







# Regional Impacts of Climate Change and Issues for Stormwater Management (WS-12, PO-10)

# **Agenda**

Boynton Beach Intracoastal Park Clubhouse January 22, 2015 10 AM – 4:30 PM

# **WORKSHOP OBJECTIVES:**

- Develop awareness of, and the guidance for policies, strategies and standards to improve resilience to coastal and inland flooding, saltwater intrusion, and other related impacts of climate change and sea level rise in Stormwater Master Plans. (SP-2)
- Facilitate local to regional cooperation in developing inventories of vulnerable stormwater infrastructure (and facilities already operating below design capacity) for the purposes of assessing vulnerability and devising adaptation strategies to ensure long-term system viability. (WS-1 and WS-6)
- Develop awareness of existing inundation maps and stormwater management models to identify areas and infrastructure at increased risk of flooding and tidal inundation with increases in sea level. (WS-3)
- Determine next steps in evaluating the impacts of rising sea and groundwater levels on soil storage, infiltration rates and inflow to stormwater systems; consider longer-term influences on water quality; and develop strategies for implementing stormwater reuse projects that account for current and future conditions. (WS-4)



9:30 AM Coffee & Registration

10:00 AM Welcoming Remarks

**Nancy Schneider**, Senior Program Officer, US Adaptation Programs, Institute for Sustainable Communities (ISC) and Staff to the Compact Steering Committee

10:10 - 10:40 AM

Know the Flow - Our Regional Water System in Southeast Florida Moving Toward the Future. (SP-4, WS-1, WS-4, WS-6)

Primary and secondary systems/levels of service.

**Jeff Kivett**, Director, Division of Operations, Engineering & Construction, South Florida Water Management District

**Tommy Strowd**, Director of Operations & Maintenance, Lake Worth Water Management District

10:40 - 11:00 AM

Setting the Stage - Vulnerability of South Florida Coastal Stormwater Facilities to Sea Level Rise and Climate Change (WS-4, SP-5)

A review of the impacts of sea level rise and climate change on local infrastructure with a conceptual approach to vulnerability assessment.

Frank Marshall, Ph.D., P.E., Principal, Frank Marshall Consulting

11:00 - 11:30 AM

Vulnerability Analysis Mapping (WS-3, SP-7, SP-12)

Southeast Florida is highly vulnerable to sea level rise (SLR). Mapping different SLR inundation scenarios identifies areas at potential risk and aids in long term visioning and planning.

**Nancy Gassman, Ph.D.**, LEED Green Associate, Assistant Public Works Director, Sustainability Division, City of Fort Lauderdale

11:30 - 12:15 PM

Moving Toward Sustainable, Resilient Stormwater Management in Southeast Florida - Green Infrastructure Design & Place-Making

Low-Impact Development/Green Infrastructure – The use of LID/GI continues to gain use across the U.S. and can play a prominent role in Florida's future. This session provides an overview of LID/GI concepts and practices, discusses important implementation considerations, and examines its role in offsetting the effects of climate change.

**Brett Cunningham, P.E.**, Vice President, Jones Edmunds & Associates **Jason Bregman**, Associate at Michael Singer Studio and Owner, Jason Bregman

Environmental Planning and Designs

#### 12:15 – 1:00 PM **Buffet Lunch**

Lunch will be provided for workshop participants

#### 1:00 – 1:45 PM **R**

## Regional Innovations in Stormwater Management Master Planning

- Planning: City of West Palm Beach's Stormwater Master Plan
   Penni Redford, Sustainability Director, City of West Palm Beach
   Elizabeth Perez, P.E., D.WRE, President, Collective Water Resources
- Implementation: City of Miami Beach's Stormwater Adaptation
   Bruce Mowry, City Engineer, City of Miami Beach
   Henry O. Briceño, Research Professor, Southeast Environmental
   Research Center & Department of Earth and Environment, Florida
   International University

#### 1:45 - 2:15 PM

# Integrated Approach to Quantifying the Effects of Climate Change on Water Resources and Coastal Infrastructure in Urban Miami-Dade County

This integrated study (USGS, NOAA and Miami-Dade County) looks at the effects of climate change on the micro and macro scale in Miami-Dade County and includes a new storm surge climate change monitoring station in an area identified as a data gap by NOAA. Researchers will be asking audience members for feedback on useful model data and platforms, as well as missing components.

**Eric D. Swain Ph.D.,** Research Hydrologist, USGS Florida Water Science Center **Virginia Walsh, Ph.D., P.G.**, Senior Professional Geologist Chief, Hydrogeology Section, Miami Dade Water and Sewer Department

#### 2:15 - 2:45 PM

#### **Networking Break**

#### 2:45 - 3:45 PM

## City/County Synergies (SP-6): Round Table Discussions

Participants will gather in groups by county to discuss issues of local relevance, share news of upcoming projects, look for opportunities to collaborate, and brainstorm approaches and possible stormwater engineering solutions for various climate change impact scenario (30 mins), then report out to the other groups (30 mins).

#### 3:45 - 4:15 PM

# Resilient Stormwater Management in Southeast Florida - Financing Strategies Toward Sustainable Stormwater Systems (NS-7, WS-16)

This session covers mechanisms used to fund stormwater programs. It includes a discussion of funding sources such as grants, stormwater utilities, legislative appropriations, local-option sales tax, and general funds.

Brett Cunningham, P.E., Vice President Jones Edmunds & Associates

#### Financing Case Study - Ft. Lauderdale

**Emilie Smith**, Budget Manager, City of Ft. Lauderdale

#### 4:15 - 4:30 PM

#### **Conclusion - Arc of Innovation**

**Doug Yoder**, Deputy Director, Miami-Dade Water and Sewer Department

#### 4:30 PM

## Adjourn

#### Southeast Florida Regional Climate Action Plan Implementation Guide:

http://www.southeastfloridaclimatecompact.org//wp-content/uploads/2014/09/implementation-guide.pdf

# SPEAKER LIST AND CONTACT INFORMATION

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