

# Pima County Regional Flood Control District Monthly Brown Bag Series

## Harnessing Storm Water in Desert Cities

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Wednesday, February 12, 2020

12:00 to 1:00

201 North Stone Ave, 9<sup>th</sup> Floor



Source: PAG

In the City of Tucson, green infrastructure is implemented in a decentralized manner throughout the streets of neighborhoods to reduce flooding impacts, support local plant life, and address urban heat island impacts. Taking advantage of the City of Tucson, Arizona as a living laboratory, this observational study evaluates the cumulative impact of green infrastructure installation in neighborhood streets on stormwater runoff characteristics under varying rainfall depth, intensity, and seasonality.

This observational study is strongly focused on the development and analysis of high-resolution empirical runoff datasets derived on scales typically underrepresented in data-limited semi-arid urban environments. This study discusses methods and analyses undertaken in order to understand urban hydrologic functioning at the urban subwatershed scale by comparing runoff ratios, runoff volumes, peak discharge, and runoff durations derived for paired events in nested watersheds in two urban neighborhoods in Tucson, Arizona. These runoff characteristics are compared across paired runoff events, and are summarized across rainfall regimes, seasonal distribution of rainfall, green infrastructure implementation levels, and land cover characteristics. Results will be used to assess the emerging hydrological influence of green infrastructure networks in small urban streams, given the heterogeneity in basin installation and performance.