

CURRICULUM VITAE  
**Mark W. Clark**

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**EDUCATION**

- Ph.D. (Wetland Biogeochemistry), Department of Soil and Water Science, University of Florida, Gainesville, Florida - 2000.
- M.S. (Wetlands Ecology), Department of Environmental Engineering Sciences, University of Florida, Gainesville, Florida - 1999.
- B.S. (Marine Biology), Department of Biology, University of Massachusetts, Dartmouth Campus, North Dartmouth, Massachusetts – 1986.

**PROFESSIONAL EXPERIENCE**

- Assistant Professor and Extension Specialist (Wetlands and Water Quality) tenure track, University of Florida, Department of Soil and Water Science, Gainesville, Florida, (September, 2004 - present).
- Assistant Professor and Extension Specialist (Wetlands and Water Quality) -non-tenure track, University of Florida, Department of Soil and Water Science, Gainesville, Florida, (August, 2002 – August 2004).
- Research Assistant Professor - non-tenure track, University of Florida, Department of Soil and Water Science, Gainesville, Florida, (Jun, 2001 – Jun, 2002).
- Postdoctoral Associate, University of Florida, Department of Soil and Water Science, Gainesville, Florida, (Jan, 2001– May, 2001).
- Graduate Research Assistant, University of Florida, Department of Soil and Water Science, Gainesville, Florida (Jan, 1996 – Aug, 1998; Apr, 1999 – Dec, 2000).
- Graduate Teaching Assistant, University of Florida, Department of Soil and Water Science, Gainesville, Florida, (Sep, 1998 – May, 1999).
- Graduate Research Assistant, University of Florida, Center for Wetlands, Department of Environmental Engineering Sciences, Gainesville, Florida (Spring and Summer 1993, 1994; Jan, 1995 – Dec, 1996).
- Graduate Teaching Assistant, University of Florida, Center for Wetlands, Department of Environmental Engineering Sciences, Gainesville, Florida (Fall 1993, 1994).
- Vice President of Marine Conservation, Florida Keys Land and Sea Trust, Marathon, Florida (Sep, 1991 Aug, 1992).
- Research Technician, Florida Keys Land and Sea Trust, Marathon, Florida (Apr, 1989 -Aug, 1991).
- Technical Consultant, Rosensteel School of Marine and Atmospheric Science, University of Miami, Miami, Florida (Jan - May, 1989).
- Chief Engineer, R/V *Acania*, Intersea Research Inc., Friday Harbor, Washington and Auke Bay, Alaska (Apr - Sep, 1988).
- Research Technician III, Howard Hughes Medical Institute, Woods Hole Oceanographic Institute, Woods Hole, Massachusetts (Jun, 1986 - May, 1988).

**GRADUATE STUDENTS**

**Committee Chair or Co-Chair:** (Present students below, 14 graduated)

- *On Campus:* Sylvia Lang (PhD), Adrienne Frisbee (MS), Cecilia Kennedy (MS), Casey Schmidt (MS), Jason Newman (MS), Tae-Goo Ho (PhD), Kevin Ratkus (MS), Italo Lenta (MS), Andrea Albertin (PhD, co-chair)
- *Distance Education:* Joseph Sowards (MS), Jason Hood (MS), William Grant (MS), Daniel Irick (MS), Ashley Barrentine (PhD),

**Committee Member:** (Present students below, 28 graduated)

- Angelique Keppler (SWS), Aniruddha Guha (CWR), Jehongir Bhadha (SWS), Dan Perkins (SWS), Kim McDonald (SWS), Charles Bohall (SWS), Eban Bean (ABE), Bhuvaneswari Govindarajan (HOS), Kiara Winans (ENV), Justin Fleischman (ENV), Sarah Dilling (ANS), Kim Heiss (LAA), Scott Davis (SWS), Samuel Vacca (SWS), David Mahnken (SWS)

## **RESEARCH ACTIVITIES**

Present research investigates mechanisms controlling sediment accretion rates in Everglades National Park Ridge and Slough communities, biogeochemical characterization of wetlands throughout the Southeastern United States to assist USEPA in the development of numeric nutrient criteria, efficacy of wetland restoration in the Lake Okeechobee watershed to increase retention of phosphorus in the watershed and the use of biological/ecological indicators to detect environmental change. Funding for this research is or has been supported by the following grants:

- 2007-2010 – Evaluating Decomposition Dynamics, Community Composition, and Ridge-Top Senescence in the Ridge-Slough Mosaic in Response to Climate Change and Water Management USACOE (\$466,841)
- 2007-2010 – Regional Distribution of Soil Nutrients - Hierarchical Soil Nutrient Mapping for Improved Ecosystem Change Detection USACOE:(\$228,467)
- 2007-2009 – Reducing Nonpoint Sources Loss of Nitrate within the Santa Fe Basin. FDEP, FDACS (\$322,788)
- 2007-2009 – Florida Ranchlands Environmental Services Pilot Project. FDACS (\$60,000)
- 2002-2004 –Assessment and Validation of Wetland Biogeochemical Indicators for Establishment of Numeric Nutrient Criteria. USEPA (\$120,000)
- 2002-2005 –Phosphorus Retention and Storage by Isolated and Constructed Wetlands in the Lake Okeechobee Basin. FDACS, SFWMD, FDEP (\$1,899,999)
- 2003-2005 –Methodology to Determine the Attributes of Subaqueous Soils as Related to Existing and Potential Submerged Aquatic Vegetation. FDOT (\$208,580)
- 2001-2006 –Spatial Variability and Modeling of Soil Accretion in Shark River Slough. DOI (\$398,968)
- 2000-2002 – Everglades Research and Education Conservation District: Contribution of Internal P Loads in Canal Sediments. (\$150,000)
- 2000-2001 – United States Environmental Protection Agency: National Wetlands Biogeochemical Characterization Database (\$178,680)

