

# **Draft Environmental Assessment**

## **Lomas Negras Arroyo Stabilization Project**

**Rio Rancho, Sandoval County, New Mexico**

Southern Sandoval County Arroyo Flood Control Authority

HMGP DR-4079-NM, Project #11

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**FEMA**

U.S. Department of Homeland Security  
Federal Emergency Management Agency  
Region 6  
FRC 800 North Loop 288  
Denton, TX 76209-3698



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## List of Acronyms

APE	Area of Potential Effects
ARMS	Archaeological Records Management Section
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
CWA	Clean Water Act
dBA	decibels on the A-weighted scale
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
HMGP	Hazard Mitigation Grant Program
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMDHSEM	New Mexico Department of Homeland Security and Emergency Management
NMED	New Mexico Environment Department
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Administration
SHPO	State Historic Preservation Office
SSCAFCA	Southern Sandoval County Arroyo Flood Control Authority
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WOUS	Waters of the United States
WSEL	Water Surface Elevation

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## **1. Introduction**

The Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) proposes to construct an off-channel detention pond and bank stabilization features in the Arroyo de las Lomas Negras to protect adjacent and downstream properties from flood and erosion damage, as well as reduce sediment deposition in downstream facilities. The project area is located in Rio Rancho, Sandoval County, New Mexico. It appears on the Loma Machete and Bernalillo, New Mexico US Geological Survey 7.5-minute quadrangle maps (Figure 1).

The nature of flood events in southern Sandoval County, New Mexico, which includes the City of Rio Rancho, is characterized by intense, short-lived thunderstorms. These storms drop significant amounts of rainfall in a very short time, creating a surge of stormwater that flows in the arroyos or drainage ditches downstream toward the Rio Grande. As this area of New Mexico is semi-arid, the soils in southern Sandoval County are generally highly erodible. Runoff from storm events can rapidly result in localized flooding and erode large segments of arroyo bank.

When Rio Rancho was first platted in the 1960s, there were very few locations where sufficient property was retained in the public domain for the conveyance of stormwater. Consequently, residential and commercial properties have been impacted by large flows and erosion of watercourses. In developed areas of the city, this can result in damage to structures and other property, as well as pose a threat to the safety of inhabitants.

In 2006, a large storm event occurred in the watershed, which resulted in overtopping of Saratoga Road and damage to the infrastructure associated with this roadway. Additionally, during the 2006 storm, localized flooding occurred at Enchanted Hills Elementary School and impacted New Mexico Highway 528 (NM 528), a significant arterial roadway.

The project is designed to provide increased flood protection and reduce potential for damage to downstream areas where existing public infrastructure and residential development occur. Such areas are prone to damage by high flows and bank erosion resulting from storm events.

### **1.1 Project Authority**

The Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) is the local government sponsor of the proposed project. It is a statutorily created governmental entity chartered to manage large drainages (arroyos) in southern Sandoval County, New Mexico. As such, SSCAFCA has submitted an application to the Federal Emergency Management Agency (FEMA) through the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM) for a grant under FEMA's Hazard Mitigation Grant Program (HMGP). This program, as authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster.

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This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (Title 40 of the Code of Federal Regulations (40 CFR) Parts 1500-1508), and FEMA's procedures for implementing NEPA (FEMA Instruction 108-1-1). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this EA is to analyze the potential environmental impacts of the proposed Lomas Negras Arroyo Stabilization Project. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

## **1.2 Project Location**

The proposed project is located within, and adjacent to, the banks of the Arroyo de las Lomas Negras, an ephemeral water course that runs west to east through the City of Rio Rancho, Sandoval County, New Mexico and ultimately conveys flows to the Rio Grande located approximately 2 miles from the project site. The proposed detention and stabilization measures would be constructed as depicted (with minor final design variations) on the conceptual grading plan (Appendix A) within an arroyo segment of approximately 2,700 feet west of the NM 528. The approximate coordinates for the project are 35.27805; -106.62688 and the construction would take place near Saratoga Drive, Obregon Road, and NM 528.

## **2. Purpose and Need**

When subjected to a significant runoff event, the arroyo is prone to overbanking in the vicinity of Enchanted Hills Elementary School and the City of Rio Rancho sewer lift station at the east end of the project site. Additionally, two significant north-south roadways, Saratoga Road and NM 528, are prone to overtopping. After a significant storm in 2006, significant damage was done to the Saratoga Road arroyo crossing and NM528 was overtopped by stormwater flows.

As development of Rio Rancho continues, a more impervious surface would be created west (upstream) as well as north and south of the project location, amplifying runoff quantities and increasing the possibility of significant flooding and erosion by smaller storms.

The purpose of this project is to provide permanent flood and erosion protection adequate for the 100-year 24-hour duration runoff event, which produces a peak flow of approximately 3,340 cubic feet per second (cfs) under current conditions. The project will allow passage of flow through the orifice plate structure in an amount small enough for downstream facilities to convey adequately. The excess flows will be conveyed to an off-channel storage facility and released at a greatly reduced rate to allow for passage through downstream infrastructure. The purpose of HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

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### **3. Alternatives**

#### **3.1 No Action Alternative**

The No Action alternative would entail no construction of detention and bank protection measures along this reach of the Arroyo de las Lomitas Negras. There would be no improvement to the hydraulics associated with the arroyo system (either increase in capacity of conveyance structures and arroyo hardening or reduction in flow rates during 100-year storm event and arroyo bank hardening). The arroyo would continue to migrate laterally. Consequently, the flood and erosion threats to Enchanted Hills Elementary School, nearby transportation infrastructure, and dwellings along this reach of the arroyo would not be addressed.

