

# Importance of Montane Forests and Snowfall as Water Resources for the Wasatch Region

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## Goal

- Quantify stand-level transpiration and snowpack dynamics in montane coniferous forests along an elevation gradient in the iUTAH watersheds to determine the relative influences of temperature and snow water equivalent (SWE) on water availability for the Wasatch Range Metropolitan Area

## Research Methodology

- Install sap flow sensors at three sites along an elevation gradient to measure transpiration
- Measure snow depth and SWE at multiple locations at each site throughout the winter and snowmelt period using a Federal sampler

## Impact

- Montane forest snowmelt primary source of water for the Wasatch Region
- Important to assess the current water balance of the region and identify the environmental variables that influence annual variations in water availability to better predict future water resources

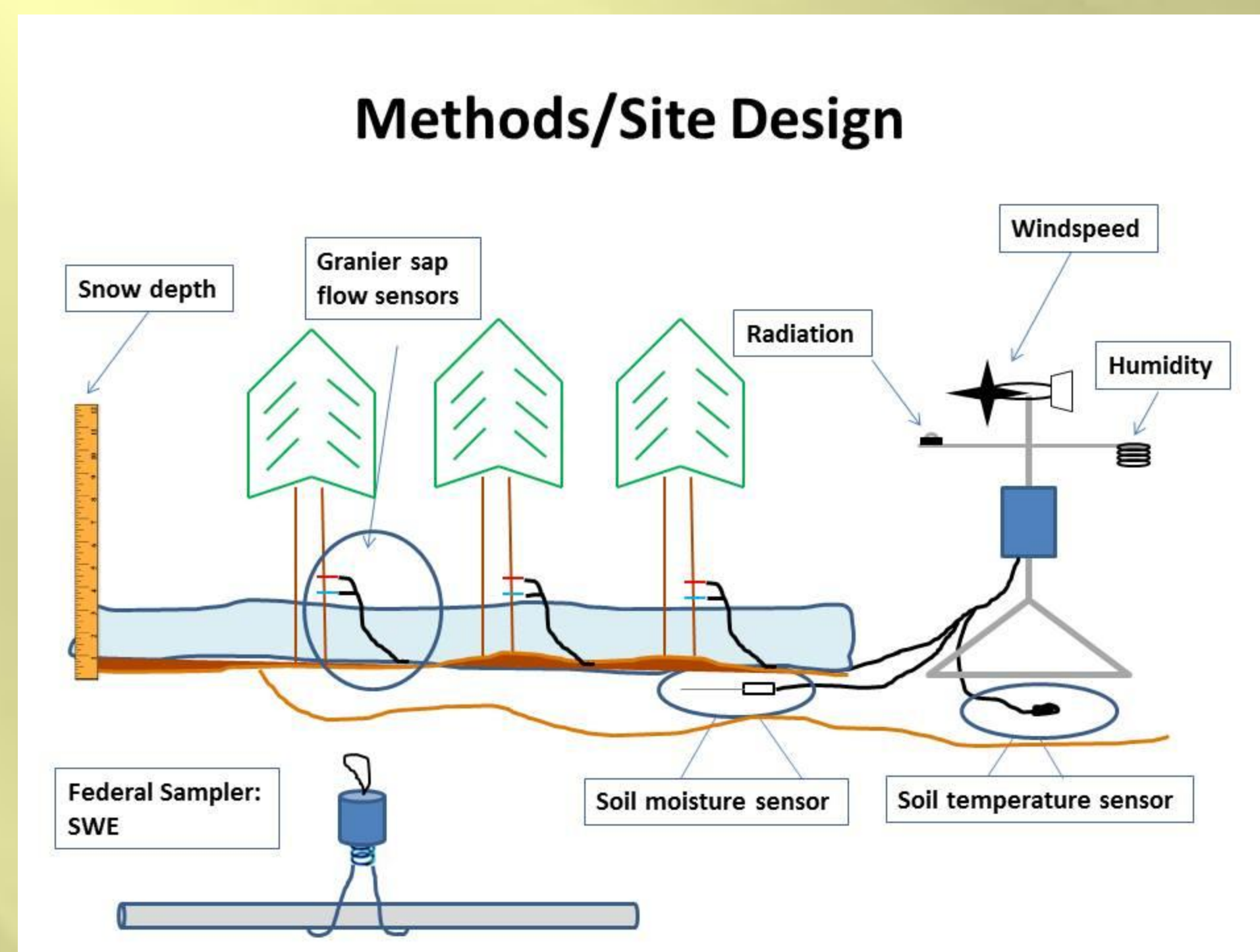


Figure 1. Sap flux instrumentation and climate stations will be installed at three sites, varying elevation, in the iUTAH watershed areas.



