United States Department of Agriculture

Forest Service

Southwestern Region

United States Department of Interior

Bureau of Land Management

Taos Field Office

Record of Decision for the Buckman Water Diversion Project

Santa Fe National Forest and Taos Field Office of the BLM in Santa Fe County, New Mexico

Printed on recycled paper – October 2007

Record of Decision

Environmental Impact Statement for the
Buckman Water Diversion Project
Santa Fe County, New Mexico

U.S. Department of Agriculture
Forest Service, Southwestern Region
Santa Fe National Forest

U.S. Department of the Interior
Bureau of Land Management
Taos Field Office

October 2007

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Introduction

This Record of Decision made by the U.S. Department of the Interior, Bureau of Land Management, Taos Field Office, and the U.S. Department of Agriculture, Forest Service, Santa Fe National Forest (herein the Agencies), documents the decision to approve a selected alternative as described in the "Final Environmental Impact Statement for the Buckman Water Diversion Project" (FEIS). The Buckman Water Diversion Project (Buckman Project) addresses the immediate need for a sustainable means of accessing water supplies for the City of Santa Fe, New Mexico (City), Santa Fe County (County), and Las Campanas Limited Partnership ((Las Campanas), herein the Applicants.[1]

The U.S. Department of Agriculture, Forest Service (FS) and U.S. Department of the Interior, Bureau of Land Management (BLM) have served as co-lead agencies for this EIS, because the project will be located in large part on lands administered by both Agencies. In addition, the Bureau of Reclamation, and the City and County have served as cooperating agencies.

The FS and BLM have completed the detailed analysis and FEIS for the proposed Buckman Project. The FEIS documents an analysis of the effects of alternatives to divert water from the Rio Grande to meet certain near-term water supply needs. The analysis has been conducted in compliance with the National Environmental Policy Act of 1969 (NEPA) and other applicable laws and regulations.

The decision is consistent with the "Santa Fe National Forest Plan" and the "Taos Resource Management Plan." This decision is based on:

- a comparison of the potential environmental effects of the proposed action alternative and other alternatives (FEIS, Chapter 3);
- the significant issues and how well each alternative addressed them (FEIS, Chapter 2); and
- comments received during scoping and the 60-day comment period on the DEIS. (Refer to Appendix A in the FEIS for comments on the DEIS and the Agencies' responses.)

The decisions made by the FS and the BLM respectively affect only those lands managed by each agency. Therefore, separate decisions made by each agency are identified at the end of this document, along with the agency decision appeal procedures.

[1] The FEIS refers to the quantity of water used for this analysis in terms of an expected demand in 2010 for the City of Santa Fe and Santa Fe County. This analysis began in 2002, and since then, the City has implemented conservation measures that will allow extending that demand expectation (5,230 ac. ft/year) to the year 2015 or beyond. Similarly, once the facility is available, the County would use this supply to meet immediate needs.

Decision

Decision Overview

The Proposed Action in the FEIS is the proposal developed by the Applicants. The Proposed Action includes many elements that are common to all alternatives that were analyzed. Improvements to Buckman Road and the locations of most major facilities associated with the Proposed Action would be part of all action alternatives. However, because this project includes a number of facilities spaced across several miles of Federal lands, alternatives were developed based on issues that arose regarding potential impacts of specific project facilities.

Figure 1, following, provides the geographic context for the whole Buckman Project. It identifies the locations for all the facilities and associated infrastructure for which the Forest Service and Bureau of Land Management are making decisions.

To respond to the proposed facilities spaced across several miles of Federal lands, the FEIS describes and analyzes the following sets of facility alternatives:

- a set of alternatives for the sediment treatment facility near the river;
- a set of alternatives for a facility to dispose of the sand once it is removed from the river water;
- a set of alternatives for raw water transmission pipelines;
- a set of alternatives for treated water transmission from city/county facilities to the north end of the project area;
- a set of alternatives for upgrading electric power to the near-river facilities; and
- a set of alternatives for placing power at the city/county water treatment facility.

As required by the National Environmental Policy Act, the No Action Alternative was also analyzed and considered in the FEIS. With this alternative, none of the facilities or road improvements proposed would be permitted.

The Agencies' decision for this project is described below. The selected alternative consists of a combination of the Proposed Action and alternatives derived from the array of the six sets of facility alternatives described above.

The selected alternative would authorize the following facilities that are not changed from the Proposed Action in the FEIS:

- A diversion structure on the eastern bank of the Rio Grande with an adjacent low-head pump facility.
- Booster Stations 2A and 3A, and the raw water pipeline running between them.
- The water treatment plant for the City/County and the raw water pipelines running to the City/County water treatment plant and the Las Campanas treatment plant from Booster Station 2A. Treated water pipelines tie into existing water lines.
- Road improvements for Buckman Road that range from the minimum to maximum level described in the FEIS, based on whether sand is trucked away from the river or returned to the river. (With maximum road improvements, maintenance would remain at a maintenance designed to accommodate high clearance vehicles (Forest Service Level 2).

In addition to those facilities identified above, the following options are selected:

- The selected alternative(s) for the location of the sediment removal facility and Booster Station 1A avoids disturbance of the historic Buckman townsite (Alternatives SF1/SF2). These alternatives accommodate sand returned to the river or sand trucked away from the site. The location for Booster Station 1A also houses the sediment removal equipment and, therefore, it will be at the same location.
- There are two selected alternatives for the sand disposal element of the project: A return pipeline to the river (Alternative SF1) will be implemented if permitted by the Environmental Protection Agency (EPA). If the EPA does not permit sand return, implementation of Alternative SF2 will truck sand away from the site. The decision to select both alternatives, allows sand to be returned to the river and/or trucking the sand away from the site. This combination of the two may be necessary to implement the facility design in order to meet the mitigation measures intended to minimize sediment impacts to aquatic habitat (see "Decisions for Required Mitigation and Monitoring," items 8 and 13, for aquatic habitat mitigation). This combination may also be necessary to meet the permitting requirements of the EPA.
- Although there were two Agency preferred alternatives identified through the DEIS for the pipeline connecting Booster Station 1A with Booster Station 2A, the selected alternative is the single pipe (RWP1). The Applicants have agreed on this as the selected design and impacts are similar.
- For the treated water route from the new City/County water treatment facility to the existing water pipeline from the Buckman Well Field (near existing Booster Station 3), two alternatives are selected: the Proposed Action (PA), which places the line in a utility easement along Las Campanas Drive, and Alternative TWP3, which routes the line back to Dead Dog livestock well, then up Buckman Road to Booster Station 3. These alternatives minimize impacts to Federal lands in the vicinity and avoid creating new utility corridors.
- The selected alternative for the power upgrade to the river is the Proposed Action (PA), which places the new line underground from the Buckman substation to the river facilities, and upgrades the Buckman substation. Completing the loop to the existing line will allow for integration of underground electric power distribution to the river that provides power to Booster Stations 1A, 2A, and the near-river facilities with minimal impacts to resources, such as visual resources or scenery.
- The selected alternative for the water treatment plant power upgrade is (AGP1A), which allows for placement of the new substation near Caja del Rio Road on the City's Municipal Recreation Complex (MRC) land. A line from the substation would connect to an existing buried line that runs along Caja del Rio Road. Where the access road to the water treatment plant intersects Caja del Rio Road, a line buried in the access road would extend to the water treatment plant. This alternative avoids creating a new utility corridor.

