Building Water Supply Resilience for the City of Durango

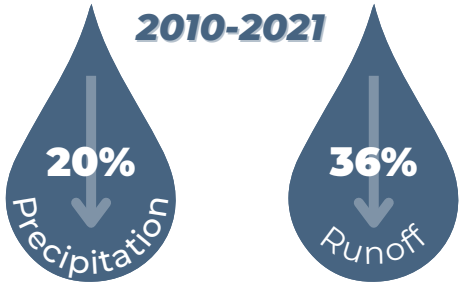
Photo: thedurangoteam.com

Durango's Water Supply

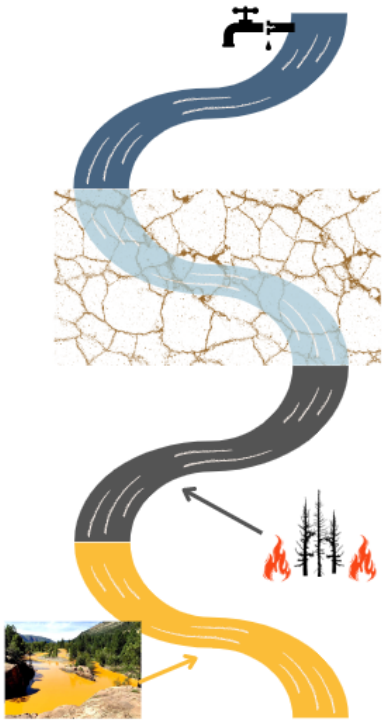
The **Florida Watershed** is currently the primary water source for the City of Durango. The **Animas Watershed** is the supplementary source. This supply system is susceptible to risks from aging infrastructure, drought/aridification, wildfire, and unplanned mine releases, necessitating an evaluation of options to build water supply resilience

The City of Durango is considering improving water supply resilience by increasing raw water storage from 10 days of capacity to 350 days by tapping into storage in Lake Nighthorse.

The Florida Watershed 1985-1999 compared to 2010-2021



What are the risks posed by the current system?



AGING INFRASTRUCTURE With current demand, the City's terminal reservoir near Fort Lewis College can only store 10 days of water and the raw water pipe has failed numerous times over the last two decades.

DROUGHT AND ARIDIFICATION Annual precipitation and runoff in the Florida Watershed have decreased significantly over the last three decades. Increased temperatures have lead to significantly earlier snowmelt, increased environmental demand for water, and significantly decreased efficiency of the watershed to convey precipitation to runoff.

WILDFIRE Much of the Florida and Animas Watersheds are in high or very high risk of wildfire. The occurrence of a wildfire in one of these watersheds could increase the cost to treat degraded water.

UNPLANNED MINE RELEASE The legacy of hardrock mining and the presence of naturally mineralized tributaries contribute to unpredictable water quality in the Animas River. There are an estimated 10,000 abandoned mines in the region.

Solutions

The system faces multiple threats to water availability: infrastructure, aridification, wildfire, and unplanned mine releases. Independently, these risks are manageable, but compounded incidents require additional resilience to avoid crisis. The City of Durango has rights to 3,800 acre-feet of water in Lake Nighthorse, equating to 350 days of storage or a **1,277% increase in storage resilience for the City of Durango.**