Cities of the Future 2010
Urban River Restoration 2010

March 7-10, 2010
Boston Marriott Cambridge
Boston, Massachusetts, USA

Both conferences are held in cooperation with the New England Water Environment Association, the Water Environment Research Foundation, the Environmental & Water Resources Institute, the American Society of Landscape Architects, the New England Interstate Water Pollution Control Commission, and the American Planning Association – Massachusetts Chapter. Cities of the Future 2010 is organized jointly with the International Water Association, and is also supported by the National Onsite Wastewater Recycling Association. Urban River Restoration 2010 is also supported by American Rivers.

Joint Opening General Session

Monday, March 8, 2010 **Salon 3**
8:30am – 11:45am **2.75 PHDS**

8:30am – 9:00am Welcome
Paul Freedman, *LimnoTech*
President, *Water Environment Federation*

Erin Mosley, *CH2M Hill*
NEWEA Past President

Tom Pedersen, *CDM*
Cities of the Future Conference Chair

Tim Dekker, *LimnoTech*
Urban River Restoration Conference Chair

Keynote Presentations

Paul Brown, AICP
CDM
Executive Vice President, Global Market Development
Technical Director, Neysadurai Centre for Integrated Water Resources and Urban Planning, Singapore

Michael Van Valkenburgh
Michael Van Valkenburgh Associates, Inc.
Principal
Charles Eliot Professor in Practice of Landscape Architecture, Harvard Graduate School of Design; Lead Principal, Lower Don Lands Urban Design Plan and Don River Park, Toronto

Panel Discussion

Moderator: **Paul Freedman**, *LimnoTech*
President, *Water Environment Federation*

Panelists: **Henrietta Davis**, **Councilor, *City of Cambridge***

Paul Brown*,* Executive Vice President, *CDM*

Michael Van Valkenburgh*,* Principal, *Michael Van Valkenburgh Associates, Inc.*

Lynne A. Hamjian, Surface Water Branch Chief, Office of Ecosystem Protection, *U.S. EPA Region 1*

Session 1 (COTF): Green Cities

Monday, March 8, 2010
1:30pm - 5:00pm

Moderator: TBD

1A	**1:30pm**	**Creating a City of Gardens and Water - Singapore's Active, Beautiful, Clean Waters Programme** K.G. Yap, A. Koh, *PUB, the National Water Agency, Singapore*
1B	**2:00pm**	**Adapting to Climate Change with Green Infrastructure: Opportunities in the Charles River Watershed** K. Bowditch, J. Wood, *Charles River Watershed Association*
1C	**2:30pm**	**An Ecosystems Services Approach to Public Facilities Planning: On Developing an Implementation Plan** A. Yap, *City of Damascus*; D. Green, *City of Damascus & CH2M HILL*; G. Honan, M.J. Kealy, *CH2M HILL*
	3:00pm	*Networking Break*
1D	**3:30pm**	**Triple Bottom Line Approach to Sustainable Remediation, Case Study: Wichita, Kansas** D.L. Brown, R.L. Olsen, P. Anderson, *CDM*; S. Maloney, *City of Wichita, KS*
1E	**4:00pm**	**The Green Soup to Tree Nuts of Sustainable Community Design** W. Goldsmith, D. Bitsko, J.S. Burkhart, *Bioengineering Group*
1F	**4:30pm**	**Quantifying Thermal Impacts of Green Infrastructure: Review and Gaps** C. Clark, *Argonne National Laboratory*; B. Busiek, *LimnoTech*; P. Adriaens, *University of Michigan*
Poster		**Milwaukee's Green Roofs: Sowing the Seeds of Prosperity for People and the Planet** T. Perez, G. Radford, *City of Milwaukee*; C. Schultz, K. Sands, K. Shafer, *Milwaukee Metropolitan Sewerage District*
Poster		**Introduction of Bio-Shafts to Urban Core Environment** D. D'Alessandro, *D'Alessandro & Associates*

