9:00 am – 4:00 pm  Dam Owner Training (Parlor H, Holiday Inn Select Koger Conference Ctr)

SUNDAY, MARCH 6, 2011
1:00 – 5:00 pm  Engineers Forum (Parlor H, Holiday Inn Select Koger Conference Ctr)
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 Registrant’s Reception

MONDAY, MARCH 7, 2011
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  Douglas W. Domenech, Secretary of Natural Resources, Commonwealth of Virginia

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<th>Track A–Parlor A</th>
<th>Track B–Parlor B</th>
<th>Track C–New River</th>
<th>Track D–Chesterfield</th>
<th>Track E–Parlor E</th>
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9:15 – 10:30  First Concurrent Sessions

Session 1A  Stormwater  Moderator – Seshadri Iyer, URS Corp.
(2) Rain Gauge Network in a Coastal Virginia Community – Jeff Waller, PE, City of VA Beach, Dept. of Public Works
(3) Technology Revitalizes Historic Base – Jamie Weist, PE, Kimley-Horn and Associates, Inc.
(4) Non-Importance of Inflow Hydrographs Under Controlled Outflow – Seshadri Iyer, PhD, PE, CFM, URS Corp.

Session 1B  Dam Safety  Moderator – Robert Bennett, DCR
(1) An Owner Reflects on Compliance with the 2008 Amended Dam Safety Regulations – Steve Shenk, PE, City of Lynchburg, Utilities Dept.
(2) Impact of Virginia Dam Safety Regulations on the City of Norfolk’s In-Town Reservoirs – Adrienne Shaner, EIT, Gannett Fleming, Inc.
(3) Lessons and Observations from DCR Dam Safety Inventory in Pittsylvania Co, VA – Joe Rogers, PE, DCR, Office of Dam Safety

Session 1C  TMDLs 1  Moderator – Deva Borah, Woolpert
(1) Stormwater Quality Devices for Removing Sediments, Nutrients, and Hydrocarbons – Edward Seagle, PE, Woolpert, Inc.
(2) Evaluation of a Nutrient TMDL in an Upper Piedmont River in South Carolina – Debabrata Sahoo, PhD, EIT, Woolpert, Inc.
(3) Dynamic Watershed Simulation Model with Bank Erosion for Developing Sediment TMDL – Deva Borah, PhD, PE, Woolpert, Inc.
(4) The Chesapeake Bay TMDL and Watershed Implementation Plans: Education Virginia’s Stakeholders – Brian Benham, VA Tech, Dept. of Biological Systems Engineering
Session 1D ● Watershed Management 1 ● Moderator – Fred Wilkins, Fairfax Co. SWPD
1) Stormwater Improvement Study for the Putnam County MS4 Coordination Committee – Richard Franzetti, PE, BCCE, LEED AP, Malcolm Pirnie, Inc.
2) James City County: Comprehensive Watershed Management and Stream Restoration for Nutrient Reduction – Barry Moses, PE, James City Co., Daniel Proctor, PE, Williamsburg Environmental Group, Inc.
3) A Sub-watershed Partnership Approach: Rhetoric or Reality? – Fred Wilkins, EIT, Chad Crawford, PE, Fairfax County Stormwater Planning Division

Session 1E ● Floodplain Management 1 ● Moderator – Shane Parson, URS Corp.
1) Bridge Scour Using GIS Integrated Storm Surge Hydrodynamic Modeling, Lesner Bridge Replacement Project, VA Beach, VA, Bridge Scour, New Software and Emerging Science Application (Part 1) – Gamal Hassan, HWR, David Bradshaw, Khalid Hussein, Clark Nexsen Architecture & Engineers
2) Bridge Scour Using GIS Integrated Storm Surge Hydrodynamic Modeling, Lesner Bridge Replacement Project, VA Beach, VA, Bridge Scour, New Software and Emerging Science Application (Part 2) – David Bradshaw, Khalid Hussein, Clark Nexsen Architecture & Engineers, Gamal Hassan, HWR
3) Developing Velocity Distribution for Overbank Areas – Marcel Giovanni Prieto, CFM, Venkata Nimmala, EIT, CFM, Mathini Sreetharan, PhD, PE, CFM, Dewberry
4) Flood Models and the Chesapeake Bay TMDL – John Paine, PE, PH, CFM, URS Corporation

