford, L.P. and S.M. Glenn, 1999. Introduction. In "Coastal Ocean Processes: A Tribute to William D. Grant, Abstracts of a Symposium held in Woods Hole, MA, September 27-30, 1998. WHOI Technical Rept. WHOI-99-04: 1-2.

Sanford, L.P., Chao, S.-Y., Halka, J.P., Baker, J.E., Chang, M.L., and Nakagawa, Y., 1999. Development of a Contaminant Transport Model for Baltimore Harbor, Draft Final Report to Maryland Department of the Environment. UMCES, HPL, Cambridge, MD, 67 pp.

Nakagawa, Y., L.P. Sanford, and J.P. Halka, 2000. Effect of Wind Waves on Distribution of Muddy Bottom Sediments in Baltimore Harbor, USA. Proceedings of the Coastal Engineering 2000 Conference, 16-21 July, 2000, Sydney, Australia. B.L. Edge (*ed.*) ASCE, New York, 3516-3524.

- Lin, W., Sanford, L.P., McQueen, J., Suttles, S.E. and Huang, P.A., 2002. Coupling GLERL with RAMS to study surface wind wave effects on air-sea fluxes in Chesapeake Bay, Proceedings of the 7th Int. Workshop on Wave Hindcasting and Forecasting, Banff, Alberta, Canada, pp. 203-214.
- Baker, J.E., Ko, F.-C., Burrell, T., Beard, E., Larsen, R., Bamford, H., Sanford, L.P. and Suttles, S.E., 2002. Comprehensive harbor assessment and regional modeling study, Part 1. UMCES Technical Series No. TS-372-02-CBL, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD.
- North, E.W., Hood, R.R., Chao, S.-y. and Sanford, L.P., 2002. Retention of fish early-life stages and copepod prey in an estuarine nursery area: the influence of environmental variability. ICES Journal of Marine Science. N:04, 18 pp.
- Baker, J.E., Sanford, L.P., Chang, C.-W.A., 2003. Comprehensive Harbor Assessment and Regional Modeling Study, Part 2: Baltimore Harbor Chemical Contaminant Model. UMCES[CBL]03-XX, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD.
- Cronin, T.M., Sanford, L. P., Langland, M. L., Willard, D., Saenger, C. 2003. Chapter 6: Estuarine Sediment Transport, Deposition, and Sedimentation. A Summary Report of Sediment Processes in Chesapeake Bay and Watershed, Water Resources Investigation Report 03-4123. T. M. Cronin, M. L. Langland and S. Phillips. New Cumberland, Pennsylvania, U.S. Geological Survey: 129-160.
- Reimers CE, Friedrichs C, Bebout B, Howd P, Huettel M, Jahnke RA, MacCready P, Ruttenberg K, Sanford L, Trowbridge J. 2004. Coastal Benthic Exchange Dynamics. CoOP Office. Report 10. 92 p.
- Havens, K., C. Heyer, R. Hoffman, B. Michael, K. Moore, S. Phillips, S. Preston, L. Sanford, and M. Trice, 2005. Evaluating the Design and Implementation of the Chesapeake Bay Shallow Water Monitoring Program. CBP STAC Publication 05-003. 18 pp.
- CBP-STAC, 2006. Modeling in the Chesapeake Bay Program: 2010 and Beyond. CBP-06-001, Chesapeake Bay Program Scientific and Technical Committee, Annapolis, MD.
- Mason, Robert, Porter, Elka, and Sanford, Larry 2006. The Role of Resuspension in Enhancing the Remobilization and Bioaccumulation of Mercury and Methylmercury into Bivalves and Other Benthic Organisms. Hudson River Foundation Project #009-01A, UMCES#07-4-35236, TS-520-06, CBL 06-085. 118 pp.
- Koch, E.W., Sanford, L.P., Chen, S.-N., Shafer, D.J. and Smith, J.M., 2006. Waves in Seagrass Systems: Review and Technical Recommendations. ERDC TR-06-15, U S Army Corps of Engineers.