Session 2 (COTF): System Cities: The New Paradigm

Monday, March 8, 2010
1:30pm - 5:00pm

Moderator: TBD

2A	**1:30pm**	**Locating Water-Cycles in the Lower Lea Watershed** T.H. Teh, S. Bell, *University College London*
2B	**2:00pm**	**Masdar City's Integrated Approach to Sustainability** M. Hartman, *CH2M HILL*; M.B. Knell, *MASDAR*; J. Witherspoon, *CH2M HILL*
2C	**2:30pm**	**Urban Water and Energy Use - From Current US Use to Cities of the Future** V. Novotny, *Northeastern University*
	3:00pm	*Networking Break*
2D	**3:30pm**	**DCWASAs Certifiable GHG Inventory and Projected GHG Reductions From Cambi/Anaerobic Digestion Upgrades** J. Willis, *Brown and Caldwell*; W. Bailey, E. Jolly, S. Murthy, C. Peot, *District of Columbia Water and Sewer Authority*; D. Trueblood, *Brown and Caldwell*
2E	**4:00pm**	**Cities and Their "Water Socio-Footprint": A Dynamic Socio-Technical Network** O. Barreteau, G. Abrami, *Cemagref, UMR G EAU*; F. Cernesson, *AgroParisTech,UMR G TETIS*; R. Ducrot, *Cirad, UMR G EAU*; P. Garin, *Cemagref, UMR G EAU*; P. Le Goulven, *IRD, UMR G EAU*; P. Maurel, *Cemagref, UMR TETIS*; A. Richard-Ferroudji, *Cemagref, UMR G EAU*; V. Souchère, *INRA, UMR SADAPT*; C. Werey, *Cemagref, UMR GSP*
2F	**4:30pm**	**Optimizing Information Management for Sustainable Project Decisions** E. DeGeorge, *MWH Global*; J. Loucks, *MWH Americas*

Session 3 (URR): The Science of Urban Rivers: Technical Challenges and Solutions

Monday, March 8, 2010
1:30pm - 5:00pm

Moderator: Richard Isleib, *HydroQual Inc.*

3A	**1:30pm**	**Challenges with Defining Fisheries Targets in Large Urban Systems - The Chicago Area Waterway System** D. Bradley, *LimnoTech*; J. Wasik, T. Granato, S. Dennison, *Metropolitan Water Reclamation District of Greater Chicago*; S. Bell, *LimnoTech*
3B	**2:00pm**	**Use of a Two-Dimensional Water Quality Model as Both an Analytical Tool and a Communications Tool in the Restoration of Water Quality in the Charles River** D.E. Walker, *AECOM*; D.A. Kubiak, *Massachusetts Water Resources Authority*
3C	**2:30pm**	**Linking Goals and Priorities to Good River Restoration Engineering Design: Herrick Hollow Creek Restoration, New York** S. Sangameswaran, J. Lederer, D. Smith, J. Rowan, W. Goldsmith, *Bioengineering Group*
	3:00pm	*Networking Break*
3D	**3:30pm**	**The Necessity of Integrating Basin Management in Urban River Restoration** K.E. Kelley, B. Kolb, J. Lefkowitz, G. Croom, *CDM*
3E	**3:45pm**	**Richmond, Virginia Combines Sustainable Environmental Practices, Beautification and History to Create a Premier Livable Urban Environment** C.L. Beschler, R.C. Steidel, *City of Richmond, Virginia*; F.E. Maisch, Y. Fang, *Greeley and Hansen*
3F	**4:00pm**	**The Basis of Design for Rehabilitation of the Underwood Creek Channel and Floodplain, An Urban Stream in Milwaukee, Wisconsin** D.E. Miller, *Mainstream Restoration, Inc.*; T.R. Sear, *Short Elliott Hendrickson, Inc.*; R.M. Chmielewski, *Ecological Services of Milwaukee, Inc.*; D. Fowler, *Milwaukee Metropolitan Sewerage District*
	4:15pm	**MODERATED DISCUSSION with Audience Participation**