10:30 – 10:45 Coffee Break

10:45 – 12:00 Second Concurrent Sessions

Session 2A ● Stormwater BMPs 1 ● Moderator – Mindy Ruby, Filterra
1) Selecting Structural Stormwater BMPs for the Cost Effective Removal of Specific Non-Point Source Pollutants – Tim MacVitti, Jeff Herr, PE, D.WRE, Brown and Caldwell
2) Arlington County Ballston Pond Retrofit Project – William Springer, PE, Rummel, Klepper & Kahl, LLP
3) Filterra® Bioretention Systems: Advancing Conventional Stormwater Treatment with High Flow Rate Bioretention Design – Mindy Ruby, Filterra Bioretention Systems

Session 2B ● Dam Safety 2 ● Moderator – Greg Paxson, Schnabel Engineering
1) A Comparison Regarding the Use of Downstream Lateral In-flows in Performing a Dam Failure Analysis – Michael Claud, PE, Timmons Group
2) Dam Breach Analysis, Hazard Classification, and Inundation One Mapping: What Your Consultant is Doing to Earn Their Fees – Shannon Cotulla, PE, Hurt & Proffitt, Inc.
4) Reduced Design Floods for Dams – What are the Savings? – Greg Paxson, PE, Schnabel Engineering

1) Engaging in TMDL Development and Implementation – Jennifer Tribo, Hampton Roads Planning District Commission
2) Chesapeake Bay TMDL: A Roadmap for Documenting Reasonable Assurance in Virginia – Tom Singleton, Chad Smith, Dave Tomasko, PhD, PBS&J

Session 2D ● Watershed Management 2 ● Moderator – Courtney Reijo, Virginia Tech
1) Cost-Effectiveness of Pollutant Removal Strategies for Fairfax County, VA – Case Study: Pohick Creek – Kate Bennett, Fairfax County Dept. of Public Works and Environmental Services, Dan Medina, PhD, PE, D.WRE, PBS&J
2) Indirect and Cumulative Impacts Analysis (Watershed Study) – Daren Pait, PE, CFM, Kimley-Horn and Associates, Inc.
3) A Geographical Information System (GIS)-Based Assessment of Riparian Buffer Topography in the Chesapeake Bay Water: Implications for Nitrogen Removal, Courtney Reijo, Virginia Tech
Session 2E  •  Floodplain Management 2  •  Moderator – John Paine, URS Corp.

(1) Flood Hazard Evaluation: Stream Perspective vs. Watershed Perspective – Zhida Song, James, Michael Baker Jr., Inc.
(2) Overview of FEMA Risk MAP Non-Regulatory Datasets and Products – Shane Parson, PE, CFM, URS Corp.
(3) Dam Failure Impact Classes of Virginia Dams – Kaveh Zomorodi, PhD, PE, CFM, Dewberry
(4) The NFIP in Virginia and the Chesapeake Bay Preservation Act, an Unintentional Cooperative Effort, Charley Banks, CFM, DCR, Division of Dam Safety and Floodplain Management

12:15 – 1:15  Luncheon

Keynote Address - David A. Johnson, Director of the Department of Conservation and Recreation

MONDAY AFTERNOON, MARCH 7, 2011

1:30 – 2:45 PM  Third Concurrent Sessions

Session 3A  •  Stormwater BMPs 2  •  Moderator – Rod Frederick, Michael Baker Jr., Inc.

(1) Chemical Treatment of Stormwater-20 Years of Advancements – Jeff Herr, PE, D.WRE, Brown and Caldwell
(2) Construction of BMPs on City Owned Property – Esther Dornin, City of Virginia Beach
(3) EISA Section 438 Stormwater Guidance Overview – Charlene Harper, PE, LEED AP, Timmons Group
(4) Protection Urban Lakes from Urban Pollution – Rod Frederick, PE, D.WRE, F.ASCE, Michael Baker Jr., Inc.

Session 3B  •  Dam Safety 3  •  Moderator – Lisa Cahill, Watershed Services, Inc.

(1) Dams, Monitoring Flows in Emergency Spillways – Amanda Pennington, VA DCR, Division of Dam Safety & Floodplain Management
(2) Removal of Bluebird Dam at the U.S. Dept. of the Interior, National Park Services Rocky Mountain National Park, CO – Charles Karpowicz, PE, Water Resources Management (ret)
(3) Renovating an 100-Year Old Dam to Serve Another Century – Jamie Morris, Western VA Water Authority, David Henderson, AECOM Technical Services, Inc.