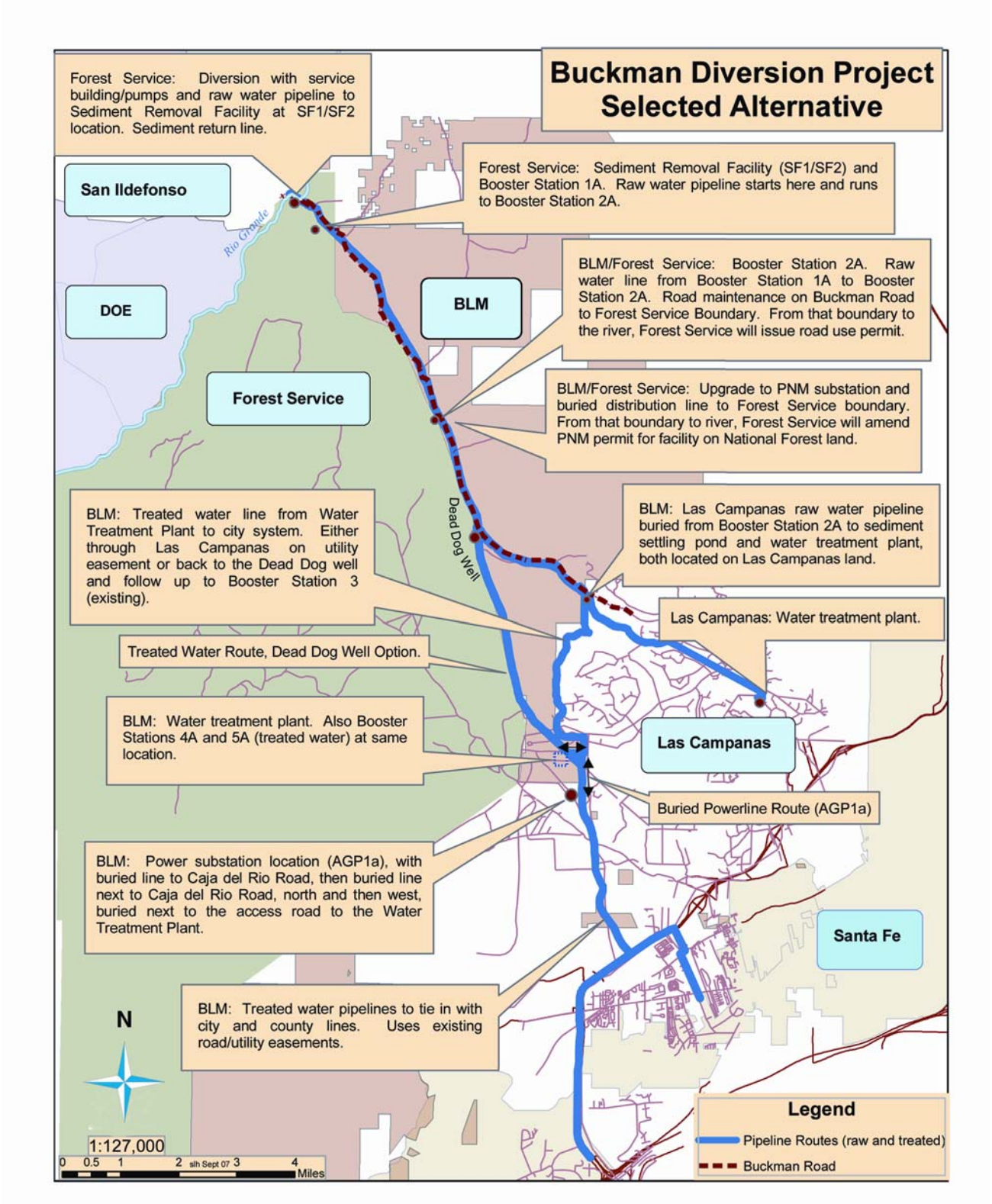


Figure 1. Locations of Buckman Diversion Project facilities and associated infrastructure for which the Forest Service and Bureau of Land Management are making decisions.

Decisions for Required Mitigation and Monitoring

The identified decisions for the required mitigation measures are derived from three main sources:

- The FEIS developed mitigation measures and monitoring objectives that ensure potential environmental effects are minimized and disclosed adequately;
- The biological assessment (BA) and biological opinion (BO-terms and conditions), which were developed through formal consultation with the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act to ensure threatened and endangered species were not jeopardized; and
- Mitigation recommendations developed pursuant to the Fish and Wildlife Coordination Act, which requires consideration of these recommendations with the intent to avoid any loss of habitat. The Fish and Wildlife Coordination Act Report (FWCAR) documents the analysis and recommendations.

The mitigation measures discussed in the FEIS help to avoid and reduce significant direct, indirect and cumulative impacts caused by project construction and operation activities. They were developed as a result of the NEPA process documented in the FEIS (pp. 65-68).

The ESA Section 7 consultation process contributed to the FEIS development for species found at the site of the facility. Consultation also augmented the FEIS for those portions of the project outside the direct authorization of the FS/BLM, specifically, the water transfers and water management. Although the water transfers and use do not impact FS/BLM managed lands, these actions are connected in terms of how they affect the silvery minnow, a species listed as endangered under the ESA. Therefore, through consultation, additional detail of how the transfers may occur and how the water facility will be operated have been included in the BA and BO. These mitigation measures and terms and conditions incorporate the operation plan included in the BA (Section 5.f, pp 50-55), which is based on the operation plan submitted as Appendix A of the BA. The operations plan is designed to minimize the effects to silvery minnow of diverting native water through the Buckman system. This operation plan includes a curtailment strategy for periods of low flow (BA pp. 53-55; BO pp. 11-13), and requires an obligation to confer with other water users each year to determine the likelihood of low flows in the spring-fall period (BA p. 54).

In addition to those mitigation/monitoring measures found in the FEIS that are already part of the selected alternative, the following mitigation and monitoring decisions found in the BO and FWCAR will be applied to this project.

1. Identify all flood plains, including those of the arroyo crossings and avoid them through directional drilling underneath, or adequately bypassing them with properly sized culverts, low water crossings, and the placement of vegetated riprap (no concrete blocks, gabions, jersey jacks), where used. Use best management practices (e.g. those identified in the 404 certificate) for crossings. (FWCAR pp. 14, 18, 52, 54; FEIS pp. 73, 105, 108, 113, 123, 171)
2. Obtain CWA Section 402 and 404 permits including any required toxicity testing, as well as Section 401 water quality certification from the State of New Mexico. (FWCAR pp. 41, 43, 54; FEIS p. 68)

3. Design the sand return line to disperse TSS to the greatest extent practicable that minimizes the impacts of sedimentation on aquatic life. (FWCAR pp. 36-43, 46-49, 52, 55; FEIS pp. 68-69, 112).
4. Avoid the release of chlorinated water by planning for and preventing pipe breaks at the crossings of the Santa Fe River or any other arroyos where piped water contains chlorine compounds or through restriction of the use of chlorinated water during dust suppression near aquatic habitats, flood plains or riparian areas. Construction and maintenance will be done per best management practices. In addition, no use of chlorinated water would be allowed where it could impact riparian/aquatic habitats. (FWCAR p. 54).
5. Require, as a condition of any permits, all recommendations for species protection by the USFWS and/or the New Mexico Department of Game and Fish to protect migratory birds, as well as avoiding wildlife entrapment during construction or trenching (FWCAR p. 54; FEIS pp. 65-66, 146-147).
6. Before construction occurs in the near-river environment, applicants must coordinate with the NMED, the LANL or any other appropriate entity to obtain the necessary analytical support. Specifically, before digging in the river area, conduct tests on surface and buried sediment in the route and if concentrations of radiological contaminants are found that exceed worker safety levels, the route would be modified to avoid such exposure. This measure will avoid exceeding health/safety or other standards.
7. Develop and implement an aquatic species monitoring program in the vicinity of the Buckman Project, in collaboration with nearby landowners and stakeholders, to confirm actual impacts to aquatic life compared with the analysis, and implement an adaptive management program so as to incorporate the findings of this program. The purpose is to minimize impacts by the operation of the Buckman Project (FWCAR pp. 29, 34-35, 54; FEIS pp. 65, 66, 127-128, 131). For example, monitoring would test entrainment assumptions. This monitoring should last as it is useful for identifying impacts associated with the diversion. Once these are no longer detected impacts or assumptions are validated, it may be reduced to an appropriate level or discontinued.
8. Develop a diversion and discharge operations plan that includes methods to minimize the potential effects to aquatic life, fisheries, or fish habitat (FWCAR pp.37-43, 46-49, 52, 54; FEIS pp. 9, 15, 65, 75-76, 130-133).
9. Contract appropriate and qualified personnel to rescue fish or other aquatic life that become stranded in the area dried by the coffer dam. (FWCAR pp. 34, 52, 54)
10. Minimize potential wildlife loss at onsite storage ponds and at the Las Campanas surface water treatment plant lagoons with appropriate wildlife exclusion devices or deterrent techniques in consultation with appropriate wildlife agencies (FWCAR p. 54).
11. Rectify the impact to riparian vegetation and habitats by restoring the riparian system along this reach of the Rio Grande to the maximum extent practical. The FWCAR and FEIS note that existing riparian habitat is valuable (FWCAR pp. 29-30, 30, 32-36, 55; FEIS pp. 65-66, 123-124, 127-130) and because its importance, recommends no net loss of 6.61 acres of this riparian habitat value, in perpetuity.
    a. In order to accomplish this objective, the revegetation plan described in the FEIS (pp. 9, 12, 32, 38, 39, 40, 45, 65-66, 73-74) will include a riparian restoration section identifying the type of vegetation, timing of planting, location of plantings,

monitoring protocols and frequency and adaptive management necessary to recover the lost riparian habitat value associated with the Buckman Project.

12. Rectify the impact to the upland vegetation and habitats, by restoring the native vegetation in this area to the maximum extent practical to benefit upland species (FWCAR pp. 33-34, 36, 44; FEIS pp. 9, 12, 32, 38, 39, 40, 45, 65-66, 73-74). In order to achieve this objective, one or more of the following actions will be implemented:
    a. Rio Grande at Buckman site invasive plant control/riparian habitat restoration (about 30-40 acres available).
    b. County land dedication as open space for wildlife habitat. Santa Fe County has begun acquiring land for this purpose and expects to have several hundred acres potential for this use during the next few years.
    c. La Cienega/Santa Fe River willow restoration/invasive plant control.
    d. Provide the Forest Service with assistance in enforcement of the existing non-motorized use area on the east side along the Rio Grande (e.g. maintain closure behind City Well 8).
    e. Improvement of the watershed through planting of vegetation along the Cañada Ancha. The focus of this effort will be along those portions of the watershed affected by the pipeline and road improvements, which also provides stability for these improvements.

13. Compensate for the loss of up to 6.98 acres of aquatic habitat/wetlands by replacing or providing substitute resources or environments for these acres. This compensation will be undertaken to replace lost habitat value after all other forms of mitigation have been applied (e.g. efforts to reduce habitat lost to TSS return). Specific habitat losses are described in the FWCAR (pp. 26-29, 34-43, 46-49, 52, 55) and FEIS (pp.130-133). In order to achieve this objective, the following needs to be considered:
    a. To determine the relative compensation for different types of habitats lost and mitigated, the FWCAR recommends using habitat equivalency analysis (HEA). HEA provides a framework for determining the area required for compensatory restoration (FWCAR p. 55). As much as possible, this method, or one of equal validity, will be employed to make this determination of habitat replacement.
    b. The FWCAR notes that "[c]ompensation may be in two forms. In-kind compensation measures are those that provide substitute resources that are physically and biologically the same as or closely approximate the resources to be impacted or lost. Out-of-kind compensation measures provide substitute resources that are physically and biologically different from the resources lost. Compensation is accomplished through management of habitat where there is the potential for increasing its value or, in some instances, through protection of land where it can be predicted that all or part of its habitat value would be lost over time.