CBP-STAC, 2007. An Introduction to Sedimentsheds: Sediment and its Relationship to Chesapeake Bay Water Clarity, STAC Publication 07-002, Annapolis, MD. 23 pp.

Halka, J. P., and Sanford, L. P., 2008. Contributions of Shore Erosion and Resuspension to Nearshore Turbidity in the Choptank River., Draft Report to the USEPA Chesapeake Bay Program, in revision.

C. Grants and Contracts (last 5 years)

1. Awarded

a. active

“Interactions between Shoreline Erosion, Suspended Solids, and Submerged Aquatic Vegetation in the Little Choptank River”, L.P. Sanford, E. Koch and J. Halka, Maryland Sea Grant College, 2/05 – 1/08, \$74,143 individual budget.

“Dynamic stability and particle transformations: tracing pathways of production in Estuarine Turbidity Maxima”, E. Houde, L.P. Sanford, et al., NSF Ocean Sciences, 10/05-9/09, \$465,220 individual budget.

“A real-time and rapid response observing system for the study of physical and biological controls on muddy seabed deposition, reworking and resuspension”, C. Friedrichs, L.P. Sanford, et al., NSF Ocean Sciences, 1/06-12/08, \$324,415 individual budget.

“Community Sediment Transport Model”, W.R.Geyer, C.Sherwood, L.P. Sanford, et al., ONR-NOPP, 6/06-5/09, \$130,000 individual budget.

b. expired

“Contributions of Shoreline Erosion and Resuspension to Nearshore Turbidity in the Choptank River” J.P. Halka and L.P. Sanford. USEPA Chesapeake Bay Program, 7/02-6/07, \$151,896 individual budget.

“Development of a Sediment Transport Model for the Chesapeake Bay: Supporting Physical Data”, L.P. Sanford, C. Friedrichs and J. Maa, USACE, 10/03-3/07, \$173,625 individual budget.

“Seasonal Measurements of Sediment Erodibility in Lynnhaven River Basin”, US Army Corps of Engineers, subcontract through the Virginia Institute of Marine Science, 3/05-1/07, \$28,512 individual budget.

“Chesapeake Bay Observing System (CBOS) Cooperative Expansion And Integration Demonstration”, Drs. W. Boicourt and L. Sanford. NOAA CBO, 9/04-8/06, \$180,000 total budget.

“Do Oyster Filtration and Wave Attenuation Associated With Oyster Reefs and Breakwaters Improve Seagrass Habitat”, Dr. R. Hood, E. Koch, R. Newell, L. P. Sanford, E. North, NOAA, Sea Grant, 2/03-1/06, \$8,000 individual budget.

“Hydrodynamic Measurements in the Southern Coastal Bays of Maryland”, L. Sanford. MD DNR, 3/04-2/05, \$26,177.

The role of resuspension in enhancing the remobilization and bioaccumulation of Mercury and Methymercury into bivalves and other benthic organisms. R. Mason, E.T. Porter, and L.P. Sanford, Hudson River Foundation, 7/1/02 – 6/30/04, \$23,981 individual budget.

How do estuarine turbidity maxima entrap particles, retain zooplankton, and promote recruitment of fish?, E. Houde, M. Roman, L. Sanford, R. Hood, S-Y Chao, and C. Friedrichs. NSF Biological Oceanography, 11/00 - 10/04. \$299,927 individual budget.

Toward a mechanistic understanding of outbreaks of *Pfisteria* and related dinoflagellates, P. Glibert, L. Sanford, et al., ECOHAB Interagency Research Program, 10/98 - 8/04, \$204,316 individual budget.

“Calibration of the Operational Baltimore Harbor Model Derived from CHARM”, Dr. S.Y. Chao, L. P. Sanford, Maryland Department of Environment, 7/03-12/03, \$53,846, total budget.

Examining sediment transport and dynamics as part of the Lake Superior KITES project, J. Churchill, A.J. Williams, and L.P. Sanford, NSF Ocean Sciences through WHOI, 3/98 - 12/03. \$199,220 individual budget.

