RECLAMATION

Managing Water in the West

Santo Domingo Tribe – Endangered Species Habitat Improvement Project- Phase II- Environmental Assessment

U. S. Department of the Interior
Bureau of Reclamation
Albuquerque Area Office
Environment Division
Albuquerque, New Mexico

April 2007

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Santo Domingo Tribe – Endangered Species Habitat Improvement Project- Phase II- Environmental Assessment

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BUREAU OF RECLAMATION
Albuquerque Area Office
Albuquerque, New Mexico

Finding of No Significant Impact

Santo Domingo Tribe – Endangered Species Habitat
Improvement Project- Phase II-
Environmental Assessment

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April 30, 2007
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5/1/07
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AAO-07-007
FONSI Number

BACKGROUND

The Cochiti Reach of the Middle Rio Grande (MRG) has undergone drastic landscape alterations. The riparian ecosystem has been negatively impacted by reduced pulse flows and the encroachment of non-native phreatophytes. Because of these conditions, the habitat for the Rio Grande silvery minnow (silvery minnow) has been degraded. The reconnection of abandoned side channels and isolated backwaters will enhance the habitat for this species. Re-growth of native vegetation will benefit the endangered Southwestern willow flycatcher (flycatcher).

SUMMARY OF PROPOSED ACTION

The Proposed Action involves habitat construction and placement of large woody debris (LWD) in the Rio Grande, which is anticipated to contribute to the enhancement and recovery of silvery minnow in the Cochiti Reach of the MRG. The proposed projects are located on Santo Domingo Tribal Lands; three projects are located on the east side of the Rio Grande, while the LWD project will occur in area located in the Rio Grande from the Rio Galisteo confluence to the south boundary of tribal lands.

The Rio Grande projects include the diversification of habitat for the silvery minnow by removing sediment from an abandoned oxbow and modification of two nonfunctioning Bureau of Reclamation restoration sites from the 1990s. The LWD project is intended to encourage sediment deposition and water velocity reduction in the Rio Grande.

The proposed projects will affect approximately 23 acres in the Rio Grande Bosque, which is currently inundated with non-native phreatophytes and provides marginal wildlife habitat.

The Proposed Action is anticipated to benefit terrestrial and aquatic species and result in positive long term benefits in the Cochiti Reach of the Rio Grande. The Federal Action triggering NEPA compliance is the funding of the Proposed Action by the Middle Rio Grande Endangered Species Act Collaborative Program through Reclamation.

ENVIRONMENTAL IMPACTS RELATED TO THE RESOURCES OF CONCERN

Resources of primary concern associated with the proposed action include the federally threatened and endangered species that could occur within the project area and their habitats, impacts to water quality and erosion into the river, impacts to bosque vegetation, and environmental justice.

Short-term environmental impacts are anticipated during the construction phase of the project, resulting from temporary construction disturbance and noise. Direct environmental impacts may include temporary and localized increases in the level of suspended sediments in the river, and riparian vegetation may be temporarily impacted from clearing and trampling. These short-term direct effects will be minimized by

following best management practices, monitoring water quality, using silt curtains to limit sedimentation, conducting construction during low flow periods and outside the nesting season for migratory birds, and monitoring bald eagles for any potential disturbance.

Indirect effects may result from construction noise above the ambient noise level normally experienced. Indirect long-term beneficial effects to silvery minnow and its habitat will be evaluated and monitored during the course of the project.

As a result of analyzing the effects of the proposed action in this EA, the following summarizes the reasons why there would be a Finding of No Significant Impact:

i. Geology and Soils- The present day channels are composed of clay, silt, sand, and gravel, similar to the composition of ancestral river deposits. The soils on Santo Domingo are of alluvial origins which are deep and well drained. These soils are also very mobile and because of year round water flow, sediment transport in the river is constant and no adverse impacts are expected from the Proposed Action.

ii. Hydrology- Under the Proposed Action, no additional water sources will be utilized to allow water to inundate each of the three constructed projects.

iii. Water Resources and Water Balance- The habitat enhancement projects under the proposed action may create more water surface area, potentially increasing evaporation; however, these areas are well shaded which will limit evaporation. All projects are on Santo Domingo Tribal lands and a permit from the Office of the State Engineer will not be necessary for any potential water depletions. It is likely that the removal of an area of greater than 100 acres of phreatophytes during Phase I of this Project will add water to the system.

iv. Noxious Weeds- Implementation of the Proposed Action has the potential to result in the introduction and establishment of state listed noxious weeds; however, a revegetation plan combined with thorough cleaning of all equipment before arriving at the sites will minimize that potential. The Natural Resources Branch of the Santo Domingo Tribe will monitor the construction areas for noxious weeds and will treat them as necessary.

v. Threatened and Endangered Species and Species of Special Status- Habitat construction will occur while water levels are low and species surveys will be conducted prior to and while restoration activities are being conducted under the proposed action. The U.S. Fish and Wildlife Service concurred with Reclamation's determination that the proposed Project would not have adverse effects on the silvery minnow, flycatcher or bald eagle.

vi. Cultural Resources and Traditional Cultural Properties- No sacred sites or traditional cultural properties are expected in the project areas; however, should consultation with the Tribe result from any such site or property, then Reclamation will consult with the Tribe to ensure no adverse effects result from the Proposed Action.

vii. Indian Trust Assets- The Santo Domingo Tribe is proposing this project. There are no Native American Indian Trust lands or Assets that will be diminished because of the project activities.

viii. Socioeconomic Considerations- Positive economic impacts to the Tribal community are anticipated through temporary employment of sawyers and laborers. The Proposed Action will have no adverse impacts to the economy of Sandoval County or the Tribal economy.

ix. Land Use- The Proposed Action will have no effect on the current uses of water for agriculture, ranching, residential, or other activities in the area. The Proposed Action will not affect adjacent agricultural land use and will not change current land status or uses.

x. Environmental Justice- Construction would be undertaken entirely on lands of the Santo Domingo Tribe, a minority population. There are no anticipated environmental effects that would be adverse to tribal members. Employment opportunities for tribal members will have a positive benefit to the Tribe from the projects.

ENVIRONMENTAL COMMITMENTS

All applicable permits have been obtained prior to implementation of the project, including but not limited to:

- Clean Water Act (CWA), Section 404 as administered by the U.S. Army Corps of Engineers.
- Section 7 of the ESA as administered by the US Fish and Wildlife Service (USFWS). To protect shallow water habitat adjacent to the bank line during construction, a silt curtain will be installed. To protect aquatic habitats from spills or contamination, hydraulic lines will be protected from punctures. Additionally, all fueling will take place outside the active floodplain, and all equipment will undergo cleaning and inspection prior to operation. Equipment will be parked on predetermined locations on high ground away from the project area overnight.
- Should a bald eagle be observed within 0.25 mile, upstream or downstream of the active project site in the morning before project construction activity starts, or following breaks in project construction activity, the construction crew would be required to suspend all activity until the bird leaves on its own volition, or if the Tribal biologist in consultation with the USFWS determines that the potential for harassment is minimal. However, if a bald eagle arrives during project construction activities or if a bald eagle is observed beyond the specified distance, construction would not need to be interrupted. If bald eagles are found consistently in the immediate action area during project construction, Santo Domingo would contact the USFWS to determine whether formal consultation under ESA is necessary.
- Avoid impacts to birds protected by the Migratory Bird Treaty Act by scheduling construction outside of the normal bird breeding and nesting season (approximately April 15 through August 15) for most avian species or conducting preconstruction breeding

surveys and monitoring if construction were to occur during the breeding and nesting season, and consult with USFWS if affected species are observed.

