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Los Alamos National Laboratory Floodplain Assessment for the West Road Post and Cable Fencing Project

Los Alamos
NATIONAL LABORATORY

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Prepared for: U.S. Department of Energy
National Nuclear Security Administration
Los Alamos Field Office

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ACRONYMS

CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
EO	Executive Order
LAC	Los Alamos County
LANL	Los Alamos National Laboratory
ft.	feet
mi.	miles
NM 501	New Mexico State Road 501
NNSA	National Nuclear Security Administration
PR-ID	Permits and Requirements Identification

INTRODUCTION

The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the U.S. Department of Energy (DOE), is proposing to take action at Los Alamos National Laboratory (LANL) to install post and cable or in-kind barriers along West Road at selected locations near the Los Alamos County ice-skating rink in Los Alamos Canyon (Figure 1). The proposed project is intended to improve vehicular and pedestrian safety on West Road by reducing traffic hazards associated with unsafe roadside parking and reduce wildland fire hazards associated with vehicles driving and parking on vegetation. West Road crosses approximately 0.35 miles (mi.) (1,900 feet (ft.)) of the Los Alamos Canyon floodplain at the bottom of Los Alamos Canyon. Project activities within the floodplain include blocking access to the informal roadside parking along either side of West Road in Los Alamos Canyon.

NNSA has prepared this floodplain assessment in accordance with 10 Code of Federal Regulations (CFR) Part 1022 *Compliance with Floodplain and Wetland Environmental Review Requirements* (10 CFR Part 1022) (CFR 2003) which was promulgated to implement DOE requirements under Executive Order (EO) 11988 *Floodplain Management* (EO 1977). A floodplain is defined in 10 CFR 1022 as "the lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands," and a base floodplain as "the 100-year floodplain, that is, a floodplain with a 1.0 percent chance of flooding in any given year (CFR 2003)." This floodplain assessment evaluates potential impacts to floodplain values and functions from implementation of the proposed action, identifies alternatives to the Proposed Action, and allows for meaningful public comment.

DOE/NNSA has published this Floodplain Assessment for a 15 day for public review and comment period. Please provide comments on this Floodplain Assessment to Kristen Dors at:

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or

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After the close of the public comment period and prior to issuing a floodplain statment of findings DOE/NNSA will reevaluate the practicability of alternatives to the proposed floodplain action, mitigating measures and take into account all substantive comments received during the public comment period. DOE/NNSA will endeavor to allow 15 days of public review prior to implementing the proposed action.

