

Appendix A

Public and Agency Correspondence

Programmatic Agreement

075566



**PROGRAMMATIC AGREEMENT
BETWEEN
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE NEW MEXICO STATE HISTORIC PRESERVATION OFFICE
AND THE US BUREAU OF RECLAMATION ALBUQUERQUE AREA OFFICE**

**REGARDING
ACTIVITIES OF THE MIDDLE RIO GRANDE
RIVER MAINTENANCE PROGRAM**

WHEREAS, the US Bureau of Reclamation is authorized by the Flood Control Acts of 1948 (62 Stat. 1171) and 1950 (64 Stat. 163) for construction, repair and maintenance of its Middle Rio Grande facilities; and

WHEREAS, Reclamation's Middle Rio Grande Project facilities are routinely maintained, upgraded, or expanded at times in order for Reclamation to meet its mandated functions; and

WHEREAS, Reclamation has determined that certain of these activities may have an effect upon properties included in or eligible for inclusion in the National Register of Historic Places (NRHP) and has consulted with the Advisory Council on Historic Preservation (the Council), and the New Mexico State Historic Preservation Officer (SHPO) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act; and

WHEREAS, Reclamation will act as the lead agency for the purpose of compliance with Section 106 of the National Historic Preservation Act for all Reclamation activities regardless of land ownership of historic properties that may be affected by Reclamation activities; and

WHEREAS, Reclamation has jurisdiction over lands, easements, rights-of-way, and appurtenant facilities that could contain archaeological and other historic properties other than Reclamation's built facilities;

NOW, THEREFORE, the ACHP, Reclamation, and the SHPO agree that Reclamation's routine maintenance program will be administered in accordance with the following stipulations to satisfy Reclamation's Section 106 responsibilities for all individual actions under these programs.

Programmatic Agreement (cont.)**STIPULATIONS**

I. MAINTENANCE ACTIVITIES. The following stipulations refer to all activities listed in Attachment A. Activities that will occur on tribal lands are exempted from this Agreement, and in such cases will follow the normal Section 106 process.

- A. Those classes of activities listed in Attachment A (except root plowing, see D) will not require any cultural resources investigations or any additional consultation among the parties to this agreement, if those activities take place within the active river channel or along its banks, provided that such activities make use of existing access routes and staging areas. Reclamation will coordinate these activities with its cultural resources personnel without consultation with the SHPO.
- B. The classes of activities listed in Attachment A (except root plowing, See D) have a low probability of affecting cultural resources since they are surface-disturbing activities taking place within the active floodplain or recently formed terraces (surfaces less than 50 years of age) providing such activities make use of existing access routes and staging areas. Reclamation will carry out these activities in consultation with its cultural resources personnel (who must meet the Secretary of Interior's professional standards), who will conduct a project review that will include a Class I (records and literature) search for known historic properties in the vicinity of the project. Reclamation's cultural resources personnel will determine whether a field survey or monitoring is necessary. Activities determined to not require field inventory or monitoring will be included in the annual report to the SHPO (See Stipulation III). Monitoring is defined here as directing maintenance activities away from an archaeologically sensitive area.
- C. The classes of activities listed in Attachment A will require a Class III cultural resources survey and/or SHPO consultation prior to implementation if such activities involve surface-disturbance in previously undisturbed areas, including new access routes, storage yards, and staging areas, and if these activities occur on terraces older than 50 years (historic floodplains).
- D. Root plowing. Consultation with SHPO on projects involving root plowing will be made on a case by case basis and will involve at minimum monitoring, by qualified Reclamation cultural resources staff, during removal and/or site condition assessment subsequent to removal activities.

II. DISCOVERIES

If any cultural resources are noted during maintenance activities, work will cease until the cultural resources can be evaluated. This procedure will include contacting Reclamation's cultural resources personnel and will include a field review by a qualified archaeologist as per the Secretary of the Interior's

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standards. If the resources are not sites, if the site has been determined not eligible, or the effects to the site have been previously mitigated, no additional consultation is required, and the maintenance activity can proceed. If it is a newly discovered site and cannot be avoided, the site will be recorded and evaluated for significance and effect according to 36 CFR 800.3 through 800.7. Should human remains be located, Reclamation will be responsible for consultation as stipulated under the Native American Graves Protection and Repatriation Act. Inadvertent discoveries will also be subject to New Mexico state preservation (4NMAC 10.12) and human remains laws (NM Stat. Ann. 18-6-1) where appropriate.

III. ANNUAL REPORT

On an annual basis, Reclamation's cultural resources personnel will review those portions of the maintenance program listed under Stipulation I A and B and submit a report to SHPO by December 1 of each year, beginning in 2005, and including information on all projects that required no further consultation. The SHPO will have 30 days to respond to the annual report.

IV. AMENDMENTS

Any party to this Programmatic Agreement may request that it be amended or modified, whereupon the parties will consult in accordance with 36 CFR 800.13 to consider such amendments. Any resulting amendments will be developed and executed in the same manner as the original document.

V. ENACTMENT AND PERIOD OF EFFECT

This programmatic agreement will take effect the day after it is accepted, by signature by the Council and will remain in effect until terminated as provided under Stipulation VII.

VI. DISPUTE RESOLUTION

Should any party to this agreement object within 30 days to any actions pursuant to this Agreement, Reclamation will consult with the objecting party to resolve the objection. Should an objection pertaining to this Agreement be raised by a member of the public, Reclamation shall notify the parties to this Agreement and take the objection into account, and consult with the objector. If Reclamation determines that the objection cannot be resolved, Reclamation will forward all documentation relevant to the dispute to the Council. Within 30 days, the council will either provide Reclamation with recommendations or notify Reclamation that it will comment pursuant to 36 CFR 800.6b, and proceed to comment. Reclamation will consider Council's comments in accordance with 36 CFR 800.6c(2). Any recommendation or comment provided by the council will be understood to retain only to the subject of the dispute, and Reclamation and SHPO's responsibilities will remain unchanged to carry out all actions under this Agreement that are not the subject of the dispute.

Programmatic Agreement (cont.)

VII. TERMINATION

Any party to this Programmatic Agreement may terminate it by providing 45 calendar days notice to the other parties with specific reasons for such withdrawal, provided that the parties are consulted during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

VIII. PERIODIC REVIEW OF AGREEMENT

The parties to this Agreement will meet or otherwise consult to review this Agreement and update as necessary at three year intervals, from the date this Agreement is enacted. This Programmatic Agreement will expire in 2020 unless it is renewed by the signatories.

Programmatic Agreement (cont.)

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: _____
Executive Director

NEW MEXICO STATE HISTORIC PRESERVATION OFFICER

By: *Kathleen Slink* Date: 9/18/05
New Mexico State Historic Preservation Officer

BUREAU OF RECLAMATION

By: *Mark Sommer* Date: 8/2/05
Area Manager, Albuquerque Office



Programmatic Agreement (cont.)**ATTACHMENT A
River Maintenance Activities****1. River Engineering Techniques**

River engineering techniques include a variety of methods for influencing flow alignment, bank stabilization, and controlling and managing overbank flow. Every effort will be made to use the river restoration techniques described in Section 6 to the maximum extent possible before considering these techniques. River engineering activities will be incorporated only in cases when river restoration alone is not adequate for the protection of critical riverside facilities, or in-stream structures. All projects that include river engineering works would have river restoration components to provide a net positive effect on the ecosystem. River engineering works will require periodic maintenance.

Rock Vanes - These weir structures are intended to act as in-stream cover, deflect flows away from eroding bankline, and break up the secondary circulation cells which add to the stress in the near bank region.

Toe Revetment Plantings - These structures utilize a combination rock or riprap material and willow planting to protect an eroding bank. The rock or riprap material is placed at the toe of the bank while the plantings are placed along the top of the bank or on terraces along the bank.

Native Material Bank Stabilization-rock and/or Log Spurs - These structures are intended to provide bank stabilization and create in-stream cover through various alternatives of root wad and boulder placement, J-Hook and Rootwad Vanes, cross vanes, log revetments, and vegetation planting.

Groins/Bendway Weirs- Groins and Bendway Weirs are embankments or dikes projecting from the bank into the channel to regulate river flow alignments. Both may be perpendicular to the bank or angled either up or down stream in an "L" or "T" shape. These can be used in combination with bar reconstruction to move the channel away from a trouble spot along a safer alignment. Groins and Bendway Weirs could be used in all reaches except the Velarde Reach where the river is generally too narrow to make them practical. These are essentially the same structure as rock vanes but have larger top widths to enable heavy equipment to place the rock.

Training dikes- Training dikes are constructed more or less parallel to the channel to guide the flow. Most training dikes will be built in conjunction with revetment works or channel re-alignment/pilot channel projects and would most likely be used in the Middle Reach and below where the river banks are low.

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Freeboard dikes- Freeboard dikes are built to contain high flows with an adequate factor of safety to protect other works or facilities. Freeboard dikes are most often required in areas where there are no levees, development or farmland is at the river's edge.

Pilot channels/Pilot Cuts- Pilot channels are excavated to establish new river courses. Pilot channel may require stabilization with revetments or other works. Pilot channels will most likely be needed in areas where channel alignments are least defined and sediment plug formation is a problem. Pilot cuts encourage the river to move the sediment and reform the channel allowing for minimal disturbance as opposed to channel dredging. The excavations will not disturb surfaces greater than 40 years in age.

Revetments- A revetment is a facing placed on a riverbank to resist and prevent further erosion. Many types of materials and systems are available for revetting banks. Economic and feasibility of construction considerations, aquatic and riparian habitat, and aesthetic factors governs the choice of a particular revetment system. All types of bank stabilization work requires periodic maintenance. Rock riprap has generally been used in all reaches to revet banks. The use of native material revetment is currently being explored.

Windrows- Windrows are used alone or in conjunction with revetments to limit future bank erosion. Riprap is piled in a windrow on top of the bank along a desired alignment. When the bank erodes back to the windrow, the rock is undermined and drops down the bank controlling erosion. After the rock begins to drop down the bank, additional rock is required to redress and shape the bank. Windrows could be used in all reaches to stabilize bank erosion.

Permeable jetties- Steel or wood Kellner jacks (jetty jacks) have been previously used to stabilize the Rio Grande. The effectiveness of permeable jetties depends on an adequate supply of sediment being transported by the river and on site specific hydraulic conditions. Currently no jetty jack installations are planned for the Middle Rio Grande Project, however this item is left in for the remote possibility of future installations.

Curve shaping- The realignment of river banks may be necessary in all reaches. Curve alignments are determined by right-of-way considerations and hydraulic parameters. This activity could be a component of previously mentioned river training works techniques or may be used alone.

Stabilized soil, Manufactured revetment units, and Cellular confinement systems- The chemical treatment of soils makes them less susceptible to erosion. The most common soil treatment is soil cement. Soil and cement are mixed and compacted to make an erosion-resistant material. Soil cement cannot be constructed underwater. This technique would only be used in unusual circumstances. Several types of manufactured units are available for revetment construction. These units are typically made of concrete and are designed to be laid on the bank in interlocking patterns. The high cost of these systems would limit their use to very special cases. Plastic grid systems designed to limit movement of soils can be used to prevent erosion. These systems use a honeycomb cell

Programmatic Agreement (cont.)

sheet anchored to the bank to contain fill material. These systems may be practical in conditions where erosion potential is small.