## **EXTENSION ACTIVITIES**

Extension efforts are focused on demonstration projects using wetlands in urban and agriculture watersheds to improve water quality and ecological function, increase awareness and implementation of stormwater education requirements under NPDES Phase II, participation in workshops and in-service training for watersheds, wetlands and stormwater. These efforts are increasingly focused on Low Impact Development practices and their integration into new and existing developments. These Extension efforts are supported by the following grant funding:

- 2006-2008 –Low Impact Development Workshops for county Governments, SJRWMD (\$30,000)
- 2006-2008 –Low Impact Development Workshop for Professionals (CEU credits) FDEP, (\$25,000)
- 2004-2007 –Implementation of Education Component for Campus NPDES Phase II Stormwater Permit. · 2004-2007 –Implementation of Education Component for Campus NPDES Phase II Stormwater Permit. University of Florida Physical Plant Division: (\$30,000)
- 2003-2006 –Enhancement Decision-Making Tools/Training for Landowners and Technical Service Providers. USDA (\$275,000)
- 2003-2004 –Tumblin Creek Wetland Impacts Assessment and Conceptual Restoration Plan. City of Gainesville (\$24,688)
- 2002-2005 –Geo-Temporal Estimation and Visualization of Nitrogen in Mixed-Use Watershed. USDA (\$684,000)
- 2002-2005 –Phosphorus Retention and Storage by Isolated and Constructed Wetlands in the Lake Okeechobee Basin (Extension component). FDACS, SFWMD, FDEP (\$50,000)
- 2000-2003 –Internet Based Course on Wetlands and Water Quality. USDA (\$85,686)
- 1998 –Stormwater Ecological Enhancement Project. SJRWMD, UF (\$65,000)

## **TEACHING ACTIVITIES**

Present teaching activities include one undergraduate introductory course on Wetlands (SOS 4244) taught lecture style on campus, and two distance education courses. One Distance Education course is an undergraduate course that parallels the one on campus Wetlands (SOS 4244), the other course is a graduate

level course on Wetlands and Water quality (SOS5242). These courses have been taught for the past four years. Additional teaching experience is below.

- Co-Instructor: Wetlands and Water Quality, undergraduate level (Dept. of Soil & Water Science), 1996-2001
- Co-Instructor: Wetlands Ecology (Dept. Environmental Engineering Sciences) 1997-1998.
- Guest lecturer: (Depts. of Wildlife Ecology and Conservation, Architecture, Environment Engineering Sciences, Civil Engineering, Santa Fe Community College) 1996-2003.
- Laboratory Instructor: General Soils (Dept. of Soil and Water Science) 1999.
- Wetland Ecology Laboratory (Dept. Environmental Engineering Sciences) 1993-1994.
- Teaching Assistant: Biogeochemistry of Wetlands (Dept. of Soil & Water Science) 1995;

#### **MEMBERSHIP ON COMMITTEES, ADVISEMENT AND PROFESSIONAL ORGANIZATIONS**

- Numeric Nutrient Criteria Technical Advisory Committee: Invited participation, Deputy Division Director – Florida Department of Environmental Protection.
- Technical Advisory Committee for development of Nutrient Criteria Technical Guidance Manual: Wetlands-USEPA
- Ecology, Conservation and Stewardship Committee – University of Florida
- Chair - Natural Area Advisory Committee: Oversight of UF Natural Area Teaching Laboratory
- Faculty Advisor, University of Florida Wetlands Club
- 24<sup>th</sup> Avenue Focus Group: Invited participation, Univ. of Florida Vice President for Administrative Affairs.
- Board of Directors - Global Ecological Enhancement Partnership, 2000-2004 (a not for profit corporation).
- Society of Wetland Scientists
- Ecological Society of America

#### **AWARDS AND PROFESSIONAL POSITIONS**

- Soil and Water Science Graduate Student Excellence Award, 2000.
- Honorary Mention, 1999 National Wetland Awards for the Stormwater Ecological Enhancement Project.
- H. T. Odum outstanding Graduate Student Award, 1998.

#### **RESEARCH PUBLICATIONS (MANUSCRIPTS)**

- Dunne, E. J., K.R. Reddy, and M.W. Clark. 2006. **Biogeochemical indices of phosphorus retention and release by wetland soils and adjacent stream sediments.** *Wetlands* 26: 1026-1041.
- Dunne, E.J., K.R. Reddy, and M.W. Clark. 2006. **Phosphorus release and retention by isolated wetland soils.** *International Journal of Environmental Pollution.* 28:496-516.
- Cohen, M., R. S. Mylavarapu, I. Bogrecki, W. S. Lee, and M.W. Clark 2007. **Reflectance Spectroscopy for Agronomic Soil Analysis.** *Soil Science.* (in press)
- O. A. Diaz, S. H. Daroub, J. D. Stuck, M. W. Clark, T. A. Lang, and K. Reddy, 2006. **Sediment Inventory and Phosphorus Fractions for Water Conservation Area Canals in the Everglades,** *Soil Sci. Soc. Am. J.* 70:863-871
- Otto, G. M., M. W. Clark, T. J. Walker and T. L. Crisman, 2000. **Reintroduction of wetland functions to the urban landscape: The Stormwater Ecological Enhancement Project.** *Verh. Internat. Vereln.Limnol* 27:1-6.
- Lapointe B. E. and M. W. Clark, 1992. **Nutrient inputs from the watershed and coastal eutrophication in the Florida Keys.** *Estuaries* 15(4):465-476.