#### **3.2 Proposed Action Alternative**

Under the proposed action alternative, SSCAFCA would construct a detention pond and associated facilities, as well as line the existing arroyo and tributary downstream to direct flows and provide a stable surface for storm flows. Proposed improvements include the following elements:

- Excavation, grading, and lining of a 6-foot deep detention pond adjacent to, but outside of, the channel.
- Construction of an orifice plate and lateral weir structure across and next to the arroyo to divert stormwater flows in excess of 900 cfs into the detention pond
- Construction of principal and emergency spillways to release excess stormwater from the detention pond back into the arroyo at a greatly reduced and controlled rate
- Re-alignment and lining of a small adjacent tributary arroyo to facilitate conveyance through existing box culverts downstream
- Grading and lining of arroyo bank from existing box culverts at Saratoga upstream to new orifice and lateral weir to protect new infrastructure with shotcrete or soil cement.
- Two spoil pile areas have been identified adjacent to the channel to store the excavated material permanently. They would be flattened and stabilized. The northern spoil pile area would be turned returned to Rio Rancho Public Schools as land for school use in future development.
- Lining of arroyo bank with shotcrete or soil cement in vicinity of new stabilized soil disposal site at east end of project to protect from erosion.

The proposed construction would be scheduled for a time between October 15 and June 15 (outside the normal monsoon season in this area). Upon completion of construction activities, the area would be revegetated with native seed mix. A 12 foot wide access road would be graded for maintenance. Appendix A provides an aerial map of the project area, maps and photos depicting scour and erosion of the arroyo, and a preliminary grading plan for the proposed improvements.

It is estimated that the project design lifespan would be approximately 50 years, and SSCAFCA would be responsible for the design, construction, construction oversight, and ongoing maintenance of the

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proposed improvements into perpetuity. Maintenance needs at the project area would be evaluated on an annual basis and after every major storm event. Maintenance activities could include measures such as:

- Backfilling scoured out areas along the side slope after major storm events
- Repairing shotcrete or soil cement that is damaged by scour/debris during storm events
- Removing excess sediment from off-channel holding facility
- Monitoring upstream and downstream tie-in points of the bank protection to ensure erosion does not begin to compromise the structure.

The proposed construction of shotcrete or soil cement bank protection provides a more permanent solution to this problem when compared to a riprap side slope treatment.

### **3.3 Alternatives Considered and Dismissed**

In addition to the proposed action, SSCAFCA considered other alternatives and improvements that were eliminated due to costs (both capital and maintenance) and maintainability. Therefore, these alternatives are not analyzed further in this EA.

- **Alternative 1-Hardening of entire arroyo cross section**

This alternative includes the construction of a shotcrete lined trapezoidal channel through the subject reach, which would permanently set the alignment of the arroyo and improvement of the stormwater crossings at Saratoga Road and NM528 to pass up to 4,000 cfs.

- **Alternative 2-Relocation of the existing channel**

This alternative would relocate the existing channel to the centerline of the arroyo, but would potentially affect wildlife habitat and require a significant amount of shotcrete to complete. Due to this alternative being a fully lined channel, and the need to accommodate stormwater flows under the two roads, the total cost of the project would be significantly higher, with a cost of approximately \$8,500, 000.00. Additionally, a fully lined channel would likely require habitat mitigation for burrowing owls to replace lost habitat. Construction of the channel itself would need to be completed outside the monsoon season and would take approximately 12 months. This option would also require the closure of Saratoga Road and NM 528 for construction of additional capacity, creating a significant traffic detour and increased costs. Total project timeframe is 24 to 30 months.

- **Alternative 3-Construction of traditional dam to restrict flows down arroyo**

Alternative 3 would be the construction of a traditional dam just upstream of Saratoga Road in the Lomitas Negras Arroyo and a lined channel below Saratoga Road. This would reduce the peak flow in the channel down to 1300 cfs. Although this would reduce the potential for the arroyo to overtop the existing banks, it would not provide for the added benefit of property restoration by elevating adjacent property due to a lack of available fill material. Additionally, the bank protection would be required to be up to 150 percent of the material required in the proposed

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action alternative due to the lack of available fill material, increasing costs. Finally, a dam of sufficient size to reduce the flow to 1300 cfs would also be considered a Jurisdictional Dam by the New Mexico Office of the State Engineer (NMOSE). This requires NMOSE approval of the hydrology and hydraulics, as well as development of an Emergency Action Plan. Due to the location of Enchanted Hills Elementary School downstream of the proposed dam, this dam would be classified as *high hazard*, requiring additional protocols to be followed to address the possibility of a dam failure, which could impact the school and adjacent residences. This process would add an additional 6 to 12 months to the project timeline, resulting in a project schedule of 36 to 42 months. The cost is estimated at \$6,225,000.00.

## **4. Affected Environment and Potential Impacts**

### **4.1 Physical Resources**

The physical resources considered in this EA are soils and air quality/climate. The proposed project does not have the potential to impact geology because construction activities would not be deep enough to affect bedrock; therefore, impacts to geological resources are not evaluated.

#### **4.1.1 Soils**

According to the US Department of Agriculture Natural Resources Conservation Service ([NRCS 2016]) Soil Survey of Sandoval County Area, New Mexico, two map units are present within the project area: Sheppard loamy fine sand, 3 percent to 8 percent slopes and Sheppard loamy fine sand, 8 percent to 15 percent slopes. They are common in structural benches, dunes, alluvial fans, and stream terraces and are somewhat excessively drained.

Both soils are moderately erodible (0.24 K factor rating), and are well suited to mechanical site preparation. These soils range from somewhat to very limited for commercial structures based on slopes and flooding, and somewhat limited (slope) to not limited for local roads.

- The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on unnecessary and irreversible conversion of farmland to nonagricultural uses. For the purpose of FPPA, farmland definition includes prime farmland, unique farmland, and land of statewide or local importance; it is important to note that these definitions include land such as forestland, pastureland, or other land that is not in current production. Sheppard loamy fine sand is not classified as prime farmland or farmland of statewide importance (NRCS Web Soil Survey 2016).

- **No Action Alternative**

The no action alternative would result in continued erosion of soils in the project area and sedimentation of downstream surface waters.