2. Sediment Removal

Removal of sediment from the river channel by mechanical means may be needed to maintain flow capacity. Disposal of spoil material is an important consideration when planning these operations.

Arroyo Plug Grading and Removal- Sediment deposited in the river channel at the mouths of tributary arroyos sometimes must be removed by excavation. In many arroyos the sediment deposits are sand size material, are readily washed away during high flows, and provide a sediment supply for the river. Below Cochiti Dam additional sediment supply is needed and arroyo sediments can provide some sediment enrichment. Very large arroyo plugs can diminish channel capacity or deflect flows excessively into riverside facilities, only in these instances would Reclamation undertake arroyo plug removal or grading. Most arroyo deposits would remain untouched. Because of regulation by dams, mainstem flow is often inadequate to remove arroyo plugs containing large gravel or cobble sized materials that might otherwise be removed naturally. Arroyo plugs are usually excavated or graded by dozers or scrapers. Spoil material may be destabilized or relocated within the river channel to be naturally redistributed by the river to provide a sediment source to enrich the sediment load.

Dredging/Sediment settling basins - Dredging includes all underwater excavation of bottom material. Dredging may be done by machines scooping the bottom material up in buckets (bucket dredging) or by pumping a solid/water mixture and discharging through pipes (hydraulic dredging). Hydraulic dredging often requires the construction of settling ponds where the discharged solids are separated from the water. Construction of settling ponds usually requires building up embankments or dikes to contain the dredged material and overflow structures to carry away the water. Size of settling ponds depends on quantity of material to be discharged and the type and size of the solids to be settled out. In open water areas, silt curtains may be used to diminish or limit turbidity effects caused by dredging. Dredging would be used to construct or maintain channels in areas where sediment is depositing. Reclamation only has plans for bucket dredging in areas where active flows are routed around job site with a coffer dam and local fish seining is performed.

3. Vegetation Management

Vegetation Management has a variety of components and objectives; 1) restoring native tree species, 2) removal of exotic species, 3) reduction of net depletions (i.e. evapotranspiration), and 4) maintaining floodway capacity; 5) or reservoir storage.

Historically, vegetation management activity was concentrated where river bars were mown annually to prevent growth of woody vegetation. Under our current mowing

Programmatic Agreement (cont.)

program, Reclamation is evaluating its effectiveness in meeting river restoration/maintenance goals. Until further analysis and studies are performed, the mowing of native riparian vegetation on river bars is temporarily postponed. This program is currently being re-evaluated based on current geomorphic, hydrologic, and environmental conditions. Vegetation management will also likely be needed as the Elephant Butte Reservoir pool recedes, and salt cedar grows on the exposed delta.

Transect Brushing - Vegetation may be trimmed to create a clear line of sight along a transect as part of Reclamation's data collection program for river channel monitoring.

Mowing- Vegetation may be cut with mowers. Mowing controls development of woody and perennial species while minimizing disturbance to grasses and forbs.

Root plowing- A root plow is a large blade that is pulled through the ground beneath the surface by a tractor to destroy underground rootstocks. Root plowing would ordinarily be used to eliminate exotic woody species such as salt cedar and Russian olive trees. Vegetative debris could be piled and left within the cleared area, stacked and burned within the cleared area, or removed to an offsite location.

Clearing of Understory Vegetation - This activity would involve the removal of deadfall and/or exotic species vegetation beneath a native species vegetation canopy.

4. Levee Maintenance

Reclamation regularly maintains the levee system in the Socorro, Bosque del Apache, San Marcial and Elephant Butte Reaches. In other areas, Reclamation may perform levee maintenance on an intermittent, occasional or emergency basis at the request of the Middle Rio Grande Conservation District. Levee failure caused by bank erosion at less than flood flows is also a Reclamation responsibility. Levee maintenance includes raising levee heights, reinforcing by widening levee bases, filling and repairing washouts, stabilization with revetments or groins, drainage improvements, grading, shaping, and road graveling.

A potential alternative for reaches below Cochiti Dam is to relocate the levees, irrigation canals, and riverside drains in selected locations. This option may increase the available floodplain width.

5. Access and Construction Requirements

Haul roads and operating areas- Access construction may require clearing, placement of fill, grading, installation of culvert pipes, and graveling.

Stockpiles- Sites for stockpiling material may require clearing, grading, and fencing. Material may be stockpiled for a particular construction project or may be stored for unspecified maintenance. Stockpiles may be in place temporarily or permanently.

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Cofferdams/Inflatable water bladders- Cofferdams or inflatable water bladders are sometimes needed to divert water temporarily during construction operations.

Borrow areas for fill material- Fill material for bank shaping or embankment construction may be imported from borrow areas off site or excavated from adjacent bars or islands. Fill material will only be imported from areas having existing cultural clearance.

Spoil areas- Excess material excavated or dredged from the river channel is disposed in designated spoil areas.

Storage yards- Temporary storage of equipment, material and supplies is often needed at a location convenient to a job site. Storage areas may require clearing, grading, graveling, drainage, and fencing.

6. River Restoration Techniques

Bioengineering and habitat enhancement techniques will be utilized to address river maintenance objectives while restoring ecological function and integrity of the riverine ecosystem. The following activities utilize the fluvial processes of the Rio Grande, native vegetation, and ecological perspectives to address river system concerns. Combinations of these activities will most likely be employed in maintenance and rehabilitation designs.

Terrace and Overbank Lowering (Re-establish floodplain hydrologic connectivity) - This type of work would allow for the expansion of the active floodplain and to provide low surfaces along the river's banks for the establishment of Riparian habitat. The new floodplain/lowered surface would be located in areas where the channel is relatively incised and the potential for overbank flows is minimal. The lowered surfaces would be inundated at higher discharges providing refuge for aquatic organisms, restoration of native riparian vegetation, and re-establishment of a river channel/floodplain hydrologic interaction.

Channel Widening/Bank Destabilization - Widening the main river channel via vegetation clearing and bank terracing to initiate native species regeneration. For bank destabilization, jetty removal, clearing vegetation via rootplowing and bank lowering along the bankline would most likely occur.

Woody Debris Snags and Boulder Placements - Woody debris snags and boulders would be placed at locations within the river channel or along river banks to provide aquatic habitat in itself or in association with other techniques. Woody debris snags and boulders could be placed individually or in groupings. Boulder placement would most likely occur in the upstream river channel reaches, e.g., Velarde and Espanola.

Programmatic Agreement (cont.)

High Flow Side Channels - Provide backwater and slower velocity areas for aquatic and terrestrial species and increase the potential for overbank flooding and native species regeneration. The activity would most likely involve pilot channel excavation, inner channel terracing, and bank material removal or de-stabilization on surfaces less than 40 years of age.

Removal of Lateral Confinements - In areas where the river channel is constricted, the removal and/or relocation of confining terraces, levee, low flow channel, and jetties could be performed for floodplain expansion.

Vegetation planting and natural re-generation - Restoration of native riparian habitat mosaic, including salt grass, shrub, and bosque communities via planting or through re-establishing hydrologic connectivity. Potential methods include individual pole and willow whips, willow bundles/mats, or other planting methods. Vegetative plantings may also be incorporated in re-establishing floodplain terraces.

Gradient Restoration Facilities (GRF'S) - Gradient restoration facilities are low head grade control structures with fish passage aprons. These structures are utilized to halt channel degradation, reduce upstream velocities, trap finer sediments, and increase water surface elevations. Diverse velocities and flow depths will be created over the fish passage apron. Downstream sediment transport is not permanently reduced as sediment is only trapped by the GBF until an upstream equilibrium channel slope is attained. The amount of sediment deposited upstream of the GRF's is only a few percent of the annual sediment load. Fish passage aprons will be designed with the most current silvery minnow criteria available. Currently the apron design mimics natural riffles in the Rio Grande.

Increasing the Sand Load to Channel Reach - Mechanically introducing sand into the river channel in reaches where the sediment transport capacity of the sand load is in excess to the available sediment supply and the channel is degrading and the river is becoming gravel bedded. This activity may assist in raising the river bed, changing gravel substrate to sand, increase channel width, and decrease the average depth. The activity may involve either moving river terrace sediment deposits with land based equipment or even possibly hauling of sediment materials from upland areas for placement in the river channel.

Oxbow Re-establishment - Re-establishing a flow source to an Oxbow to serve as a wetland for wildlife habitat and vegetation enhancement. These areas will be designed to provide backwater and side channel habitat adjacent and connected to the river channel for silvery minnow habitat and restoration of native riparian vegetation.

Deformable Bankline(s) - A deformable bankline consists of a stone toe sized to be mobile at the five-year return interval flood event, and native vegetation plantings. The stone toe is required to temporarily stabilize the bank to allow planted vegetation to become established. The rock utilized in the toe will be wrapped in biodegradable fabric to ensure stability during the first three to five years. After the fabric degrades and the

Programmatic Agreement (cont.)

toe becomes mobile by subsequent events, the vegetation/soil interaction and natural fluvial processes will control the bank shape. Deformable banklines can also be comprised of fabric encapsulated soils as opposed to stone dependant on its location in the floodplain and stability criteria. Deformable banklines will most often be established on barren banks, when riverside facilities will not be threatened by a migrating bend or on newly created banks through activities such as channel re-alignment and terrace lowering.

Non-Native Vegetation Clearing and Floodplain Expansion - Mechanical clearing of exotic species vegetation adjacent to the river channel to promote native species regeneration within the floodplain and also expanding the floodplain. This includes creating paths for river waters to inundate the cleared area during peak spring runoff flows. These areas will be designed to provide backwater and side channel habitat adjacent and connected to the river channel for silvery minnow habitat and restoration of native riparian vegetation.

Rock Weirs - Varying types of rock weir structures would be utilized for bed control and raising the river bed/water surface elevation. They are Vortex and "W" rock weirs and cross vanes. These structures are intended to alleviate excessive bank erosion, create grade stabilization, create instream cover and diversity of velocity and depth across the width of the river channel. Both structures allow for fish passage and may trap finer sediments upstream of the structures. The apex of Vortex rock weirs is pointing upstream while the apexes of "W" rock weirs are pointing both upstream and downstream.

Channel Avulsions - Realignment of the river channel along a new route to promote new habitat development involving vegetation clearing, partial blocking of the old river channel, and pilot channel excavation. The old river channel will develop into a backwater area, providing refuge for aquatic species. Additionally, as sediments are deposited in the old channel, a low floodplain will evolve, allowing new age classes of native vegetation to establish.

Channel Realignment/Pilot Channel Work - Relocation of the river channel away from an existing riverside facility that is threatened by erosion and/or to bring the channel to an equilibrium slope and planform. Channel realignment may incorporate deformable banks to establish the new channel pattern and allow for natural fluvial process to shape the banks.

Culvert and Low Water Crossings - Installation of culverts and low water crossings within the berm and levee systems to provide water to disconnected areas of the floodplain for habitat improvement.

River Bar/Island Enhancement - River bars can be enhanced from a habitat standpoint by various combinations of exotic species vegetation clearing, plantings, lowering, pilot channel work, and creation of high flow side channels. This activity can also be used in

Programmatic Agreement (cont.)

conjunction with other techniques to expand the active floodplain, dissipate stream energy, and reduce sheer stress along vulnerable banklines.