#### **RESEARCH PUBLICATIONS (BOOKS AND CHAPTERS)**

- Parker et al 2006. **Draft Nutrient Criteria Technical Guidance Manuel: Wetlands.** USEPA Technical Document EPA-823-B-05-003. 198 pp.
- K. R. Reddy and M. W. Clark, (in review). **Module #18 Wetland Biogeochemical Indicators,** United States Environmental Protection Agency, Office of Water.

## RESEARCH PUBLICATIONS (TECHNICAL REPORTS, THESIS AND DISSERTATIONS)

- Ankerson, T. T., T. L. Crisman, M. W. Clark, J. Larsen, K. Martinson, J. Muller, and K. Regan, 2003 **City of Gainesville Basin Planning Initiative: A Report with Recommendations**, March. 55 pp.
- Balcer, N. (MS Thesis) 2006. **Litter Decomposition and Phosphorus Release in Okeechobee Isolated Wetlands**. University of Florida, pp 91
- Barlow, S.E. (MS Thesis) 2004. **Vegetative Characteristics of Gopher Tortoise (*Gopherus polyphemus*) Habitat on the Lower Suwannee National Wildlife Refuge: Implications for Restoration and Management of Pine Communities**. University of Florida. pp. 92.
- Clark, M. W. (MS Thesis) 1999. **Effects of floating substrate on morphology, biomass production and survival of *Acer rubrum* L., *Fraxinus caroliniana* Mill, *Brachiaria purpurascens* (Raddi) Henr., and *Pontederia cordata* L.** University of Florida, Gainesville, FL. 123 pp.
- Clark, M. W. 2004. **2004 Annual Report documenting NPDES Phase II Public Outreach and Education Activity on University of Florida Campus**. UF Physical Plant Division.
- Clark, M. W. 2005. **2005 Annual Report documenting NPDES Phase II Public Outreach and Education Activity on University of Florida Campus**. UF Physical Plant Division.
- Clark, M. W. 2006. **2006 Annual Report documenting NPDES Phase II Public Outreach and Education Activity on University of Florida Campus**. UF Physical Plant Division.
- Clark, M. W. and K. R. Reddy 1998. **Analysis of floating and emergent vegetation formation in Orange Lake. Final Report volume I** contract #96W234, St. Johns River Water Management District, Palatka FL, 336 pp.
- Clark, M. W. and K. R. Reddy, 2002. **Contribution of Internal Phosphorus Loads in South Florida Canal Sediments. Final Report**, Everglades Protection District, Belle Glade, FL, 60 pp.
- Clark, M. W. and K. R. Reddy, 2003. **Spatial Variability and Modeling of Soil Accretion in Shark River Slough: 2003 annual report**, Department of Interior 113 pp.
- Clark, M.W. and K.R. Reddy. 2005. **Spatial Variability and Modeling of soil Accretion in Shark River Slough**, 2004 Annual Report. Department of Interior pp. 33.
- Clark, M.W. and K.R. Reddy. 2005. **Wetlands Biogeochemical Characterization Database and Supplemental Assessment and Validation of Wetland Biogeochemical Indicators**, Final Report. USEPA, Office of Water.
- Clark, M.W. and K.R. Reddy. February, 2002. **Contribution of Internal P Loads in Canal Sediment**. Interim report to Everglades Protection District. pp. 25 + Appendix
- Clark, M.W., C.A. Schmidt and J. Prenger, 2005. **Wetland Impact Assessment and Conceptual Restoration Plan for Tumblin Creek, Final Report**. City of Gainesville, FL. Pp. 261.
- Frisbee, A.E. (MS Thesis) 2007. **Nitrate-Nitrogen Dynamics in the Santa Fe River Watershed, North Central Florida**. University of Florida. pp. 74.
- Greco, S. (MS Thesis) 2004. **A Biogeochemical Comparison of Wetlands in the Southeastern United States**. University of Florida. pp. 110.
- Grunwald, S., N.B. Comerford, Dr. M. W. Clark, Dr. D.A. Graetz, and Dr. R.B. Brown, and R. Srinivasan. 2003. **Geo-Temporal Estimation and Visualization of Nitrogen in a Mixed-Use Watershed, 2003 annual report**. USDA Program for Nutrient Science for Improved Watershed Management.
- Grunwald, S., N.B. Comerford, Dr. M. W. Clark, Dr. D.A. Graetz, and Dr. R.B. Brown, and R. Srinivasan 2004. **Geo-Temporal Estimation and Visualization of Nitrogen in a Mixed-Use Watershed, 2004 annual report**. USDA Program for Nutrient Science for Improved Watershed Management.
- Grunwald, S., N.B. Comerford, Dr. M. W. Clark, Dr. D.A. Graetz, and Dr. R.B. Brown, and R. Srinivasan 2005. **Geo-Temporal Estimation and Visualization of Nitrogen in a Mixed-Use Watershed, 2005 annual report**. USDA Program for Nutrient Science for Improved Watershed Management.
- Grunwald, S., N.B. Comerford, Dr. M. W. Clark, Dr. D.A. Graetz, and Dr. R.B. Brown, and R. Srinivasan 2006. **Geo-Temporal Estimation and Visualization of Nitrogen in a Mixed-Use Watershed, Final Report**. USDA Program for Nutrient Science for Improved Watershed Management. Final report, USDA Program for Nutrient Science for Improved Watershed Management.
- Jorczak, E. (MS Thesis) 2006. **Influence of Hydrology on Everglades Ridge and Slough Soil Topography**. University of Florida. pp. 64.
- Leeds, J.A. (MS Thesis) 2006. **Phosphorus Sorption and Flux in Northern Everglades Soil and Under Drained and Flooded Conditions**. University of Florida pp. 65