"Turbulence and mixing studies in experimental ecosystems." L.P. Sanford. USEPA, Multiscale Experimental Ecosystem Research Center, UMCEES. 8/96-7/03, \$246,820 individual budget.

“Bottom Sediment Erodibility in Northern Chesapeake Bay” L.P. Sanford, J.P.-Y. Maa, J.C. Cornwell, G.R. Gust, Maryland Sea Grant, 2/02-7/03, approx \$35,000 individual budget.

Comprehensive Harbor Assessment and Regional Modeling (CHARM) Study. J.E. Baker, L.P. Sanford, and S-Y Chao. Maryland Department of the Environment, 7/99 - 12/02. \$181,959 individual budget.

“CHARM analysis funds”. L.P. Sanford. Maryland Department of the Environment. 1/02-6/02. \$20,000.

2. Pending

“Collaborative Research: A Real-Time and Rapid Response Observing System for the Study of Physical and Biological Controls on Muddy Seabed Deposition, Reworking, and Resuspension: Request for Supplemental Funding”, L. P. Sanford with colleagues from VIMS, NSF Orion Program, 1/09 to 12/10.

“MA08: Cumulative development stressors in the Mid-Atlantic: From measurements to forecast models and integrated assessments”, P. Glibert, V. Coles, L.P. Sanford, et al., NOAA CSCOR Program, ONR Tidal Flats, 6/2008-5/2013.

“Properties of Background Suspended Sediments in Shallow Nearshore Environments of Chesapeake Bay”, L.P. Sanford, C.M. Palinkas, and C.L. Gallegos, MD Sea Grant, 2/2009-1/2011.

“An Investigation of Flocculation, Settling and Erosion Processes on Tidal Mud Flats”, L.P. Sanford and Y-H. Kim, ONR Coastal Geosciences, 1/2008-9/2009.

D. Presentations and Invited Seminars (last 5 years)

ERF 2003, September 2003, “Particle Dynamics in Estuaries: An Overview (and some examples)”.

Flocculation in Natural and Engineered Environmental Systems, CCIW, Burlington, Ontario, Canada, September 2003. “Variability of Suspended Particle Concentrations, Sizes, and Settling Velocities in the Chesapeake Bay Turbidity Maximum”.

Hydroqual, Inc., Mahwah, NJ, February 2004. “The State of the Art in Fine Sediment Transport Research and Modeling”.

USEPA Chesapeake Bay Program Nutrient Subcommittee, May 2004. “Choptank Erosion Study: Sediment Transport Processes”.

Johns Hopkins University Center for Environmental and Applied Fluid Mechanics, February 2005, “Particle transport dynamics in Chesapeake Bay”.

Rutgers University Center for Marine Science, March 2005, “Particle transport dynamics in Chesapeake Bay”.

University of Wales Bangor School of Ocean Sciences, June 2005, “Fine Sediment/Particle Transport Dynamics in Coastal Waters: A Personal Perspective on the State of the Art”.

Proudman Oceanographic Laboratory, Liverpool, UK, July 2005, “Measuring and modeling fine sediment erosion”.

University of Wales Bangor School of Ocean Sciences, August 2005, “A simplified model for supply-limited erosion and consolidation of muddy sediments”.

Estuarine Research Federation Physics Symposium, October 2005, “Sediment/Particle Transport Dynamics in Coastal and Estuarine Waters: Research Challenges”.

Geological Society of America Meeting, Philadelphia, October 2006, “Short-term sediment dynamics and long-term shoreline erosion rates in Chesapeake Bay”

Virginia Institute of Marine Sciences, April 2006, “Measuring and modeling fine sediment erosion”

Horn Point Laboratory, March 2006, “Measuring and modeling fine sediment erosion”

University of Delaware Geology Department, March 2006, “Measuring and modeling fine sediment erosion”

Fall AERS Meeting, October 2006, “Recent Advances In Estuarine Sediment Transport Research”

Pan-American Studies Institute Course on Physics of Estuaries, August 2007, “An Introduction to Sediment Transport in Estuaries”, with Gail Kineke.