Jetty/Snag Removal - Perform the removal of jetty jacks from areas where their function is no longer necessary as means to establish new banklines or where the jetties have been moved into the main river channel as a result of erosional processes and may pose a hazard.

Nursery Habitat Inlets- Inlets can be excavated from either a bank or an island. These created drift zones are ideal habitat for juvenile and larval fish. Ongoing Reclamation research indicates these naturally formed habitats also retain silvery minnow eggs. As the inlet fills with sediment over time it will regenerate a healthy Riparian and retain hydrologic connection to the river.

Comment Letter 1

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

March 21, 2006

Operations Division
Regulatory Branch

Mr. Christopher Sands
Bio-West, Inc.
1063 West 1400 North
Logan, UT 84321-2291

Dear Mr. Sands:

This is in reference to your March 15, 2006, letter regarding the Bureau of Reclamation, Albuquerque Area Office's proposed Sandia Priority Site draft environmental assessment in the Rio Grande in Sandia Pueblo, Sandoval County, New Mexico (Action No. 2006 00149).

We reviewed the Middle Rio Grande Project, Sandia Priority Site, Draft Environmental Assessment, dated March 2006. Listed below are several comments and questions regarding the draft environmental assessment (DEA) and referenced by page number.

1. Page 5: The DEA states that there are no jurisdictional wetlands within the project area. However, Page 4 (second bullet) states that *Salix* spp. (willow) are within the project area. Also, on Page 14, in Section 3.2.2, the DEA states that the project area consists of highly disturbed vegetation communities that are frequently flooded and are dominated by Coyote Willow/ Threesquare Bulrush Alliance species. This would seem to indicate that at least some of the area may be jurisdictional wetlands according to the Corps of Engineers wetlands delineation criteria. Has a wetlands determination/delineation been done for the proposed project? If wetlands were identified, the wetlands delineation forms must be submitted with the application for a Department of the Army permit under Section 404 of the Clean Water Act. If a wetlands determination/delineation was not performed, one must be performed to provide a map of jurisdictional/non-jurisdictional wetland areas within the project area.

2. Page 11, Second Bullet: This paragraph discusses the removal of existing trees and other vegetation to allow access

Note: Yellow highlight represents comment identified for Reclamation's response.

Comment Letter 1 (cont.)

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into the project area. How many trees and what species will be removed?

3. Page 12: Will the proposed fish barriers use the same refugial pool as the Bernalillo Priority Site or will a different refugial pool be constructed for the Sandia site?

4. Page 13: The paragraph discusses mitigation activities including revegetation with native plants and seeding. What will be the criteria used for success for the containerized trees and shrubs and for the reseeded areas? How will the success criteria be measured?

If you have any questions please feel free to write or call me at (505) 342-3284 or e-mail me at william.m.oberle@usace.army.mil.

Sincerely,



William M. Oberle
Regulatory Specialist

Response to Comment Letter 1

Reclamation appreciates the comments and suggestions provided by the Corps for this project.

1. References in the Draft EA that suggest there are no jurisdictional wetlands within the project area were revised in the Final EA. The project area was evaluated by a wetlands ecologist who determined that no wetland hydrology existed above the ordinary high water mark of the Rio Grande at this location. Because the project occurs entirely within the floodway of the Rio Grande, a formal jurisdictional wetland delineation was not performed. However, a Section 404 of the Clean Water Act joint application for a permit and water quality certification was submitted to the Corps earlier this year. A copy of the Section 401 Water Quality Certifications and the Section 404 Permit are included in this Appendix.
2. The Proposed Action includes the removal of all non-native specimens from the project area as part of construction. It is not possible at this time to provide a definitive answer on the number of trees that will be removed from the project area during construction. However, the only trees that will be removed are non-native (e.g., saltcedar, Siberian elm, Russian olive).
3. The proposed Rio Grande silvery minnow refugial pool for the Sandia Priority Site will be contained within the project area and will be separate from the Bernalillo Priority Site refugial pool.
4. As with the Bernalillo Priority Site project, a separate Compensatory Mitigation Plan Checklist has been prepared and submitted to the Corps in order to meet Section 404 of the Clean Water Act Permit conditions.

Comment Letter 2

ORIGINAL

GOVERNOR
Bill Richardson



DIRECTOR AND SECRETARY
TO THE COMMISSION
Bruce C. Thompson

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

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For basic information or to order free applications: 1-800-862-9310.

STATE GAME COMMISSION
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Las Cruces, NM

Peter Pino
Zia Pueblo, NM

Dr. Tom Arvas
Albuquerque, NM

Leo Sims
Hobbs, NM

April 11, 2006

Ms. Nancy Umbreit
Bureau of Reclamation, Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102

Re: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the Sandia Priority Site Project, Sandoval County, New Mexico
NMGF No. 10754

Dear Ms. Umbreit:

In response to the Draft Environmental Assessment (EA) and cover letter dated March 15, 2006, that we received regarding the Sandia Priority Site Project, Sandoval County, New Mexico, the New Mexico Department of Game and Fish (Department) has identified several issues of concern that were not addressed in the EA. They are concerns regarding pollution control and fish passage:

- Implement necessary spill prevention and containment methods during construction. Provide the USFWS with a copy of the spill prevention and containment plan for the proposed action prior to beginning of construction. Notify the USFWS of any spills or contamination associated with construction or maintenance within one hour of occurrence to determine whether silvery minnow salvage is appropriate, water quality testing is necessary, and assess the effects of the spill on the silvery minnow.
- During all in-stream work, require the construction contractor to maintain an open channel (velocity less than 3 ft/sec) in the Rio Grande for fish passage around the construction site at all times.

The Department would also like to ask that clean waste material from excavation activities be placed in the floodplain where it can contribute to the sediment regime of the Rio Grande, while meeting the requirements of the 401 Water Quality Certification.

The EA makes a misleading statement when it states that no jurisdictional wetlands occur within the project area. This statement may lead readers to believe that a 404 permit is not required. It should be made clear to the reader that Section 404 of the Clean Water Act requires a permit for placement of fill in the waters of the U.S. even though no wetlands are located in the project area.

On page 20 of the Draft EA, under Section 4.3.3, Proposed Action, paragraph one states "Past experience has shown that, over time, any noxious weeds that manage to gain a foothold in the project area would likely be crowded out by

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Note: Yellow highlight represents comment identified for Reclamation's response.



Comment Letter 2 (cont.)

Nancy Umbreit

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the more competitive native vegetation." While this statement may be accurate when applied strictly to State-listed Noxious Weeds, it does not describe the documented regrowth of woody and herbaceous vegetation on bosque restoration projects in the Albuquerque reach in the last six years, including regrowth of noxious woody vegetation (e.g., saltcedar) and unwanted native weedy species (e.g., kochia, cocklebur).

Thank you for the opportunity to comment on this Draft EA. If you have any questions please contact Randy Floyd at (505) 476-8091 or randy.floyd@state.nm.us.

Sincerely,



Lisa Kirkpatrick, Chief
Conservation Services Division

LK/rif

xc: Russ Holder, Acting Ecological Services Field Supervisor, USFWS
Brian Gleadle, NW Area Operations Chief, NMGF

Response to Comment Letter 2

Reclamation appreciates the comments and suggestions provided by NMDGF for this project.

1. Reclamation entered into formal consultation with the USFWS for this project and intends to comply with the conditions provided in the Service’s Biological Opinion for the Sandia Priority Site project, on file at Reclamation offices, which includes provisions for spill prevention and containment.
2. The construction sequence developed by Reclamation specifically for the Sandia Priority Site project is designed to provide an unobstructed river channel for fish movement around the construction area at all times. Water velocities in the unobstructed river channel will be consistent with normal river flow.
3. Surplus waste materials from excavation activities within the project area will be stockpiled within the Rio Grande floodway to contribute to the river’s future sediment regime as it migrates across the floodplain at the south end of the project area (see Figure 2 in the Final EA).
4. References in the Draft EA that suggest there are no jurisdictional wetlands within the project area were revised in the Final EA. The project area was evaluated by a wetlands ecologist who determined that no wetland hydrology existed above the ordinary high water mark of the Rio Grande at this location. Because the project occurs entirely within the floodway of the Rio Grande, a formal jurisdictional wetland delineation was not performed. However, a Section 404 of the Clean Water Act joint application for a permit and water quality certification was submitted to the Corps earlier this year. A copy of the Section 401 Water Quality Certifications and the Section 404 Permit are included in this Appendix.

Comment Letter 3



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
Santa Fe

ORIGINAL

John R. D'Antonio, Jr., P.E.
State Engineer

BATAAN MEMORIAL BUILDING, ROOM 102
RECEIVED SANTA FE, NM 87504-5102
ALBUQUERQUE AREA OFFICE (505) 827-6120
OFFICIAL FILED (505) 827-6682

APR 13 2006

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BY			
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FLOOR			
DATE	INITIALS	FILE	
04/19	JVV	185	

April 12, 2006

Ms. Nancy Umbreit
Bureau of Reclamation
555 Broadway NE, Suite 100
Albuquerque, NM 87102

Re: Draft Environmental Assessment, Middle Rio Grand Project, Sandia Priority Site

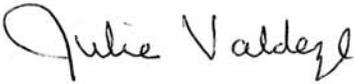
Dear Ms. Umbreit:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed reconstruction of the east river bank and realignment of the existing river channel at the Sandia Priority Site.

The proposed reconstruction address environmental issues that are not under the jurisdiction of the Office of the State Engineer. Should any issues arise with regard to water rights or quantity, please alert this office. Otherwise, the Office of the State Engineer has no comment.

If you have any questions, please call me at 505-827-6790 or email me at jvaldez@ose.state.nm.us

Sincerely,



Julie Valdez
Senior Water Resource Specialist

Note: Yellow highlight represents comment identified for Reclamation's response.



Response to Comment Letter 3

1. Reclamation appreciates the review of the Draft EA by the State Engineer's Office.

New Mexico Environment Department Water Quality Certification



BILL RICHARDSON
GOVERNOR

ORIGINAL
State of New Mexico
ENVIRONMENT DEPARTMENT
Surface Water Quality Bureau
Harold Runnels Building Room N2050
1190 St. Francis Drive - Zip 87505
P.O. Box 26110 - Zip 87502-6110
Santa Fe, New Mexico
Telephone (505) 827-0187
Fax (505) 827-0160
www.nmenv.state.nm.us



RON CURRY
SECRETARY

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ALBUQUERQUE AREA OFFICE
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NOV 20 2006

CINDY PADILLA
ACTING DEPUTY SECRETARY

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Fldr #	39342		
Date	Initial	Tc	
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May 9, 2006

Ms. Nancy Umbreit
Bureau of Reclamation
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102-2352

Subject: Clean Water Act Section 401 Water Quality Certification for NMED SWQB File SF-118-2006.
Sandia Priority Site Project, Bernalillo County, New Mexico.

Dear Ms. Umbreit,

The Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department has examined your application and/or other information furnished for authorization of the project indicated above under Sections 404 and 401 of the federal Clean Water Act. According to the application and/or information, this project involves realigning the river channel and modifying the adjacent floodplain to increase channel stability and improve aquatic habitat. This project does not involve the use of concrete or asphalt.