- Lewis, C.G. (MS Thesis) 2004. **Linkages Among Vegetative Substrate Quality, Biomass Production, and Decomposition in Maintaining Everglades Ridge and Slough Vegetative Communities.** University of Florida. pp. 73.
- McKee, K. (MS Thesis) 2005. **Predicting Soil Phosphorus Storage in Historically Isolated Wetlands within the Lake Okeechobee Priority Basins.** University of Florida. pp. 224.
- Paris, J. M. (MS Thesis) 2005. **Southeastern Wetland Biogeochemical Survey: Determination and Establishment of Numeric Nutrient Criteria.** pp. 113.
- Reddy K.R., M.W. Clark, J. Jawitz, T. DeBusk, M. Annable, W. Wise and S. Grunwald. 2004. **Phosphorus retention and Storage by Isolated and Constructed Wetlands in the Okeechobee Drainage Basin, 2003 annual report.** Florida Department of Agriculture and Consumer services.
- Reddy K.R., M.W. Clark, J. Jawitz, T. DeBusk, M. Annable, W. Wise and S. Grunwald. 2005. **Phosphorus retention and Storage by Isolated and Constructed Wetlands in the Okeechobee Drainage Basin, 2004 annual report.** Florida Department of Agriculture and Consumer services.
- Reddy K.R., M.W. Clark, J. Jawitz, T. DeBusk, M. Annable, W. Wise and S. Grunwald. 2006. **Phosphorus retention and Storage by Isolated and Constructed Wetlands in the Okeechobee Drainage Basin, 2005 annual report.** Florida Department of Agriculture and Consumer services.
- Schmidt, C.A. (MS Thesis) 2005. **Floodplain Impacts from Channelization and Urbanization: A Characterization of the Tumbler Creek Delta Floodplain,** Gainesville, FL. University of Florida pp. 108
- Smith, J.D. (MS Thesis) 2006. **Phosphorus Storage Dynamics in Wetland Vegetation and Forage Grass Species: Facilitating Wetland Hydrologic Restoration in the Lake Okeechobee Watershed.** University of Florida. pp. 146
- Stenburg, J., M. W. Clark and R. Conrow 1997. **Development of natural and planted vegetation and wildlife use in the Lake Apopka marsh flow-way demonstration project 1990-1994** (edited by J Prenger). Final report contract #89B005. St. Johns River Water Management District, Palatka, FL 509pp.
- Stuckey, D.A. 2005. A Biogeochemical Survey of Wetlands in Southwestern Indiana. University of Florida. pp 195.
- Wells, A.O. 2005. **Waters of the University of Florida: Managing for Water Quality in the Lake Alice Watershed.** University of Florida. pp.121.

#### **RESEARCH POSTERS AND PRESENTATIONS**

- Dunne, E. J., M. W. Clark and K. R. Reddy, 2005. **Phosphorus Storage by Historically Isolated Wetland Ecosystems with Grazing Pastures of Okeechobee Basin, Florida.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Bohlen P. J., S. Gathumbi, K. McKee, M. W. Clark, and S. Grunwald, 2005. **Strategic restoration of Wetlands on Private Lands: Regional Approaches in the Lake Okeechobee Watershed.**
- Clark, M. W., C. Lewis, E. Jorczak and K. R. Reddy, 2005. **Soil Accretion Processes Regulating the Ridge and Slough Vegetative Mosaic of South Central Everglades, USA.** Humedales 2005: Fifth international wetlands symposium, Playa Larga, Cuba.
- McKee, K. A., S. Grunwald, M. W. Clark, and S. Newman, 2005. **Phosphorus Predictions in Isolated Wetlands of the Lake Okeechobee Priority Basins Using GIS, Remote Sensing and Classification Trees.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Bryan, R., M. W. Clark, 2005. **Wetlands bird survey: A comparison of conventional stormwater basins, enhanced stormwater basin and natural wetlands.** Annual Meeting Society for Integrative and Comparative Biology, Buena Vista Palace Resort and Spa, Orlando, FL.
- Clark, M. W. A Frisbee, K. R. Reddy 2005 **Nitrate Nitrogen Dynamics in Tributaries and Riparian Wetlands on Boston Farm – Santa Fe River Ranch Beef Unit: Preliminary Findings.** Presentation to Suwannee River Water Management District Governing Board.
- Dunne, E. J., M. W. Clark, K. R. Reddy. 2005. **Ecosystem phosphorus storages in historically isolated wetlands.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Jorczak, E., and M. W. Clark 2005. **Possible mechanisms regulating Everglades ridge and slough soil topography.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Wells, O. and M. W. Clark, 2005. **Water Quality on the University of Florida Campus.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL

- Frisbee, A. and M. W. Clark, 2005. **Denitrification as a mechanism for reducing nitrate concentrations in the Santa Fe River Basin.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Lang, S. and M. W. Clark, 2005. **The Reality of Watershed Development: Can Water Quality Standards be met with Current BMPs?** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Concha, C. and M. W. Clark 2005. **Impacts of Stormwater Runoff to Soil Phosphorus Assimilative Capacity in Urban Isolated Wetlands.** 2005 Soil and Water Science Departmental Research Forum. Gainesville FL
- Clark, M.W., K. R. Reddy, E. Dunne, and K. A. McKee 2004. **Hydrologic restoration of Isolated Wetlands in the Okeechobee Watershed: An Integrated Approach to Reduce Phosphorus Loads to the Lake.** National Conference on Ecosystem Restoration, Orlando, FL.
- Cohen, M.J. and M.W. Clark 2004. **Development of a Systems Model to Explore Long-Term RidgeSlough Dynamics.** National Conference on Ecosystem Restoration, Orlando, FL.
- Dunne, E.J., K. R. Reddy and M. W. Clark. 2004 **Phosphorus Release and retention by soils of Natural Isolated Wetlands in Okeechobee Basin, FL.** National Conference on Ecosystem Restoration, Orlando, FL.
- Clark, M. W. K. R. Reddy, E. Jorczak and C. Lewis, 2003. **Variation of Soil Topography and Soil Forming Factors between Ridge and Slough Communities, Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys"** April 13-18.
- Clark, M. W. 2003. **Wetland Community Types, Biogeochemistry of Wetlands: Science and Applications:** Gainesville Florida, October 13-15.
- Clark, M. W. 2003. **Gas Exchange between Soil-Plant-Water System, Biogeochemistry of Wetlands:** Science and Applications: Gainesville Florida, October 13-15.
- Corstanje, R., M. W. Clark, and K. R. Reddy. 2003. **Plant, Soil and microbial nitrogen uptake and allocation in a controlled mesocosm experiment,** Soil Science Society of America, 2003 Annual Meeting. Nov. 2-6.
- Daroub, S. H., J. D. Stuck, O. A. Diaz, M. W. Clark, K. R. Reddy, 2003. **Impact of Water Conservation Area Canals on Low-Phosphorus Water Discharged from Storm Treatment Areas.** Soil Science Society of America, 2003 Annual Meeting. Nov. 2-6.
- Diaz, O. A., S. H. Daroub, J. D. Stuck, T. A. Lang, M. W. Clark and K. R. Reddy, 2003. **Contribution of Internal Phosphorus Loads in Water Conservation Area Canal Sediments.** Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys" April 13-18.
- Dunne, E. J., K. R. Reddy and M. W. Clark, 2003. **Phosphorous Retention and Storage by Isolated Wetlands in Lake Okeechobee Basin.** Soil Science Society of America, 2003 Annual Meeting. Nov. 2-6.
- Jorczak, E. and M. W. Clark, 2003. **Water Velocities and Total Suspended Solids Transport in the Southern Everglades.** Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys" April 13-18.
- Lewis, C. G., and M. W. Clark, 2003. **Effects of Litter Quality on Landscape Scale Vegetation Patterns in Shark River Slough, Florida Everglades.** Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys" April 13-18.
- McKee, K. A., S. Grunwald, M. W. Clark, S. Newman, 2003. **Up-scaling of Wetland Indicators from Site-specific to Regional Scale.** Soil Science Society of America, 2003 Annual Meeting. Nov. 2-6.
- Prenger, J., M. W. Clark, W. Wilkie and M. Cohen 2003. **Feasibility Analysis of Aquatic Biomass Conversion and Land Application: A Conceptual Approach to Improve Water Quality and Promote Ecosystem Sustainability.** Invasive Plants in Natural and Managed Systems: Linking Science and Management, 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL. November 3-7.
- Sabesan, A., S. Grunwald, M. W. Binford, M. W. Clark, N. B. Comerford, D. A. Graetz, R. B. Brown, 2003. **Targeting Sampling Locations Using GIS and Remote Sensing Datasets.** Soil Science Society of America, 2003 Annual Meeting. Nov. 2-6.
- Grunwald, S., K. R. Reddy, T. Z. Osborne, R. Corstanje, M. W. Clark and S. Newman. 2004 **Spatially-Explicit Modeling of Soil Phosphorus Across the Greater Everglades.** National Conference on Ecosystem Restoration, Orlando, FL.

