



CASE STUDY **ARROYO GRANDE**

*Levee Protection
San Luis Obispo, CA*

PROJECT SUMMARY

The Arroyo Grande Creek Watershed is a coastal basin located in southern San Luis Obispo County. Its primary use is agricultural land, but also includes Lake Lopez Reservoir and a regional airport. In response to severe flooding in the 1950s, the Arroyo Grande Creek Watershed was initially constructed in 1961 by the USDA Soil Conservation Service and the Arroyo Grande Resource Conservation District.

Estimated capacity of the channel was 1,700 cfs. In 2001, a high intensity storm event caused levee failure, resulting in millions of dollars in damage to adjacent farmland and residential properties.

The San Luis Obispo County Flood Control & Water Conservation District and the Department of Public Works developed multi-phased plan to improve flood protection. Phase II of the plan included improvements to the levees located in the watershed, which had previously breached during intense rain events. The land adjacent to the levees is lucrative agricultural property, so the project engineer wanted to minimize the need for expensive right-of-way acquisition. The engineer also wanted a solution that would provide at least 20 years of protection.



PROBLEM

The Arroyo Grande levee needed to be reinforced after damage from several major flood events.



SOLUTION

Approximately 30,000 square yards of ARMORMAX was installed to stabilize the levees.



ARMORMAX[®]

Engineered Earth Armoring System

PropexGlobal.com/Armormax

FEATURES & BENEFITS

- Superior UV resistance for up to 75 year design life
- Recognized by the Environmental Protection Agency (EPA) as a Best Management Practice (BMP) to improve water quality
- Patented trilobal X3® Fiber Technology helps lock in seeds and promote rapid root mass development
- Promotes infiltration of surface water
- Resistant to both hydraulic and non-hydraulic stresses
- Environmentally-friendly solution for improving groundwater quality and protecting wildlife
- Easy installation equals reduced time and costs

The ARMORMAX® system was selected to armor the levees. ARMORMAX protects earthen levees against the erosion-causing hydraulic forces of storm surge. It has been tested by Colorado State University and the U.S. Army Corps of Engineers (USACE) on a full-scale wave overtopping simulator. Testing confirms that ARMORMAX provides increased levee resilience and durability and reduces the risk of a breach caused by wave overtopping. ARMORMAX is approved by the USACE and has been installed on more than 100 miles of levees in the U.S.

Using ARMORMAX can also reduce the amount of space needed for the right of way because it provides improved surficial stability on steeper than normal slopes while maintaining an acceptable factor of safety.



PERFORMANCE

ARMORMAX stabilized the levees and allowed for reduced right of way space.



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