



**US Army Corps
of Engineers®**
Albuquerque District



FEMA

JOINT PUBLIC NOTICE

Application Number: SPA-2015-00080-ABQ

Date: July 23, 2015

Comments Due: August 21, 2015

SUBJECT: The U.S. Army Corps of Engineers, Albuquerque District, (Corps) and the Pueblo of Nambé Environment Department (NED) are evaluating an application for the Rio Nambé Debris Flow Barriers, located in the Pueblo of Nambé Reservation, Santa Fe County, New Mexico, which would result in impacts to approximately 1.2 acres (ac) or 926 linear feet (lf) of waters of the United States in the Rio Nambé. The Federal Emergency Management Agency (FEMA) is the federal funding agency for the proposed project. This notice is to inform interested parties of the proposed activity and to solicit comments on the Corps, NED and FEMA actions.

AUTHORITY: This application is being evaluated under Sections 404 and 401 of the Clean Water Act (CWA) for the discharge of dredged or fill material in waters of the United States (U.S.). Tribal water quality certification is provided under the authority of Pueblo of Nambé water quality standards.

APPLICANT: Philip Perez
Governor, Pueblo of Nambé
15A NP 102 West
Santa Fe, New Mexico 87506

AGENT: Ryan Weiss
High Water Mark, LLC
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Cochiti Pueblo, NM 87072

LOCATION: The project area is located on the Pueblo of Nambé Reservation in Section 28 of Township 19N, Range 10E, Latitude 35.850328°, Longitude -105.892941°, Santa Fe County, New Mexico (Figures 1-7 of 7).

PROJECT DESCRIPTION: The applicant proposes to install three Geobrugg, ring-net, flexible debris flow barriers in the Rio Nambé at three separate locations upstream of Nambé Falls Reservoir (Figures 3-6 of 7). Ring-net debris flow barriers would be installed perpendicular to the stream channel in the valley for the purpose of capturing debris and sediment mobilized from the upper watershed during rain and snowmelt runoff

events. The debris flow barriers system consists of a ring-net barrier rockfall protection system that is flexible and modified to resist the velocities and energies of lateral loads unique to debris flows. Ring-net debris flow barriers include a wire mesh and geotextiles to retain smaller debris and sediment, while allowing water to pass through the barrier (Figures 3-7 of 7). The ring-nets are anchored into bedrock in the valley walls by drilling and secured by grout.

The applicant considered channel morphology, channel gradient, available storage capacity upstream of the potential barrier sites, accessibility for construction and maintenance, and bedrock conditions for debris flow barrier site selection. The debris flow barriers have been designed to capture approximately 7,583 cubic yards (cy) or 4.7 ac-ft, 408 cy or 0.25 ac-ft, and 804 cy or 0.5 ac-ft of debris and sediment at full capacity respectively for Sites 1, 2, and 3. At full capacity, the debris flow barriers would capture enough material to fill approximately 0.9 ac, 0.1 ac, 0.17 ac of waters of the U.S. respectively at Sites 1, 2 and 3. The debris flow barriers have been designed for a life span of up to 25 years, at which time the applicant may remove the barriers and allow any fill behind them to become revegetated and act as grade control as long as the upper watershed has recovered from fire impacts sufficient enough for the threat of debris flows to have been eliminated. The applicant would dredge material captured by the debris flow barriers on an as-needed basis and as recommended by the applicant's contractor. Debris and sediment dredged from behind the barriers would be disposed in an upland location on Pueblo of Nambé lands that has been previously disturbed (Figure 2 of 7).

Access for construction, operation, and maintenance of the debris flow barriers would be developed in uplands and provided by extending an existing jeep-trail at Site 1; a new roadway would need to be constructed at Site 2; and an existing 8-ft wide footpath would be expanded at Site 3 (Figures 3-6 of 7).

