

**APPENDIX A: EXISTING (2003) OIL AND GAS LEASING
STIPULATIONS**

**A-1: GENERAL SURFACE USE
AND OCCUPANCY
REQUIREMENTS**

**A-2: GENERAL CONDITIONS OF
APPROVAL**

**A-3: PRACTICES FOR OIL AND GAS
DRILLING AND OPERATIONS
IN CAVE AND KARST AREAS**

APPENDIX A: EXISTING (2003) OIL AND GAS LEASING STIPULATIONS

APPENDIX A-1: GENERAL SURFACE USE AND OCCUPANCY REQUIREMENTS

This appendix describes practices intended to be applied, when needed, to minimize surface disturbance.

The intent of the Surface Use and Occupancy Requirements is to best manage mechanical surface disturbance and other effects on specified natural resources. Mechanical surface disturbance is created by the use of such things as tools and machinery. Circumstances for waivers of the requirements have been included so that they will not be applied needlessly. Exceptions to the requirements will be considered in emergency situations involving human health and safety and the protection of the environment.

The basis for the “200 meter rule” used in the Surface Use and Occupancy Requirements is 43 CFR 3101.1-2, which states that, at a minimum, mitigation measures are deemed consistent with oil and gas lease rights if they do not require “...relocation of proposed operations by more than 200 meters...” The intent of the actions described in this Appendix is to comply with the regulations and allow the relocation of proposed activities to mitigate impacts, but by no more than 200 meters, without undertaking additional NEPA analysis. The opportunity exists through the NEPA process to design mitigation of impacts that would require relocation greater than 200 meters. The “200 meter rule” simply allows relocation of an activity, such as during on-site meetings prior to APD approval, without the need for detailed NEPA analysis.

The Surface Use and Occupancy Requirements identify minimum use standards for activities around certain natural and man-made features to ensure protection of those features.

- **Wildlife Habitat Projects:** Surface disturbance will not be allowed within 200 meters of existing or planned wildlife habitat improvement projects. Large-scale vegetation manipulation projects such as prescribed burns will be excepted. This requirement will be considered for waiver with appropriate off-site mitigation, as determined by the Authorized Officer.
- **Endangered Species:** Surface disturbance will not be allowed within 200 meters of critical endangered species habitat.
- **Raptor Nests and Heronries:** Surface disturbance will not be allowed within 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both. Raptor nests on special, natural habitat features, such as trees, large brush, cliff faces and

escarpments, will be protected by not allowing surface disturbance within 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.

- **Slopes or Fragile Soils:** Surface disturbance will not be allowed on slopes over 30 percent. Exceptions will be considered for projects designed to enhance or protect renewable natural resources, or if a plan of operations and development which provides for adequate mitigation of impacts was approved by the Authorized Officer. Occupancy or use of fragile soils will be considered on a case-by-case basis.
- **Streams, Rivers, and Floodplains:** Surface disturbance will not be allowed within 200 meters of the outer edge of the 100-year floodplain (As Defined by the Federal Emergency Management Agency FEMA), to protect the integrity of the floodplain. On a case-by-case basis, an exception to this requirement may be considered based on one or more of the criteria listed below. The first three criteria would not be applied in areas of identified critical or occupied habitat for federally listed threatened or endangered species.
 - Additional development in areas with existing developments that have shown no adverse impacts to the riparian areas as determined by the Authorized Officer, following a case-by-case review at the time of permitting.
 - Suitable off-site mitigation if habitat loss has been identified.
 - An approved plan of operations ensures the protection of water or soil resources, or both.
 - Installation of habitat, rangeland or recreation projects designed to enhance or protect renewable natural resources.
- **Playas and Alkali Lakes:** Surface disturbance will not be allowed within 200 meters of playas or alkali lakes. Waiver of this requirement will be considered on a case-by-case basis for projects designed to enhance or protect renewable natural resources. An exception for oil and gas development will be considered if playa lake loss was mitigated by the protection and development of another playa exhibiting the potential for improvement. Mitigation could include: installing fencing; developing a supplemental water supply; planting trees and shrubs for shelter belts; conducting playa basin excavation; constructing erosion control structures or cross dikes; or by improving the habitat in another area.

- **Springs, Seeps, and Tanks:** Surface disturbance will not be allowed within 200 meters of the source of a spring or seep, or within downstream riparian areas created by flows from the source or resulting from riparian area management. Surface disturbance will not be allowed within 200 meters of earthen tanks or the adjacent riparian areas created as a result of the presence of tanks. Exceptions to this requirement will be considered for the installation of habitat or rangeland projects designed to enhance the spring or seep, or downstream flows.
- **Caves and Karst:** Surface disturbance will not be allowed within 200 meters of known cave entrances, passages or aspects of significant caves, or significant karst features. Waiver of this requirement will be considered for projects that enhance or protect renewable natural resource values, when the proposed activity is of a short duration, or when an approved plan of operations ensures the protection of the cave and karst resources. Also see Appendix A-3 for cave and karst drilling practices.
- **Visual Resource Management:** Painting of oil field equipment and structures to minimize visual impacts will be conducted according to the requirements of Notice to Lessees (NTL) 87-1, New Mexico. Low profile facilities also may be required, when needed, to reduce the contrast of a project with the dominant color, line, texture, and form of the surrounding landscape. Other surface facilities or equipment approved by the BOR, such as large-scale range improvements or pipelines, will be painted, when needed, to conform with the requirements of visual resource management to minimize visual impacts. Paint colors will be selected from the ten standard environmental colors approved by the Rocky Mountain Coordinating Committee. The selected paint color will match as closely as possible the predominant soil or vegetation color of the area.
- **Recreation Areas:** Facilities must be located so that they are not visible from designated recreation areas such as campgrounds, picnic areas, boat launch ramps, etc.
- **Spacing Requirements:** The lease or portion of a lease for an area within and below the full conservation pool elevation may be issued for the sole purpose of assisting the orderly development of the Federal mineral estate. This lease will only be used to maintain state well-spacing requirements on the lands noted above. With the exception of providing access, determined on a case-by-case basis, this lease does not grant surface occupancy.

The specific stipulations listed below are designed to protect the dams, water conveyance facilities, and the water quality in the Project Area.

1. Permittee agrees to provide written notice to the Bureau of Reclamation (BOR) 15 days prior to any and all intended surface activities in connection with exploration, drilling, or any other activity associated with, or leading to, oil and gas, geothermal or other leasable mineral

- production including seismic activity on any lands which the BOR has jurisdiction as the surface agency.
2. Permittee agrees to no surface occupancy within 800 horizontal meters (~1/2 mile) from the Brantley or Avalon Dam sites. Drilling proposed within 800 to 1600 meters (~ 1/2 to ~ 1 mile) of either dam will be considered on a case-by-case basis after review of the geology of the proposed site. This stipulation is to ensure the integrity of the structures.
 - 3a. Permittee agrees to no surface occupancy within 200 horizontal meters (~ 1/8 mile) or below the full conservation pool elevation (Brantley full pool elevation is 3,271 feet AMS) and no storage facilities below the maximum flood zone elevation at Brantley Reservoir (Brantley maximum flood surface elevation is 3286 feet above sea level). This stipulation is to reduce the possibility of contamination (pollution) affecting the reservoir waters.
 - 3b. Permittee agrees to no surface occupancy within 200 horizontal meters (~ 1/8 mile) of the maximum conservation pool elevation (Avalon maximum conservation pool surface elevation is 3190 feet) and no storage facilities below 3,200 feet at Avalon Reservoir.
 4. Permittee agrees to no surface occupancy within 200 horizontal meters (~ 1/8 mile) of the centerline of any constructed or proposed BOR tunnel, canal, aqueduct, pipeline, lateral, drain, transmission line, telephone line, roadway, building, or other permanent structures or facilities under the administration, jurisdiction, or ownership of the BOR. BOR operation and maintenance roads will not be used for access without prior approval of the BOR.
 5. Permittee agrees to no surface occupancy within 200 horizontal meters (approximately 1/8 mile) of any improved campground, boat ramp, or other permanent recreation facility.
 6. Permittee agrees to locate production facilities so they are not visible from the reservoir or public recreation facilities (campgrounds, etc.).
 7. Permittee agrees to no surface occupancy within the boundaries of Brantley Lake State Park or other designated public recreation areas.

APPENDIX A-2: GENERAL CONDITIONS OF APPROVAL

This appendix describes standard conditions of approval. When appropriate, conditions of approval may be selected from this list and attached to use authorizations. A check-list or other suitable means may be used to identify applicable conditions of approval. The emphasis is primarily on oil and gas operations and rights-of-way, but these conditions may be applied to other activities, as well.

General Conditions

1. Reclamation does, through the duly authorized officer executing this Permit, hereby consent to Permittee’s request to enter onto lands of the United States for the purpose of; establishing, constructing, placing, operating and maintaining an oil and gas well head and appurtenant facilities approved _____ by the State of New Mexico’s Energy, Minerals and Natural Resources Department (_____) and constructing, improving and maintaining an access road to that site, subject to the terms and conditions herein written:

said lands located in the XX (XX) of Section XX and the XX of the XX (XX) of Section XX of Township XX South, Range XX East, New Mexico Principal Meridian in Eddy County, New Mexico. The area is shown in the attached “Exhibit A,” and made a part hereof.

2. This permission given herein will neither constitute nor be construed as any surrender of the jurisdiction and supervision of the United States over the lands described herein.
3. The Permittee hereby agrees to indemnify and hold harmless the United States, their employees, agents, and assigns from any loss or damage and from any liability on account of personal injury, property damage, or claims for personal injury or death arising out the Permittee’s activities under this Permit.
4. The Permittee will comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the Permittee will comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on United States lands or on facilities authorized by this permit. (Re: 40 CFR, Part 702-799 and particularly provisions on polychlorinated biphenyls, 40 CFR, Part 761.1 - 761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 will be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of the reportable release or spill of toxic substances will be furnished to Reclamation concurrent with the filing of the reports to the involved Federal agency or State government.
5. The Permittee agrees to indemnify and hold harmless the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on United States lands unless the release is wholly unrelated to the



Permittee's activities on United States lands. This agreement applies without regard to whether a release is caused by the Permittee, its agent or unrelated third parties.

6. If, during any phase of the construction, operation, maintenance, or termination of the facilities authorized by this permit, any oil or other pollutant should be discharged, impacting United States lands, the control and removal, disposal, and cleaning up of such oil or other pollutant, wherever found will be the responsibility of the Permittee, regardless of fault. Upon failure of the Permittee to control, repair all damages to United States lands resulting therefrom, Reclamation may take such measures as deemed necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the Permittee. Such action by Reclamation will not relieve the Permittee of any liability or responsibility.
7. The Permittee will comply with all applicable water, ground, and air pollution laws and regulations of the United States, the State of New Mexico and local authorities. In addition the Permittee will comply with the following hazardous materials restrictions:
 - A. The Permittee will comply with all applicable Federal, State, and local laws and regulations, and Reclamation policies and instructions, existing or hereafter enacted or promulgated, concerning any hazardous material that will be used, produced, transported, stored or disposed of on or in lands, waters or facilities owned by the United States or administered by Reclamation.
 - B. "Hazardous material" means any substance, pollutant or contaminant listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601, et seq., and the regulations promulgated pursuant to that Act.
 - C. The Permittee may not allow contamination of lands, waters or facilities owned by the United States or administered by Reclamation by hazardous materials, thermal pollution, refuse, garbage, sewage effluent, industrial waste, petroleum products, mine tailings, mineral salts, pesticides (including, but not limited to, the misuse of pesticides), pesticide containers or any other pollutants.
 - D. The Permittee will report to Reclamation, within 24 hours of its occurrence, any events which may or does result in pollution or contamination adversely affecting lands, water or facilities owned by the United States or administered by Reclamation.
 - E. Violation of any of the provisions of this Article will constitute grounds for immediate termination of this Permit and will make the Permittee liable for the cost of full and complete remediation and/or restoration of any Federal resources or facilities that are adversely affected as a result of violation.

- F. The Permittee agrees to include the provision contained in paragraphs (a) through (e) of this Article in any subcontract or third party contract it may enter into pursuant to this Permit.
- G. Reclamation agrees to provide information necessary for the Permittee, using reasonable diligence, to comply with the provision of this Article.
- 8. The holder shall be responsible for maintaining the site in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
- 9. The Permittee will minimize disturbance to existing fences and other improvements on United States lands. The Permittee is required to promptly repair improvements to at least their former condition. Functional use of these improvements will be maintained at all times. The Permittee will make a documented good-faith effort to contact the owner of any improvements prior to disturbing those facilities. When necessary to pass through a fence line, the fence will be braced on both sides of the passageway prior to cutting the fence.
- 10. This Permit is granted subject to the existing rights in favor of the public or third parties for highways, roads, railroads, telegraph, telephone and electrical transmission lines, canals, laterals, ditches, flumes, siphons, and pipelines on, over, and across said land.
- 11. This Permit is personal, revocable, and nontransferable and will become effective on the date hereinabove written and unless otherwise sooner terminated, will continue for ten (10) years so long as in the opinion of Reclamation it is considered expedient and not detrimental to the public interest, and will be revocable upon sixty (60) days written notice to the Permittee in accordance with Article 11. Upon such revocation or termination, the aforesaid structure or structures and all accessories will be removed without delay at the expense of the Permittee. The Permittee will leave the site(s) in a condition satisfactory to Reclamation and the Bureau of Land Management.
- 12. This Permit may be revoked by Reclamation upon sixty (60) days written notice to the Permittee if:
 - A. The Permittee's use of the land interferes with existing or proposed facilities; or
 - B. The land contained in the Permit is needed for any United States purpose; or
 - C. The United States disposes of its interest in the land contained in this Permit; or

- D. The Permittee fails to comply with any other terms or conditions of this Permit and upon notification of the violation, Permittee fails to adequately cure the violation in a timely manner. Reclamation will have the final determination regarding the adequacy of the cure.
13. Reclamation has appraised the fair market value of the right-of-use fee in accordance with 43 CFR, Part 429.3. Said appraisal has established the fee for the right-of-use as \$ _____, and is due prior to the United States executing this Permit.
14. The Permittee will comply with Section 106 of the National Historic Preservation Act (P.L. 89-665, 80 Stat.915 [16 USC 470] as amended, the New Mexico Cultural Properties Act (NMSA 1978, 18-6-1 through 18-6-23), and the Prehistoric and Historic Sites Preservation Act (NMSA 18-8-1 through 18-8-8) and their implementing regulations for all registered cultural properties on Reclamation lands, specifically including all properties and lands within the Carlsbad Irrigation District National Historic Landmark. The New Mexico State Cultural Properties Act requires that survey work for archaeological sites be conducted prior to any development on State or Federal lands. The Permittee will get written authorization before any work is started within the Carlsbad Irrigation District National Historic Landmark. Any cultural resources discovered shall be immediately reported to the authorizing officer.

Pursuant to the Memorandum of Agreement with the Bureau of Reclamation, the Advisory Council on Historic Preservation and the New Mexico State Historic Preservation Officer, the Carlsbad Irrigation District will ensure compliance with the New Mexico Cultural Properties Act (NMSA 1978, 18-6-1 through 18-6-23), and the Prehistoric and Historic Sites Preservation Act (NMSA 18-8-1 through 18-8-8) and their implementing regulations for all registered cultural properties conveyed to the CID by the Bureau of Reclamation.

In the event cultural resources (including architecture, artifacts, and/or cultural debris of bone, shell, charcoal, or wood) are discovered during activities authorized herein, Permittee will immediately cease work in proximity of the discovery location and contact the Reclamation archaeologist immediately at (505) 462-3644, giving location and nature of the findings. The Permittee will exercise care so as not to disturb or damage the cultural materials discovered, and will provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government.

Discovery of Human Remains: Any person who knows or has reason to know that he or she has inadvertently discovered possible human remains on Federal lands, must provide immediate telephone notification of the inadvertent discovery to the Reclamation archaeologist at (505) 462-3644.

If the discovery occurred in connection with an activity, including (but not limited to) construction, mining, logging, and agriculture, the person will cease the activity in the area of the discovery, make a reasonable effort to protect the items discovered, and wait for approval from the Reclamation archaeologist before resuming such activity. The requirement is prescribed under the Native American Graves Protection and Repatriation Act (Public Law 101-601; 104 Stat. 3042) of November 1990 and National Historic Preservation Act, Section 110(a)(2)(E)(iii) (Public Law 102-575, 106 Stat. 4753) of October 1992.

Destruction of Archaeological Resources: Any person who excavates, removes, damages, alters or defaces or attempts to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian land is subject to a maximum of five years in prison and \$250,000 fine, as prescribed under Sections 6 and 7 of the Archaeological Resources Protection Act of 1979 (Public Law 96-95, 93 Stat. 721), as amended.

15. No member of or delegate to Congress or the Resident Commissioner will be admitted to any share or part of this Permit or to any benefit to arise therefrom, but this restriction will not be construed to extend to this Permit if made with a corporation or company for its general benefit.
16. The Permittee warrants that no person or agency has been employed or retained to solicit or secure this Permit upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee except bona fide employees and bona fide commercial agencies maintained by the Permittee for the purpose of securing business. For breach or violation of this warranty, Reclamation will have the right to revoke this Permit without liability or in its discretion to require the Permittee to pay the full amount of such commission, percentage, brokerage, or contingency fee to the United States.

Road Construction, Improvement, and Maintenance

17. The road will have a driving surface of 14 feet. The maximum grade is 10 percent unless agreed to by Reclamation in writing. If Reclamation does permit grades in excess of 10 percent for a distance of more than 300 feet, that segment will be designed by a professional engineer. Maximum width of surface disturbance from construction, improvement and maintenance activities will be 30 feet.
18. Crowning with materials on site and ditching on one side of the road of the uphill side will be required. The crown will have a grade of approximately 2 percent, i.e. 1 inch crown per 12 feet of width. If conditions dictate, ditching may be required for both sides of the road; if conditions permit, flat-bladed road may be considered.

19. Drainage control will be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips. All lead-off ditches will be graded to a 3 percent maximum ditch slope. The spacing interval for lead-off ditches will be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope in percentage.