- Coyote willow will be collected from Site Two, Four and Five and replanted adjacent to the constructed channel (see page 5, section 2.2.2).
- Section 106 of the National Historic Preservation Act (NHPA) as administered by the New Mexico State Historical Preservation Office (SHPO). Should evidence of possible scientific, prehistorical, historical, or archeological data be discovered during the course of this action, work shall cease at that location and the Area archaeologist shall be notified by phone immediately with the location and nature of the findings. Care shall be exercised so as not to disturb or damage artifacts or fossils uncovered during operations, and the proponents shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government.
- The Pueblo of Santo Domingo is committed to monitoring the habitat restoration projects for changes in site conditions and the presence of various fish species using the habitat. The Pueblo of Santo Domingo will be responsible for notifying the Service if the find silvery minnows using the ephemeral channels or other habitat features or in the event that isolated habitats form in the channel.

COORDINATION

The USFWS was notified about the proposed action and concurred with the determination that the Project may affect, not likely to adversely affect federal endangered and threatened species potentially occurring in the Project areas. The USACE was consulted regarding CWA 404 permits and compliance and has determined no permits are needed for the proposed action.

CONCLUSION

In accordance with the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. 4331-4335). as amended, and based on the analysis in the EA, the Bureau of Reclamation has determined that implementing the preferred plan presented in the EA for the Santo Domingo Tribe would not result in significant impact on the human environment and does not require preparation of an environmental impact statement.

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ACRONYMS AND ABBREVIATIONS

AOI	Area of Impact
BA	Biological Assessment
BIA	Bureau of Indian Affairs, U.S. Department of the Interior
BO	Biological Opinion
cfs	Cubic Feet per Second
CFR	Code of Federal Regulations
CWA	Clean Water Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act, 16 USC sections 1531-1544
Collaborative Program	Middle Rio Grande Endangered Species Act Collaborative Program
flycatcher	Southwestern willow flycatcher
FR	Federal Register
FWS	Fish and Wildlife Service, U.S. Department of the Interior
ISC	New Mexico Interstate Stream Commission
ITA	Indian Trust Assets
LWD	Large Woody Debris
MRG	Middle Rio Grande
NEPA	National Environmental Policy Act, 42 USC sections 4321-4370d
NHPA	National Historic Preservation Act
NRB	Santo Domingo Tribe-Natural Resources Branch
NRHP	National Register of Historic Places
OSE	Office of the State Engineer, State of New Mexico
Reclamation	Bureau of Reclamation, U.S. Department of the Interior
RPA	Reasonable and Prudent Alternative under the ESA
RPM	Reasonable and Prudent Measures under the ESA (***see*** glossary)
Silvery Minnow	Rio Grande silvery minnow (*Hybognathus aramus*)
SHPO	New Mexico State Historic Preservation Office
TCP	Traditional Cultural Properties
USACE	U.S. Army Corps of Engineers

Chapter 1. PURPOSE AND NEED FOR ACTION

1.1 Introduction

The Cochiti Reach of the Middle Rio Grande has undergone drastic landscape alterations. The installation of the Galisteo and Cochiti dams have altered the riparian ecosystem with reduced pulse flows and accelerated riverbed incision. The regulated hydrograph in the Rio Grande has swift currents, incised river banks, abandoned side channels, isolated backwaters, and thick stands of exotic vegetation.

The Santo Domingo Tribe-Natural Resources Branch (NRB) proposes to work at three sites along the Rio Grande and to place Large Woody Debris (LWD) in the Rio Grande from the Rio Galisteo confluence to the Santo Domingo southern grant boundary. The NRB will be practicing multiple habitat restoration techniques outlined in the "Habitat Restoration Plan for the Middle Rio Grande," (Tetra Tech 2004). All of the proposed restoration projects are aimed at enhancing riverine features to accommodate the needs of the Rio Grande silvery minnow (silvery minnow). One project will be the second phase of an earlier awarded project, which involves the restoration of an oxbow, while the remaining two projects will incorporate low-flow side channels and backwater habitats. Each project will incorporate embayments or scallops and other habitat features associated with desirable silvery minnow nursery habitat. The LWD project is intended to encourage sediment deposition and water velocity reduction, resulting in suitable fisheries habitat for the silvery minnow.

The Project is funded by the Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) through the Bureau of Reclamation. This Environmental Assessment (EA) has been conducted to evaluate the impacts of the construction on environmental resources and their relationship to other projects while complying with the National Environmental Policy Act (NEPA) (42 U.S.C. 4331-4335).

1.2 Proposed Action

The proposed federal action is the funding of various habitat restoration projects by the Collaborative Program through Reclamation. These projects involve removal of non-native phreatophytes and habitat construction that are anticipated to contribute to the enhancement and recovery of silvery minnow in the Middle Rio Grande (MRG). The proposed projects are located on Santo Domingo Tribal Land. Three projects are located on the east side of the Rio Grande and one project extends from the confluence of the Rio Grande and the Rio Galisteo to the southern tribal grant boundary.

The proposed Rio Grande projects include diversifying habitat for silvery minnow by removing sediment from abandoned oxbows to create embayments, backwaters and side channels. This project will complement other restoration efforts taking place on Santo Domingo Tribal Land such as phreatophyte removal projects in the Rio Galisteo which

will allow additional sediment transport to the Rio Grande, enhancing silvery minnow habitat.

1.3 Purpose and Need

The purpose of the project, funded by Reclamation, is to implement habitat restoration projects to benefit the silvery minnow and the flycatcher, which is an important component of the Collaborative Program. The implementation of the Proposed Action would also benefit the silvery minnow habitat on Santo Domingo Pueblo.

The need for the Proposed Action is to satisfy federal requirements under the Biological Opinion (U.S. Fish and Wildlife Service 2003) for Reclamation's Water and River Maintenance Operations, the USACE's Flood Control Operations, and Related Non-Federal Actions on the Middle Rio Grande, New Mexico, 2003 (U.S. Fish and Wildlife Service 2003). The Biological Opinion requires the funding and collaborative execution of habitat restoration projects on the Middle Rio Grande that will improve survival of all life stages of the endangered silvery minnow, as specified in RPA element S:

> In consultation with the [U.S. Fish and Wildlife] Service and appropriate Pueblos and in coordination with parties to the consultation, action agencies shall conduct habitat/ecosystem restoration projects in the Middle Rio Grande to increase backwaters and oxbows, widen the river channel, and/or lower river banks to produce shallow water habitats, overbank flooding, and regeneration stands of willows and cottonwood to benefit the silvery minnow, the flycatcher, or their habitats. Projects should be examined for depletions. It is the Service's understanding that the objective of the action agencies and parties to the consultation is to develop projects that are depletion neutral. By 2013, additional restoration totaling 1,600 acres (648 hectares) will be completed in the action area. In the short term (5 years or less), the emphasis for silvery minnow habitat restoration projects shall be placed on river reaches north of the San Acacia Diversion Dam. Projects should result in the restoration/creation of blocks of habitat 24 hectares (60 acres) or larger [U.S. Fish and Wildlife Service 2003:95–96].

1.4 Relevant Statutes, Regulations, and other Plans

Compliance is required under the provisions of Section 7 of the ESA as administered by the USFWS, and Section 106 of the National Historic Preservation Act (16 U.S.C. 470) as administered by the New Mexico State Historic Preservation Office (SHPO). A site visit and review of the project was performed by the USACE. It was determined that under Section 404 of the Clean Water Act (CWA) that a permit was not required to conduct these restoration activities.

Chapter 2. ALTERNATIVES

2.1 Introduction

This chapter describes the two alternatives analyzed in this EA: the No action Alternative and the Proposed Action Alternative. Other alternatives considered are also documented.

2.2 Description of the Alternatives

2.2.1 No Action Alternative

Without the proposed action, the Rio Grande in this reach will maintain high water velocities, continue channelization, and maintain poor habitat diversity for the silvery minnow.

Without the placement of LWD in the Rio Grande, high water velocity will persist and prevent sediment deposition and, thus, perpetuate poor quality habitat for the flycatcher and silvery minnow.