In addition to the measures described above, the following three recommendations are to be considered during design and operation of the project:

14. The operations and sediment return plan will include conservation of fish and wildlife to avoid impacts. (FWCAR pp. 29, 35, 44, 51, 52, 54; FEIS pp. 12, 47, 52, 65-66); BA pp. 50-55; BO pp. 11-13)
15. Work with Santa Fe County to include ordinances or best management practices that require low impact development techniques for storm water runoff and reduce irrigation needs (FWCAR pp. 51, 52, 54).
16. Encourage conservation of water to benefit fish and wildlife (FWCAR pp. 51, 52, 54).

Finally, the USFWS provided the following reasonable and prudent measures, which will become a part of the authorizations for the project (BO p. 44):

17. The project proponents will seek to minimize the amount of native Rio Grande flows diverted at times when the likelihood of the river drying is high.
    a. Prior to implementation of the project, work with each other, the USFWS, and to the extent practicable the City of Albuquerque and Bureau of Reclamation, to establish a coordination strategy that will minimize diversions of native Rio Grande water during periods of low flow and associated river drying in the Middle Rio Grande.
    b. Elements of this strategy may include identifying opportunities to modify diversion schedules at the Buckman Diversion and/or divert San Juan Chama water instead of native water to minimize reduction of silvery minnow habitat from March through October. Written documentation of this strategy must be submitted to the USFWS prior to operation of the Buckman Direct Diversion (BDD) (BO p. 45).

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring re-initiation of consultation and review of the reasonable and prudent measures provided. The BLM and FS must immediately provide an explanation of the causes of the taking, and review with the USFWS the need for possible modification of the reasonable and prudent measures.

As noted in the BO (p. 45), Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or designated critical habitat, to help implement recovery plans, or to develop information.

The U.S. Fish and Wildlife Service recommends the following conservation activities (BO p. 45):

1. Encourage conservation of water to benefit the silvery minnow.
2. Support the efforts of the Middle Rio Grande Endangered Species Act Collaborative Program (MRGESCP).

To ensure that locations on both FS and BLM administered lands are consistent with this decision, engineering maps and a staked centerline will be reviewed on the ground by authorized agency representative(s) prior to any disturbance. These mitigation/monitoring measures and other stipulations (e.g. EPA, Corps of Engineers requirements) will be incorporated into an implementation plan (directed by the FS/BLM) that will be integrated into the plan of development and operations.

As described in the FEIS, an additional requirement is for the Buckman Direct Diversion Board to designate a project manager to monitor all construction activities on FS and BLM administered lands and to coordinate with the designated agency representatives. The required monitoring will provide quality control for the project, and help develop an adaptive management strategy to respond to changing conditions.

Required Permits

Permits necessary for the construction, operation, and maintenance of the new Buckman Direct Diversion facilities will be required by the FS and BLM prior to initiating construction. Drawings and location surveys of specific facilities will also be submitted to the Agencies as part of the implementation process. Before this decision can be implemented, permits are required from other agencies in addition to the BLM and FS. (Refer to the FEIS, pp. 68-69, for a non-inclusive list of permits that may be required.)

Other Project Terms and Conditions

Mitigation and monitoring requirements identified in the FEIS and specialist reports developed for the FEIS will be assigned to the BDD Board as part of the terms and conditions for the authorizations to construct, operate and maintain the facilities. The BDD Board is an entity empowered by the Joint Powers Act, passed by the City of Santa Fe and Santa Fe County, which will administer the construction and operation of the Buckman Direct Diversion.

The agency project inspector may require additional best management practices not included in the list of mitigation measures to protect soil, water, and air quality, in particular where these additional measures are required for permitting with other responsible agencies (e.g. measures required for a National Pollutant Discharge Elimination System storm water discharge permit is required from the U.S. Environmental Protection Agency).

Decision Rationale

The selected alternative was chosen because the actions have the least impacts to the resources managed by the Agencies and it avoids creating new utility corridors through otherwise undeveloped lands. The facility alternatives selected avoid impacts to the Buckman townsite, and route new pipelines through existing utility corridors.

As discussed above, the Agencies have also decided to authorize one of two alternatives for each of the following: the location of the sediment removal facility and Booster Station 1A; the means of disposing of sand; and the pipeline route from the City/County water treatment plant to a tie-in with the existing line near Booster Station 3. This strategy allows the Agencies and the Applicants to continue to cooperate on implementing the best alternative for each of these three parts of the project.

The impacts to soils would be relatively similar and minimal under any of the alternatives (FEIS, pp. 181-183). Similarly, the alternatives have similar impacts to wildlife, including management indicator species and migratory birds (FEIS pp. 122-147). In consultation with the USFWS, additional recommendations have been considered for project implementation in order to mitigate loss of aquatic, riparian and wildlife habitat.

The selected alternative has beneficial effects to ground water resources, as it provides a means of managing municipal water supply in a way to allow ground water "resting" while surface supplies are used (FEIS pp. 115-122).

All alternatives have similar small impacts to surface water (FEIS pp. 93-115), which are difficult to discern from the overall water operations in the Rio Grande system. Changes in surface water use patterns resulting from operation of the Buckman Project will result in negligible effects to other water users, including other water rights (FEIS p. 112), and recreational use of the river system (FEIS pp. 159, 162-164). Direct effects to wildlife would also be minimal.

The selected alternative also avoids effects to threatened/endangered and sensitive species (FEIS pp. 133-144), with the exception of the silvery minnow (FEIS pp. 138-144; BA p. 65; BO pp. 40-45). Although construction of the facility with mitigation has no effect to any listed species, the water operations are likely to cumulatively contribute to an adverse effect to the silvery minnow (FEIS p. 143).

Facility operations would result in the transfer of Rio Grande water rights to the Buckman Diversion site. The most likely location for the water to be acquired is between Cochiti Dam and Elephant Butte Reservoir and, therefore, some effects are expected to occur to riparian and aquatic wildlife by changing the amount of water available for habitat. However, with the required mitigation measures in place, the effects are limited to the point of not being distinguishable in the context of the entire river system, which includes operations of the Middle Rio Grande Conservancy District, Bureau of Reclamation, and City of Albuquerque. A discussion of this aspect of the project is located under the Endangered Species Act section that follows.

Tribal Consultation, Public and Government Agency Involvement, Issues, and Alternatives Development

Consultation With Tribal Governments

In accordance with the requirements of the National Historic Preservation Act (NHPA) and the revised 36 CFR 800 regulations of Section 106, Executive Order 13084, and Consultation and Coordination with Indian Tribal Governments, tribal consultation occurs early and throughout the NEPA process.

Tribal consultation letters were mailed in 2002 by the FS to the Pueblo of Jemez, Navajo Nation, Pueblo of Laguna, Pueblo of Acoma, Ohkay Owingeh[2], Pueblo of San Ildefonso, Pueblo of Santo Domingo, Pueblo of Isleta, Pueblo of Taos, Pueblo of Picuris, Pueblo of Sandia, Pueblo of Cochiti, Pueblo of Santa Ana, Pueblo of Tesuque, Pueblo of Nambe, Pueblo of Zia, Pueblo of Pojoaque, Pueblo of Santa Clara, and the Jicarilla Apache Nation.

At the request of the tribal governments, followup consultation occurred in 2002 with the Pueblo of Santa Clara and Pueblo of San Ildefonso. In addition, the tribal consultation process continued through the public review phase following distribution of the DEIS. For example, in August 2006, a field review was conducted in coordination with members of the Pueblo of Santa Clara.

Public and Government Agency Involvement

The Agencies and Applicants facilitated an open and collaborative process for agency and public involvement. The process included formal public scoping and a variety of formal and informal channels of communication such as maintaining Internet pages on the BLM and City of Santa Fe Web sites. The FEIS (pp. 23-25) describes the early efforts to bring interested and potentially affected parties into the process. Coordination with the affected agencies and Applicants is, and will continue to be integral to ongoing project development and implementation.

Issues and Alternatives Development

Planning issues are defined as disputes or controversies about existing and potential land and resource allocations, levels of resource use, production, and related management practices.

Identified issues involved the following resource and resource use subject areas (FEIS, pp. 25-26): land use and tenure, water resources, biological resources, cultural resources, recreation and scenic resources, traffic, air quality, noise, and socioeconomics.

In addition to evaluating these issues, the environmental impact statement assesses the potential effects that the proposed project could have on Indian Trust Assets, as well as assessing the potential effects that the proposed project could have on minority and low-income populations. Economic and land use impacts of the Proposed Action and alternatives, as well as the No Action Alternative, were considered, as are other social considerations. Both direct and indirect impacts are considered, as are cumulative effects of the Buckman Project with other past and reasonably foreseeable future projects that could affect the area.

[2] Ohkay Owingeh was called the Pueblo of San Juan at the time of the scoping.

The alternatives considered in detail in the EIS included a No Action Alternative and sets of alternatives that responded to the more general issues, as well as site specific issues (FEIS, pp. 25-26, 31-47). Consequently, site specific issues helped to develop the following facility alternatives:

- Sediment Facility Alternatives
- Water Pipeline Alternatives
- Power Upgrade Alternatives

Alternatives Considered but Eliminated from Detailed Study

Many alternatives were considered but eliminated from detailed study because they would not meet the stated project purpose and immediate near-term need for a sustainable means of accessing water supplies for the Applicants. Coupled with the need for surface water access through diversion of San Juan-Chama Project water and native Rio Grande water, is the requirement to reduce reliance on over-taxed ground water resources.

Additionally, it should be noted that this proposed project has an independent utility from the City and County's long-term water management strategy, which could consider different water diversion locations and other water management options.

Alternatives considered but eliminated from further analysis are listed below. Additional discussion can be found in the FEIS (pp. 29-31).

- Additional ground water pumping.
- Other surface water diversions, located elsewhere. Other sites considered early during the feasibility study included the San Ildefonso area, Caja del Rio area, Cochiti Lake area, and Peña Blanca area.
- Water conservation was suggested as a way to avoid the need for the project altogether.
- Alternative technologies.