The U.S. Army Corps of Engineers (USACE) will regulate this project under Individual Permit (USACE Action 2006-00149). In addition, a State Water Quality Certification is required by Section 401 of the federal Clean Water Act in order to ensure that your project will comply with the state water quality standards (Standards for Interstate & Intrastate Surface Waters, New Mexico Water Quality Control Commission, 20.6.4 NMAC amended 7/17/2005). According to the water quality standards the Rio Grande (Isleta Pueblo boundary to Alameda Street Bridge) is designated for the following uses: irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat, and secondary contact.

For a complete list of the water quality standards that apply to your project, refer to the following sections of the *Standards for Interstate & Intrastate Surface Waters*, New Mexico Water Quality Control Commission, 20.6.4 NMAC amended 7/17/2005.

- 20.6.4.8 *Antidegradation Policy and Implementation Plan*
- 20.6.4.13 *General Standards*
- 20.6.4.900 *Standards Applicable to Attainable or Designated Uses*
- 20.6.4.105 *The main stem of the Rio Grande from the headwaters of Elephant Butte reservoir upstream to Alameda bridge (Corrales bridge)....*
- 20.6.4.13.J *...Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or increase more than 20 percent when the background turbidity is more than 50 NTU. Background turbidity shall be measured at a point immediately upstream of the turbidity-causing activity. However, limited-duration activities necessary to accommodate dredging, construction or other similar activities*



New Mexico Environment Department Water Quality Certification (cont.)

and that cause the criterion to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and all appropriate permits and approvals have been obtained.

- 20.6.4.11.E.5 *...A continuous zone of passage through or around the mixing zone shall be maintained in which the water quality meets all applicable criteria and allows the migration of aquatic life presently common in surface waters of the state with no effect on their populations.*

These standards are available on the web at: <http://www.nmenv.state.nm.us/swqb/Standards/20.6.4NMAC.pdf>.

401 Water Quality Certification with Conditions:

Pursuant to Section 401 of the Clean Water Act and 40 Code of Federal Regulations Part 121, the SWQB hereby issues a conditional Section 401 Water Quality Certification for USACE Action 2006-00149: Sandia Priority Site Project based on the application and/or information provided. This certification is subject to conditions to reasonably assure that the activity will be conducted in a manner that will not violate applicable water quality standards, including the Antidegradation Policy and New Mexico Statewide Water Quality Management Plan. **Therefore, this Certification is not valid unless the following conditions are adhered to:**

1. Work in a stream channel should be limited to periods of no flow when practicable, and must be limited to periods of low flow. Avoid working within the channel during spring runoff or summer thunderstorm season.
2. Work in flowing water must be minimized. When it is necessary to work in flowing water, the water turbidity must be monitored downstream and near the construction activities. The applicant must ensure that a continuous zone of passage through or around the mixing zone is maintained in which the water quality meets all applicable criteria and allows the migration of aquatic life presently common in surface waters of the state with no effect on their populations.
3. Prior to beginning construction, erosion control measures must be installed to prevent the movement of disturbed soil or other contaminants into surface water. Temporary protective mats are required for heavy equipment working in wetlands to minimize impacts to soil and vegetation. Temporary access roads must be restored to pre-project conditions. All areas adjacent to the watercourse that are disturbed because of the project must be replanted with native vegetation. Native riparian and/or wetland species must be used in areas that support such vegetation.
4. Temporary protective mats are required for heavy equipment working in wetlands, to minimize impacts to soil and vegetation. Protective mats are also recommended for use on stream banks and riparian areas.
5. Temporary access roads must be restored to pre-project conditions.
6. All areas that are disturbed because of the project must be replanted with native vegetation and protected until the area is no longer subject to erosion into surface water. The native plant species must be appropriate for the moisture conditions of the affected area, whether it be wetland, riparian, or upland.
7. All heavy equipment used in the project area must be steam cleaned before the start of the project and inspected daily for leaks. A written log of inspections and maintenance must be completed. Leaking

New Mexico Environment Department Water Quality Certification (cont.)

equipment must not be used in or near any watercourse. Park equipment outside of channel when not in use.

8. Spill clean-up materials such as booms and absorbent pads must be available on-site at all times during construction. Report all spills immediately to the SWQB as required by the New Mexico Water Quality Control Commission regulations (20.6.2.1203 NMAC). For non-emergencies during normal business hours, call 505-428-2500. For non-emergencies, call 866-428-6535 or 505-428-6535 (voice mail, twenty-four hours a day). For **emergencies only**, call 505-827-9329 twenty-four hours a day (NM Dept of Public Safety).
9. Fuel, oil, hydraulic fluid, or substances of this nature must not be stored within the normal floodplain, and must have secondary containment systems to prevent spills if the primary storage container leaks. Refuel equipment at least 100 feet from surface water.
10. A copy of this 401 certification must be kept at the project site during all phases of construction. All contractors involved in your project must be provided a copy of this certification and made aware of the conditions prior to starting construction.
11. The SWQB must be notified at least five days before starting construction, to allow time to schedule monitoring or inspections.

Violations of State water quality standards could lead to penalties under the New Mexico Water Quality Act. Section 74-6-10.1 B of the Act states, "Any person who violates any provision of the New Mexico Water Quality Act other than Section 74-6-5 NMSA 1978 or any person who violates any regulation, water quality standard, or compliance order adopted pursuant to that act shall be assessed civil penalties up to the amount of ten thousand dollars (\$10,000) per day for each violation."

The SWQB specifically reserves the right to amend or revoke this 401 Certification at any time to ensure compliance with water quality standards. If you have any questions regarding this 401 Water Quality Certification please feel free to contact Neal Schaeffer of my staff at (505) 476-3017. Thank you for your cooperation.

Sincerely,



Marcy Leavitt, Chief
Surface Water Quality Bureau

ML: cns

- xc: NMED District I Manager, Albuquerque
William Oberle, U.S. Army Corps of Engineers
Tom Nystrom, Wetlands, Region 6, USEPA
Lisa Kirkpatrick, NM Department of Game and Fish
Joy Nicholopoulos, U.S. Fish and Wildlife Service
Alex Puglisi, Sandia Pueblo Environment Office
401 Certification File SF-118-2006

Pueblo of Sandia Access Letter

Lawrence R. Gutierrez
Governor

Scott Paisano
Lt. Governor



ORIGINAL

(505) 867-3317
Fax (505) 867-9235

www.sandiapueblo.nsn.us

June 15, 2006

Connie L. Rupp, Area Manager
U.S. BUREAU OF RECLAMATION
Albuquerque Area Office
555 Broadway Blvd. NE, Suite 100
Albuquerque, New Mexico 87102-2532

Attn: ALB-422

RE: Access for Sandia Priority Sites Project

Dear Ms. Rupp:

As presented to the Pueblo of Sandia Tribal Council in 2005, it is our understanding that the Sandia Priority Site Project will be located on the east side of the Rio Grande within the Pueblo of Sandia. Access to the east side of the project site via the top of the levee is hereby granted for the period of July 1, 2006 through April 30, 2007 for the purposes of project implementation and construction.

The project purpose is to protect the levee from erosion damage while meeting the habitat needs specified in the Biological Opinion addressing Reclamation's river maintenance activities (U.S. Fish and Wildlife Service, 2003). Up to three (3) earthen ramps may be constructed to allow access from the levee top to the project site. Road improvements, including blading and gravel cap placement, may be made to the levee road and ramps to ensure safe and convenient access to the site.

As previously approved by the Pueblo's Tribal Council, Reclamation is permitted to conduct the planned maintenance actions of creating secondary channels, installing bendway weirs, and realigning the main channel of the Rio Grande at the project site slightly westward, to reduce erosion potential on the east bank. Approximately 50 weirs will be installed in the area where the river is close to the levee. Fill, obtained entirely within the construction area, will be placed between and on top of the weirs to create a new bankline and floodplain surface. All jetty jacks within the project area will be removed to promote a more natural habitat, provide better construction access, and eliminate potential safety hazards. Removal of all cottonwood trees and other native plants will be minimized; any removed vegetation will be mulched and spread evenly. All disturbed areas will be planted with native vegetation in consultation with the Pueblo's environmental staff.

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Date	Initials	Tc
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6/26	Hanson	100
6/26	m	150

RW 7/6/180
M 185
191
JA 174
M 176



Pueblo of Sandia Access Letter (cont.)

Permission is also granted for a previously cleared staging area, approximately 200 feet by 200 feet, west of the levee road on the east side of the river, next to the Riverside Drain. Riprap, coir fabric, rootwads and related construction materials and equipment will be stockpiled at this location during project site pre-construction and construction activities.

The Bureau will consult with the Pueblo's Environment Department on a weekly basis to determine if any cultural or Pueblo activities are planned in close proximity to the project area which requires temporary cessation of project activities. If this consultation fails to occur as required, this grant of permission shall be terminated.

If you have any questions regarding this letter, please contact Alex Puglisi, environment director of my staff 771-5080.

Sincerely,



Lawrence Gutierrez
Governor

LG/AP

Cc: Mark Nemeth, Bureau of Reclamation
Chief Linda Wrasman, Pueblo of Sandia Police Department
Mike Ferguson, Pueblo of Sandia Lands Director
Alex Puglisi, Pueblo of Sandia
Environment Department Reading File
File

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Pueblo of Sandia Water Quality Certification

Lawrence R. Gutierrez
Governor

Scott Paisano
Lt. Governor



ORIGINAL

(505) 867-3317
Fax (505) 867-9235

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www.sandiapueblo.nsn.us
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June 21, 2006

Nancy Umbreit
U.S. BUREAU OF RECLAMATION
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102-2352

RE: Water Quality Certification for Proposed Bureau of Reclamation - Sandia Priority Site Project (U.S. Army Corps of Engineer's Project No. 2006-00149), Pueblo of Sandia

Dear Ms. Umbreit:

Pueblo of Sandia staff has reviewed your request, on behalf of the U. S. Bureau of Reclamation (BOR) for a Clean Water Act (CWA) Section 401 Water Quality Certification. Your request was deemed complete by the Pueblo's staff on June 7, 2006.

The Pueblo of Sandia Environment Department has reviewed and visited the proposed project site with BOR personnel. The Pueblo hereby certifies, pursuant to Section 401 of the CWA, that the project will comply with applicable provisions of Sections 304 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and with other applicable requirements of the CWA.

This certification is contingent upon BOR's compliance with the requirements of the "authorization to proceed" under the CWA Section 404 Individual Permit issued by the U.S. Army Corps of Engineers (No. 2006-00149) and compliance with the general and specific conditions of this Water Quality Certification, as listed in Attachment A. Any failure by the Bureau of Reclamation to maintain compliance with these requirements may result in revocation of this Water Quality Certification. This certification does not eliminate the Applicant's responsibility to comply with other applicable laws, regulations, requirements and/or permits.



Pueblo of Sandia Water Quality Certification (cont.)

If you have any questions or concerns, please contact Alex Puglisi, environment director, or Scott Bulgrin, water quality officer of my staff at (505) 867-4533.