2.2.2 Proposed Action Alternative

The proposed action is aimed at enhancing riverine features to accommodate the silvery minnow needs (Figure 1). Site two-Phase II is the subsequent phase of a previously constructed habitat restoration project. Phase II is the upstream portion of an abandoned oxbow that was excavated by the NRB in the fall and winter of 2006. This project is designed to be a low-flow velocity side channel, with constructed embayments. Sites four and five are located on the east side of the Rio Grande and are now abandoned fish habitat projects constructed by Reclamation in the early 1990s. The LWD project is intended to enhance fisheries habitat in this reach by placing wood material that is absent in this reach.

Site Two-Phase II

Site Two-Phase II is located on the east side of the Rio Grande, approximately 1.5 miles south of SP88 and Bridge No. M102. The NRB is proposing to extend the backwater into a low velocity flow-through habitat for silvery minnow. Currently, the site consists of an oxbow that is inundated only at high flows (>2,500 cfs). The oxbow is approximately 1.1 miles in length. The dominant vegetation in the project area is Russian olive, tamarisk, and coyote willow. The soils range from a sandy loam to a gravel/cobble composition. Groundwater at the project location is less than three feet below surface.

The flow-through channel will be constructed by excavating the anterior end (or mouth) of the oxbow 0.75 miles, which would connect the backwater with the Rio Grande (Figure 2). The channel will be between 10 and 20 feet wide and will be excavated to

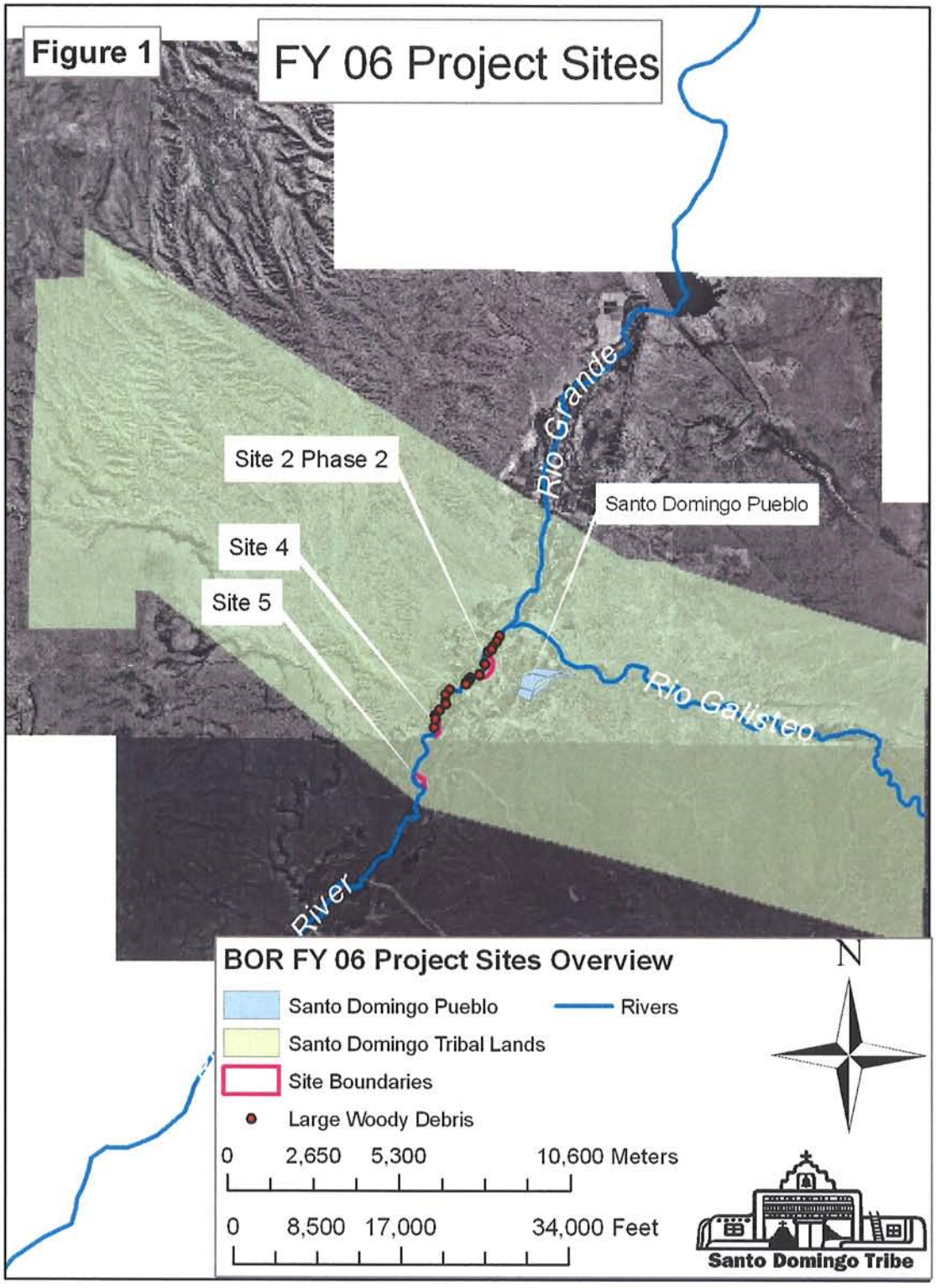
Figure 1
FY 06 Project Sites
Site 2 Phase 2
Site 4
Site 5
Rio Grande
Santo Domingo Pueblo
Rio Galisteo
River
BOR FY 06 Project Sites Overview
Santo Domingo Pueblo
Rivers
Santo Domingo Tribal Lands
Site Boundaries
Large Woody Debris
0 2,650 5,300 10,600 Meters
0 8,500 17,000 34,000 Feet
N
Santo Domingo Tribe

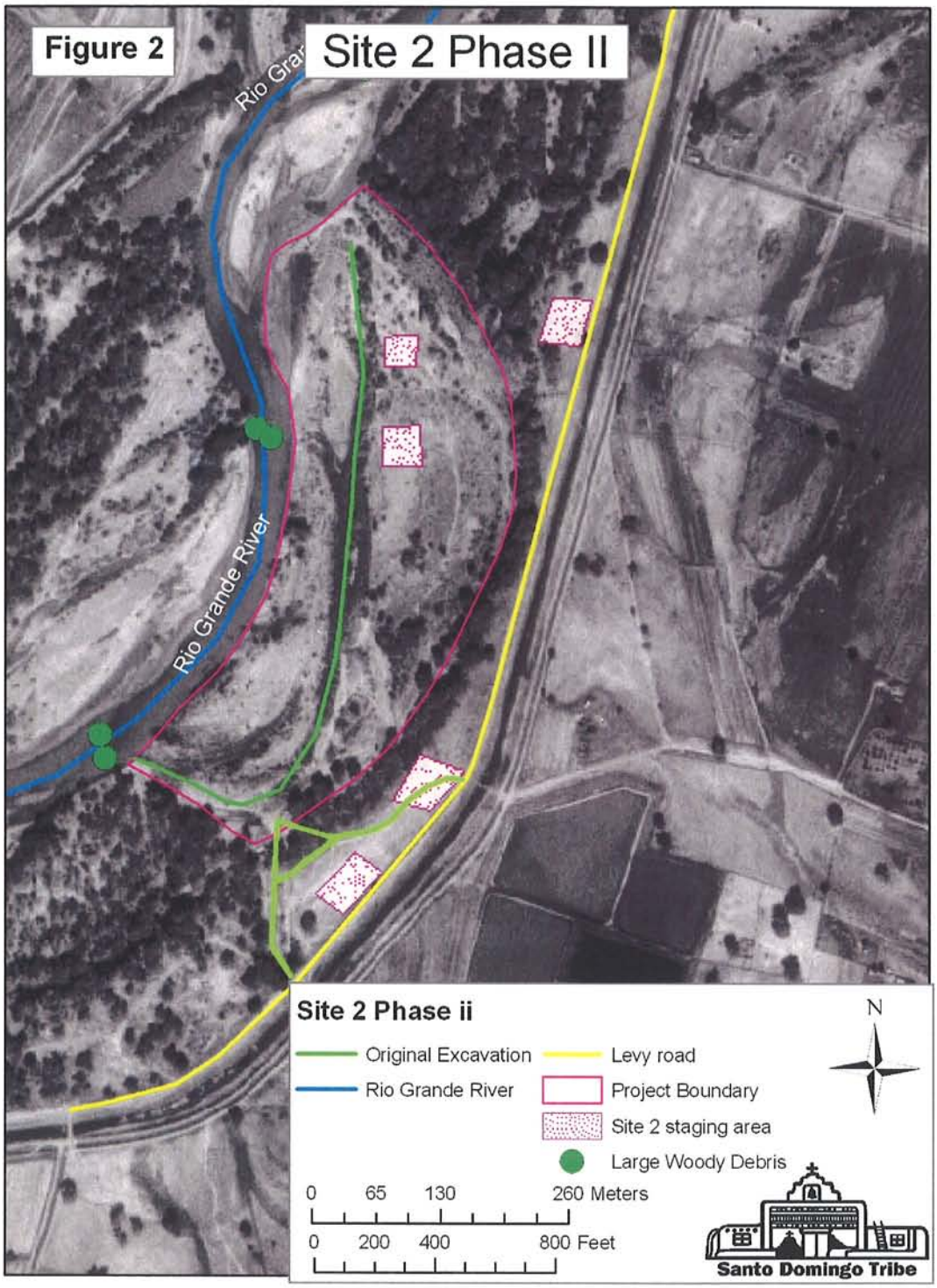
Figure 2
Site 2 Phase II
Rio Grande River
Site 2 Phase ii
Original Excavation
Levy road
Rio Grande River
Project Boundary
Site 2 staging area
Large Woody Debris
0 65 130 260 Meters
0 200 400 800 Feet
N
Santo Domingo Tribe