Session 4 (URR): Multifaced Appraoches to Urban River Restoration: Case Studies

Monday, March 8, 2010
1:30pm - 5:00pm

Moderator: Wendi Goldsmith, *Bioengineering Group*

4A	**1:30pm**	**Restoring the Luster to Boston and Brookline's Historic Emerald Necklace** B.R. Conklin, *CDM*
4B	**2:00pm**	**Combining Flood Mitigation and River Restoration Opportunities to Achieve Public Benefits and Ecologically Sustainable Solutions in Peabody, Massachusetts** J. Doyle-Breen, A. Weieneth, *AECOM*; B. Haney, *City of Peabody*
4C	**2:30pm**	**Bringing Down the Wall - Enhancing an Urban River and Park in Fitchburg, Massachusetts** C. Delpapa, *MA Department of Fish & Game*; D. Streb, M. O'Hara, *Fitchburg Community Development Dept.*; A. Selle, W. Norris, *Inter-Fluve, Inc.*
	3:00pm	*Networking Break*
4D	**3:30pm**	**The Rouge River National Wet Weather Demonstration Project: Eighteen Years of Documented Success** J.W. Ridgway, *Alliance of Rouge Communities*
4E	**4:00pm**	**The Ala Wai Watershed Project - Formulating Objectives and Building Stakeholder Acceptance for River Restoration and Flood Management in Hawaii's Most Populated Watershed** C.S. Barger, *U.S. Army Corps of Engineers*; L. Kettley, *CH2M Hill*; M.R. Tompkins, *NewFields River Basin Services, LLC*
4F	**4:30pm**	**Gilkey Creek Relocation and Restoration Project in Flint, Michigan** P. Evanoff, *JJR, LLC*
Poster		**The Lower Mystic River Corridor Strategy: Six Cities and a Regional Planning Agency Working Together to Achieve the Full Potential of the Lower Mystic** J. Blaustein, *Metropolitan Area Planning Council*

Session 5 (COTF): Metrics and Benchmarking: Driving Innovation

Tuesday, March 9, 2010
8:30am - 12:00pm

Moderator: TBD

5A	**8:30am**	**International Benchmarking of Sustainability Practices** L.K. Lampe, J. Hawkins, *Black & Veatch*
5B	**9:00am**	**Towards the Development of a Rating System for Sustainable Infrastructure: A Checklist or a Decision-Making Tool?** A. Georgoulias, J. Allen, L. Farley, J. Kher Kao, I. Mladenova, *Harvard University Graduate School of Design*
5C	**9:30am**	**Sustainable Growth – A Partner in Building the "Communities of the Future" – Cincinnati MSD's Approach to Align Economies, Communities and the Environment** J.A. Parrott, *Metropolitan Sewer District of Greater Cincinnati*
	10:00am	*Networking Break*
5D	**10:30am**	**Optimizing Technology and Economics - Utility Wide Strategic Energy Planning for the Philadelphia Water Department** W.W. Allis, *Black & Veatch*; C. Crockett, *Philadelphia Water Department*; N. Rolph, M. Kleveter, P. Kumar, *Black & Veatch*
5E	**11:00am**	**Collaborative Teaming Drives Successful Implementation of Sustainable Water Project** C.N. Hurley, C.A. Feehan, J.W. Norton, Jr., *MWH Americas, Inc.*
5F	**11:30am**	**Integrated Systems Modeling for Sustainable Urban Development** W. Cesanek, A. Cannan, O. Sellers-Garcia, D. Spector, *CDM Neysadurai Centre for Water Resources & Urban Planning*