Community Sediment Transport Modeling Meeting, May 2007, “Modeling Cohesive Sediments: Erosion, Deposition, and Bed Processes”.

CBP-STAC SedimentSheds Workshop, January 2007, “Fine-Grained Sediment Transport Processes in Chesapeake Bay”, with Carl Friedrichs.

Dorchester Shoreline Erosion Group, October 2007, “Shore Erosion in Chesapeake Bay - Causes and Consequences”; with Jeff Halka

E. Symposia Organized/Chaired for Professional Meetings (last 5 years)

“Physical Dynamics and Pathways for Production in River-Estuary Transition Zones”, 19th Biennial Estuarine Research Federation Conference, Providence, RI, November 2007. Session Co-chair with Ed Houde.

“Sediment Transport in Lakes, Estuaries, and Shallow Shelves”, AGU/ASLO/TOS Ocean Sciences Meeting, Orlando, FL, March 2008. Session Co-chair with N. Hawley, B. Lescht, and C. Harris.

“Estuarine Sediment Dynamics and Morphodynamics”. 18th Biennial Estuarine Research Federation Conference, Norfolk, VA, October 2005. Session Co-chair with Carl Friedrichs.

Co-Organizer of INTERCOH 2003: the 7th International Conference on Nearshore and Estuarine Cohesive Sediment Transport Processes, October 1-4 2003, Gloucester Point, VA, with Jerome Maa and David Schollhamer.

“Dynamics of Estuarine Particles”. Symposium Organized for the 17th Biennial Estuarine Research Federation Conference, Seattle, WA, September 2003. Session Co-Chair with C. Friedrichs.

F. Memberships in Professional Societies

Active - American Geophysical Union, Estuarine Research Federation, American Society of Limnology and Oceanography
Presently Inactive - The Oceanography Society, Tau Beta Pi, Sigma Xi

G. Other Professional Recognition (last 5 years)

1. Awards

Kirby Laing Fellowship for Visiting Scholars, School of Ocean Sciences, Univ. of Wales, Bangor, June-August 2005
Estuarine Research Federation Reviewing Award, 2007

2. Peer Review Activities

a. Proposals reviewed (8 in 2007)

NSF Physical Oceanography (22, 1 in 2007)
NSF Marine Geology and Geophysics (4)
NSF Other (12)
NOAA Coastal Ocean Program (8)
NOAA Sea Grant (CA, MA, ME, NY, NH, DE, FL, National Office) (23)
NOAA National Undersea Research Center, CT and NY/NJ (8)
Hudson River Foundation (13, 7 in 2007)
San Francisco Bay-Delta Research Enhancement Program (1)
National Environment Research Council, UK (3)
Louisiana DEPSCoR Program (5)
Elkhorn Slough Research Foundation (3)

b. Articles reviewed (9 in 2007)

Book Chapters (10)
Marine Geology (2)
Harmful Algae (1)
Journal of Marine Research (4)
Journal of Coastal Research (2)
Journal of Geophysical Research (Oceans) (22; 1 in 2007)
Journal of Sedimentary Research (2)
Estuaries (19; 4 in 2007)

Estuarine, Coastal, and Shelf Science (11)
Limnology and Oceanography (15, 2 in 2007)
American Society of Civil Engineers Journals (4)
Journal of Oceanic Engineering (2; 1 in 2007)
Journal of Experimental Marine Biology and Ecology (1)
Journal of Great Lakes Research (2)
Ocean Dynamics (2)
San Francisco Estuary and Watershed Science (1 in 2007)
Science of the Total Environment (1)
Scientia Marina (1)
Marine Ecology Progress Series (4)
Continental Shelf Research (4, 1 in 2007)
Environmental Science and Technology (1)
Integrated Environmental Assessment and Management (1)
Computers and Geosciences (1)
Journal of Marine Systems (3)

c. External promotion and tenure reviews

1 in 2003; 1 in 2005; 1 in 2006; 1 in 2007

d. External Review Panels

HRF Proposal Panel, June 2007
EPA STAR Fellowship Panel, February 2004

3. Invited Participation in Workshops

CBP STAC Workshop, “An Introduction to Sedimentsheds: Sediment and its Relationship to Chesapeake Bay Water Clarity”, January 2007, Annapolis, MD, Steering Committee Member and Presenter

ACT Workshop on Seabed Sensor Technology, Savannah, GA, February 2006

CBP STAC Workshop on Modeling in the Chesapeake Bay Program: 2010 and Beyond, January 2006, Annapolis MD, Steering Committee Chair

CBP STAC Shallow Water Monitoring Workshop, December 2004, Steering Committee Member and Co-chair.