- Jorzak, E. and M. W. Clark 2004. **Relating water Depth, Hydroperiod, and Flows with Elevation Differences in the Everglades Ridge and Slough Community**. National Conference on Ecosystem Restoration, Orlando, FL.
- Castro, H. R., K. R. Park, K. Sharma, M. W. Clark, A. Ogram, K. R. Reddy and M. R. Norland. 2004. **Linkage between Microbial Metabolic Diversity and Restoration Age in the Hole-in-the-Donut, Everglades National Park**. National Conference on Ecosystem Restoration, Orlando, FL.
- Clark, M. W. and K. R. Reddy, 2002. **Contribution of Internal Phosphorus Loads in South Florida Canal Sediments**. Final Report, Everglades Protection District, Belle Glade, FL, 60 pp.
- Clark, M. W. and K. R. Reddy, 2003. **Spatial Variability and Modeling of Soil Accretion in Shark River Slough**: 2003 annual report, 113 pp.
- Clark, M. W., R. Corstanje, K. R. Reddy, and P. W. Inglett. 2002. **Biogeochemical Characterization of the Nations Wetlands**, 23<sup>rd</sup> Annual Meeting of the Society of Wetland Scientist, June 2-7, Lake Placid, NY.
- Clark, M. W., K. R. Reddy, K. Sieving and J. Schaefer 2000. **Temporal dynamics and mobility of floating islands on Orange Lake, north central Florida, USA**. 21<sup>st</sup> Annual Meeting of the Society of Wetland Scientists, August 6-12, Quebec, Canada.
- Clark, M. W., and K. R. Reddy 1999. **Contribution of sediment gases to buoyancy of organic base floating wetlands, 6<sup>th</sup> Symposium on Biogeochemistry of Wetlands**, July 11-14, Fort Lauderdale, Florida.
- Clark, M. W., K. R. Reddy, and K. R. Warr 1999. **Effect of floating substrates on vegetation of Orange Lake, warm-temperate Florida, USA**, 20<sup>th</sup> Annual Meeting of the Society of Wetland Scientists, June 6-11, Norfolk, Virginia.
- Clark, M. W., K. R. Reddy, K. E. Sieving, and J. M. Schaefer 1998. **Physical and vegetative characterization, wildlife use and spatial dynamics of floating wetland communities on Orange Lake north central Florida, USA**. Natural Resources Forum' 98: Linkages in Ecosystem Science, Management and Restoration, June 9-10, Gainesville, Florida.
- Clark, M. W., and G. M. Otto 1998. **Stormwater Ecological Enhancement Project**. Natural Resources Forum' 98: Linkages in Ecosystem Science, Management and Restoration, June 9-10, Gainesville, Florida.

#### EXTENSION PUBLICATIONS

- Water's Journey: Everglades Episode I: Restoring Hope** 2006. 60 min. PBS documentary, Karst Productions High Springs FL.
- Water's Journey: Everglades Episode II: Currents of Change** 2006. 60 min. PBS documentary, Karst Productions High Springs FL.
- Developing a Better Way** 2006. 15 minute video discussing Low Impact Development practices. Karst Productions, High Springs FL.
- The Habitable Planet – A systems Approach to Environmental Science: Unit 8. Freshwater resources** 2006 (in production) Science Media Group, Science Education Dept. Harvard-Smithsonian Center for Astrophysics
- Clark, M. W. 2004. **What is Phase II NPDES?** Florida Cooperative Extension Service Fact Sheet #SL 215, University of Florida, Gainesville, FL
- Clark, M.W. and A.O. Wells, **Swamp Report Newsletter**: Summer 2006 edition. 5pp.
- Flinchum, M. and M. W. Clark 2004-2006. **“The Same Page”** (periodic newsletter to foster communication among team members of the UF/IFAS Lake Okeechobee Protection Program and selected allies in an effort to keep everyone on “The Same Page.”)
- Bohlen, P., M.W. Clark and M. Flinchum 2003. **Restoring Wetlands on Cattle Ranches in South Florida**. The Florida Cattleman, Nov: 18-23.

#### EXTENSION WEBSITES

- Clark, M. W. and M. Aldridge 2004 -Present. Wetland Extension Website <http://wetlandextension.ifas.ufl.edu>
- Clark, M. W. and M. Aldridge 2004 - Present. UF Clean Water Campaign Website <http://campuswaterquality.ifas.ufl.edu>
- Clark, M.W. and M. Aldridge 2005 - Present. Wetland Enhancement Resources <http://wer.ifas.ufl.edu>
- Clark, M. W. and M. Aldridge 2006 - Present. Wetlands UF Portal <http://wetlands.ufl.edu>

