



WATER DEMAND, CAPACITY, AND PRODUCTION

Water Demand and Capacity

Development on McMillan Mesa was anticipated to need just over 200 GPM (gallons per minute). Based on current land use and the proposed Natural Area, demand is anticipated at just under 200 GPM. Because of needed fire flows, the area was designed carry 2,000 GPM. There is no expected change in demand or capacity of water based on the proposed Natural Area.

Waterline Access

The majority of existing waterlines exist within the existing road's right-of-ways. However, there are some that connect the San Francisco de Asis school/church to Pinecliff Dr and Gemini Rd. No new waterlines are desired or expected within the proposed Natural Area.

However, the City of Flagstaff will need continued access to the existing lines that pass through the proposed Natural Area.



Existing waterline through Natural Area



Well house near Lake Mary

Water Production

McMillan Mesa is currently being evaluated for the placement of new City wells. The mesa is a volcanic flow over multiple fault lines. Wells along fractures and fault lines can produce more water because the ground in that vicinity is often more porous, allowing higher quantities of water to flow. Potential well sites will be coordinated strategically with fault locations. The entire mesa, within and outside of the Natural Area, is being evaluated for its water production potential.

Once the construction is complete, the wells can be contained in a small house made of native rock. There will be little noise created during operations, unlike the more remote and older wells that often run on diesel power since wells in the vicinity of the mesa can be connected to the electric grid. The initial drilling of a well takes between six months and a year. Total disturbance within the Natural Area would be approximately one-half acre with offsite construction staging. There is the potential to take advantage of new, directional drilling technology. This method could start with a surface location that worked best with the surrounding land uses, drill down, and then drill to the side to intercept the fracture lines that yield the most water.