

BACKGROUND AND PROJECT LOCATION



Past rain events (most notably in 2006, 2015, and 2021) overwhelmed existing infrastructure due to debris and silt clogging culverts and filling concrete channels. The Arroyo 1 Dam Improvement Project will reduce the amount of rock and silt that accumulates in the Bear Ridge Channel. Proposed improvements will also slow the speed of water as it comes off the mountain while reducing the amount of maintenance necessary.

About Arroyo 1 and the Bear Ridge Channel

Arroyo 1 flows down the western slopes of the Franklin Mountains, through a culvert under Franklin Hills Street, and into the Bear Ridge Channel. The concrete-lined channel then runs along Bear Ridge Drive before emptying into the Mulberry Reservoir, near the Don Haskins Recreation Center. Unlike the Bear Ridge Channel, improvements proposed in Arroyo 1 east of Franklin Hills Street will utilize low-impact design principles.



Project area shown in red

CONSTRUCTION TIMELINE AND BUDGET



Estimated Construction Start: March 2024

Scheduled Completion: Winter 2025

Budget: \$5,805,301

Arroyo 1 Scope of Work:

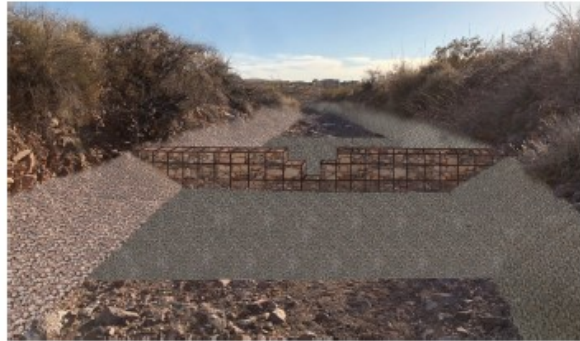
- Excavating and reshaping one-third mile of the Arroyo 1 channel just east of the Franklin Hills culvert
- Installing mortared rock rip-rap
- Implementing a geogrid gravel-filled soil stabilization system
- Adding gabion mattresses along the channel
- Constructing seven gabion basket structures to slow water speed and catch debris
- Constructing a maintenance road that will run the length of the arroyo improvements



Construction Site Access:

- Construction vehicles will access the site via Franklin Ridge Drive and Franklin Moor Drive

GREEN INFRASTRUCTURE



For illustration purposes only

Gabion Baskets and Gabion Mattresses

- Steel wire structures filled with rock or stone used to improve stability and prevent erosion
- Designed to blend into the natural environment
- Permeable structures that allow water to filter through while slowing velocity
- Over time vegetation can grow through gabion mattresses, further blending into natural surrounding while providing added structural soundness

Gabion Basket Structures

- Barriers designed to reduce water speed and catch debris before entering Bear Ridge Channel
- Reduction in debris allows more area for water to convey during rain events reducing the likelihood of channel clogs and overflows



For illustration purposes only



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Geogrids or Aggregate Stabilization Systems

- Allows water infiltration on slope face and vegetation to grow through
- Three dimensional cells are filled with gravel or other small aggregate allowing for vegetation to grow through while providing structural reinforcement, slope stabilization, and erosion control
- Arroyo 1 is the first stormwater project to implement geogrid systems

WE'RE HERE TO HELP

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epwater.org/arroyo1
or scan the QR code.



EPWater's Mission:

Provide sustainable high quality water services.