



# FINAL PROGRAM

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## SATURDAY, MARCH 2, 2013

8:00 AM – 9:00 AM Registration for Dam Owner Training Session  
9:00 AM – 4:00 PM Dam Owner Training Session, Holiday Inn Select Koger Conference Center)

## SUNDAY, MARCH 3, 2013

1:00 – 4:00 PM Dam Engineers Forum (Parlor H, Holiday Inn Select Koger Conference Center)  
1:30 – 5:00 PM Exhibitors' Display Set Up (Exhibitors' Area)  
2:00 – 5:00 PM Registration (Conference Reception Desk)  
4:00 – 5:00 PM Meeting of VLWA Board of Directors  
5:30 – 7:00 PM Exhibitor and Early Registrants' Reception

## MONDAY, MARCH 4, 2013

7:00 – 8:00 AM Registration and Check-In (Conference Reception Desk)  
7:30 AM Coffee and Pastries  
8:00 – 9:00 AM Welcome to the Conference, Stuart Stein, Conference Chair and President of VLWA

**Keynote Address – EPA Region III MS4 Inspections – Strategies and Results**, Andrew Dinsmore, Environmental Scientist, Water Protection Division, EPA Region III

**Track A–Parlor A      Track B–Parlor B      Track C–New River      Track D–Chesterfield      Track E–Parlor E**

### 9:15 – 10:30 AM First Concurrent Sessions

#### Session 1A • Stormwater Management 1 • Moderator – William K. Norris, VA DEQ Office of Regulatory Affairs

- (1) **Stormwater Infrastructure from Nuisance to Asset: A Municipal Perspective on Transitioning from Stormwater Regulations to Watershed Centric Alternatives**, Matt Stolte, PE, Town of Blacksburg; Lee Hixon, PE, EEE Consulting, Inc.; Kafi Howard, Town of Blacksburg; Adele P. Shirmer, PE, Town of Blacksburg; Katherine Smith, Town of Blacksburg
- (2) **Movin' on Up: Transitioning a Local Stormwater Program from "Rural" to "Ready"**, Frank A. Haltom, Isle of Wight County General Services; Clifton F. Bell, PE, PG, Brown and Caldwell, Virginia Beach, VA
- (3) **VPDES, VSMP's, TMDL's, VESCP's, DCR and EPA**, William J. Johnston, PE, City of Virginia Beach, Department of Public Works
- (4) **Public Participation Concepts - How the Public is Involved in the Regulatory Development Process**, William K. Norris, VA DEQ Office of Regulatory Affairs; Ann Regn, VA DEQ; Angela Neilan, VA DEQ; Shannon Junior, SOLITUDE Lake Management

#### Session 1B • Dam Safety 1 • Moderator – Amanda Pennington, VADCR Division of Dam Safety and Floodplain Management

- (1) **A Dam Failure Analysis for Two Reservoirs in Series – Hermitage Country Club Reservoir #1 Dam & Reservoir #2 Dam**, David P. Wilmoth, PE, CFM, PH, Timmons Group; Michael L. Claud, PE, CFM, Timmons Group
- (2) **Comparison of Rainfall Distributions for PMF Development**, Michael D. Wilson, PE, Hurt & Proffitt
- (3) **2012 Revisions to Dam Safety Regulations-Simplified Mapping for Low Hazard Dams**, Amanda S. Pennington, PE, VADCR Division of Dam Safety and Floodplain Management

**Session 1C • Stormwater BMPs • Moderator – Terry Siviter, Rotondo Environmental Solutions, LLC**

- (1) **Upflow Filtration and Floating Wetland Islands for Improved Pollutant Removal in Urban Stormwater Wet Retention Ponds**, Ryan Winston, Department of Biological and Agricultural Engineering, North Carolina State University; William Hunt, Department of Biological and Agricultural Engineering, North Carolina State University; Joel Garbon, Imbrium Systems Corp.
- (2) **Phosphorus Removal Performance of Bioretention Soil Mix Amended with Phosphorus-Adsorbing Media**, Joel Garbon, Imbrium Systems Corp.
- (3) **Raising the Bar on Nutrient Removal: Overview of an Independent Field Evaluation of an Innovative Filtration Media to Maximize Phosphorus Removal**, Derek Berg, CONTECH Engineered Solutions
- (4) **Precast Concrete Stormwater Management Runoff Reduction Alternatives in Ultra Urban Applications**, Terry Siviter, Rotondo Environmental Solutions, LLC

