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Title: FLOODPLAIN STATEMENT OF FINDINGS FOR CORRECTIVE ACTIONS IN POTRILLO CANYON TECHNICAL AREA - 36, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NEW MEXICO

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**FLOODPLAIN STATEMENT OF FINDINGS  
FOR  
CORRECTIVE ACTIONS IN POTRILLO CANYON  
TECHNICAL AREA - 36  
LOS ALAMOS NATIONAL LABORATORY  
LOS ALAMOS, NEW MEXICO**

**AGENCY:** U.S. Department of Energy (DOE) National Nuclear Security Administration, Los Alamos Field Office (NA-LA)

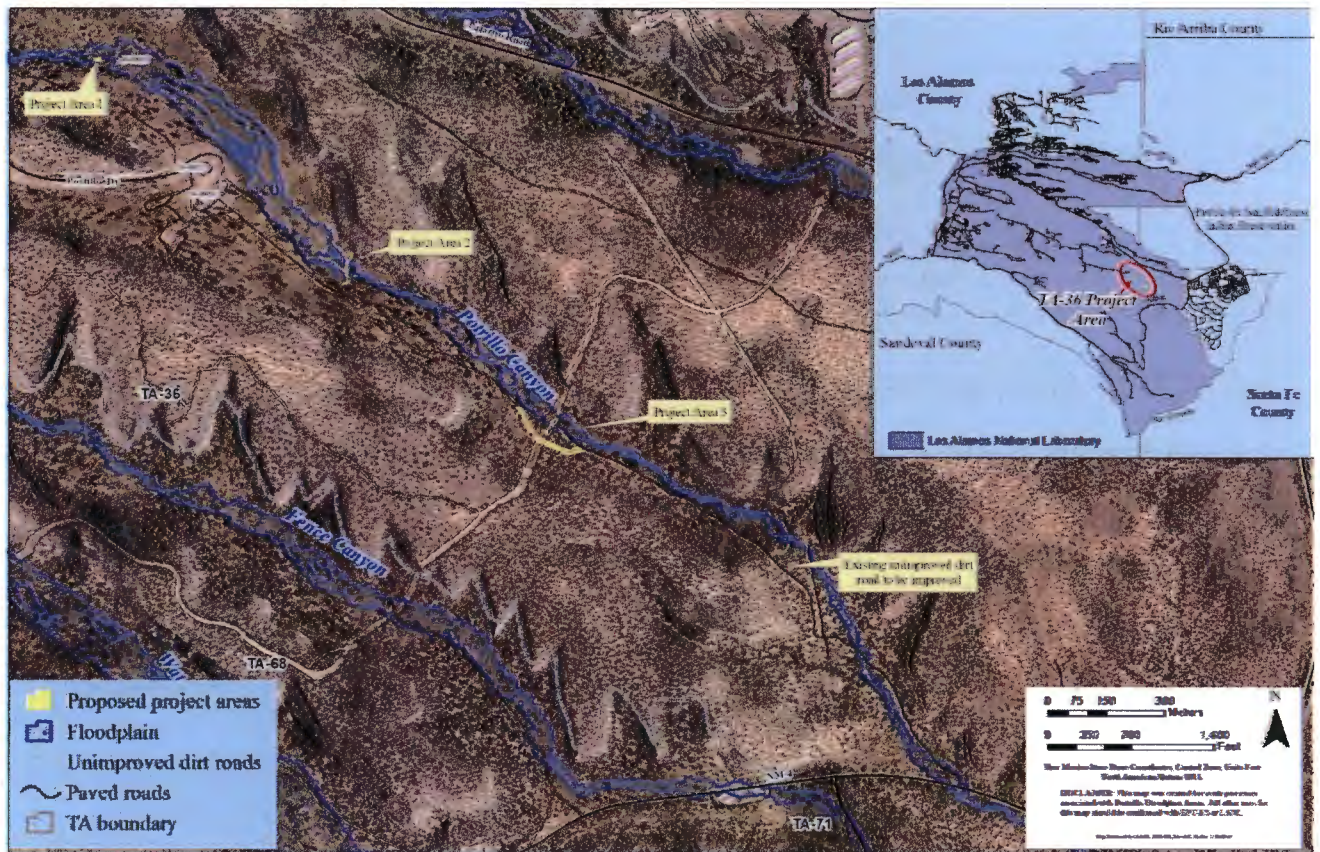
**ACTION:** Floodplain Statement of Findings

**PROPOSED ACTION:** In 2014, baseline storm water monitoring samples for Potrillo Canyon Sample Management Area (Figure 1) at Los Alamos National Laboratory (LANL) exceeded the National Pollutant Discharge Elimination System Individual Permit No. NM0030759 target action level (TAL) of 15 picocuries per liter (pCi/L) for gross-alpha radioactivity (393 pCi/L) and a TAL of 30 pCi/L for radium-226 and radium-228 (95.9 pCi/L). Consequently, erosion control measures within the management area are proposed to minimize sediment migration, a corrective action under the permit that is a requirement of the New Mexico Environment Department consent decree and a good management practice to limit off site sediment migration.

