

## **Chapter 5**

### **Purpose and Need, Recommendations, and Commitments**

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#### **5.1 INTRODUCTION**

In Chapter 3, Affected Environment and Environmental Consequences, proposed structural and non-structural components and their potential environmental impacts and proposed mitigation measures for Refined Alternatives 4 and 6 of the Animas-La Plata Project (ALP Project) were discussed and evaluated. On the basis of this evaluation, Refined Alternative 6 was reassessed to determine whether the concerns raised in Chapter 2, Development of Alternatives, about its ability to meet the project purpose and need have been addressed.

#### **5.2 EXPLANATION OF PURPOSE AND NEED**

The purpose and need for the proposed federal action is:

*“ . . . to implement the [Colorado Ute Water Rights] Settlement Act by providing the Ute Tribes an assured long-term water supply and water acquisition fund in order to satisfy the Tribes’ senior water rights claims as quantified in the Settlement Act, and to provide for identified M&I water needs in the Project area.” [Federal Register Notice, January 4, 1999]*

In evaluating whether the purpose and need is satisfied by any particular alternative, it is necessary to determine whether it provides a feasible means by which the quantities of water contemplated in a settlement can be secured with sufficient certainty. In addition, the alternative must be reviewed to determine whether it will facilitate overall settlement implementation. The primary elements necessary to secure an Indian water rights settlement are as follows:

- An agreement by the United States, tribe, state, and a majority of parties to the adjudication, as well as associated legislation, which provides benefits (primarily water rights) to an Indian tribe sufficient to warrant a waiver of the tribe’s reserved water rights claims;
- A defined and reasonable timeframe by which the tribe will, in fact, secure those benefits specified in the settlement agreement;
- Entry of a final decree by the court adjudicating the water rights claims which recognizes the tribe’s right to the water and associated benefits identified in the settlement agreement; and
- A waiver of water rights claims by both the tribe and the United States, in its capacity as trustee, becoming effective. The waiver is contingent upon the three previous elements.

##### **5.2.1 Purpose and Need Factors**

In order to test an alternative against the project purpose and need, Chapter 2 identified four separate requirements. These requirements were utilized to evaluate the original 10 alternatives against the project purpose and need. The four requirements are described below:

- Yield** - Will the alternative annually provide the desired volumes of “wet water” (i.e., water readily available for beneficial use) for the Ute Mountain Ute and Southern Ute Indian Tribe (Colorado Ute Tribes) in order to satisfy the Colorado Ute Tribes’ senior water rights claims, as well as those of other identified Indian and non-Indian users? The *purpose and need* describes an intent to implement the Colorado Ute Indian Water Rights Settlement Act of 1998 (Public Law (P.L.) 100-585) (Settlement Act), which contemplated developing an average water supply to provide 53,200 afy of depletions to satisfy the Colorado Ute Tribes’ water rights claims in the Animas and La Plata River Basins.
- Reliability** - Will the alternative provide a reliable, long-term water supply? Will the yield be renewed by the hydrologic cycle?
- Location** - Will the water supply be reasonably available to the designated users in their lands and/or communities? Are needed water conveyance facilities feasible for development?
- Practicability** - Is the development of the alternative technically feasible? Are there impediments or restrictions which make development of the alternative impractical? Some of these perceived impediments may be related to authority issues or legal concerns.

Following the evaluation described in Chapter 2, only 2 of the original 10 alternatives evaluated were determined to warrant additional study. These were Refined Alternative 4 and Refined Alternative 6. This decision was based, in part, on the fact that these two alternatives rated closely on impacts and both, in theory, could meet the purpose and need test. Chapter 2, however, did raise concerns about the ability of Refined Alternative 6 to ultimately meet the project purpose and need. Notwithstanding those concerns, because Refined Alternative 6 set forth a significantly different approach to potentially meeting the purpose of and need for the project, the decision was made that a more in-depth analysis was needed. That analysis was done, and is contained in Chapter 3 and Chapter 4.