various widths to increase habitat heterogeneity. The mouth of the channel will remain unexcavated or dammed with sandbags and a silt fence until completion. While digging the channel, embayments or scallops will be excavated and tiered into the banks to create nursery habitat. Woody debris will be placed in the newly constructed side channel to enhance habitat variability and invertebrate establishment.

A dense thicket of coyote willow is located within the project area, some of which occurs in the oxbow. During excavation, willow will be removed and replanted adjacent to the channel. In addition to the relocation of willow, a 75-foot buffer zone of non-natives trees will be cleared around the project area, which will aid in replanting efforts. The clearing will total approximately six acres. Cottonwood poles will be planted adjacent to the flow-through channel totaling nearly 3 acres at 20 poles per acre and will be planted to depths up to 8 feet with an auger.

Site Four

Approximately 15 years ago, Reclamation conducted a series of river maintenance activities aimed at controlling erosion in the river corridor at Santo Domingo. In addition to bank armoring, Reclamation constructed features to accommodate fish habitat. Since construction, the river's high water flows have eroded the riverbed, which has isolated the backwater from the main channel. This backwater presently contains water year-round mostly due to groundwater seepage.

The mouth of the backwater is elevated in such a manner that it is not connected to an existing side channel. The side channel is inundated only at flows greater than 1500 cfs. The side channel has three to four pools at 0.5 m deep and borders a rip-rap armored bank (Figure 3). A large stand of coyote willow intermixed with exotic trees borders the side channel in the floodplain. Excavation of the backwater and the inlet of the side channel will allow water to readily flow from the backwater to the side channel. Additional excavation of the higher elevated portions of the side channel will provide the necessary gradient for a low velocity habitat.

It is anticipated that approximately 2.6 acres of land will need to be excavated. Excavation would take place in winter months and during low flow conditions.

Precautions will be taken during the construction of the project in the event that silvery minnow are located within the project area, including preventing heavy equipment from entering the water and installing silt fences when the mouth of the side channel is excavated. To prevent equipment from operating in the river all excavation activities will occur during low flow conditions.

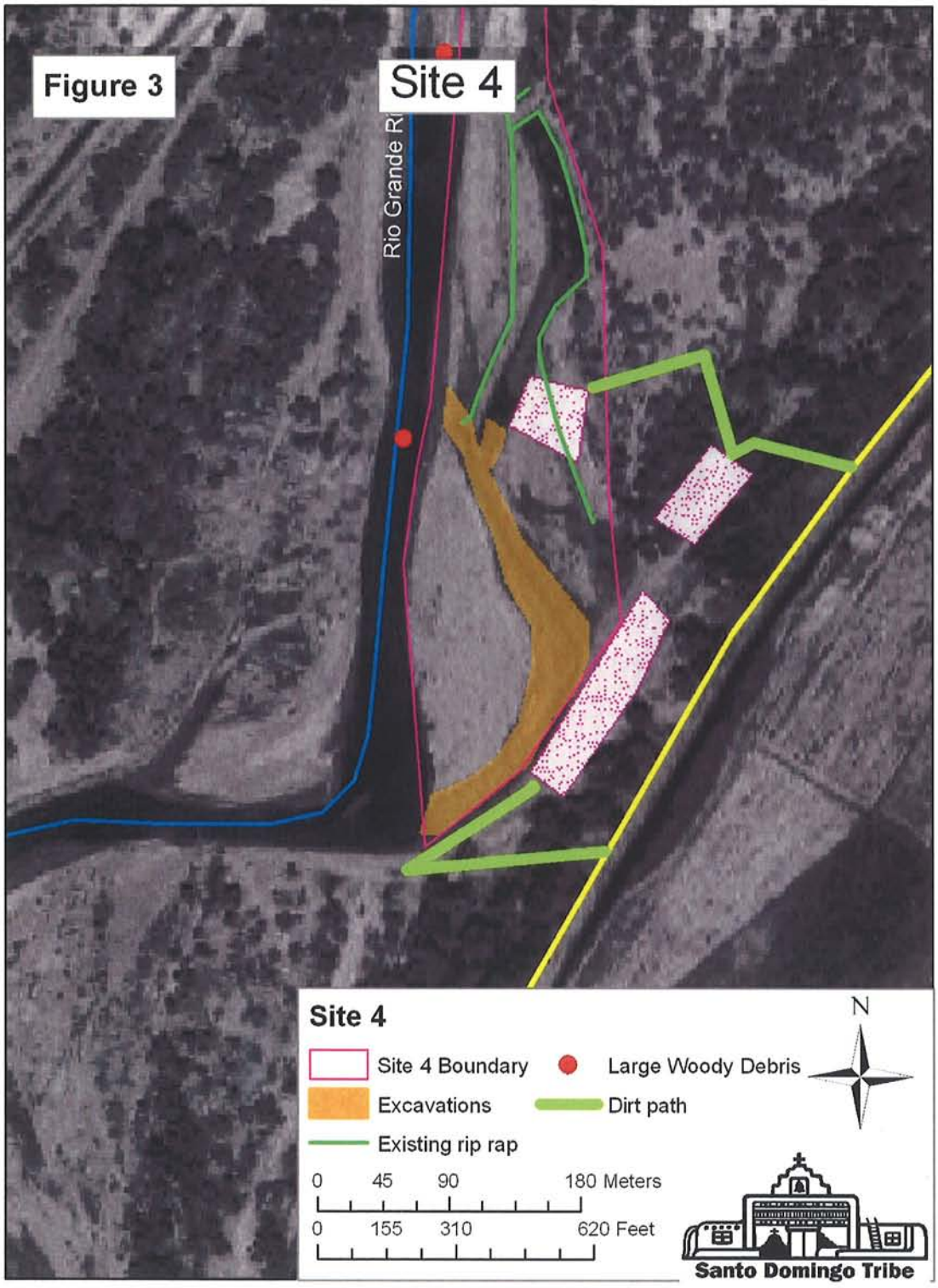
Figure 3
Site 4
Rio Grande Ri
Site 4
Site 4 Boundary
Large Woody Debris
Excavations
Dirt path
Existing rip rap
0 45 90 180 Meters
0 155 310 620 Feet
N
Santo Domingo Tribe

Site Five

Site 5 is located 3.6 miles south of the SP88 and Bridge No. M102 on the east bank of the Rio Grande (Figure 4). The water velocity at this site is slow (≈25cm/s) and the depth is shallow (.75 m) relative to other sections of the Rio Grande. The substrate composition ranges from sand and cobble to a sandy sediment mixture. This site borders an outcrop of rip-rap and, in general, has beneficial nursery habitat characteristics. The area to be restored has two main components that are in need of restoration: a backwater and a side channel. The inlet of the habitat has a higher elevation than the terminus, thus isolating any water in the habitat from the actively flowing water.

