STORMWATER
SYMPOSIUM | 2024
Emerging Issues in Stormwater Management

ABSTRACT TITLE GUIDE

THURSDAY, OCTOBER 17

10:20 AM – Innovative Solutions
The Villanova Room
Moderator: Derek Berg – Contech Engineered Solutions

Step-tiered bioretention bed design: monitoring performance for stormwater quality enhancement
Abdullah Al-Amin[1], Erica R. McKenzie[1]
Temple University, Department of Civil and Environmental Engineering, 1947 North 12 Street, Philadelphia, PA[1]

Providing Access for the Future of SCMs
Kevin R. Kozain, P.E.[1]
NTM Engineering, Inc, Dillsburg, PA[1]

Pump It Up- Designing SEPTA's resilient transit infrastructure
Shiny Mathew, PE, ENV SP[1]
JMT[1]

Introducing the iNode: An Intelligent IoT Node for Low-Cost Remote Data Acquisition, Sensing and Actuation
James Peyton- Jones, Ph.D.[1]
Villanova University, Department of Electrical and Computer Engineering[1]

Stop the Leaks! Exploring Repair Techniques to Seal GSI Outlet Structures
J. Olsson[1], W. Nichols[2], B. Conway[2]
Verdantas, 211 N 13th Street, Suite 503, Philadelphia, PA[1]
Philadelphia Water Department, 1101 Market St. 4th Floor, Philadelphia, PA[2]

10:20 AM – Advances in Modeling
The Cinema
Moderator: Christopher Seigel, PE – Sci-Tek Consultants, Inc.

Climate Change and the Rainfall Energy R in RUSLE
Shirley E. Clark[1], Ruth Ayn Hocker[2]
Department of Civil, Construction and Environmental Engineering, Penn State Harrisburg, Middletown, PA[1]
Civil Engineering, Pennsylvania College of Technology, Williamsport, PA[2]

Stormwater Management Facilities in Coastal Areas with Respect to Climate Change
O. F. Erukubami[1], H. K. Morgan[2], L. G. Trout, Jr.[2], C. B. Voter[1,3]
Department of Earth Sciences, University of Delaware, Penny Hall, 255 Academy Street, Newark, DE[1]
Water Resources Engineering, Straughan Environmental, Inc., 200 Continental Drive, Suite 401, Newark, DE[2]
Department of Civil and Environmental Engineering, 301 Dupont Hall, Newark, DE[3]

HEC-RAS 2D Hydraulic and Sediment Analysis for Dam Removal
M. Fares[1], J. Bellini[1], P. Masopust[1], T. Alexander[1]
Aterra Solution, 300 Brookside Ave, Ambler, PA[1]

Comparing Calibrated Models of Suburban Karst Watersheds with USGS Regression Equations
A. Wilusz[1], M.J. Vanaskie[1]
HRG, 776 Bull Run Crossing Suite 200, Lewisburg, PA[1]

Understanding Sediment Capture Efficiency of Green Grate Inlets: Physical and Computational-based Modeling
Behailu Bereded[1], Virginia Smith, P.E., Ph.D. [1], Kristin Sample-Lord, P.E., Ph.D. [1]
Villanova University, Villanova Center for Resilient Water System, Department of Civil and Environmental Engineering, 800 Lancaster Ave, Villanova, PA[1]

1:25 PM – Real World Lessons
The Villanova Room
Moderator: Amy Leib – Verdantas

Comparing Conventional and Water Sensitive Urban Designs for a South African Greenfield township development
A. A. Boadu Anie[1], A. A. Ilemobade[1]
School of Civil and Environmental Engineering, University of the Witwatersrand, 1 Jan Smuts Avenue, Braamfontein 2000, Johannesburg, South Africa[1]

Plants in a pickle? Plant responses to deicing salt in highway-adjacent bioinfiltration basins
J.S. Caplan[1], J. Baumgarten[1,2], A.B. Salisbury [1,3], E.R. McKenzie[4], S.W. Eisenman[1]
Dept. of Architecture and Environmental Design, Temple University, Ambler, PA[1]
Dept. of Biology, Bryn Mawr College, Bryn Mawr, PA[2]
Dept. of Ecology, Evolution, and Natural Resources, Rutgers University, New Brunswick, NJ[3]
Dept. of Civil and Environmental Engineering, Temple University, Philadelphia, PA[4]

Still working after 22 years: Monitoring an Early Modular Stormwater Infiltration System at the Washington National Cathedral
M. Henderson, PE[1], R. Farella, PE[1], M. Adams, PE LEED AP[1]
Meliora Design, 259 Morgan St, Phoenixville, PA[1]

Radnor Township Municipal Projects for Climate Resiliency
M. Busch[1], M. Henderson[1], M. Adams[1]
Meliora Design, 259 Morgan St, Phoenixville, PA[1]

Resilient Green Infrastructure
Z. H. Ranstead, P.E., LEED-AP, CFM[1]
T&M Associates, 1700 Market Street, Suite 3110 Philadelphia, PA[1]

1:25 PM – Smart Systems
The Cinema
Moderator: Kathy Gee, PE, PhD – OptiRTC, Inc.

Drones: Applications and Limits for SCM Inspections
Susan Giannantonio, P.E., CPESC[1]
NTM Engineering, Inc. 103 W. Church Street, Dillsburg, PA[1]

Data-Driven Approach to Enhance Green Stormwater Infrastructure (GSI) Performance
Musfiqur Rahman[1], Virginia Smith[2], Xun Jiao[3], Bridget Wadzuk[4], Peleg Kremer[5]
Graduate Research Assistant, Department of Civil and Environmental Engineering, Villanova University[1]
Associate Professor, Department of Civil and Environmental Engineering, Villanova University[2]
Assistant Professor, Department of Electrical and Computer Engineering, Villanova University[3]
Professor, Department of Civil and Environmental Engineering, Villanova University[4]
Associate Professor, Department of Geography and the Environment, Villanova University[5]

Historical Storm Events as an Alternative to Design Storms
Amanda Hess, Ph.D., P.E.[1]
Villanova University, Villanova Center for Resilient Water System, Department of Civil and Environmental Engineering, 800 Lancaster Ave, Villanova, PA[1]

A "CLOUD" SOLUTION TO CLIMATE RESILIENT STORMWATER INFRASTRUCTURE
R.G. Bathurst, PE, BC.WRE, LEED AP[1]
Century Engineering, LLC, 10710 Gilroy Road, Hunt Valley, Maryland[1]
Center for Watershed Protection, Inc., 11711 E. Market Place, Fulton, MD[1]

Re-"connecting" the Delaware River Basin with Smart BMPs
Jennifer Steffens[1]
OptiRTC[1]

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