In the course of performing the analysis on Refined Alternative 6, it became increasingly evident that under various scenarios there are still significant issues associated with Refined Alternative 6 which affect its ability to meet the project purpose and need. In particular, the analysis showed that there are concerns with the ability of Refined Alternative 6 to meet the *yield* criteria. There are also serious concerns about the ability of Refined Alternative 6 to meet the *practicability* criteria. These two concerns are discussed below.

### 5.2.1.1 Yield

As defined in Chapter 2, the purpose of and need for this project is to implement the 1988 Settlement Act by providing an assured long-term water supply for the Colorado Ute Tribes and other project water users. Refined Alternative 4 includes a non-structural \$40 million water acquisition fund to allow the Colorado Ute Tribes to purchase up to 13,000 afy of additional depletion water rights should they so choose. Alternative 6 was refined to provide for a similar fund to acquire an annual depletion of 13,000 af. It is assumed that this amount of water would be left on the land where acquired for the time being. For purposes of analysis, the relative impacts and potential reliability of this 13,000 afy component are assumed to be essentially the same for the two alternatives.

Additional water must be acquired under the remainder of the non-structural component of Refined Alternative 6 in order to meet the balance of the water supply needs of the Colorado Ute Tribes and other users. In comparison, under Refined Alternative 4 this additional water would be provided through

structural components (e.g., Ridges Basin Reservoir). Refined Alternative 6, however, would supply this same amount of water from a combination of structural and non-structural components. In this respect, water from re-operation and modification of existing federal facilities in the project area would provide all but about 17,432 afy of the total project demand. The 17,432 afy balance would be met through a non-structural approach; it equates to about 11,933 acres of irrigated farmland that would have to be acquired in the project area. Of this amount, 10,000 acres would be acquired in the Pine River Basin out of a total non-Indian irrigated land base of 30,000 acres. Using the assumptions below, it appears feasible to acquire the remaining necessary acreages in the La Plata River (785 acres), Mancos River (500 acres), and McElmo Creek (640 acres) drainages, which would provide water for 2,318 afy depletion. (The 11,933 acres is in addition to the acreage needed to acquire the 13,000 afy as discussed in the previous paragraph.)

Water rights must be acquired that, when considered in the aggregate, would represent the average water rights priority. The entire water rights base would be accessible to meet these needs, not just the senior rights. Although market forces are somewhat unpredictable, it appears feasible to acquire from 6,000 to 7,000 acres of land in the Pine River Basin which would require about 8,000 to 10,000 afy depletion on a willing seller/willing buyer basis within a 30-year planning horizon. The 30-year planning horizon is a conservative projection of the period over which land would be acquired; if land became available earlier, then the planning horizon could be reduced. As discussed below, however, it will become increasingly costly and difficult to acquire the last 5,000 to 7,000 afy of water in the Pine River Basin with sufficient senior water rights to meet the overall water needs. This would mean that the required depletion under Refined Alternative 6 would be about one-quarter less than the required amount. If the assumption of acquiring water rights with the average seniority is not met, then additional acreage would be required (see Attachment D, Water Rights Considerations and Constraints, Land Acquisition, and Conversion of Fee Simple Farmland).

Real estate turnover has been low over the last several years, at least from agricultural land. Since 1993, an average of about five properties per year (i.e., irrigated farm and ranch properties, with a minimum parcel size of 80 acres) in the Pine River Basin have been sold. The 1999 La Plata County active listings of farm and ranches in April 1999 totaled 37 properties, or 2 percent of all real estate listings; only 1 had sold in 1999 by that date (see Attachment D).

There were 91 residential acreage listings in Bayfield, Ignacio, Vallecito, Mancos, and Cortez, of which 10 sold in this period. Only four of these listings were over 35 acres. However, past sales may not provide a reliable forecast of future sales, particularly 30 years out. The sales price escalation that has been reported in the last few years is more of an indicator that shows a trend for higher prices on continuously smaller rural parcels (see Attachment D.)