Environmentally Preferred Alternative

The environmentally preferred alternative is the alternative(s) that best meets the goals of section 101 of the National Environmental Policy Act and is required by 40 CFR 1505.2(b) to be identified in a Record of Decision. Ordinarily, this is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural and natural resources. The BLM and FS consider the environmentally preferred alternative for the Buckman Water Diversion Project to be the No Action Alternative. However, the Agencies recognize that the No Action Alternative will not provide the development and use of facilities in meeting certain near-term water needs for the City of Santa Fe, Santa Fe County, and Las Companas Limited Partnership.

Comments on the DEIS

The public comment period for this DEIS was initiated with publication of the Notice of Availability in the "Federal Register" on December 17, 2004. Two open house meetings were held on the afternoon and evening of January 26, 2005, to allow the public to meet with the

Applicants for the project and representatives of the FS and BLM. At the open house meetings, the public was invited to ask questions about the project and provide comments.

Appendix A in the FEIS contains public comments received on the DEIS, along with the Agencies' responses to those comments. After reviewing the public comments, the Agencies determined that the alternatives considered in the DEIS, including the Agency's preferred alternative—which was identified in the Dear Reader letter—was adequate. However, in order to respond to a number of comments, the subsequent FEIS was updated to clarify the analysis and provide additional information. The FEIS was also updated to reflect discussions with the U.S. Fish and Wildlife Service regarding impacts of the project to the silvery minnow.

In May 2007, the FS and BLM received a copy of a letter which contained comments from two Department of the Interior agencies on the DEIS. The letter was dated February 14, 2005, and authored by the coordinating Department of the Interior agency, the Office of Environmental Policy and Compliance (OEPC). The letter had not been received by either agency and, therefore, the comments were not identified and addressed in the FEIS. The Agencies met with the Regional OEPC Officer and the USFWS, the primary commenter, in June 2007, and determined that the issues raised in the comment letter had been, or would be addressed in the biological assessment and biological opinion, the Coordination Act Report (FWCAR), and/or the Record of Decision for the project. A letter was sent to the Director of OEPC outlining the disposition of comments. Those comments and the Agencies' responses are provided in Appendix A of this document.

Comments on the FEIS

In May 2007, copies of the FEIS were mailed to interested/affected individuals, organizations and agencies. As required by BLM procedures, a detailed "Federal Register" notice was published on May 10, 2007, indicating that the FEIS would be available for public review and comment during a 30-day comment period. The comment period began on May 18, 2007, when a formal notice of availability was published in the "Federal Register" by the Environmental Protection Agency announcing that the FEIS was available for review. The BLM provided instructions on how to comment at its Internet Web site and in the notice published May 10, 2007. Appendix B of this document provides the Agencies' responses to comments received during the FEIS comment period.

Findings Required by NEPA and Other Laws

The planning and decisionmaking process for this project was conducted in accordance with all applicable laws, regulations, policies and plans. This section briefly describes our findings regarding the legal requirements most relevant to this project decision.

National Environmental Policy Act of 1960, As Amended, and Implementing Regulations (40 CFR 1500)

We find that the planning and decisionmaking process for this project was conducted in accordance with the requirements in the National Environmental Policy Act (1970) and its implementing regulations (40 CFR 1500, 1986) as supported by the contents of the environmental impact statement and the project record.

Federal Land Policy and Management Act of 1976

We find that the planning and decisionmaking process for this project was conducted consistent with the requirements set forth in the 1976 Federal Land Policy and Management Act (FLPMA) based on the following factors:

- This is the primary legal basis for granting authorizations for use and occupancy of National Forest System and BLM administered lands (43 U.S.C. 1715). The Secretaries of Agriculture and the Interior are authorized under FLPMA to grant, issue, or renew rights-of-way over, upon, or through Federal lands for utility corridors. FLPMA is guided by the regulations at 36 CFR for the FS and 43 Code of Federal Regulations for the BLM.
- Implementation of the selected alternative is consistent with the 1988 “Taos Resource Management Plan” which sets forth the land use decisions, terms and conditions for guiding and controlling future management actions on public lands.

National Forest Management Act of 1976, As Amended

As forest supervisor, I find that the selected alternative and mitigation and monitoring requirements are consistent with the 1987 “Santa Fe National Forest Land and Resource Management Plan,” which sets forth programmatic direction in accordance with the National Forest Management Act. This is based on the following factors:

- The descriptions in the FEIS of the selected alternative, the mitigation and monitoring measures (FEIS, pp. 31-69), and the environmental consequences of implementation (FEIS, pp. 55-174) are consistent with the Santa Fe Forest Plan goals described for heritage resources, visual quality, wildlife and fish, soil and water, and riparian areas.
- The mitigation measures and best management practices identified for implementation are tied to the Santa Fe Forest Plan standards and guidelines and will ensure consistency with the Santa Fe Forest Plan.

National Historic Preservation Act of 1966, As Amended

We find that this project is consistent with the requirements of Section 106 of the National Historic Preservation Act and 36 CFR 800 regulations, based on the following factors:

- Formal consultation with the State Historic Preservation Office (SHPO) under Section 106 has been conducted and completed. Documentation of required heritage resource inventories and evaluations were submitted to SHPO; the appropriate SHPO concurrences and clearances have been received.
- The FS and BLM have engaged in consultation with tribes regarding the potential impacts of the alternatives on both BLM and National Forest System lands according to the National Historic Preservation Act and associated legal requirements (FEIS pp. 23, 148).
- A heritage resource impact analysis was completed (FEIS, pp. 141-148) and additional details are contained in archeologist reports on file with the Santa Fe Forest Supervisor's Office and Taos Field Office of the BLM. Archeologists who prepared and reviewed this analysis concluded that if the project is implemented using required mitigation and monitoring, the project will have no effect to heritage resources.

Endangered Species Act of 1973, As Amended

We find that the project is consistent with the 1973 Endangered Species Act and its implementing regulations (50 CFR 402) based on the following factors:

- All federally listed species potentially occurring, or with habitat occurring in the analysis area, were identified and effects to them are described in the FEIS (pp. 133-147).
- The required biological assessment (BA) was completed. It determined the project would not likely adversely affect listed species that have potential to occur in the area of the diversion (Southwestern willow flycatcher and bald eagle[3]). The BA found adverse effects are likely to the endangered silvery minnow, because some of the water used by the project will have a change in point of diversion, primarily coming from the Middle Rio Grande, which provides habitat to the endangered silvery minnow (FEIS p. 143; BA pp. 65-68). Loss of this water to the system would, in turn, result in loss of habitat and other effects that would cumulatively contribute to an adverse effect to the minnow. Although this additional impact causes an incidental take, actual mortality caused by the Buckman Project cannot be segregated from the larger incidental take permitted under the 2003 biological opinion (BO) during consultation for river operations (Bureau of Reclamation). The BO describes the effects of other river operations in the action area (BO pp. 29-31, 41-44) and determined this level of anticipated take is not likely to result in jeopardy to the silvery minnow or destruction or adverse modification of designated critical habitat (BO p. 44).

[3] Since the FEIS was published in May 2007, and since the biological opinion was received from the Fish and Wildlife Service (June 2007), the bald eagle was removed from the list of threatened species. This new information does not substantially alter the analysis or the need for protection measures. Eagles retain protection under the Bald Eagle Protection Act and so the new information does not require a change in analysis to make this decision.

As noted in the BO:

> "The Buckman Project will have effects to silvery minnow and the designated critical habitat through reductions in flow in the Angostura Reach, the Isleta Reach, and reductions in availability of supplemental water to support flows as required in the 2003 BO. Improvements to habitat in these reaches through projects described in the environmental baseline may be slightly less effective in light of the reduced flows. Although the proposed action has the potential to cause minimal adverse effects to designated critical habitat for the silvery minnow, it is anticipated that these impacts will not affect the function or intended conservation role of designated critical habitat relative to the conservation of the silvery minnow and to the overall critical habitat designation. Implementation of the proposed action is not expected to impede the survival or recovery of the silvery minnow within Middle Rio Grande or range-wide." (BO p. 44)

The BO estimates that, "[u]p to 13 miles of river between the Paseo Diversion and the Waste Water Treatment Plant outfall, and up to 3 miles of river below the Isleta Diversion dam, will experience peak flow reductions of up to 11 cfs due to the Buckman Project. The Service has determined that these reduced flows will result in a permanent loss of 6.21 acres of critical habitat in the Middle Rio Grande…."

Fish and Wildlife Coordination Act of 1934, As Amended

The project is consistent with the requirements of the Fish and Wildlife Coordination Act. We have considered the recommendations provided in the Coordination Act Report, which avoid, minimize, rectify or compensate for predicted habitat loss caused by the construction and operation of this project. In general a "no net loss of habitat" determination is made based on the mitigation recommendations included in the FEIS and in the mitigation included in the mitigation section of this ROD.

Migratory Bird Treaty Act of 1918, As Amended, and the Bald and Golden Eagle Protection Act of 1940, As Amended

The project is consistent with the requirements of the 1918 Migratory Bird Treaty Act based on the following factors: Based on the type of habitat and mitigation measures, disturbance would be avoided by preconstruction surveys and timing restrictions (FEIS p. 146). The bald eagle mitigation measures (FEIS p. 140) assure protection of the bald eagle, and so comply with the act.

Clean Water Act of 1977, As Amended

We find that the project is consistent with the requirements of the Clean Water Act and its implementing regulations (40 CFR 130), as well as New Mexico State Water Quality Standards, based on the following factors:

- Mitigation measures and monitoring require structures or filtration to protect water quality.
- Best management practices will be required to mitigate potential erosion by the authorized officer as deemed necessary.