SPACING INTERVAL FOR TURNOUT DITCHES

<u>Percent Slope</u>	<u>Spacing Interval</u>
0 – 4	400 feet – 150 feet
4 – 6	250 feet – 125 feet
6 – 8	200 feet – 100 feet
8 – 10	150 feet – 75 feet

A typical lead-off ditch has a minimum depth of one foot below and a berm 6 inches above the natural surface elevation. The berm will be on the downslope side of the lead-off ditch. The ditch will tie into vegetation wherever possible.

Culvert pipes will be used for cross drainage dips where low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed will be of a sufficient diameter to pass the anticipated flow of water. Culvert location and diameters will be submitted to Reclamation by Permittee for Reclamation approval.

On road slopes exceeding 2 percent, drainage dips will drain water into an adjacent lead-off ditch. Drainage dip location and spacing will be determined by the following formula:

$$\text{spacing interval} = 400 \text{ ft} / \text{road slope percent} + 100 \text{ ft.}$$

example 2% slope: $400/2 + 100 = 300$ feet

20. The road or those portion identified by Reclamation may, as determined by Reclamation, be required to be surfaced with caliche, gravel, or other surfacing material which will be approved by Reclamation. When surfacing is required, surfacing material will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing will be no less than the driving surface. Prior to using any mineral materials from any existing or proposed source, authorization must be obtained from Reclamation.
21. Where used, all Cattleguard grids and foundation design and construction will meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids will be required where heavy loads (Exceeding H-20 loading), are anticipated. Cattleguard grids will not be less than 8 feet in length nor less than 14 feet in width. A wire gate, 16 foot minimum width will be provided on one side unless otherwise requested by the surface user.



- 22. Permittee will maintain the road in a safe, usable condition. A maintenance program will include, but not limited to blading, ditching, culvert cleaning, drainage installation, cattle guard maintenance and surfacing.
- 23. Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less.
- 24. Unless otherwise determined by Reclamation, the road will not be used as an access for the public. Reclamation withdrawn lands are established for project purposes and are not subject to the use by the general public. Permittee will be responsible to ensure that the public use is restricted from the withdrawn lands under management by Reclamation.
- 25. The area will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle, and Saltcedar.
- 26. Reclamation will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done at that point until clearance has been issued by Reclamation. Special restoration stipulations or a realignment may be required at such intersections, if any. Roads and pipelines will be routed around sinkholes and other karst features when practical. Turnout ditches and drainage leadoffs will not be constructed in such a manner as to increase or decrease the natural flow of water into or out of cave or karst features.

Road Rehabilitation

- 27. When the road is abandoned, it will be ripped at least sixteen inches deep, including all turnouts. The caliche may be reclaimed for re-use before ripping. The caliche will be removed and topsoil placed over the impacted area, and the surface disced before seeding. All culverts or other structures will be removed. All fill material will be replaced into the cut areas; borrow and lead-off ditches, drainage dips, or other erosion control earthwork will be filled or smoothed, and the abandoned road returned to the natural contours, as closely as possible. Traffic barriers will be installed at all vehicular access points to prevent further use of the road. Water breaks at least 8-inches high will be constructed as directed by Reclamation.
- 28. Permittee will reseed the entire area with the following mixture:

<u>Seed</u>	<u>Rate (lbs. per acre PLS)</u>
Alkali sacaton (<i>Sporobolus airoides</i>)	3 lbs. per acre
Sideoats grama (<i>Bouteloua curtipendula</i>)	5 lbs. per acre



Pounds of pure live seed (PLS): (Pounds of seed) * (percent of purity) * (percent of germination).

All disturbed areas are to be seeded with the seed mixture listed above. The seed and fertilizer are to be applied together by broadcasting with a seed spreader, than harrowed for seed coverage. Use of a seed drill is acceptable. Appropriate measures will be taken to insure that the seed/fertilizer mixture is evenly and uniformly planted. There will be no primary or secondary noxious weeds in the seed mixture. Seeds will be tested for viability and purity in accordance with State law(s) within nine months prior to purchase. Commercial seed will be either certified or registered and the seed mixture container will be tagged in accordance with State law(s). The seed will be available for inspection by Reclamation. The seeding will be repeated until a satisfactory stand is established as determined by Reclamation. Evaluation of growth will not be made before completion of the growing season after seeding.

29. Normally the best time for seeding is between June 15 and September 15. However, the Permittee may reseed immediately after completing surface abandonment procedures. In any event, Reclamation reserves the right to require reseeding at a specified time if the seed does not germinate after one complete growing season.
30. Permittee will contact Reclamation at 505.462.3599 at least three working days prior to the start of reseeding activities.

Drilling Surface Requirements: Standards

31. The approval of this action does not in any way grant or imply approval of any off-lease or off-unit action. It is the responsibility of the applicant to obtain any such approvals from the appropriate surface managing agency, including the Reclamation, and/or any private landowners.
32. Prior to commencing construction of the road, pad, or other associated developments, the operator shall provide the dirt contractor with a copy of the approved Surface Use Plan and the attached Conditions of Approval.
33. All topsoil and vegetation encountered during the construction of the drill site areas shall be stockpiled and made available for resurfacing of the disturbed areas after completion of the drilling operations. Topsoil on the (well name and number) is approximately (specify) inches in depth. A minimum of approximately (specify) Cubic yards of topsoil material shall be stockpiled on the (specify) edge / at the (specify) corner of the location for reclamation of the pad and pit area.

34. The Permittee shall post signs identifying the location permitted herein in accordance with the requirements contained in 43 CFR 3162.6. The following data is required on the well sign:

Operator's Name: _____

Well Name and No.: _____

Lease No.: _____

Location: xx' fxl & xx' fxl - Sec. nn T nn S, R nn E NMPM

35. All vehicles and equipment associated with the drilling, completion, or production phases of this well shall be confined to the approved road, pad and other areas approved herein.
36. The drill pad and access road for this well must be surfaced with 6 inches on compacted caliche, gravel or other approved surfacing material. Caliche, gravel or other related materials from new or existing pits on Federal mineral estate shall not be taken without the approval of Reclamation and the Bureau of Land Management. Payment for Federal mineral materials to be used for construction is required prior to construction of the pad and road.
37. Reserve or mud pits shall not be constructed within the Project Area. The Permittee will use the Closed Loop System with no reserve pits. The entire well pad will be bermed to prevent oil, salt, and other contaminants from leaving the well pad. Topsoil shall not be used to construct any of the berms. The berms shall be maintained throughout the life of the well.
38. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. Any water erosion that may occur during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. The surface material for the road and well pad shall be removed before reclamation can begin.
39. Firewalls/Containment Dikes are to be constructed and maintained around all storage facilities/batteries. A 20-millimeter, permanent liner will be installed with a 4-ounce felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1.5 times the capacity of the largest tank. Automatic shut-off check valves, or similar systems, will be installed to minimize the effects of catastrophic line failures used in production or drilling. Exhaust noise from pump jack engines must be muffled or otherwise controlled.
40. If during any drilling or construction activities any sinkholes or cave openings are discovered, all drilling or construction activities shall cease immediately and Reclamation



will be notified. Within one working day, Reclamation will evaluate the situation and determine if construction can continue or provide mitigation measures to lessen damage to the karst environment. Reclamation will coordinate this activity with the Bureau of Land Management and a verbal recommendation to proceed or stop the operation will be issued.

41. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Waste burial on site is not permitted.
42. All above ground structures not subject to safety requirements shall be painted by the Permittee to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project will be provided within thirty days following the execution of this permit.
43. All open-vent exhaust stacks associated with heater-treater, separator and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.

New production equipment installed on federal leases after November 1, 1993, will have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and, to the extent practical, to discourage perching and nesting.

Buried Pipelines

44. The holder shall conduct all activities associated with the construction, operation, and termination of the pipeline within the authorized limits.
45. The pipeline shall be buried with a minimum cover of _____ inches between the top of the pipe and ground level.
46. Blading of all vegetation shall/shall not be allowed. Blading is defined as the complete removal of brush and ground vegetation. Clearing of brush species shall be allowed. Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface. In areas where blading and/or clearing is allowed, the maximum width of these operations shall not exceed _____ feet.
47. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing

- them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.
48. Vegetation, soil, and rocks left as a result of construction or maintenance activity shall be randomly scattered over the project area and shall not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer, except that an earthen berm shall be left over the ditch line to allow for settling back to grade.
 49. The holder shall seed all surface disturbed by construction activities. Seeding shall be done according to the attached seeding requirements (Exhibit _____), using the attached seed mixture (as determined to meet Desired Plant Community objectives).
 50. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates “Standard Environmental Colors” designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is _____, Munsell Soil Color Chart Number _____.
 51. The holder shall post signs designating the Reclamation serial number assigned to this authorization at the following locations: the points of origin and completion, or entry to and exit from public lands, of the pipeline and at all major road crossings. These signs shall be posted in a permanent, conspicuous manner, and shall be maintained in a legible condition for the term of the authorization.
 52. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder shall take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Surface Installed Pipeline

53. No surface pipeline will be placed within/below the 100-year floodplain at Brantley Reservoir (elevation 3,283 feet [1,000 meters]) or Avalon Reservoir (elevation 3,200 feet [975 meters]).
54. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2803/2883. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from fire or soil movement (including landslides and slumps as well as wind and water caused movement of particles) caused or substantially aggravated by any of the following within the permit area:

- A. Activities of the holder, including but not limited to, construction, operation, maintenance, and termination of the facility.
- B. Activities of other parties including but not limited to:
 - 1. Land clearing.
 - 2. Earth-disturbing and earth-moving work.
 - 3. Blasting.
 - 4. Vandalism and sabotage.
- C. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction of in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from the negligent acts of the United States.

- 55. The holder shall conduct all activities associated with the construction, operation, and termination of the pipeline within the authorized width of _____ feet.
- 56. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.
- 57. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be “snaked” around hummocks and dunes rather than suspended across these features.
- 58. The pipeline shall be buried a minimum of _____ inches under all roads, including “two-tracks” and trails. Burial shall continue for 20 feet on each side of each crossing. The condition of the road, upon completion of the construction, shall be returned to at least its former state, with no bumps, dips, or soft spots remaining in the road surface.
- 59. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

60. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates “Standard Environmental Colors” designated by the Rocky Mountain five-State Interagency Committee. The color selected for this project is _____, Munsell Soil Color Chart Number _____.
61. The holder shall post signs designating the Reclamation serial number assigned to this pipeline at the following locations: the points of origin and completion, or entry to and exit from public lands, of the pipeline and at all major road crossings. These signs shall be posted in a permanent, conspicuous manner, and shall be maintained in a legible condition for the term of the authorization.
62. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder shall take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

Overhead Electric Distribution Lines

63. The holder shall conduct all activities associated with the construction, operation, and termination of the power line within the authorized limits.
64. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
65. Power lines shall be constructed to standards outlined in “Suggested Practices for Raptor Protection on Power lines,” Raptor Research Foundation, Inc., 1981, unless otherwise agreed to by the Authorized Officer in writing. The holder is responsible for demonstrating that power pole designs not meeting these standards are “raptor safe”. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The Reclamation reserves the right to require modifications or additions to power line structures constructed under this authorization, should they be necessary to ensure the safety of large perching birds. These modifications and/or additions shall be made by the holder without liability or expense to the United States.
66. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence will be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

67. Construction holes left open overnight shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.
68. The holder shall evenly spread the excess soil excavated from pole holes in the immediate vicinity of the pole structure.
69. The Reclamation serial number assigned to this authorization grant shall be posted in a permanent, conspicuous manner, and be maintained in a legible condition for the term of the authorization at all major road crossings and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.
70. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures prescribed in the grant or determined at the time of abandonment.
71. All surface structures (poles, lines, transformers, etc.) Shall be removed within _____ days of abandonment, relinquishment, or termination of use of the serviced facilities or within _____ days of abandonment, relinquishment, or termination of this authorization, whichever comes first. This will not apply where the power line extends to serve an active, adjoining facility or facilities.

Communication Sites

72. The authorization is conditioned upon the submission of a copy of an approved license and/or renewal license granted by the Federal Communication Commission (FCC) or the Interdepartmental Radio Advisory Committee (IRAC) for each electronic station installation authorized or future amendments of this authorization. A copy of the FCC or IRAC authorization shall be submitted with 90 days of issuance of this authorization or within 90 days following approval of an amendment to this authorization. Failure to submit the FCC or IRAC authorization copy within the time specified shall be grounds for termination of this authorization or cancellation of an amendment to this authorization. The Authorized Officer may grant an extension of up to 90 days, if requested in writing by the holder.
73. The holder and its sublessees shall at all times operate their radio-electronic equipment in such a manner as not to cause interference with radio-electronic operations of existing users in the vicinity. If such interference results from holder's or sublessee's operations, holder shall promptly, at its own expense, modify the equipment and operations, or shut down if necessary to eliminate or reduce the interference to the satisfaction of the FCC, IRAC, and/or the Authorized Officer.

74. The holder shall notify the Authorized Officer of any intent to locate additional users within or upon their existing facilities, not less than 45 days prior to occupancy of holder's facilities. Information that must included is:
 - A. Name, current address, and phone number of the third party user(s).
 - B. Expected date of occupancy.
 - C. A photo or sketch of the type of antennas to be installed, as well as any other planned physical changes to the exterior facilities operated by the holder. If the proposed use is not specified in the original authorization shall be required.
75. No less than 45 days prior to occupancy of the holder's facility, the holder shall notify existing users within a 1-mile radius that the holder intends to accommodate a new communication user in its facility. Existing users can then file any comments pertaining to potential frequency or electromagnetic problems with the Federal Communications Commission, 1919 M Street NW, Washington, DC 20554, with a copy to the Authorized Officer.
76. The holder shall be responsible for the actions and operations of any third party users associated with this facility. All such use shall be subject to the applicable terms, conditions, and stipulations of this authorization.
77. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is _____, Munsell Soil Color Chart Number _____.
78. The holder shall post signs designating the Reclamation serial number assigned to this facility at the points of entry to and exit from the site. These signs shall be posted in a permanent, conspicuous manner, and shall be maintained in a legible condition for the term of the authorization.
79. The holder agrees to share road maintenance costs with all present and future users of the access road. At such future time as a Users Association for this communication site is formed, the holder shall join the Users Association and remain a member in good standing. Within 30 days of the creation of such Users Association the holder shall provide the authorized officer with evidence of membership. Failure of the holder to join the Users Association and remain a member in good standing shall constitute sufficient grounds for termination of this authorization.

Mineral Material Sites (Gravel, Sand, Saleable Type Minerals)

- 80. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices, and include Storm Water Pollution Prevention Plans that address erosion and sediment control as well as other potential pollutants.
- 81. The holder shall conduct all activities associated with the construction, operation, and termination of the material pit within the authorized limits.
- 82. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.
- 83. The holder shall be responsible for the actions and operations of any third party users associated with this authorization. All such use shall be subject to the applicable terms, conditions, and stipulations of this authorization.
- 84. The road proposed as part of this authorization shall be constructed and maintained in accordance with Reclamation road standards, including the New Mexico Roads Policy.
- 85. The holder shall seed all surface disturbed by construction activities. Seeding shall be done according to the attached seeding requirements (Exhibit _____), using the attached seed mixture (as determined by DPC).
- 86. Suitable topsoil material removed in conjunction with clearing and stripping shall be conserved in stockpiles (within the material site) (at the following staked locations: specify location). Topsoil shall be stripped to an average depth of (specify) inches. A total of (specify) cubic yards of topsoil shall be stockpiled.
- 87. Excess excavated, unsuitable, or slide material shall be disposed of as directed by the Authorized Officer.
- 88. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of (designate) inches deep, the soil shall be deemed too wet to adequately support construction equipment.



89. Existing roads and trails on public lands that are blocked as the result of the material pit activities shall be rerouted or rebuilt as directed by the authorized officer.
90. The holder shall recontour the disturbed area and obliterate all earthwork by removing embankments, backfilling excavations, and grading to reestablish the approximate original contour of the land as determined by the Authorized Officer.
91. The holder shall uniformly spread topsoil over all unoccupied disturbed areas. Spreading shall not be done when the ground or topsoil is frozen or wet.
92. Reclamation will monitor construction on this material pit site. Notify the appropriate Reclamation Resource Area Office at least _____ working days prior to commencing excavation at _____.

Floodplain Development

93. If a threat of flooding by the Pecos River occurs during drilling operations, the _____ Resource Area Manager will issue a shut-in order. Toxic substances and, possibly, drilling equipment will be removed from the floodplain.
94. A drilling pad will be elevated at least _____ (inches, feet) and surfaced according to Condition of Approval 36.
95. All riparian habitat will be protected according to instructions provided by the Authorized Officer. Trees will not be cut down unless authorized.
96. No storage facilities will be allowed within 660 horizontal feet (200 horizontal meters) of the 100-year floodplain at Brantley or Avalon Reservoirs.
97. Pits containing oil, tank bottoms or other hydrocarbons, salt water, or any toxic substances will not be allowed in the floodplain.
98. Provision for containing salt water flow must be made prior to beginning drilling, without resorting to reserve pits constructed in the ground. Metal tanks or tank trucks must be in place to collect salt water. Salt water storage will not be allowed in the floodplain.
99. Production facilities will be located outside the floodplain.
100. Flow lines from the wellhead to production facilities will be buried, if soil conditions permit burial.

101. Special precautions will be taken to reduce damage from flooding:
- A. The well will be equipped with a down-hole shut-in device, rated at working pressure of 1,500 psi; or
 - B. The wellhead will be buried below ground in a concrete cellar with a grate over it; or
 - C. Three steel posts will be set in concrete. Horizontal steel cross bars will connect the posts. Heavy gauge chain link fencing will be welded or bolted to the post and cross bars. The V must point upstream or in the direction specified.
102. Chemical toilets will be used instead of latrines.

