

University of Louisville

Incorporating Water Management into the Community Planning Process

Water Management Workshop

August 16 – 17, 2012

UNIVERSITY OF
LOUISVILLE
CENTER FOR ENVIRONMENTAL
POLICY & MANAGEMENT

Disclaimer: The information provided at this Workshop by the Water Infrastructure Capacity Building Team does not constitute legal advice or legal representation.

Welcome

Thank you for joining us for the Incorporating **Water Management into the Community Planning Process Workshop**. This workshop is designed to build the capacity of HUD Sustainable Communities and EPA grant recipients to face water management issues within their communities.

Topics at this workshop address both policy and technical issues communities may face when seeking to communicate with their community about changes in the way water resources are preserved. Peer learning is an important component of this workshop which is designed to encourage interaction both between participants and with the experts brought in to speak about specific issues. This format should allow community members to find answers to the actual concerns they bring with them to the workshop. Where possible, we have avoided lectures that may be either too general or too specific for the pragmatic needs of participants at this workshop.

Thank you for attending and we hope this event is valuable to you. Please fill out the evaluation form provided in your folder to assist us with future events.

About the Sustainable Communities Capacity Building Program

Through a cooperative agreement with the U.S. Department of Housing and Urban Development (HUD) and the U.S. Environmental Protection Agency (EPA), the Water Resource Capacity building team provides capacity building and technical assistance to HUD and EPA award recipients. The capacity building teams are forming networks among the grantees to exchange ideas on successful strategies, lessons learned, and emerging tools. This work will strengthen the capacity of grantee communities to create more housing choices, make transportation more efficient and reliable, make more efficient investment in water and wastewater infrastructure, and build vibrant, healthy and economically prosperous neighborhoods. Grantees and their partners can access resources, network with their peers, and find information about upcoming events on the SC Learning Network, available here: <http://sclearningnetwork.org/>.

This program is a component of the Partnership for Sustainable Communities, an innovative interagency collaboration launched by President Obama in June 2009, between HUD, EPA and DOT to lay the foundation for a 21st century economy by creating more financially, environmentally, and socially sustainable communities. More information about the Partnership and additional resources can be found here: <http://www.sustainablecommunities.gov>.

About the Water Infrastructure Capacity Building Team

The Water Infrastructure Capacity Building Team is led by the Environmental Finance Center at the University of Louisville (UofL) and includes members of the Environmental Finance Center Network (EFCN), a national partnership of ten public universities funded in part by US EPA and specializing in the questions of how to pay for environmental compliance and improvement. The team also includes three other UofL centers, the Center for Hazards Research and Policy Development, the Center for Infrastructure Research, and the Center for Land Use and Environmental Responsibility. The team's technical assistance offerings will help communities create and implement complete land use development/re-development and transportation plans that take into account water infrastructure. This includes but is not limited to water conservation and protection, wetland preservation, stormwater and wastewater management, flood hazard mitigation planning, environmental justice and water, sustainable water utility financing, coordination with water utilities, and utility asset management.

Agenda

Thursday, August 16th

8:30 a.m. Registration and Networking

Coffee and continental breakfast are provided.

9:00 a.m. Welcome and Purpose

Lauren Heberle, University of Louisville Center for Environmental Policy and Management and the Environmental Finance Center Region 4

Melissa Kramer, US Environmental Protection Agency

Logistics and the agenda are outlined. Each participant is asked for a two-minute overview of their project.

9:45 a.m. Three Strategies for Effectively Integrating Water into Sustainable Community Development

Craig Anthony (Tony) Arnold, University of Louisville Center for Land Use and Environmental Responsibility

Three strategies are introduced that have a high potential of long-term effectiveness as over-arching principles and processes for integrating water into sustainable community development.

10:45 a.m. Integrating Land Development Codes with Water Infrastructure

Lauren Heberle and Carol Norton, University of Louisville Center for Environmental Policy and Management and the Environmental Finance Center Region 4

Opportunities to update land use regulations to promote better water management are presented.

12:00 p.m. Lunch

Time set aside to network.