Based on the available information, the overall project purpose is storm water management. The applicant believes there is a need to capture debris flows from storm water because of the large amount of debris and sediment entering the Rio Nambé and Nambé Falls Reservoir from the 2011 Pacheco Fire scar, which adversely affected approximately 10,250 ac or 50% of primarily Rio Nambé watershed. The proposed project would reduce the amount of sediment and debris entering the reservoir, prevent downstream property damage from debris flows, and minimize public health and safety risk due to debris flows.

PROPOSED MITIGATION: The applicant would construct the debris flow barriers during low flow conditions and barrier installation would not result in the discharge of dredged or fill material into waters of the U.S. The barriers will minimize adverse impacts to waters of the U.S. downstream by capturing large debris and sediment flows originating in the upper Rio Nambé watershed and Pacheco Fire burn scarred areas. Captured debris and sediment from behind each barrier would be removed and disposed in a previously disturbed upland location for approximately 25 years or until the Pacheco Fire burn scar areas have recovered sufficiently to eliminate debris and sediment flows in the Rio Nambé watershed. Once the burn scar has recovered, the applicant may remove the barriers and leave any debris and sediment available

behind the barriers for the purpose of grade control, bank and channel stability, and restoration of the riparian corridor. The applicant believes that aggraded sediment and large woody debris would enhance aquatic habitat by providing suitable substrate for propagation of riparian vegetation, provide for native benthic macro-invertebrate habitat, and native salmonid spawning habitat when native Rio Grande Cutthroat Trout (*Oncorhynchus clarki virginalis*) are reintroduced on tribal lands. The applicant believes that the proposed project would avoid and minimize adverse impacts to waters of the U.S. to the maximum extent practicable. Therefore, the applicant has not proposed compensatory mitigation for the proposed project.

ADDITIONAL INFORMATION:

Environmental Setting. There is approximately 1.2 ac or 926 lf of perennial stream that is waters of the U.S. within the proposed project area. The proposed project area is located in the Southern Rockies, Crystalline Mid-Elevation Forest and Foothill Woodlands and Shrublands ecoregions. The Crystalline Mid-Elevation Forest ecoregion is characterized by low mountain ridges, slopes and outwash fans with moderate to high gradient perennial streams consisting of boulder, cobble, and bedrock substrates. Vegetation in the Crystalline Mid-Elevation Forest ecoregion is dominated by ponderosa pine (*Pinus ponderosa*) forest with some areas containing pinyon pine (*Pinus edulis*) or junipers (*Juniperus* sp.) at low elevations and south slopes; understory including Gambel oak (*Quercus gambelii*), mountain mahogany (*Cercocarpus* sp.), antelope bitterbrush (*Purshia tridentata*), wax currant (*Ribes cereum*), skunkbush (*Rhus trilobata*), wood rose (*Rosa woodsii*), kinnikinnick (*Arctostaphylos uva-ursi*), mountain muhly (*Muhlenbergia montana*), Junegrass (*Koeleria macrantha*), Arizona fescue (*Festuca arizonica*), and pine dropseed (*Blepharoneuron tricholepis*). Higher elevations include Douglas-fir (*Pseudotsuga menziesii*) and white fir (*Abies concolor*) forests.

The Foothill Woodlands and Shrublands ecoregion is characterized by hills, ridges, and footslopes with moderate to high gradient perennial, intermittent, and ephemeral streams with cobble, gravel and sandy substrates. Vegetation in this ecoregion is dominated by pinyon-juniper woodlands, sagebrush (*Artemisia tridentata*) and mountain mahogany shrublands, Gambel oak woodlands, serviceberry (*Amelanchier alnifolia*), and skunkbrush.

Soils are classified by the Natural Resources Conservation Service, Santa Fe County Soil Survey, as Morenda, Fiesta, and Espanola soils, 1 to 85 percent slopes, flooded. The Morenda, Fiesta, and Espanola soils are characterized as gravelly to sandy clay loam; located in footslopes, valley sides and valley floors; well drained; and nonsaline to very slightly saline soils. This soil classification is not prime farmland.