- Permits from the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency, as described in the FEIS, will be required prior to construction and operation, including those for operation of a sand return feature of the project.

Safe Drinking Water Act of 1974, As Amended

Providing clean municipal drinking water is the responsibility of the City of Santa Fe, Santa Fe County and Las Companas as water providers. Although this decision is not directly responsible for this law's requirements, we have reviewed the best available information regarding the potential hazards posed by surface water diversion at the Buckman site in order to evaluate the feasibility of this project. This information indicates that the risk of introducing harmful substances is low. In addition, the measures proposed to stop taking water during storm events, as well as the use of the best available technology to remove any substances that could be diverted with the water, provides a reasonable certainty that this project will be able to meet the requirements of the Safe Drinking Water Act.

Wild and Scenic Rivers Act of 1968, As Amended

We find that the project is consistent with the requirements of the Wild and Scenic Rivers Act based on the following factors: The Santa Fe National Forest eligibility for Wild and Scenic Rivers was completed as part of the national review before completion of the Forest Plan in 1987. No drainages within the study area were included in the Forest Plan for further study. The reason for this has not been found documented, but a likely explanation is that the Rio Grande through the White Rock reach lies within the full pool elevation of the Cochiti Reservoir, and so this reach would not be considered "free flowing" as required by the act.

Nonetheless, in response to concerns raised during the DEIS/FEIS comment periods, the Santa Fe National Forest will consider a review of the eligibility of this segment of the Rio Grande. However, authorization of the Buckman Project before such a review does not preclude an eligibility determination because possible outstandingly remarkable values (ORVs), such as cultural resources (FEIS pp. 147-155), geologic (FEIS pp. 181-183), recreation (FEIS pp. 155-164), and scenery (FEIS pp. 164-173) will not be impacted to a large degree by this project.

Environmental Justice, Executive Order 12898, 1994

Executive Order 12898 (February 11, 1994) directs Federal agencies to focus attention on the human health and environmental conditions in minority communities and low-income communities. The purpose of the Executive Order is to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. The Executive Order states that populations should not be disproportionately impacted due to ethnicity or income level. Based on the social and economic analysis of the effects of alternatives in the FEIS (pp. 149-164), we find that the selected alternative will not disproportionately impact minority or low-income populations.

Forest Service Decision

As forest supervisor for the Santa Fe National Forest, I have decided to authorize the appropriate permits to the Buckman Direct Diversion Board, an entity empowered by the Joint Powers Act, passed by the City of Santa Fe and Santa Fe County, to administer the construction and operation of the Buckman Direct Diversion.

The portions of the project that will lie on National Forest System lands are:

- The diversion structure and the low-head pumps and service building near the river.
- The sediment processing facility and associated pumping facilities and pipelines, as depicted in Alternative SF1/SF2 (FEIS, p.37). Pending a decision by the Environmental Protection Agency to permit a return of the sand-sized sediment to the river, this decision would allow a return flow pipe (Alt. SF1), or trucking of sand away from the sediment facility (Alt. SF2). A combination of the two alternatives may also be implemented in order to meet possible restrictions to the timing of sediment return (e.g. storage and trucking may be required in order to avoid returning sand at certain times of very high sediment loads, but for most other times, direct return would be within regulatory limits).
- The raw water pipeline from the near-river facility to Booster Station 1A.
- Authorization for Santa Fe County to maintain Buckman Road to the standards specified in the FEIS (FEIS pp. 2, 41 and FEIS Fig. 14), which is a Maintenance Level 2.
- This decision also includes issuing the appropriate permits to PNM for power upgrades (12.5 kV buried line) from the Buckman Substation to the near-river facility as described in the FEIS (pp. 59-60).

Forest Service Administrative Review or Appeal Opportunities

The decision related to National Forest System lands is subject to administrative review (appeal) in accordance with 36 CFR 215 (June 2003). A written notice of appeal—clearly stating it is a notice of appeal being filed pursuant to 36 CFR 215.14—must be filed within 45 days from the date of publication of legal notice of this decision in the "Albuquerque Journal." The publication date in the "Albuquerque Journal," newspaper of record, is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Individuals or organizations that submitted substantive comments during the comment period specified at 36 CFR 215.6 may appeal this decision. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14. An appeal must be filed (regular mail, fax, e-mail, hand delivery, or express delivery) with the appeal deciding officer.

Written appeals must be submitted to:

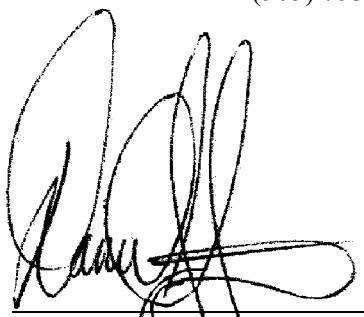
Deputy Regional Forester, Southwestern Region
Appeal Deciding Officer
333 Broadway Blvd., SE
Albuquerque, NM 87102
FAX: (505) 842-3173
E-mail: appeals-southwestern@fs.fed.us

The office business hours for those submitting hand delivered appeals are: 8 a.m. to 4:30 p.m. Monday through Friday, excluding holidays. Electronic comments must be submitted in a format such as an e-mail message, plain text (.txt), rich text format (.rtf), Adobe (.pdf) and Word (.doc) to appeals-southwestern@fs.fed.us. The appeal must have an identifiable name attached or verification of identity will be required. A scanned signature may serve as verification on electronic appeals.

Forest Service Information Contact

For additional information concerning this decision or the Forest Service appeal process, contact:

Sandy Hurlocker
Española Ranger District
1710 North Riverside Dr.
Espanola, NM 87505
(505) 753-7331



10-5-07

DANIEL J. JIRON **Date**

Forest Supervisor
Santa Fe National Forest
USDA Forest Service

Bureau of Land Management Decision

As field office manager for the Taos Field Office, it is my decision to grant rights-of-way to the Buckman Direct Diversion Board, an entity empowered by the Joint Powers Act, passed by the City of Santa Fe and Santa Fe County, to administer the construction and operation of the Buckman Direct Diversion. The portions of the project that will lie on BLM administered lands and which will be authorized are specified below:

- The route for one raw water pipeline from Booster Station 1A to Booster Station 2A and on to Dead Dog Well.
- The location of Booster Station 2A.
- The route for one raw water pipeline from Booster Station 2A to the boundary of Las Campanas property. Continuation of this line, as well as Las Campanas water treatment facilities (Booster Station 3A), lie on lands owned by Las Campanas and so would not be authorized by this decision. Nonetheless, as connected actions that have mitigation measures necessary to avoid impacts to BLM lands, the Las Campanas facilities will be constructed to meet those design requirements.
- The route for one raw water pipeline from Booster Station 2A to the City-County water treatment plant.
- The route for one treated water pipeline running from Booster Station 4A at the City/County water treatment plant to the existing city water system, tying in at the existing Booster Station 3. Two routes are authorized, but only one will be implemented, depending on design considerations for the City-County. The first potential route is the Proposed Action route which lies mostly on Las Companas with two ends requiring crossing lands managed by the BLM. The second potential route is along roadways within an existing corridor used for gas lines and overhead electric. Although the second route lies within an existing corridor, it would require BLM to issue a new right-of-way.
- The location of the City-County water treatment plant as well as Booster Stations 4A and 5A as shown in the FEIS.
- The route for a buried 12.5 kV line from Buckman substation to the near-river facilities and a new substation located as depicted in Alternative AGP1A in the FEIS.
- Santa Fe County maintenance of Buckman Road to the standards specified in the FEIS.

Bureau of Land Management Decision Appeal Procedures

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR 2801.10(a). If an appeal is filed, the notice of appeal must be filed with the Bureau of Land Management, Taos Field Office, Field Office Manager, 226 Cruz Alta Road, Taos New Mexico 87571, within 30 days of the date the notice of the decision appears in the *Federal Register*.

If you wish to file a petition pursuant to 43 CFR 2801.10(b) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. Copies of the notice of appeal and petition for a stay must also be submitted to the Interior Board of Land Appeals and to the Regional Office of the Solicitor at the same time the original documents are filed with this office.

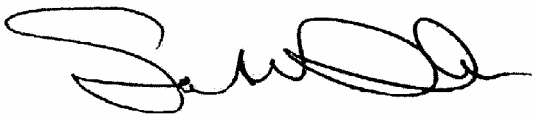
[note: these appeal procedure instructions replace the language in the printed ROD]

Bureau of Land Management Information Contact

For additional information concerning this decision or the Bureau of Land Management appeal process, contact:

Mr. Sam Des Georges
BLM - Taos Field Office
226 Cruz Alta Road
Taos, NM 87571
(505) 751-4725
e-mail: sam_desgeorges@nm.blm.gov

The Buckman Water Diversion Project FEIS and Record of Decision are available at the following Web site: http://www.blm.gov/nm



10/4/2007

SAM DES GEORGES **Date**

Taos Field Office Manager
Taos Resource Area
USDI Bureau of Land Management

Implementation Date

This decision will not be implemented sooner than 5 business days following the close of the Forest Service appeal filing period established in the Notice of Decision in the "Albuquerque Journal." If an appeal is filed on the Forest Service decision, implementation will not begin sooner than 15 business days following a final decision on the appeal. Implementation means actually doing the ground-disturbing actions described in this notice. Field project preparation work such as design and staking may proceed.

Errata

The following corrections need to be made to the FEIS:

Page 12 of the "Executive Summary" indicates that the construction and operations of the Buckman Project would not adversely affect the silvery minnow. This statement is incorrect and should read as follows to be consistent with the FEIS page 143: "The transfer of water rights out of the Middle Rio Grande Basin to the Buckman Diversion site could cumulatively contribute to an adverse effect to the silvery minnow."

Page 108 of the FEIS uses an incorrect USGS number for Tesuque Creek station. It should be USGS station number 08308025 (not 8308025).

