Implementing Low Impact Development at the University of Utah

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Goal

- Develop stormwater bioinfiltration designs adapted to our local "cold desert" climate that help to restore natural hydrology in urban landscapes

Figure 1. A demonstration bioinfiltration garden treating stormwater runoff from a driveway on the University of Utah campus during a spring rain storm.

Research Methodology

- Quantify physiological plant performance
- Measure nitrogen treatment capacity
- Describe nitrogen treatment pathways of engineered bioinfiltration ecosystems in our climate

Figure 2. *Rhus trilobata (sumac), Bouteloua gracilis (buffalo grass),* and *Sorghastrum Nutans (Indiangrass)* are three regionally native plants used in our "upland" bioinfiltration design.

Impact

- Demonstrating that Green Infrastructure approaches to integrated water resources management works here in Utah

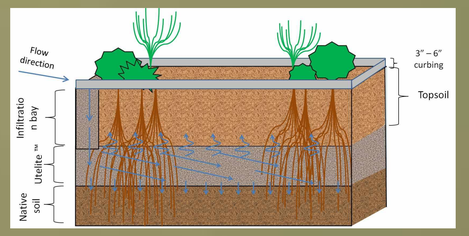

Figure 3. Bioinfiltration design.

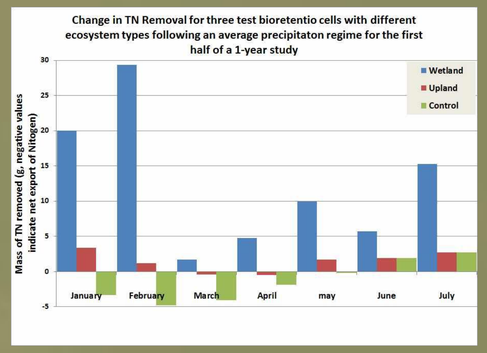

Figure 4. Preliminary results from the first half of this year indicate that wetlands remove the most nitrogen from stormwater but at a cost of 40 liters per square meter per day of supplemental irrigation.

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Graduate Research Fellowship Program

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