Rio Nambé is located in the Upper Rio Grande watershed. The Rio Nambé flows from its headwaters along the western flank of the Sangre de Cristo Mountains in the Santa Fe National Forest on to Pueblo of Nambé lands, where water is impounded by the Nambé Falls Dam. The Nambé Falls Dam is a concrete and earthen embankment structure built in 1976 as part of the San Juan-Chama Drinking Water Project. The Nambé Falls Reservoir has a storage capacity of 2,023-ac-ft. The terrain upstream of the Nambé Falls Reservoir is rugged, with steep slopes above drainage channels and generally rounded hill tops.

In June 2011, the Pacheco Fire burned approximately 10,250 ac of U.S. Forest Service lands, almost entirely within the Rio Nambé watershed. The fire resulted in severe soil damage and vegetation loss over much of the upper watershed. As a result, there are large areas of loose soil on steep slopes that contributes to increased flashy storm discharges and erosion. The potential for landslides is high within the fire damaged watershed and debris flows resulting from such landslides may carry large boulders and trees. The materials eroded from the upper watershed are currently being deposited downstream on Pueblo of Nambé lands and in Nambé Falls Reservoir. Rio Nambé and Nambé Falls Reservoir have already been damaged by increased sediment deposition. A delta has formed at the reservoir inlet, covering an area approximately 1 ac, and a culvert at the reservoir inlet and access road is frequently filled with sediment.

The geology within Nambé Falls Reservoir primarily consists of the Nambé Member of the Tesuque Formation, Santa Fe Group (upper Oligocene to lower Miocene). This is a light grey, tan, and pinkish coarse sandstone with interbedded conglomerate, siltstone, and sparse mudstone. East of the reservoir, the geology transitions to Early Proterozoic “Embudo Granite”. Embudo Granite forms the intrusive core of the Sangre de Cristo Mountains. The granite is exposed in the erosional reaches of the Rio Nambé upstream of the reservoir, but the depositional reaches are covered in quarternary alluvium. The alluvium within the stream channel is predominately rounded grains of coarse sand, gravel, and cobble. The alluvium is composed primarily of quartz, feldspar, amphibole, and mica. The Rio Nambé is a low gradient, approximately 4 degrees, plane-bed stream at the inlet to Nambé Falls Reservoir. The upstream area, where the stream exits a narrow, deeply incised canyon, the gradient increases to approximately 10 degrees.

Alternatives. The applicant provided information concerning project alternatives. The applicant considered alternatives based on benefit-to-cost ratios, operation and maintenance costs, and potential adverse impacts on aquatic, cultural, economic, and natural resources. The applicant considered a no action alternative where nothing would be constructed or installed in the Rio Nambé watershed to prevent debris flows. The applicant also considered other types of storm water management in the Rio Nambé consisting of various sized earthen filled embankments and gabion structures that would be located in the delta area of Nambé Falls Reservoir, and an earthen filled embankment located upstream of the reservoir and Nambé Pueblo (NP)101 on the Rio Nambé. The earthen filled embankments in the reservoir delta would have a spillway to allow for water flows over the embankment, the upstream earthen filled embankment would have a culvert to pass water flows, and the gabions would allow water to flow through them due to permeability.

Other alternatives may develop during the review process for this permit application.

EVALUATION FACTORS: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the described activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the described activity, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the described activity will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general

environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people. The activity's impact on the public interest will include application of the Section 404(b)(1) guidelines promulgated by the Administrator, Environmental Protection Agency (40 CFR Part 230).

HISTORIC PROPERTIES: The Corps consulted district files and records, the latest version of the National Register of Historic Places (NRHP), and state records of NRHP-eligible and potentially eligible historic properties to determine if there are any historic properties that may be affected by the proposed undertaking. The entire project area has not been recently surveyed for historic properties; and, therefore, further identification efforts will likely be required. Based on this initial information, the Corps has made a preliminary determination that the proposed project has the potential to affect historic properties.