Drilling Rig Storage

103. The holder shall conduct all activities associated with the operation, and termination of the rig storage within the authorized limits. All activity will be limited to _____ (describe authorized area of activity) and the immediate perimeter _____ (describe distance; maximum of 20 feet).
104. If the storage of this rig should interfere with the producer's operations, the holder shall be required to remove it immediately.
105. Should the well be plugged and abandoned during the term of this permit, the permittee will be required either to remove the drilling rig within 30 days or assume all responsibility for restoration of the well pad and access road.
106. The Reclamation will be notified in writing within 30 days after removal of the drilling rig. Address correspondence to:

Bureau of Reclamation
Carlsbad Project Office
620 East Greene
Carlsbad, NM 88221-1356

Geophysical Exploration

107. All large, hummocky sand dunes encountered during geophysical operations shall be avoided by driving around the sand dunes.

108. Any large trees (e.g., soapberry, elm or large mesquite) encountered in the area of operations shall be avoided and shall not be disturbed.
109. Playas shall be avoided by using re-routes or skips.
110. Wildlife watering facilities shall be avoided by using re-routes or skips.
111. Archaeological sites shall be avoided by adhering to the re-routes flagged in the field, which are listed in the attachment to the NOI. Additional cultural resources protections provided in cultural report _____, which are listed in the attachment, shall be followed.
112. Any fence needing to be cut during operations to allow access shall be immediately repaired to a condition as good as or better than the condition in which the fence was found. No fence shall be removed.
113. Where appropriate, disturbed areas shall be rehabilitated as directed by the Authorized Officer. Rehabilitation techniques may include, but are not limited to: ripping, discing, or other seed bed preparation; reseeding; placement of erosion control devices; and berming, barricading, and/or signing geophysical routes where they cross roads.
114. Operations shall be suspended when, in the judgment of the Authorized Officer, they have the possibility of unduly harming the surface during periods of wet weather or drought.

APPENDIX A-3: PRACTICES FOR OIL AND GAS DRILLING AND OPERATIONS IN CAVE AND KARST AREAS

This appendix describes practices for detecting and avoiding significant caves and significant karst features with respect to oil and gas drilling, and for mitigating impacts to significant caves and karst when they cannot be avoided. These mitigations are predicated on the Reclamation's responsibilities for resource management and protection derived from the Federal Land Policy and Management Act, the Federal Cave Resources Protection Act, and the National Environmental Policy Act. The practices described here supersede those of the Draft "Interim Guide for Oil and Gas Drilling and Operations in Cave and Karst Areas" (February 1993).

Potential for Caves or Karst

A map of cave or karst potential will be maintained to provide the public with current information about the likelihood of the presence of cave or karst resources. The map will serve as an indicator of the potential for encountering caves or karst for which special practices could be required, following

NEPA analysis, to mitigate drilling impacts. The primary use of the map is as a source of information for individuals or companies contemplating the leasing of federal minerals.

Three zones of cave or karst occurrence have been identified and categorized: high potential; medium potential; and low potential. Areas that contain known cave or karst features are in the high potential zone. Areas containing known soluble rock formations with the potential for cave or karst development are in the medium potential zone. These zones were identified using geological maps and existing information on caves and karst. All other lands fall into the low potential zone. These zones were identified using geologic maps and existing information on caves and karst. All other lands fall into the low potential zone. These zones may be increased or decreased in size as new information from drilling, cave exploration or other sources becomes available.

The cave or karst occurrence zones have been further divided into smaller geographic areas to provide an additional means of identification of a specific area. An estimate has been made for each of these areas as to the lowest likely depth at which caves might be expected. Again, this is simply a source of information for individuals or companies contemplating the leasing of Federal minerals. The lease notice “Potential Cave or Karst Occurrence Area” (Roswell 46), will be applied to leases when all or part of the lease is located in a high or medium potential cave or karst occurrence area. An example of the least notice is included below. The purpose of the lease notice, as with maps of cave or karst potential, is to provide information to the purchasers of federal oil and gas leases.

Table C3-1. Cave or Karst Occurrence Areas, Brantley and Avalon Project Area.

AREA NAME	DEPTH ^b	POTENTIAL ^b
Burton Flats	350	High

Because the identification of cave or karst potential zones is only informational, the mitigations described below will be applied, when and where appropriate, irrespective of any identified zone of cave or karst potential. However, the emphasis of management will be on caves presently designated significant or on those designated in the future as significant, and on significant karst features.

Lease Notice

Potential Cave or Karst Occurrence Area

All or portions of the lease are located in a potential cave or karst occurrence area. Within this area, caves or karst features such as sinkholes, passages, and large rooms may be encountered from the surface to a depth of as much as 2,500 feet, within surface areas ranging from a few acres to hundreds of acres. Due to the sensitive nature of the cave or karst systems of this area, special



protective measures may be developed during environmental analyses and be required as part of approvals for drilling or other operations on this lease. These measures could include relocation of the proposed well; changes in drilling operations; special casing and cementing programs; modifications to surface facilities; or other reasonable measures to mitigate impacts to cave or karst values. These measures may be imposed in accordance with 43 CFR 3101.1-2; 43 CFR 3162.5-1; Onshore Oil and Gas Order No. 1; and Section 6 of the lease terms (Roswell 46 February 1991).

Mitigation of Drilling Impacts

The need to relocate drilling locations to avoid caves or karst, and any special drilling or production practices employed to mitigate impacts to caves or karst, will be determined during the NEPA analysis of APDs or other applications.

The practices described below will be applied where needed, and to the extent necessary, to ensure that the potential impacts of drilling oil or gas wells, or of constructing other facilities, in cave or karst areas would be minimized according to the following process:

1. Detect potential cave or karst resources and determine their significance.
2. Avoid cave or karst resources where possible.
3. Mitigate impacts to caves or karst that cannot be avoided.

The result of any detection efforts will be addressed in the NEPA analysis and appropriate mitigations will be developed, if needed as part of the analysis.

Depending on the results of detection, avoidance will be considered as a means of mitigating potential impacts. In most cases, avoidance will be accomplished by relocation of the proposed well location, which is often done in consultation with the operator at the time of a field examination. Moving a proposed location up to 200 meters is a commonly employed avoidance measure. The need to move a location more than 200 meters will be addressed in the NEPA analysis of an APD. If the construction of a pipeline, road, power line or other facility is proposed, rerouting or relocation will be required to accomplish avoidance.

The management of oil and gas operations in cave or karst areas, including approvals for drilling oil or gas wells, will be guided by procedures described below, Surface Use and Occupancy Requirements (Appendix A-1), and Conditions of Approval (Appendix A-2). These practices will be modified as new and cost effective technologies for cave and karst protection become available.

Detection Methods

The primary detection method will be the review of Reclamation or other records on the presence of caves or karst features in the area of interest, in conjunction with a field exam by a Reclamation

employee or cave inventory contractor to determine the presence of unrecorded cave or karst features. Depending on the results of initial detection efforts and a determination of potential significance by the Reclamation, cave exploration could be employed to gain additional information.

As various geophysical techniques are proven useful for cave detection and become generally available for use, they may be considered on a case-by-case basis as a means of locating unrecorded cave or karst features.

Surface Mitigation

Whether or not a proposed activity has been relocated to reduce potential impacts on caves or karst, surface mitigations will be applied, when needed to minimize the risk of impacts during construction, drilling or production. Appropriate surface mitigations will be developed during the NEPA analysis of a proposal and could include one or more of the following practices, most of which have long been employed to mitigate impacts.

Practices to minimize potential impacts from reserve pit spill or leakage:

- The use of a Closed Loop System or steel tanks.

Practices to minimize potential impacts from leaking tanks or pipelines:

- The construction of berms around storage tanks sufficient to contain spills, in accordance with Conditions of Approval (Appendix A-2);
- The installation of leak detection systems for pipelines or tanks;
- The use of permanent liners in storage tank areas;
- The use of differential pressure shut-off valves;
- The use of corrosion-inhibiting coatings and cathodic protection.

Practices to minimize the potential impacts of vented or escaping gases settling in caves:

- The flaring or venting of gas to protect human safety and to better disperse the gases and eliminate possible gas ignitions;
- The use of stock tank vapor recovery systems.

Subsurface Mitigation

Applicable and reasonable subsurface mitigations will be applied where the presence of caves or karst is obvious or expected, based on the results of detection efforts, and in lost circulation zones. The options could include, but are not limited to, the following practices:

Drilling

- Cable tool drilling techniques will be used when possible in areas where encounters of caves or karst are expected at depths not greater than 350 feet.
- Rotary drilling techniques in cave or karst areas will include the use of either fresh water mud, foam, or compressed air as a circulating medium in zones where caves or karst are expected. Below those zones, the operator may use whatever drilling fluid is appropriate.

Casing and Cementing

- All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run according to American Petroleum Institute and Reclamation standards.
- A “cave protection” casing could be required in instances when a designated significant cave would be jeopardized. The cave-protection casing string would be set at least 100 feet below the deepest known cave-bearing zone as determined by drilling or other pertinent methods.
- Regardless of the type of drilling machinery used, if bit drops of four feet or more and circulation losses greater than 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the Reclamation will be notified by the Operator. The Reclamation will assess the consequences of the situation and work with the Operator on corrective actions to resolve the problem. If corrective actions fail, the well will be plugged.
- The casing will be cemented in place using one or a combination of any of the following methods that are environmentally sound, as determined by the Reclamation and the Operator:
 1. If a large void or severe lost circulation zone is encountered, isolation from above and below rather than complete cement coverage of these zones could be employed. This would be accomplished by using stage cementing equipment, external casing packers, cement baskets, and one-inch remedial cementing techniques.

2. For a less severe lost circulation zone encountered while drilling, the operator would attempt to circulate cement to the surface using a single or multistage cementing job composed of a “lead” and “tail” slurry for each stage.
3. Foam cementing techniques may be used.

Any corrective actions proposed to resolve problems related to bit drops or lost circulation will require Reclamation concurrence before implementation. A decision on how to proceed will be reached within 24 hours of notification.

Monitoring Drilling Operations

Where the presence of significant caves or significant karst features are obvious or expected based on the results of detection efforts, and in lost circulation zones, constant monitoring of drilling operations by the Reclamation could be required.

Monitoring Production Operations

On wells within one-half mile of significant caves, annual pressure tests will be performed by the Operator on all casing annuli. If the test results indicated a casing failure, remedial actions approved by the Reclamation will be undertaken to correct the problem.

Plugging and Abandonment

The BLM standards for plugging and abandonment in Onshore Oil and Gas Order No. 2 will be applied to protect or isolate all useable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, caves, and any prospectively valuable deposits of minerals. This includes any zones encountered during drilling that contain fluids with a potential to migrate.

Record Keeping

The Operator will track the customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence or absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

The Reclamation may review data held by companies on wells drilled in cave or karst areas, to gain information about impacts to caves and karst. This information will be used to categorize lost-circulation zones on the basis of depth, relative volume, and severity, and to evaluate and compare the relative success or failure of different remedies attempted to combat lost-circulation problems

while drilling and cementing casing in these zones. This information also will be used to update information about the occurrence of cave and karst features. Information concerning cave resources gathered during drilling will be submitted, as well, to be retained by Reclamation in accordance with the regulations implementing the Federal Cave Resources Protection Act.

**APPENDIX B: BUREAU OF RECLAMATION'S 2003
RESOURCE MANAGEMENT PLAN
DETAILED MANAGEMENT DIRECTIVES**

APPENDIX B: BUREAU OF RECLAMATION'S 2003 RESOURCE MANAGEMENT PLAN DETAILED MANAGEMENT DIRECTIVES

GENERAL MANAGEMENT DIRECTIVES

General management directives for the Resource Management Plan were developed in response to the findings from the resource inventory, public involvement program, and issue identification as outlined in Table 4-3 of the RMP. Management directives provide a statement of the Management Direction (goal), Management Objective, Management Action, and Lead Agency/Partnerships for each of the four issue categories identified in Chapter 4 of the RMP. The goals and objectives serve as a primary foundation on which the proposed management directive was developed. Each goal reflects the desired management direction (goal) for the Project Area. Along with each management direction is a set of management objectives and management actions that describe a series of activities that must be accomplished in order to achieve the management direction (goal). Recommendations for partnerships or management responsibilities are included to aid in implementation of management directives.

Table B-1 provides a detailed summary of preferred management strategy specifics along with management objectives, management actions, and anticipated partnerships and responsibilities. The four issue categories identified in Chapter 4 of the RMP were used for the management direction as a means of organizing management strategies, indicating areas of emphasis, and aiding in the understanding of the scope of management. The four categories include Facility Management, Land Use, Recreation, and Natural and Cultural Resources.

SITE-SPECIFIC AND ACTIVITY AREA MANAGEMENT DIRECTIVES

Thirty-six site-specific areas and facilities have been identified for detailed management directives. Each site is identified, its function (land use) indicated, and its management action outlined. Table B-2 provides the detailed information for each specific area.

Table B-1. General Management Directives.

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
CATEGORY A: FACILITY MANAGEMENT			
A1: Encourage and Support Balanced Water Use and Management within the Constraints of Existing New Mexico Water Law, Compacts, Treaties, and Contracts with Water Users	Explore the reduction of reservoir water level fluctuations at Brantley and Avalon Reservoirs through timing of water releases to meet other resource needs.	Investigate reservoir fluctuations and establish a minimum pool recommendation. Investigate water release timing and the effect on other resource needs and establish an appropriate water release schedule.	Reclamation ^a , State Parks ^b , and CID ^c .
	Investigate the acquisition of water rights to increase the minimum pool at Brantley Reservoir and to enhance natural resources and recreational uses.	Participate in water operations planning process for the Pecos River.	Reclamation, CID, NMDGF ^d , and other agencies as appropriate.
	Recommend the development of a Drought Contingency Plan.	Support the development of a Drought Contingency Plan.	Reclamation, State Parks, CID, and other agencies as appropriate.
	Clarify water rights as set forth in the Pecos River Compact.	Make available to the public all information regarding the Pecos River compact and on-going water operations plan.	Reclamation, State Parks, and CID.
	Recommend beneficial water operations that enhance recreation, fish, wildlife, and scenic values while meeting project purposes.	Develop guidelines for enhancing water-related resource values where opportunities exist within existing operating criteria. These guidelines will be developed to maximize both ecological and recreational benefits through improved management of available resources.	Reclamation, CID, NMDGF, State Parks, and other agencies as appropriate.
A2: Protect and Manage Historic Facilities	Pursue the development of an agreement with the CID for establishing guidelines to maintain and protect historic facilities and sites within the Project Area. These would include the McMillan facilities, the Avalon facilities, and the Flume.	Develop guidelines for protecting historic facilities and sites. Pursue an agreement with the CID for maintaining historic facilities and sites.	Reclamation, CID, and State Parks.
	Recommend mechanisms to protect, restore, and recognize historic, pre-historic, and paleontological resource sites.	Develop and implement an integrated Cultural Resources Management Plan (see also Goal D4).	Reclamation, CID, State Parks, and other agencies as appropriate.



Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
CATEGORY B: LAND USE			
B1: Coordinate Oil and Gas Leases to be Compatible with other Resource Needs	Consider and identify appropriate changes to Reclamation's Oil and Gas Leasing Stipulations.	Adopt Mineral Lease Stipulations as identified in Appendix C of the RMP.	Reclamation.
	Identify and establish additional "no surface occupancy" areas where development activities may conflict with other resource needs.	Adopt Mineral Lease Stipulations as identified in Appendix C of the RMP.	Reclamation.
	Develop an agreement between managing agencies for notification and coordination of oil and gas activities.	Pursue an agreement between managing agencies for notification and coordination of oil and gas activities.	Reclamation, BLM ^e , CID, State Parks, and other agencies as appropriate.
B2: Manage Grazing Leases to be Compatible with other Resource Needs	Review current grazing leases and determine their compatibility with other resource needs.	Revise current grazing leases to align practice with natural and cultural resources as appropriate.	Reclamation, BLM, CID, and other agencies as appropriate.
	Determine appropriate grazing scenarios within the Project Area through the development and implementation of a Grazing Management Plan (GMP).	Develop an allotment-specific livestock GMP.	Reclamation, BLM, CID, and other agencies as appropriate.
	Establish and implement a range condition monitoring process.	Incorporate range condition monitoring process into the livestock GMP.	Reclamation, BLM, and CID.
	Explore a cooperative agreement with the BLM for management of grazing leases within the Project Area.	Implement cooperative agreement with the BLM for management of grazing leases.	Reclamation, BLM, and CID.
B3: Minimize Conflicts and Incompatibilities among Land Uses	Provide adequate space between sensitive areas (e.g., important wildlife habitat, historic structures, project facilities, etc.) and identified public-use areas.	Install adequate signage and/or fencing as appropriate.	Reclamation and State Parks.
	As much as possible, within the constraints of the land base, plan for compatible areas to accommodate recreational, natural resource, and other future uses.	Follow guidelines established in the Site Specific Management Directives (see Table B-3, below).	Reclamation and State Parks.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS	
		Establish recommendations to prevent or minimize damage to Project Area resources caused by inappropriate livestock grazing, oil and gas development, or recreational activities.	Develop and implement an allotment-specific livestock GMP for the Project Area.	Reclamation, State Parks, and BLM.
		Coordinate with the CID to suggest management of resources on transferred lands that is compatible with resource management within the Project Area.	Work with the CID cooperatively on management of resources on transferred lands as appropriate.	Reclamation and CID.
		Establish continued coordination with local communities, Eddy County, BLM, State Parks, NMDGF, and other resource management agencies to maintain the rural character of the Project Area while providing for economic opportunities.	Participate with local agencies as appropriate to monitor development and plan for appropriate growth surround Project Area lands.	Reclamation, CID, Eddy County, BLM, State Parks, NMDGF, and other agencies as appropriate.
B4:	Improve Law Enforcement and Promote Public Health, Safety, and Welfare	In coordination with other agencies, pursue an agreement with local law enforcement agencies to provide additional law enforcement on Project Area lands not presently being patrolled and to supplement law enforcement provided by other agencies such as State Parks and NMDGF.	Develop an agreement between managing agencies as appropriate to provide law enforcement.	Reclamation, NMDGF, State Parks, and other agencies as appropriate.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS	
		Develop, clarify, formalize, and/or enforce appropriate regulations and guidelines to educate the public about management of Reclamation land and waters within the Project Area on the following topics: <ul style="list-style-type: none"> ▸ Vandalism/Crime ▸ Management of waste ▸ Trespass ▸ Boating regulations ▸ Recreational use of wildlife management areas ▸ Access ▸ Camping ▸ Hunting/Fishing 	Develop and implement a public education and information program. Create and make available maps for the Project Area showing access points, land uses, points of interest, and recreation sites. Describe current rules and regulations including waste disposal, boating regulations, camping regulations, and hunting/fishing regulations.	Reclamation, CID, State Parks, NMDGF, and other agencies as appropriate.
B5:	Provide Adequate and Safe Access to All Designated Project Public Use Areas	Cooperate with the State, county, and local governments, and others, in their efforts to achieve needed improvements and/or maintenance of regional and local access roads.	Investigate the feasibility of entering into cooperative agreements with local and state entities to formulate a regional travel management plan.	Reclamation, State Parks, and NMSHTD ^f .
		Provide adequate vehicular access and parking at all designated use areas on Reclamation lands.	Monitor public use and determine access and parking needs where access will not interfere with other resource plans.	Reclamation and State Parks.
		Control access to sensitive areas (e.g., wildlife habitat, archaeological sites, project facilities, etc.).	Support State Parks in their efforts to implement access control points within existing Developed Recreation Areas (motorized and non-motorized) and to prevent shoreline vehicular access except at designated areas such as existing boat ramps.	Reclamation and State Parks.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
	<p>Clarify and define the use of existing access points through a clear, formal Memorandum of Understanding (MOU) among Reclamation, State Parks, NMDGF, and State and local governments.</p>	<p>Review and revise the license agreement and/or the MOU between Reclamation, State Parks, and local governments as necessary. Establish a process and criteria for reviewing requests for future access points.</p>	<p>Reclamation and State Parks.</p>
	<p>Develop and provide an access plan to Project Area users indicating:</p> <ul style="list-style-type: none"> ▶ Public access to and through the Project Area ▶ Various uses of land within the Project Area ▶ Agency management responsibilities within the Project Area ▶ Access regulations within the Project Area 	<p>Develop and implement an access management plan. Close and revegetate approximately 214 kilometers (133 miles) of unmanaged and unmaintained roads. Develop four new primitive access sites with small gravel parking areas.</p>	<p>Reclamation, State Parks, and other agencies as appropriate.</p>
CATEGORY C: RECREATION			
C1:	Investigate and Develop Appropriate Uses of the Champion Cove Area	Identify and evaluate appropriate uses of the Champion Cove area that will be compatible with existing resource needs.	Work with Eddy County, State Parks, and NMDGF on Champion Cove issues.
		Pursue an agreement for management of the area.	Establish management responsibility for the Champion Cove area.
		Identify needed facilities to provide security, access control, refuse disposal, and waste management should public use be continued. Consider "movable" facilities to accommodate changing reservoir water levels and consider limiting public access to better manage resources.	Work with Eddy County, State Parks, and NMDGF on Champion Cove issues.
		Ensure safe access to and from Highway 285 into Champion Cove.	Work with Eddy County, State Parks, and NMDGF on Champion Cove issues.
			Reclamation, Eddy County, State Parks, and NMDGF.



Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
C2: Provide Accessible Recreational Facilities	Provide appropriate access for the elderly and disabled at all Reclamation and State facilities that is consistent with current Federal regulations and guidelines.	Meet Americans with Disabilities Act and Rehabilitation Act requirements.		Reclamation and State Parks.
	Survey and evaluate existing facilities within the Project Area for access requirements.	Meet Americans with Disabilities Act and Rehabilitation Act requirements.		Reclamation and State Parks.
	Recommend improvements to existing facilities to bring them into compliance.	Meet Americans with Disabilities Act and Rehabilitation Act requirements.		Reclamation and State Parks.
C3: Provide Adequate Recreational Support Facilities, Both Land-Based and Water-Based, to Meet Demand within the Limits of the Project Area's Carrying Capacity	Determine the Project Area's carrying capacity for water-based and land-based recreational activities. Designate areas suitable for future facilities development.	Accommodate needed changes of future developed water-based and land-based oriented recreation uses such as: <ul style="list-style-type: none"> ▶ Number of developed campsites, ▶ Number of dispersed campsites, ▶ Capacity limits for BAOT, ▶ Multi-use trail systems, and ▶ Other shoreline support facilities. See Site-Specific Management Directives in Table B-3 for further information.		Reclamation, NMDGF, and State Parks.
	Investigate, plan for, and locate additional recreational support facilities at key locations within the Project Area as demand warrants.	See Site-Specific Management Directives in Table B-3 for further information.		Reclamation, NMDGF, and State Parks.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
	<p>Explore the possibility of developing trail systems throughout the Project Area that will accommodate hiking, equestrian, and bicycle uses. In any trail system, achieve linkages among the various recreation sites.</p>	<p>Identify the needs for a non-motorized multi-use trail system. Prepare a trails master plan for the Project Area. The master plan should include:</p> <ul style="list-style-type: none"> ▶ Location of trail route; ▶ Trailhead locations; ▶ Linkages to existing trails or recreational facilities; ▶ Trail interpretation and signage; and ▶ Trail support facilities such as restrooms, bicycle stands, horse rails, etc. ▶ Connection between Avalon Reservoir and the Flume by extending the existing canal trail. 	<p>Reclamation, CID, and State Parks.</p>
	<p>Provide opportunities for nature interpretation and wildlife observation wherever consistent with natural resource conservation and management Goals and Objectives. Recommend informational lectures/programs at the Visitor Center/ campgrounds to inform and educate visitors.</p>	<p>Develop and implement an Interpretive Master Plan that highlights education opportunities for visitors to the Project Area. Identify areas for nature interpretation and wildlife observation. Create programs to develop information and instruction of:</p> <ul style="list-style-type: none"> ▶ Wildlife within the Project Area, ▶ Nature interpretation, and ▶ Lecture series on specific wildlife or nature subjects. <p>Provide information on interpretive programs at visitors centers and campground kiosks.</p>	<p>Reclamation and State Parks.</p>

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS	
CATEGORY D: NATURAL AND CULTURAL RESOURCES				
D1:	Protect Water Quality in the Reservoirs and the Pecos River	Provide sanitation and waste management facilities at developed recreation sites (e.g., restrooms, trash containers, Recreational Vehicle [RV] and boat dump stations, etc.).	Ensure the appropriate sanitation/waste management facilities are provided at all recreation areas. Inventory current facilities and address current and future needs. Develop and implement a contingency and containment plan for stored petroleum products as necessary.	Reclamation and State Parks.
		Encourage and support the State of New Mexico Environment Department, Field Operations Division, in achieving and enforcing proper installation, operation, and maintenance standards for sewer systems and private septic systems on properties surrounding the Project Area.	Regulate the construction and use of septic systems to ensure compliance with State regulations. Investigate alternative waste water disposal systems (e.g. sanitary sewer system).	Reclamation, NMED/SWQB ⁹ , and State Parks.
		Develop and implement an ongoing water quality monitoring program.	Continue the on-going water quality monitoring program for both reservoirs. Ensure the water quality monitoring program is being followed. Complete additional baseline studies and monitor water quality as needed.	Reclamation, State Parks, CID, NMED/SWQB, and other agencies as appropriate.
		Investigate and determine the source of illegal waste disposal in order to protect water quality.	Work with appropriate agencies to control illegal dumping.	Reclamation, NMDGF, State Parks, and other agencies as appropriate.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
D2: Control/Manage Noxious Weeds and Other Vegetation	Prepare and administer an Integrated Vegetation Management Plan for the Project Area, in compliance with the Noxious Plant Management MOU, to control and manage salt cedar, noxious weeds, or other vegetation and to re-establish native vegetation within the Project Area.	Develop and implement an Integrated Pest Management Plan for vegetation and rodents that would include: <ul style="list-style-type: none"> ▶ Describe the methods used (e.g. mechanical, chemical, thermal) to control various pests (e.g. weeds, shrubs, vertebrates, and invertebrates). ▶ Monitor the effects of vegetation management on wildlife habitats and populations. ▶ Update and improve the pest management program currently being implemented. 	Reclamation, CID, State Parks, NMDGF, and other agencies as appropriate.
	Monitor the effects of vegetation management on wildlife habitats and populations.	Incorporate findings into the Integrated Pest Management Plan.	Reclamation, CID, State Parks, NMDGF, and other agencies as appropriate.
D3: Manage Wildfires	Pursue a formal agreement with the appropriate agency(ies) for wildfire management.	Work with the appropriate agencies to provide wildfire management of Project Area lands.	Reclamation, BLM, NMDGF, State Parks, and other agencies as appropriate.
	Reduce fire hazards through appropriate grazing, mechanical, and/or prescribed burning methods.	Incorporate findings into the Fire Management Plan (FMP).	Reclamation, BLM, NMDGF, State Parks, and other agencies as appropriate.
	Develop and implement a FMP.	Work with appropriate agencies to develop and implement a FMP.	Reclamation, BLM, NMDGF, State Parks, and other agencies as appropriate.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)		MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
D4:	Protect Cultural Resources	Identify the location, integrity, and eligibility of cultural resource sites within the Project Area including historic, pre-historic, and paleontological resource artifacts.	Document (e.g. mapping, photography, excavation, or collection) locations and integrity of cultural resources within the Project Area (e.g. historic, prehistoric, and paleontological resource artifacts).	Reclamation, CID, State Parks, NMSHPO ^h and other agencies as appropriate.
		Establish a proactive program to protect, preserve, and interpret historic, pre-historic, and paleontological resource sites where appropriate.	Develop an Integrated Cultural Resources Management Plan. This plan would: <ul style="list-style-type: none"> ▶ Protect unauthorized collection and excavation of artifacts and all other ground-disturbing activities. ▶ Require permitting and compliance with the National Historic Preservation Act for any professional excavation of archaeological or historic sites. ▶ Develop a public education program about these cultural resources. ▶ Document eligible sites with the National Register of Historic Places. ▶ Assess all cultural resources within the area for potential effect before any ground-disturbing activities. ▶ Include a 'stop work' order on all construction activities if cultural resources are found during construction. ▶ Pursue and agreement with the CID for establishing guidelines to maintain and protect historic facilities and sites within the Project Area. 	Reclamation, CID, State Parks, NMSHPO, and other agencies as appropriate.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS	
D5:	Protect and Enhance Suitable Vegetation and Wildlife Habitat Values	<p>Identify and designate Wildlife Management Areas at suitable locations within the Project Area to preserve long-term, viable habitat for avian species, big game, and other mammals.</p>	<p>Develop a Wildlife Management Plan for protection and enhancement of wildlife species within designated Wildlife Management Areas. Specify management responsibilities, designate sensitive habitats, and recommend enhancement opportunities. The Wildlife Management Plan would:</p> <ul style="list-style-type: none"> ▶ Specify suitable recreation within Wildlife management Areas. ▶ Identify measures to enforce restrictions on recreational use. ▶ Identify areas in need of restoration. ▶ Describe desired vegetation conditions and measures to expand natural habitat for endangered species. ▶ Protect and enhance areas designated as occupied territories of threatened or endangered species. 	Reclamation, State Parks, NMDGF, USFWS ¹ , and other agencies as appropriate.

Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
	<p>Clarify and/or establish management agreements, where appropriate, with the USFWS, NMDGF, State Parks, other agencies with appropriate management responsibilities, and/or adjacent land owners for the management of designated Wildlife Management Areas and for threatened and endangered species (TES) habitat protection and enhancement.</p>	<p>Develop and implement management agreements with appropriate agencies for management of Wildlife Management Areas.</p>	<p>Reclamation, State Parks, NMDGF, USFWS, other agencies (as appropriate), and land owners.</p>
	<p>Investigate buffer zones or other measures to avoid conflict with or damage to Wildlife Management Areas arising from human uses on land or water as needed.</p>	<p>Develop a Wildlife Management Plan indicating buffer zones on a land use map. Include a set of prohibited and recommended uses within each buffer zone.</p>	<p>Reclamation, State Parks, NMDGF, USFWS, and other agencies as appropriate.</p>
	<p>Identify wetlands and riparian vegetation and provide recommendations for the protection of such areas in accordance with existing Federal and State regulations.</p>	<p>Develop and implement a Wetlands Management Plan that would:</p> <ul style="list-style-type: none"> ▶ Identify restrictions of recreational activities in wetland areas. ▶ Specify the appropriate setback for development of recreational facilities. ▶ Apply best management practices to control erosion and limit impacts to any nearby wetlands. ▶ Increase protection and enhancement opportunities within the wetland areas. ▶ Inventory wetland and riparian vegetation. ▶ Protect jurisdictional wetlands in accordance with existing Federal regulations. 	<p>Reclamation, State Parks, NMDGF, USFWS, and other agencies as appropriate.</p>
	<p>Clarify designated locations available for public hunting and fishing.</p>	<p>Provide current hunting regulations information at public information sites.</p>	<p>Reclamation, State Parks, and NMDGF.</p>



Table B-1. General Management Directives (cont.).

MANAGEMENT DIRECTION (GOAL)	MANAGEMENT OBJECTIVES	MANAGEMENT ACTION	LEAD AGENCY/ PARTNERSHIPS
D6: Protect and Enhance the Quality of the Fishery	Identify beneficial water level management for fish spawning periods at Brantley and Avalon Reservoirs within current legal constraints.	Identify beneficial pool levels for each reservoir. Incorporate findings into the Fisheries Management Plan.	Reclamation, CID, NMDGF, and State Parks.
	Recommend and support beneficial flows for the Pecos River between Brantley and Avalon Reservoirs within current legal constraints.	Identify beneficial river flows for the Pecos River. Incorporate findings into the Fisheries Management Plan.	Reclamation, CID, NMDGF, and State Parks.
	Cooperate with NMDGF and other appropriate agencies in developing fishery management and stocking programs consistent with public demand.	Develop and implement a Fisheries Management Plan that would: <ul style="list-style-type: none"> ▶ Identify a fishery management and stocking program. ▶ Identify the public fishery demand. ▶ Monitor the reservoirs and river to evaluate the need for catch limitations. ▶ Consider establishing fishing regulations for certain shoreline areas to protect the shoreline fishing experience. 	Reclamation, State Parks, NMDGF, and other appropriate agencies.
	Plan for and implement new studies of the fishery habitat and species composition. Fine-tune fishery management programs based on these studies and fishing demand.	Study fish habitat and species composition and include findings in the fishery management plan.	Reclamation, State Parks, NMDGF, and USFWS.

- ^a U.S. Department of the Interior, Bureau of Reclamation.
- ^b New Mexico State Park and Recreation Division.
- ^c Carlsbad Irrigation District.
- ^d New Mexico Department of Game and Fish.
- ^e U.S. Department of the Interior, Bureau of Land Management.
- ^f New Mexico State Highway Transportation Department.
- ^g State of New Mexico Environment Department - Surface Water Quality Bureau.
- ^h New Mexico State Historic Preservation Office.
- ⁱ U.S. Fish and Wildlife Service.



Table B-2. Site-Specific Management Directives.

AREAS AND FACILITIES	FUNCTION (LAND USE CATEGORY)	MANAGEMENT ACTION
Avalon Day Use Area	Developed Recreation Area (without utilities) <ul style="list-style-type: none"> ▸ 10 hectares (24 acres) Administrative Area <ul style="list-style-type: none"> ▸ 24 hectares (59 acres) 	Maintain existing facilities. Develop new Developed Recreation Area (without utilities) day use area. Provide adequate sanitation/waste management facilities. Develop a new non-motorized multi-use trail along the existing canal to connect Avalon Dam with the Flume. Protect historic resources.
Pecos River Primitive Area	Primitive Recreation Area (motorized access) <ul style="list-style-type: none"> ▸ 5,461 hectares (13,495 acres) ▸ 1,350 Potential Dispersed Camping Units (maximum) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Protect historic resources.
Brantley Lake State Park Visitor Center	Developed Recreation Area (with utilities) <ul style="list-style-type: none"> ▸ 19 hectares (47 acres) 	Maintain existing facilities. Develop a public education and information program. Provide an interpretive fish and wildlife display. Provide adequate sanitation/waste management facilities.
East Side Brantley Lake State Park and Rocky Bay Primitive Area	Primitive Recreation Area (motorized access) <ul style="list-style-type: none"> ▸ 623 hectares (1,539 acres) ▸ 154 Potential Dispersed Camping Units (maximum) Administrative Area <ul style="list-style-type: none"> ▸ 9 hectares (21 acres) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Improve check station.
Limestone Campground and East Side Day Use Area	Developed Recreation Area (with utilities) <ul style="list-style-type: none"> ▸ 104 hectares (256 acres) ▸ 100 Potential Developed Camping Units (maximum) 	Maintain existing facilities. Expand existing campground as necessary. Provide adequate sanitation/waste management facilities.
Seven Rivers Day Use Area	Developed Recreation Area (without utilities) <ul style="list-style-type: none"> ▸ 4 hectares (10 acres) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Develop a new non-motorized multi-use trail system.



Table B-2. Site-Specific Management Directives (cont.).

AREAS AND FACILITIES	FUNCTION (LAND USE CATEGORY)	MANAGEMENT ACTION
Seven Rivers Primitive Area	Primitive Recreation Area (motorized access) <ul style="list-style-type: none"> ▸ 265 hectares (655 acres) ▸ 66 Potential Dispersed Camping Units (maximum) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Develop a new non-motorized multi-use trail system.
South Bay Primitive Area	Primitive Recreation Area (motorized access) <ul style="list-style-type: none"> ▸ 265 hectares (655 acres) ▸ 66 Potential Dispersed Camping Units (maximum) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Develop a new non-motorized multi-use trail system.
Champion Cove	Developed Recreation Area (without utilities) <ul style="list-style-type: none"> ▸ 72 hectares (177 acres) ▸ 50 Potential Developed Camping Units (maximum) 	Develop new Developed Recreation Area (without utilities) campground. Improve access road. Develop a new non-motorized, multi-use trail system. Provide adequate sanitation/waste management facilities. Construct boat ramp. Establish management responsibility for the area through cooperative agreement.
The Flume Day Use Area	Developed Recreation Area (with utilities) <ul style="list-style-type: none"> ▸ 17 hectares (43 acres) 	Maintain existing facilities. Provide adequate sanitation/waste management facilities. Develop a new non-motorized multi-use trail along the existing canal to connect Avalon Dam with the Flume (i.e., extend existing trail to Avalon Dam).
Brantley Wildlife Management Area	Wildlife Management Area <ul style="list-style-type: none"> ▸ 10,008 hectares (24,729 acres) Administrative Area <ul style="list-style-type: none"> ▸ 128 hectares (317 acres) 	Maintain existing facilities. Develop new Primitive access sites with small gravel parking areas at four locations. Provide adequate sanitation/waste management facilities.