Figure 2. North Fork of the Provo River in the Uinta Mountains.

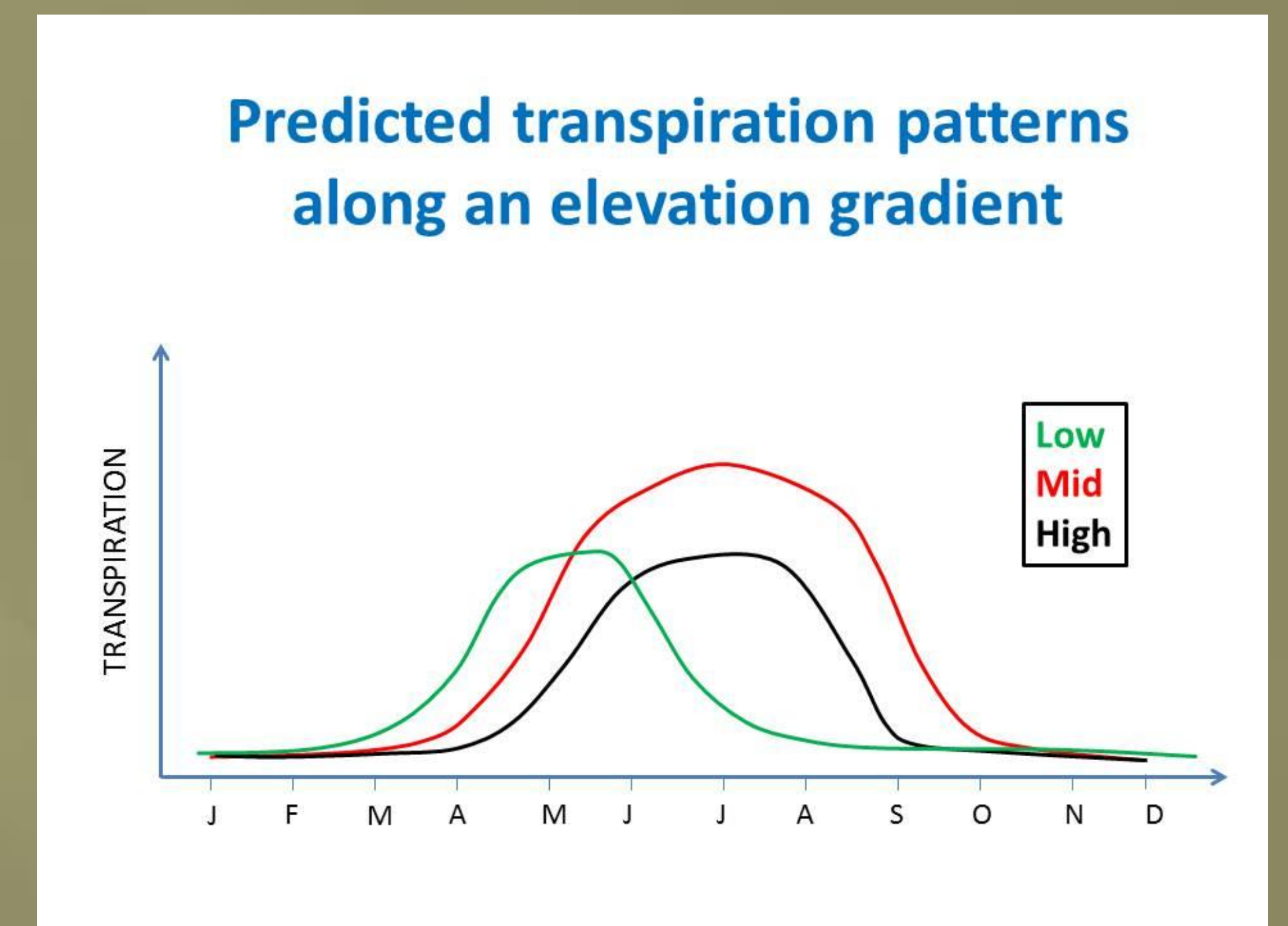


Figure 3. Mid-elevation sites are hypothesized to have the greatest total season transpiration. Transpiration is predicted to be limited by cold temperatures at high elevations and water availability at low elevations.



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