ENDANGERED SPECIES: The Corps has reviewed the U.S. Fish and Wildlife Service's latest published version of Federally-listed endangered and threatened species located in Santa Fe County, New Mexico to determine if any listed species or their critical habitat may occur in the proposed project area. The Corps has made a preliminary determination that the proposed project will not affect any Federally-listed endangered or threatened species or their critical habitat that are protected by the Endangered Species Act.

FLOODPLAIN MANAGEMENT: The proposed project is located on Pueblo of Nambé tribal lands. The Pueblo of Nambé does not participate in the National Flood Insurance Program (NFIP) and, therefore, there is no floodplain administrator because there is not an adopted floodplain ordinance. Floodplain development permits are not required for communities that do not participate in the NFIP. While a FEMA Flood Insurance Rate Map (FIRM) does not exist for the project area and flood zones have not been determined, portions of the proposed action are assumed to be located in the floodplain based on their location within Rio Nambé. Therefore this public notice serves as early notification of the intent to carry out an action in the floodplain and the public is invited to comment on the action so that those comments may be considered in the federal government's decision making process for floodplain management.

COMMENT SUBMITTAL AND DEADLINES: The Corps and NED are soliciting comments from all interested parties to consider and evaluate the impacts of this proposed activity. Any comments received will be considered to determine whether to issue, issue with special conditions, or deny a permit for this proposal.

Submittal of Corps Permit Application Comments: All comments regarding the Corps permit application for the above-described project must be received on or before August 21, 2015, which is the close of the comment period. Comments on tribal Section 401 certification must be submitted as described below under "Water Quality Certification Comments". Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Anyone may request, in writing, that a

public hearing be held to consider this application. Requests shall specifically state the particular reason(s) for holding a public hearing. If the Corps determines that the information received in response to this notice is inadequate for thorough evaluation, a public hearing may be warranted. If a public hearing is warranted, interested parties will be notified of the time, date, and location. Comments and requests for additional information on the Corps permitting action should be submitted to:

Kelly Allen, Project Manager
US Army Corps of Engineers, Albuquerque District
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Albuquerque, New Mexico 87109
Phone: 505-342-3216
E-mail: Kelly.E.Allen@usace.army.mil

Submittal of Water Quality Certification Comments: Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps prior to permit issuance. For the above described project, the applicant is required to obtain water quality certification (WQC), under Section 401 of the CWA, from the NED.

This document serves to notify the public that the NED will consider issuing WQC under Section 401 of the CWA. The purpose of WQC is to reasonably ensure that the permitted activities will be conducted in a manner compliant with applicable Pueblo of Nambé water quality standards.

The NED will accept and consider written comments regarding the WQC received during the public comment period. Comments may be submitted electronically or by hard copy to:

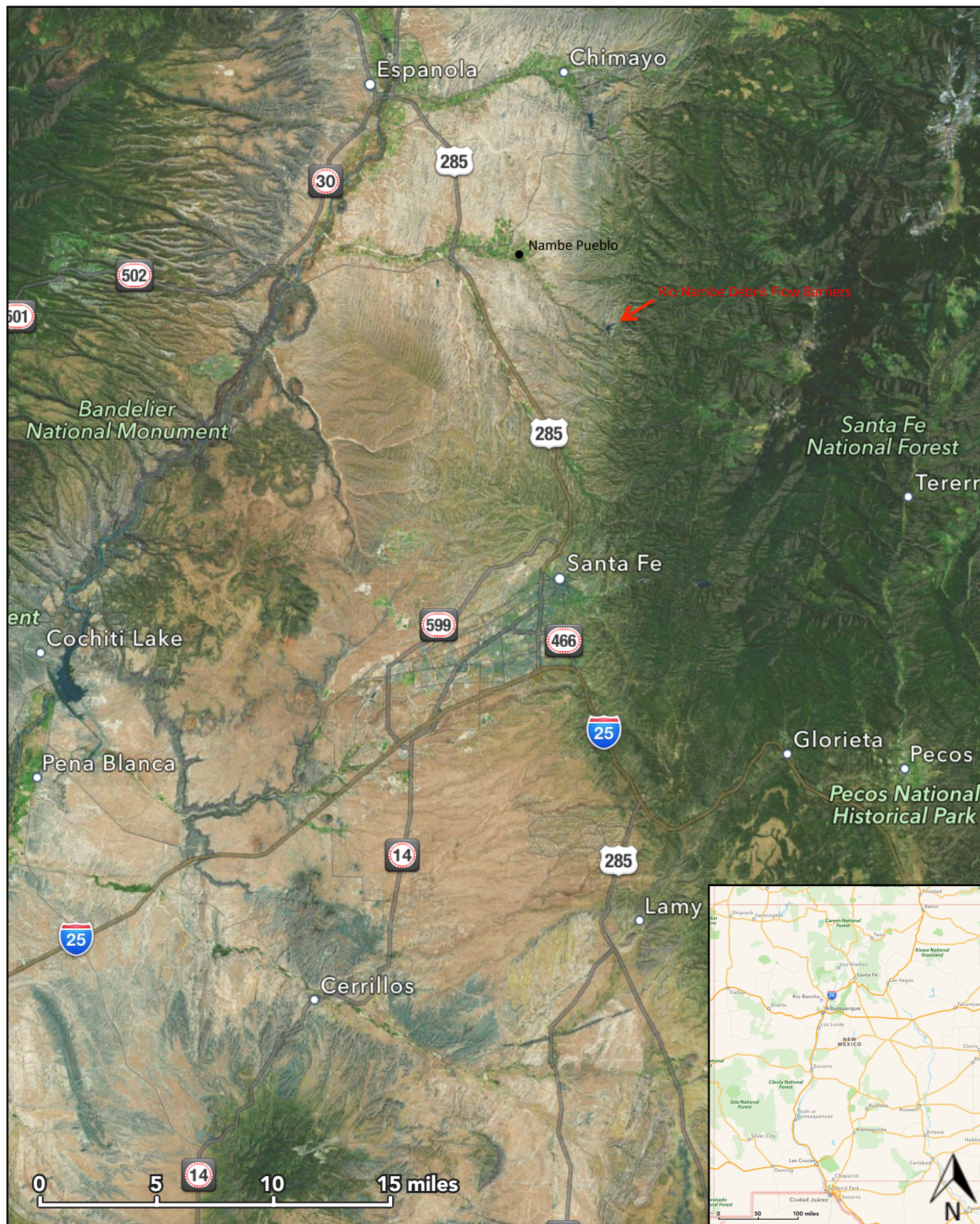
Steve Rydeen
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Environment Department
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Nambé Pueblo, New Mexico 87506
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E-mail: srydeen@nambepueblo.org

Submittal of Comments on the FEMA action: Written comments on the proposed action can be mailed, emailed, or faxed to the contact below. If no substantive comments are received during the public comment period, FEMA plans to review and adopt the environmental decision document issued by the Corps upon issuance of the Clean Water Act permit, and FEMA will issue its own Finding of No Significant Impact (FONSI) to finalize the agency's compliance with the National Environmental Policy Act (NEPA).

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Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available through the Freedom of Information Act.