Steering Committee Member, NSF CoOP Coastal Benthic Exchange Dynamics Workshop, St. Petersburg, FL, April 2004.

Hudson River Foundation Workshop on Sediment Transport in the Hudson River, New York, New York, November 2003.

Workshop on Flocculation in Natural and Engineered Environmental Systems, CCIW, Burlington, Ontario, Canada, September 2003.

USEPA Chesapeake Bay Program STAC workshop on Shoreline Erosion and Chesapeake Bay water quality, Annapolis, MD, January 2003.

USGS-Sponsored Workshop on Development of a Community Sediment Transport Model, Williamsburg, VA, October 2002.

USFWS et al. Workshop - Information Exchange: Sediment and the Chesapeake Bay Watershed From Top to Bottom, January, 2002.

H. Consulting activities (last 5 years)

Part-time Consultant/Employee with Hydroqual, Inc., Mahwah, NJ. 2004-present.

Review of Environmental Impact Report on Breakwater Construction in Rockhold Creek, MD, for Community and Environmental Defense Services, Owings Mills, MD, 2003.

IV. TEACHING AND TRAINING

Regular Member, USM Inter-Institutional Graduate Faculty
Full Member, UMCES Graduate Faculty

A. USM courses taught (last 5 years)

MEES 608G – Bottom Boundary Layer and Sediment Transport Processes, Spring 2004, 3 students.

MEES 608F - Bio-physical coupling in upper estuaries; team taught with other HPL faculty, lead by E. North, Fall 2006, 10 students

MEES 607 – Quantitative Methods in the Environmental Sciences, Course with J. Baker, Fall 2002, 2003, 2004 and 2006, 2007. 9-14 students per year.

B. Education committees (last 5 years)

Member of UMCES Academic Forum Committee, 2001-2004

C. Student training (all)

1. Degrees conferred

Weiqi Lin, Ph.D., MEES, "Modeling Surface Wind Waves and Their Effects on Air-sea Fluxes in Chesapeake Bay, December 2000

Miao-Li Chang Ph.D., MEES, "Influences of Resuspension and Deposition on Early Diagenesis of Nutrients and Contaminants", November, 1999

Elka T. Porter Ph.D., MEES (co-advisor with J. Cornwell), "Physical and Biological Scaling of Benthic-Pelagic Coupling in Experimental Ecosystem Studies, March 1999

Sean Crawford M.S., MEES, Dec. 1998
"Effects of turbulence on boundary layer fluxes in experimental ecosystems

Brian Alleva M.S., MEES, Dec. 1994
"A System for Predicting Wave-Induced Sediment Resuspension Potential and Wave Energy Flux in an Enclosed Sea"

Kieth Ruffin M.S., MEES, Dec. 1995 (Co-Advisor with Dr. Karen Prestegard, UMCP)
"The Effects of Hydraulic Clam Dredging on Nearshore Turbidity and Light Attenuation in Chesapeake Bay"

2. Graduate students currently supervised

Shih-Nan Chen Ph.D., MEES, entered September 2002, anticipated graduation May 2008..

