



CITY OF FLAGSTAFF

FLAGSTAFF CITY COUNCIL

211 West Aspen Avenue, Flagstaff, Arizona 86001

Main Line: 928-213-2000

Website: <https://www.flagstaff.az.gov>

April 20, 2021

Colonel Julie A. Balten
Commander, Los Angeles District
U.S. Army Corps of Engineers
915 Wilshire Blvd.
Los Angeles, CA 90017

Dear Col. Balten,

The Flagstaff City Council is writing to express its strong support for the \$150 million Arizona Environmental Infrastructure program established through Section 595 of the Water Resources Development Act of 2020 (WRDA 2020) that became Public Law 116-260 on December 27, 2020. This law will bring critically needed infrastructure to Arizona's aging and dilapidated water systems across the state.

As you continue to formulate your fiscal year 2022 work plan requests, the City of Flagstaff has several projects that we ask for immediate consideration as you develop the plan:

Flagstaff downtown flood lateral tunnel

- Cost: \$1,600,000
- The City of Flagstaff Downtown Flood Lateral Project would leverage work that the U.S. Army Corp of Engineers has committed to complete to remove the 100-year FEMA floodplain in downtown and southside neighborhoods of Flagstaff. The lateral project would allow for flood protection of the downtown area by diverting flow to the new Army Corps Rio de Flag tunnel. This is a public safety and hazard mitigation project for which the City of Flagstaff has complete oversight and responsibility.

WF Killip Elementary School regional flood detention basin

- Cost: \$2,000,000
- The Killip School Regional Flood Detention Basin is currently in the design phase. The detention basin would mitigate predicted post-fire runoff from the 2019 Museum Wildfire. The detention basin would mitigate predicted flooding from 10-year rain events and larger by collecting and detaining floodwaters that would otherwise damage the southern portion of the Sunnyside neighborhood of Flagstaff. Modeled flows from the Museum Fire burn scar indicate a high probability of one to three feet of water through the majority of the neighborhood even under frequent storm events (10 to 25-year rain events). This detention basin is needed to help alleviate the threat of post-fire floods.

Soliere Avenue low water crossing improvement at Fanning Wash

- Cost: \$1,200,000
- This project would remove a hazardous low water crossing by placing a culvert underneath the road to alleviate flooding. Similar projects have been completed or are underway in the same area. This crossing is the last low water crossing to be removed and would allow for uninterrupted travel along an important arterial road during regular flow events.



Fanning Drive wash at Route 66

- Cost: \$2,500,000
- The Fanning Wash culvert at Route 66 is currently undersized and creates a flood hazard along one of the busiest highways in Flagstaff. A new larger culvert would reduce flooding risk. The project would require coordination with Arizona Department of Transportation.

Columbia Circle drainage improvement

- Cost: \$950,000
- This drainage improvement to reduce the likelihood of flooding for a portion of the Continental Country Club neighborhood is already designed. The project would include re-shaping an existing drainage channel to convey floods through the neighborhood without overtopping.

Paradise Road drainage improvement

- Cost: \$1,950,000
- Spruce Wash at Paradise Road is currently undersized for predicted Museum Fire post-fire flows. The channel can currently convey approximately 40 cubic feet per second, two orders of magnitude less than expected routine flows. Current mitigation efforts include jersey barriers and sandbags. The channel needs to be re-configured to be able to convey 320 cubic feet per second to match the downstream stormwater conveyance structures.

Switzer Canyon flood detention structure

- Cost: \$2,000,000
- Switzer Canyon wash is currently undersized through the North Hospital neighborhood. The diminutive channel causes nearly 20 homes to be in the FEMA floodplain. The area is also at high risk of impacts from future wildfire flows. A detention basin upstream of the city development would mitigate flooding and allow for the removal of the FEMA floodplain. The majority of the anticipated costs would be for land acquisition or easements.

Lake Mary Water Treatment Plant sedimentation basin rehabilitation

- Cost: \$5,500,000
- The current sedimentation basins at the Lake Mary Water Treatment Plant (LMWTP) were installed in 1965 and have been in continuous use with all original equipment since then. A Water Infrastructure Master Plan completed by engineering firm NCS Engineers in 2015 found the LMWTP Sedimentation Basins as the highest priority needing attention in all of water production infrastructure. The LMWTP Sedimentation Basin Rehab design was completed in the fall of 2020 by engineering firm Brown & Caldwell (B&C). The project essentially includes replacing or repairing all critical components of the sedimentation basins. The criticality and importance of the LMWTP Rehab project cannot be overstated. Without immediate attention the City could lose surface water production and available waters in Upper Lake Mary as a potable water supply, which serve as the COF's primary water supply in a catastrophic power loss scenario.



Raw water pipeline rehabilitation/lining

- Cost: \$2,000,000
- Surface water from Upper Lake Mary is supplied to the Lake Mary Water Treatment Plant (LMWTP) through a 27-inch concrete “wire wrap” pipeline that was installed in 1964 and is no longer in production. Due to the age and installation of the pipeline, there have been ruptures or breaks on average every two years over the last 16, the most recent occurring in the fall of 2020; requiring an emergency repair. Newer technologies have allowed for the rehabilitation or lining of pipelines rather than outright replacement. Lining the 27” concrete pipeline would be the most cost effective and feasible means of ensuring a reliable pipeline to deliver surface water from Upper Lake Mary to the LMWTP. While the cost of completion for the entire project would be approximately \$15 million, the design and construction services phases of the project could be completed for approximately \$2 million.

Meter replacement

- Cost: \$2,000,000 (scalable)
- The City of Flagstaff Water Services Division current maintains over 20,000 metered accounts and over 10,000 meters that are 12 years or older and in need of replacement. Newly developed “smart” meters can collect data more accurately, which is beneficial in reducing leaks through a customer leak detection capability. While total replacement of all meters would cost approximately \$8 million, the project could be broken into phases and administered over several years, allowing for a scalable approach based on available funding. This project also supports water conservation activities.

Woody Mountain Wellfield powerline burial

- Cost: \$4,000,000
- The Woody Mountain Wellfield is currently the City of Flagstaff’s largest groundwater supply with a capacity slightly over 5 million gallons per day. From Woody Mountain Well #1, city-owned powerlines traverse both Forest Service, private, and city owned land to six other groundwater wells and the Woody Mountain Booster Station. Relocating powerlines underground is a best management practice employed by numerous power utilities nationwide to increase resiliency and reduce wildfire threat from arcing that can occur with powerlines and surrounding vegetation. Relocating the city-owned overhead powerlines to the six groundwater wells and the Woody Mtn. Booster Station would increase the resiliency and dependability of the wellfield and reduce the risk of wildfire caused by the powerlines to northern Arizona.

Thank you for your consideration of these critical environmental infrastructure projects for the City of Flagstaff. If you have any questions or concerns, please free to contact Mayor Paul Deasy at 928-213-2015/ Paul.Deasy@flagstaffaz.gov or legislative affairs staff at 928-213-2019/ sarah.langley@flagstaffaz.gov. We look forward to partnering with you and the Los Angeles District to improve our critical infrastructure.



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Sincerely,

cc: Representative Greg Stanton, House Transportation and Infrastructure Committee
Representative Tom O'Halleran
Senator Kyrsten Sinema
Senator Mark Kelly