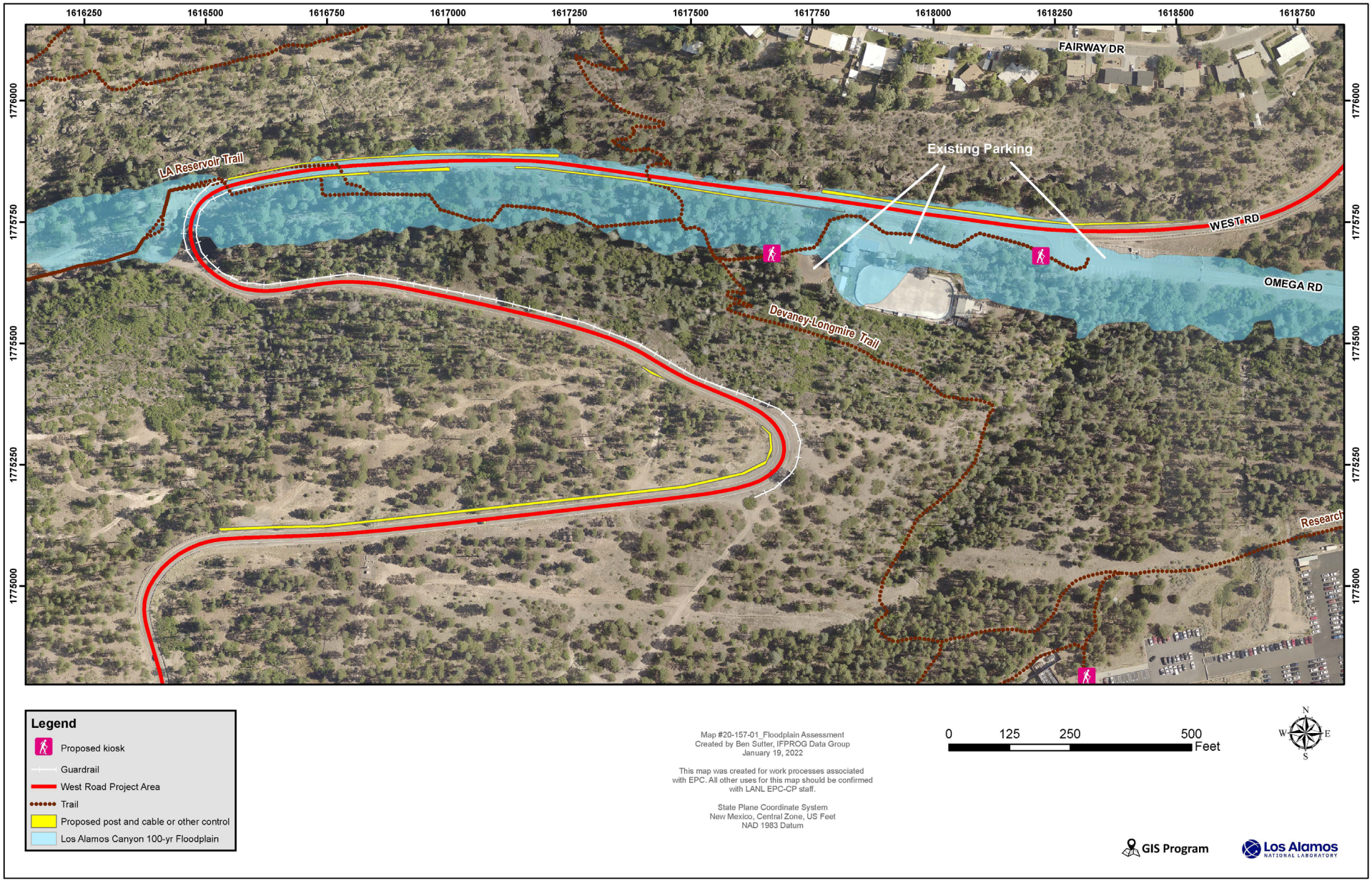

Figure 1. Location of the West Road Post and Cable Project and the Los Alamos 100-yr floodplain.

BACKGROUND

West Road, owned by DOE, is regularly used by vehicles as an alternate route around the main campus of LANL to West Jemez Road/New Mexico State Road 501 (NM 501). West Road is a bypass road that allows the public to avoid traveling through Technical Area 3 at LANL and access areas west of the laboratory. These areas include Camp May Road to Pajarito Mountain, approximately six mi. west of Los Alamos, and NM 501 towards Jemez Springs, New Mexico, approximately 38 mi. southwest of Los Alamos, or Bandelier National Monument, approximately 11 mi. south of Los Alamos.

West Road from the mesa top edge through the bottom of Los Alamos Canyon is a narrow two lane road with multiple areas of informal parking on the road shoulder in the bottom of Los Alamos Canyon. Out of the canyon bottom, multiple two-track paths have formed from unauthorized off-road vehicle travel. The safety issues associated with West Road are undesignated roadside parking with poor visibility for vehicles and pedestrians and potential for wildland fire from vehicles driving and parking on vegetation such as dry grass and pine needles. The proposed project would implement upgrades to improve the current safety issues.

The upper portion of Los Alamos Canyon is characterized by mixed conifer and ponderosa pine forests with steep canyon sides/cliffs and a relatively narrow canyon bottom. Although a stream channel runs through the canyon, water flow is intermittent. Areas adjacent to the stream channel were disturbed by flooding after the 2011 Las Conchas Fire. There is some riparian vegetation remaining, but Siberian elm trees, an invasive species, have also established in some parts of the canyon, contributing to reduced native habitat and excess fire fuel.

The portion on the floodplain impacted by this project is approximately 1.44 acres (33 ft. wide by 1,900 ft. long). The canyon bottom is developed with a paved road, hiking trails, parking areas, and an ice-skating rink (Figure 1).

PROJECT DESCRIPTION

Installation of post and cable or in-kind barriers are proposed along West Road at selected locations near the mesa top and in the canyon bottom near the Los Alamos County ice-skating rink in Los Alamos Canyon. This assessment focuses on activities occurring in or near the Los Alamos Canyon 100-yr floodplain (Figure 1). The installation activities are not proposed within the stream channel but instead in the upper riparian area of the floodplain. Activities previously completed within the floodplain including milling and resurfacing the roadway, replacing existing guardrails, and extending guardrails have been addressed in a separate floodplain assessment (LANL 2021). Activities previously proposed within the floodplain but not completed to date including installing informational trail kiosks, installing trail wayfinding markers, and invasive species removal (e.g., Siberian elm trees) to restore habitat and reduce wildland fire risk. These activities have also been addressed in a separate floodplain assessment (LANL 2021).

Figure 2 shows the project area in the floodplain near the ice-skating rink looking west. Vehicles currently park on road shoulders to access local recreational trails and the ice-skating rink.