Sincerely,



Lawrence Gutierrez
Governor

/SJB

Enclosure

cc: William M. Oberle, U. S. Corps of Engineers Regulatory Specialist
Brian Hanson, U.S. Fish & Wildlife Service Acting Field Supervisor
Jim Herrington, U.S. Environmental Protection Agency Region 6 Wetlands
Mike Ferguson, Pueblo of Sandia Lands Department Director
Alex Puglisi, Pueblo of Sandia
Scott Bulgrin, Pueblo of Sandia
File

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Pueblo of Sandia Water Quality Certification (cont.)**ATTACHMENT A****Project Information
File No. 060602**

1. **Applicant:** U.S. Bureau of Reclamation
2. **Applicant's Agent:** Same
3. **Project Name:** Sandia Priority Site Project
4. **Project Location:** Rio Grande on the Pueblo of Sandia's Reservation Boundary and Stretch of River
5. **Type of Project:** Channel realignment activities and placement of bendway weirs, rootwads, and debris in Rio Grande at the Sandia Priority Site, Sandoval County, New Mexico.
6. **Project Description:** Bureau of Reclamation will be constructing two meander bends in the main channel, the construction of 58 to 90 bendway weirs, 50 to 100 rootwads and 26 to 40 debris piles. The project is designed to provide a longer-term solution for protection of the east levee and canal system at the Sandia Priority Site and habitat restoration. The project area is located on the Pueblo of Sandia near the Pueblo's northern boundary. Construction phases include: access and staging, removal/disposal of jetty jacks and exotic vegetation, channel realignment, bendway weir construction, rootwads and debris piles, secondary channel excavation, channel diversion and dewatering, main channel re-alignment, berm removal, and vegetation planting. Construction is estimated to be completed in eight months.
7. **Federal Agency/Permit:** U. S. Corps of Engineers Individual Permit, No. 2006-00149.
8. **Other Required Regulatory Approvals:** New Mexico Environment Department Clean Water Act Section 401 Water Quality Certification for Areas in the Rio Grande Outside of Pueblo's Jurisdiction.
9. **Receiving Water:** Pueblo of Sandia's Stretch of the Rio Grande.
10. **Designated Beneficial Uses:** Wildlife, Warmwater Aquatic Life, and Ceremonial Use.
11. **Impacted Waters of the United States:** Sections of the Rio Grande on the Pueblo of Sandia
12. **Dredge Volume:** The total quantity of dredged and fill materials will be approximately

Pueblo of Sandia Water Quality Certification (cont.)

79,800 to 120,000 cubic yards. This will be placed as fill materials to create meanders, secondary channels and as bank material. Approximately 1,706 to 3,300 cubic yards of rock and logs will also be placed as permanent fill. Approximately 6,600 cubic yards of cobble and earthen materials will be placed as temporary diversion dams during construction.

13. Related Projects: None

**14. Avoidance and
Minimization Activities
(Applicant proposed):**

The Applicant will implement Best Management Practices (BMPs) to avoid impairment of the Pueblo of Sandia's Water Quality Standards and *Standards for Interstate & Intrastate Surface Waters*, New Mexico Water Quality Control Commission 20.6.4 NMAC: 7/17/2005 to minimize undesirable impacts. Access paths will be pre-determined to avoid travel in wetted pools or flowing water.

15. Required Compensatory Mitigation:

1. The project will not cause further erosion in/on Pueblo lands. No construction materials, spoils, debris, or any other substances associated with this project that may adversely impact the Pueblo of Sandia's Water Quality Standards, shall not be located in a manner which may result in a discharge or threatened discharge of pollutants to waters of the Pueblo. Stockpiled construction materials, spoils and debris locations should be reviewed with the Pueblo of Sandia Environment Department;
2. All disturbed areas located outside of the planned crossings and access areas disturbed during the course of the project will be restored to their natural state. This shall include re-vegetation, if necessary, through seeding or plantings. All debris (sidecastings, etc.) that may adversely impact the Pueblo of Sandia's Water Quality Standards, shall not be located in a manner which may result in a discharge and shall be removed before termination of the project;
3. Any stockpiled soils will be kept out of the Rio Grande and Best Management Practices (BMPs) shall be implemented to prevent and reduce the discharge of pollutants and sediments from entering into waters of the United States. There will be no stockpiling of sediments that may have an adverse effect on the Rio Grande;
4. Any disturbance to native wetland, riparian or upland vegetation will be kept to a minimum extent necessary to perform the required work and shall occur only in the areas where work is performed. Any riparian or wetland areas impacted by the project on Pueblo of Sandia lands will be mitigated at a ratio of 2:1;
5. Water turbidity must be monitored at a minimum of two stations downstream of the Sandia Priority Site. One of these stations shall be located immediately downstream (within 10 meters) of the project area. These stations will be sampled at a minimum of three (3) times daily to reflect pre-construction, construction and post construction periods of activity. Sampling will occur at a minimum of twice per week (Mondays and Fridays). These results shall be submitted to the Pueblo of Sandia Environment Department every two weeks throughout the project. Any deviation from this monitoring and reporting schedule must be submitted in writing to the Pueblo of Sandia Environment Department for consultation. The Bureau of Reclamation must ensure that a continuous zone of passage through or around the area of disturbance is maintained in which the water quality meets all applicable criteria of the Pueblo of Sandia's Water Quality Standards and allows migration of aquatic life presently found in the surface waters of the Pueblo with no effects on their populations.

Pueblo of Sandia Water Quality Certification (cont.)

6. The Pueblo of Sandia Environment Department shall be notified in advance of any modifications to the project that represent a significant alteration of proposed access activities described in the Applicant's request for certification. A timetable for the implementation of these changes, as well as a detailed description of the changes, shall be provided to the Department;
7. If any cultural artifacts and/or human remains be found, work will be suspended in the area of discovery until notification is provided to Mr. Sam Montoya, Language and Cultural Resources Manager, at (505) 771-3317;
8. All areas disturbed or damaged by the Bureau of Reclamation (or its contractors) which are eroding or contributing sediment to the Rio Grande and may be adversely impacting the Pueblo of Sandia's Water Quality Standards, will be stabilized and restored in consultation with the Pueblo of Sandia Environment Department;
9. The Applicant shall restore all areas of "**Temporary Impacts**" to waters of the United States and all other areas of temporary disturbance that could result in a discharge or a threatened discharge to waters of the Pueblo. Restoration shall include grading of disturbed areas to pre-project contours and re-vegetation with native species. (This includes any constructed access routes crossing the Pueblo's boundary and Rio Grande not developed as permanent access for this project.);
10. The Bureau of Reclamation and all contractors employed by the Bureau of Reclamation will notify the Pueblo of Sandia Environment Department of any activities occurring during the nesting seasons of migratory bird species in the areas and will provide for the monitoring of these species by the Pueblo of Sandia, if necessary;
11. The Bureau of Reclamation will notify the Pueblo of Sandia's Environment Department upon completion of the project, activities associated with these conditions of certification, and the required compensatory mitigation;
12. The Bureau of Reclamation and all contractors employed by the Bureau of Reclamation, shall have copies of this certification and the U.S. Army Corps of Engineer's Authorization to Proceed for this project onsite at all times so they are familiar with all conditions set forth in these documents;
13. The Bureau of Reclamation will comply with all applicable Clean Water Act (CWA) regulations and requirements including the NPDES Storm Water Permit Program. Any best management practices selected and implemented to ensure compliance with the CWA will be submitted to the Pueblo's Water Quality Officer for review and acceptance prior to implementation of project construction activities; and
14. All required mitigation of disturbed areas shall be monitored at the end of the first growing season following project completion. Unsuccessful plantings and seed will be replaced by the Bureau of Reclamation.

Sandia 404 Permit

DEPARTMENT OF THE ARMY PERMIT

Permittee Bureau of Reclamation

Permit No. 2006 00149

Issuing Office Albuquerque District Corps of Engineers

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Approximately 79,800 to 120,000 cu. yds. of earthen materials will be excavated from the river channel and placed as fill materials to create meanders, secondary channels and as bank material. Approximately 1,706 to 3,300 cu. yds. of rock and logs will also be placed as permanent fill. Approximately 6,600 cu. yds. of cobble and earthen materials will be placed as temporary diversion berms during construction. The permit is to place dredged and fill material at the Sandia Priority Site as levee protection along the east bank and habitat restoration in the Rio Grande, in and adjacent to, the Pueblo of Sandia, Sandoval County, New Mexico. The project will include construction of two meander bends in the main channel, the construction of secondary channels, the construction of 58 to 90 bendway weirs, 50 to 100 rootwads and 26 to 40 debris piles. The project will be constructed in accordance with the attached drawings, entitled, "Channel Realignment and Bendway Weir Construction, Sandia Priority Site, Sandia Pueblo, Sandoval County, New Mexico, Application by Bureau of Reclamation, Application No. 2006 00149," sheets 1 through 13, dated May 2006.

Project Location: The Rio Grande in and adjacent to Sandia Pueblo, Sandoval County, New Mexico.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2009. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required

ENG FORM 1721, NOV 86

EDITION OF SEP 82 IS OBSOLETE.

33 CFR 325 (Appendix A)



Sandia 404 Permit (cont.)

to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

After a detailed and careful review of all of the conditions contained in this permit, the permittee acknowledges that, although said conditions were required by the Corps of Engineers, nonetheless the permittee agreed to those conditions voluntarily to facilitate issuance of the permit; the permittee will comply fully with all the terms of all the permit conditions.

1. Should a bald eagle be observed within 0.25 mile up- or downstream of the active project area in the morning before construction activities start or following breaks in construction, the construction crew will be required to cease all activity until the bird leaves of its own volition or the USBR biologist, in consultation with the USFWS, determines that the potential for harassment is minimal. If a bald eagle arrives during construction activities, or is beyond the specified distance, construction would not be interrupted.
2. The permittee shall limit clearing and grubbing activities during the April through August migratory bird nesting season. If construction should prove necessary during the nesting season, the areas shall be surveyed, and when occupied, avoided until nesting is complete.
3. The permittee shall comply with terms and conditions of the Biological Opinion for the Sandia Priority Site project from the U.S. Fish and Wildlife Service.
4. Temporary staging areas and other disturbed areas will be revegetated with native vegetation.
5. Best Management Practices (BMPs) including silt curtains or similar erosion control devices will be used to control turbidity and minimize sedimentation in the project area.
6. Existing maintenance yards shall be used, to the extent practicable, to store and service construction equipment. Construction equipment will be cleaned prior to use and inspected daily. Petrochemical fuels and lubricants will be stored outside the floodplain and within an impervious secondary containment system. Any spills will be contained and disposed of at an approved upland disposal site. No equipment refueling will be performed within 100 feet of a water of the United States. A spill kit will be kept onsite.
7. Any poured concrete will be contained in forms and/or placed

Sandia 404 Permit (cont.)

behind/in cofferdams to prevent discharge into the watercourse. Appropriate measures will be used to prevent wastewater from concrete batching, vehicle wash-down, or aggregate processing from entering the waterway.

8. During construction, an open channel for fish passage shall be maintained at normal flow levels.

9. The permittee shall employ the refugial pool system during construction as described in their application and environmental assessment. The permittee shall continue to coordinate site visits with the U.S. Fish and Wildlife Service to evaluate the refugial pool management and to determine if any RGSM minnows present should be removed from the project area.

10. Any construction in the river channel below the ordinary high water mark will be performed during low flow conditions.

11. All stockpiles of excavated materials not utilized for construction will be removed from the river channel and bank areas after completion of construction activities.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

Sandia 404 Permit (cont.)