Page 146 in the FEIS misstated the Migratory Bird Treaty Act (MBTA) authority and needs to be corrected in errata or noted in the ROD. No incidental take permitting mechanism is available under the MBTA for construction projects.

Appendix A. Response to February 14, 2005, DOI/OEPC Comments on the DEIS

During the public comment period for the "Draft Environmental Impact Statement for the Buckman Water Diversion Project" (DEIS), the Department of the Interior (DOI) submitted comments electronically. For unknown reasons, these comments were not received. This omission was discovered in May 2007 when the final environmental impact statement (FEIS) was published without mention of these comments.

In June 2007 the U.S. Forest Service (FS), Bureau of Land Management (BLM), and the U.S. Fish and Wildlife Service (USFWS) met with the Department of the Interior's Office of Environmental Policy and Compliance (OEPC) to discuss the issues raised in their comment letter. OEPC found that the proposed project could affect fish and wildlife resources downstream of the project area. The impacts would be due to reduced native Rio Grande flows downstream of the Paseo del Norte diversion in Albuquerque, and reduced flows associated with point of diversion changes.

The DEIS/FEIS reflects the National Environmental Policy Act (NEPA) process and policy, which calls for disclosing significant effects to the human environment. As noted in the FEIS, direct effects of project construction and maintenance to fish and wildlife are described as low to all species. Mitigation measures are described to reduce the impacts further, and the potential impacts to the single federally listed species known to frequent the diversion site (bald eagle) has been mitigated (FEIS p. 134, 140).[4] Thus, the FEIS describes effects of the project under the control of the FS and BLM.

The focus of the DOI/OEPC comments center around two aspects of the project not under FS/BLM jurisdiction, and required additional consultation with the USFWS.

First, native Rio Grande water pumped by the diversion falls under the jurisdiction of the New Mexico State Engineer. San Juan-Chama Project water (nonnative to the Rio Grande basin) falls under the jurisdiction of the Interstate Stream Commission and the Bureau of Reclamation. The only adverse effect of the Buckman Project to the silvery minnow has been identified as the transfer of native water from its current point of diversion (most likely in the Middle Rio Grande valley). This issue is discussed at length in the biological assessment/biological opinion (BA/BO), said documents being developed in close consultation with the USFWS since 2002.

Second, the Fish and Wildlife Coordination Act calls for consideration of a broader spectrum of fish and wildlife analysis than the Endangered Species Act for all projects that affect river systems by obstructing or diverting water. The Agencies' (FS and BLM) managers for the Buckman Water Diversion Project have been working with the USFWS for the 5 years of the planning life to develop a Coordination Act Report (FWCAR) that reflects appropriate consideration of these additional effects.

Although the Fish and Wildlife Coordination Act has similar mandates as NEPA, it responds to a separate objective, which is to develop projects with no net loss of habitat to fish and wildlife. The FWCAR provides a more refined and detailed analysis to comply with the mandate of the

[4] The bald eagle was de-listed in August 2007 after the FEIS was released. Therefore, there are no listed species directly impacted from construction and maintenance of the facilities at the diversion site. Nonetheless, bald eagle mitigation measures have been retained for consistency with FEIS effects analysis for the eagle.

Fish and Wildlife Coordination Act, but that level of detail has not been incorporated in the FEIS in order to allow the FEIS to meet the NEPA objective of focusing on significant effects.

The comments were considered and addressed in a realm of three different possibilities or combination thereof:

- Response addressed by identification in the FEIS/ROD Errata.
- Response addressed in the BA or BO.
- Response addressed in the FWCAR.

Comment 1: *Project-related flow reductions of native Rio Grande water below the Paseo del Norte diversion could adversely affect the Rio Grande silvery minnow (minnow) and other aquatic biota by reducing available habitat, which could reduce foraging habitat for birds and mammals. It may also impact riparian habitats by lowering ground water levels, particularly during drought conditions.*

Response: The BA/BO provides extensive data and analysis to describe the effects of the potential change in the point of diversion. As noted, this change is not measurable in relation to other river operations in the Middle Rio Grande and, therefore, cannot be mitigated for in terms of general wildlife/fish habitat loss. The FWCAR attempts to quantify this change, which is estimated to be up to 6.21 acres of aquatic habitat in the approximately 160-mile segment of the Rio Grande downstream from the diversion site (FWCAR p. 49). The FWCAR and Record of Decision include mitigation to rectify or compensate for these effects. The BA/BO describe the potential effects to the silvery minnow, and again, the changes produced by operations of the Buckman Project cannot be distinguished from the river operations.

Comment 2: *More consideration should have been given to an alternative that used infiltration galleries at the Buckman site that could reduce the need for expansive sediment treatment facilities and other infrastructure proposed in the DEIS. The use of infiltration galleries would also eliminate the potential issue of fish entrainment.*

Response: A study conducted by Las Campanas in 1995 indicates that an infiltration gallery at the Buckman site would produce about 2 to 3 cfs, which would not meet the purpose of the proposal to provide for a peak of more than 28 cfs (Balleau 1995).

Comment 3: *The DOI agrees that visitor use in the project area would increase with project-related improvements to Buckman Road. Increased use of lands in and adjacent to the project area may negatively impact fish and wildlife resources through off-road recreation and other land disturbance activities. The proposed management actions should be provided in the FEIS.*

Response: The FEIS describes how the improvement of Buckman Road could lead to additional impacts (FEIS pp. 9, 65, 128, 160, 162, 171). As part of the adaptive framework to respond to possible increase in use, management controls will be used to maintain impacts within predicted levels. Examples of controls include (but are not limited to) signage or strategic barriers.

Comment 4: *The use of a cofferdam surrounding and isolating the construction area would minimize construction related impacts to water quality and aquatic resources. However, it would*

not mitigate the impact to aquatic resources associated with reduced flows downstream and entrainment at the intake structure.

Response: The recommendations included in the ROD from the BO and FWCAR are designed to mitigate the effects of these expected effects to habitat by the slightly reduced flows associated with operation of the Buckman Project.

Comment 5: *Improvements to Buckman Road may increase recreational use of lands in and adjacent to the project area. It may also facilitate easier access to developable private inholdings near the project area. The proposed project would also facilitate further housing development and other Las Companas facility development.*

Response: The issue of road improvements and impact of development resulting from those road improvements was considered in the DEIS/FEIS based on a report of potential traffic increases caused by the proposed changes in the road. The improvements are considered minimal to meet standards and so the resulting increase in use was not considered to be significant. Nonetheless, the need to monitor the effects was also noted.

Comments 6 and 7: *The Office of Environmental Policy and Compliance (OEPC) recommended including a discussion of the impacts associated with reducing native Rio Grande flow. They also recommend including a discussion of the effects associated with changing the point of diversion for water used in the project and including a description of the regional mitigation measures and how the implementation of those measures would serve to minimize adverse effects to the minnow.*

Response: These discussions are found in the BA and BO. The BA discusses operations of the river under current conditions and once the Buckman Project begins diverting water (BA pp. 6-15, 22-26). Effects are also described in the regional context (BA pp 26-37and 44-60), including the curtailment of use during certain conditions in the river. Coordination with other water using agencies is also described. As a result of this change in flow, a small loss of this water to the system would, in turn, result in loss of habitat and other effects that would cumulatively contribute to an adverse effect to the silvery minnow. Although this additional impact causes an incidental take, actual mortality caused by the Buckman Project cannot be segregated from the larger incidental take permitted under the 2003 biological opinion during consultation for river operations (Bureau of Reclamation). The BO describes the effects of other river operations in the action area (BO pp. 29-31, 41-44) and determined this level of anticipated take is not likely to result in jeopardy to the silvery minnow or destruction or adverse modification of designated critical habitat (BO p. 44).

The Fish and Wildlife Coordination Act Report (FWCAR) describes the effects of changes in flow as well (pp. 46-50) and made recommendations for avoiding or rectifying these effects (pp. 53-56).

Comment 8: *Rather than habituating to changes in road traffic, wildlife may increasingly avoid the project area.*

Response: We acknowledge that this may occur.

Comment 9: *On Jan. 13, 2005, the U.S. Fish and Wildlife Service (USFWS) met with the USFS, BLM, and Tetra Tech. Inc., to discuss the project and potential project-related impacts to fish and wildlife resources. The proposed project will be further reviewed under the Fish and Wildlife Coordination Act and a Fish and Wildlife Coordination Act Report will be developed.*

Response: Consultation with the USFWS began in 2002. A number of meetings were conducted. The contractor was asked to write the FWCAR, working with the USFWS to ensure it met their standards. Based on samples provided by the USFWS in 2002, a draft of the FWCAR was produced and the final FWCAR was completed in June 2007.

Comment 10: *Alternatives Considered but Eliminated from Further Study. Alternative Technologies, Page 30: It is unclear if infiltration galleries were considered as a diversion option. Information on the effectiveness of: infiltration galleries in or adjacent to the project area may be available from the Pueblo of San Ildefonso'(DEIS page 83).*

Response: See response to comment 2.

Comment 11: *To minimize project-related impacts to fishery resources, we recommend that construction occur when fish passage is not critical (e.g., during low flow periods). If construction is necessary when fish passage is critical, then passage should be provided in the construction area. To facilitate up and downstream fish movement, water should be of sufficient depth and velocity to allow fish to swim through the project area.*

Response: As described in the FEIS (pp. 32 and 65), timing of construction in the river is limited to about 5 months during the seasons of low flow—summer and autumn. The project proposes no blockage of fish passage, neither during construction nor operations.