APPENDIX C: AGENCY CORRESPONDENCE



IN REPLY REFER TO:

United States Department of the Interior

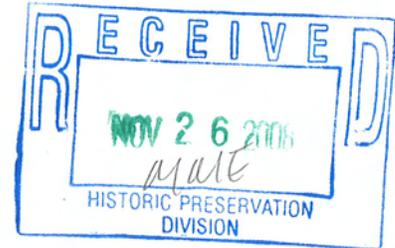
BUREAU OF RECLAMATION

Albuquerque Area Office
555 Broadway Blvd. NE, Suite 100
Albuquerque, NM 87102-2352



NOV 26 2008

ALB-186
ENV-1.10



085867

Ms. Katherine A. Slick
Director, New Mexico State Historic Preservation Office
Department of Cultural Affairs
Bataan Memorial Building, 407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

Subject: Preliminary Section 106 Consultation for the Environmental Assessment (EA) for the Brantley and Avalon Reservoirs 2008 Resource Management Plan Amendment, Carlsbad Project, New Mexico

Dear Ms. Slick:

The U.S. Department of the Interior, Bureau of Reclamation is preparing an EA and subsequent Resource Management Plan Amendment (RMPA) to address future Federal leasable (e.g., geothermal, oil, gas) minerals development on Reclamation-administered lands in Eddy County, New Mexico (Figure 1-1). The lands encumbered by the EA and RMPA are part of Reclamation's Carlsbad Project, which is authorized under the Reclamation Act of June 17, 1902, and the Brantley Project Acts of 1972 (P. L. 92-514) and 1980 (P. L. 96-375).

The original Carlsbad Project was authorized by the Secretary of the Interior on November 28, 1905, from which time project facilities have been rehabilitated, enlarged, and improved under subsequent authorizations to provide for irrigation, flood control, river regulation, fish and wildlife, recreation, and other beneficial uses.

The Minerals Leasing Act of 1920, as amended, provides the Department with authority to issue leases on lands where the mineral rights are held by the Federal government. This authority has been delegated to the Department, Bureau of Land Management, a Cooperating Agency for the RMPA and EA. The RMPA will amend Reclamation's 2003 Resource Management Plan for Brantley and Avalon Reservoirs by modifying the existing oil and gas development stipulations of Federal minerals, and only affects those lands identified as containing existing *Unleased Federal Minerals*, as well as any future unleased Federal mineral estate.

The result of this planning process will be an RMPA that identifies approximately 40,000 acres at the Reservoirs that will be subject to the proposed stipulations, made available for oil and gas development through Federal leasing, and what requirements or stipulations are needed to manage those lands to protect other resource values. This includes all Federal mineral lands, and future leases on lands conveyed by Reclamation to the Carlsbad Irrigation District (CID) in 2001. Stipulations that will be attached to future Federal mineral leases and future CID mineral leases may

include, but are not limited to, controlled surface use, timing limitations, or no surface occupancy. The RMPA document also will identify the circumstances necessary for granting waivers, exceptions, or modifications to leasing stipulations.

The area of impact includes a variety of cultural resources, such as archaeological sites (prehistoric and historic), the historic CID, and through consultation with the appropriate Native American groups may also include Traditional Cultural Properties (TCPs), Sacred Sites (to date after previous and ongoing consultations no TCPs or sacred sites have been determined). Reclamation will continue to conduct Section 106 review and compliance on oil and gas projects pursuant to a Programmatic Agreement with the BLM, and other agreements between BLM and your office. The BLM is the lead agency for cultural resources compliance on projects that (1) involve permission to drill on BLM or Reclamation lands, including access roads and pipelines submitted as a package with a well; and (2) involve multiple surface land status, in which BLM is one of the parties.

Reclamation will periodically undertake archaeological field projects on its historic properties as part of its Section 110 stewardship responsibility. Reclamation also will continue to monitor the condition of its historic properties and fulfill its obligations under the Archaeological Resources Protection Act of 1979.

This EA, which is prepared to meet current requirements of the Federal minerals program, is not the final review upon which approval of all proposed actions on Reclamation lands in Eddy County will be based. Rather, the RMPA will identify lands within Reclamation's jurisdiction that are available for leasing and how those Federal minerals might be developed and managed for oil and gas activities. Decisions on all subsequent site-specific actions will be tiered from this EA. That is, additional compliance with all applicable laws and regulations, such as the National Environmental Policy Act, National Historic Preservation Act (NHPA), the Clean Water Act, and the Endangered Species Act, will occur on site specific lease/drilling proposals. However, the scope of the site-specific approval process will be streamlined and facilitated by the planning and programmatic evaluation of impacts in the RMPA and EA documents.

Under Section 106 of the NHPA, as amended, Reclamation is informing your office of our EA and RMPA planning process. The EA and RMPA will be provided to your office for review and comments. Existing environmental compliance procedures by BLM and Reclamation will continue to be utilized to provide environmental compliance for oil and gas development.

If you have any questions or concerns about the project, please contact Mr. Mark Hungerford at 505-462-3664.

Sincerely,

COMMENTS


for NM State Historic Preservation Officer

12/03/08



John R. Poland
Area Manager

We look forward to reviewing the documents!

Enclosure

NOV 17 2008

ALB-186
ENV-1.10

Mr. Bobby Jay
Tribal Administrator, Apache Tribe of Oklahoma
P.O. Box 1220
Anadarko, OK 73005

Subject: Consultation Invitation Regarding the Brantley and Avalon Reservoirs Resource Management
Plan Amendment Environmental Assessment

Dear Mr. Jay:

In accordance with the National Environmental Policy Act of 1969, the Bureau of Reclamation is preparing an Environmental Assessment (EA) and an amendment to the original Reclamation 2003 Resource Management Plan to evaluate the conditions for existing mineral leasing and development within the Project Area, develop additional oil and gas leasing stipulations and to develop appropriate guidance that will allow Reclamation and Bureau of Land Management to make informed decisions about oil and gas leasing and development on Reclamation-administered lands in order to comply with existing guidelines and laws.

Reclamation is preparing this EA and subsequent Resource Management Plan Amendment to address future Federal leasable (e.g., oil, gas) minerals development on Reclamation-administered lands in Eddy County, New Mexico.

The purpose of this letter is to invite your Tribe's involvement on a government-to-government basis to identify any concerns your tribe may have regarding the potential effects of our future activities on trust assets, cultural and biological resources, or tribal health and safety. Reclamation wants to ensure that you have an opportunity to help us identify and address any issues important to your tribe.

Reclamation will gladly provide any additional information needed by you or your staff to describe the proposal in further detail. To discuss the EA or arrange a meeting, please contact Ms. Marsha Carra at 505-462-3602.

Sincerely,



John R. Poland
Area Manager

Identical Letter Sent to Persons on Next Page.

Identical Letter Sent To:

Honorable Wallace Coffey
Chairman, Comanche Indian Tribe
P.O. Box 908
Lawton, OK 73502

Mr. Johnny Wauqua
Chairman, Comanche Tribal Business
Committee
P.O. Box 908
Lawton, OK 73502

Honorable Jeff Houser
Chairman, Fort Sill Apache Tribe of Oklahoma
Route 2, Box 121
Apache, OK 73006

Honorable Benjamin H. Nuvamsa
Chairman, Hopi Tribe
P.O. Box 123
Kykotsmovi, AZ 86039

Mr. Leigh Kuwanwisiwma
Director, Hopi Tribe Cultural Preservation
Office
P.O. Box 123
Kykotsmovi, AZ 86039

Honorable Levi Pesata
President, Jicarilla Apache Nation
P.O. Box 507
Dulce, NM 87528

Honorable Don Tofpi
Chairman, Kiowa Tribe of Oklahoma
P.O. Box 369
Carnegie, OK 73015-0369

Mr. Dewey Tsonetokoy, Sr.
Kiowa NAGPRA Coordinator
Route 2, Box 74
Ft Cobb, OK 73038

Mr. Don Tofpi
Chairman, Kiowa Business Committee
P.O. Box 369
Carnegie, OK 73015-0369

Honorable Carlton Palmer
President, Mescalero Apache Tribe
P.O. Box 227
Mescalero, NM 88340

Ms. Donna Stern-McFadden
Tribal Historic Preservation Office
P.O. Box 227
Mescalero, NM 88340

Honorable Joe Shirley
President, Navajo Nation
P.O. Box 9000
Window Rock, AZ 86515

Mr. Lawrence Morgan
Speaker, Navajo Nation Council
P.O. Box 3390
Window Rock, AZ 86515

Honorable Robert Benavides
Governor, Pueblo of Isleta
P.O. Box 1270
Isleta, NM 87022

Mr. John Sorrell
Hydrology, Pueblo of Isleta
P.O. Box 1270
Isleta, NM 87022

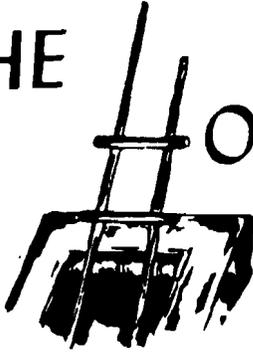
Honorable Paul Chinana
Governor, Pueblo of Jemez
P.O. Box 100
Jemez Pueblo, NM 87024

Honorable Frank Paiz
Governor, Ysleta del Sur Pueblo
P.O. Box 17579
El Paso, TX 79917

Mr. Rick Casada
Cultural Resources Coordinator
Ysleta del Sur Pueblo
P.O. Box 17579
El Paso, TX 79917

WBR:MCarra:DKinsey:11/07/08:505-462-3602
G:\SecFiles\Envi\Carra, Marsha\Draft_SHPO Letter-110708.doc

THE HOPI TRIBE



CHAIRMAN

VICE-CHAIRMAN

January 12, 2009

John R. Poland, Area Manager
 Attention: Marsha Carra
 Bureau of Reclamation, Albuquerque Area Office
 555 Broadway Blvd., NE, Suite 100
 Albuquerque, New Mexico 87102-2352

RECEIVED BOR ALBUQUERQUE AREA OFFICE OFFICIAL FILE COPY		
JAN 20 2009 I-09-19		
Class	ENV-6.00	Action
Prj	GF	
Cntr #		
Fldr #		
Date	Initial	To
1/21	JRF	100
1/23	WR	102
1/26	WL	150
1/26	MC	186

Dear Mr. Poland,

This letter is in response to your correspondence dated November 17, 2008, regarding the Bureau of Reclamation preparing an Environmental Assessment and an amendment to the 2003 Resource Management Plan to address oil and gas leasing and development on Reclamation administered lands in Eddy County.

The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in New Mexico, and the Hopi Cultural Preservation Office supports the identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties. The Hopi Cultural Preservation Office considers the archaeological sites of our ancestors to be Traditional Cultural Properties. Therefore, we appreciate Reclamation's solicitation of our input and efforts to address our concerns.

And therefore, please provide us with a copy of the draft Brantley and Avalon Reservoirs Resource Management Plan Amendment Environmental Assessment for review and comment. Should you have any questions or need additional information, please contact Terry Morgart at 928-734-3619 the Hopi Cultural Preservation Office. Thank you for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
 Hopi Cultural Preservation Office

xc: New Mexico State Historic Preservation Office



THE NAVAJO NATION

JOE SHRILEY, JR.
PRESIDENT

RECEIVED BOR
ALBUQUERQUE AREA OFFICE
OFFICIAL FILE COPY
FEB 09 2009

BEN SHELLY
VICE PRESIDENT

February 04, 2009

Mr. John R. Poland, Area Manager
Bureau of Reclamation
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102-2352

Class <i>LND-6-00</i>		
Prj <i>GF</i>		
Cntr #		
Fldr #		
Date	Initial	To
<i>2/10</i>	<i>RP</i>	<i>100</i>
<i>2/11</i>	<i>UC</i>	<i>102</i>
<i>2/13</i>	<i>ML</i>	<i>150</i>
<i>2/13</i>	<i>MC</i>	<i>186</i>

Action

192

Subject: Tribal Consultation Request. Proposing an Amendment of the Resources Management Plan to include evaluation of the existing mineral leasing and development of additional oil and gas leasing strategies at the Brantley and Avalon Reservoirs, New Mexico.

Dear Mr. Poland:

Our apology for an oversight and missing the deadline date of our response to your request, please note that in reference to your letter of November 17, 2008, the Historic Preservation Department – Traditional Culture Program (HPD-TCP) received a request for consultation regarding the above undertaking and/or project. After reviewing your consultation documents, HPD-TCP has concluded the proposed undertaking/project area **will not impact** any Navajo traditional cultural properties or historical properties.

However, if there are any inadvertent discoveries made during the course of the undertaking, your agency shall cease all operations within the project area. HPD-TCP shall be notified by telephone within 24 hours and a formal letter be sent within 72 hours. All work shall be suspended until mitigation measures/procedures have been developed in consultation with the Navajo Nation.

The HPD-TCP appreciates your agency's consultation efforts, pursuant to 36 CFR Pt. 800.1 (c)(2)(iii). Should you have additional concerns and/or questions, do not hesitate to contact me. My contact information is listed below.

Sincerely,

Tony Joe, Program Manager
Historic Preservation Department – Traditional Culture Program

Tel: 928.871.7688

Fax: 928.871.7886

E-mail: tonyjoe@navajo.org

TCP 09-193
File: Office file/chrono



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

March 4, 2011

Cons. #22420-2011-I-0033

Memorandum

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

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

Subject: Concurrence with the Revised Biological Assessment for the Brantley and Avalon Reservoirs Resource Management Plan Amendment

Thank you for your request for concurrence under section 7 of the Endangered Species Act, as amended, on the revised Biological Assessment of the Brantley and Avalon Reservoirs Resource Management Plan Amendment. The Bureau of Reclamation's (Reclamation) proposed action addresses future Federal leasable oil, gas, and mineral development on approximately 49,000 acres in Eddy County, New Mexico. The revised January 28, 2011, biological assessment and Reclamation's February 25, 2011, electronic mail correspondence to the New Mexico Ecological Services Field Office (NMESFO) determined that the proposed action "may affect, is not likely to adversely affect" the Pecos bluntnose shiner (*Notropis simus pecosensis*), interior least tern (*Sterna antillarum athalassos*), and gypsum wild-buckwheat (*Eriogonum gypsophilum*) and its critical habitat.

The NMESFO concurs with your determinations that the Brantley and Avalon Reservoirs Resource Management Plan Amendment "may affect, is not likely to adversely affect" these species and critical habitat with implementation of your proposed special lease stipulations. These stipulations include the following, among others:

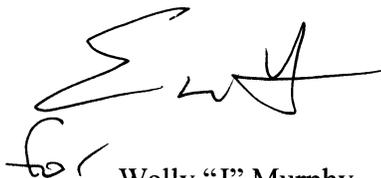
- No surface occupancy within 2,640 horizontal feet of dam embankments, appurtenant structures, and tunnels at Brantley Dam or Avalon Dam sites.
- No surface occupancy within 660 horizontal feet of maximum water surface at Brantley Reservoir (elevation 3,263 feet) or Avalon Reservoir (elevation 3,190 feet).

- No storage facilities within 660 horizontal feet of the 100-year floodplain at Brantley Reservoir (elevation 3,283 feet) or Avalon Reservoir (elevation 3,200 feet).
- Surface occupancy on a case-by-case basis within 660 horizontal feet of normal high water line of streams, rivers, and arroyos for construction of roads and pipelines. Construction of access roads and pipelines will be restricted in high-value riparian and sensitive areas along streams, rivers, and arroyos. No wells permitted within these areas.
- Wildlife Habitat Projects: Surface disturbance will not be allowed within 200 meters of existing or planned wildlife habitat improvement projects. Large-scale vegetation manipulation projects such as prescribed burns will be excepted. This requirement will be considered for waiver with appropriate off-site mitigation, as determined by the Authorized Officer.
- Endangered Species: Surface disturbance will not be allowed within 200 meters of critical endangered species habitat.

This concludes section 7 consultation on the proposed Brantley and Avalon Reservoirs Resource Management Plan Amendment. Please contact the NMESFO to verify that the above determinations and concurrence are still valid if: 1) Future surveys detect listed or proposed species in habitats where they have not been previously observed; 2) the project is changed or new information reveals effects of the action to the listed species or critical habitat that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

The NMESFO appreciates the information and analysis conducted by the Albuquerque Area Office in this biological assessment. We also commend Reclamation for avoiding adverse effects to listed species and critical habitat in this project. In future communications regarding this memorandum or the proposed project, please refer to Consultation #22420-2011-I-0033. If you have any questions concerning this memorandum, please contact Dr. Patricia Zenone of my staff at (505) 761-4718.

Sincerely,

A handwritten signature in black ink, appearing to read 'Wally J. Murphy', with a stylized flourish at the end.

Wally "J" Murphy
Field Supervisor

cc:

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

Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,
Santa Fe, New Mexico

District Manager, Bureau of Land Management, Carlsbad District Office, Carlsbad, New Mexico

**APPENDIX D: COMMENT LETTERS AND COMMENT
RESPONSES**

APPENDIX D: COMMENT LETTERS AND COMMENT RESPONSES

This appendix contains the unabridged comment letters received from agencies, organizations, and the general public on the Brantley and Avalon Reservoirs Resource Management Plan Amendment (RMPA) Draft Environmental Assessment (DEA). In most cases, comments were directed at specific topics of concern, while others requested clarification or correction of content in the DEA. All comment letters received are included in their entirety below, along with Reclamation responses to substantive comments. Where appropriate, the Final Environmental Assessment (FEA) has been revised in response to these comments where noted.