Session 6 (COTF): Decentralized Networks in the New Paradigm

Tuesday, March 9, 2010
8:30am - 12:00pm

Moderator: TBD

6A	**8:30am**	**Rethinking Sustainable Sanitation for the Urban Domain** C. Lüthi, *Eawag - Swiss Federal Institute of Aquatic Science and Technology*; J. McConville, *SEI*; A. Norström, *Swedish Water House*; A. Panesar, R. Ingle, *GTZ*; D. Saywell, *IWA*; T. Schütze, *TU-Delft*
6B	**9:00am**	**Re-Engineering the Engineering Profession for the 21st Century** M.J. Walsh, *CDM*
6C	**9:30am**	**The Cost of Uncertainty and the Value of Flexibility in Water and Wastewater Infrastructure Planning** T. Hug, *Eawag*; D. Dominguez, *Bern State Office for Water and Waste*; M. Maurer, *Eawag*
	10:00am	*Networking Break*
6D	**10:30am**	**New Concepts for Urban and Suburban Water Management Using Distributed Systems** V. D'Amato, *Tetra Tech, Inc.*
6E	**11:00am**	**Enabling Decentralized Urban Sewage Infrastructure by Facilitating Successful Organisations to Provide Long-Term Management** C. Mitchell, K. Abeysuriya, J. Willetts, D. Fam, *University of Technology Sydney*
6F	**11:30am**	**Technology Roadmap for Sustainable Wastewater Treatment in a C-Constrained World** L. Fillmore, *Water Environment Research Foundation*; G.V. Crawford, J. Sandino, *CH2M-HILL*
Alternate		**Network Infrastructure – Cities of the Future** V.I. Nelson, *Coalition for Alternative Wastewater Treatment*
Poster		**The Application of Life Cycle Assessments for Water and Wastewater Facilities' Planning** S. Tarallo, A. Shaw, G. Hunter, R. Kuhns, L. Lampe, *Black & Veatch*
Poster		**Food Waste to Renewable Energy** D. Parry, S. Vandenburgh, T. Raine, *CDM*; K. Christiansen, *Gaia Strategies*; M. Keleman, *Insinkerator*

Session 7 (URR): Restoration Objectives and Public Engagement

Tuesday, March 9, 2010
8:30am - 12:00pm

Moderator: Bryce Lawrence, *Patti Banks Associates*

7A	**8:30am**	**Community-Driven River Restoration: Buffalo River Area of Concern, New York** J.S. Jedlicka, M. Wooster, K. Winkler, *Buffalo Niagara Riverkeeper*
7B	**9:00am**	**Integrated Watershed Approach to Restoring the Tacony Creek Valley in Philadelphia** S.D. Peyton, R. Howley, W.C. Fleece, T.J. Taylor, D.L. LaBrake, L. Peoples, *Stantec Consulting Services Inc.*
7C	**9:30am**	**Bringing Social Change and Urban River Restoration Together Through Public Involvement and Spatial Analysis** B.T. Lawrence, *Patti Banks Associates*; C. Grimaldi, *Brush Creek Community Partners*; R. Knott, *The Historic Manheim Park Association*; S. Hardy, R. Stroer, *BNIM*; K. Pyakuryal, *UMKC*
	10:00am	*Networking Break*
7D	**10:30am**	**Finding a Balance: Stream Restoration Objectives in a Vertically and Laterally Constrained Urban River** R.V. Hopper, M.K. Sloop, *CDM*
7E	**10:45am**	**South Platte River Greenway Master Planning** T. Bogan, T. Johnson, *CDM*; J. Shoemaker, *Greenway Foundation*; M. Grimes, *MDG Consultants*
7F	**11:00am**	**FREEing the Quequechan River** H. Grosvenor, *Newport Collaborative Architects, Inc.*; D.A. Carey, *CoastalVision*
	11:15am	**MODERATED DISCUSSION with Audience Participation**