- **Proposed Action Alternative**

Minor short-term impacts to approximately 50 acres of project area soils would occur during excavation, site preparation, and construction. Long-term, minor impacts such as a slight

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decrease of permeable surfacing in the general area would occur due to the addition of soil cement to provide a protective surface at arroyo embankments. Prime farmland would not be impacted because none exists in the project area.

To minimize impacts to soils, SSCAFCA would prepare a stormwater pollution prevention plan (SWPPP) and obtain a National Pollution Discharge Elimination System (NPDES) permit prior to construction. Implementation of appropriate erosion and sediment control best management practices (BMPs) would be required during construction. Upon completion of construction activities, the area would be revegetated with native seed mix.

#### **4.1.2 Air Quality and Climate**

The U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter greater than 10 microns in diameter, particulate matter greater than 2.5 microns in diameter, ozone, and sulfur dioxide (USEPA 2016). Rio Rancho and Sandoval County are in attainment with the NAAQS for these criteria pollutants (NMED 2016).

Climate change is resulting in increased temperatures as well as a rise in sea level and the incidence of severe weather events. Consideration of climate change would indicate the potential for severe storm events at the project area could increase. This is accounted for in the decision-making to implement the proposed project. The climate in Rio Rancho is semi-arid, with low precipitation and low humidity. Average annual precipitation is 12.26 inches. More than 6 inches precipitation is received during the monsoon season from July through October. The average annual temperature is 55.7°F. The temperatures range from an average monthly maximum of 78.1°F in July to an average monthly minimum of 34.3°F in January (National Climatic Data Center 2016).

- **No Action Alternative**

This alternative would not be expected to impact air quality. Climate change could worsen large catastrophic flows in the project area and vicinity.

- **Proposed Action Alternative**

The project would be expected to result in minor, temporary, and localized impacts to air quality during the construction due to the use of fuel-burning equipment and potential for fugitive dust. The project would not affect the attainment status for Rio Rancho or Sandoval County.

No impacts are anticipated on climate due to the small scale of the project. Construction contractors would be required to comply with local, state, and federal requirements for air emissions and to implement dust control measures such as watering down construction areas when winds are high. Equipment running times should be minimized.

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## 4.2 Water Resources

Resources addressed in this section are surface and ground water, water quality, wetlands, and floodplains.

### 4.2.1 Surface Water, Ground Water, and Water Quality

The project area is located in and around the Arroyo de las Lomitas Negras, an ephemeral waterway. This waterway conveys stormwater and flows only in response to precipitation inputs. It is a tributary of the Rio Grande via the Harvey Jones channel approximately 2 miles east of the project area. The project area is located with the 8-digit Hydrologic Unit Code (HUC) watershed of 13020203 and the 12-digit HUC of 130202030103.

No wild and scenic river designations occur within the project area or the Middle Rio Grande (USFWS 2016a).

No sole-source aquifers are designated within Sandoval County (Appendix B).

No impaired waters, as listed by the state of New Mexico under Sections 303(d) and 305(b) of the Clean Water Act, occur in the project area, although portions of the Rio Grande within this 8-digit HUC are listed.

Depth to ground water within the project area is expected to exceed 6 feet, which is the extent of excavation depth for the project (Appendix B).

- **No Action Alternative**

Under the no action alternative, bank erosion would continue at the site, resulting in increased sediment deposition downstream. During large storm events, the aggraded areas would be expected to result in a large amount of sediment being carried to the Rio Grande during a short period. This could reduce water quality and restrict flows or cover existing wetland or riparian habitats.

- **Proposed Action Alternative**

The project would impact the arroyo below the plane of the ordinary high water mark (OHWM), along approximately 2,500 linear feet of the arroyo bank. Construction would be scheduled between October 15 and June 15, which is outside the normal regional monsoon season. The proposed action will require permitting under sections 404 and 401 of the Clean Water Act. SSCAFCA has been in coordination with the U.S. Army Corps of Engineers (USACE) regarding Section 404 permitting, and anticipates that the proposed project will qualify under Regional General Permit NM-14-01 or Nationwide Permit 43. SSCAFCA is responsible for coordinating with and obtaining any required Section 404 Permit(s) from USACE and/or any Section 401/402 Permit(s) from the state prior to initiating groundwork. SSCAFCA must comply with all conditions of the required permit(s).

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Minor, short-term impacts to surface waters and surface water quality may occur due to transport of sediment from disturbed soils by stormwater runoff during construction. Sediment transport to downstream areas during rainfall events would be the primary water quality issue. However, the proposed project site is located immediately upstream of a stormwater detention facility, which would minimize the likelihood of sediment being transported from the site to the Rio Grande.

To minimize impacts of the proposed action to soils and sedimentation of the arroyo, SSCAFCA would prepare a SWPPP and obtain an NPDES permit prior to construction. Implementation of appropriate erosion and sediment control best management practices (BMPs) would be required during construction. Upon completion of construction activities, the area would be revegetated with native seed mix, which would further reduce sedimentation of waterways.

#### **4.2.2 Wetlands**

Wetlands are transitional areas located between terrestrial and aquatic systems that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation that is typically adapted for life in saturated soil conditions and are defined by three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology.

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the US, including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Executive Order (EO) 11990 (Protection of Wetlands) requires federal agencies to avoid, to the extent possible, adverse impacts to wetlands.

The United States Fish and Wildlife Service (USFWS 2016b) National Wetland Inventory identifies a pond, but no wetlands within the project area (Appendix B).

No hydric soils are identified on soil maps of the project area (NRCS 2016, Appendix B).

No wetlands were identified in the project area during field surveys.

- **No Action Alternative**

The no action alternative would not impact wetlands.

- **Proposed Action Alternative**

The proposed action would not impact wetlands, as none are present within or immediately adjacent to the project area. No wetlands downstream of the project area would be expected to receive discharge from project activities. SSCAFCA is coordinating with USACE on obtaining a Section 404 Clean Water Act permit for work within other waters of the U.S.

