

# WRDA PROJECT PROPOSALS

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## SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

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### SANTA ANA RIVER MAINSTEM FLOOD PROTECTION PROJECT

**Funding Request:** \$81.5 Million

**Estimated Total Project Cost:** \$1.7 Billion

The Santa Ana River Mainstem Project done in conjunction with the U.S. Army Corps of Engineers (USACOE) includes seven interdependent features: Mill Creek Levee, Oak Street Drain, San Timoteo Creek, Lower Santa Ana River, Seven Oaks Dam, Prado Dam and Santiago Creek. As of this date, Seven Oaks Dam, Mill Creek Levee, Oak Street Drain, San Timoteo Creek Reaches 1, 2 and 3A and the Lower Santa Ana River (LSAR) Reaches 1-8 and 10 are complete.

**Project Description:** Appropriate \$81.5 million (75%) through USACOE for the remaining portion requested for funding that includes \$108.6 million for engineering, construction, and right-of-way acquisition, environmental mitigation for Prado Dam (\$56.5 million), Seven Oaks Dam (\$8.6 million) and Reach 9 of the Lower Santa Ana River reach (\$43.5 million).

### SAN TIMOTEO CREEK BASINS FLOOD PROTECTION PROJECT

**Funding Request:** \$4 Million

**Estimated Total: Project Cost:** \$6 Million

The San Timoteo Creek basins were constructed by the U.S. Army Corp of Engineers (USACOE) in 2005 to help provide flood protection. Recent storms have completely filled all 18 basins. In their design of the project, the USACOE anticipated that the 18 basins would need to be cleaned out in entirety once every 18 years. The actual frequency is closer to every 4-5 years which is an unanticipated and burdensome effort for the District. These exacerbated maintenance and operations cost that cannot be sustained by the San Bernardino County Flood Control District.

**Project Description:** Authorize and appropriate \$4 million for USACOE to cost share (65%) in maintenance and removal of sediment deposit in San Timoteo Basins 1 through 18.

### SAN TIMOTEO CREEK BASINS FLOOD PROTECTION AND WATER QUALITY STUDY

**Funding Request:** \$2 Million

**Estimated Total: Project Cost:** \$4 Million

The San Timoteo Creek basins were constructed by the U.S. Army Corp of Engineers (USACOE) in 2005 to help provide flood protection. Recent storms have completely filled all 18 basins. In their design of the project, the USACOE anticipated that the 18 basins would need to be cleaned out in entirety once every 18 years. The actual frequency is closer to every 4-5 years which is an unanticipated and burdensome effort for the District. A study needs to be conducted to find solutions to the actual amount of debris produced by the watershed.

**Project Description:** Authorize and appropriate \$2 million (50%) for USACOE to study sediment deposit in San Timoteo Basins 1 through 18.

## **LYTLE-CAJON CHANNEL FLOOD PROTECTION PROJECT**

**Funding Request:** \$3.9 Million

**Estimated Total project Cost:** \$6 Million

The U.S. Army Corps of Engineers (USACOE) originally built the Lytle-Cajon Creek Channel in 1948. Due to wear and tear along the channel a USACOE inspection report suggested repairs to the invert. These repairs are especially important due to the nature of the channel structure with the side walls being dependant on the invert for strength.

**Project Description:** Authorize and appropriate the construction of the Lytle-Cajon Creek flood protection project in the amount of \$3.9 million (65%).

## **LYTLE-CAJON BASIN FLOOD PROTECTION, WATER QUALITY AND WATER CONSERVATION STUDY**

**Funding Request:** \$2 Million

**Estimated Total project Cost:** \$4 Million

The San Bernardino County Flood Control District would like the U.S. Army Corps of Engineers (USACOE) to study the use and function of the inlet gate on the Lytle-Cajon Channel and the potential for a debris basin upstream to help reduce future damage and maintenance needs. The study will find a long term solution to the channel's maintenance needs. This facility was built by the USACOE in 1948.

**Project Description:** Authorize and appropriate the Lytle-Cajon Basin flood protection and water conservation project in the amount of \$2 million (50%).