Figure 3 shows the proximity of an informal parking area to the traffic lanes and prevalence of grass and pine needles. Figure 4 shows the west end of the project in the floodplain looking west. Vehicles currently park on road shoulders near this hairpin road curve to access local recreational trails.

Figure 2. Project area in the floodplain near the ice-skating rink looking west.

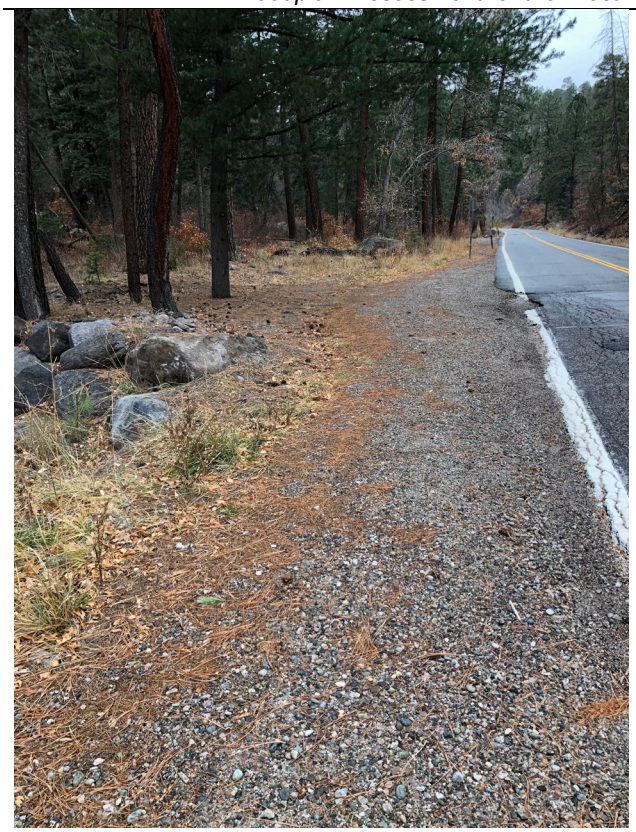

Figure 3. Informal parking area showing proximity to traffic lanes and vegetation.

Figure 4. West end of project in the floodplain near a hairpin curve area looking west.

To better protect floodplain resources and control vehicle parking hazards, post and cable or other in-kind barriers would be installed on the road shoulders to block the informal parking. The current project identifies four areas in the floodplain; however, this floodplain assessment includes any additional parking barriers the project may need to install in the Los Alamos Canyon floodplain. The post and cable or other in-kind barriers would be installed on the north and south sides of West Road near the ice-skating rink. Post and cable or other in-kind barriers will also extend to the east from the guardrails at the hairpin road curve. The barriers would be installed using heavy equipment such as auger or mini-backhoe. Heavy equipment will remain on paved surfaces and established shoulders during installation. Postholes would be a maximum of 6 ft. deep and spaced approximately 8 ft. apart. Soils will be placed back in the holes. Any excess soils would be removed from the site or stabilized along the side of the road, outside of stream or riparian areas, following guidelines in the LANL Master Specification Section for seeding (LANL Spec 2021).

Parking would be limited to the three existing parking locations (Figure 1), one on DOE property and two on LAC property. The parking area located to the east of the ice-skating rink with approximately 50 paved parking spots is located on DOE property. The unpaved parking area on the west side and the paved parking area on the north side of the ice-skating rink are located on Los Alamos County property. The unpaved ice-skating rink parking area is located along the LA Reservoir Trail and has space for approximately 10 vehicles. The paved ice-skating rink parking area has space for approximately 24 vehicles, however hikers and other non-rink customers should not park in this area when the rink is in operation.

FLOODPLAIN IMPACTS

LANL maintains a Permits and Requirements Identification (PR-ID) process for LANL subject matter experts to identify, evaluate and resolve project-specific issues such as presence of underground utilities, contaminated soils, spills and leaks, soil disturbance and stabilization, threatened and endangered species habitat, floodplains or wetlands, and regulatory agency authorizations such as US Army Corp of Engineers permit requirements and Clean Water Act permit requirements. The process aids in identifying potential impacts to the natural and beneficial floodplain values and potential effects on lives and property.

Short-term Impacts

The following requirements were identified and reviewed in the PR-ID process to avoid potential impacts.

- This project consists of activities on existing road and shoulder areas and will not require National Pollution Discharge Elimination System Construction General Permit coverage. The road and shoulders will not be widened.
- Proposed activities in the floodplain do not significantly alter the current hydrology. The activities are not proposed within the stream channel but instead in the upper riparian area of the floodplain. This project will not be required to meet Energy Independence and Security Act compliance in the area of the floodplain.