#### **4.2.3 Floodplains**

EO 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. FEMA uses Flood

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Insurance Rate Maps (FIRMs) to identify the regulatory 100-year floodplain for the National Flood Insurance Program. The project area is located within Zone A, a special flood hazard area subject to inundation by the 1 percent chance flood, within which, no base flood elevations have been determined. (FEMA 2008, Map Number 35043C1894D and 35043C1913D Appendix B).

As part of the conceptual design for this project, hydrologic analysis was completed to evaluate impacts to the floodplain from the proposed project. It was determined that the project would not require a map revision due to increases in the floodplain size, however, a floodplain map revision will likely be performed to remove land from the floodplain as a result of the new construction. .

- **No Action Alternative**

The no action alternative would result in no reduction of the current flood potential and would not alter the floodplain.

- **Proposed Action Alternative**

The proposed action would slightly alter the topography of a mapped flood hazard area in order to reduce potential for flood. As a result, floodplains would be impacted. SSCAFCA must coordinate with the local floodplain administrator and obtain required permits prior to initiating work. In compliance with FEMA regulations implementing Executive Order 11988, Floodplain Management, FEMA is required to carry out the 8-step decision-making process for actions that are proposed in the floodplain per 44 CFR §9.6.

#### **4.2.4 Eight Step Floodplain Review**

**Step 1** is to determine whether the project is located in the 100-year floodplain. Portions of the proposed action alternative are located in the 100-year floodplain with a Zone A designation, as depicted on FIRM map numbers 35043C1894D and 35043C1913D, dated March 18, 2008. Zone A indicates an area with a 1 percent annual chance of flooding where base flood elevations have not been determined.

**Step 2** is to notify and involve the public in the decision-making process, which will be incorporated into the notice of availability for this EA.

**Step 3** is to identify and evaluate practicable alternatives to locating the proposed project in the floodplain, including alternative sites and actions outside of the floodplain.

The purpose of the project is to reduce the potential for flooding and erosion within and downstream of the project area. SSCAFCA identified four alternatives to the proposed action, including no action. The alternatives considered were to hard line the entire arroyo cross section; relocate the existing channel to the centerline of the arroyo; and construct a traditional dam just upstream of Saratoga Road in the Lomas Negras Arroyo and a lined channel below Saratoga Road; and the preferred alternative, to construct an off-channel detention facility with some bank protection. Each of these alternatives would have also been located within the floodplain.

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Since the threat of erosion and flood is location-specific, no other locations outside of the floodplain were considered because an alternate location would not meet the specific purpose and need of this project. The relocation of vulnerable structures was not considered due to the nature of the vulnerable facilities (roadways, elementary school, and sewer lift station) and the relative cost for relocating these types of facilities.

**Step 4** is to identify impacts associated with occupancy and modification of the floodplain and support of floodplain development that could result from pursuing the proposed action alternative. Per 44 CFR 9.10 “Identify impacts of proposed actions,” FEMA should consider whether the proposed action will result in an increase in the useful life of any structure or facility in question, maintain the investment at risk and exposure of lives to the flood hazard, or forego an opportunity to restore the natural and beneficial values served by floodplains or wetlands. FEMA should specifically consider and evaluate impacts associated with modification of floodplains; additional impacts which may occur when certain types of actions may support subsequent action which have additional impacts of their own; adverse impacts of the proposed actions on lives and property and on natural and beneficial floodplain values; and these three categories of factors: flood hazard-related factors, natural values-related factors, and factors relevant to a proposed action’s effects on the survival and quality of wetlands. Per 44 CFR, natural values-related factors include, water resource values (natural moderation of floods, water quality maintenance, and ground water recharge); living resource values (fish and wildlife and biological productivity); cultural resource values (archeological and historic sites, and open space recreation and green belts); and agricultural, aquacultural and forestry resource values. Factors relevant to a proposed action’s effects on the survival and quality of wetlands include public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion; maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

The proposed action alternative will not result in an increased base discharge and is intended to reduce the flood hazard potential to surrounding structures and infrastructure. The project is not expected to encourage development within the floodplain. The proposed action will not change land use or result in a reduction to societal and recreational benefits provided by the floodplain at this location. Open space and recreational uses in the parks will not be impacted by the proposed action.

The floodplain provides the following functions: flood storage and conveyance, filter nutrients and impurities from runoff, reduce flood velocities, reduce flood peaks, moderate temperature of water, reduce sedimentation, promote infiltration and aquifer recharge, and reduce frequency and duration of low surface flows. These functions are expected to remain intact after the implementation of the project.

As discussed in **Section 4.2.1** of this EA, there could be minor short-term impacts to surface water quality during project construction.

As discussed in **Section 4.3.1** FEMA has determined the project will result in no effect to threatened and endangered species and will not adversely modify or otherwise affect critical habitat. The proposed action would have negligible impacts to native species and their habitats and population levels of native species would not be affected.

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Floodplains also provide migration, breeding, nesting and feeding habitat. These floodplain values would not be significantly adversely impacted by the proposed project. There is the potential for adverse impacts to migratory bird species that may be present at the time of site clearing and grubbing activities (**Section 4.3.2**).

As discussed in **Section 4.4** the site has been surveyed for archeological resources. One recommended eligible site was recorded. This site will be avoided by construction. Archeological resources are considered a societal resource and a value and benefit of floodplain areas. The proposed action will not impact archeological resources, which will be flagged for avoidance.

**Step 5** is to minimize the potential adverse impacts identified under Step 4 and restore and preserve the natural and beneficial values served by floodplains. Many of the impacts discussed above are considered insignificant or beneficial to the floodplain. The proposed action to reduce flood potential and erosion contributes to the conservation of the floodplain and its natural and beneficial values. Short-term water quality impacts will be mitigated by the implementation of BMPs (see **Section 4.2.1**). Impacts to migratory bird species will be minimized by seasonal restrictions such that work is conducted outside of nesting season or by the deployment of a biological monitor if work must take place during nesting season (see **Section 4.5.3**). Archeological resources were identified and will be avoided. SCAFCA will employ a qualified archaeologist to flag the site for avoidance and will require the contractor to remain outside the flagged area (**Section 4.4**). If during construction, archeological resources are discovered, the contractor will be required to stop work and contact SCAFCA who will in turn contact NMDHSEM, FEMA, and/or the State Historic Preservation Office for guidance. For any work in the floodplain, SCAFCA will be required to coordinate with the local floodplain administrator and obtain any required permits prior to initiating work

**Step 6** is to determine whether the proposed action is practicable and to reevaluate alternatives. Per the discussion above, the proposed action alternative is the only practicable alternative.

