

HANG-ELEVEN

How Autotrophs Navigate Gushers - Efficacy, Limits, Evaporation, Variability, Extent, $\delta^{15}\text{N}$ arly!

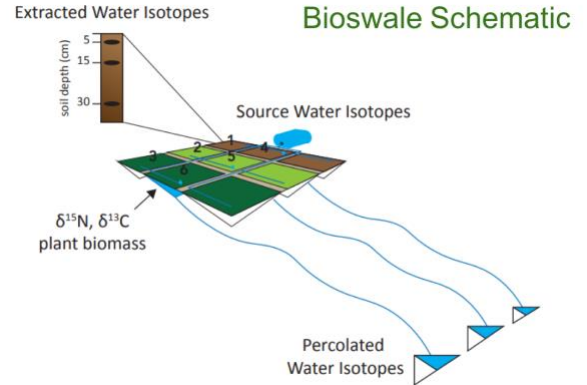
OMFG, Bioswales!

Organic Material Flux and Groundcover, Bioswales!

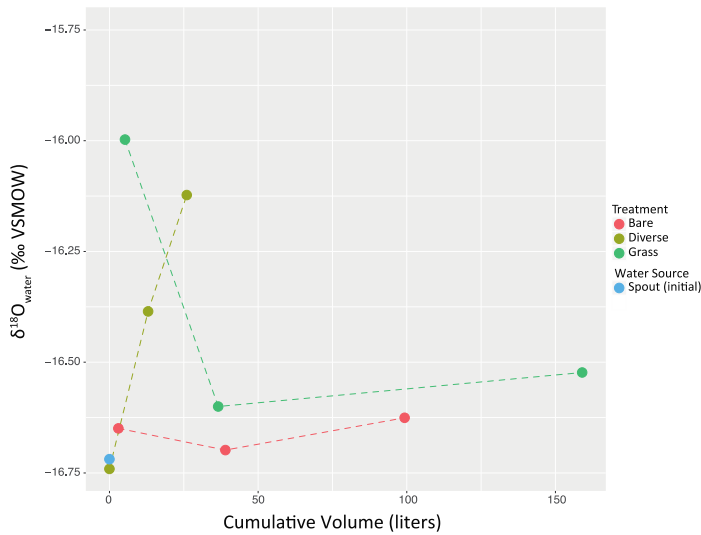
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How does plant diversity in bioswales impact the efficacy of storm water management?

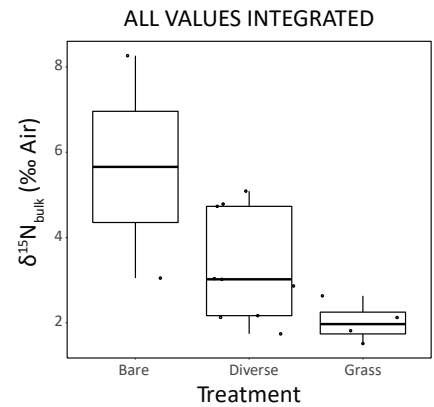
A bioswale is a landscape feature that removes pollution from runoff in urban ecosystems. The University of Utah bioswale that we worked with had three different treatment plot types: bare (no plants), grass, and diverse (multiple plant species). We sampled soil for water extraction, plants for carbon and nitrogen isotope analyses, and water samples for oxygen isotope analyses.



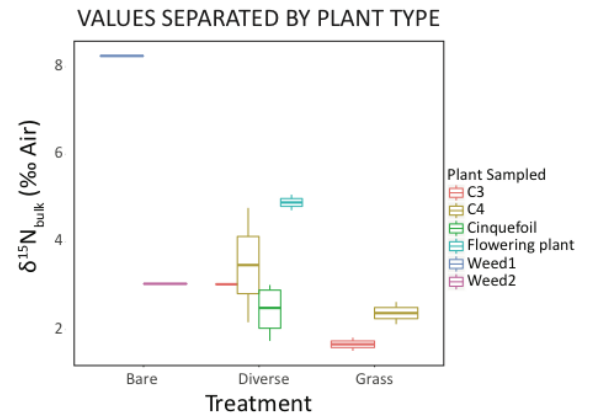
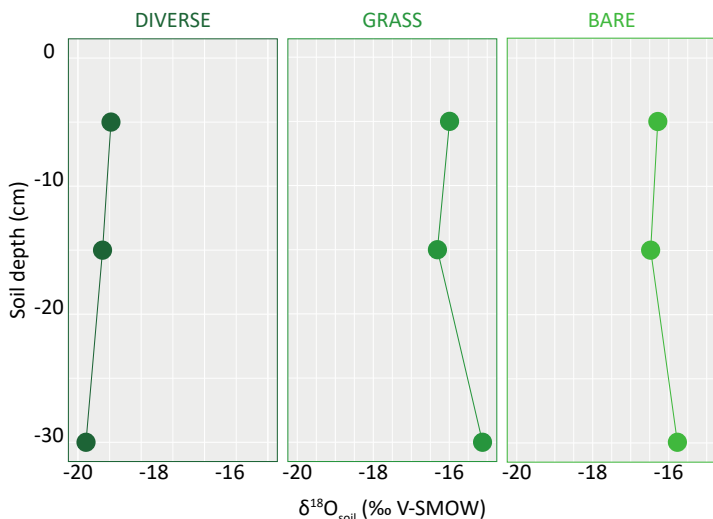
Question 1 (water analysis): Does bioswale plant diversity influence total water evaporation in a storm event?



Question 3 (C/N analyses): Does bioswale plant diversity influence plant C and N isotopes?



Question 2 (water extraction): Does bioswale plant diversity influence long-term evaporation rates?



Conclusion: (Q1, 2) There are no strong indications of evaporation among the three treatments or over the course of a storm event. (Q3) Isotope ratios of phytometers may indicate differences in nitrogen cycling rate, but species identity is important to consider.