**Session 1D • TMDLs • Moderator – Kathy Hoverman, PE, KCI Technologies**

- (1) **PCB TMDL Monitoring Study for Naval Installations in the Elizabeth River Watershed**, Monica Quiñones Burgos, CH2M HILL
- (2) **Source Investigation Studies as a Critical Component of PCB TMDL Development Necessary to Reclaim the Fish Consumption Use**, Mark Richards, Watersheds Program, Department of Environmental Quality
- (3) **A Methodology for Achieving TMDL Load Reductions**, Lee Hixon, PE, EEE Consulting, Inc.; Ashley G. Parks, EIT, EEE Consulting, Inc.; Christopher J. Swanson, PE, EEE Consulting, Inc.
- (4) **Effective Stream Restoration Techniques for TMDL Reductions**, Kathy Hoverman, PE, KCI Technologies

**Session 1E • Floodplain Management 1 • Moderator – Mary L. Searing, PE, DWRE, GISP, CFM, Greenhorne & O'Mara**

- (1) **Development of FEMA's GeoDam-BREACH Toolset for Simplified Dam Break Analysis**, Huidae Cho, Ph.D., CFM, GISP, Dewberry; Jangwoan Choi, Ph.D., CFM, GISP, Dewberry; James E. Demby, Jr., PE, FEMA National Dam Safety Program; Edward (Ed) Beadenkopf, PE, CFM, URS Corp.; Sam Crampton, PE, CFM, Dewberry; Sivasankkar Selvanathan, Ph.D., GISP, CFM, Dewberry; Diwakar Sharma, GISP, CFM, Former Dewberry Employee
- (2) **Environmental Impacts of Levees on Floodplains**, M. Tariq Makhdoom, Ph.D., CFM, Dewberry
- (3) **Some Technical Issues in Dam Break Inundation Study: How to Develop Hydrologic and Hydraulic Models Correctly and How to Calculate Breach Parameters**, Zhengang (Michael) Wang, Ph.D., PE, CFM, Virginia Department of Conservation and Recreation
- (4) **Development of a Prioritization Scheme for BMPs to Insure Water Quality Treatment Goals are Met**, Mary L. Searing, PE, DWRE, GISP, CFM, Greenhorne & O'Mara

**10:30 – 10:45 AM      Coffee Break**

**10:45 AM – 12:00 PM   Second Concurrent Sessions**

**Session 2A • Stormwater Management 2 • Moderator – Clifton F. Bell, PE, PG, Brown and Caldwell**

- (1) **Identification of Industrial and High Risk Runoff Facilities for MS4 Permit Compliance**, Elizabeth Graves, Kimley-Horn and Associates, Inc.
- (2) **Best Management Practices to Reduce Iron Contamination in Stormwater Runoff from Salvage Yards**, Andrew Newbold, Old Dominion University; John McKenney, Old Dominion University; Meredith Cutchin, Old Dominion University; Jaewan Yoon, Department of Civil and Environmental Engineering, Old Dominion University
- (3) **ALERT (AMEC Load Estimating and Reduction Tracking) Tool**, Thomas Williams, AMEC Environment & Infrastructure, Inc.; David Bulova, AMEC Environment & Infrastructure, Inc.
- (4) **A Modeling Toolbox for Setting Site-Specific Nutrient Goals**, Clifton F. Bell, PE, PG, Brown and Caldwell

**Session 2B • Dam Safety 2 • Moderator – Thomas I. Roberts, PE, CFM, VA Department of Conservation & Recreation, Division of Dam Safety & Floodplain Management**

- (1) **Can a Dam Engineer Serve Two (or more) Masters?**, Paul I. Welle, PE, Schnabel Engineering; Mathew J. Lyons, PE, USDA Natural Resources Conservation Service
- (2) **Periodic Dam Inspections - Not Just a Chore – Basic Consideration for Owners**, Boyd Howard, PE, Gannett Fleming, Inc.
- (3) **Infamous Concrete Dam Failures: Separating Fact from Folklore**, Robert A. Kline, Jr., PE, Gannett Fleming, Inc.
- (4) **Dam Safety – Sources of Free, Public Domain, & Pertinent Information on Current Practices for Dam Design Criteria, Rehabilitation, Maintenance, and Inspection**, Thomas I. Roberts, PE, CFM, VA Department of Conservation & Recreation, Division of Dam Safety & Floodplain Management

