

Integrating Green Infrastructure into a “One Water” Stormwater Discussion for Tucson

University of Arizona – ENR2
Friday, March 3, 2017 : 8:30 a.m. – 4:30 p.m

Green Stormwater Infrastructure Potential in Tucson – A “One Water” Discussion



Rincon Heights 2012

Green Infrastructure is a design strategy that will build value-added community benefits into stormwater infrastructure projects. Following a *City-County joint Water-Wastewater Infrastructure*

Supply and Planning Study, 2011-2015 Action Plan for Water Sustainability, staff from the City of Tucson, Pima County Regional Flood Control District and Pima Association of Governments have been working to integrate stormwater management applications to address community resilience in the arid southwest desert (heat, drought and flooding). This Green Infrastructure – One Water discussion workshop was planned following the first ‘One Water’ Summit in 2016 in New Orleans, LA and with the assistance from American Rivers.

The workshop goals were to: initiate a dialogue about green infrastructure potential between the various city, county and regional entities that manage stormwater services; examine opportunities and challenges to increased collaboration between these entities; and launch a continuing process that will foster greater collaboration toward “One Water” stormwater management.

Opening statements:

Timothy Thomure, Director, Tucson Water, set the dialogue to engage in future collaborations with a “One Water” concept as the



ONE Water Reliability

platform to explore all available water resources. He constructively challenged the participants to rethink the roles of traditional water resources and determining multiple beneficial uses of stormwater. With increasing

community and political interest in stormwater and green infrastructure, the Tucson/Pima County area has reached an opportune moment for innovation.

Additional speakers provided information about local, state and federal directions in stormwater management, along with data illustrating support and gaps in information. Evan Canfield, Sr. Hydrologist, Pima County Regional Flood Control District, highlighted activities of the Green Infrastructure/Low Impact Development Working Group: development of a manual of Design Guidelines, including cost-benefit analysis of seven (7) of the features, case studies and resolutions passed by the regional council. One of the major gaps identified was maintenance – responsibilities, implementation and standards. Dr. Tom Meixner, Associate Department Head, Institute of the Environment, Department of Hydrology and Water Resources, gave an overview of recent research and data from the University of Arizona; current research has been exploring opportunities to recharge groundwater in urban streams, scales of green infrastructure, how they impact stormwater management and modeling these variabilities.



Gallo figure – PAG and WMG compiled data

Meixner Presentation 2017

The morning panel discussion included case study examples from City of Atlanta, GA; Clark County, Nevada and District of Columbia Department of Energy and Environment. Susan Rutherford, Senior Watershed Manager, City of Atlanta, covered the issues of internal

Workshop Summary

cross-departmental coordinations and stormwater funding leveraged from a voter approved one cent sales tax. John Tennert, Clark County Regional Flood Control District, NV, oversees multiple jurisdictions' water quality monitoring; each jurisdiction having their own methodology of monitoring and reporting. Matthew Robertson, Environmental Protection Specialist, District of Columbia Department of Energy and Environment, covered multiple funding sources utilized by the Department to fund various aspects of stormwater



Photo: Tucson Water 2017

management: stormwater utility, water rate payer fee, plastic bag fee, and federal grants. Panel discussion included participants asking questions and sharing success and challenges in their jurisdictions.

Summary of morning discussion:

- Director Thomure, Tucson Water, and Deputy Administrator de Bonis, Pima County, both expressed the need to consider all water resources moving forward to address water supply and demands, extreme weather events and drought conditions;
- The wide variety of people attending enabled a healthy discussion about how a "One Water" concept could work well in this region to link different disciplines, and encourage departmental flexibility
- Without sewer overflow or water quality drivers, support for expenditures of public funds for stormwater management in the Tucson area depends on resolving local concerns. Green infrastructures can be a tool for doing so while realizing additional community goals.
- Increased collaboration requires regional leadership and shared resources.

Afternoon small group discussions:

The first small groups focused on 4 specific questions, participants could stay in one group or rotate to a second group. The following were the questions with highlights of these discussions:

Group 1: *How can we foster collaboration to achieve multiple benefits?*

- Bring stakeholders together [regulators, regulated, maintenance, political]

- Communication/education on property damage impact, public safety and property values

Group 2: *How can we reduce barriers and pursue opportunities to address multiple goals?*

- Improve the ability of single focus agencies to see beyond their traditional roles
- Foster understanding about how current standards and procedures can be barriers to solutions

Group 3: *What are creative funding opportunities for GI?*

- Need for multiple funding sources – including cross departmental and interjurisdictional; cannot bank on single source funding
- Communicating to constituents so they know what public funds are used for

Group 4: *How can public agencies and community organizations support each other and a green infrastructure strategy?*

- Recognize drivers and barriers may be different for different groups
- Communication (i.e., forums) to stakeholders, partners, neighborhoods that include data, metrics, permitting, numbers

The second small group activity was a mapping exercise. Participants worked collaboratively to map priorities to build green infrastructure into stormwater management. Goals included: addressing flooding and erosion; improve water quality; climate resiliency; economic vitality; address public health; address air quality; increase vegetation and shade; address population diversity and equity.



Photo: Tucson Water 2017

Next Steps: to promote the goals of green infrastructure in Tucson:

- Continue to engage and communicate; including cross-jurisdictional and intra-jurisdictional vision and missions
- Develop a plan to fund green infrastructure
- Continue to build data layers; update mapped information, if more current maps available
- Provide more tools to implement context sensitive infrastructure