The area proposed for erosion controls (Figure 1) consists of portions of Technical Area 36 that were used as firing sites primarily involved high explosives (HE) and metal (e.g., depleted uranium, lead, copper, aluminum, and steel), small-explosives experiments and burn pits (burn pits were used for burning and disposal of test debris). In addition, underground explosive tests were conducted at an approximate depth of 100 feet were also conducted.

These watershed-based storm water controls will focus on addressing erosion occurring within the floodplain through mitigating and reducing both current and future channelization and head cutting. The construction of the erosion protection measures will require heavy equipment to reach the sites using the existing road. The existing road is in disrepair and is close to archaeological sites. Therefore, the road will be rerouted around areas of erosion protection measures and archaeological sites and improved through blading and the addition of gravel.

DOE will build a coir log structure (A coir log is a mesh log-shaped bag filled with coconut husk known as coir.) in Project Area 1, constructed completely of biodegradable materials and rock riprap hardening. The coir logs structure is an erosion control measure to minimize sediment migration. Additionally, two rock check dams up gradient and two rock check dams downgradient of the coir logs structure will be constructed. The proposed control measures will provide run-on and run-off erosion and sedimentation controls by spreading and slowing the water flow that occurs after precipitation events.



**Figure 1. Proposed project areas**

In Project Area 2 DOE will install a series of low earthen berms with rock check dams and riprap to direct stormwater run-off back into the floodplain. A water bar and bar ditch run-out on the dirt access drive up gradient of the stream channel will also be installed. In addition, to correct an erosional head cut, a minimum of four Zuni bowls<sup>1</sup> in series will be constructed to provide erosion protection features and gabion armoring to retain sediment in the head cut area and stop the head cutting by slowly filling in the area with sediment.

The road in Project Area 3 will be rerouted out of the floodplain and improved by blading and the addition of gravel. The existing fire break has a 2-foot berm and this will be enhanced to approximately 4 feet in height to retain storm water run-off and sediments. The enhanced berm will have an inlet pipe and armored spillway to slow the flow of storm water and direct the flow of water onto the flood plain. The abandoned roadway section will be revegetated with native vegetation. In addition to the road improvements at the firebreak, the road will be rerouted around an archaeological site to ensure the archeological site is not damaged. The road will also be straightened to improve vehicle access. The road improvements may include the armoring or

<sup>1</sup> This structure is placed at the "head" or beginning of a gully, preventing the head cut from eroding further upstream. In essence this is a constructed "step pool" where the impact of the waterfall is dissipated by the water in the pool of the Zuni bowl. After flow slows or stops, sediments such as sand and clay are left behind in the bowl and anchored by native vegetation growing through the rocks.

culverting of one drainage crossing. Some trees and vegetation will be removed during the road realignment.

**ALTERNATIVES:** Alternatives to the proposed action that were considered but eliminated include a full investigation and removal of all affected soils and capping all of the areas for no exposure. Both the full investigation and removal and capping the areas are not practicable at this time because sections of the project areas are still permitted active firing sites. These alternatives were eliminated from further consideration because they would not meet DOE's stated purpose and need to reduce potential sediment-borne pollutants migration from DOE lands. In addition, DOE considered a No Action Alternative. This alternative was not selected because it would not allow DOE to fulfill its requirements under the permit. The reduction of potential migration of HE and metals is an important goal of LANL's operation practices.

**SUPPLEMENTARY INFORMATION:** The notification for actions within a floodplain area and request for comments was sent to appropriate government agencies, tribal, and groups and persons known to be interested in or potentially affected by the proposed floodplain action and published in the Santa Fe New Mexican on April 28, 2016. Concurrently, access to the *Floodplain Assessment for Corrective Actions in Potrillo Canyon, Technical Area 36, Los Alamos National Laboratory, Los Alamos, New Mexico* was provided via <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/lareport/LA-UR-16-20393> and hard copy at the Los Alamos National Laboratory Public Reading Room, located at 94 Cities of Gold Road, Pojoaque, New Mexico. No comments were received. This Floodplain Statement of Findings was prepared in accordance with Executive Order 11988: Floodplain Management and DOE implementing regulations 10 Code of Federal Regulations 1022, and provides a summary of the results of the Floodplain Assessment.

**FLOODPLAIN IMPACTS:** DOE NA-LA has determined that this project will not result in long-term adverse impacts to the beneficial values of the 100-year floodplain. The project will conform to applicable floodplain protection standards. Temporary disturbance within the floodplain will cease following completion of construction activities associated with this proposed project. Best management practices, including erosion and sediment control measures will be utilized during construction to minimize any potential harm and revegetation of construction scarred areas using an appropriate native seed mix or plants. This proposed project will not significantly modify existing elevations and flow paths within the floodplain or result in other long-term impacts to the floodplain and its functionality. No negative effects to lives and property associated with floodplain disturbance are anticipated.

**FOR FURTHER INFORMATION CONTACT:** For further information on this proposed floodplain action contact Ms. Vicki Loucks via email at [vicki.loucks@nnsa.doe.gov](mailto:vicki.loucks@nnsa.doe.gov); fax (505) 667-5948; or mail to Ms. Vicki Loucks, NNSA Los Alamos Site Office, 3747 West Jemez Road, Los Alamos, NM 87544.