Session 8 (URR): Addressing Physical Contraints

Tuesday, March 9, 2010
8:30am - 12:00pm

Moderator: Michael Donahue, *URS Corp.*

8A	**8:30am**	**Rio Salado Environmental Restoration, Phoenix, AZ** J. S. Bays , *CH2M HILL*
8B	**9:00am**	**Kinnickinnic River Flood Management and Watercourse Rehabilitation, Achieving Multiple Design Objectives, Milwaukee, Wisconsin** T.R. Sear, *Short Elliott Hendrickson*; P. Elliott, *Milwaukee Metropolitan Sewerage District*
8C	**9:30am**	**College Gardens: Synthesis of Stream Restoration and Storm Water Management for an Urban Park Renewal** T. Schueler, *McKim & Creed, PA*; L. Soukup, *City of Rockville*; J. Fetchu, *Charles P. Johnson & Assoc.*
	10:00am	*Networking Break*
8D	**10:30am**	**Case Study: Central Arroyo Seco Stream Restoration Near Downtown Los Angeles** W.R. Katagi, T. Johnson, *CDM*; T. Brick, *Arroyo Seco Foundation*
8E	**11:00am**	**Understanding the Elements of Restoration: Case Study of Urban Impoundments/Oxbows** J. O'Meara, S.K. Sinha, L. Huntington, Z. Ball, *Environmental Consulting & Technology, Inc.*
8F	**11:30am**	**Integrating Sustainable Green Solutions Into Urban Design: The Marina District Riverfront Redevelopment Project** T.M. Evans, *URS Corporation*
Poster		**Effectiveness of Environmentally Sensitive Site Design and Low-Impact Development on Storm Water Runoff Patterns at Partridgeberry Place LID Subdivision in Ipswich, MA** R. Fitsik, *Geosyntec Consultants*

Session 9 (COTF): Engage, Collaborate, and Innovate!

Tuesday, March 9, 2010
1:30pm - 5:00pm

Moderator: TBD

9A	**1:30pm**	**Collaborate and Integrate or Evaporate! A Work in Progress From Melbourne Australia on Creating a Water Smart City** J. Ewert, H. Ryan, *Melbourne Water Corporation*
9B	**4:00pm**	**Marina Barrage: The Community Engagement Approach as a Paradigm for Urban Solutions in Cities of the Future** B.M. Harley, *CDM*; K.G. Yap, *PUB Singapore*
9C	**2:30pm**	**Providing a Resilient Framework for Stakeholder Engagement Through Learning Alliance: The Case of SWITCH Learning Alliance Approach in Sub-Saharan Africa** B. Darteh , *Kwame Nkrumah University of Science and Technology*; O. Cofie, L. Raschid-Sally, *International Water Management Institute*; E. Awuah, *Kwame Nkrumah University of Science and Technology*
	3:00pm	*Networking Break*
9D	**3:30pm**	**Integrating Water Infrastructure in a New Paradigm for Sustainable, Resilient Communities** T. Clements, V. D'Amato, *Tetra Tech*; T. Taylor, *Electric Power Research Institute*
9E	**2:00pm**	**A Tale of Two Models: How Agent Based Modeling Filled in the Human Variables of Hydrologic Modeling for Low Impact Development in Somerville, MA** C. Carlson, *University of New Hampshire*; O. Barreteau, *Cemagref*; K. Foltz, *MIT*; P. Kirshen, *Battelle*; J. Limbrunner, *HydroLogics*
9F	**4:30pm**	**4-A Collaborative: Kansas City Design Professionals for Regional Sustainability** A.N. Sauer, B.R. Macke, *CDM*
Poster		**Alewife Reservation - A Case Study for Implementing Restoration Strategies in an Urban Wild** D. Bitsko, *Bioengineering Group*

