

Fort Churchill Flood Hazard Mitigation Project Selected by FEMA National Review Panel

The Fort Churchill Flood Mitigation Project proposes construction of a low-flow channel approximately 5,170 FT long located away from the existing bank failure; installation of bio-engineering treatment along the new low-flow channel outer banks to promote long term stability; installation of a lined open channel to convey the irrigation water along approximately 1,420 LF of the existing open ditch; filling the existing bank failure out at a 3:1 (Horizontal to Vertical) slope; and armoring the slope with rock reinforcement to an elevation above the 100 YR event. The engineer's preliminary estimate of probable costs for the project totals \$2,289,238.

Upon review by the Nevada Hazard Mitigation Planning Committee, the Fort Churchill Flood Mitigation Project was ranked #5 out of 8 projects submitted for the State of Nevada. Additionally, Nevada State Parks was recently notified that the application was successful in the FEMA national competitive process. Upon completion of NEPA, Nevada State Parks will be awarded \$1,716,908 or 75% of the total project cost. The remaining \$572,330 or 25% of the project cost will be provided by State and local partners through donation of in-kind services and bioengineering materials.



Have You Identified Your Community Hazards?

5 Questions Every County, City, and Town Should Ask About Hazard Mitigation

Securing the Fort: Hazard Mitigation Planning

Built in 1861, Fort Churchill, once an active U.S. Army Fort, was the desert outpost that guarded the Pony Express run and provided protection for the settlers. Hundreds of soldiers were based here and during the Civil War the fort was an important supply depot for the Nevada Military District. However, today Fort Churchill faces a different threat.

During the 1997 flood event, flows of the Carson River at Fort Churchill peaked at 22,800 cfs. Portions of the Fort Churchill Road were washed away and flooded in many places. During such flood events and when at high capacity, the Carson River has eroded the river bank directly adjacent to Fort Churchill Road and the Buckland Ditch, causing a 25-foot vertical bank that is approximately 1,420 linear feet long. In the last six years, there has been a 15 to 20-foot loss of land and it is anticipated, if corrective actions are not taken, bank failure is eminent. This will result in destruction of both the existing irrigation system and the adjacent Fort Churchill Road.

In February 2010, we were contacted by Dayton Valley Conservation District (DVCD) and asked how we may be able to assist with this bank stabilization project. As the project developed, R.O. Anderson facilitated meetings with the project partners including Nevada State Parks, Dayton Valley Conservation District, Nevada Division of Forestry, USDA Natural Resources Conservation District, Carson Water Subconservancy District, Lyon County, and Nevada State Lands to discuss design alternatives and potential funding opportunities.

R.O. Anderson identified a potential funding source through the FEMA Unified Hazard

Mitigation Grant Program and prepared the detailed applications for submittal on behalf of Nevada State Parks. As a result of our efforts, the Fort Churchill Flood Mitigation Project was selected by the FEMA National Review Panel.

Nevada's current economic condition has made funding infrastructure projects, such as this, difficult at best. In response to our clients' needs, R.O. Anderson has initiated a comprehensive grant program to assist in the identification of funding opportunities for hazard mitigation, as well as transportation, water and wastewater, parks, open space, energy efficiency/clean energy, economic development, capital improvements, and environmental and resource conservation.

According to FEMA, mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. We challenge each city, town and community to ask yourself the following questions.

1. Has your community identified potential losses of lives, property, and economic well-being from future disasters?
2. Do you have critical infrastructure at risk?
3. Do you have an approved Local Hazard Mitigation Plan in place?
4. Can you afford to wait until the next disaster?
5. Is your fort secured?

For more information about your community's risk assessment or further information about the FEMA Unified Hazard Mitigation Grant Program, please contact Stephanie Hicks, AICP, at (775) 215-5042.