DISTRICT ENGINEER
ALBUQUERQUE DISTRICT
U.S. ARMY CORPS OF ENGINEERS

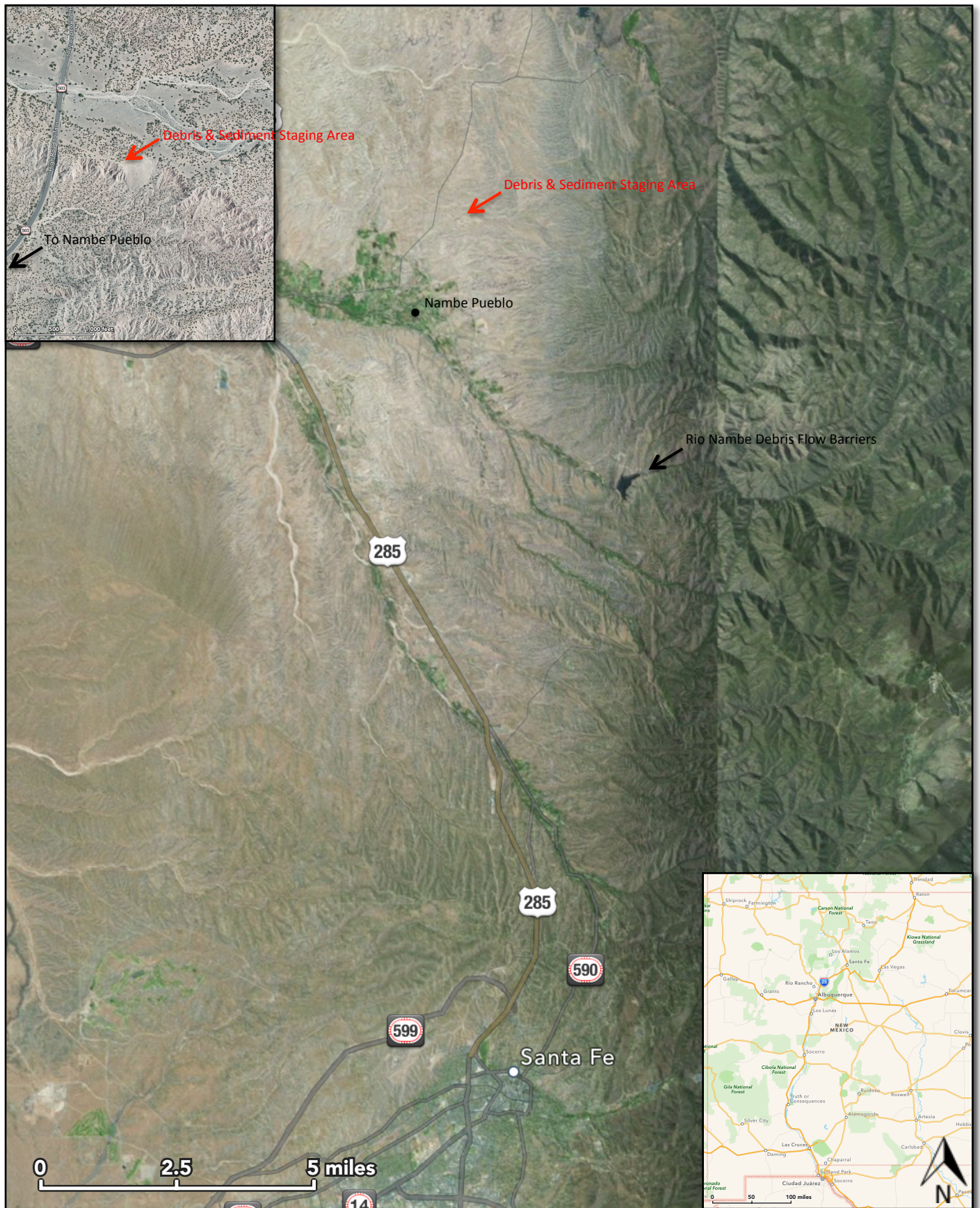


Rio Nambé Debris Flow Barriers-Vicinity Map

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 1 of 7



Rio Nambe Debris Flow Barriers-Debris and Sediment Staging Area Map

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 2 of 7