**Session 2C • Stormwater Retrofits and LID • Moderator – Douglas H. Moseley, III, AICP, CFM, GKY & Associates, Inc.**

- (1) **Retrofitting Existing Development with LID Technologies**, Jackie Krayenvenger, PE, KCI Technologies
- (2) **The Use of Innovative BMPs and LID Options for Achieving the Water Quality Requirements**, Khadija Abdur-Rahman, PE, Rummel, Klepper & Kahl, LLP
- (3) **Municipal Parking Lot Retrofit with Permeable Pavement**, Don Rissmeyer, PE, CFM, A. Morton Thomas & Associates, Inc.
- (4) **Assessing Municipally Owned Sites for Stormwater Management Retrofits: A Case Study in Fairfax County, VA**, Douglas H. Moseley, III, AICP, CFM, GKY & Associates, Inc.

**Session 2D • Coastal Issues • Moderator – Scott C. Blossom, PE, CFM, Williamsburg Environmental Group, Inc.**

- (1) **Analysis of Increasing Storm Surges on Coastal Communities**, Amity B. Dewey, Parsons Brinckerhoff
- (2) **What is the Role of Water Resources in the Field of Virginia Offshore Wind Energy Development?**, Rick Thomas, PWS, PWD, Timmons Group; Marissa Kassir, EIT, Timmons Group
- (3) **Removal of Salinity Barriers in Tampa Bay, Florida**, Scott M. Deitche, GPI Southeast, Inc.
- (4) **Rainwater Harvesting Case Studies from the Caribbean**, Scott C. Blossom, PE, CFM, Williamsburg Environmental Group, Inc.; J. Alex Forasté, PE, Williamsburg Environmental Group, Inc.

**Session 2E • Floodplain Management 2 • Moderator – David Preusch, West Consultants**

- (1) **The Benefits and Appropriate Use of Base Flood Approximate Shapefiles to Calculate Zone A Base Flood Elevations**, Jeremy Kirkendall, CFM, Greenhorne & O'Mara, Inc.
- (2) **Estimating the Return Period of PMF in Virginia**, Kaveh Zomorodi, Ph.D., PE, CFM, Dewberry
- (3) **Upper and Middle Rappahannock River Basin Rainfall, Stream, and Water Quality Gauging Analysis**, Holly Carpenter, EIT, CFM, LEED U.S. Army Corps of Engineers, Norfolk District, Flood Plain Management Services Section
- (4) **Alleviation of Flooding through Stream Restoration, Combined Sewer System (CSO) in Urban Streams**, Alex Haptemariam, PE, CFM, Greenhorne & O'Mara

**12:15 – 1:15 PM Luncheon**

**Keynote Address – A Federal Perspective on Climate Change and Water Resources Management**, David A. Raff, Ph.D., CIV, Senior Hydrologic and Hydraulic Engineer, United States Army Corps of Engineers, Institute for Water Resources

## MONDAY AFTERNOON, MARCH 4, 2013

### 1:30 – 2:45 PM Third Concurrent Sessions

#### Session 3A • Stormwater Management 3 • Moderator – Lisa Jeffrey, Brown and Caldwell

- (1) **Stormwater Improvement Planning: Evaluation Alternatives for Nutrient and Runoff Reduction in Urban Areas within the Chesapeake Bay Watershed**, Allen Townsend, EIT, Brown and Caldwell
- (2) **Harnessing the 800 Pound Gorilla: Make Your Compliance Data Work for You (and not the Other Way Around)**, Catherine Eichel, Brown and Caldwell
- (3) **Minimizing Construction Impacts to Suburban Stream Corridors**, Jack Wall, PE, Brown and Caldwell
- (4) **Keys to Successful Implementation of TMDL and MS4 Permit Compliance Programs within Chesapeake Bay Region**, Lisa Jeffrey, Brown and Caldwell