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Connie L. Rupp
(PERMITTEE)

7/3/06
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Donald Borda
Donald Borda
Chief, Regulatory Branch
(for the DISTRICT ENGINEER)

7/10/06
(DATE)

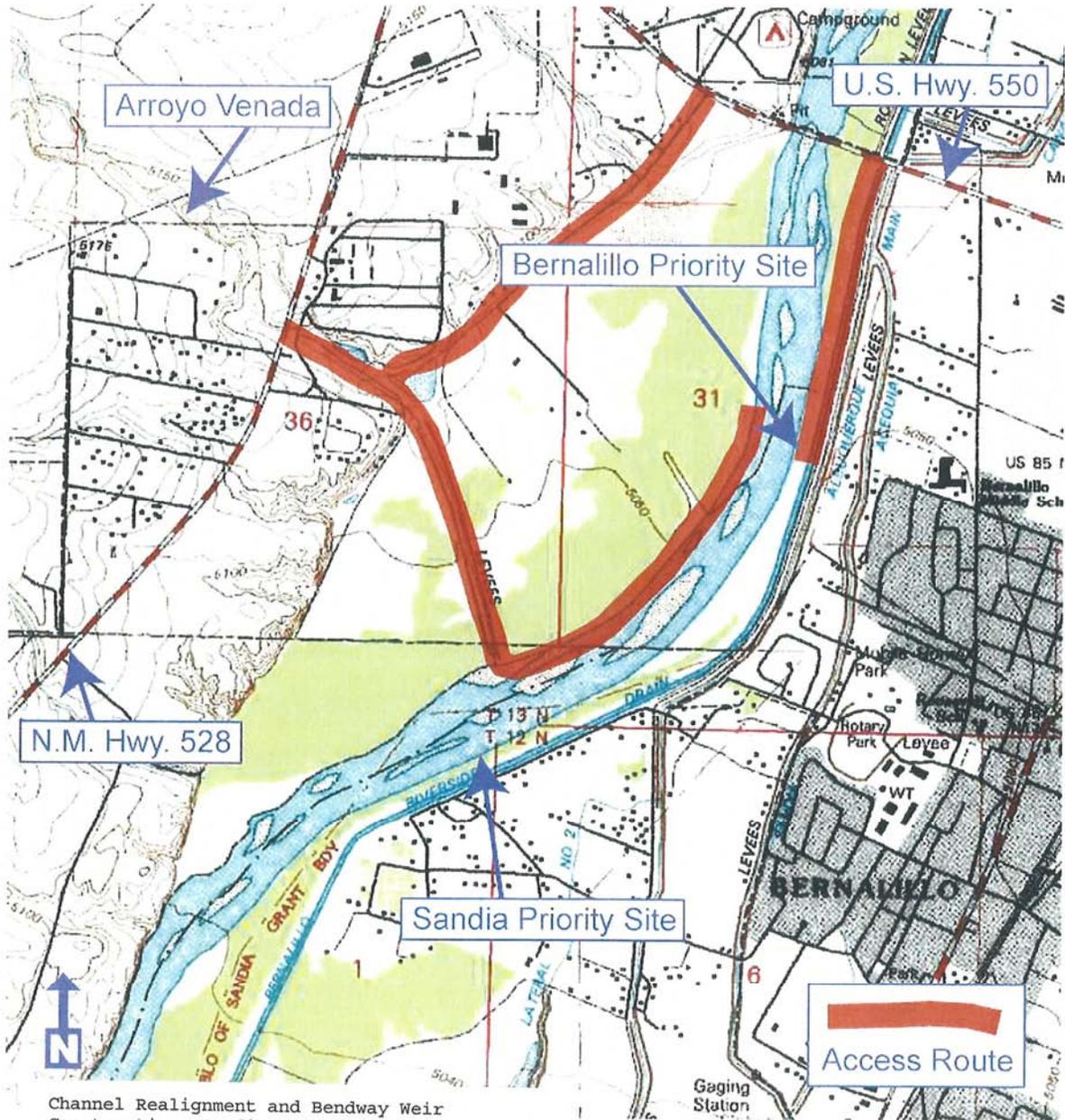
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFERREE)

(DATE)

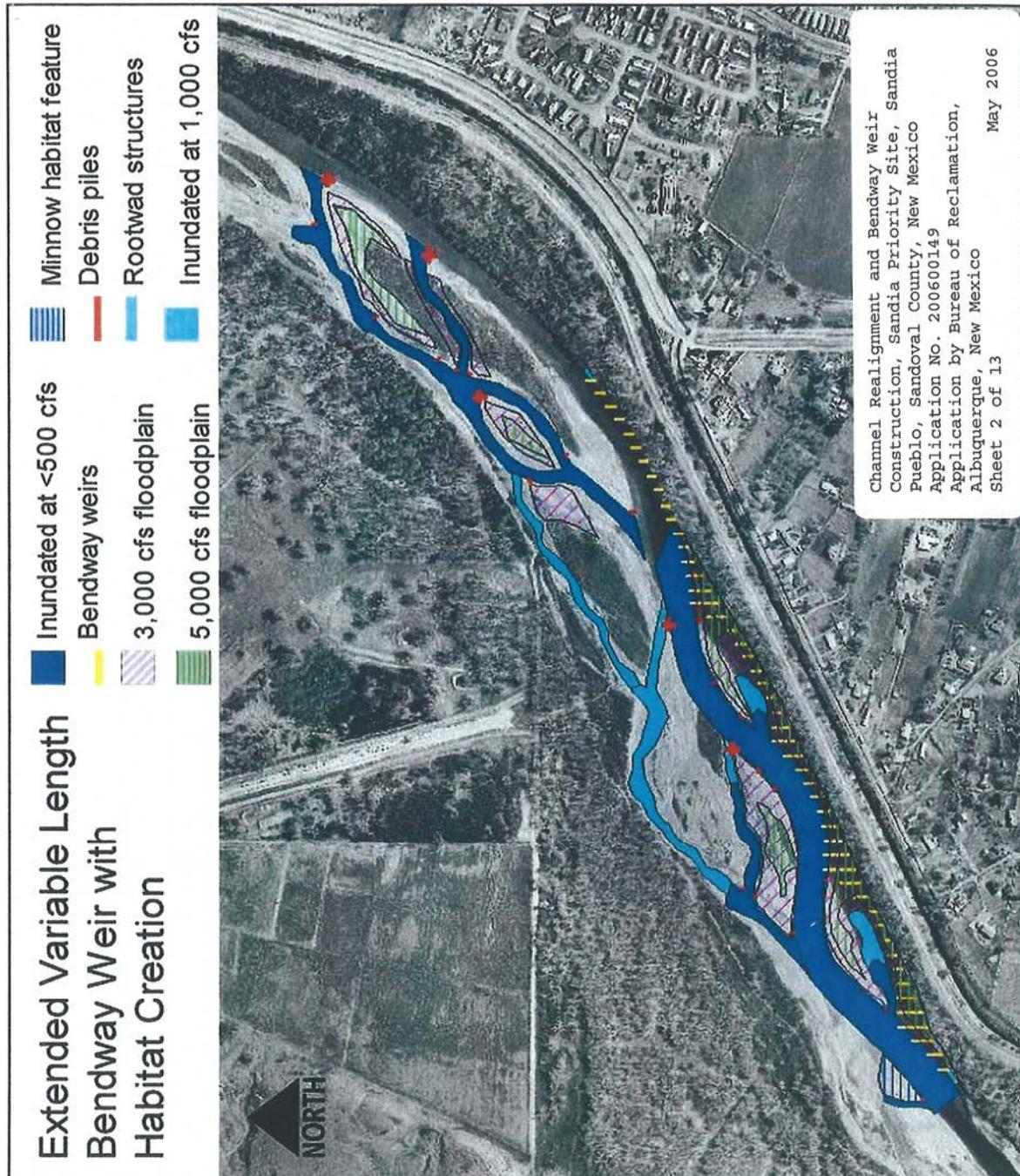


Sandia 404 Permit (cont.)

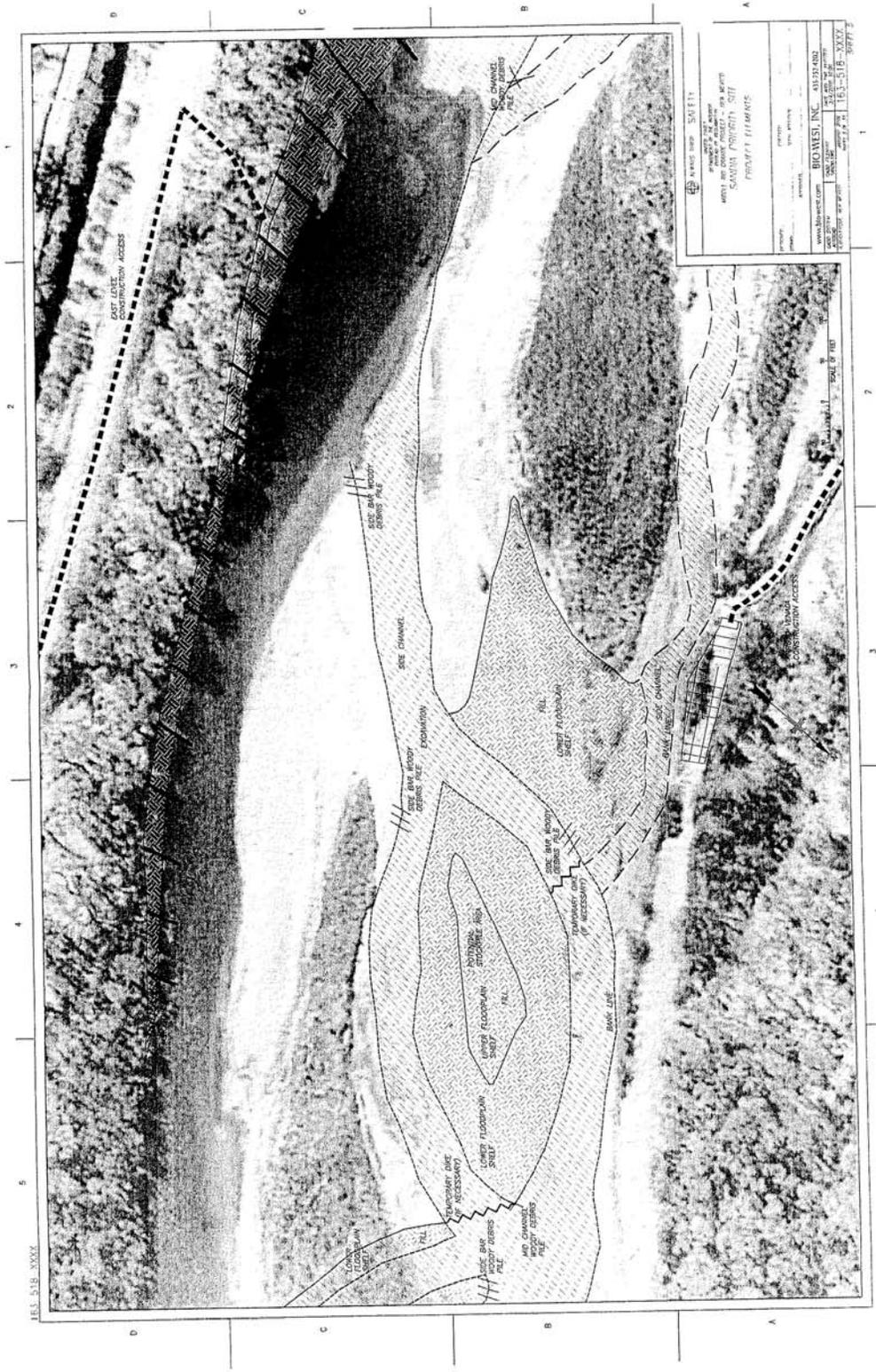


Channel Realignment and Bendway Weir Construction, Sandia Priority Site, Sandia Pueblo, Sandoval County, New Mexico
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Sandia 404 Permit (cont.)