## **EXTENSION PRESENTATIONS**

- Clark, M. W. 2006 **Stormwater Management: Low Impact Development (LID) Practices and Enhanced Basin Design**. Turf and Ornamental Updates In-Service Training. Pine Acres, FL. October 18.
- Clark, M. W. 2006. **Stormwater and Open Space: An Opportunity to Enhance Basin Design, Biodiversity and Function**. Alachua County Stormwater Pond Workshop Series, Monteocha Pond. February 15.
- Clark, M. W. 2006. **Enhancing Stormwater Basins: Improving Water Quality, and Creating Multipurpose Value**. Alachua County Stormwater Pond Workshop Series, Monteocha Pond. February 15.
- Clark, M. W. 2006. **Case Studies: Stormwater Ecological Enhancement Project (SEEP)**. Alachua County Stormwater Pond Workshop Series, Monteocha Pond. February 15.
- Clark, M. W. 2006. **Establishment, Maintenance and Management Objectives for Enhanced Ponds**. Alachua County Stormwater Pond Workshop Series, Monteocha Pond. February 15.
- Clark, M. W. 2006. **Stormwater and Open Space: An Opportunity to Enhance Basin Design, Biodiversity and Function**. Alachua County Stormwater Pond Workshop Series, Matheson Museum. February 25.
- Clark, M. W. 2006. **Enhancing Stormwater Basins: Improving Water Quality, and Creating Multipurpose Value**. Alachua County Stormwater Pond Workshop Series, Matheson Museum. February 25.
- Clark, M. W. 2006. **Case Studies: Stormwater Ecological Enhancement Project (SEEP)**. Alachua County Stormwater Pond Workshop Series, Monteocha Pond. Matheson Museum. February 25.
- Clark, M. W. 2006. **Establishment, Maintenance and Management Objectives for Enhanced Ponds**. Alachua County Stormwater Pond Workshop Series, Matheson Museum. February 25.
- Clark, M. W. 2006. **Stormwater and Open Space: An Opportunity to Enhance Basin Design, Biodiversity and Function**. Alachua County Stormwater Pond Workshop Series, Millhopper Branch Library. March 1.
- Clark, M. W. 2006. **Enhancing Stormwater Basins: Improving Water Quality, and Creating Multipurpose Value**. Alachua County Stormwater Pond Workshop Series, Millhopper Branch Library. March 1.
- Clark, M. W. 2006. **Case Studies: Stormwater Ecological Enhancement Project (SEEP)**. Alachua County Stormwater Pond Workshop Series, Millhopper Branch Library. March 1.
- Clark, M. W. 2006. **Establishment, Maintenance and Management Objectives for Enhanced Ponds**. Alachua County Stormwater Pond Workshop Series, Millhopper Branch Library. March 1.
- Clark, M. W. 2006. **Stormwater Management and Low Impact Development**. Presentation to the Environmental Law Clinic. December 5.
- Clark, M. W. 2006. **Low Impact Development: Benefits and Challenges of Implementation**. Florida Stormwater Association pre-conference TMDL workshop, Orlando, FL. FSA pre-conference TMDL workshop, November 29.
- Clark, M. W. 2006. **UF Clean Water Campaign**, Campus and Community Sustainability Conference, Gainesville, FL October 25 - 26.
- Clark, M.W. and S. Hofstetter 2006. **Stormwater Management and Low Impact Development**. Campus and Community Sustainability Conference, Gainesville, FL October, 25 - 26.
- Clark, M.W. 2006. **Natural Area Teaching Laboratory and Campus Water Quality**. Annual Report to UF Lakes, Vegetation and Landscaping Committee. October, 9
- Clark, M. W. 2006 **Everglades Biogeochemistry and Ecology**. Research/Extension Workshop on the Everglades Ecosystem, Belle Glade, FL. June, 14
- Clark, M. W. 2006. **Low Impact Development: Integrated Stormwater Design - Considerations for Water Management**. Polk County Water School, June 7.
- Jacoby, C. and M. W. Clark. **Minimum Flows and Levels (MFL)**. Watershed In-Service Training. Xx County. April 19,
- Clark, M. W. 2006. **Aquatic Horticultural and Wetland Plants. Agriculture & Aquaculture Economic Development Workshop**. Mote Aquaculture Facility, Sarasota County. January 30.
- Clark, M. W. 2006 **Extension Programs in Natural Systems**. Research/Extension Workshop on the Everglades Ecosystem, Belle Glade, FL. June, 14
- Clark, M. W. 2006. **Enhanced Stormwater Basins: Improving Water Quality, and Creating Multipurpose Value**. Presentation to Marion County Parks and Recreation Oversight Committee.
- Clark, M. W. 2006. **Lake County Stormwater: Issues and Opportunities in Residential Developments**. Lake County Special Topics on Growth Management Workshop. April, 13.



- Clark, M. W. 2006 **Program for Resource Efficient Communities & Low Impact Development: Integrated Stormwater Design – Considerations for Water Management**. Presentation to NE Soil Conservation District May 9, 2006
- Clark, M. W. 2006. **Stormwater Management: LID Practices**. Low Impact Development Workshop. Baker County. December, 4.
- Clark, M. W. 2006. **Laws Related to Water Quality and Quantity**. Low Impact Development Practices for Florida: Stormwater. CEU Workshop, Gainesville FL. May 2.
- Clark, M. W. 2006. **Stormwater Considerations in Residential Developments**. Low Impact Development Practices for Florida: Stormwater CEU Workshop. Gainesville FL. May 2.
- Clark, M. W. 2006. **Best Low Impact Development Practices - Enhanced Stormwater Basins: Improving Water Quality, and Creating Multipurpose Value**, Low Impact Development Practices for Florida: Stormwater CEU Workshop. Gainesville FL. May 2.
- Clark, M. W. 2006. **Low Impact Development and Permitting Standards – What’s Being Tried in Florida - The future?** Low Impact Development Practices for Florida: Stormwater CEU Workshop. Gainesville FL. May 2.
- Clark, M. W. 2006. Stormwater Management: LID Practices. Low Impact Development Workshop. St. Johns County. August, 24.
- Clark, M. W. 2005. **Documentation of Environmental Services: What and How to Monitor**. Agency and Collaborators “kick off” meeting for Okeechobee Environmental Services project.
- Clark, M. W. 2005. **Enhanced Stormwater Ponds: Improving Water Quality, Ecology and Neighborhood Value**. Spring Hill Pond Workshop, Alachua County
- Clark, M.W. 2005. **Undisturbed Shorelines: Morphology, Processes and Functions**. Poe Springs Workshop for conservation area managers. February 17.
- Clark, M. W. 2005. **Typical Shoreline Disturbances and Resulting Loss of Function**, Poe Springs Workshop for conservation area managers. February 17.
- Clark, M. W. 2005. **Assessing and Addressing the Problem of Shoreline Impacts: not just the symptom**, Poe Springs Workshop for conservation area managers, February 17.
- Clark, M. W. 2005. **Shoreline Restoration Techniques**, Poe Springs Workshop for conservation area managers. February 17.
- Clark, M.W. 2005. **Undisturbed Shorelines: Morphology, Processes and Functions**. Poe Springs Workshop for Alachua County landowners. February 26.
- Clark, M. W. 2005 **Typical Shoreline Disturbances and Resulting Loss of Function**, Poe Springs Workshop for Alachua County landowners. February 26.
- Clark, M. W. 2005. **Assessing and Addressing the Problem of Shoreline Impacts: not just the symptom**, Poe Springs Workshop for Alachua County landowners, February 26.
- Clark, M. W. 2005. **Shoreline Restoration Techniques**, Poe Springs Workshop for Alachua County landowners. February 26.
- Clark, M.W. 2005. **Undisturbed Shorelines: Morphology, Processes and Functions**. Poe Springs Shoreline Restoration Extension Training. March 9.
- Clark, M. W. 2005 **Typical Shoreline Disturbances and Resulting Loss of Function**, Poe Springs Shoreline Restoration Extension Training. March 9.
- Clark, M. W. 2005. **Assessing and Addressing the Problem of Shoreline Impacts: not just the symptom**, Poe Springs Shoreline Restoration Extension Training, March 9.
- Clark, M. W. 2005. **Shoreline Restoration Techniques**, Poe Springs Shoreline Restoration Extension Training. March 9.
- Clark, M. W. 2005. **Shoreline Restoration Workshop Part I: Structure and Function of Natural Lake Shoreline**, Orlo Vista Park, Orlando, May 12.
- Clark, M. W. 2005. **Shoreline Restoration Workshop Part II: Impacts to Shoreline and Implications of loss of vegetation**, Orlo Vista Park, Orlando, May 12
- Clark, M. W. 2005. **Shoreline Restoration Workshop Part III: Lake Shoreline Enhancement Techniques**, Orlo Vista Park, Orlando, May 12
- Clark, M. W. 2005 **Phosphorus origin, Transport, Management and BMPs: Urban Landscapes**. Everglades Extension In-Service Training. May 18
- Clark, M. W., 2005 **Everglades Ecology: Then and Now**. Everglades Extension In-Service Training. May 18