Comment 12: *To minimize trapping of wildlife during trenching operations we recommend, where possible, that trenching and burying of pipelines be done concurrently. In addition, we recommend leaving the least amount of trench open overnight and providing escape ramps for trapped wildlife. We also recommend that areas disturbed during construction be reseeded with native vegetation to minimize erosion.*

Response: Agency specialists and the New Mexico Game and Fish have provided mitigation measures to respond to this concern, and those measures will be implemented through the terms and conditions of the permits (FEIS p. 66).

Comment 13: *If culverts are used, then they should be placed at the existing grade of the channel to prevent the initiation of head cutting and other erosion problems. The diameter of the culvert should be larger than the channel bed to facilitate sediment, bed load, and debris passage. Culverts and/or concrete dips should be oriented with the natural channel and present no angular deviation from the natural channel plan form. The road grade at arroyo crossings should prevent diversion of arroyo water from the channel. If flow overtops the road, it should return to its natural channel instead of being diverted elsewhere.*

Response: Culvert placement will be guided by best management practices, which include all of the suggested practices as well as others. On June 19, 2007, the Army Corps of Engineers issued a permit under Section 404 of the Clean Water Act to allow placement of fill material in the Rio

Grande, the Santa Fe River, and many other ephemeral tributaries. As part of the permit (pp. 4-6), mitigation measures are included that align with those in the FEIS. They defer to the USFWS for some mitigation and reserve the opportunity to review the design of the sediment return outfall.

Comment 14: *Structures, such as wastewater lagoons, tanks, and evaporation ponds often provide injurious conditions to threatened or endangered species, migratory birds, or other wildlife. During flight, migratory birds may not distinguish between artificial water bodies and natural water bodies, and could be attracted to these artificial water bodies to drink, rest, and forage. Artificial water bodies could serve as an "attractive nuisance" if measures are not taken to exclude migratory birds (and other wildlife) from access to injurious waters or conditions.*

Response: The New Mexico Game and Fish Department was consulted, commented on the DEIS, and their comments are incorporated (FEIS pp. 66, 209-215, 258). Appropriate design features (e.g. chemical treatment would be inside buildings, not exposed lagoons) and mitigation measures will protect wildlife. In addition, under consultation with USFWS, measures included in the ROD will reduce the risk by requiring appropriate measures for protecting species from these waters.

Comment 15: *The DEIS states that "[p]rojects within the Buckman area could inc1ude granting access ROW's for private inholdings within BLM lands, and increased housing development." This bullet item appears inconsistent with the statement on page 11 of the DEIS that "…development would not occur as a result of the level of improvement measures for Buckman Road."*

Response: The road level improvements authorized by this decision leave the road at a level that does not facilitate subdivision development. If subdivisions are developed and the road system requires an upgrade, that decision would occur at the time this need is demonstrated more clearly than it is at this time. (Tierra Lopezgarcia Group. The "Buckman Roadway Study for the Buckman Water Diversion Project, Santa Fe NM." Prepared for the Sangre de Cristo Water Division. February 2004.)

Comment 16: *Project-related flow reductions downstream of the Paseo del Norte diversion may negatively impact habitat restoration efforts for the minnow. Reduced flows associated with project-related point of diversion changes may compound these impacts.*

Response: The issue of flow changes by the change in point of diversion has been described in detail in the BA/BO as well as the FWCAR. See response to comments 6 and 7, as well as the description of effects to silvery minnow described in the ROD (see pages 8 and 15).

Comment 17: *Changing the point of diversion or the release timing of 3,000 afy (ac-ft/year) of Jicarilla Apache Nation San Juan-Chama Project water may negatively impact fish and wildlife resources in and adjacent to the project area by reducing flows or further regulating the hydrograph.*

Response: The Bureau of Reclamation analyzed the impacts of the changes to the release timing of Jicarilla's leased San Juan-Chama water. In a finding of no significant effect (FONSI) signed May 22, 2006, the Bureau of Reclamation found that the change in use (which includes point of

diversion and timing) of the San Juan-Chama Project water predicted in the foreseeable future would not be a major Federal action causing significant effects to the human environment. This finding included the foreseeable change in use from providing ground water pumping offsets (current use) to direct use of the water in a diversion. Also, in a finding of no significant impact dated October 17, 2005, the Bureau of Reclamation found that subcontracting up to 3,000 ac-ft/year of Jicarilla Apache Nation's San Juan-Chama Project water would have no biological, physical or cultural resources effects.

As noted previously (comments 6 and 7), the BA and BO discuss the change that may be expected when the point of diversion is changed. As noted in the BO, use of San Juan-Chama water to offset ground water pumping occurs (BO page 10, 32), but the water release does not contribute to year-round flows because it occurs in the winter months to maximize the benefit of this water to the Rio Grande Compact (i.e. to minimize evaporative loss and other factors). Even with conservative assumptions about the change from current use (for offsets) and pumping out of the river directly, the effects in terms of mortality to silvery minnow cannot be segregated from other river operations (BO p. 44).

Comment 18: *As stated in the DEIS, "The primary goal of the Buckman Project is to quickly provide all [sic] increased level of drought protection and lower … stress on the existing Buckman Well Field." The diversion/depletion of surface flows could negatively impact fish and wildlife resources, particularly during drought conditions. This emphasizes the importance of implementing water conservation measures and fully evaluating the impacts of not only diversions of native Rio Grande water, but changes to the point of diversion of any consumptive water.*

Response: The BA and BO describe in detail the existing use of the water and what will change after the Buckman Project is operational (see comments 6 and 7). The FEIS notes that transfer of water rights out of the Middle Rio Grande basin to the Buckman diversion point could cumulatively contribute to an adverse effect to the silvery minnow (FEIS p. 143). This adverse effect has been minimized through the consultation process with USFWS (see page 10 for mitigation measures intended to reduce these impacts).

Comment 19: *It appears that the Proposed Action and its alternatives have the potential to negatively affect surface water resources. Although the effect of the proposed project on average flows in the Rio Grande would be less than one percent, the changes in point of diversion and project-related reduction in native flow downstream of the Paseo del Norte diversion could negatively affect surface water resources.*

Response: The BA and BO, as well as the FWCAR, provide the additional information called for in this comment. See responses to comments 6, 7 and 18.

Comment 20: *The flow data for Tesuque Creek station (USGS station number 08308025, not "8308025," as referenced in the report) for the period June 1998-September 1999 and notes that this limited period may not be representative of current conditions.*

Response: The gage number will be included in the "Errata" section. The comment accurately restates the FEIS when it says this information may not be representative of current conditions.

Comment 21: *The DOI recommends that the final EIS identify where the needed water could come from and the potential impacts associated with the use of that water (e.g., change in point of diversion). We also recommend that the final EIS identify the existing or current use of the 800 afy of water the Las Companas representatives have stated they have secured.*

Response: As noted in comments 6, 7 and 18, the BA and BO provided detailed descriptions of the potential sources of water for the project as well as current use of proposed water resources.

Comment 22: *To the extent possible, reservoir releases should mimic the natural pre-development hydrograph in the project area*.

Response: Please refer to response for comment 23, below.

Comment 23: *Late summer releases of San Juan-Chama water would be beneficial to the extent that they augment low flows and minimize intermittency. If the majority of the water is diverted into the project, then late summer releases of an additional 0 to 20 cfs of San Juan-Chama water may not benefit downstream reaches. In fact, the storage of this water may result in a net detriment to fish and wi1dlife resources due to reductions in peak flows associated with water storage and further regulation of the hydrograph.*

Response: The BA and BO discuss the effects of water release timing. Also see the response to comment 1.

Comments 24 and 25: *As stated in the DEIS, 71.2 afy equates to about to 0.014 percent of the average flows in the Rio Grande at Otowi. Because project-related impacts may occur downstream of Otowi, it would be useful to identify in the final EIS what percent of flow 71.2 afy would equate to in downstream areas (i.e., downstream of the Paseo del Norte diversion) during critical low flow periods (e.g., September). Increasing or enhancing base flows may benefit fish and wildlife resources during critical low flow periods. However, storage of water early in the year for later release would further regulate the hydrograph and may negatively impact fish and wildlife in the project area. The benefits of gradual releases and low flow augmentation should offset the impacts of early season water storage.*

Response: See response to comments 6, 7 and 18. Also, the BA section 2.1.4 describes in detail changes in flows resulting from this project, and then Section 2.4 provides detail about the water operations. Section 5.4 describes the effects including downstream (pp. 42-48).

Comment 26: *Where possible, revegetated areas should be fenced off to exclude cattle grazing and disturbances until vegetation is successfully re-established.*

Response: The FEIS identifies development of a revegetation plan to assure effective revegetation occurs. Rather than restrict the methods, a wide variety of potential methods could be included, primarily using native species (e.g. willow and cottonwood along the river), depending on the circumstances at each site (FEIS pp. 9, 65-66). Monitoring this revegetation is intended to account assure success.

Comment 27: *The report states that 247 acres will be temporarily affected by the proposed project (Page 122) and that reclamation of this land is intended. Revegetation techniques, other than use of native plants and mulch and control of invasive weeds; however, are not specified. Thus, we suggest that conservation of any available biological soil crusts from the project's disturbed areas be considered for use in reclamation of the disturbed wildlife habitat. Biological soil crusts contain microbial, algal, and/or fungal soil communities, which can enhance revegetation efforts, especially in arid/semiarid regions, such as the proposed project. Information on biological soil crusts can be found at http://www.soilcrust.org/.*

Response: Revegetation measures will include those most suitable for this area. Work in the area on other water facilities have provided experience with successful methods.

Comment 28: *The MBTA (Migratory Bird Treaty Act) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the FWS. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, we recommend construction activities occur outside the genera1 migratory bird nesting season of March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until nesting is complete.*

Response: Construction timing will be managed through required mitigation as described in the FEIS (pp. 65-66) and in the ROD (see page 5).

Comment 29: *Project-related losses of mature trees should be mitigated.*

Response: Appropriate mitigation to address this is described in the FEIS (pp. 65-66).