#### Session 3B • Dam Safety 3 • Moderator – Tillman Marshall, PE, Schnabel Engineering

- (1) **Rehabilitation of New Creek 14 Dam - A Comprehensive Rehabilitation of an Aging NRCS High Hazard Earthfill Dam**, Paul Schweiger, PE, CFM, Gannett Fleming, Inc.
- (2) **Rehabilitation of the George H. Nichols Dam**, Jim Nadeau, ACF Environmental; Bellini, Joe, AMEC
- (3) **Filter Drains – Design and Construction**, Alexander B. Robinson, EIT, Froehling and Robertson, Inc.
- (4) **Troublesome Creek Spillway Replacement**, Tillman Marshall, PE, Schnabel Engineering

#### Session 3C • Green Stormwater Management • Moderator – Laurie Coffman, PE, Timmons Group

- (1) **Sustainable, Cost-Effective Green Initiative Design for Stormwater Quantity and Quality Treatment**, Jodi Mills, Filterra Bioretention Systems
- (2) **Benefits of Green Stormwater Management for Flood Loss Avoidance**, Lisa Hair, PE, US Environmental Protection Agency; Daniel E. Medina, PhD, PE, D.WRE, CFM, Atkins; Leo Kreyborg, PE, CFM, Atkins; Zachary Baccala, CFM, Atkins; Jacqueline Monfils, PE, CFM, Atkins; Allan Willis, Atkins; Jason Berner, US Environmental Protection Agency
- (3) **SAGE – Stormwater Alternatives through Green Enhancement**, Proctor S. Harvey, RLA, ASLA, SAGE Certified, Inc.
- (4) **Greenway Stormwater Park: Using an Under-Utilized Green Space for a High Impact Water Quality Retrofit**, Laurie Coffman, PE, Timmons Group; Aislinn Creel, PE, LEED, AP, Timmons Group

#### Session 3D • Lake Management • Moderator – Harvey H. Harper, III, Ph.D., PE, Environmental Research & Design, Inc.

- (1) **Lake Braddock Dredging Plan**, Casey M. Kight, LA, GKY & Associates, Inc.
- (2) **Harvesting of Phragmites and Cattail Stalks to Meet Pollution Reduction Needs**, Steve McLaughlin, PE, City of Virginia Beach, Department of Public Works
- (3) **Recognizing and Quantifying Internal Recycling in Lakes**, Harvey H. Harper, PhD, PE, Environmental Research & Design, Inc.

#### Session 3E • Floodplain Management 3 • Moderator – Charley Banks, VA DCR

- (1) **Changes to the Community Rating System (CRS) Program and How to Make Them Work for Your Community**, Mari Radford, CFM, Floodplain Management, FEMA Region III; Amanda Gowans, CFM, ISO
- (2) **Biggert-Waters Flood Insurance Reform Act of 2012 (112th Congress)**, Rich Sobota, CFM, CPCU, Floodplain Management, FEMA Region III
- (3) **Floodplain Management From the Local Government Perspective**, James C. Rakestraw, PE, CFM, Stafford County, Virginia Department of Planning and Zoning
- (4) **The ASFPM Foundation and the FloodManager Simulation**, John Hoffman, CFM, PMP, Dewberry

### 2:45 – 3:15 PM Coffee Break

### 3:15 – 4:30 PM Fourth Concurrent Sessions

**Session 4A • Stormwater Management 4 • Moderator – Seshadri Iyer, Ph.D., PE, URS Corp.**

- (1) **Building Infrastructure Reliability into Master Planning and Long-Term Funding**, Noelle Slater, ARCADIS U.S., Inc.
- (2) **Stormwater Management Program at Virginia's Ports**, Tausha Hathaway, ARCADIS U.S., Inc.
- (3) **Watershed Vulnerability and Impact Assessment, the United States Army (Army) Garrison Fort A.P. Hill, Caroline County, Virginia**, Doug Fraser, PG, EEE Consulting, Inc.; Scott Smizik, AICP, EEE Consulting, Inc.; Gef Fisher, Fort A.P. Hill Environmental and Natural Resource Division
- (4) **Comprehensive Stormwater Management Plan Development for an Atlantic Coastal Basin**, Seshadri S. Iyer, PhD, PE, URS Corp.; Craig Pearson, EIT, URS Corp.; Steve McLaughlin, PE, City of Virginia Beach, Department of Public Works