- Clark, M. W. 2005. **Kissimmee Chain of Lakes Conceptual Ecosystem Model Review: Wetlands and Vegetation. Technical Peer Review Workshop** July 14-15, Kissimmee FL.
- Clark, M. W. 2004. **Function and Value of Wetlands in Agricultural Watersheds in the USA: presentation at:** Nutrient Management in agricultural Watersheds – A Wetlands Solution, Teagasc Research Centre, Wexford, Ireland, May24-26.
- Clark, M. W. 2004. **Stormwater: What's the bid deal?** Stormwater BMP Academy Workshops, May 6-7, Santa Rosa County Extension Office, Milton, Florida
- Clark, M. W. 2004. **Chemistry of Stormwater Treatment Systems**, Stormwater BMP Academy Workshops, May 6-7, Santa Rosa County Extension Office, Milton Florida
- Clark, M. W. 2004. **Stormwater Ecological Enhancement Project**, Stormwater BMP Academy Workshops, May 6-7, Santa Rosa County Extension Office, Milton, Florida
- Clark, M. W. 2004. **Water Quality 101**, “Kickoff” meeting for Development and Adoption of an Equine Best Management Practice (BMPs) Manual, Marion County Extension Office, Ocala, Florida
- Clark, M. W. 2004. **Wetland Functions and Values in Agricultural Watersheds (Private Interest – Public Benefits)** Certified Crop Advisors Training Session. Lake Alfred
- Clark, M. W. 2004. **Role of Wetlands in Treatment Solution**. Gainesville Creek Summit. Gainesville FL. October 10
- Flinchum, D.M. and M.W. Clark 2004 **Wetland Enhancement Decision-Making Tools/Training for Landowners and Technical Service Providers in the Lake Okeechobee Watershed**. National Conference on Ecosystem Restoration, Orlando, FL.
- Clark, M. W., 2003. **Ecologically Enhanced Stormwater Basin Design: A BMP with Educational Opportunities**, Stormwater BMP Academy, Jekyll Island, GA. May 28.
- Clark, M. W., 2003. **NPDES Phase II: What is it and why should you know?** Watershed Approach to Water Quality, In-Service Training. Bradenton, FL. August 20-21.
- Clark, M. W., 2003. **Stormwater Education in Florida SEEP and More**. Stormwater Education Workshop, Positioning Extension to take the lead. Savannah GA, February 11-12.
- Clark, M. W. and K. R. Reddy, 2003, **National Wetlands Biogeochemical Characterization Database, Evaluating Wetland Condition for Nutrient Criteria: An EPA Outreach Workshop**, Atlantic City, NJ. March 25-27.
- Clark, M. W., T. Obreza, C. Jacoby and M Spranger, 2003. **A Multidisciplinary Approach to Water Quality Extension in Florida**, USDA-CSREES National Water Quality Coordinators Conference: Building the Network, Strengthening Partnerships. Tucson Arizona Jan 12-15.
- Clark, M. W. 2003. **Watersheds, Wetlands, and Water Quality**. Presented at: The World of Water Science: 2003 Summer Seminar and Workshop, June 25-26.
- Clark, M. W. 2003. **Wetland Hydrology**, The World of Water Science: 2003 Summer Seminar and Workshop, June 25-26.
- Reddy, K. R. and Clark, M. W., 2003. **Biogeochemical Indicators. Evaluating Wetland Condition for Nutrient Criteria: An EPA Outreach Workshop**, Atlantic City, NJ. March 25-27