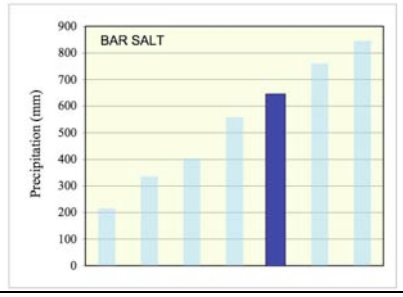
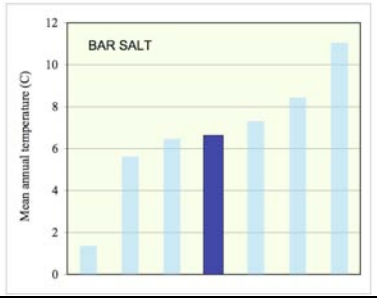
Location: **Red Butte Canyon**, Great Basin (IRON, domain 15), RBC_UT_IRON
Contact person: Jim Ehleringer, 801-581-7623, ehleringer@biology.utah.edu
Webpage: http:// neon-iron.org, http://redbuttecanyon.net

Location within domain: Latitude: 40.80 Longitude: -111.78 Ownership: USFS Access: protected, RNA Aquatic features: stream and reservoir Contributions to national gradient: Snowmelt, drought, aquatic, stream, land cover, invasives, infectious disease	

History: The 'range' of the IRON basin and range is Red Butte Canyon, a protected watershed with a history of ecological, aquatic, and climatic studies. This canyon is closed to the public and has never been grazed or settled. Red Butte Canyon contains both a stream and reservoir.

Key characteristics: Red Butte Canyon is a pristine watershed of 2,500+ ha immediately east of the University of Utah. It spans 1600-2300 m elevation, and is characteristic of Great Basin watersheds. The lower canyon is dominated by *Bromus tectorum* and some *Artemesia tridentata*. The canyon transitions into a shrub woodland dominated by *Quercus gambelii* and *Acer grandidentatum*; the canyon is dominated by *Populus tremuloides* and *Pseudotsuga menziesii*.

Climatic location of Red Butte Canyon within the BAR SALT gradient are shown in dark blue. Contributions to national gradients: drought, land cover, invasives, infectious disease		

Existing infrastructure relevant to NEON: There is a network of 8 weather stations in the canyon with records going back to 1945; a USGS NAQWA stream monitoring site; and detailed maps of the geology, vegetation, and soils. A comprehensive biotic inventory has been updated continuously over the past 40 yrs. USGS and the Central Water Conservancy District maintain two permanent gauging stations in the stream/reservoir that monitor all chemical, physical and limnological characteristics of the aquatic system.

Facilities: There are laboratories and dormitories adjacent at the University of Utah, including a small laboratory and storage building at the mouth of the canyon. This lab facility includes 1 ha for experiments and two 60-m artificial stream systems where both stream water and nitrogen can mimic natural conditions.