**Session 4B • Dam Safety 4 • Moderator – Robert Blankinship, Carpi USA**

- (1) **Mitigating Risk When Drilling at the Toe of a Dam**, Cari Beenenga, PE, Gannett Fleming, Inc.
- (2) **Boils and Seeps - Management and When to Call for Help**, Susan Bruns, PE, Gannett Fleming, Inc.
- (3) **Integrating Infrastructure Upgrades with Gravity Dam Repairs**, Timothy W. Johnston, PE, Gannett Fleming, Inc.
- (4) **Underwater Installation of a PVC Membrane on Occoquan Dam**, Robert Blankinship, Carpi USA; John Wilkes, Carpi, USA

**Session 4C • Infrastructure and Drainage Improvements • Moderator – Liz Scheessele, PE, CFM, Timmons Group**

- (1) **Railroads as Drainage Divides: Kinsley Drainage Improvements Phase I**, Amelia Wehunt, PE, Timmons Group; Andrew Gould, PE, Timmons Group
- (2) **Redevelopment in Conjunction with Aging Infrastructure: Combined Sewer Relocation**, Andrew Gould, PE, Timmons Group; Amelia Wehunt, PE, Timmons Group
- (3) **Falls Church Storm Sewer Maintenance Prioritization**, Suzanne L. Angelo, PE, GKY & Associates, Inc.; Jason E. Widstrom, PE, City of Falls Church, VA
- (4) **City of Norfolk City-Wide Drainage Master Plan**, Liz Scheessele, PE, CFM, Timmons Group

**Session 4D • Soil Erosion and Stream Stabilization • Moderator – Cody Gillin, VA Water Resources Research Center, Virginia Tech**

- (1) **Emergency Bank Stabilization in Bismark, ND – Sheet Piling the Trusted Solution**, Andrew Verity, Gerdau Long Steel North America
- (2) **Forrest Hill Park Trail Erosion Repair Project**, Michael Hogan, PE, Rummel, Klepper & Kahl
- (3) **Topographic Metrics to Predict Soil Spatial Patterns**, Cody Gillin, VA Water Resources Research Center, Virginia Tech

**Session 4E • Floodplain Management 4 • Moderator – David Gunn, Henrico County, VA**

- (1) **Virginia, Map Modernization, and FEMA's Risk MAP Program**, Jeff Smith, PE, PMP, CFM, Accenture Federal Services; Robert Pierson, FEMA Region III
- (2) **Update on the FEMA Risk MAP Program's Non-Regulatory Products**, Shane Parson, PE, CFM, URS Corp.
- (3) **Resilience – Turning Risk MAP to Action**, Christine Worley, URS Corp.
- (4) **Flood-Related Data Toolbox**, John N. Paine, PE, PH, CFM, URS Corp.

## MONDAY EVENING, MARCH 4, 2013

**4:45 – 6:00 PM Reception**

**6:00 – 6:30 PM Virginia Lakes and Watersheds Association Business Meeting**

## TUESDAY MORNING, MARCH 5, 2013

**7:15 – 8:15 AM Virginia Floodplain Management Association Meeting, Parlor E**

**8:30 – 9:45 AM Fifth Concurrent Sessions**

### **Session 5A • Stormwater Screening, Sampling, and Monitoring • Moderator – Lisa Bass, ME, EIT, Parsons Brinckerhoff**

- (1) **Post Implementation Audit of Lamberts Point BMP, Norfolk, Virginia**, Alan Edwards, Department of Civil and Environmental Engineering, Old Dominion University; Ryan Foshay, Department of Civil and Environmental Engineering, Old Dominion University; Jaewan Yoon, Ph.D., Department of Civil and Environmental Engineering, Old Dominion University
- (2) **Do's and Don'ts in Conducting Dry Weather Field Screening**, Daniel Rickmond, PE, URS Corp.; Francis Janes, City of Virginia Beach, Department of Public Works; Seshadri Iyer, Ph.D., PE, URS Corp.; Steve McLaughlin, PE, City of Virginia Beach, Department of Public Works
- (3) **Continuous Sampling and Monitoring and Modeling to Determine Pollutant Loading for Wet Weather Events – Part I**, Lewis White, Parsons Brinckerhoff
- (4) **Continuous Monitoring for Pollutant Loading – Part II**, Lisa Bass, ME, EIT, Parsons Brinckerhoff

