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Los Alamos National Laboratory Starmer's Gulch Floodplain Assessment for the Fencing Project at Technical Area-08

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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
EISA	Energy Independence and Security Act
yr	year
LANL	Los Alamos National Laboratory
NNSA	National Nuclear Security Administration
TA	Technical Area

INTRODUCTION

The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the U.S. Department of Energy (DOE), is proposing to take action within the Starmer's Gulch 100-year (yr) floodplain at Technical Area (TA) 08. This action consists of the installation of a barbed 3-wire perimeter fence to create an operational boundary marker within TA-08. There is currently a gate on the access road that requires vehicles to check in at TA-08 Access Control. The boundary fence will direct pedestrian access through Access Control.

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*, which was promulgated to implement DOE requirements under Executive Order 11988 *Floodplain Management*. According to 10 CFR 1022, a floodplain is defined 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." 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.

BACKGROUND

Stormwater Management History

The Starmer's Gulch 100-yr floodplain runs roughly west to east through the center of TA-08, just north of building 08-0070) (Figure 1). There are no storm water management controls in Starmer's Gulch other than culverts under NM 501 and secondary road crossings within LANL (not shown on map).

The proposed fence will cross the floodplain in an area dominated by open Gambel oak woodland with no defined riparian corridor or wetlands present (Photo 1).

PROJECT DESCRIPTION

The proposed 3-wire barbed wire fencing will run from the access gate in the south to an existing perimeter fence north of Starmer's Gulch. LANL civil engineering standards require that T-posts will be driven into the ground at intervals of no less than 16 ft and to a depth of no less than 36 in. The 100-yr floodplain is approximately 60 ft wide at the fence crossing, therefore there should be no more that 4-5 posts installed in the floodplain. Fencing and T-posts can be transported to the area outside the floodplain in a vehicle but will be transported into the floodplain and installed by hand. The proposed fencing will be located so as to limit the amount of disturbance to existing trees and shrubs. Installation of fencing within the floodplain should take less than 1 week.

Related Projects

There are no proposed or related stormwater or floodplain projects or controls in this area.