Session 10 (COTF): Governance and Cities of the Future

Tuesday, March 9, 2010
1:30pm - 5:00pm

Moderator: TBD

10A	**1:30pm**	**Water Reuse in Future Cities** E.A. Clerico, *Alliance Environmental*
10B	**2:00pm**	**Local Water Managers and Statewide Integrated Water Resource Policy - A Business Perspective** M.A. Girts, *CH2M HILL*; G. Achterman, *Oregon State University*; D. Wyse, *Oregon Business Council*
10C	**2:30pm**	**Institutional Challenges to System Innovation in Wastewater Management – The Case of Urine Diversion in Sweden** D. Fam, C. Mitchell, K. Abeysuria, *University of Technology, Sydney*
	3:00pm	*Networking Break*
10D	**3:30pm**	**Institutional and Organizational Contexts for Sustainable Innovations in Sanitation** J. Markard, C. Lüthi, *Eawag - Swiss Federal Institute of Aquatic Science and Technology*
10E	**4:00pm**	**Governance in Building a 21st Century Water Infrastructure** P. Schwartz, *Clean Water Action*
10F	**4:30pm**	**Triple Bottom Line Benefits from Economic Development** M. Musgrave, *MWH Global*; D. Sherman, *City of Indianapolis*; E. DeGeorge, *MWH Global*

Session 11 (URR): Creating and Measuring the Value of Urban Rivers

Tuesday, March 9, 2010
1:30pm - 5:00pm

Moderator: Ted Graham, *Metropolitan Washington Council of Governments*

11A	**1:30pm**	**Challenges to Returning Public Access Swimming to the Charles River in an Urban Environment** K. Patterson Greene, *Charles River Conservancy*; M. Nelson, *University of Massachusetts Boston*; F. Hellweger, *Northeastern University*
11B	**2:00pm**	**Holistic Water Management Creates Valued Urban Water Assets in Singapore** B.M. Harley, *CDM*; K.G. Yap, *PUB Singapore*
11C	**2:30pm**	**Regenerating Rivers to Sustain Communities: A Tale of Two Cities** J. Kulik, *Green_Space Planning, LLC*; S. Jordan, *Civitas Inc.*
	3:00pm	*Networking Break*
11D	**3:30pm**	**Non-Market Valuation of Water Quality Along the Ohio River** S. Vedachalam, M. Hnytka, B.L. Sohngen, F.J. Hitzhusen, *The Ohio State University*
11E	**4:00pm**	**Urban Water Bacterial Source Tracking** T. Borci, L. O'Neill, *U.S. EPA*
11F	**4:30pm**	**Yes We Can! Reviving Lost Water Resources Functions in Urban Environments** W. Goldsmith, D. Bitsko, J. Rowan, J.S. Burkhart, *Bioengineering Group*

Session 12 (URR): Texas and Other Foreign Countries

Tuesday, March 9, 2010
1:30pm - 5:00pm

Moderator: Cheri Salas, *CH2M HILL*

12A	**1:30pm**	**Rio Bogotá Environmental Recuperation and Flood Control Project** C. Yee-Batista, *The World Bank*; J.M. Rincón, *Corporación Autónoma Regional de Cundinamarca*; G. Browder, *The World Bank*; A. Acosta, R.A. Catacoli, *Corporación Autónoma Regional de Cundinamarca*
12B	**2:00pm**	**Integrating Hydrology, Ecology and River Geomorphology into Urban Landscape Design: The Lower Don Lands Naturalization Project** T.J. Dekker, D. Lautenbach, *LimnoTech*; S. Apfelbaum, *Applied Ecological Services*; G. Shepard, *Michael Van Valkenburgh and Associates*; B. Webster, *WATERFRONToronto*
12C	**2:30pm**	**TBD**
	3:00pm	*Networking Break*
12D	**3:30pm**	**Fort Worth Central City - Revitalization of an Urban Floodway** J.D. Keith, *CDM*
12E	**3:45pm**	**The Trinity River Corridor Project in Dallas, Texas: Enhancing an Urban Ecosystem and Reviving River and Floodplain Open Space to Create Future Sustainable Development Opportunities** J. Parrish, *CH2M HILL*; I. Bunster-Ossa, *Wallace, Roberts, and Todd*; M. Tompkins, *NewFields River Basin Services*; M. Bastian, *CH2M HILL*
12F	**4:00pm**	**Reforestation of the Mission Reach of the San Antonio River** R.N. Thomas, *Jacobs Engineering Group*
	4:15pm	**MODERATED DISCUSSION with Audience Participation**