Thus, it appears that under a willing buyer/willing seller principle, assuming a 30-year timeline and given access to additional money if needed, sufficient land and water can potentially be acquired under Refined Alternative 6. However, as noted above, there is a certain element of risk involved in buying the last amount of land and water rights sufficient to meet the water needs for Refined Alternative 6. Risk will be represented either as additional cost to complete the land and water acquisition program, or the end result of acquiring fewer acres and acre-feet (af) of water than required. Because significant water acquisition is a critical element of Refined Alternative 6, uncertainty of its ability to meet the yield factor creates a potential fatal flaw to the ability of Refined Alternative 6 to secure the requisite benefits called for in the Settlement Act, and thus, its ability to meet the project's purpose and need. It should also be noted, as will be discussed below, that the 30-year planning horizon assumed here is a long time-period for implementation of an Indian water rights settlement.

% Refined Alternative 4 has a present value cost of about \$343.8 million (including the \$40 million water acquisition fund and sunk costs) for construction, operation and maintenance; cost of the of Navajo Nation Municipal Pipeline (NNMP); and cost of mitigation and cultural resources. Refined Alternative 6 has a present value of about \$290.1 million (including the water acquisition fund and sunk costs) for construction, land purchase, and water rights transfers; NNMP; enlarging Lemon Dam; and purchase of stored water in Red Mesa Reservoir. However, Refined Alternative 4 provides a secure, reliable water supply for M&I purposes in a seven-year period, while Refined Alternative 6 provides a secure, reliable water supply for only about three-quarters of the required amount, and a less reliable process of obtaining the remaining water needed through land acquisitions. There is a risk that Refined Alternative 6 could not meet the water supply of the Settlement Act, and this risk needs to be added to the present value of the total cost associated with it.

### **5.2.1.2      Practicability**

In the process of evaluating impacts, several concerns arose about the practicability of Refined Alternative 6 in the areas of: (1) socioeconomic issues, (2) changes in water use, (3) timing, and (4) Indian Trust Assets (ITAs).

#### **5.2.1.2.1      Socioeconomic Issues**

A range of socioeconomic issues related to Refined Alternative 6 affect its ability to meet the project purpose and need. These issues include a potential lack of support for a water acquisition program of the magnitude contemplated here, including the potential objections to taking land and water into trust.

With respect to the magnitude of land and water acquisition that is necessary as part of Refined Alternative 6, it would take roughly 11,933 acres of irrigated farmland out of a total of 156,000 irrigated acres in the 5 watersheds in order to obtain the amount needed to supply an assured water supply which represents the required non-structural portion of Refined Alternative 6. It should be reiterated here that this quantity has been reduced through the process of refining Alternative 6, whereby re-operation of existing federal facilities is utilized to make a substantial amount of water available to the Colorado Ute Tribes. The yield provided through re-operation alone, however, does not achieve the quantity specified in the Settlement Act, and therefore water acquisition is necessary. In addition, re-operation alone would create issues with respect to the location element of purpose and need if not combined with water acquisition. Although water acquisition has been simplified as part of Refined Alternative 6, it is still significant enough to present an issue. While the amounts of land to be acquired in the La Plata River, Mancos River, and McElmo Creek Basins are minor in relation to the total amount of land available, the potential acquisition of one out of every three acres of irrigated farmland in the Pine River Basin could be disruptive to the local real estate market and the social fabric of the local community, and it could impact the county tax base as well. In fact, as evidenced by letters and comments submitted during the Romer-Schoettler process, there appears to be considerable local opposition to the types of land acquisition and water transfers proposed under Refined Alternative 6. Under a willing buyer/willing seller arrangement, this could present significant problems as to the practicability of Refined Alternative 6. Such opposition would affect the ability of Refined Alternative 6 to meet the project purpose and need.