**Step 7** requires that the public be provided with an explanation of any final decision that the floodplain is the only practicable alternative. In accordance with 44 CFR §9.12, SCAFCA must prepare and provide a final public notice 15 days prior to the start of any erosion control activities in the floodplain. Documentation of the final public notice is to be forwarded to FEMA for inclusion in the permanent project files.

**Step 8** is the review of the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in 44 CFR § 9.11 are fully implemented. The proposed project will be conducted in accordance with applicable floodplain development requirements.

## **4.3 Biological Resources**

### **4.3.1 Threatened and Endangered Species and Critical Habitat**

The Endangered Species Act (ESA) of 1973 requires federal agencies to determine the effects of their proposed actions on threatened and endangered species and their designated critical habitats. A survey for biological resources was conducted in the project area during the summer of 2016. Existing conditions were documented. A list of federally listed species for Sandoval County was requested from the U.S. Fish and Wildlife Service (USFWS 2016c) via the Information, Planning, and Conservation tool (IPaC). The IPaC

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report listed the Jemez Mountains salamander, Southwestern Willow flycatcher, Rio Grande silvery minnow, and New Mexico meadow jumping mouse as federally endangered and the Mexican Spotted owl and Yellow-Billed Cuckoo as federally threatened. No critical habitat is present in the project area per the IPaC report. State listed species were also addressed.

No listed species or their suitable or critical habitats were observed during surveys of the project area.

- **No Action Alternative**

This alternative would result in no effect to federal listed species and would not be expected to impact state listed or otherwise protected species.

- **Proposed Action Alternative**

FEMA has made the determination that the proposed action would result in no effect to federally listed species because no listed species occur within the project area and none would be indirectly impacted by the project. No critical habitat is present in the project area. Therefore, FEMA has determined that the proposed action would not adversely modify designated or proposed critical habitat.

#### **4.3.2 Wildlife**

The Migratory Bird Treaty Act (MBTA) protects migratory birds and their parts (including eggs, nests, and feathers) from take. Nearly all native North American bird species are protected by the MBTA.

No bird nests were observed in the project area at the time of the biological survey. Several burrows potentially suitable for use by burrowing owls were present, but not occupied.

Common wildlife such as lizards and small mammals (or their sign) were observed within the project area.

- **No Action Alternative**

No impact to wildlife would be expected under the no action alternative.

- **Proposed Action Alternative**

Approximately 50 acres of about 50-percent (on average) vegetated soils would be disturbed by construction. Therefore, approximately 25 acres of vegetation (shrubs and grasses) would be cleared. Small mammal burrows would be filled or scraped. Upon completion of construction, the area would be revegetated with native seed mix to stabilize soils and restore, to the extent feasible, lost wildlife habitat.

Construction would be scheduled to occur between October 15 and June 15, outside the normal monsoon season but in partial overlap with the general migratory bird nest season. Because the construction timeframe is limited by the potential for arroyo flow events, it may not be feasible to construct wholly outside the area nesting season as well, which would limit the construction season.

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The following measures would be required to avoid or reduce potential impacts to wildlife:

- SSCAFCA would limit grading of burrows to the winter months and limit vegetation removal during the peak migratory bird-nesting period of April through August to the extent feasible to avoid take of individuals, nests, or eggs.
- If vegetation removal must occur during the nesting season, SSCAFCA would employ a monitor qualified to conduct breeding-bird surveys to survey the area for nests prior to clearing/scraping. The monitor would determine the appropriate timing of surveys in advance of work activities.
- If an occupied nest is found, work within a buffer zone appropriate for the species would be delayed until the nest is vacated and juveniles have fledged.
- For work near an occupied nest, the monitor would prepare a report to document the species present and the rationale of buffer selection. SSCAFCA would submit this report to FEMA and any other approving agency for inclusion in project files.
- Any trenching required for the project would be equipped with escape ramps or filled concurrently to avoid trapping small animals.

#### **4.4 Cultural Resources**

The National Historic Preservation Act (NHPA) of 1966, (PL 89-665; 16 USC 470 et seq.) as amended, outlines federal policy to protect historic properties and promote historic preservation in cooperation with the States, Tribal and local governments, and other consulting parties.

Section 106 of the NHPA outlines the procedures for federal agencies to follow to take into account the effect of their actions on historic properties. The Section 106 process applies to a federal undertaking that has the potential to affect historic properties, defined in the NHPA as those properties that are listed in or eligible for listing in the National Register of Historic Properties.

Under Section 106, federal agencies are responsible for identifying historic properties within the Area of Potential Effects (APE) for an undertaking, assessing the effects of the undertaking on those historic properties, if present, and considering ways to avoid, minimize, and mitigate any adverse effects of its undertaking on historic properties; it is the primary regulatory framework that is used in the NEPA process to determine impacts on cultural resources. The APE is the geographic area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.

Because the scope of work for the proposed drainage improvements primarily involves activities that will occur at or below grade, FEMA has determined that the APE is congruent with the limits of construction, including the areas of direct excavation or modification and areas used for the staging and operation of equipment.

A cultural records file search in the Archaeological Records Management Section (ARMS) of the New Mexico State Historic Preservation Division through the New Mexico State Historic Preservation Office

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(SHPO), was conducted for previously recorded archaeological sites and surveys. A review of the archeological data in ARMS indicates that much of the project area has been previously surveyed. Areas of the APE which have been surveyed resulted in negative findings. However, there are several archeological sites within the immediate vicinity of the APE. Due to the local topography and the proximity of several known archaeological sites the potential for presence of archeological sites within the remaining portions of the APE was assessed as moderate to high. Based on this probability, FEMA determined that a cultural resources survey was necessary to identify potential historic properties within the APE.