## **SEVEN OAKS DAM WATER QUALITY SPECIAL STUDY**

**Funding Request:** \$6.5 Million

**Estimated Total Project Cost:** \$8.7 Million

The U.S. Army Corps of Engineers (USACOE), Los Angeles District, is conducting a feasibility level study to investigate water quality issues related to Seven Oaks Dam and Reservoir. This effort is proceeding in partnership with the existing non-Federal sponsor for the Santa Ana River Mainstem Project, that sponsor being the flood control districts of Orange, Riverside and San Bernardino counties.

**Project Description:** Appropriate \$6.5 million (75%) through USACOE towards the feasibility phase study and to start identifying alternatives and develop plans for implementation.

## **SEVEN OAKS DAM WATER CONSERVATION SPECIAL STUDY**

**Funding Request:** \$2 Million

**Estimated Total Project Cost:** \$4 Million

The U.S. Army Corps of Engineers (USACOE), Los Angeles District, is conducting a feasibility level study to investigate water conservation issues related to Seven Oaks Dam and Reservoir. This effort

is proceeding in partnership with the existing non-Federal sponsor for the Santa Ana River Mainstem Project and the San Bernardino Valley Municipal Water District.

**Project Description:** Appropriate \$2 million (50%) through USACOE towards the conservation study.

## **CACTUS BASINS FLOOD PROTECTION, WATER QUALITY AND WATER CONSERVATION PROJECT**

**Funding Request:** \$21.8 Million

**Estimated Total Project Cost:** \$33.5 Million

The San Bernardino County Flood Control District is currently designing the expansion of Cactus Basins 3, 4 and 5 and the plans are in the final stages of review and environmental clearance. The project will provide flood protection, water quality improvement, and will allow for water recharge. This is part of the Rialto Channel system which was studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Fund \$21.8 million (65%) in construction cost for the Cactus Basins flood protection, water quality and water conservation project.

## **RIALTO CHANNEL FLOOD PROTECTION PROJECT**

**Funding Request:** \$19.5 Million

**Estimated Total Project Cost:** \$30 Million

The Rialto Channel has numerous road crossings and channel sections that cannot handle the increased run off from the I-210 Freeway and Cactus Channel project. The project includes the channel improvements, including upgraded road crossings and the improvement of the channel at Riverside Avenue. The Rialto Channel system has been studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Fund \$19.5 million (65%) in construction cost for the Rialto Channel flood protection project.

## **MOJAVE FORKS DAM FLOOD PROTECTION AND WATER CONSERVATION PROJECT**

**Funding Request:** \$32.5 Million

**Estimated Total Project Cost:** \$50 Million

The Mojave Forks Dam was constructed for flood protection and water conservation purposes and was completed in 1972 by the U.S. Army Corp of Engineers (USACOE). In order to enhance the groundwater recharge activity, in March 1986, the USACOE, Los Angeles District, published a report titled Mojave River Dam, containing various alternatives. Their alternatives include installing gates at the dam outlet and dam modification to increase a storage capacity of the existing dam.

**Project Description:** Authorize and appropriate \$32.5 million (65%) through USACOE for the engineering and construction of gates at the dam outlet and dam modification to increase storage capacity of the existing dam.

## **MOJAVE RIVER FLUVIAL GEOMORPHOLOGIC STUDY**

**Funding Request:** \$1 Million

**Estimated Total Project Cost:** \$2 Million

It is essential to the flood protection efforts in the High Desert to be able to maintain and, when needed, improve portions of the Mojave River. A fluvial geomorphologic study of the Mojave River that identifies the hydrology and sediment transport processes is needed to update the current Mojave River Floodplain Maintenance Plan prepared by the U.S. Army Corp of Engineers (USACOE) in 1997.

**Project Description:** Authorize and appropriate \$1 million (50%) for the USACOE to perform a fluvial geomorphologic study of the Mojave River.

## **U.S. ARMY CORPS OF ENGINEERS - SAN TIMOTEO LOAN**

**Funding Request:** \$4 Million

**Estimated Total: Project Cost:** \$6 Million

The San Bernardino County Flood Control District (District) currently has a \$6 million loan with the U.S. Army Corps of Engineers (USACOE) for the construction of San Timoteo Chanel and Basin project. The District has already repaid \$2 million of this loan. Recent storms have completely filled all 18 basins. In their design of the project, the USACOE anticipated that the 18 basins would need to be cleaned out in entirety once every 18 years. The actual frequency is closer to every 4-5 years which is an unanticipated and burdensome effort for the District. These exacerbated maintenance and operations cost that cannot be sustained by the San Bernardino County Flood Control District. If the remaining \$4 million did not have to be repaid the maintenance and operations costs would not be as much of a burden.