One specific factor in creating local opposition to Refined Alternative 6 is the prospect that land acquired as part of the process would be taken into trust by the federal government for the Colorado Ute Tribes' benefit. Taking land into trust is a significant issue to local non-Indian communities due to the potential ramifications on the local sales and property tax base as well as jurisdictional matters (e.g. those

involving law enforcement, land use planning, public education, and maintenance of utilities and roads). Conversely, having lands held in trust by the federal government is very beneficial to tribes from an economic, as well as cultural and social, perspective. The process by which lands are taken into trust is set forth in 25 CFR Part 151 (currently the subject of proposed new rules, published in the *Federal Register* on April 12, 1999 (64 FR 17574)). The process under both the existing and proposed rules provides for an administrative appeal process available to any party adversely affected by lands being taken into trust. Judicial review is then available. As a result, it is possible that some acquisitions may not result in land and associated water rights being taken into trust. Although this may not preclude Tribal use of water acquired as part of a voluntary sale, it does affect the nature of the rights the Tribes' acquire, and limits those benefits contemplated as part of Refined Alternative 6.

In summary, the issues involved in acquiring the amounts of land and water from the local area that are deemed necessary as part of this particular settlement raise significant concerns as to the practicability of Refined Alternative 6 to satisfy the project purpose and need.

#### **5.2.1.2.2      *Changes in Water Use***

All of the water rights acquired would be irrigation and not M&I rights. Thus, in order to change the type and place of use, applications must be made to the Colorado State Water Court. Such applications typically involve a long and burdensome judicial process undertaken in a public setting where any affected party would have the right to oppose. Based on discussions with professionals familiar with comparable water rights transfer cases in the State of Colorado, it is estimated that the average time needed to make the type of change of uses contemplated in Refined Alternative 6 would be approximately eight years per application (assuming several acquisitions included in each application). Applications must be supported by legal, engineering, environmental, and mitigation analyses, public forums, and legal representation. Current residents of eastern La Plata County and other project areas may well object to removing water from some of the best irrigated lands in the county, and to the implications to downstream return flows and impacts to groundwater recharge, which could affect their water supplies. If such objections occur, the change of use proceedings which would be necessary to utilize a significant amount of the acquired water would likely become expensive. In addition, the length of time and eventual outcome of the water transfer application would be uncertain. This process, therefore, adds elements of risk, uncertainty, and unquantified costs to the successful completion of the non-structural components of Refined Alternative 6, which affects the practicability of the alternative and its ability to meet the purpose and need.

#### **5.2.1.2.3      *Timing***

One of the elements which is critical to successful implementation of an Indian water rights settlement is a defined and reasonable time frame in which the tribes will secure those benefits specified in the settlement. Even with a reduced reliance on water acquisition, there are significant issues as to whether the level of water contemplated for acquisition under Refined Alternative 6 would indeed be available as discussed in the preceding sections. Even if available, the planning period utilized is a 30-year period. This presents a significant issue as to how this settlement could be finalized (i.e., the waiver of claims becoming effective) without the benefits of the settlement being secured for an extended time frame. This situation is exacerbated by the fact that, in and of itself, securing the benefits would be uncertain. Assuming sufficient support exists for utilization of Refined Alternative 6 as an alternative for settlement implementation, it presents a possibility that implementation of settlement could be initiated but never finished, resulting in the same situation 30 years from now that exists today. Accordingly, the extended

timing with uncertain resolution related to Refined Alternative 6 calls into question its ability to satisfy the project purpose and need.

#### **5.2.1.2.4 Indian Trust Assets**

As a threshold matter, there is a question of whether Refined Alternative 6 would be an acceptable settlement alternative to the Colorado Ute Tribes ( i.e., whether it would provide sufficient benefits with sufficient certainty to justify waiving their reserved water rights claims). Historically, the two Tribes have been resistant to a non-structural settlement alternative (Resolution No. 97-160 of the Southern Ute Tribe and Resolution No. 4365 of the Ute Mountain Ute Tribal Council). In addition, the federal government, as trustee for the Colorado Ute Tribes, must assess whether a settlement proposal justifies a waiver of the Tribes' reserved water rights claims. Although refinements to Alternative 6 have increased the assured water supply which could be made available to the Colorado Ute Tribes for certain uses contemplated in the water use scenarios, there is still a considerable amount of uncertainty as to the ability of Refined Alternative 6 to finalize implementation. Consultation with the Colorado Ute Tribes would be necessary to conclusively assess their position on Refined Alternative 6.