Session 3C  •  Ecological Restoration  •  Moderator – Curtis Hickman, Kerr Environmental Svcs

(1) Ecological Effects of Flood Control Dams in Virginia’s Ridge and Valley Ecoregion – Justin Reiske, Emily Robinson, Robert N. Brent, PhD, James Madison University
(2) Regenerative Conveyance Systems-Applying Coastal Plain Outfalls in the Piedmont Region – Ron Tuttle, Catherine Torgersen, Fairfax Co.
(3) Four Decades of Stream Restoration: Where Were We-Where Are We-Where Are We Going? – Larry Mohn, VA Dept. of Games & Inland Fisheries

Session 3D  •  Watershed Management 3  •  Moderator – Ketchem, NRCS

(1) Comprehensive Watershed Planning for Nutrient Reduction in Ellerbe Creek-City of Durham, NC – Sandi Wilbur, PE, City of Durham Stormwater Services Division, Mike Fowler, PE, Brown and Caldwell
(2) Evaluating Site Selection, Monitoring Guidelines and Alternative Substrates for Oyster Reef Restoration – Stephanie Long, Erika Seelenbinder, Jae Yoon, Civil and Environmental Engineering, Old Dominion University
(3) The Use of Rapid Watershed Assessments to Evaluate the Resource Conditions in the Shenandoah River Basin – Alica Ketchem, PE, USDA Natural Resources Conservation Service

Session 3E  •  Floodplain Management 3  •  Moderator – Jeff Smith, Accenture

(1) The ASFPM Foundation – Grant Smith, Dewberry
(2) Rethinking the NFIP – Richard Sobota, FEMA Region III
(3) The Perfect Storm: Story of Survival and Triumph – Gayle Hicks, City of Hampton, Leigh Morgan Chapman, Salter’s Creek Consulting, Inc.
### Session 4A - Stormwater BMPs 3
**Moderator** – Shelly Frie, CH2M HILL

1. **Putting Stimulus Dollars to Work – A Public Private Partnership Using Green Infrastructure to Eliminate CSOs in Lynchburg, VA** – G. Keith Thompson, Jr., PE, LEED AP, Wiley /Wilson, Jeff Scarano, PE, City of Lynchburg
2. **Utilizing Sorbitive Media to Enhance Green Infrastructure Practices** – Bob Gallucci, Imbrium Systems
3. **Low Impact Development and Rainwater Harvesting Strategies for the Urban Environment** – Derek Berg, CONTECH Construction Products
4. **LID Retrofit Nutrient Reduction Accounting Using the Runoff Reduction Method** – Shelly Frie, Howard Lusk, CH2M HILL

### Session 4B - Dam Safety 4
**Moderator** – Thomas Roberts, DCR

1. **Alternatives for Increasing a Dam’s Conveyance Capacity** – Robert Kline, Jr., PE, Gannett Fleming, Inc.
2. **A 3-D Model is Worth a Thousand Cross Sections – Some Examples of Visualization for Analysis and Reporting** – Laura Shearin, PE, Schnabel Engineering
3. **Landscaping Solutions for Embankment Dams** – Bryan Layman, PE, CPSS, AOSE, LEED AP, Joseph Meiburger, PE, CPG, LEED AP, ECS Mid-Atlantic, LLC

### Session 4C - Water Quality 1
**Moderator** – Steve McLaughlin, City of VA Beach

2. **Effectiveness of Adaptive Streambank Fencing at Reducing In-Stream E coli Loads** – Peter O’Donnell, Washington and Lee University
3. **Virginia Beach Use of a Rural/Agricultural BMP – Horse Manure and Shavings Composting Facility** – Steve McLaughlin, City of VA Beach, Dept. of Public Works
4. **Realization of a New Vessel Sewage Pumpout Facility in Coastal Virginia** – Bill Johnston, PE, City of VA Beach, Dept. of Public Works

### Session 4D - Lake Maintenance 1
**Moderator** – Nicki Bellezza, Reston Association

1. **Repairing Leaks in Earthen Dams for Engineers and Sophisticated Dam Owners** – Scott Cahill, Watershed Services, Inc.
2. **Use of Siphons for Pond Drains** – Alex Robinson, EIT, Froehling & Robertson, Inc.
3. **Design Matrix to Guide Shoreline Stabilization Measures for Lakes in Northern Virginia** – Edward Beadenkopf, PE, CFM, URS Corporation
4. **Lake Shoreline Protection in Reston, VA** – Nicki Bellezza, Reston Association

### Session 4E - Floodplain Management 4
**Moderator** – David Preusch, Michael Baker Jr., Inc.

1. **Establishing Statewide Flood Observation & Warning Capability** – Mark Slauter, CFM, VA Dept. of Emergency Management
2. **Mitigation Plan Update: An Opportunity to Mitigate Repetitive Loss Properties** – Union County, PA Case Study – Jen Sparenberg, CFM, Shubha Shrivastava, AICP, CFM, URS Corporation
4. **Use of HAZUS Standard Data for Mitigation Planning, Implications under Risk MAP and for Communities** – Carver Struve, Drew Whitehair, Michael Baker Jr., Inc.
MONDAY EVENING, MARCH 7, 2011