The backwater will have approximately four inches of sediment removed from its inlet, which will allow water to flow into the habitat year round. Additionally, excavation will extend to the north in a tiered manner, which will provide a variety of habitats for the various life stages in the event of elevated flows. The habitat will be nearly 150 meters in length and 20 meters in width. In addition to the tiered habitats, the NRB proposes to connect an existing low flow embayment. The connection can be easily accomplished, which will provide two parallel nursery habitat features. Up to thirty partially buried jetty jacks will be removed in this project area by utilizing a gas powered chop saw.

A large sandbar of approximately 4.5 acres is located upstream of the riprap. Between the sand bar and a 20-acre parcel of bosque is an ephemeral side channel. The NRB intends to conduct bar modification activities in which the mouth and side channel will be excavated which will permit water to flow through the side channel and back to the Rio Grande. Approximately 3.1 acres are proposed to be excavated and 20 acres of adjacent bosque will be thinned of non-natives phreatophytes.

Precautions will be taken during the construction of the project in the event that silvery minnow are located within the project area, including preventing heavy equipment from entering the water and installing silt fences when the mouth of the side channel is excavated. To prevent equipment from operating in the river all excavation activities will occur during low flow conditions.

Large Woody Debris

In this reach of the river, extensive river alignment has occurred in which water velocities are high (>90cm/s), which hinders silt deposition. Though pulse flows from the Rio Galisteo have contributed a great deal of sediment, much of it is immediately transported downstream.

The NRB is proposing to utilize tree trunks and root balls from previous extraction projects for placement of LWD along the Rio Grande (Figure 5). Each tree trunk and root ball will be marked for tracking purposes. The desired outcome of this project is to improve habitat for invertebrate and vertebrate fauna, specifically the silvery minnow.

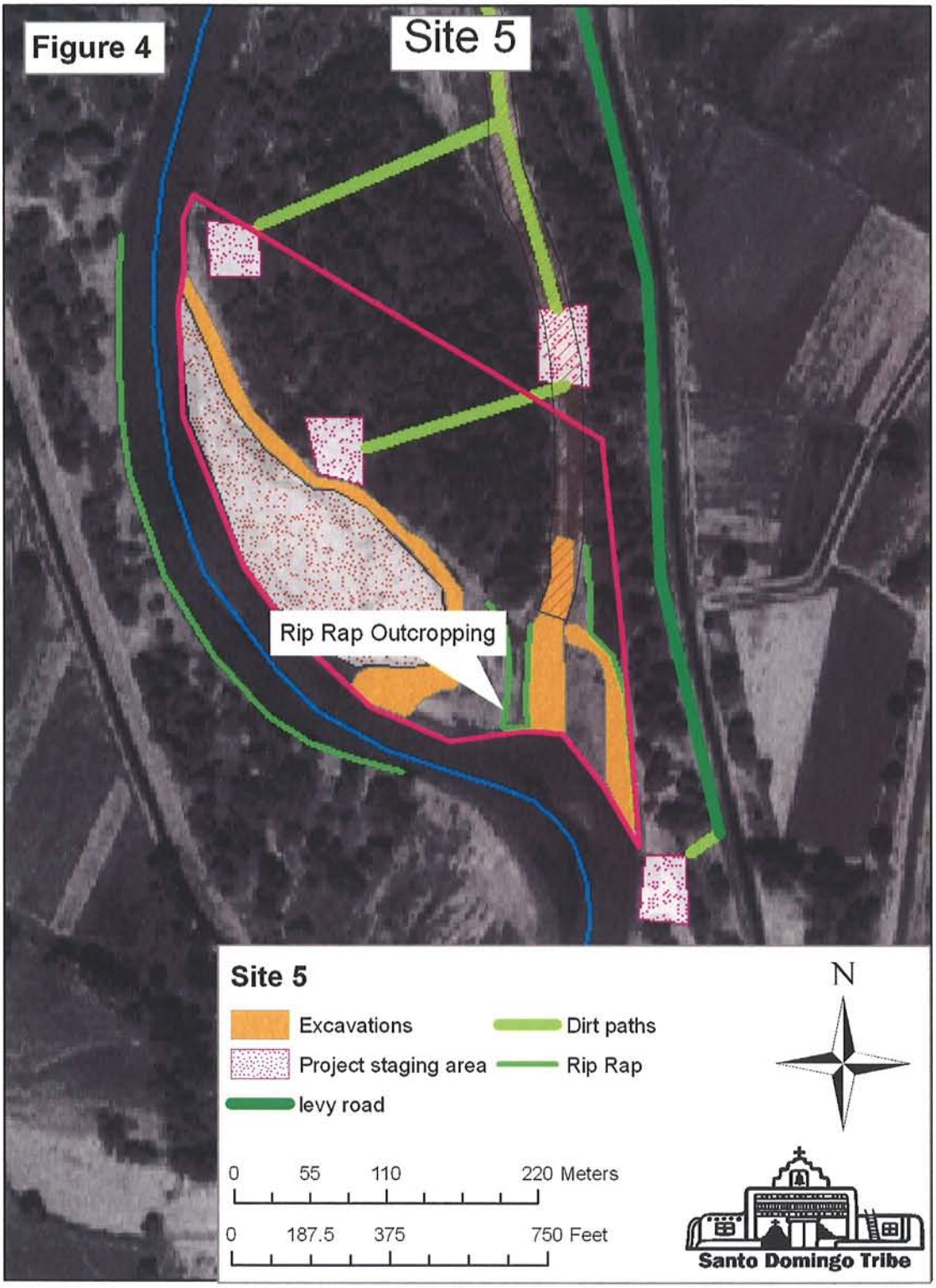
Figure 4
Site 5
Rip Rap Outcropping
Site 5
Excavations
Dirt paths
Project staging area
Rip Rap
levy road
0 55 110 220 Meters
0 187.5 375 750 Feet
N
Santo Domingo Tribe