SSCAFCA contracted qualified professional archaeologists from Marron and Associates to conduct a cultural resources survey in August of 2016. The survey resulted in the documentation of several isolates and one eligible lithic manufacturing site. The site was recorded as eligible under criterion D as it has the potential to yield additional information about its temporal affiliation and use. The boundaries of the site fall well outside the limits of construction. The remainder of the surveyed area contained only isolated lithic debitage that are not directly associated with the site recorded. No further investigation was recommended.

- **No Action Alternative**

The no action alternative would not be expected to impact cultural resources.

- **Proposed Action Alternative:**

Under the proposed action alternative, SSCAFCA would require the final project design to avoid impacts to site LA186030. An avoidance area not less than 50 feet from the boundaries of the site would be identified on the project plan sheets to ensure that the contractor does not disturb the area. Prior to the onset of construction, SSCAFCA would employ a qualified professional archaeologist, who meets Secretary of Interior standards, to flag the avoidance area prior to construction.

In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and SSCAFCA shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. SSCAFCA will immediately notify NMDHSEM and FEMA, and FEMA shall notify the SHPO. If unmarked graves or human remains are present on private or state land, compliance with the New Mexico Cultural Properties Act (Article 18, Section 6, Subsection 11.2 (18-6-11.2), NMSA 1978, also known as the Unmarked Burial Statute is required. SSCAFCA will stop work immediately in the vicinity of the discovery. SSCAFCA will immediately notify NMDHSEM, FEMA, and law enforcement agencies of the discovery. Law enforcement shall notify the Office of the Medical Investigator (OMI) and FEMA shall notify the SHPO. OMI shall evaluate the remains for medicolegal significance with minimal disturbance of the remains. OMI will terminate the discovery of any non-medicolegal human remains to the SHPO, who shall proceed pursuant to the Unmarked Burial Statute and its implementing regulations found at 4.10.11 NMAC.

Based on information gathered through this review process, FEMA has made a determination of No Adverse Effect to historic properties as a result of the proposed undertaking. The New Mexico SHPO

concluded with this determination in a letter dated December 7, 2016 (See Appendix C). FEMA consulted 16 federally recognized tribes that claim affiliation with the general area: Pueblo of Cochiti, Comanche Nation, Hopi Tribe, Pueblo of Isleta, Pueblo of Jemez, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Pueblo of Laguna, Navajo Nation, Ohkay Owingeh, Pueblo of Sandia, Pueblo of San Felipe, Pueblo of San Ildefonso, Pueblo of Santa Ana, Pueblo of Santa Clara, Pueblo of Santo Domingo, Pueblo of Tesuque, and Pueblo of Zia. At the time of this draft EA, FEMA had received concurrence from the Comanche Nation and the Navajo Nation. (See Appendix C).

#### 4.5 Socioeconomic Resources

##### 4.5.1 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

To analyze socioeconomic and environmental justice, conditions, economic, and year 2010 census data were compared from New Mexico, Sandoval County, and Rio Rancho (Tables 1 and 2 ). Economic data available from the 2010 to 2014 5-year American Community Survey (US Census Bureau 2016) was used. The median household income estimate for Rio Rancho was above that of the county and state. The reported poverty rate of all people for Rio Rancho was lower than the county and state rates. The percent-unemployed for Rio Rancho was lower than the county and state estimates.

**TABLE 1. COMPARATIVE ECONOMIC DATA: AMERICAN COMMUNITY SURVEY ESTIMATES**

COMMUNITIES	NEW MEXICO	SANDOVAL COUNTY	RIO RANCHO
Median household income	\$44,968	\$57,092	\$59,243
All people below poverty level	20.9%	14.7%	11.3%
Percent unemployed	9.6%	9.2%	7.6%

*Source: U.S. Census Bureau (2016; 2010-2014 5-year American Community Survey Estimates)*

**TABLE 2. COMPARATIVE POPULATION CHARACTERISTICS**

POPULATION	NEW MEXICO	SANDOVAL COUNTY	RIO RANCHO
Population – 2010 census	2,059,179	131,561	87,521
Racial characteristics* 2010 census			
- Hispanic/Latino	46.3%	35.1%	36.7%
- Native American	10.7%	12.9%	3.2%
- African American	2.8%	2.1%	2.9%
- Asian	2.0%	1.5%	1.9%
- Hawaiian / Pacific Islander	0.2%	0.1%	0.2%
- White	68.4%	68%	76%
- Some other race	16.8%	11.5%	13.1%
- Two or more races	3.7%	3.9%	4.7%

*\*Racial categories do not total 100% because Hispanic/Latino includes more than one race. Source: U.S. Census Bureau 2010 census data*

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- **No Action Alternative**

The no action alternative would not be expected to result in disproportionate adverse impacts to minority or low income populations.

- **Proposed Action Alternative**

The project is not expected to result in disproportionate adverse impacts to minority or low-income populations. The purpose of the project is to reduce the risk of floods and scouring to community facilities and infrastructure, as well as residential property in the project area. Long-term beneficial impacts would occur in the preservation of existing homes from erosion due to flooding. Temporary jobs may also be created during construction.

#### **4.5.2 Hazardous Materials**

If present in the environment, hazardous substances are a serious concern because of health and safety risks for the public and construction workers as well as potential cleanup liability. Section 101(10) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) takes a wide interpretation of hazardous substances to include all of the following:

- Substances designated under Sections 307(a) and 311(b)(4) of the Clean Water Act;
- Hazardous air pollutants listed under Section 112 of the Clean Air Act;
- Resource Conservation and Recovery Act (RCRA) hazardous wastes; and
- Chemical mixtures for which the USEPA has taken action under Section 7 of the Toxic Substances Control Act.