**Project Description:** Waive the remaining USACOE loan in the amount of \$4 million.

## **DEER CREEK BASIN FLOOD PROTECTION PROJECT**

**Funding Request:** \$4.7 Million

**Estimated Total Project Cost:** \$6.2 Million

The capacity of Deer Creek Basin, a U.S. Army Corps of Engineers (USACOE) built facility, has been a controversial topic for many years and gained national attention by U.S. Senators Diane Feinstein and Barbara Boxer. The San Bernardino County Flood Control District (District) worked with USACOE to determine how to improve the basin's capacity. The District estimates the cost to expand the basin to 310 acre-feet, standard capacity for USACOE facilities, to be \$6.2 million.

**Project Description:** Authorize and appropriate funding in the amount of \$4.7 million (65%) to the USACOE for the Deer Creek Debris Basin flood protection project.

## **TWIN CREEK LEVEE FLOOD PROTECTION PROJECT**

**Funding Request:** \$1.8 Million

**Estimated Total Project Cost:** \$2.7 Million

The levee system at Twin Creek Channel, a U.S. Army Corps of Engineer (USACOE) built facility, was evaluated in 2008 through the USACOE RIP program and was found to not meet the freeboard and erosion requirements to obtain FEMA certification. The improvements would not only allow the facility to be certified but would take a number of commercial and residential areas out of a floodplain.

**Project Description:** Authorize and appropriate \$1.8 million (65%) in funding to USACOE for the construction of the Twin Creek Levee flood protection project.

## **WILSON CREEK FLOOD PROTECTION PROJECT**

**Funding Request:** \$455,000

**Estimated Total Project Cost:** \$700,000

The Wilson Creek flood protection project is a joint effort between the San Bernardino County Flood Control District and the City of Yucaipa. The city has begun construction of the basins and outlet structure. The District has engineered plans to substantially reduce the flood hazard along the downstream conveyance system between the basins and Interstate Highway 10. The Wilson and Wildwood Creeks have been studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Authorize and appropriate \$455,000 (65%) in funding to USACOE for the construction of the Wilson Creek flood protection project.

## **WILDWOOD CREEK FLOOD PROTECTION AND WATER QUALITY PROJECT**

**Funding Request:** \$3.9 Million

**Estimated Total Project Cost:** \$6 Million

The Wildwood Creek flood protection and water quality project is a joint effort between the San Bernardino County Flood Control District and the City of Yucaipa. The City has built basins at the upstream portion of the system. This project would reduce the flood hazard along the downstream conveyance system between the basins and Interstate Highway 10. The Wilson and Wildwood Creeks have been studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Authorize and appropriate \$3.9 million (65%) in funding to USACOE for the construction of the Wildwood Creek flood protection, water quality and water conservation project.

## **MOJAVE LEVEE PHASE II FLOOD PROTECTION PROJECT**

**Funding Request:** \$850,000

**Estimated Total project Cost:** \$1.3 Million

The Mojave River Levee Phase II flood protection project is an extension of the Mojave River Levee Phase I up to the Oro Grande Wash Box in the High Desert area. Currently, San Bernardino County Flood Control District staff is preparing the final engineering plans to submit to the State and local agency to attain proper permits. The Mojave River system has been studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Authorize and appropriate \$850,000 in funding to USACOE for the construction of the Mojave Levee Phase II flood protection project.

## **MISSION ZANJA FLOOD PROTECTION, WATER QUALITY AND WATER CONSERVATION PROJECT**

**Funding Request:** \$ 3.9 Million

**Estimated Total Project Cost:** \$6 Million

The San Bernardino County Flood Control District has been working with the City of Redlands on developing a project along the Mission Zanja system. The project will provide flood protection, water quality improvement, and will allow for water recharge. The Mission Zanja system has been studied by the U.S. Army Corps of Engineers (USACOE).

**Project Description:** Fund \$3.9 million (65%) in construction cost for the Mission Zanja flood protection, water quality and water conservation project.