At the same time, there is cause for significant concern regarding the impact of Refined Alternative 6 on the other two Indian tribes in the San Juan River Basin. As noted earlier, Refined Alternative 6 was refined to include re-operation of the federal facilities to make water available to the Colorado Ute Tribes. Although this improved the prospective yield of Refined Alternative 6, the result is that Refined Alternative 6 uses all the remaining available storage capacity in Navajo Reservoir beyond that required to meet existing approved depletions and to deliver water required for endangered fish, leaving no remaining flexibility to supply new depletions for the Jicarilla Apache Tribe or the Navajo Nation. The most recent hydrology modeling information has indicated that under Refined Alternative 6 as presently configured, there would not be sufficient flows into Navajo Reservoir to allow necessary flow releases from Navajo Reservoir to meet the flow recommendation in the San Juan River. The most recent information indicates that acquisition of up to an additional 5,000 acres in the Pine River Basin (and allowing the water being used on the 5,000 acres to flow downstream into Navajo Reservoir) may be necessary. This additional water needs to be available in Navajo Reservoir in order to meet flow recommendations in the San Juan River. For purposes of this evaluation, however, Reclamation has used the most conservative approach using 10,000 acres in the analysis.

Impacts to the ability of the Navajo Nation and Jicarilla Apache Tribe to utilize their reserved water rights are significant to assessing the practicability of Refined Alternative 6. The United States is a trustee to all four of the tribes in the basin and must seek to reconcile competing interests in a manner acceptable to each of the tribes. Although the Navajo Nation and Jicarilla Apache Tribe have historically not objected to the Colorado Ute Tribal settlement, the additional impacts caused by Refined Alternative 6 may cause those tribes to reassess their historical positions. Objections by those tribes would seriously affect the viability of Refined Alternative 6 to implement the Colorado Ute Tribes' water rights settlement. Consultation would be necessary to conclusively assess those tribes' position on Refined Alternative 6.

By comparison, under the No Action Alternative, only 20,000 afy of the 62,420 afy of depletion required can be delivered. With Refined Alternative 4, present model results indicate no further allowable development, resulting in an impact to Indian trust water development of 20,000 afy. The impact is based upon the use of modified recommended operating rules for Navajo Dam to mimic a natural hydrograph for the benefit of endangered fish in the San Juan River. With additional model refinement and improved operating rules, this impact may be less.

### 5.2.2 Conclusion

The evaluation of several factors reveals that implementation of Refined Alternative 6 presents a number of problems:

- It would impose significant risks on the ability of the project to provide an assured water supply commensurate with the water rights established in the settlement;
- The wholesale purchase of land and transfer of water may be opposed by the local community, thereby impacting completion of the settlement;
- It would require an extended and uncertain time frame to secure the settlement benefits, which would affect the ability to finalize the settlement; and
- It would substantially impact Indian trust water rights by using the remaining capacity of the Navajo Reservoir, a facility designed to supply these demands, thus creating a likely conflict with the Navajo Nation and Jicarilla Apache Tribe.

### 5.2.3 Clean Water Act Analysis

The Bureau of Reclamation (Reclamation) is seeking an exemption under Section 404(r) of the Clean Water Act (CWA) from having to obtain a dredge and fill permit from the U.S. Army Corps of Engineers under Section 404(a) of the CWA. As part of this process, Reclamation has prepared an analysis of wetlands impacts under the guidance of Section 404(b)(1) of the CWA (see Attachment B-1, Section 404(b)(1) Evaluation). The guidelines under Section 404 provide that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed activity that would have a less adverse impact on the aquatic ecosystem. Such a practicable alternative can be any alternative which could be reasonably obtained, utilized, or expanded in order to fulfill the basic purpose of the activity.