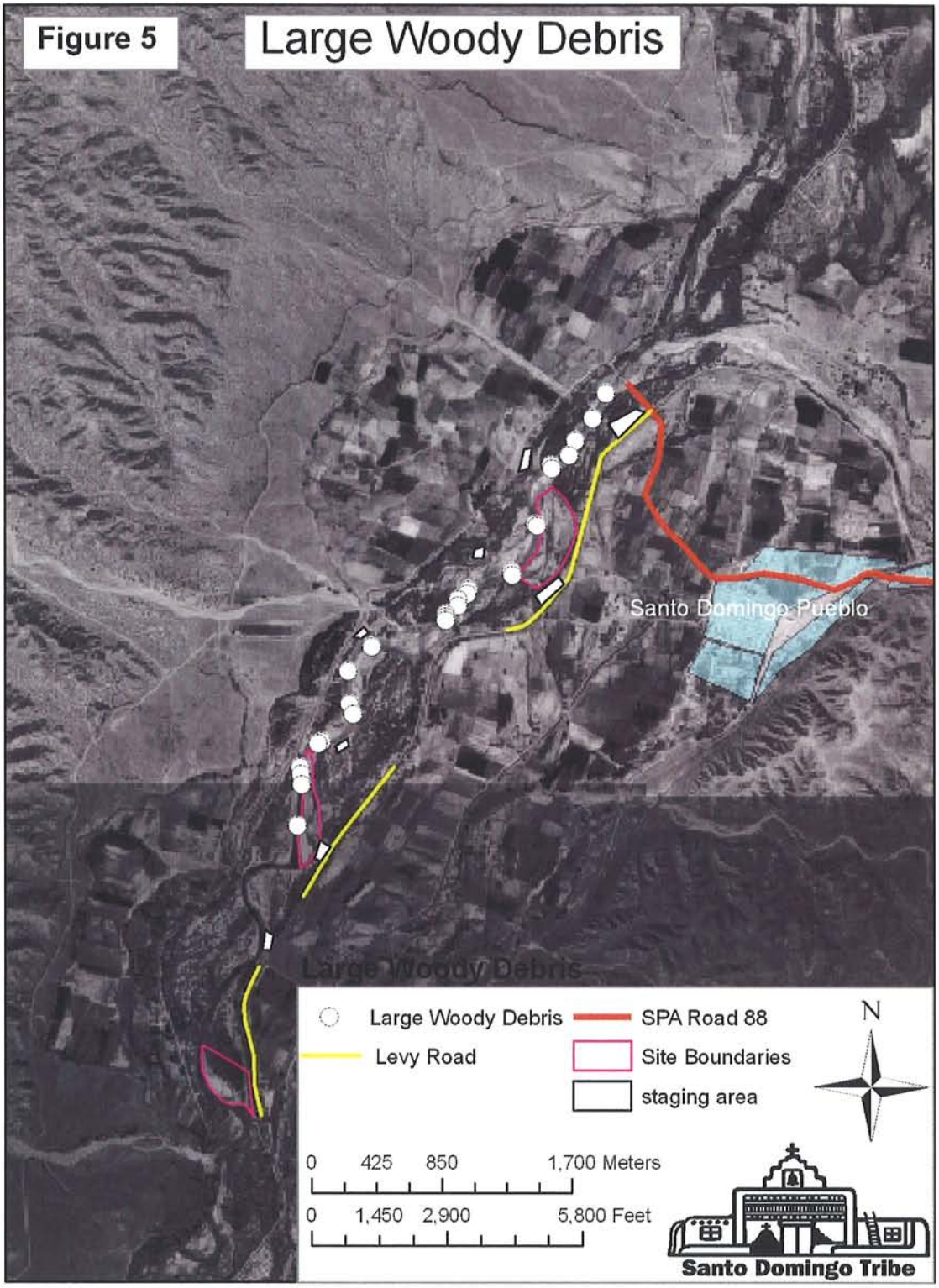
Figure 5
Large Woody Debris
Santo Domingo Pueblo
Large Woody Debris
Large Woody Debris
SPA Road 88
Levy Road
Site Boundaries
staging area
N
0 425 850 1,700 Meters
0 1,450 2,900 5,800 Feet
Santo Domingo Tribe

The LWD is intended to reduce water velocity and encourage sediment deposition. The root balls will not be secured to the shore or river bed, which is anticipated to allow natural redistribution in the river. The NRB will utilize a contractor to place the LWD via excavator with a hydrologic thumb. LWD placement with this method would preclude equipment from entering the river. The characterization (water velocity, substrate composition, etc,) of each site will be conducted before and after the project takes place. The initial and subsequent positions of each root ball placed in the river will be monitored using GPS to assess the movement of the root ball and any newly acquired habitat.

2.3 Alternatives Considered but Eliminated from Further Study

Alternative Project Areas: Less desirable, abandoned oxbows exist on Santo Domingo Tribal Lands; however, greater volumes of sediment would need to be removed to create the habitat conditions of the Proposed Action and therefore the study of these abandoned oxbows were not advanced.

Other sites were considered for restoration but were eliminated from further consideration for a number of reasons, including cost, accessibility and rank in priority. Dense stands of exotic vegetation and several rows of jetty-jacks surround several potential project sites, which would increase costs and time to complete a project.

Chapter 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This section describes the environmental consequences of various resources, including geology and soils, hydrology, water resources and water balance, noxious weeds, threatened and endangered species and special status species, cultural resources, Indian trust assets, socioeconomic considerations, land use, and environmental justice. The description of the affected environment for these resources can be found in the document, Santo Domingo Tribe – Habitat Restoration for the Rio Grande Silvery Minnow and Salt Cedar Removal Project Environmental Assessment, March 2006, and is incorporated by reference in this document.

The affected environment is within the Cochiti Reach of the Middle Rio Grande. The Cochiti Reach extends from Cochiti Dam downstream to the Angostura Dam. This reach has been identified by Reclamation and the FWS, as well as the Collaborative Program, as an area where habitat/ecosystem restoration projects would be highly beneficial to all life stages of the silvery minnow.

3.2 Description of Relevant Affected Resources

3.2.1 Geology and soils

During construction of the backwater and side channel, care will be taken to minimize sediment erosion. Excavated material will be stockpiled at a pre-designated location and transported to a community borrow pit, and silt fencing will be installed when working near the bank of the river. With these mitigating measures, no impacts are anticipated due to the Proposed Action.

Under the No Action Alternative, the regulated hydrograph from Cochiti Dam will continue incision of the main stem of the Rio Grande, which will result in high river banks and continue to prevent inundation of the historic floodplain. Sediment deposition will be minimal; water will run cold. Under the No Action Alternative, geomorphic conditions favorable to silvery minnow egg retention and larvae development will continue to be unfavorable.

3.2.2 Hydrology

Under the Proposed Action, water would flow naturally through the side channel and backwater restoration projects. An increase in desirable habitat conditions suitable for the silvery minnow developmental phases would be available.

Under the No Action alternative, the side channels and backwater areas would continue to be isolated from flows in the Rio Grande.

3.2.3 Water Resources and Water Balance

The intent of the Proposed Action is to increase habitat availability for the silvery minnow. The creation of additional surface area may increase evaporation; however, with the removal of 100+ acres of phreatophytes from the Rio Grande and Rio Galisteo in Phase I of Santo Domingo's silvery minnow habitat restoration efforts in FY 2005 will offset any loss. All projects conducted under the Proposed Action will occur on Santo Domingo Tribal Lands and a permit for any potential water losses will not be necessary. Under the No Action Alternative, there will be no change to surface water and no additional habitat for the silvery minnow. Evapotranspiration losses will increase as non-native vegetation matures and reproduces throughout the Proposed Action areas.

3.2.4 Noxious Weeds

Under the Proposed Action, the removal of saltcedar, Russian olive and Siberian elm will have a positive result by allowing native vegetation to flourish and proliferate.

The No Action Alternative would result in continued growth, expansion and consumption of water by non-native vegetation in and around the project area near the Rio Grande.

3.2.5 Threatened and Endangered Species and Species of Special Status

Three threatened and endangered species: the Rio Grande silvery minnow, the Southwestern willow flycatcher, and Bald Eagle; and the Yellow Billed Cuckoo, a USFWS candidate species, historically occurred on tribal lands.

Rio Grande Silvery Minnow (*Hybognathus amarus)*

No long-term adverse impacts to silvery minnow or habitat are anticipated to occur from short-term construction of new habitat or LWD placement. The anticipated benefits to the silvery minnow and its habitat resulting from habitat development far outweigh any potential negative impacts.

The No Action Alternation would result in continued poor habitat conditions in the Cochiti Reach.

Southwestern willow flycatcher (*Empidonax trailii extimus*)

Because the project site does not contain actual or potential habitat for the species, the Proposed Action and No Action Alternative will have no effect on breeding habitat and no direct effects to the species.