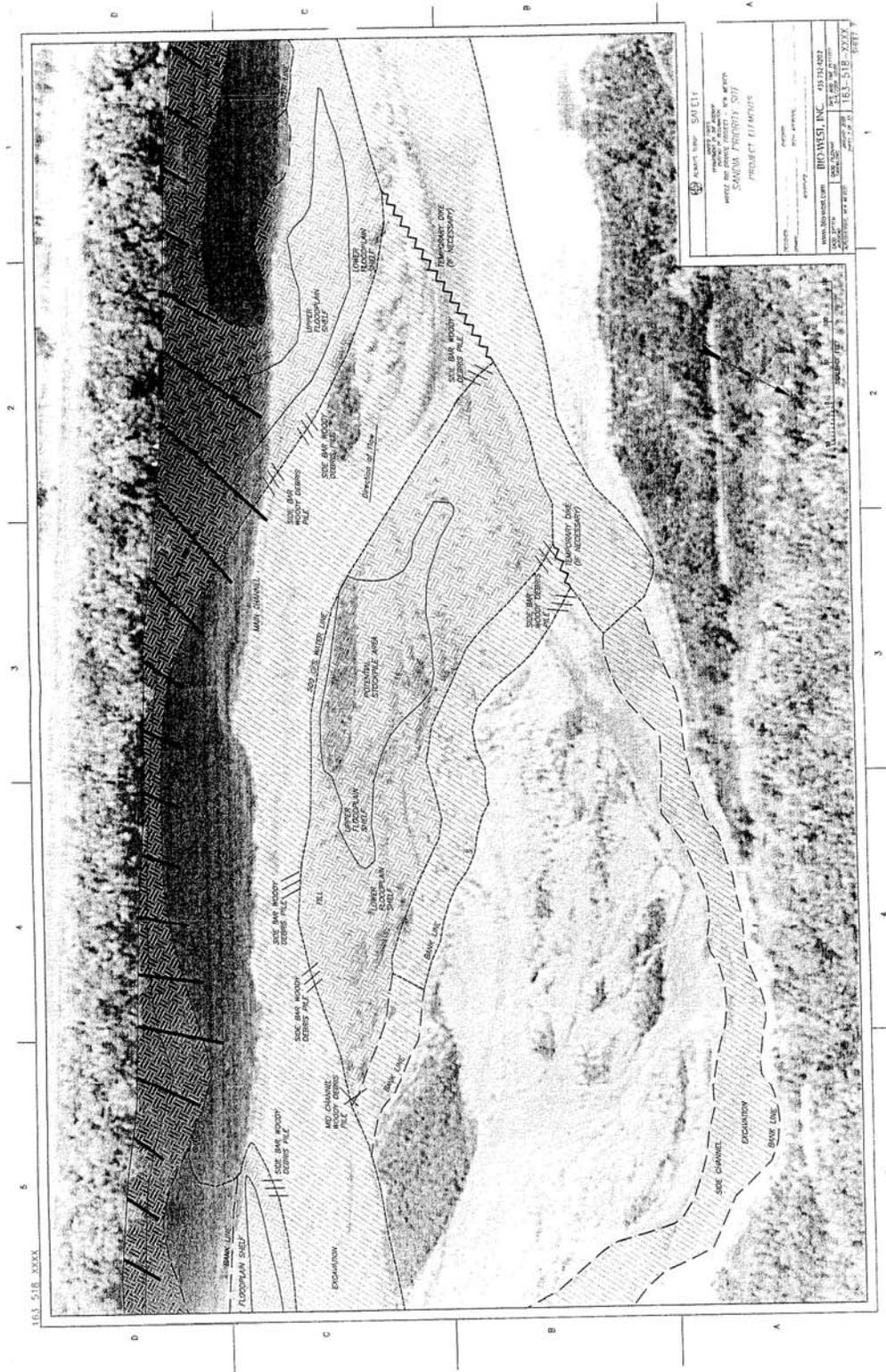
Sandia 404 Permit (cont.)



Channel Realignment and Bendway Weir Construction, Sandia Priority Site, Sandia Pueblo, Sandoval County, New Mexico
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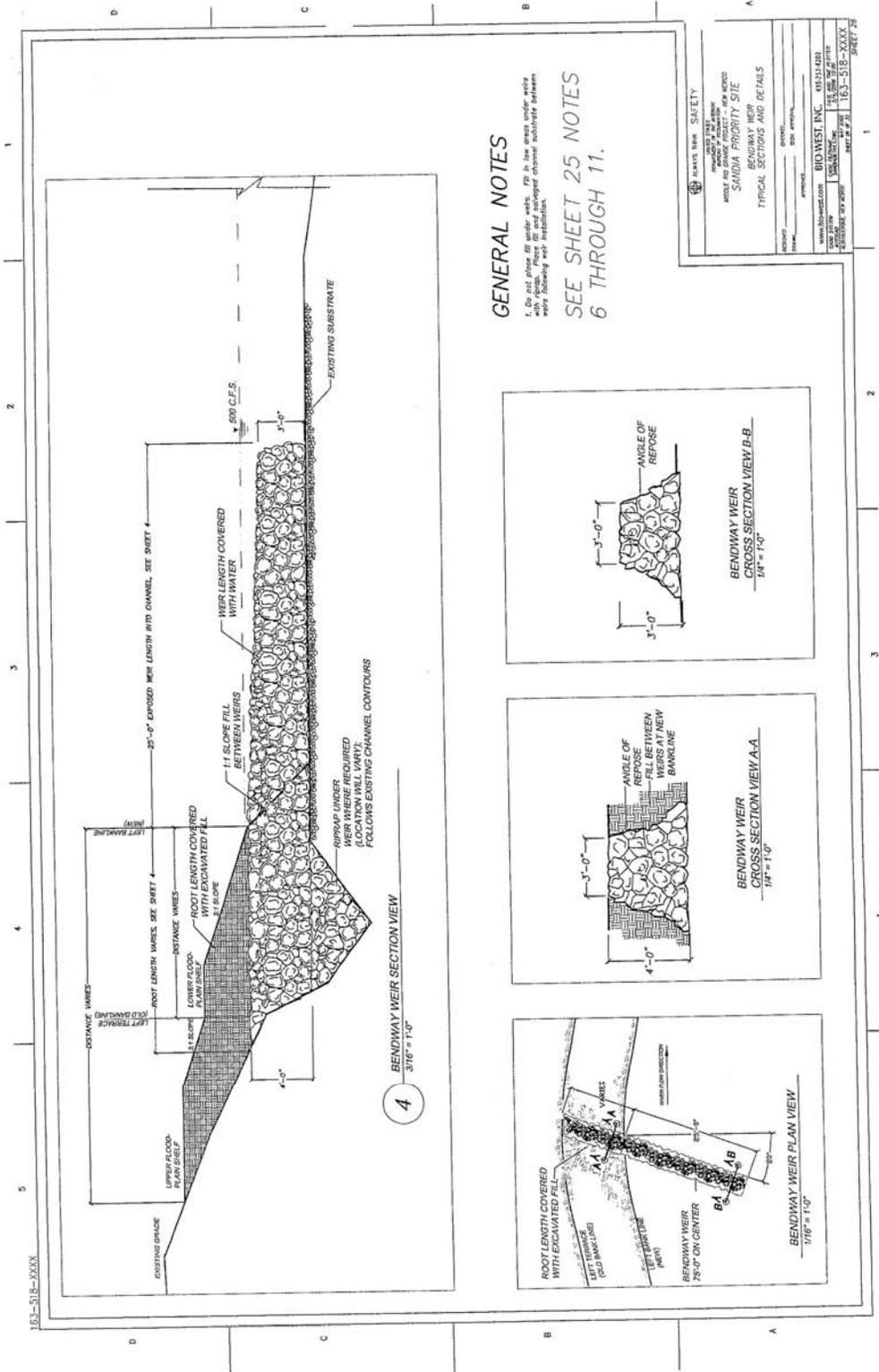
Sandia 404 Permit (cont.)



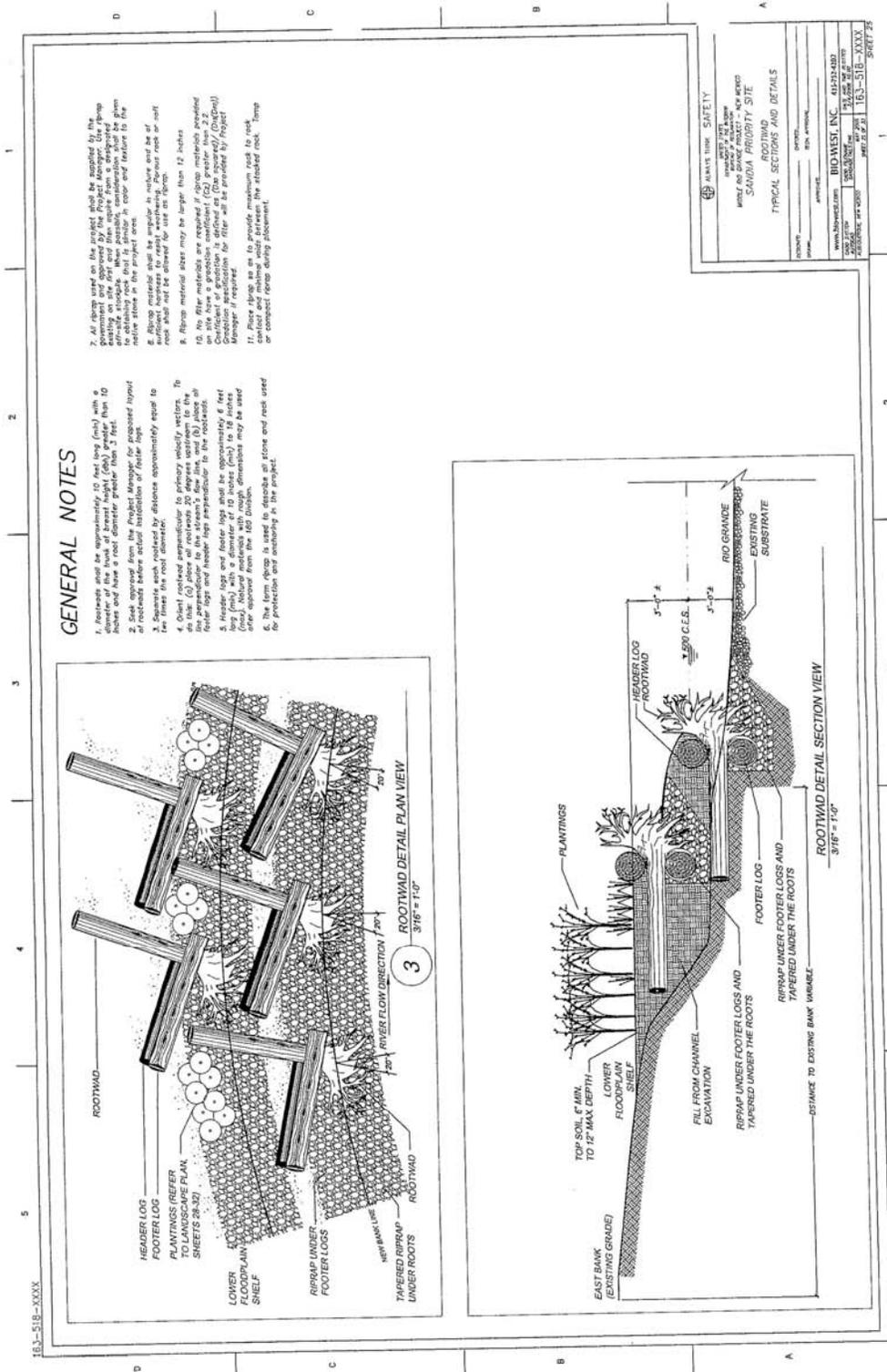
Channel Realignment and Bendway Weir
Construction, Sandia Priority Site, Sandia
Pueblo, Sandoval County, New Mexico
Application No. 200600149
Application by Bureau of Reclamation,
Albuquerque, New Mexico
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Sandia 404 Permit (cont.)