### **Session 5B • Dam Safety 5 • Moderator – David A. Krisnitski, PE, CFM, Froehling and Robertson, Inc.**

- (1) **Overtopping Protection Systems for Earth Dams**, Robert R. Bowers, PE, O'Brien & Gere
- (2) **New Ragged Mountain Dam – Design and Construction in Review**, Randall P. Bass, PE, Schnabel Dam Engineering; Douglas J. March, PE, Rivanna Water and Sewer Authority
- (3) **Lake Merriweather Dam – Auxiliary Spillway Design and Construction**, David A. Krisnitski, PE, CFM, Froehling and Robertson, Inc.

### **Session 5C • Stormwater Pump Stations • Moderator – James D. White, PE, City of Virginia Beach, Department of Public Works**

- (1) **Stormwater Pump Stations in the City of Virginia Beach – What Have We Learned and Where Do We See Their Usage in the Future? Part 1 of 2**, C. Gregory Johnson, PE, City of Virginia Beach, Department of Public Works
- (2) **Stormwater Pump Stations in the City of Virginia Beach – What Have We Learned and Where Do We See Their Usage in the Future? Part 2 of 2**, Michael W. Mundy, PE, City of Virginia Beach, Department of Public Works
- (3) **Stormwater Pump Station Construction Challenges in Virginia Beach – What are the Unique Challenges and Considerations?**, Glenn Bottomley, PE, Parsons Brinckerhoff
- (4) **A Commitment to Protecting the Valued Communities Along the Virginia Beach Coastline**, James D. White, PE, City of Virginia Beach, Department of Public Works

### **Session 5D • Water Quality Trading • Moderator – Seth Brown, Water Environment Federation**

- (1) **Agricultural Baselines in Water Quality Trading Programs: Issues and Status in the Chesapeake Bay**, Kurt Stephenson, Virginia Tech
- (2) **The Expansion of Nutrient Credit Trading in the Commonwealth**, Ginny Snead, Department of Conservation and Recreation
- (3) **Current Status of WQT in Chesapeake Bay and Future Trends**, George Kelly, Environmental Banc and Exchange
- (4) **Simulation of a Stormwater Volume Credit Trading Program Using an Agent-Based Modeling Platform**, Seth Brown, Water Environment Federation

**Session 5E • Floodplain Management 5 • Moderator – Kenneth Somerset, Poquoson, VA**

- (1) **FEMA Region III Coastal Hazard Analyses and FIRMS Update**, Robin Danforth, PE, CFM, FEMA Region III; David Bollinger, FEMA Region III; Heather Zhao, PE, CFM, RAMPP, Germantown, MD; Yi Zheng, CFM, RAMPP, Fairfax, VA
- (2) **HAZUS Risk Assessment, City of Baltimore, MD – Measuring Flood Risk Associated with Sea Level Rise**, Cynthia McCoy, FEMA Region III
- (3) **Hurricane Sandy-Like Storm Surge in Virginia**, Mark Slauter, Virginia Department of Emergency Management
- (4) **Models vs. Mother Nature: Comparing the "Flash Flood" to a 1-Dimensional Hydraulic Model**, Troy Biggs, PE, PH, D.WRE, CFM, AMEC Environment & Infrastructure, Inc.

**9:45 – 10:15 AM Coffee Break**

**10:15 – 11:30 AM Sixth Concurrent Sessions**

**Session 6A • Watershed Management • Moderator – Deva K. Borah, Ph.D., PE, ENDESCO, Inc.**

- (1) **Models, Analytical Tools and Data for TMDL Development and Implementation: A Brief Review**, Deva K. Borah, Ph.D., PE, ENDESCO, Inc.
- (2) **Watershed Management Approach in the City of Newport News**, Don Alexander, PE, Woolpert, Inc.; Brian Lewis, PE, City of Newport News, VA; Jamie Clark, PE, City of Newport News, VA; Don Cole, GISP, Woolpert, Inc.
- (3) **Modeling Storm Sewer Networks in the City of Newport News, Virginia, Using Two Different Software Solutions**, Steve Godfrey, PE, CFM, Woolpert, Inc.
- (4) **Water Quality Issues in Virginia: Neighborhood Level Strategies**, David N. Powell, Ph.D., PE, Woolpert, Inc.