1:00 p.m. Hazard Mitigation Planning

Josh Human, Andrea Pompei, and Reggie Ferreira, University of Louisville Center for Hazards Research Workshop participants are introduced to the field of hazard mitigation planning and are provided an opportunity to outline and discuss outreach strategies that engage diverse segments of the population during the plan development process. Special emphasis is placed on the National Flood Insurance program (NFIP) and ways to achieve additional Community Rating System (CRS) credits through collaborative planning.

3:00 p.m. FEMA RiskMap, Floodplain Mapping, and Outreach

Louie Greenwell, Stantec

This session explains how FEMA's RiskMAP (Mapping, Assessment, and Planning) products will provide a community with better tools to influence flood-risk awareness and mitigation.

- 4:00 p.m. Case Study: Sanitation District 1 of Northern KY and the City of Covington (KY)**
Samantha Brown, Environmental Engineer, Water Resources Department, Sanitation District 1 of Northern KY
This case study provides an opportunity to learn how SD1, the second largest sewer district in Kentucky, and the city of Covington partner to include green infrastructure on most of the city's construction projects.

Friday, August 17th

- 8:30 a.m. Breakfast and Networking**
- 9:00 a.m. Recap of Material from Thursday**
- 9:30 a.m. MSD's Green Infrastructure Incentives Program**
Tom Rockaway and Josh Rivard, University of Louisville Center for Infrastructure Research
Wes Sydnor, Louisville Metropolitan Sewer District (MSD)
The speakers provide an overview of MSD's Green Infrastructure Incentive Program specifically detailing the development of the incentive's pricing structure and the overarching goals of the program.
- 10:30 a.m. MSD's Green Stormwater Mitigation Infrastructure Program**
Tom Rockaway and Josh Rivard, University of Louisville Center for Infrastructure Research
John Ricketts, URS Corporation,
Current stormwater mitigation projects in Louisville are presented as a case study. Specifically, the panel provides information on the goals of the project, the development process, design principles and the initial performance results of monitored green installations.
- 11:30 a.m. Wrap-up**
A recap of the workshop and final Q & A.

Workshop Speakers

Craig Anthony (Tony) Arnold, J.D.

Boehl Chair in Property and Land Use, Professor of Law, Louis D. Brandeis School of Law, University of Louisville

Affiliated Professor of Urban Planning, Department of Urban and Public Affairs, University of Louisville
Chair, Center for Land Use and Environmental Responsibility, University of Louisville

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Tony Arnold is the Boehl Chair in Property and Land Use, Professor of Law, and Affiliated Professor of Urban Planning at the University of Louisville, where he also chairs the Center for Land Use and Environmental Responsibility. He has received national and international recognition for his interdisciplinary research at the intersection of land use planning and regulation, water law and policy, environmental conservation and sustainability, and property rights and interests. His works have been widely cited and used not only by scholars in many disciplines but also by government agencies at all levels, industry and business groups, and environmental and community-based groups.

Professor Arnold received his Doctor of Jurisprudence with Distinction from Stanford University, and has taught at Stanford University, the University of Florida, the University of Houston, the University of Wyoming, the University of Puerto Rico, and Chapman University. He clerked for a federal appellate judge, was a city attorney in Texas, served as Chairman of the Planning Commission of Anaheim, California, and has served on many nonprofit boards and government commissions in the fields of community development, housing, urban planning, and environmental conservation and sustainability.

Samantha Brown, E.E.

Environmental Engineer, Sanitation District No. 1

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Samantha Brown is an Environmental Engineer with the Water Resources Department at Sanitation District No. 1 (SD1), Northern Kentucky's storm water and wastewater utility. Samantha joined SD1 in 2008. Samantha is currently responsible for implementing Northern Kentucky's Regional Storm Water Program on behalf of 33 Northern Kentucky communities to ensure compliance with EPA storm water regulations. Additionally, she is responsible for the development and implementation of SD1's green infrastructure program which focuses on using natural features and processes to effectively manage storm water runoff. Samantha currently serves on the Kentucky Stormwater Association Board and several other stormwater related committees.

Samantha has a Bachelor of Science degree in Civil Engineering from the University of Cincinnati.