Each comment letter is numbered and presented with sequential numbers for each comment on the right margin of the letter. The vertical bars above the numbering indicate the position and length of each particular comment. The first number corresponds to the sequential number of the letter while the second number corresponds to the sequential number of the comment(s) in each letter. Responses to comments within each letter are presented following the letter itself.

Comment Letter 1

From: mburrows@valornet.com [<mailto:mburrows@valornet.com>]
Sent: Thursday, August 05, 2010 1:22 PM
To: Carra, Marsha F
Subject: Suggestion

Dear Ms. Carra :

This is Marvin Burrows down in Hobbs, NM. I've worked in the oil and gas industry in New Mexico for 43 years. I've worked as production supervisor for various companies, and as manager for oil and gas producers and pipeline companies. My current title is Engineering Manager for Rice Operating Company.

I've been following the progression of the issue concerning whether or not there should be oil and gas development of the Brantley / Avalon Project Areas. Has it been considered that the companies wanting to develop that area might be willing to contribute a percentage of oil and gas production toward the betterment of the project area? If, for example, \$.05 for each MCF of gas produced, and \$.50 for each barrel of oil produced, could go into a fund used for the betterment of the Project Area, I feel certain the developers would do it. It would even be a great tax deduction.

If such contributions went to the bottomless pit / black hole in Washington DC, I don't think the idea would ever fly. But if the money so contributed was in fact used for the betterment of the area, I don't think it would be a hard sell at all.

In all of my years of making things work, I've learned (the hard way) that there is always a compromise that is win/win. We just have to look for it.

Thanks

Marvin L. Burrows
Hobbs, NM

Comment 1-1

Response to Comment Letter 1

Thank you for your comments. Your comments are addressed below.

Response to Comment 1-1: Reclamation appreciates your suggestion for contributing a percentage of oil and gas production revenues generated within the Project Area toward improvements within the Project Area. Revenues from oil and gas production on Federal leases within the Project Area are collected and distributed by the Bureau of Land Management (BLM). Reclamation has no authority to impose any additional fees on lessees beyond the fees charged for administrative costs and right-of-use rental for surface facilities.

Comment Letter 2



2009-2010 Executive Committee

Chairman
Leland Gould
Western Refining, Inc.

Vice Chairman
Ray Payne
Devon Energy Corp.

Treasurer
Mike Hanagan
Manzano, LLC

Chairman-Elect
Kelly Hart
BP America

Kent Adams
BOPCO, LP

Daryn Forrest
Hobbs Rental Corp.

Ken Huseman
Basic Energy Services

Matthew Hyde
Concho Resources, Inc.

Thomas Janiszewski
Oxy Permian

A. Roy Lyons
ConocoPhillips

Mitch Mamoulides
Chevron USA, Inc.

Pinson McWhorter
Yates Petroleum

Raye Miller
Marbob Energy Corp.

Gary Pitts
EOG Resources, Inc.

Tom Price, Jr.
Chesapeake Energy Corp.

Robert Revella
Williams

Jason Sandel
Aztec Well Servicing Co.

Michael Smith
EPCO, Inc.

Jim Townsend
Holly Corp.

Ronnie Trammell
DCP Midstream

Jennifer Webster
El Paso Corp.

Past Chairman
Cliff Brunson
BBC International

President
Steve Henke

New Mexico Oil & Gas Association

P.O. Box 1864
Santa Fe, NM 87504-1864

Ph: 505-982-2568
Fax: 505-986-1094

www.nmoga.org

August 27, 2010

VIA E-MAIL
Ms. Marsha Carra
Bureau of Reclamation
555 Broadway Blvd, NE
Suite 100
Albuquerque, NM 87102

Re: Brantley and Avalon Reservoir RMPA/DEA Carlsbad Project

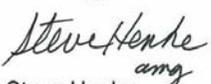
Dear Ms. Carra:

The New Mexico Oil and Gas Association (NMOGA) is a nonprofit trade association that represents all aspects of New Mexico's oil and natural gas industry. NMOGA represents over 300 member companies, from the largest major oil company to the smallest of independents, and all segments of the industry, including crude oil refiners, natural gas processors, pipeline operators as well as service and supply companies that support all segments of the oil and gas industry.

With the delay of the documents appearing on your web site, we lost the time needed to circulate to our members to coordinate comments. Therefore, we are requesting an extension of the comment period for the Brantley and Avalon Reservoir RMPA/DEA until Thursday, September 30, 2010.

I appreciate your consideration. If you have any questions, please feel free to contact me at 505.982.2568.

Sincerely,



Steve Henke
President

xc: Linda Rundell
Doug Burger
Jim Stovall

"Ensuring tomorrow's future today."
Serving our members since 1929

Comment 2-1



Response to Comment Letter 2

Thank you for your comments. Your comments are addressed below.

Response to Comment 2-1: Reclamation approved the request to extend the public comment period from 30 days to 60 days, ending on September 30, 2010.

Comment Letter 3



Devon Energy Corporation
20 North Broadway
Oklahoma City, OK 73102-8260

405 235 3611
www.devonenergy.com

September 26, 2010

Via Electronic Mail and Certified Mail

Marsha Carra
U.S. Department of the Interior
Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352
Email: mcarra@usbr.gov

Re: Brantley and Avalon Reservoirs Resource Management Plan Amendment Draft
Environmental Assessment

Dear Ms. Carra:

Devon Energy Corporation (Devon) files these comments on the Bureau of Reclamation's (Reclamation) Brantley and Avalon Reservoirs Resource Management Plan (RMP) Amendment, Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI). On August 30, Reclamation agreed to extend the comment period until September 30, 2010 and Devon timely submits these comments.

Devon appreciates the opportunity to comment on this RMP Amendment and the accompanying Draft EA and FONSI to Reclamation's 2003 RMP for the Brantley and Avalon Reservoirs. Devon currently has approximately 6,000 gross acres of oil and gas leases and approximately 50 wells within this planning area. Devon also has a significant lease position adjacent to the planning area and stands to be dramatically affected by the decisions made by this process. In addition to these comments, Devon also adopts and incorporates by reference the comments filed by the New Mexico Oil and Gas Association. Devon supports Reclamation's efforts to balance multiple and often competing interests in the planning area but believes several provisions and restrictions should be modified to accommodate multiple uses on the lands in the planning area, including oil and gas development.

GENERAL COMMENTS

Devon supports Reclamation's preferred alternative (Alternative C) with the modifications and revisions discussed below. These edits and modifications will protect the federal mineral estate while at the same time providing environmental protection measures that ensure protection of water resources, threatened and endangered species, cultural resources, wildlife and air quality. Reclamation should increase the amount of acreage that potential lessees could occupy, or lands that could later be occupied as determined on a case-by-case basis, based

Comment 3-1



Comment Letter 3 (cont.)

Ms. Marsha Carra
 Page 2
 September 20, 2010

on the site-specific parameters of each well or group of wells. Reclamation and the Bureau of Land Management (BLM) should preserve as much regulatory flexibility as possible for future oil and gas development in the project area.

Reclamation is conducting the RMP Amendment in cooperation and coordination with BLM, which has been delegated the authority to issue and manage oil and gas leases for lands controlled by Reclamation. Draft EA at 2. Given this dynamic, it is imperative that the rights and obligations of federal mineral lessees be protected by provisions related to BLM’s management of the federal mineral estate pursuant to the Mineral Leasing Act (MLA) and the Federal Land Policy Management Act (FLPMA). As a result, Reclamation must also follow the requirements for oil and gas leasing and management of the federal mineral estate found in the statutes, regulations, manuals, handbooks and policy of BLM and the Department of the Interior. Accordingly, in the specific comments below, Devon references and includes comments on Reclamation’s duty to comply with BLM’s management guidelines and parameters in overseeing the federal oil and gas program. Thus, the Draft EA should include a description and statement regarding FLPMA and Reclamation’s obligation to BLM and the Department of Interior in protecting the federal mineral estate in accordance with FLMPA. These statements should be included in Section 1.5 – Relevant Statutes and Regulations.

Devon provides the following background on the National Environmental Policy Act (NEPA) to provide context for its comments on the Draft EA. NEPA is a procedural statute that “prescribes the necessary process [and] does not mandate particular results.” *Wyo. Farm Bureau Fed’n v. Babbitt*, 199 F.3d 1224, 1240 (10th Cir. 2000). As explained by the U.S. Supreme Court in *Robertson v. Methow Valley Citizens Council*, “[i]t is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process.” 490 U.S. 332, 350 (1989). It is also well settled legal precedent that NEPA “does not require agencies to elevate environmental concerns over other appropriate considerations.” *Citizens’ Comm. to Save Our Canyons v. United States Forest Serv.*, 297 F.3d 1012, 1022 (10th Cir. 2002); *Utah Shared Access Alliance v. U.S. Forest Serv.*, 288 F.3d 1205, 1207 (10th Cir. 2002). NEPA does not require Reclamation to promote environmental concerns over other resources, including environmentally responsible oil and gas development.

NEPA does require Reclamation to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(2)(E). As stated in 40 C.F.R. § 1508.9(b), this statutory provision is independent of the environmental impact statement (EIS) requirement and mandates that agencies seek alternatives for all proposals, including those for which the agency prepares only an environmental assessment. *See Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002). Reclamation’s Draft EA for the Brantley and Avalon RMP Amendment, therefore, must consider a reasonable range of alternatives for oil and gas leasing.

Comment 3-1 (cont.)

Comment 3-2

Comment 3-3



Comment Letter 3 (cont.)

Ms. Marsha Carra
 Page 3
 September 20, 2010

SPECIFIC COMMENTS

Devon provides the following specific comments on the Draft EA.

1. Valid Existing Rights

Much of the planning area overlaps valid existing federal, state and private oil and gas leases. FLPMA states that “[a]ll actions by the Secretary concerned under this Act shall be subject to valid existing rights.” 43 U.S.C. § 1701 note (h). 43 C.F.R. § 1610.5-3(b); *see also Colorado Enviro. Coal.*, 165 IBLA at 227 (explaining that “FLPMA expressly provides that “[a]ll actions by the Secretary concerned under this Act shall be subject to valid existing rights.”) (citing 43 U.S.C. § 1701 note (h) (2000)). Thus, existing oil and gas lessees have valid existing rights to develop these leases regardless of the current or future land use designations that may be imposed upon this area.

Devon urges Reclamation and BLM to continue to recognize valid existing lease rights within the planning area. The valid existing rights and obligations conferred to operators from the Department of the Interior under these federal leases are not pre-empted or otherwise excused by Reclamation’s designation of new recreational and other types of management areas. In addition, Reclamation cannot deny operators access to their leases (i.e. roads, pipelines) when such access necessarily must traverse across unleased areas. The Draft EA should specify that valid existing rights will be protected regardless of the management decisions made as part of the RMP Amendment. Reclamation should include the following text in the RMP Amendment and Final EA:

Valid existing rights are legal rights to use the land that were in existence prior to implementation of the decisions in the RMP and/or RMP Amendment. The most significant types of valid existing rights are oil and gas leases, mining claims, and right-of-way authorizations. The oil and gas leasing stipulations specified for particular areas in the RMP Amendment will not apply to existing leases. These existing leases will be subject to the specific lease stipulations that were applied under the previous land use plan or that are attached to the actual lease. An existing right-of-way will only be subject to the specific terms and conditions that were applied when it was authorized.

2. Lease Stipulations

Reclamation has applied three types of special lease stipulations for the Project Area: (1) no surface occupancy; (2) no storage facilities; and (3) surface occupancy on a case-by-case basis. Draft FONSI at 3. These stipulations are subject to exception, modification and waiver at the discretion of the authorized officer. *Id.* The Draft EA does not contain an adequate analysis of why Reclamation determined to limit the special lease stipulations to these three. To completely comply with NEPA’s mandate to fully examine a reasonable range of alternatives, Reclamation must analyze other less restrictive alternatives that will not so heavily limit oil and gas development in the Planning Area. There are other reasonable and feasible alternative lease stipulations that Reclamation could apply that would allow the development of the oil and gas leases while protecting other important resources. For example, Reclamation should consider

Comment 3-4

Comment 3-5

Comment 3-6



Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 4
September 20, 2010

lease stipulations that allow for waiver of NSO if the authorized officer determines there is no potential to impact the waters in each reservoir based on yearly water levels. The Draft EA must explain why other alternatives were not considered in full and were subsequently dismissed.

Reclamation must also fully discuss and disclose to the public the specifics regarding the granting the exceptions, modifications and waivers of each of these lease stipulations. As written, the Draft EA fails to include any discussion regarding Reclamation’s use of these waivers.

3. Adequate Socio-Economic Analysis

Under NEPA, Reclamation must integrate social science and economic information in the preparation of informed, sustainable land use planning decisions, including amendments to land use planning decisions. In addition, BLM’s regulations implementing FLPMA for land use planning for mineral resources require that RMP decisions “estimate and display the physical, biological, economic, and social effects of implementing each alternative considered in detail.” 43 C.F.R. § 1610.4-6.

Similarly, NEPA requires federal agencies to “insure the integrated use of the natural and social sciences . . . in planning and decision making.” 42 U.S.C. § 4332. Under NEPA’s implementing regulations, the “human environment” includes economic and social effects. Specifically, this regulation provides that the human environment includes “the natural and physical environment and the relationship of people with that environment. . . . [and] the economic or social and natural or physical environmental” must discuss these effects on the human environment. 40 C.F.R. § 1508.14.

A proper socio-economic impact analysis must be used to assess the social and economic consequences of implementing the various alternatives identified through the planning process. The impact analysis must also include recent and verifiable income and employment for various economic sectors, community infrastructure, state and local revenues and expenditures, and land use patterns.

There is no support for Reclamation’s statement that there is a lack of interest by the oil and gas industry in this area. Draft EA at 4-29. This statement specifically contradicts the Draft EA’s purpose and need for developing the RMP Amendment that “[i]n the recent years the BLM has experienced a tremendous increase in interest from oil and gas development companies for new lease nominations throughout Eddy County, including the Project Area.” Draft EA at 1-5. Reclamation must correct these statements.

Mineral development is critical to the local economies of Eddy and other surrounding New Mexico counties. The Draft EA fails to fully account for the adverse economic impacts that would result from the restrictions placed on mineral development in the agency-preferred alternative (Alternative C). These restrictions would adversely impact tax revenues, employment, energy prices and royalty payments. Reclamation must fully consider how restricting oil and gas development on lands in the Planning Area would adversely affect local, state, and federal economies before making its final decision on this RMP Amendment.

Comment 3-6 (cont.)

Comment 3-7

Comment 3-8

Comment 3-9

Comment 3-10



Comment Letter 3 (cont.)

Ms. Marsha Carra
 Page 5
 September 20, 2010

The 2009 Economic Impact Report of New Mexico’s Oil and Gas Industry prepared by C. Megan Starbuck, Ph.D., available at the Energy Advances New Mexico website, concluded that over \$3.53 billion was generated by the extraction of oil and natural gas in New Mexico. This translates to over 15,650 jobs associated with the oil and gas industry. Further, revenue from taxes (\$983 million) accounted for over 18% of the state’s total tax revenue. These figures underscore the important and positive beneficial role that oil and natural gas development plays. Production taxes, royalties and leasing bonus and rentals are also realized at the federal, state and county level. In the Draft EA, Reclamation should account for these benefits by including a more thorough discussion of the positive economics of the oil and gas industry.

The data provided by Reclamation in the Draft EA does not support its conclusions in Section 4.1.12 that increasing oil and gas development would not produce much economic benefit. Draft EA at Section 3.2.12; Draft EA at 4-29. The Draft EA acknowledges that oil and gas revenues for the State of New Mexico for 2008 exceed \$1.3 billion (one fifth of the total General Fund revenue for the state). Draft EA at 3-45. Eddy County ranks third, and Chavez County ranks fifth in the state for oil and gas production and each “contributes substantial numbers of jobs to the economy of both counties.” Draft EA at 3-45. The oil and gas industry also provide “significantly higher paying that many other jobs area” for these two counties.

Census and other data from 2003 do not support the conclusions reached in the Draft EA. Reclamation admits that the oil and gas industry has a lower unemployment rate and produces higher paying jobs, but concludes that restrictions on the oil and gas development will have little economic impact. Reclamation must correct these statements. Reclamation should use more current and accurate data provided from sources similar to The 2009 Economic Impact Report of New Mexico’s Oil and Gas Industry in its socio-economic analysis. Review of economic data from the State of New Mexico actually demonstrates that increased oil and gas development and fewer restrictions on development will increase the positive impacts on the state and local economies. Reclamation must also provide a supportable rationale, with relevant data, for its conclusions.

In the event Reclamation adopts Alternative C, or components of Alternative C in the RMP Amendment, Reclamation must quantify the reduction in economic gain and other impacts that are associated with restrictions imposed on oil and gas development by the NSO stipulations and the “no well” restrictions. Reclamation must also consider the impact that planning decisions have on the commodity price at a national level.

The Draft EA excludes and provides insufficient data and information on the highly significant state and local revenue generated due to a variety of taxes paid to the state and local governments. Another major contribution to the economy made by the oil and gas industry is payments to the federal government, 50 percent of which is returned to the state which apportions appropriate revenue to counties, in the form of federal lease rentals, lease bonus payments, and royalties generated from federal activities on public lands. Section 4.1.12 of the Draft EA does not contain a full and comprehensive analysis of the positive impacts of oil and gas development on the stated and local economies. Nor does the Draft EA fully disclose the negative impacts that restricting development will have on these economies. To fully comply with NEPA, the RMP

Comment 3-11

Comment 3-12

Comment 3-13

Comment 3-14

Comment 3-15



Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 6
September 20, 2010

Amendment and EA must provide a rational basis for its conclusions regarding the economic impact of restrictions on oil and gas leasing and development. Accordingly, Reclamation must revise and update Sections 3.2.12 and 4.1.12.