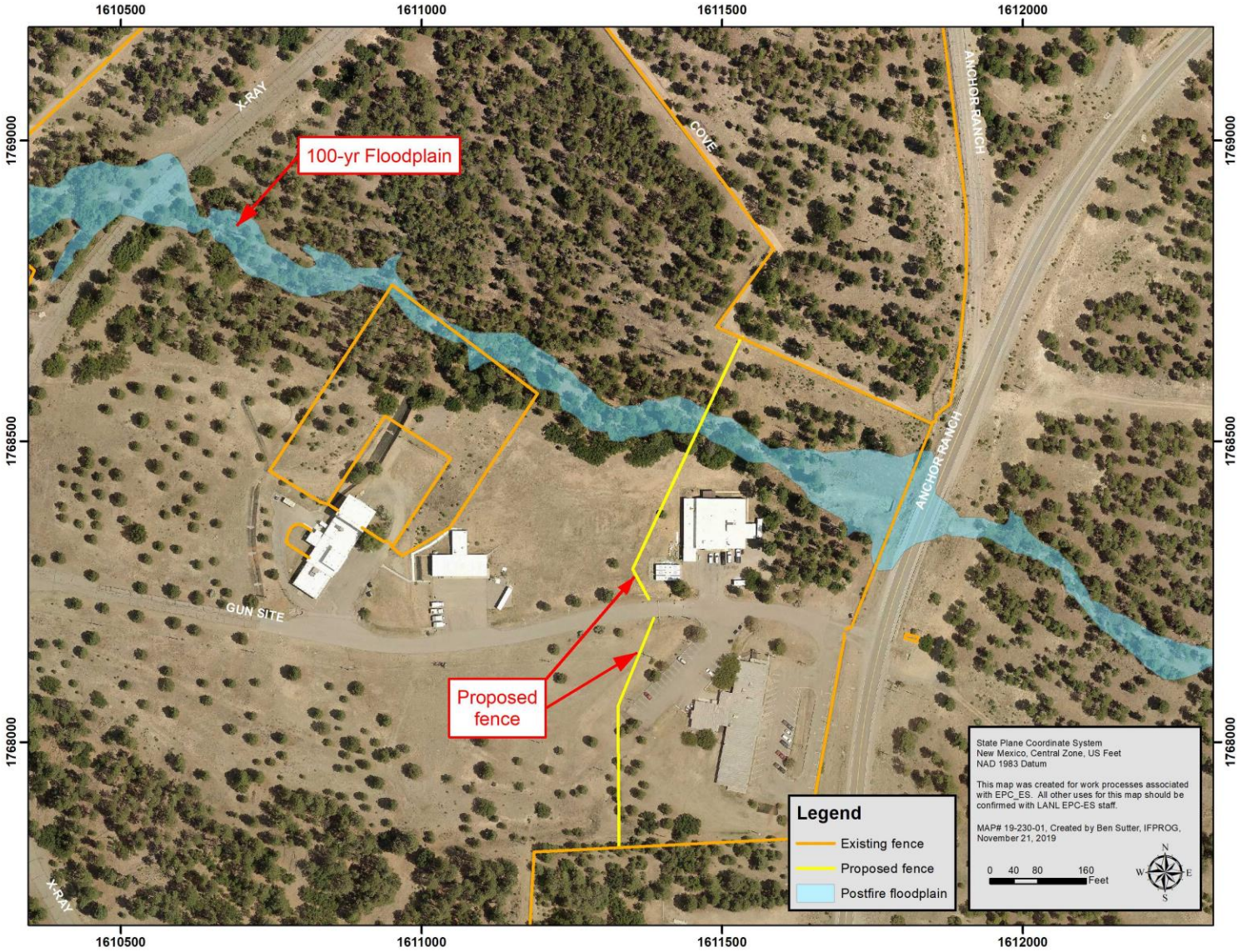

Figure 1. Map of TA-08 proposed fence line (yellow) and Starmer's Gulch 100-yr floodplain.

FLOODPLAIN IMPACTS

The proposed project would involve work within the 100-yr floodplain. The following floodplain impact assessment discusses the positive and negative, direct and indirect, and long- and short-term effects of the proposed project on the floodplain.

Short-term Impacts

All ground-disturbing activities at LANL are required to obtain a LANL issued excavation permit. This permitting process evaluates potential issues such as underground utilities, contaminated soils, threatened and endangered species impacts, impacts to floodplains or wetlands, cut and fill activities in Waters of the U.S., and specific US Army Corp of Engineers permit requirements.

Short-term direct impacts to the floodplain from this project include temporary ground disturbance associated with the installation of fence posts and wire fencing.

Short-term indirect impacts to the floodplain from these projects include potential soil erosion from ground disturbance associated with construction/installation activities and potential spills or leaks (fuel, oil, hydraulic fluid) that could occur during these activities; however, these indirect impacts will be mitigated by permit process controls as discussed below.

Short-term direct and indirect impacts from the project will be avoided or minimized through implementation of the following LANL best management practices for construction work in floodplains:

- Hazardous materials, chemicals, fuels, and oils will not be stored within the floodplain.
- Work in a floodplain will not take place when the soil is too wet to adequately support equipment.
- Equipment will be refueled at least 100ft from any drainage, including dry arroyos.

Potential direct effects to migratory birds and other biological resources would include short-term disturbance related to noise and human presence during construction. Adult migratory birds would give way to construction equipment to avoid being killed or injured. The Migratory Bird Treaty Act prohibits killing migratory birds, including nestlings and eggs in an active nest. Therefore, if vegetation removal is required, it would be coordinated to occur outside of the nesting season for migratory birds (May 15 through July 31). If construction activities occur during the nesting season, an onsite inspection for bird nests from LANL Biological Resource subject matter experts would be required. Construction activities will conform to requirements stipulated in the Migratory Bird Best Management Practices Source Document for Los Alamos National Laboratory (LANL 2011).

Long-term Impacts

No long-term direct or indirect impacts to the floodplain are anticipated from the installation of the fencing across the Starmer's Gulch 100-yr floodplain.

An evaluation of the effects of the proposed actions on the floodplain considered conservation of habitat for existing flora and fauna, cultural resources, aesthetic values, and public interest. The proposed action will not remove any potential habitat, and disturbed soil will be revegetated with native species in order to minimize any habitat loss. The proposed action will not impact cultural resources as there are no cultural resource sites within the potential affected area. The proposed action will not impact aesthetic values since all construction activities are internal to LANL and the fence will not be seen by the public.

The floodplain within the proposed actions is entirely located within LANL property and is uninhabited. No impacts to lives or private property associated with floodplain disturbance are anticipated from this project.

ALTERNATIVES

A 3-strand barbed wire fence will be used instead of chain link to allow wildlife to move more freely through the area.

CONCLUSIONS

Although the proposed project may result in limited and minor short term, direct and indirect impacts to the 100-yr floodplain, it will not result in adverse impacts to the floodplain values or functions. Short-term impacts will be minimized through the use of best management practices during and following construction activities. No long-term adverse impacts to the floodplain are expected from the installation of the 3-strand wire fence.

DOE/NNSA will publish, in accordance with 10 CFR 1022, a Statement of Findings that will include a brief description of the proposed projects, an explanation of why they are located in a floodplain, the alternatives considered, a statement indicating if the actions conform to state and local floodplain requirements, and a brief description of the steps to be taken to minimize potential harm within the floodplain. After publication of its Statement of Findings, DOE will endeavor to allow at least a 15-day public review period before implementing the proposed action. The Statement of Findings will be posted online and available for public review.

DOE/NNSA will take into account all substantive comments received on this Floodplain Assessment and, in accordance with 10 CFR 1022 and, prior to implementing the proposed action, provide the Statement of Findings to state, tribal and local governments, and others who submitted comments on the proposed floodplain action.

LITERATURE CITED

LANL 2011. Migratory bird best management practices source document for Los Alamos National Laboratory revised November 2011. Hathcock, Charles D ; Hansen, Leslie A ; Fair, Jeanne M ; Keller, David C. LA-UR-11-06629.

Photos

Photo 1. View across Starmer's Gulch 100-yr floodplain, facing north. Note existing fence in background.