Comments 30 and 31: *Larval fish produced near the proposed diversion site would not be able to actively swim until they have adequately developed. Entrainment of larval fish would occur with the diversion structure. Fish entrainment should be monitored, and where appropriate, mitigated.*

Response: The FEIS, page 131, discusses the fish entrainment impacts. Although some fish egg entrainment could occur, the design of the facility is intended to minimize this and so would not have a noticeable effect on the fish population. Through additional analysis included in the FWCAR, a more precise estimate of the impacts to fish populations is provided.

Monitoring will occur and, where appropriate, structures and/or operations will be modified to reduce the effects.

Comment 32: *To the extent that changes in the point of diversion of San Juan-Chama water alter existing flows in the Rio Grande, diversion of San Juan-Chama water may affect the minnow, possibly adversely. Flow changes would also affect other aquatic species in the Rio Grande, particularly in reaches prone to desiccation.*

Response: As noted in response to comments 6, 7 and 18, the BA/BO provides details about the potential effects of the change in diversion of the water. Specific measures to minimize impacts are identified in the "Decisions for Required Mitigation and Monitoring" section in the ROD.

Comment 33: *As stated in the DEIS, ". . .the cumulative effects of the Buckman Project and Albuquerque's proposed diversion could reduce native Rio Grande water flow in occupied silvery minnow reaches, subsequently increasing the duration and extent of river drying by a small, but measurable, amount." Because the proposed project could increase the duration and extent of river drying by a measurable amount the project could adversely affect the minnow. The USFS and/or BLM should submit a biological assessment for the purpose of identifying any endangered or threatened species that is likely to be affected by the proposed action.*

Response: The biological assessment was submitted and the process has been completed with the issuance of a biological opinion on June 25, 2007.

Comment 34: *No incidental take permitting mechanism is available under the MBTA for construction projects.*

Response: An erratum to the FEIS has been included in this document to clarify this authority.

Appendix B. Responses to Comments on the FEIS

The comment period on the final environmental impact statement (FEIS) began on May 18, 2007, with the publication of a notice of availability in the "Federal Register."

This comment period had been announced on May 10, 2007, when the Bureau of Land Management published a notice of availability. The FEIS was posted on the BLM Internet Web site starting on that day.

Printed copies of the FEIS were distributed prior to May 10, 2007, to agencies, groups and individuals.

During the comment period on the FEIS, nine comment letters were received:

1. B. Sachau
2. J. Arends (Concerned Citizens for Nuclear Safety)
3. P. McCarthy
4. M. Davis
5. D. Kenny
6. J. Buchser (Sierra Club)
7. R. Schmidt-Peterson (New Mexico Interstate Stream Commission)
8. B. Shields (Amigos Bravos)
9. Z. Spiegel

Comments on the FEIS were considered as follows:

Comment 1: *Leave water for wildlife.*

Response: The effects analysis presented in the FEIS considered the potential impacts to wildlife due to changes in downstream flow. Findings have indicated that the potential effects would be limited.

Comment 2: *Request for an extension by CNNS and others.*

Response: In a letter dated June 15, 2007, the BLM denied this request for an extension because the agency determined that adequate notice regarding the public comment period had been provided and that it was in the interest of all parties to continue with the decisionmaking process in a timely manner.

Comments 3, 4 and 5: C*onsider the migration of LANL (Los Alamos National Lab) contamination toward the site, which could render the project unusable.*

Response: This question has been considered in detail in reports that were reviewed. Based on this information, it has been determined that the risk presented by contamination is small. Although contamination may be present at the lower detection limits (which is magnitudes below the established health standards for such substances), the Buckman applicants are required to meet all Federal standards for drinking water, which is based on continuous water quality monitoring.

Comment 6a: *Water quality of the project could be affected by contamination from Los Alamos National Lab and the City of Española.*

Response: Please refer to responses to comments 3, 4 and 5.

Comment 6b: *Electric power for the diversion should be wind and solar.*

Response: Effects to Federal resources have been conducted based on the proposed power supply. If the applicants chose a different method, additional environmental analysis could consider such a change in terms of benefits and effects.

Comment 6c: *Oil and gas leasing may be planned for this area and needs to be identified if it is.*

Response: No oil/gas leasing is planned for the Caja del Rio area or for the BLM lands covered by this analysis. If such leasing were proposed, it would be subject to NEPA and all other applicable laws and regulations.

Comment 6d: *Sediment should not go into the landfill. Better to return it to the river or store for sale.*

Response: The FEIS and Record of Decision identifies two alternatives for possible implementation: one alternative would send sand to the landfill by truck, while another would return sand to the river. The Environmental Protection Agency will make the decision whether to permit or not permit sand return to the river.

Comment 6e: *Establish trails along the pipeline for security and for recreation value.*

Response: Monitoring activities, including monitoring potential impacts from changes in recreation use are required in the ROD. Security will also be implemented as needed. A system of trails may be developed through a separate planning process.

Comment 6f: *Blend into the landscape: Follow examples in SF1 and view from White Rock.*

Response: Mitigation measures will apply to facilities, with particular concern for the area seen from White Rock Overlook (FEIS p. 67).

Comment 6g: *Use sensors to maintain security and minimize energy use of lighting. Reduce impact of lighting to viewers from White Rock Overlook.*

Response: Lighting will be designed to reduce these impacts, similar to existing facilities.

Comment 7: *New Mexico Interstate Stream Commission supports the project.*

Response: Comment is noted.

Comment 8a: *Wild and Scenic River eligibility needs to be considered.*

Response: The process for determining Wild and Scenic River eligibility was set out in the planning for the "Santa Fe National Forest Plan." Appendix D of the Forest Plan FEIS describes those rivers that were eligible and why. The Rio Grande was not included. One of the key factors in determining eligibility for the Wild and Scenic River system is the "free flowing" nature of a river segment. Because the Cochiti Reservoir at full pool inundates the White Rock segment of the Rio Grande, it was most likely not considered free flowing during the Forest Plan analysis. Given the lack of current documentation regarding why this reach was not considered, and given the passage of time since those determinations were made, a review of the circumstances that made that determination is justified and may be undertaken by the Santa Fe National Forest, perhaps as part of the Forest Plan revision process. Regardless of that separate process, the impact of the Buckman Project on river eligibility is not likely to preclude a determination because it has slight impacts to the resources most likely to be outstandingly remarkable values, such as cultural resources, geology, recreation or scenery.

Comment 8b: *Water quality and 60 years of toxic discharge into the system. Mitigating the impacts of the water quality issue could make the project too costly to implement.*

Response: Please refer to response to comments 3, 4 and 5.

Comment 9a: *A number of specific additions to the FEIS summary were suggested, including mention of deteriorating well water quality, mention of potential fires, acts of terrorism and vandalism upstream of the diversion point, effects of global warming.*

Response: These changes were considered in context of the statements made in the FEIS summary. None rose to a level where making the changes warranted an errata change.

Comment 9b: *Agreements need to be in place to protect downstream rights and in-stream flow.*

Response: As noted in the FEIS and ROD, all appropriate permits and authorizations need to be in place before the project can become operational. These include water rights transfers, which include appropriate changes to point of diversion, which are authorized by the New Mexico Office of the State Engineer. Consultation with the USFWS has provided ample evidence that the change in flow caused by the project will be minimal, even at maximum diversion rates.

Comment 9c: *Complete the FEIS after funding is secured.*

Response: Completion of planning and obtaining funding are related but independent. Nothing in the analysis indicates that if a decision is made to proceed with authorization, the project applicants would not be able to obtain funding.

Comment 9d: *The FEIS inadequately considers the sand separation facility in terms of radioactive particles, as well as costs of hauling these materials, plus the harmful dust created from storing materials at landfills.*

Response: The sand removal facility and the hauling of materials have been described in the FEIS. The air quality impacts have also been disclosed. The additional hazard that may be caused by the presence of radioactive material was considered in the early stages of the planning process. It was not pursued in detail because of evidence that at these very low levels, no standards would be exceeded.

Comment 9e: *Mitigation and monitoring needs to be guaranteed.*

Response: By law, regulation and policy, all measures considered as part of this decision for mitigation and monitoring must become part of the construction and/or operational terms and conditions of respective permits and rights-of-way.

Comment 9f: *Consider the adverse effects of the radioactive particles found at the site, which could affect ground water, and create hazardous dust, which would not be created if the wells were used instead. The FEIS should discuss the effects of radioactive particles in the ponds and the resulting dust.*

Response: The FEIS discloses likely effects of the proposed action and alternatives. As noted, the low levels of the material makes the likelihood of exceeding standards low as well. As additional assurance, a mitigation measure is included in the ROD (page 6) to require appropriate survey and avoidance. Refer also to the response to comment 9d.

Comment 9g: *Explain non-peak times.*

Response: As used in the FEIS, the term "nonpeak" refers to water system demand. Peak times come in June, July and September. In the months of June and July there is ample native flow most years. In September, however, water system demand can be high (peak); therefore, an agreement has been incorporated into the operations plan to reduce use of native water during this period. A detailed discussion of the operations (a curtailment strategy) is in the BA.

Comment 9h: *Explain how the "historical and cultural" context would be defined.*

Response: If this alternative were selected, the facilities built at the old Buckman townsite would have been built to blend in with the historical context determined in FS records (old railroad siding). This alternative has not been selected.

Comment 9i: *The FEIS responses to a number of DEIS comments are inadequate and these comments should be considered again. These include explaining the benefit of surface water use to ground water, and giving more attention to the idea that growth control is an alternative to water development.*

Response: These comments were considered in the development of the FEIS, as described in Appendix A of the FEIS, pages 207-281. Conservation measures are discussed in the FEIS under the topic of "Alternatives Considered but Eliminated from Further Study" (FEIS page 30).