Reggie Ferreira

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Reggie Ferreira is a PhD candidate at the University of Louisville. His dissertation is focused on disaster resilience. Reggie has international working experience being involved with projects in Southern Africa and local projects in the United States. Currently Mr. Ferreira is working at the Center for Hazards Research and Policy Development. He is adjunct faculty at the Kent School of Social Work where he is teaching part-time courses in research and disaster management. With seven years of disaster management experience, his research focus is on community and individual resilience within a disaster context. Currently he is conducting research in the area of evidence based practice, community resilience, indigenous knowledge, social vulnerability with a specialization on special needs population and disaster preparedness.

Louie Greenwell, GISP, CFM

Principal, Stantec Consulting Services
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Louie Greenwell began his Geographic Information Systems (GIS) career in 1992 and currently serves as the GIS Practice Leader for Stantec Consulting Services. He has a diverse background in GIS implementation that has covered many levels of federal, state and local government. His experience includes implementation planning, applications and database development, infrastructure and asset management, floodplain management and flood risk mitigation.

Louie has a Bachelor's of Science in Geography from the University of Louisville and is a member of the Association of State Floodplain Managers (ASFPM) and the KY Association of Mitigation Managers (KAMM).

Lauren Heberle, Ph.D.

Director, Center for Environmental Policy and Management and the Environmental Finance Center:
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Dr. Lauren C. Heberle is the Associate Director of the Center for Environmental Policy and Management and Director of the Environmental Finance Center Serving EPA Region 4. She is also an Assistant Professor of Sociology and teaches environmental and social policy courses. Her expertise is in community participation in environmental decision making. Her areas of research include urban redevelopment, environmental policy, environmental justice, and sustainable development. She serves as a member of or expert witness to a variety of local and federal task forces and committees.

R. Josh Human, M.U.P.

Director, Center for Hazards Research and Policy Development, University of Louisville
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R. Josh Human is the Director for the Center for Hazards Research and Policy Development at the University of Louisville. Since joining the Center in 2003, he has managed and overseen numerous Hazard Planning research projects ranging across multiple disciplines. Josh is the author of State (Enhanced), Local and University Hazard Mitigation plans and several of his plans and processes have been recognized by FEMA as best practice examples and models. He is an advocate of the use of Geographic Information Systems (GIS) within the world of planning and has presented on the use of GIS and hazard planning; he's continued to promote the use of GIS through all the projects he completes.

Josh has several publications and is recognized as one of the leading experts in the hazard research field. He is a founding member, past chair and current board member of the Kentucky Association of Mitigation Managers which is the state chapter of the Association of State Floodplain Managers. In addition to his duties at the Center for Hazards, Josh is the principal of RJH Planning LLC, a planning company that completes small scale hazard planning projects. His research interests include the Resiliency, Emergency Management Life Cycle, Homeland Security, GIS, Regional Planning and the links between GIS technology and hazard research. His educational background was achieved in geography and regional planning from the University of Kentucky and the University of Tennessee.

Melissa Kramer, Ph.D.

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Melissa Kramer received a Bachelor's of Science in Biology from Penn State University and a Ph.D. in Evolution and Population Biology from Washington University in St. Louis. She began working at the U.S. Environmental Protection Agency in 2002 as an AAAS Science and Technology Policy Fellow. She currently works in EPA's Office of Sustainable Communities where she focuses on water and wastewater infrastructure issues, stormwater, and green infrastructure approaches.

Carol Norton, AICP

Assistant Director, Environmental Finance Center: Serving EPA Region 4, University of Louisville
Program Manager, Center for Environmental Policy and Management, University of Louisville
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Carol Norton is the Assistant Director of the Environmental Finance Center which serves EPA Region 4 and a Program Manager with Center for Environmental Policy and Management at the University of Louisville. She is a certified planner with the American Planning Association and earned her

Master degree in Urban Planning (MUP) from the University of Louisville and a Bachelor of General Studies (BGS) from Indiana University Southeast.

Her previous work included a public sector internship on Town and Country planning in England and serving as a planning commissioner in Corydon, Indiana and Louisville, Kentucky, as well as serving on the Metro Louisville Landmarks Commission.