4. Reasonably Foreseeable Development

It is well established that Reasonably Foreseeable Development (RFD) projections do not limit the number of wells that BLM may authorize. *Theodore Roosevelt Conservation Partnership v. Salazar*, --- F.3d ---, 2010 WL 2869778, *7 (D.C. Cir. 2010) (the RFD “estimate would not impose a hard cap on the actual number of wells that can be drilled in the [resource area.]” The RFD “serves as an analytical baseline for evaluating environmental impacts, not ‘a point past which further exploration and development is prohibited.’” *Id.* (quoting *Wyoming Outdoor Council*, 164 IBLA 84, 99 (2004)).¹ The RFD is an analysis of the impacts from a number of wells, but ultimately is an analysis of the environmental impacts from the surface disturbance and other impacts from a selected level of development. *See id.* at *8.

It should also be noted that once a well is plugged and the well pad reclaimed and abandoned, it no longer has an adverse effect on the environment. The key element that must be considered in determining what level of oil and gas activity will be allowed over the life of the plan is not the number of wells that could be drilled, but rather the net effect of surface disturbance and activities. It is imperative that Reclamation clearly state that the 60-80 wells projected over the next 20 years (or life of the RMP Amendment) is an analytical tool the agency uses to assess potential environmental impacts. Under the governing RFD case law and policy, and to preclude future permitting delays, Reclamation should include the following language in Section 2.6, or where appropriate, of the EA.

The well projection numbers in the RFD do not limit the number of wells which Reclamation and BLM may ultimately authorize in the Planning Area. Total well counts or surface disturbances exceeding these projected levels of oil and gas development do not automatically prompt a need for a supplemental NEPA analysis prior to additional leasing or development. Mitigation of environmental effects, for example, through successful reclamation, utilization of directional drilling from shared well locations, and minimizing pad and road construction can prevent the level of impacts from substantially exceeding those originally analyzed in the EA and RMP Amendment.

Reclamation should also provide an expanded discussion of the RFD and its interplay with future oil and gas leasing and development. Reclamation should also include the language above to strengthen the RMP Amendment and EA.

5. Green House Gases and Climate Change

¹ See also BLM Instruction Memorandum No. 2004-089, *Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas* (Jan. 23, 2004).

Comment 3-15 (cont.)

Comment 3-16

Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 7
September 20, 2010

Devon supports Reclamation's analysis regarding the highly speculative impacts from green house gases (GHG) and climate change. Draft EA at 4-2. Reclamation, BLM and the Environmental Protection Agency (EPA) do not possess a quantitative model or analytical tool of any kind to evaluate the impacts of oil and gas leasing, which represents the potential development, not actual development, on global climate change from emissions of GHGs. The impacts related to air quality are better assessed when specific projects have actually been proposed, and Reclamation and BLM assess those impacts on a project-level basis. So long as the Draft EA adequately discloses the potential effects of the leasing on air quality to inform Reclamation and BLM during the decision-making process and involve the public, NEPA's purpose and goals are satisfied.

Certain groups opposed to oil and gas development likely will request that Reclamation complete a comprehensive air quality, ozone and climate change analysis as part of this RMP Amendment and EA. It is important, however, to place the context and scope of Reclamations and BLM's jurisdiction over air quality issues into perspective. Air quality analysis is a matter of special expertise where reviewing tribunals show the most deference to agencies conducting the analysis. *See, e.g., Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 377 (1989). Moreover, unlike many other resources over which Reclamation and BLM have special jurisdiction, Reclamation's and BLM's role over air quality regulation is extremely limited. Under the Clean Air Act, each state has the primary responsibility for assuring air quality within the state. 42 U.S.C. § 7407. EPA has primary responsibility for areas within Indian airsheds, although EPA has not yet developed a minor source permit program for regulated activities within Indian airshed.

In addition, a decision to approve revisions to a RMP without a quantified ozone analysis in the NEPA document has been affirmed as reasonable. In *San Juan Citizens Alliance v. Norton*, 586 F. Supp. 2d 1270 (D.N.M. 2008), BLM learned during the comment period on the draft EIS that ozone formation was becoming a concern in northern New Mexico's San Juan Basin. Rather than halting its decision process on the RMP, however, BLM worked with EPA on a modeling and regulatory project to provide information needed to assess control measures to be applied when new sources sought permits. *Id.* at 1289-90. The court affirmed BLM's approach and upheld the RMP.

The RMP Amendment here will not specifically authorize any activity capable of emitting air pollutants. Potential lessees will be required to obtain a permit and authorization from the appropriate state agency or EPA before constructing any regulated emission source that is analyzed in the NEPA document. Applications for Permits to Drill (APDs) will be issued with conditions of approval that require operators to comply with all applicable laws, but the Reclamation nor BLM is legally authorized to regulate air quality standards. It is the responsibility of EPA or the State of New Mexico to issue air permits for oil and gas operations and to ensure that operators comply with those permits and the CAA. Here, Reclamation must merely analyze and disclose impacts to air and other resources in NEPA documents, but it is not the regulating agency that ensures that oil and gas operations comply with the CAA.

Comment Letter 3 (cont.)

Ms. Marsha Carra
 Page 8
 September 20, 2010

The level of analysis described in the Draft EA is sufficient for the limited purpose of this document. Reclamation need not conduct a detailed ozone or GHG analysis prior to issuing a FONSI.

6. Least Restrictive Lease Stipulations

The Draft EA does not contain an adequate analysis of Reclamation’s justification for application of the overly restrictive lease stipulations. Reclamation must include a discussion and analysis of each lease stipulation with an explanation on why less restrictive alternatives are not viable. As currently written, the Draft EA does not conform to BLM’s Manual on Land Use Planning and Manual 1624 for Fluid Minerals, which specifically directs BLM not only to identify which areas would be subject to different categories of restrictions as included in the Draft EA, but also to show that the least restrictive lease stipulation that would offer adequate protection of a resource has been selected. See BLM Handbook H-1601-1, App. C. II. F. at 16. Below are specific comments related to specific lease stipulations or restrictions on development:

a. The Draft EA proposes limits on surface occupancy on a case-by-case basis for wells proposed within 2,640 horizontal feet (805 horizontal meters) and 5,280 horizontal feet (1,609 horizontal meters) of Brantley Dam Site. Draft EA at 2-19.

Devon believes that this restriction may be a mistake. This restriction should state that surface occupancy will be authorized on a case-by-case basis for wells proposed within 2,640 horizontal feet (805 horizontal meters) of Avalon Dam Site and 5,280 horizontal feet (1,609 horizontal meters) of Brantley Dam Site. Reclamation should correct or clarify this stipulation.

b. The Draft EA proposes limits on surface occupancy within 660 horizontal feet (200 horizontal meters) of maximum water surface at Brantley Reservoir (elevation 3,263 feet [995 meters]) or Avalon Reservoir, (elevation 3,190 feet [972 meters]). Draft EA at 2-19.

Reclamation changed the elevation restrictions for the Brantley Reservoir, but not the Avalon Reservoir without a reasonable explanation. The Avalon Reservoir elevation restriction should also be revised because the elevation of the spillway gates is only 3177 feet. There is no for the current elevation limitations if the water cannot reach those elevations. Reclamation’s imposition of this restriction is not supported by the Draft EA, and it should be consistent with the spillway gates and the elevation restriction justification for the Brantley Reservoir.

c. The Draft EA proposes no storage facilities within 660 horizontal feet (200 horizontal meters) of the 100-year floodplain at Brantley Reservoir (elevation 3,283 feet [1,001 meters]) or Avalon Reservoir (elevation 3,200 feet [975 meters]). Draft EA at 2-19.

Reclamation claims this restriction addresses speculative, potential impacts to fisheries from spills and releases of toxic chemicals into the adjacent waters. Reclamation’s rationale does not support the 200 meter horizontal setback. BLM has provided no supporting data or information to support its finding that a 200 meter setback would provide any further protection,

Comment 3-17

Comment 3-18

Comment 3-19

Comment 3-20

Comment 3-21



Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 9
September 20, 2010

especially considering that Reclamation admits that the fisheries are in “poor condition.” The EA should remove this setback because the standard oil and gas lease stipulations provide “implementing actions that would contain drilling fluid and wastes.” Draft EA at 4-15—4-16 (BLM admits that these are merely “extra measures”). The current stipulation provides adequate protection and is the least restrictive measure needed to protect this resource.

There is consensus that the Pecos River floodplain is a gradually sloping, broad area that will never be flooded again because of the existence of upstream dams, flood control structures and diversions. Most of this area should not be considered a riparian area that is properly functioning, in particular, because of the effects of the Old McMillan lake bed and other uses that have persisted for years in the area. Therefore, Reclamation should modify this overly restrictive floodplain stipulation for this area, and the stipulation should be modified to only cover the lands to the river’s edge.

d. The Draft EA proposes limits on surface occupancy on a case-by-case basis within 300 horizontal feet (91 horizontal meters) of all publicly maintained (e.g., State of New Mexico, Eddy County), designated roads and highways for construction of access roads and pipelines. No wells will be permitted within these areas. Draft EA at 2-19.

The Draft EA does not provide an adequate analysis or justification for this restriction. The mere presence of a road should not provide a definitive restriction on the surface occupancy and oil and gas development. The RMP Amendment should consider not only whether to allow surface disturbance in these areas, but also whether or not to also allow wells in these areas on a case by case basis.

e. The Draft EA proposes limits on surface occupancy on a case-by-case basis within 660 horizontal feet (200 horizontal meters) of normal high water line of streams, rivers, and arroyos for construction of roads and pipelines. Construction of access roads and pipelines will be restricted in high-value riparian and sensitive areas along streams, rivers, and arroyos. No wells will be permitted within these areas. Draft EA at 2-19.

The Draft EA does not provide an adequate analysis or justification for this restriction. The Draft EA does not contain a definition of arroyos so it is difficult to provide substantive comments on this section. This restriction on arroyos should be removed because it unnecessary and not the least restrictive measure needed to protect these resources.

f. The Draft EA proposes limits on surface occupancy on a case-by-case basis within 500 horizontal feet (152 meters) of any improvements either owned, permitted, leased, or otherwise authorized by Reclamation within the leased areas for construction of access roads and pipelines. No wells will be permitted in these areas. Draft EA at 2-19.

The EA does not provide an adequate analysis or justification for this restriction. The RMP Amendment should consider whether or not to allow wells in these areas on a case-by-case basis.

Comment 3-21 (cont.)
Comment 3-22
Comment 3-23
Comment 3-24
Comment 3-25



Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 10
September 20, 2010

g. The Draft EA proposes limits of no surface occupancy within 200 horizontal feet (61 meters) of all designated, improved, and permitted trails. Draft EA at 2-19.

The EA does not define what types of trails Reclamation intends to protect with this restriction. It should also be noted in the EA that existing and future leases will not be constrained in the event that Reclamation or others designate new trails.

The Draft EA also includes a discussion of “three nature/interpretive” trails within the Planning Area. Draft EA at 3-52. The Draft EA does not contain the authority under which Reclamation would impose such a restriction or why a less restrictive stipulation could not protect these trails.

The Draft EA does not include any description, analysis or explanation for the NSO stipulation within 200 feet of “all designated, improved, and permitted trails.” Draft EA at 2-19. The Draft EA should include a discussion that existing oil and gas leases will not be restricted by future trails or a proposed mountain biking trail. These new trails would be subject to the valid existing rights of the oil and gas lessees. The Draft EA contains no analysis or explanation on why this setback is appropriate. To fully comply with NEPA, Reclamation must provide a complete analysis of its imposition of these overly restrictive (and currently unsupported) lease stipulations, explain why these restrictions are essential, and explain why they are the least restrictive means necessary to protect the resources.

The Draft EA should further explain the application of this stipulation and whether or not the trail would be protected if it qualified for inclusion on the National Register of Historic Places (NRHP). If the trail does not qualify for inclusion on the NRHP, Reclamation should discuss and analyze why the ¼ mile stipulation is appropriate. Reclamation should also consider less restrictive stipulations and conditions of approval to protect the trail, including reasonable crossings along the trail, fencing, interpretive signs, or barriers to protect important areas. All trails do not deserve the heightened protections as congressionally designated, historic trails or those that qualify for inclusion on the NRHP.

h. The Draft EA proposes limits on surface occupancy on a case-by-case basis within 200 horizontal feet (61 meters) of established crops for the construction of access roads and pipelines. No wells will be permitted within these areas. Draft EA at 2-20.

The EA does not provide an adequate analysis or justification for this restriction. The RMP Amendment should consider whether or not to allow wells in these areas on a case-by-case basis.

i. The Draft EA proposes limits on surface occupancy on a case-by-case basis within slopes steeper than 2:1 and within 200 horizontal feet (61 meters) of slopes steeper than 2:1 for the construction of access roads and pipelines. No wells will be permitted within these areas. Draft EA at 2-20.

Comment 3-26

Comment 3-27

Comment 3-28

Comment 3-29

Comment 3-30



Comment Letter 3 (cont.)

Ms. Marsha Carra
 Page 11
 September 20, 2010

The EA does not provide an adequate analysis or justification for this restriction. The RMP Amendment should consider whether or not to allow wells in these areas on a case-by-case basis.

j. The Draft EA proposes limits on surface occupancy on a case-by-case basis within established right-of-ways of human-made canals, laterals, aqueducts, pipelines, or drainages for the construction of access roads and pipelines. No wells will be permitted within these areas. Draft EA at 2-20.

The EA does not provide an adequate analysis or justification for this restriction. The RMP Amendment should consider whether or not to allow wells in these areas on a case by case basis.

7. Directional Drilling

Reclamation cannot simply presume that directional drilling will allow development in the regulatory environment offered by the Draft EA and RMP Amendment. By applying NSO and “no well” restrictions, Reclamation apparently assumes that these areas could be developed through directional drilling. These determinations, however, must be made on a site specific basis. The RMP Amendment must be flexible enough to allow and to promote adoption of new technologies as they evolve. Reclamation should state objectives and manage them rather than simply prescribe restrictions that may not be necessary in the future with the advent of new technology.

8. Development and Production (Brantley)

The current development constraints within the Brantley area include NSO below 3271 feet (except on case-by-case), and no storage facilities below 3286 feet. Devon supports Reclamation’s change that will restrict surface occupancy for wells to 3261 feet. The elevation of the spillway gates is 3261 feet, and thus there is no need to have elevation limitations if the water can not reach those elevations. The conservation storage elevation is 3256 feet, at which time water is released downstream. If a “major” flooding event exceeded this capacity, by the time flood water went through the gates and over the spillway, there would be very little water backed up to negatively effect oil and gas production facilities at the proposed elevations.

9. Development and Production (Avalon)

Unlike the limit on the Brantley area, Reclamation increased the NSO and other restrictions for the Avalon area based on the maximum water surface for each reservoir. The current development constraints within the Avalon area include NSO below 3190 feet (except on case-by-case), and no storage facilities will be allowed below 3200 feet. Devon proposes that the managing elevation for both an NSO and storage facilities should be changed to 3178 feet -- the elevation of the spillway gates is 3177 feet. There is no need for the current elevation limitations beyond the spillway gate level if the water cannot reach those elevations. The basis for the restriction limits for the Brantley and Avalon should be consistent.

Comment 3-30 (cont.)
 Comment 3-31
 Comment 3-32
 Comment 3-33
 Comment 3-34



Comment Letter 3 (cont.)

Ms. Marsha Carra
Page 12
September 20, 2010

The Draft EA contains no analysis or explanation of why a setback is appropriate for the Brantley Reservoir but not the Avalon Reservoir. To fully comply with NEPA, Reclamation must provide a complete analysis of its imposition of these overly restrictive (and currently unsupported) lease stipulations, explain why these restrictions are essential, and why they are the least restrictive means necessary to protect these resources.

10. Floodplain Stipulations for the Entire Planning Area

Current Management requires locations and facilities to be 200 meters away from the outer edge of the floodplain. The Draft EA does not contain an adequate analysis to support this restriction. As explained above, Reclamation is required to apply the least restrictive mitigation measure to protect the resource at issue. The 200 meter restriction from the edge of the floodplain is not the least restrictive measure. Instead, Reclamation should require that new locations and production facilities not be allowed within 200 meters of the edge of the river – not the floodplain. The Pecos River floodplain is a gradually sloping, broad area, and with the existence of upstream dams, flood control structures and diversions, it is unlikely to ever be flooded again. The floodplain stipulation for this area should be limited to the river's edge.

Devon appreciates the opportunity to provide these comments on the Proposed RMP Amendment and Draft EA. Devon looks forward to Reclamation's responses to these comments and changes to the Draft EA prior to the approval of the RMP Amendment. Please include Victoria Sánchez, Devon Regulatory Advisor, at (405) 228-8379 on all future notifications concerning the Proposed RMP Amendment and Draft EA. Devon would appreciate the opportunity to discuss the RMP Amendment and the proposed restrictions on oil and gas development with Reclamation and BLM.

Sincerely,



Randy Bolles
Manager, Regulatory Affairs
Western Division
Devon Energy Corporation

cc: Doug Burger, District Manager for Pecos District, Bureau of Land Management
Jim Stovall, Field Manager Carlsbad Field Office, Bureau of Land Management

Comment 3-35

Comment 3-36

Responses to Comment Letter 3

Thank you for your comments. Your comments are addressed below.

Response to Comment 3-1: The amount of land available for surface occupancy within the Project Area is determined substantially by existing legislative policies, regulatory requirements, and/or *Reclamation Manual Directives and Standards* (<http://www.usbr.gov/recman/Ind/Ind06-01.pdf>). The Department of the Interior requires each of its bureaus to establish a directives system setting forth its bureau-wide requirements. Reclamation's directives system is the *Reclamation Manual Directives and Standards*. Adherence to all requirements in the *Reclamation Manual Directives and Standards* is mandatory. However, a request for waiver from a *Reclamation Manual Directives and Standards* requirement can be made in accordance with a waiver request. A request will be reviewed and resolved with an approval or disapproval from the responsible official. Waivers will not be granted for statutory, regulatory, Executive Order, Departmental or Office of Management and Budget requirements that are applicable to Reclamation.