A CERCLA release to the environment includes any method that would allow a hazardous substance to enter environmental media (air, water, soil, or geologic material) that is not contained within a building or facility. Federal and state environmental databases were reviewed for known hazardous materials sites near the project area (USEPA 2016). No CERCLIS NPL (superfund) or brownfield sites occur within the vicinity of the project site. Several reporting facilities are present within approximately 1 miles of the site. Most occur approximately 0.8 mile or more from the project site in association with the busy commercial intersection of Northern Boulevard and NM 528. One site, a housing development, occurs about 0.40 miles from the project area.

- **No Action Alternative**

Under the no action alternative, the existing condition would not change.

- **Proposed Action Alternative**

The proposed project would create no new sources of hazardous materials. Contaminants are not expected to be encountered at the project site during construction. If contaminated soil or water is encountered during excavation, actions will be taken immediately to protect workers, students,

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and residents from exposure. The work will cease until the appropriate procedures can be implemented and permits obtained.

The construction contractor shall handle, manage, and dispose of excavated soil and debris, petroleum products, hazardous materials, and toxic waste in accordance with the requirements of governing local, state, and federal agencies.

#### **4.5.3 Noise**

Noise is generally defined as unwanted sound. Sound is most commonly measured in levels of noise called decibels on the A-weighted scale (dBA), which is the scale most similar to the range of sounds that the human ear can hear.

Noise-sensitive receptors (school, residences) are present within the vicinity of the project area.

During construction, noise levels would be higher than normal at and immediately adjacent to the proposed stabilization site due to the operation or movement of equipment. Construction-related noise is expected to be a temporary impact ending when the construction is completed. During construction or storing and moving equipment to and from work areas, noise levels could increase substantially, but temporarily.

- **No Action Alternative**

The no action alternative would result in no additional noise impacts.

- **Proposed Action Alternative**

To reduce noise impacts at receptors, construction would typically occur during weekdays and daylight hours except when, with the approval of residents, construction activities may extend beyond daylight hours to allow completion of an activity. Construction equipment would typically not operate between the hours of 10 p.m. to 7 a.m. Construction on school property may be restricted to hours when no students are present, as necessary. Prior to construction, SSCAFCA will coordinate with school officials regarding any specific construction timing restrictions.

#### **4.5.4 Traffic**

The project area is bisected by Saratoga Road and is bounded on the eastern end by the NM 528 roadway.

- **No Action Alternative**

Under the no action alternative, no direct impact to area roads would occur, but Saratoga Road and the NM 528 highway would be more likely to become eroded, silt-covered, or otherwise impacted by high flows.

- **Proposed Action Alternative**

Short-term, minor increases in the volume of construction traffic at access points to the construction site can occur. No road closures are likely to be needed resulting from construction

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activities. A traffic control plan and use of appropriate safety signs will be required of the contractor.

#### **4.5.5 Public Service and Utilities**

There is currently one gravity sewer line that runs through the project site. The as-built designs for this utility were obtained for preliminary design work. Prior to construction, the construction contractor would be required to contact the State One-Call utility spotting service to identify the location of all existing utilities in the project area. In the event of damage, the construction contractor shall contact the utility owner and, if required, the New Mexico Environment Department (NMED).

- **No Action Alternative**

Under the no action alternative, no impact to utilities would occur.

- **Proposed Action Alternative**

Prior to construction, SCAFCA will require the contractor to contact New Mexico One-Call to ensure proper locating of utilities and to protect any utilities located within the project area from damage.

No interruption to public service or utilities is anticipated during construction activities. In the event of damage to a utility, the contractor would be required to contact the utility owner, and, if applicable, the NMED, to report the utility strike. If necessary, a report detailing quantities of sewage spilled would be submitted by the contractor. If a sewer line is struck and compromised, the contractor would be required to contain and take corrective measures prior to proceeding with construction.

#### **4.5.6 Public Health and Safety**

The US Department of Labor Occupational Safety and Health Administration (OSHA), as directed under the Occupational Safety and Health Act of 1970 (29 CFR § 1910), as amended, defines safety standards for workers and requires workplaces to be kept free of serious recognized hazards. Executive Order 13045 (Protection of Children) requires federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. The project area consists of vacant land (owned by SCAFCA and Enchanted Hills Elementary School) adjacent to a residential neighborhood and school.

- **No Action Alternative**

The no action alternative would not result in safety impacts due to construction, but could reduce public safety as a result of not implementing flood control measures at the site.

- **Proposed Action Alternative**

During construction, Occupational Safety and Health Administration (OSHA) standards would be followed to protect worker and public health and safety. Risk could occur if residents or school

children wander onto the construction site and gain access to operating machinery or onsite materials.

To minimize these risks to local residents and the public, appropriate safety practices such as the placement of signs and barriers would be implemented to discourage access to the project area. All construction activities would be performed by qualified personnel trained in the proper use of appropriate equipment, including all appropriate safety precautions. The construction contractor would be responsible for adhering to the New Mexico One-Call Law to identify buried utilities.

#### 4.6 Summary Table

Table 3 summarizes the potential impacts and mitigation measures to offset those impacts.

**TABLE 3. SUMMARY TABLE**

<b>ENVIRONMENT</b>	<b>IMPACTS</b>	<b>MITIGATION</b>
Soils	50 acres of minor soil impacts (excavation, compaction). Long-term addition of impermeable surfacing to protect the arroyo embankment.	SSCAFCA will prepare a SWPPP and obtain an NPDES permit prior to construction. Implementation of appropriate erosion and sediment control BMPs would be required.
Air Quality and Climate	Minor, temporary air quality impacts (fugitive dust, exhaust) during construction. No impact to climate.	Contractors will be required to implement dust control BMPs when necessary. Equipment running times will be limited and emissions standards followed.
Surface/Ground Water/Water Quality	Minor, temporary transport of sediment from disturbed soils by stormwater runoff.	SSCAFCA will prepare SWPPP and NPDES permit. SSCAFCA will obtain CWA 404 permit coverage prior to construction.
Wetlands	No effect.	None.
Floodplains	No adverse impacts. Project would provide permanent flood protection to residents and roadway users.	SSCAFCA will coordinate with the local floodplain administrator during final design and obtain permits prior to construction.
Threatened and Endangered Species and Critical Habitat	No effect.	None.
Wildlife	Approximately 50 acres of moderate quality habitat for small animals impacted. Most impacts temporary, though minor loss of bank habitat. No impacts to migratory birds expected with restrictions.	Revegetation with native seed mix will be required. SSCAFCA will limit vegetation removal and scraping between April through August as much as possible. If activities must occur during the nesting season, SSCAFCA will deploy a biological monitor.