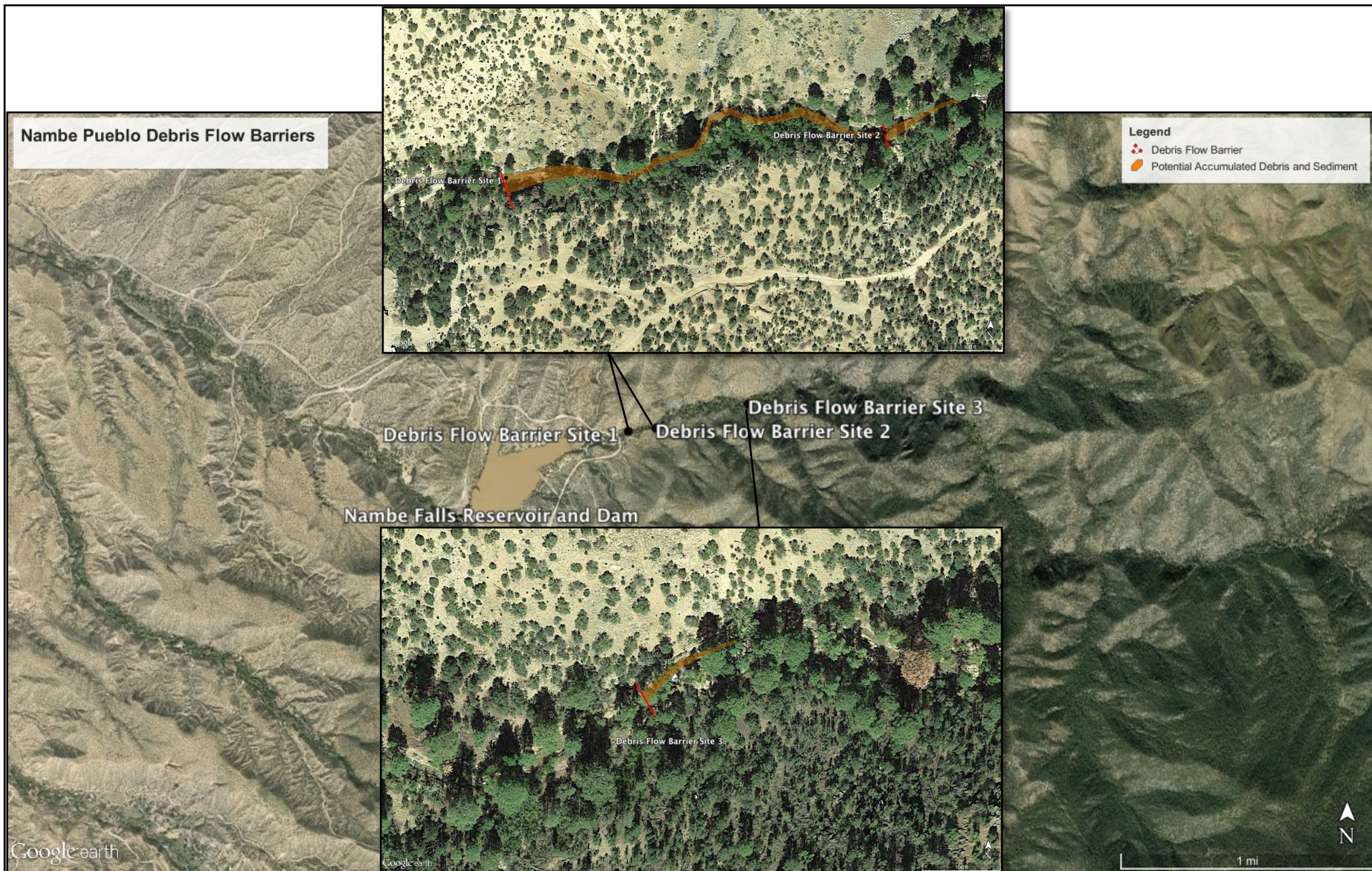


Rio Nambe Debris Flow Barriers-Aerial Image One

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 3 of 7



Rio Nambe Debris Flow Barriers-Aerial Image Two

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 4 of 7

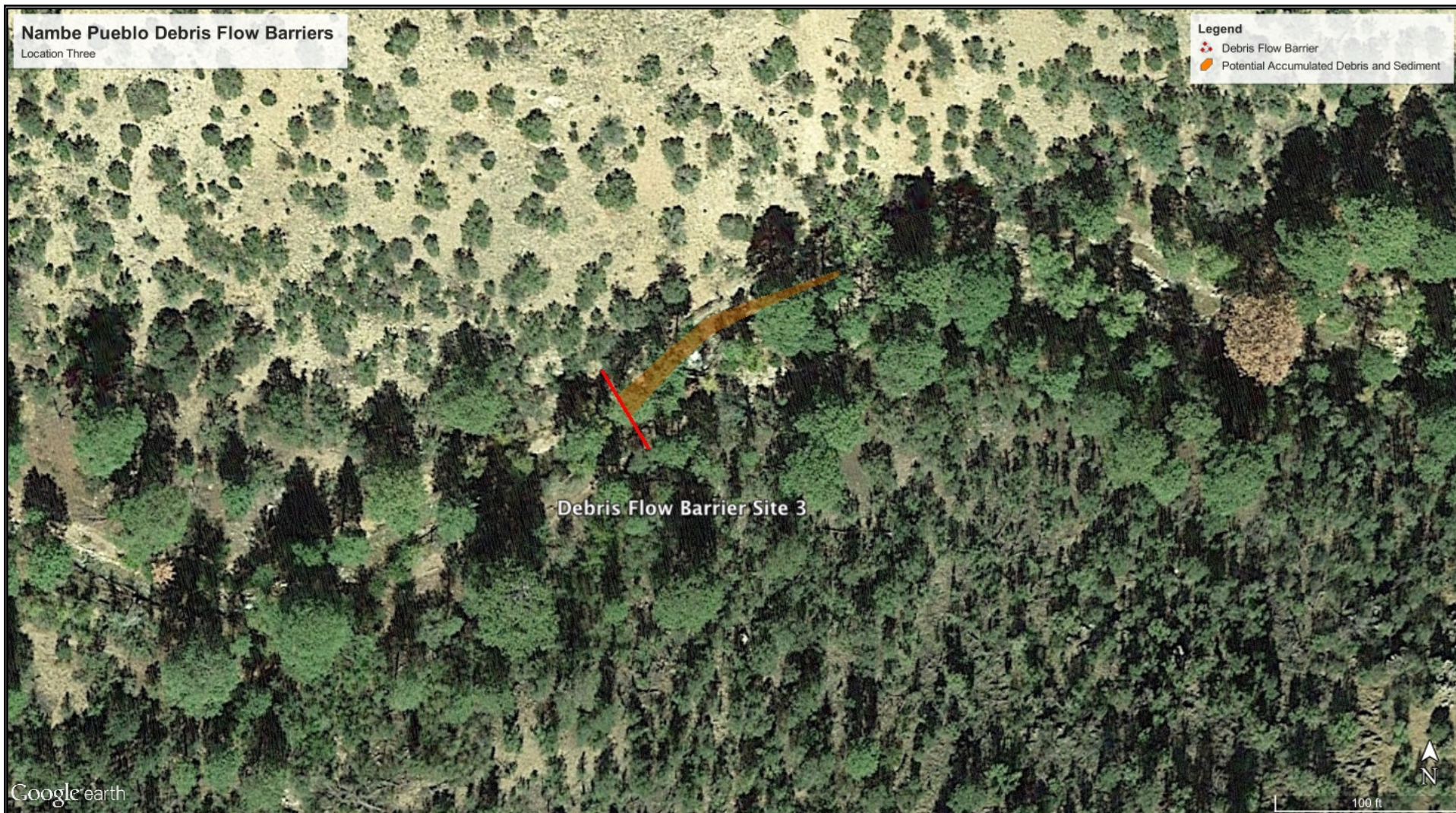


Rio Nambe Debris Flow Barriers-Aerial Image Three

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 5 of 7



Rio Nambe Debris Flow Barriers-Aerial Image Four

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 6 of 7



Rio Nambé Debris Flow Barriers-Conceptual Rendering

USACE Action Number: SPA-2015-00080-ABQ

Date Created: July 20, 2015

Figure 7 of 7