Response to Comment 3-2: While the Federal Land Policy Management Act (FLPMA) is BLM's Organic Act for public lands, Reclamation's land management authority for its withdrawn and acquired lands derives from the Reclamation Act of 1902, Reclamation Projects Act of 1939, Reclamation Recreation Management Act of 1992, Resource Management Plans (RMPs), as well as *Reclamation Manual Directives and Standards*. Reclamation actively seeks input and recommendations from BLM on issues such as mineral development, but is not obligated to follow BLM's management guidelines and parameters in overseeing development of the Federal mineral estate. Section 2805 of the Reclamation Recreation Management Act provides authority for Reclamation to develop, maintain, and revise RMPs for Reclamation lands.

Mineral leasing on Reclamation lands is administered by the BLM under provisions of Title 43, Subpart 3100 of the Code of Federal Regulations (CFR). Leasable minerals (e.g., oil, gas, and geothermal) are under discretionary authority, meaning that they are open to development through application and permitting by the BLM with concurrence by Reclamation. Except for those minerals and conditions meeting the provisions of Section 10 of the Reclamation Projects Act of 1939, leases for mineral and geothermal resources on all land acquired or withdrawn by Reclamation are issued by the BLM per an Interagency Agreement between Reclamation and BLM dated December 1982. Under this agreement the BLM will, in all issues involving mineral and geothermal leases, request that Reclamation determine whether leasing is permissible and, if so, provide any stipulations required to protect the interests of the United States. In addition, lands that were conveyed to the Carlsbad Irrigation District in 2001 are also required to be managed and used according to the purposes for which the Carlsbad Project was authorized,

Responses to Comment Letter 3 (cont.)

based on historic operations and consistent with the management of other adjacent Carlsbad Project lands.

Response to Comment 3-3: The range of alternatives that Reclamation presented in the DEA responds directly to the issues and concerns that were raised during the public scoping process. As such, there are no known unresolved conflicts concerning alternative uses of available resources within the Project Area. All three alternatives presented in the DEA address existing legislative and regulatory requirements at a programmatic level and/or place constraints if resource values are determined to be sufficiently high or protections are justified in the public interest.

Response to Comments 3-4 and 3-5: The DEA clearly states that activities allowed under existing Federal mineral leases would continue according to the terms of the lease as presently in effect, until such time as the lease expires. However, any lease activity after the expiration date would be subject to the new special lease stipulations. As such, less than 9,361 acres (3,788 hectares), or 21 percent of the Project Area, are currently identified as Unleased Federal Minerals that would be immediately subject to any of the proposed alternatives presented in the DEA.

Response to Comment 3-6: No public or agency comments have been received to specifically suggest other special lease stipulations for the Project Area than those proposed in the DEA. Reclamation is not aware of additional special lease stipulations that would be appropriate for use within the Project Area. The alternatives were developed to respond to issues identified through scoping as described in Section 1.6 of the DEA. The three alternatives analyzed in the DEA are distinguished by the type and degree of special lease stipulation constraints. No other alternatives or special lease stipulations meet the purpose and need criteria for the EA. Site specific oil and gas development activities proposed within the Project Area would continue to be evaluated on a case-by-case basis for all three alternatives. The purpose of the Surface Use and Occupancy Requirements found in Appendix A is to best manage surface disturbances and other effects on project facilities and natural or cultural resources within the Project Area. Circumstances for waivers of the requirements are included in Appendix A so that they will not be applied needlessly.

Response to Comment 3-7: Circumstances for granting exceptions, modifications, or waivers of surface use and occupancy requirements are included in Appendix A and in the *Reclamation Manual Directives and Standards* (<http://www.usbr.gov/recman/lnd/lnd06-01.pdf>). See also Response to Comment 3-1.

Responses to Comment Letter 3 (cont.)

Response to Comment 3-8: Recent and verifiable data on income and employment for various economic sectors, population, housing, and revenue affected by oil and gas development within the Project Area were presented in Chapter 3 of the DEA. Where appropriate, this information has been updated in the FEA.

Response to Comment 3-9: The reference pertains only to existing unleased tracts of land within the Project Area. The fact that these areas remain unleased is likely due to lack of interest and no evidence of payable oil and gas zones. It is not intended to infer that there is a lack of interest in oil and gas development activities within the Project Area, but rather to speculate on why certain tracts remain unleased.

Response to Comment 3-10: Reclamation believes that the agency-preferred alternative (Alternative C) is less restrictive on mineral leasing and development within the Project Area than occurs under existing conditions (Alternative A). Chapter 3 of the DEA clearly describes the economic importance of mineral development to Eddy County and New Mexico in general. However, with the Project Area representing less than 2 percent of the operating wells in Eddy County and less than 1 percent of the mineral estate within BLM's Carlsbad Field Office (CFO), its significance to the local economy is likewise minimal within this context. Because the Project Area represents such a minor portion of the overall regional oil and gas development industry in this part of New Mexico, it is not possible to accurately estimate specific economic impacts.

Response to Comment 3-11: The economic benefits derived from the oil and gas industry locally and at the state level were clearly detailed in Chapter 3 of the DEA. More current data has also been included in Chapter 3 of the FEA.

Response to Comment 3-12: Because the Project Area contains less than 2 percent of the operating wells in Eddy County and less than 1 percent of the mineral estate in the CFO, Reclamation contends that oil and gas development within the Project Area does not contribute significantly to the local economy when considered within the regional context of this part of New Mexico.

Response to Comment 3-13: Reclamation's conclusions are based on the minor portion of the oil and gas industry affected by mineral development within the Project Area compared to the regional context and economy.

Response to Comment 3-14: Because Alternative C provides for more potential well locations than found under existing conditions (Alternative A), the agency-preferred alternative will likely result in additional economic benefits, not reductions, due to less restrictions on

Responses to Comment Letter 3 (cont.)

mineral development within the Project Area. Reclamation has clearly demonstrated that there will be more oil and gas wells under Alternative C (60 to 80 wells) than under Alternative A (40 to 60 wells) over the life of the RMPA. This level of development is similar to the average of 80 wells over a 20-year period as estimated in Section 2.6 of the DEA.

Response to Comment 3-15: See Responses to Comments 3-8 through 3-14.

Response to Comment 3-16: Reclamation agrees that the number of wells projected are just estimates, and that this number will not be used as a limit for well development. Under BLM and Reclamation environmental policies, every proposed well is covered by site specific, case by case environmental compliance documents. See also Response to Comment 3-14.

Response to Comment 3-17: Reclamation agrees with the comment.

Response to Comment 3-18: Reclamation is not bound by BLM Manuals or Handbooks. Rather, many of the proposed special lease stipulations are derived from the Reclamation Act of 1902, Reclamation Projects Act of 1939, Reclamation Recreation Management Act of 1992, Resource Management Plans (RMPs), as well as *Reclamation Manual Directives and Standards*.

Response to Comment 3-19: There is no mistake. The no surface occupancy within 2,640 horizontal feet (805 horizontal meters) of Brantley and Avalon Dam Sites and the surface occupancy on a case-by-case basis within 2,640 horizontal feet (805 horizontal meters) and 5,280 horizontal feet (1,609 horizontal meters) of Brantley Dam Site have been Reclamation special lease stipulations at the Project Area for many years. These special lease stipulations were also incorporated into BLM's 1988 Carlsbad Resource Management Plan and its 1997 RMPA.

Response to Comment 3-20: The maximum water surface elevation at Brantley Reservoir is affected by Pecos River sediment transport and deposition rates. Brantley Dam and Reservoir were designed to accommodate sedimentation over a 100-year period. The reason Reclamation modified the maximum water surface elevation at Brantley Reservoir is because of new information on sedimentation rates which have dropped significantly over the years due to construction of upstream reservoirs. Avalon Reservoir's maximum water surface elevation is not subject to the same effects from Pecos River sediment transport because Brantley Dam is located immediately upstream, thus trapping most of the river's sediment. The maximum known water surface elevation at Avalon Dam to date was 3,184 feet. Reclamation does not intend to amend these long-standing special lease stipulations.

Responses to Comment Letter 3 (cont.)

Response to Comment 3-21: The special lease stipulation that requires no storage facilities be located within 660 horizontal feet (200 horizontal meters) of the 100-year floodplain elevation at each reservoir has been in place since Brantley Dam was constructed. This current stipulation has been implemented to protect the integrity of the dam structures and to reduce the possibility of contamination (pollution) affecting the reservoir waters. Case-by-case exceptions to this requirement that may be considered are described in Appendix A.

Response to Comment 3-22: Reclamation is not aware of any scientific consensus that the Pecos River floodplain will never be flooded again.

Response to Comment 3-23: Publicly maintained roads within the Project Area are heavily used by recreationists throughout the year. The limits on surface occupancy proposed along publicly maintained roads are intended to provide compliance with the conditions outlined in the *Reclamation Manual Directives and Standards* for areas receiving concentrated public use. With the Project Area serving as a recreational destination for the region, Reclamation is protecting the safety of recreationists and the visual quality found along publicly maintained roads with this special lease stipulation.

Response to Comment 3-24: This special lease stipulation is a requirement of the *Reclamation Manual Directives and Standards* for all Reclamation lands where minerals are owned by the United States or are subordinated to the rights of the United States. As it pertains to surface occupancy for mineral operations, the specific condition in LND 06-01 states that there "...will be no well drilled within 660 feet of a river, channel, permanent stream, tributary, or marsh site." Adherence to all requirements in the *Reclamation Manual Directives and Standards* is mandatory.

Response to Comment 3-25: This special lease stipulation exists to protect the interests of Reclamation, as well as the interests of those who have executed an easement, lease, license, or permit for use of Reclamation lands, facilities, and water surfaces. Reclamation has a responsibility to protect the interests of those who have an agreement to use Reclamation lands, facilities, and water surfaces. If surface occupancy can be shown to not interfere with Reclamation project purposes and any relevant land use authorizations, a waiver from this condition may be granted according to the procedures outlined in Appendix A and in the *Reclamation Manual Directives and Standards*.

Response to Comment 3-26: This special lease stipulation is a requirement of the *Reclamation Manual Directives and Standards* for all Reclamation lands where minerals are owned by the United States or are subordinated to the rights of the United States. As it pertains to surface occupancy for mineral operations, the specific condition in LND 06-01 states that

Responses to Comment Letter 3 (cont.)

there "...will be no surface occupancy within 300 horizontal feet of any developed recreational areas or undeveloped recreational areas receiving concentrated public use." Reclamation considers designated, improved, and permitted trails to meet the definition of a developed recreational facility. Currently, all designated trails within the Project Area are located within Brantley Lake State Park. Adherence to all requirements in the *Reclamation Manual Directives and Standards* is mandatory.

Response to Comment 3-27: Public safety is the primary reason to implement the NSO stipulation within 200 feet of all designated, improved, and permitted trails. Well sites are inherently dangerous and should not be accessible by the general public. Chapter 1, page 1-1, of the DEA clearly explains that proposed special lease stipulations only affect those lands identified as containing existing unleased federal minerals, as well as any future unleased mineral estate (e.g., expired leases). Further, Chapter 2, page 2-7, states that the development of existing Federal mineral leases would continue according to the terms of the lease at the time of execution, until such time as the lease expires and becomes subject to the terms in place upon expiration.

Response to Comment 3-28: Reclamation has not proposed any trail within the Project Area for inclusion on the National Register of Historic Places and has not proposed a ¼ mile stipulation. This comment does not apply to this RMPA.

Response to Comment 3-29: All areas surrounding Brantley Reservoir that are not part of Brantley Lake State Park are part of the Brantley Wildlife Management Area (WMA). The WMA was established as mitigation for the construction and operation of Brantley Dam and Reservoir, and is managed by the New Mexico Department of Game and Fish (NMDGF) through agreement with Reclamation. These mitigation lands are to be managed to fully compensate for the wetland and other types of habitats lost as described within the project's Fish and Wildlife Coordination Act Report. Part of the required mitigation involves NMDGF managing this area for upland species and waterfowl. The NMDGF implements mowing strips, planting of small grains, and controlled burning in these upland areas. Within the WMA is the Seven Rivers Waterfowl Management Area which is used to grow corn, alfalfa, milo, wheat, and millet primarily for waterfowl use. Reclamation has determined that oil and gas development is not compatible in areas where crops have been established for wildlife mitigation purposes (Brantley Mitigation). For these reasons, the limits on surface occupancy in these areas were established.

Response to Comment 3-30: Avoiding steep slopes is a standard best management practice (BMP) for oil and gas development on Federal lands. The purpose is to minimize long-term disruption of the surface resources and existing uses, and to promote successful reclamation.

Responses to Comment Letter 3 (cont.)

According to BLM's *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development: The Gold Book* (2006), well locations constructed on steep slopes cost more to construct, maintain, and reclaim and result in greater resource impacts. In addition, this stipulation has been in place on Project Area lands for many years.

Response to Comment 3-31: This special lease stipulation is a requirement of the *Reclamation Manual Directives and Standards* for all Reclamation lands where minerals are owned by the United States or are subordinated to the rights of the United States. As it pertains to surface occupancy for mineral operations, the specific condition in LND 06-01 states that there "...will be no surface occupancy or other use within the right-of-way of any canal, tunnel, aqueduct, pipeline, lateral, or drain." Adherence to all requirements in the *Reclamation Manual Directives and Standards* is mandatory.

Response to Comment 3-32: Reclamation and BLM have determined the potential number of new wells that could be drilled within the Project Area based on the proposed special lease stipulations for each alternative. The Proposed Action will likely provide between 60 and 80 new wells over the next 20 years. This represents a typical number of wells for the 20-year time period based on the reasonable foreseeable minerals development analysis of over 85 years of oil and gas development within the Project Area. This analysis was not based on directional drilling practices.

Response to Comment 3-33: The maximum water surface at Brantley Reservoir under the Proposed Action is 3,263 feet elevation. Surface occupancy is restricted below this elevation according to *Reclamation Manual Directives and Standards*. Brantley Dam provides for flood control to protect downstream communities and facilities. The top of flood control elevation is 3,283 feet. A major flood event could result in water levels reaching the flood control elevation, especially as the reservoir fills with sediment over time as designed.

Response to Comments 3-34 and 3-35: The current no surface occupancy stipulations for Avalon Dam and Reservoir have been in place to protect Project facilities and water quality, as well as to ensure the safety of downstream communities. The maximum known water surface elevation at Avalon Dam to date was 3,184 feet. Reclamation does not intend to amend these long-standing special lease stipulations.

The special lease stipulation that requires no storage facilities be located within 660 horizontal feet (200 horizontal meters) of the 100-year floodplain elevation at each reservoir has been in place since Brantley Dam was constructed. This current stipulation has been implemented to protect the integrity of the dam structures and to reduce the possibility of contamination

Responses to Comment Letter 3 (cont.)

(pollution) affecting the reservoir waters. Case-by-case exceptions to this requirement that may be considered are described in Appendix A.

Response to Comment 3-36: The current and proposed floodplain special lease stipulations for both reservoirs exist to protect Project facilities and downstream life and property. It is essential that Reclamation adequately protect the operation, maintenance, and structural safety of its facilities. Reclamation must also protect its ability to perform emergency actions when necessary.

Comment Letter 4



BILL RICHARDSON
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

Mr. Mike A. Hamman, Area Manager
Bureau of Reclamation
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102-2352.

October 4, 2010

Subject Brantley-Avalon Draft EA and Section 106 Compliance

Dear Mr. Hamman,

The New Mexico State Historic Preservation Office (SHPO) has completed a review of the Draft Environmental Assessment (EA) for the Brantley-Avalon Reservoirs Resource Management Plan (B-ARMP), which we received on September 15, 2010 (HPD log 090368).

It is important to note that National Historic Landmarks (NHL) have special requirements for protection, pursuant to Section 110(f) of the National Historic Preservation Act, and 36 CFR 800.10(c). Therefore, the SHPO recommends that the Bureau of Reclamation notify the Secretary of Interior, represented by the National Park Service, of the proposed management plan as soon as possible to obtain additional guidance on the matter.

After reviewing the B-ARMP, the SHPO feels that the EA does not give adequate consideration to the cultural properties listed on the State Register of Cultural Properties (SR) and the National Register of Historic Properties (NRHP), which are located within the Area of Potential Effect of the proposed mineral leases. These properties include the Carlsbad Reclamation Project (CIP) NHL (SR7), Avalon Dam (SR 557), Lake McMillan Dam (SR 558), and Seven Rivers (SR 77). Of these, Avalon and McMillan Dams are contributing elements to the CIP NHL. The SHPO's concern is that the cumulative effects of long-term energy development will result in adverse effects to these registered properties.

If you have any further questions feel free to call or e-mail me. I can be reached at (505)827-4225 or Bob.Estes@state.nm.us.

Sincerely,

Bob Estes
Archaeologist

Michelle Ensey
Archaeologist

Comment 4-1
Comment 4-2



Responses to Comment Letter 4

Thank you for your comments. Your comments are addressed below.

Response to Comment 4-1: The BLM and Reclamation will continue to work with the Section 106 and 110 Regulations, as well as coordinate with the National Park Service in regards to any proposed mineral leasing and development within the Carlsbad Irrigation District National Historic Landmark (NHL). Reclamation, SHPO and the Archaeological Council will develop a programmatic agreement for the McMillian Dam and Reservoir area in the NHL. This area of the NHL includes approximately 1500 acres of Reclamation lands with special lease stipulations of surface occupancy on a case by case basis and no storage facilities. The Avalon Dam and Reservoir area would remain in a no surface occupancy zone. As stated in the EA (p.3-34) all historic properties included in the CID NHL will continue to be subject to Federal statute under the National Historic Preservation Act and the New Mexico State Cultural Properties Act, as appropriate.

Response to Comment 4-2: As stated in the DEA, cultural resource inventories would continue to be required for all proposed surface-disturbing activities, including oil and gas development activities, within the Project Area. Any lands identified for development will need to follow Section 106 National Historic Preservation Act and the New Mexico State Cultural Properties Act processes before work begins. This includes all Federal mineral estates within the Project Area and future leases on lands conveyed to the Carlsbad Irrigation District in 2001. Regulations for the *Protection of Historic Properties* (36 CFR Part 800) defines the process for demonstrating such consideration through consultation with the State Historic Preservation Office, the Federal Advisory Council on Historic Preservation, and other interested parties (see Appendix A-2, General Conditions of Approval # 14).