As Assistant Director, she is currently involved in the writing, editing and distribution of practice guides throughout Region 4 – the Southeast – in an effort to increase education about environmental planning, sustainable development, water quality and community revitalization. She has also worked on projects that include land use and housing inventories and affordable housing policies and practices. She has also co-authored the *Kentucky Wet Growth Tools for Sustainable Development: A Handbook on Land Use and Water for Kentucky Communities* with Professor Tony Arnold and Dustin Wallen of the U of L Center for Land Use and Environmental Responsibility.

Andrea Pompei, M.P.A., M.U.P.

Project Manager, Center for Hazards Research and Policy Development, University of Louisville
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Andrea Pompei currently serves as Project Manager for the Center for Hazards Research and Policy Development (CHR) at the University of Louisville, where she has worked on a variety of hazard mitigation focused projects; she has been with the CHR for four years. In addition to developing local natural hazard mitigation plans in accordance with FEMA’s Disaster Mitigation Act of 2000, she led the development of community preparedness planning guidance for pandemic, and currently serves as a technical partner for the HUD Sustainable Community Capacity Building grant on the water infrastructure team.

Andrea’s professional experience, to date, is in teaching (special education) and in hazard mitigation planning within the Commonwealth of Kentucky. She holds a Masters in Public Administration and a Masters in Urban Planning from the University of Louisville and a Bachelor’s of Science in Business Administration with a minor in Spanish from the University at Albany in New York. In her spare-time, she also serves as a volunteer of the Louisville Metro Medical Reserve Corps and Community Emergency Response Team at UofL.

John Ricketts

Project Manager, URS Corporation
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John Ricketts is a project manager and water resources specialist in URS’ Louisville Office. He has over 25 years of experience in the fields of water quality, stormwater management, NPDES permitting, green infrastructure, water treatment and distribution, and wastewater treatment and collection. John’s experience ranges from studies through preliminary and final design, bidding services, and services during construction.

John has led the design of several green infrastructure projects around Louisville that are currently being monitored for performance.

Josh Rivard, M.U.P.

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Josh Rivard, research coordinator for the Center for Infrastructure Research (CIR) at the University of Louisville, has over five years of experience addressing water infrastructure issues.

As the CIR's research coordinator, Josh has worked on water infrastructure related grants for the following international and national organizations: Water Research Foundation (WaterRF); Water Environment Research Foundation (WERF); The National Institute Hometown Security (NIHS) and the U.S. Environmental Protection Agency (USEPA). He has participated as a speaker at the American Water Works Association Annual Conference and Exposition in 2009, and the Water Environment Federation's Annual Technical Exhibition, Conference 2010, speaking on the issue of residential water usage trends. In the winter of 2011, he co-authored the article "Residential Water Use Trends in North America" featured in the February 2011 issue of the Journal of American Water Work Association.

Josh holds a Bachelor of Science degree in Environmental Science from Morehead State University and a Master of Urban Planning (MUP) from University of Louisville.

Thomas D. Rockaway. Ph.D., P.E.

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Tom Rockaway is an Associate Professor in the Civil and Environmental Engineering Department, and Director for the Center for Infrastructure Research at the University of Louisville. His research work has focused on identifying methods to extend the life and improve the performance of urban infrastructure. Much of his worked has included water and wastewater initiatives and incorporating green concepts into existing systems.

Prior to his work at the University, Professor Rockaway served as a geotechnical engineer for a large power corporation, and as a regional consultant and the United States Army Corps of Engineers. He has provided foundation and subsurface recommendations for structures ranging from single-story dwellings to multi-story buildings.

He earned his doctorate from the Georgia Institute of Technology, a Masters and Bachelor's degree in Civil Engineering from Purdue University, and a Bachelor of Arts degree from DePauw University.

Wes Sydnor, P.E.

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Wes Sydnor has had 10 years of experience as a water and waste water engineer. For the past three years he has been working for MSD where he serves as a Green Infrastructure Project Manager. His responsibilities include managing nine minimum controls and CMOM programs, and public education and outreach for Project WIN (the department within MSD that manages programmatic activities for compliance with Louisville's consent decree).