**Session 6B • Dam Safety 6 • Moderator – Arthur C. Miller, Ph.D., PE, AECOM Water**

- (1) **Rattlewood Golf Course Irrigation Dam Safety Improvements**, Kofi B. Acheampong, Ph.D., PE, KCI Technologies, Inc.; Matthew R. Snyder, PE, KCI Technologies, Inc.
- (2) **Analysis of Energy Dissipation for Dam Overtopping Flows**, James J. (Jay) Lewis, Jr., PE, LS, Wiley|Wilson
- (3) **Downstream Effects Resulting from the Operation of the Pompton Lake Dam Floodgates**, Arthur C. Miller, Ph.D., PE, AECOM Water

**Session 6C • Water Resources Modeling • Moderator – Greta Hawkins, PG, Kimley-Horn and Associates, Inc.**

- (1) **Surface Water and Groundwater Retention Effects of Common Stream Restoration Practices: Comparing In-Stream Structures and Inset Floodplains**, Erich T. Hester, Virginia Tech; David L. Azinheira, Virginia Tech; Durelle Scott, Virginia Tech
- (2) **Evaluating Climate Change Impacts Using AI, Machine Learning, and Pattern Recognition Tools**, Michael J. Barbachem, URS Corp.
- (3) **From Regional Flooding to Water Quality Grass Swales – A GIS-Based Hydraulic Solution Procedure**, Gamal Hassan, PE, Hassan Water Resources (HWR); Murari Paudel, Ph.D., Aquaveo, LLC
- (4) **Stormwater Utility Financial Analysis**, Greta Hawkins, PG, Kimley-Horn and Associates, Inc.; Michael Maker, Municipal & Financial Services Group

**Session 6D • Flood Mitigation and Awareness • Moderator – Kamer Davis, FloodSmart**

- (1) **Cost – Benefit Analysis of FEMA's Levee Assessment Mapping Process (LAMP) Guidance for Communities: A Case Study**, Neftalem Negussie, Greenhorne & O'Mara
- (2) **Flood Mitigation in Virginia, Reducing Future Losses to National Flood Insurance Program**, Robert Coates, Virginia Department of Emergency Management
- (3) **North Run Flood Study – County of Henrico, Virginia**, Michael L. Claud, PE, CFM, Timmons Group; David P. Wilmoth, PE, CFM, PH, Timmons Group
- (4) **From Flood Awareness to Action: Communicating Flood Risk on a Sunny Day**, Kamer Davis, FloodSmart

**Session 6E • Floodplain Management 6 • Moderator – John N. Paine, PE, PH, CFM, URS Corp.**

**Panel Discussion: Lessons Learned From Hurricane Sandy**

- (1) Matthew W. Wall, Virginia Department of Emergency Management
- (2) Craig Wenger, CFM, Michael Baker, Jr., Inc.
- (3) Celeste DeSimone, Gloucester County Codes Compliance-Building Office
- (4) John A. Miller, PE, CFM, CSM, New Jersey Association for Floodplain Management

**11:45 – 1:00 PM Luncheon**

**VLWA Dam Safety Committee Dam Awards:**

**Best Maintained Dam, Privately Owned – Wellesley Dam** in Henrico County owned by the Wellesley Home Owners Association

**Best Maintained Dam, Publically Owned – Pedlar River Dam** in Amherst County owned by the City of Lynchburg

**Best Major Construction or Rehabilitation Projects – Forest Lake Dam Rehabilitation** in Hanover County owned by Hanover County Department of Public Works. Hanover County actually rehabilitated five dams in the last two years and this award reflects the effort they have given to meet the state standards with their dams.

**Most Improved Dam - Cranston Mill Pond** in James City County owned by Cranston Mill Pond L.L.C.

**Keynote Address: Lessons Learned from Superstorm Sandy**, John A. Miller, PE, CFM, CSM, New Jersey Association for Floodplain Management