4:45 – 6:00 PM  Reception
6:00 – 6:30 PM  Virginia Lakes and Watersheds Association Business Meeting

TUESDAY MORNING, MARCH 8, 2011

7:00 – 8:00 AM  Virginia Floodplain Management Association Meeting
8:30 – 9:45 AM  Fifth Concurrent Sessions

Session 5A  •  Stormwater in Tidewater  •  Moderator – Lewis White, Parsons Brinckerhoff
(1) Wrath of a Nor’easter: Remedies for Lynnhaven Inlet Neighborhood Flooding – Melissa Pritchard, EIT, LEED AP, Parsons Brinckerhoff
(2) Cleaning the Pipes and Clearing the Air: A Study to Determine if a Storm Sewer System is a Significant Source of Fecal Indicator Bacteria in a Coastal Suburban Neighborhood – Lisa Bass, Parsons Brinckerhoff
(3) Innovative Methods for Nutrient and Sediment Removal – Lewis White, Lisa Bass, Parsons Brinckerhoff

Session 5B  •  Dam Safety 5  •  Moderator – Steve Snell, DCR
(1) Low Level Drain Options for Existing Dams – Austen Bander, Cameron Smith, Bander Smith, LLC
(2) Hazards and Public Safety at Low-head Dams – Dr. Bruce Tschantz, PE, University of Tennessee, Knoxville
(3) Solutions for Improving Fish Passage and Public Safety at Low Head Dams – Paul Schweiger, PE, Gannett Fleming, Inc.
(4) HOA Tax Districts for Dam Safety Repairs – Steve Snell, PE, VA DCR, Dam Safety & Floodplain Management

Session 5C  •  Water Quality 2  •  Moderator – Carolyn Thomas, Ferrum College
(1) Numerical Dispersive Flux Modeling Study for RO Brine Waste Discharge under Tidal Currents – Alireza Shahvari, Ruby Damalie, Jae Yoon, Civil and Environmental Engineering, Old Dominion University
(2) Predicting Effect of a Dam Raise Project on Water Quality – Ben Martin, Dr. Li Ding, Flow Science, Inc.
(3) The Aging (eutrophication) of Reservoirs: A Comparison of Smith Mountain Lake and Claytor Lake Water Quality? – Carolyn Thomas, Delia Heck, Ferrum College

Session 5D  •  Lake Maintenance 2  •  Moderator – Paul Farrell, EnviroSolutions, Inc.
(1) From Unusual and Unique Problems Come Simply But Extraordinary Solutions – Mark O’Sullivan, Godwin Pumps
(2) Barton Dam Lake Dredging Project – Jennifer Solakian, PE, URS, Matthew Meyers, PE, Fairfax County Dept. of Public Works and Environmental Services
(3) Composting Potential of Lake Dredge Material – Paul Farrell, PE, EnviroSolutions, Inc.

Session 5E  •  Floodplain Management 5  •  Moderator – Mark Slauter, VDEM
(1) Basic Concepts and Review Steps for Reviewing Advanced Interconnected Channel and Pond Routing (ICPR) model for LOMR Process – Ekta Amar, CFM, EIT, Leonard Jackson Associates, Mathini Sreetharan, PhD, PE, CFM, Dewberry
(2) Flood Hazard Mapping for Levee Impacted Areas – M. Tariq Makhdoom, PhD., CFM, Mark Hoskins, PE, CFM, Dewberry
(3) Floodplain Analyses – Selection of Appropriate Reach Routing Method for Watershed Models – Tamrat Bedane, CFM, Srikanth Koka, CFM, Dewberry
(4) Inter-basin Flow – Developing Flood Elevations and Floodways for an Urban Floodplain – Cheryl Hannan, PE, CFM, Dewberry, Ekta Amar, DFM, Leonard Jackson Associates

9:45 – 10:15  Coffee Break

10:15 – 11:30  Sixth Concurrent Sessions
Keynote Address: Mark Crowell, FEMA – “Impact of Climate Change on the NFIP”

This study was recommended by a 2007 Government Accountability Office report titled “Climate Change - Financial Risks to Federal and Private Insurers in Coming Decades are Potentially Significant.” The report recommends that FEMA analyze the potential long-term implications of climate change on the NFIP and report the findings to Congress.