3. Graduate student committees

MEES doctoral candidates - (2 in 2007)

Luis Alves, Robert Doyle, Marilyn Mayer, Cathy Wigand, Louise Wooten, Judith Stribling, Fung-Chi Ko, Kim Warner, Ken Moore, Karla Heidelberg, Juanita Urban-Rich, John Petersen, Zhen Li, Clark Freise, James Hagy, Gary Smith, Jeff Ashley, Xiping Ma, Brian Badgley, Rick Bartleson, Eun-Hee Kim, Matt Johnson, Scott Lloyd, Abby Schneider, Chih-Wei Chang, Rebecca Holyoke, Dave Scheurer

MEES Masters candidates - (2 in 2007)

Janet Neundorfer, David Nemazie, Kathy Gloersen, Beth Bettendorf, Jonathan Johnston, Kelly Jones, Christine Baier, Peggy Derrick, James Hagy, Kelly Merrell, Koichiro Nakanishi, Carina Chiscano, Kim Benson, Chih-Wei Chang, Abby Cohen/Schneider, Teresa Coley, Jeremy Testa, Ed Davis, Zhenghua Jin, Melissa Grant, Katie McKone.

External Graduate Student Committees – (4 in 2007)

Tim Cook, MS candidate, University of Delaware, Lewes, DE
Kathy Ketteridge, Ph.D. candidate, Stevens Institute of Technology, Hoboken, NJ
Lora McGuinness, Ph.D. candidate, Rutgers University, New Brunswick, NJ
Jing Lin, Ph.D. candidate, Virginia Institute of Marine Sciences, Gloucester Pt., VA
Jarrell Smith, Ph.D. candidate, Virginia Institute of Marine Sciences, Gloucester Pt., VA

Grace Cartwright, PhD candidate, VIMS, Gloucester Pt, VA
Patrick Dickhudt, MS candidate, VIMS, Gloucester Pt, VA
James Dioro, MS candidate, UMCP Mechanical Engineering

4. Undergraduate advising

HPEL Summer Student Program -

None.

Sea Grant NSF REU Program -

Laura Rubiano-Gomez 2003.

D. Postdoctoral Training (all)

Yong Hoon Kim, September 2006-August 2008

Weiqi Lin, January-July, 2001

Sandra Werner, October 2000 – September 2001

Miao-Li Chang, December 1999 – March 2000

Elka Porter, March 1999 – July 2000

V. SERVICE (last 5 years)

A. Popular Articles

Sanford, L. P., 2003. “Voyage to the bottom of the sea: one researcher’s sedimental journey”. Bay Journal, May 2003.

B. Public Service

Co-organized (with S. Phillips) USEPA STAC 1-day workshop on Shoreline Erosion and Chesapeake Bay Water Quality: A Scientific Evaluation of Prediction Uncertainty, Potential for Improvement, and Management Implications, January, 2003.

Co-organized CBP STAC Shallow Water Monitoring Workshop, December 2004, Annapolis, MD

Member of NY/NJ Harbor Estuary Program Contaminant Assessment and Reduction Project Modeling Evaluation Group, October 2000-present.

Member of USEPA Chesapeake Bay Program Scientific and Technical Advisory Committee, January 2002 – present.

Member of the USEPA Chesapeake Bay Program Sediment Workgroup, June 2002 – present.

Organized CBP STAC workshop on CBP STAC Workshop on Modeling in the Chesapeake Bay Program: 2010 and Beyond, January 2006, Annapolis MD

Presented 2 public seminars on Global Warming, Christ Church, St. Michaels, November 2006

Co-organized CBP STAC Workshop on “An Introduction to Sedimentsheds: Sediment and its Relationship to Chesapeake Bay Water Clarity”, January 2007, Annapolis, MD

Presentation to Saints Peter and Paul Elementary School 3rd Grade on estuarine circulation, September 2007

C. Laboratory and Center

Laboratory Committees -

Chair, HPL Library Committee, 2000-2004; Member 1996-97, 2004-2006

Chair, HPL Computer Committee, 1997-99; Member 1986, 1988-1994, 1999-2002, 2004-present

Chair, HPL Environmental Sustainability Committee, 2007-

Faculty Search Committees -

UNIX System Administrator searches, 1997, 1998, 1999, 2003, 2007

Bio-Physical Search Committee, 2004

Coastal Sedimentologist Search Committee, Chair, 2005

UMCES Tenure Review Committees

None.

Regular participant in HPL Open Houses