Bald Eagle (*Haliaeetus leucocephalus*)

The Proposed Action may have short-term, minor potential effects to wintering bald eagles during construction, related to temporary noise and other disruptions. Should a bald eagle be observed within 0.25 mile, upstream or downstream of the active project site in the morning before project construction activity starts, or following breaks in project construction activity, the construction crew would be required to suspend all activity until the bird leaves on its own volition, or if the Tribal biologist in consultation with the FWS determines that the potential for harassment is minimal. However, if a bald eagle arrives during project construction activities or if a bald eagle is observed beyond the specified distance, construction would not need to be interrupted. If bald eagles are found consistently in the immediate action area during project construction, Santo Domingo would contact the FWS to determine whether formal consultation under ESA is necessary.

The No Action Alternative will have no effect on this species because the riparian vegetation used by this species will not be disturbed.

Yellow-billed Cuckoo (*Coccyzus americanus occidentalis, Cuckoo*)

The relatively limited amount of potential cuckoo habitat to be removed combined with the mitigation planting ratios that will occur under the Proposed Action may result in minor positive impacts for the cuckoo.

The No Action Alternation will not alter riparian conditions or habitat utilized by this species, and no effects will occur.

3.2.6 Cultural Resources and Traditional Cultural Properties

Cultural Resources include archeological sites, sites eligible for the State Register of Cultural Properties and/or the National Register of Historic Places (NRHP), and properties of traditional religious or cultural importance (Traditional Cultural Properties [TCPs]).

No cultural resources have been identified in the Area of Impact (AOI) of the Proposed Action. In addition, no TCPs or sacred sites were identified in the AOI. The probability of any artifacts that might have once existed in the floodplain of the Rio Grande have a very low probability of still being present (J. Hanson, pers communication). This is due to the nature of the meandering of the Rio Grande and habitat modifications being disrupted by man. Therefore, no impacts to cultural resources or TCPs are anticipated due to the Proposed Action or the No Action Alternative.

3.2.7 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets held in trust by the United States government for Indian tribes or for Indian individuals. Some examples of ITAs are lands, minerals, water rights, hunting and fishing rights, titles, and money. ITAs cannot be sold, leased, or alienated without the express approval of the United States government. The United States has a trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or individuals by treaties, statues, Executive Orders, and rights further interpreted by the courts. This trust responsibility requires that all Federal agencies take all actions reasonably necessary to protect such trust assets.

Since no ITAs that could potentially be affected have been identified, no impacts due to the Proposed Action or No Action alternative would result.

3.2.8 Socioeconomic Considerations

Short-term positive economic impacts to the Santo Domingo community will be observed through temporary employment of sawyers and laborers while construction occurs.

The No Action Alternation will have no impacts to Santo Domingo Pueblo. The proposed project will have no adverse impacts to the economy of Sandoval County.

3.2.9 Land Use

The Proposed Action and No Action Alternatives will have no effect on current uses of water for agriculture, ranching, residential, or other activities in the area. The Proposed Action will not affect adjacent agricultural land use and will not change current land status or uses.

3.2.10 Environmental Justice

The planning and decision-making process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations, including EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," which was issued by President Clinton on February 11, 1994 (FR. 1994b). The essential purpose of EO 12898 is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The Proposed Action will be constructed entirely on lands of the Santo Domingo Tribe, a minority population. However, there are no anticipated environmental effects that would be adverse to tribal members. The Proposed Action will provide employment opportunities to tribal members, a positive benefit to the Tribe.

The No Action Alternation will not adversely affect the use of the proposed action site and will have no bearing on the Santo Domingo community.

3.2.11 Irretrievable Commitment of Resources of the Proposed Action

The implementation of the project will result in the commitment of resources such as fossil fuels, construction materials, and labor. In addition, Federal funds will be expended for the construction of the proposed project.

3.2.12 Cumulative Impacts

The Proposed Action will have a net positive benefit to the silvery minnow in the Cochiti reach because of the enhanced habitat availability. Future restoration projects on Santo Domingo will be cumulative, increasing habitat for threatened and endangered species and overall biodiversity on Santo Domingo tribal lands.

Restoration efforts from neighboring tribes and pueblos will also benefit from this project because of increased habitat connectivity for the silvery minnow. Reclamation recently classified three priority sites in the Rio Grande corridor of Santo Domingo Tribal lands in which measures will be taken to protect and restore the river's banks and levees. The anticipated methods to be used by Reclamation are expected to have no adverse impacts to any endangered or threatened species. Cumulative impacts from these projects will

benefit the overall recovery efforts of the silvery minnow in the Cochiti reach by increasing the availability and connectedness of habitat in upper reaches of the Middle Rio Grande.

Chapter 4. ENVIRONMENTAL COMMITMENTS

All applicable permits have been obtained prior to implementation of the project, including but not limited to:

- Clean Water Act (CWA), Section 404 as administered by the U.S. Army Corps of Engineers.
- Section 7 of the ESA as administered by the US Fish and Wildlife Service (USFWS). To protect shallow water habitat adjacent to the bank line during construction, a silt curtain will be installed. To protect aquatic habitats from spills or contamination, hydraulic lines will be protected from punctures. Additionally, all fueling will take place outside the active floodplain, and all equipment will undergo cleaning and inspection prior to operation. Equipment will be parked on predetermined locations on high ground away from the project area overnight.
- Should a bald eagle be observed within 0.25 mile, upstream or downstream of the active project site in the morning before project construction activity starts, or following breaks in project construction activity, the construction crew would be required to suspend all activity until the bird leaves on its own volition, or if the Tribal biologist in consultation with the FWS determines that the potential for harassment is minimal. However, if a bald eagle arrives during project construction activities or if a bald eagle is observed beyond the specified distance, construction would not need to be interrupted. If bald eagles are found consistently in the immediate action area during project construction, Santo Domingo would contact the FWS to determine whether formal consultation under ESA is necessary.
- Avoid impacts to birds protected by the Migratory Bird Treaty Act (16 U.S.C. 703) by scheduling construction outside of the normal bird breeding and nesting season (April 15 through August 15) for most avian species or conducting preconstruction breeding surveys and monitoring if construction were to occur during the breeding and nesting season, and consult with FWS if affected species are observed.
- Coyote willow will be collected from Site Two, Four and Five and replanted adjacent to the channel (see page 5, section 2.2.2).
- Compliance with Section 106 of the National Historic Preservation Act (NHPA). Should evidence of possible scientific, prehistorical, historical, or archeological data be discovered during the course of this action, work shall cease at that location and the Area archaeologist shall be notified by phone immediately with the location and nature of the findings. Care shall be exercised so as not to disturb or damage artifacts or fossils uncovered during operations, and the proponents shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government.
- The Pueblo of Santo Domingo is committed to monitoring the habitat restoration projects for changes in site conditions and the presence of various fish species using the habitat.

The Pueblo of Santo Domingo will be responsible for notifying the Service if the find silvery minnows using the ephemeral channels or other habitat features or in the event that isolated habitats form in the channel.

Chapter 5. CONSULTATION AND COORDINATION

The USFWS was notified about the proposed action and concurred with the determination that the Project may affect, not likely to adversely affect federal endangered and threatened species potentially occurring in the Project areas. The USACE was consulted regarding CWA 404 permits and compliance and has determined no permits are needed for the proposed action. (Appendix A).

Chapter 6 LIST OF PREPARERS

Gabriel B. Cosyleon, Santo Domingo Tribe-Natural Resources Manager
Ann A. Watson, Santo Domingo Tribe-Ecologist

Chapter 7 APPENDIX A

7.1.1 Correspondence and Coordination

U.S. Army Corps of Engineers- CWA 404 Jurisdictional Determination letter

U.S. Fish and Wildlife Service- Section 7 Consultation for the Proposed Santo Domingo Pueblo Restoration Project Phase III- consultation number 22420-2007-I-0054

Chapter 8 REFERENCES

16 U.S.C. 470 (Short Title). National Historic Preservation Act of 1966, As amended through 2000. An Act to Establish a Program for the Preservation of Additional Historic Properties throughout the Nation, and for Other Purposes. United States Code.