ENVIRONMENT	IMPACTS	MITIGATION
Cultural Resources	No impacts to cultural resources are anticipated.	Prior to construction, SSCAFCA would employ a qualified archaeologist to flag an avoidance area around known site. If archeological deposits are uncovered, SSCAFCA will stop work in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the finds and inform NMDHSEM, FEMA, and SHPO.
Environmental Justice	No disproportionate adverse effect to minority or low-income populations would occur.	None.
Hazardous Materials	No hazardous materials or discharge of waste is expected.	If contaminated materials are discovered during construction activities, work will cease until procedures can be implemented and permits obtained. The construction contractor shall handle, manage, and dispose of excavated soil and debris, petroleum products, hazardous materials, and toxic waste in accordance with the requirements, and to the satisfaction, of the governing local, state, and federal agencies.
Noise	Short-term impacts on noise levels would occur in the project area during the construction period.	Construction would take place during normal business hours and equipment would meet all local, state, and federal noise regulations.
Traffic	Short-term, minor increases in the volume due to construction traffic.	Contractor will prepare a traffic control plan and post appropriate signs.
Public Service and Utilities	No interruption to public service or utilities is anticipated.	SSCFCA will require the contractor to contact New Mexico One-Call to locate utilities and protect utilities from damage.  In the event of damage, the contractor will contact the utility owner and, if required, the New Mexico Environment Department.
Public Health and Safety	Minor safety risks during construction for workers, school children, and residents.	SSCAFCA will ensure OSHA safety standards are followed by the contractor and safety signs /barriers are placed at access points to prohibit public access. The construction contractor would be responsible for adhering to the New Mexico One-Call law.

## 5. Cumulative Impacts

According to CEQ regulations, cumulative impacts represent the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).” In accordance with NEPA and to the extent practical,

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this EA considered the combined effect of the proposed action and other actions occurring or proposed in the vicinity of the project area.

Other local construction projects and the proposed project will impact soils, may temporarily impact local air quality by increasing dust and criteria pollutants during construction, and could impact water quality from sedimentation during construction as well as ongoing urban inputs to surface flows. No other cumulative effects are expected.

## **6. Agency Coordination, Public Involvement, and Permits**

FEMA is the lead federal agency for conducting the NEPA compliance process for the proposed project. It is the goal of the lead agency to expedite the preparation and review of NEPA documents; as well as to be responsive to the needs of the community and the purpose and need of the proposed action, while meeting the intent of NEPA and complying with all NEPA provisions.

SSCAFCA has initiated coordination with the Enchanted Hills Elementary School and Rio Rancho Public Schools. SSCAFCA conducted a coordination meeting with the USACE to identify the level of effort required for CWA Section 404 permitting. During the design phase of project development, SSCAFCA will conduct public meetings and meetings with school staff to discuss the project and impacts (primarily noise and dust) during construction.

SSCAFCA will notify the public of the availability of the draft EA through the publication of a public notice in the local newspaper of record. The draft EA will be made available for public review at a physical location in the project area and on FEMA's website (<https://www.fema.gov/media-library>). FEMA will conduct a 30-day public comment period commencing on the initial date of publication of the public notice. FEMA will consider and respond to all public comments in the final EA. If no substantive comments are received, the Draft EA will become final and a FONSI will be issued for the project.

### **6.1 Agency Coordination**

As part of the development of this EA, the following sources were contacted by SSCAFCA or FEMA; or consulted using web services.

- US Census Bureau American Factfinder, American Community Survey
- US Department of Agriculture, Natural Resource Conservation Service
- US Department of Homeland Security Federal Emergency Management Agency
- US Department of Labor Occupational Safety and Health Administration
- US Environmental Protection Agency Enviromapper
- US Environmental Protection Agency Envirofacts
- US Fish and Wildlife Service
- US Army Corps of Engineers, Regulatory Division

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- Pueblo of Cochiti
  - Comanche Nation
  - Hopi Tribe
  - Pueblo of Isleta
  - Pueblo of Jemez
  - Jicarilla Apache Nation
  - Kiowa Tribe of Oklahoma
  - Pueblo of Laguna
  - Navajo Nation
  - Ohkay Owingeh
  - Pueblo of Sandia
  - Pueblo of San Felipe
  - Pueblo of San Ildefonso
  - Pueblo of Santa Ana
  - Pueblo of Santa Clara
  - Pueblo of Santo Domingo
  - Pueblo of Tesuque
  - Pueblo of Zia
  - New Mexico Department of Game and Fish
  - New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division
  - New Mexico Environment Department, Air Quality Bureau
  - New Mexico Environment Department, Surface Water Bureau
  - New Mexico State Historic Preservation Officer
  - City of Rio Rancho
  - Rio Rancho Public Schools

In accordance with applicable local, state, and federal regulations, SSCAFCA, or its contractor, would be responsible for acquiring any necessary permits prior to commencing construction at the project area.

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## 7. References

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- USFWS. 2016a. National Wild and Scenic Rivers System webtool. Website: <https://www.rivers.gov/new-mexico.php>
- USFWS. 2016b. National Wetland Inventory. Wetlands Mapper webtool. Website: <http://www.fws.gov/wetlands/data/mapper.HTML>
- USFWS. 2016c. Information for Planning and Conservation webtool. Official Resources List. Website: <https://ecos.fws.gov/ipac/>

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