

White Tanks No. 4 Flood Retarding Structure Rehabilitation Project Maricopa County, Arizona

Fact Sheet
January 2018

History of the Dam:

White Tanks No. 4 Flood Retarding Structure was constructed by local project sponsors with the assistance of the USDA Soil Conservation Service (now Natural Resources Conservation Service) in 1954. It is operated and maintained by the Flood Control District of Maricopa County.

The structure receives storm water runoff from the southeast side of the White Tanks Mountains as well as from storm water facilities located to the north.



Why Rehabilitate the Dam?

The dam had surpassed its original 50-year project lifetime and had developed safety deficiencies.

The Arizona Department of Water Resources (state agency with regulatory authority) classified the dam as having safety deficiencies and it needed corrective action to bring it into compliance with dam safety standards and requirements.

Deficiencies included transverse cracking of the embankment, inadequate left and right spillways and unprotected corrugated metal pipe outlets.

The original 1.3 mile long, 20-foot high earthen structure provided flood protection for urban and rural areas downstream for over 60 years and sponsors felt it critical that it be rehabilitated so that it would continue to provide flood protection for another 100 years.

Rehabilitation Details:

The rehabilitation consisted of raising the dam embankment, grading of the flood pool to remove a large borrow area pit, widening and extending the existing flood structure to 1.6 miles and adding upgrades, including an architecturally and structurally enhanced concrete auxiliary spillway, drop inlet structures with realigned inflow channels and a new concrete principal outlet structure.

Project Cost:

The rehabilitation of the dam was completed in two phases over several years with completion in 2017. The project cost \$40 million with NRCS providing 65 percent of the construction cost and local sponsors provided 35 percent. FCDMC obtained easements and permits for the structures and managed the design and construction work. NRCS provided engineering assistance and other technical services for the project.

Benefits:

In addition to protecting agricultural land, the dam provides flood protection for cities and rural areas downstream that currently includes nearly 1,600 buildings with an estimated population of 50,000 by the Year 2040. The City of Buckeye has plans to build recreational fields in the flood pool area and possibly a public library upstream of the dam and outside the 100 year flood pool.

Partners:

Flood Control District of Maricopa County
Agua Fria-New River Natural Resources Conservation District
Buckeye Valley Natural Resources Conservation District
NRCS

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