- No historical or archeological sites are located in this area of the floodplain; therefore, no impacts will occur to cultural resources.

- The project is located in Jemez Mountain Salamander habitat, but road maintenance activities are confined to previously disturbed areas in existing roadways and roadsides; therefore, no impacts are expected to occur to the Jemez Mountain Salamander.

- There will be no soil-disturbing activities in the watercourse; therefore, this project will not require any Clean Water Act Section 404 permit coverage or 401 certification.

- The project does not affect any solid waste management units or areas of concern.

Potential short-term direct and indirect floodplain impacts from release of pollutants to the floodplain and exposure to stormwater would be avoided or minimized through implementation of the following best management practices:

- Hazardous materials, chemicals, fuels, and oils would not be stored within the floodplain.

- Since all road maintenance activities are adjacent to existing roads or parking areas, heavy equipment would not be used within the floodplain, especially if conditions are too wet to prevent damage to the soil structure.

- Equipment would be refueled at least 100 ft. from the Los Alamos Canyon bottom.

Potential direct effects to migratory birds and other biological resources are minimal, as little or no habitat would be disturbed. The Migratory Bird Treaty Act prohibits killing migratory birds, including nestlings and eggs in an active nest. Therefore, if vegetation removal is required, during the nesting season (May 15 through July 15), an onsite inspection for bird nests from LANL Biological Resource subject matter experts would be required. Construction activities would conform to requirements stipulated in the Migratory Bird Best Management Practices Source Document for Los Alamos National Laboratory (LANL 2020).

Long-term Impacts

No long-term impacts to the floodplain are anticipated as a result of this project. The proposed post and cable installation activities are limited to the existing road and shoulder areas. Flow paths within the floodplain would not be modified from pre-project conditions to post project conditions. The LANL Facilities and Operations monitors roads for erosion and maintenance issues. Additional monitoring occurs after high flow events to ensure structures are not trapping debris and causing erosion. This area is also managed as part of the LANL Trails Management Program, with annual trails maintenance assessments to identify problem erosion areas.

This assessment also considered the impacts of the proposed actions in the floodplain on the conservation of habitat for existing flora and fauna, aesthetic values, and public interest. The proposed action would not remove any protected habitat. The proposed action may affect aesthetic values since all construction activities in the floodplain are accessible to the public. However, these impacts are temporary, and the benefits of improved pedestrian and vehicular safety would outweigh any impacts to visual aesthetics.

ALTERNATIVES

The alternatives available to DOE/NNSA include: (1) no action alternative, and (2) installing additional No Parking signs. These alternatives were not selected by DOE/NNSA because the potential for a traffic safety issue would persist if physical barriers were not installed and informal parking areas are not better controlled. In addition, the potential to start a forest fire close to an urban area from driving and parking on vegetation would not improve.

The proposed project as described in this assessment would improve the overall condition of West Road, including potential traffic and pedestrian safety issues. Parking and driving activities that may contribute to wildland fire risk would be reduced and provide better long-term protection of the floodplain.

CONCLUSIONS

The proposed project would result in limited and minor direct and indirect impacts to the 100-yr floodplain and would not result in adverse impacts to the floodplain values or functions. Temporary disturbance within the floodplain would cease following completion of construction activities. Best management practices would be implemented. This proposed project would not significantly modify flow paths within the floodplain from pre-project conditions to post project conditions. No effects to lives and property associated with floodplain modifications are anticipated.

In accordance with 10 CFR 1022, DOE/NNSA will publish this Floodplain Assessment for a 15 day for public review and comment period. After the close of the public comment period and prior to issuing a floodplain statment of finding DOE/NNSA will reevaluate the practicability of alternatives to the proposed floodplain action, mitigating measures and take into account all substantive comments received during the public comment period.

LITERATURE CITED

EO 1977. Executive Order 11988 *Floodplain Management*.

CFR 2003. 10 Code of Federal Regulations (CFR) Part 1022 *Compliance with Floodplain and Wetland Environmental Review Requirements*.

LANL 2020. *Migratory bird best management practices source document for Los Alamos National Laboratory revised November 2020*. Stanek, J.E., Thompson, B.E., Sanchez, A.A., Berryhill, J.T. and C.D. Hathcock, LA-UR-20-24292.

LANL 2021. *Los Alamos National Laboratory Floodplain Assessment for the West Road Maintenance Project.* LA-UR-20-29975, https://energy.gov/nepa/articles/floodplain-statement-findings-west-road-maintenance-project-los-alamos-national.

LANL Spec 2021. *LANL Master Specification Section 32 9219- Seeding Rev 5*, LANL Engineering Standards, http://engstandards.lanl.gov.