16 U.S.C. 703. Migratory Bird Treaty Act of 1918. As Amended. United States Code.

42 U.S.C. 4331-4335. National Environmental Policy Act (NEPA). 1970. Title 42 - The Public Health and Welfare; Chapter 55 - National Environmental Policy , Subchapter I – Policies and Goals; Sections 4331-4335. U.S. GPO. U.S. Code Online via GPO Access at http://www.access.gpo.gov/uscode/uscmain.html. Accessed 12-16-04.
FR. 1994b. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Vol. 59, No. 32 / Wednesday, February 16, 1994. pp 7629.

Habitat Restoration Plan for the Middle Rio Grande. 2004. Prepared for: Middle Rio Grande Endangered Species Act Collaborative Program Habitat Restoration Subcommittee. Tetra Tech EM Inc., Albuquerque, New Mexico.

Habitat Restoration Plan for the Middle Rio Grande. 2004. Prepared for: Middle Rio Grande Endangered Species Act Collaborative Program Habitat Restoration Subcommittee. Tetra Tech EM Inc., Albuquerque, New Mexico.

U.S. Fish and Wildlife Service. 2003. Biological and conference opinions on the effects of actions associated with the programmatic biological assessment of the Bureau of Reclamation's Water and River Maintenance Operations, Army Corps of Engineer's Flood Control Operation, and Related Non-Federal Actions on the Middle Rio Grande. Region 2, U.S. Fish and Wildlife Service, Albuquerque, NM.

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

received
11/06/06

October 31, 2006

Operations Division
Regulatory Branch

Mr. Gabriel B. Cosyleon
Natural Resources Programs Manager
Santo Domingo Tribe
P.O. Box 70
Santo Domingo Pueblo, New Mexico 87052-0070

Dear Mr. Cosyleon:

This replies to your October 27, 2006, submittal regarding your proposed habitat restoration and creation project at three sites adjacent to the Rio Grande at Santo Domingo Pueblo, Sandoval County, New Mexico. We have assigned Action No. 2006 00595 to this activity.

We have evaluated the information you provided and studied the project description and the other records and documents available to us. I also met with you to inspect the project sites on September 13, 2006. The proposed work will involve the excavation of sediment from three side channels to the Rio Grande; and the placement (but not anchoring) of large woody debris (LWD) at several sites along the Rio Grande.

The Rio Grande and its side channels are waters of the United States. The placement of dredged or fill material into these waters will require authorization under Section 404 of the Clean Water Act.

However, based on my site inspection and a review of your submittal, the proposed work will only involve excavation of sediments and the placement of this excavated sediment above the ordinary high water mark (OHWM) of the Rio Grande and the side channels. In addition, the placement, but not anchoring, of LWD is not considered to be a discharge of fill material. Therefore, the proposed project is not regulated under the provisions of Section 404 of the Clean Water Act and a Department of the Army permit will not be required.

Our disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, state and local laws may apply to your work. Therefore, you may want to also contact other Federal, state and local regulatory authorities to

determine whether the proposed habitat restoration and creation work may require other authorizations or permits.

This letter contains an approved jurisdictional determination for your proposed project. If you object to this determination, you may request an administrative appeal under Corps' regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the South Pacific Division Office at the following address:

Mr. Douglas R. Pomeroy
Division Review Office
(ph (415)977-8035, fax (415)977-8047)
South Pacific Division
333 Market Street
San Francisco, CA 94105

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by December 30, 2006.

It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This jurisdictional determination will be valid for 5 years from the date of this letter unless new information warrants revision of the determination within that time.

If you have any questions regarding this determination, please feel free to contact me at (505) 342-3280 or e-mail me at james.a.wood@usace.army.mil. For more information about the regulatory program, please see our web site at www.spa.usace.army.mil/reg.

Sincerely,

James A. Wood
Regulatory Project Manager

Enclosure

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

April 19, 2007

Cons. #22420-2007-I-0054

Memorandum

To: Area Manager, Albuquerque Area Office, Bureau of Reclamation, Albuquerque, New Mexico

From: Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, Albuquerque, New Mexico

Subject: Section 7 Consultation for the Proposed Santo Domingo Pueblo Restoration Project Phase II

Thank you for your Biological Assessment (BA) of March 15, 2007, requesting concurrence for proposed activities associated with the proposed Santo Domingo Pueblo Restoration Project Phase II under section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1534 et seq.). The Bureau of Reclamation (Reclamation) determined the proposed project "may affect, is not likely to adversely affect" the threatened bald eagle (*Hailiaeetus leucocephalus)* (eagle) and the endangered Rio Grande silvery minnow (*Hybognathus amarus*) (minnow). Reclamation determined that there was "no effect" to all other threatened and endangered species. The proposed project sites are located on Santo Domingo Tribal Lands, Sandoval County, New Mexico.

The proposed projects include three excavation sites on the east side of the Rio Grande (Figure 1), starting 1.5 miles south of SP88 and Bridge No. M102, extending to 3.6 miles south. The project areas include a total of approximately 11 acres. Excavation will be conducted during winter months or dry periods of the year (no equipment will enter the water), and silt fences will be used to minimize the amount of sediment entering the Rio Grande. Large woody debris (LWD) will be placed in the Rio Grande at various locations to reduce water velocity and enhance sediment deposition as a means of improving habitat for the minnow in the Cochiti Reach. Each piece of LWD will be marked with an aluminum tag and monitored for downstream movement, and formation of new habitat.

We concur with Reclamation's determinations for the following reasons:

Eagle:

- If a bald eagle is observed within 0.25 mile of the proposed project area in the morning when activity starts, or arrives during breaks in activity, the contractor would be required to suspend all construction activity until the bird leaves on its own volition, or the project biologist, in consultation with the U.S. Fish and Wildlife Service, determines that the potential for harassment is minimal. However, if a bald eagle arrives during construction activities, or is observed more than 0.25 mile from the construction site, activity would not be interrupted.

Minnow:

- According to the last documented comprehensive study, minnow have not been captured in this portion of the river since 1995 (Platania 1995). Additionally, habitat in this area is considered poor due to a lack of fine sediment. Therefore, the probability of encountering minnows in the project area is very low.
- Excavation will be conducted during winter months or dry periods of the year.
- No equipment will enter the Rio Grande.
- Silt fences and sandbag walls would be used to isolate the excavation area from the river and minimize the transport of suspended sediment from the work area to the river.
- Standard Best Management Practices (BMPs) will be used to prevent pollution and minimize sediment entering the river. BMPs would be enforced to minimize potential impacts to fish from direct construction impacts and erosion inputs into the river during periods of work. All equipment will be inspected prior to mobilization. Spill cleanup equipment will be kept on-site for containing accidental leaks of fluids.
- The Pueblo of Santo Domingo is committed to monitoring the habitat restoration projects for changes in site conditions and the presence of various fish species using the habitat. The Pueblo of Santo Domingo will be responsible for notifying the Service if they find silvery minnows using the ephemeral channels or other habitat features or in the event that isolated habitats form in the channel.

Please contact the Service to verify the above determinations are still valid if: 1) Future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the project is changed or new information reveals effects of the actions to the listed species or their habitats to an extent not considered in these evaluations; or 3) a new species is listed that may be affected by these projects.

This concludes section 7 consultation on the proposed Santo Domingo Pueblo Restoration Project Phase II. Thank you for your concern for endangered species and New Mexico's wildlife

habitats. Please refer to consultation number #22420-2007-I-0054 in all future correspondence regarding this project. If we can be of further assistance, please contact Anne Davis, of my staff at the letterhead address, or at 505-761-4712.

for Wally Murphy

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Platania, S.P. 1995. Ichthyofaunal survey of the Rio Grande, Santo Domingo and San Felipe pueblos, New Mexico, July 1994. Report to the U.S. Army Corps of Engineers, Albuquerque, NM. 56 pp.