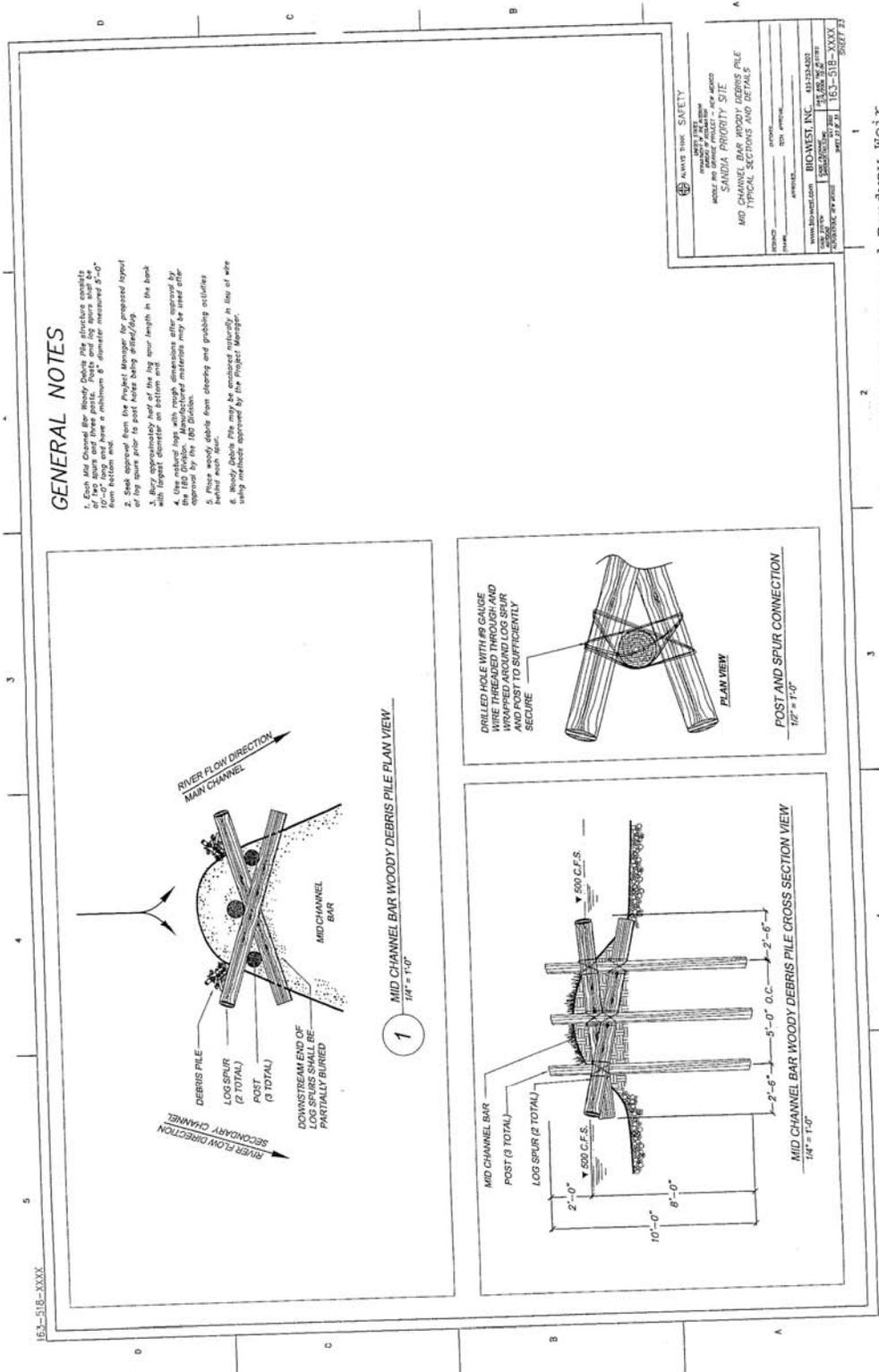
Sandia 404 Permit (cont.)



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Sandia 404 Permit (cont.)



GENERAL NOTES

1. Each Mid Channel Bar Woody Debris Pile structure consists of two spurs and three posts. The spurs shall be 8' wide and 8' high. The posts shall be 8' diameter and 5'-0" high. The posts shall be 8' apart.
2. Spill approval from the Project Manager for proposed layout of log spurs prior to post holes being drilled/rip.
3. Ripraps approximately 12" x 12" x 12" in the top of the log spurs shall be placed around the perimeter of the log spurs.
4. Ripraps shall be placed around the perimeter of the log spurs with rough dimensions after approval by the ISD Division. Manufactured materials may be used after approval by the ISD Division.
5. Please notify debris from clearing and grubbing activities. Woody debris pile may be enclosed naturally in line of white wash methods approved by the Project Manager.

ALWAYS BOND SAFETY

PROJECT NO. 163-518-XXXX
 SANDIA PRIORITY SITE
 MID CHANNEL BAR WOODY DEBRIS PILE
 TYPICAL SECTIONS AND DETAILS

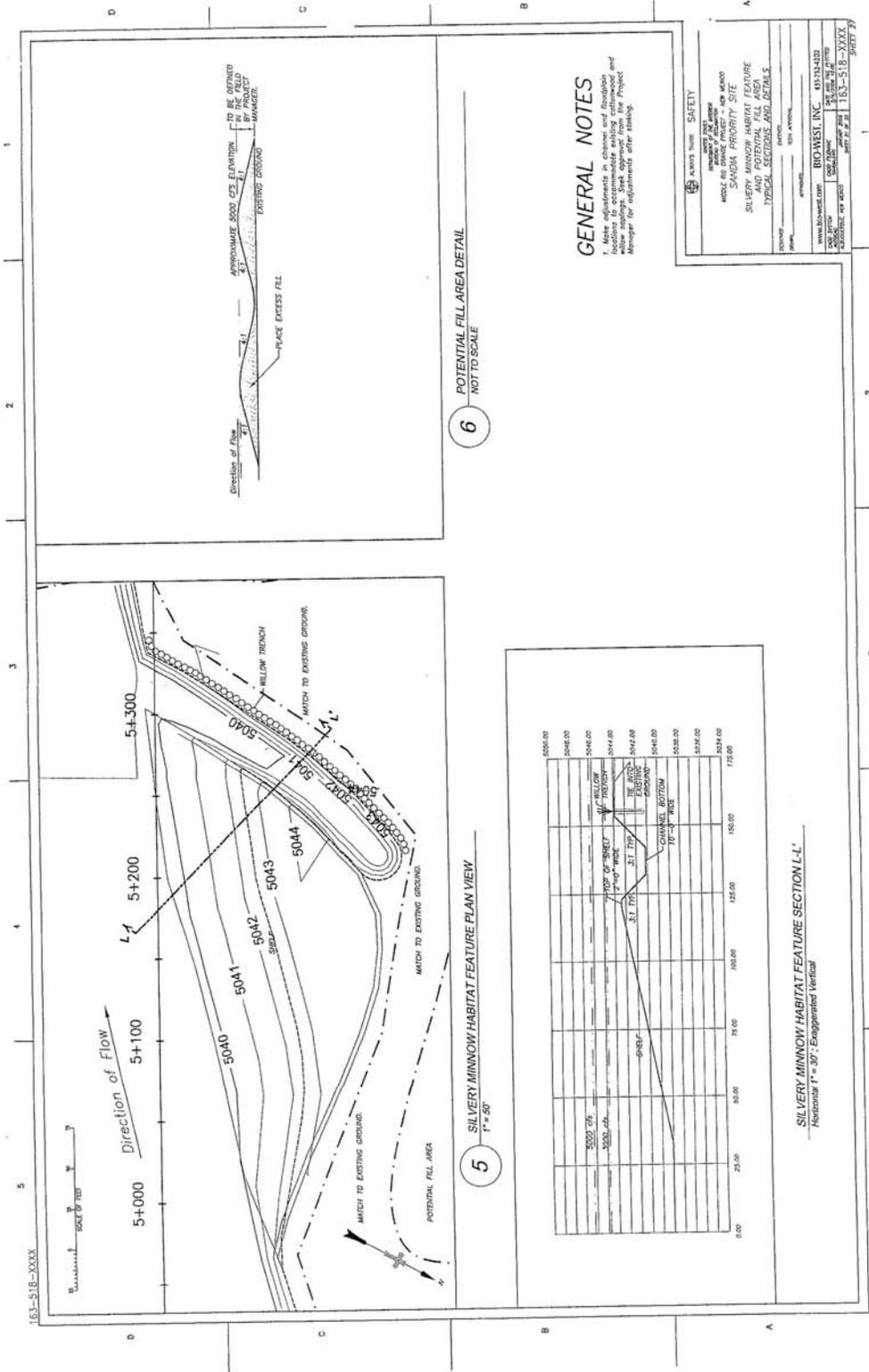
DATE: 05/11/06
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

PROJECT NO. 163-518-XXXX
 SHEET # 13

Channel Realignment and Bendway Weir Construction, Sandia Priority Site, Sandia Pueblo, Sandoval County, New Mexico
 Application No. 200600149
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Sandia 404 Permit (cont.)



GENERAL NOTES

1. Make adjustments in crown and slope as needed to meet design criteria and to meet existing conditions. Speak approval from the Project Manager for adjustments after filing.

SAFETY

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROJECT SAFETY PLAN AND ALL APPLICABLE REGULATIONS.

NOISE AND VIBRATION

NOISE AND VIBRATION MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECT NOISE AND VIBRATION MONITORING PLAN.

SANDIA PRIORITY SITE

SILVERLY MINNOW HABITAT FEATURE

TYPICAL SECTIONS AND DETAILS

DATE: 05/11/06

BY: [Signature]

APPROVED: [Signature]

PROJECT NO: 15-518-XXXX

SHEET NO: 13 OF 13

Channel Realignment and Bendway Weir Construction, Sandia Priority Site, Sandia Pueblo, Sandoval County, New Mexico

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