Given that the basic purpose of the proposed federal action is to implement the Settlement Act by providing an assured long-term water supply to the Colorado Ute Tribes, the purpose and need analysis is also relevant to whether there are other practicable alternatives available that could fulfill the basic purpose of the activity under the Section 404(b)(1) standard. Based on the analysis in Chapter 2, Alternatives 1, 2, 7, 8, and 9 have been determined not to meet the practicability factor of the purpose and need test and are, therefore, not practicable under Section 404(b)(1). Alternative 5 fails the yield factor of the purpose and need test and is eliminated from further consideration. In addition, although Alternative 3 has been determined to meet the purpose and need test, its water quality concerns are significant enough to warrant its elimination from further consideration.

For the purpose of performing as thorough an analysis as possible, it is assumed that Refined Alternative 6 is capable of satisfying the project purpose and need, and is therefore practicable. This assumption allows for Refined Alternative 6, along with Refined Alternative 4, to be evaluated pursuant to the CWA Section 404(b)(1) guidelines. That analysis is contained in Attachment B-1.

Reclamation has moved forward with this assumption in an effort to provide as thorough and complete an analysis of Refined Alternative 6 as possible. However, by so doing, it is not Reclamation's intention to diminish concerns associated with Refined Alternative 6 that deal with risk/uncertainty, and consequently the practicability of this alternative. %  
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Based on the assessment of environmental, purpose and need, and technical/economic factors, Alternative 4 and Alternative 6 were identified for further consideration in the SEIS. This determination %  
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% requires an assumption that Alternative 6 could, in theory, meet the project purpose and need. However,  
 % it should be noted that Alternative 6, when compared to the other nine alternatives, presented potentially  
 % significant environmental impacts to wetlands and endangered species habitat. This included both the  
 % non-structural components involving leaving water on the land but implementing water conservation  
 % measures, and the non-structural component of taking the water off the land for M&I use elsewhere.  
 % Both would result in the loss of a significant quantity of wetlands. The Fish and Wildlife Service, in its  
 % Planning Aid Memorandum of July 28, 1999, stated that: “Conservation measures employed within the  
 % Pine River drainage would have significant effects to fish and wildlife resources, and mitigation would  
 % be very difficult to achieve. The extent of impact to wetlands and wildlife habitats would be difficult to  
 % accurately assess. In comparison to Ridges Basin, impacts within the Pine River drainage would present  
 % impacts of far greater magnitude, due to differences in diversity of habitats of the two locations. The  
 % Pine River Valley possesses a far greater diversity of vegetation and therefore has a higher wildlife value,  
 % than Ridges Basin.” With this in mind, Alternative 6 was modified to ameliorate environmental impacts  
 % and to broaden the functions it would provide. Even with these refinements, several concerns arose  
 % about the practicability of the non-structural alternative, Refined Alternative 6, in the areas of: (1)  
 % socioeconomic issues; (2) changes in water use; (3) timing; and (4) Indian Trust Assets. It was  
 % determined that Refined Alternative 4 would have less risk/uncertainty and fewer overall impacts to  
 % wetlands and endangered species (southwestern willow flycatcher habitat) than Refined Alternative 6.

### % 5.3 RECOMMENDATION OF THE PREFERRED ALTERNATIVE

Refined Alternative 4 would best meet the project purpose and need. In addition, it is also determined to  
 be the least damaging and practicable alternative under the CWA analysis. Accordingly, Refined  
 Alternative 4 is designated as Reclamation’s Preferred Alternative (see Attachment B-1, 404(b)(1)  
 Evaluation). After reviewing agency and public comments and any additional analysis undertaken, it  
 % may be recommended to the Secretary of the Interior (Interior) for selection. **Table 5-1** and **Table 5-2**  
 % summarize water supply and costs of the preferred Alternative 4.

% <b>Table 5-1</b>		
% <b>Water Supply and Costs - Preferred Alternative</b>		
% <b>Allocation of ALP Project Water</b>		
% <b>Entity</b>	% <b>Source of Water</b>	% <b>Depletion (afy)</b>
% Southern Ute Indian Tribe	% Animas River/Ridges Basin Reservoir	% 19,980 <sup>a</sup>
% Ute Mountain Ute Tribe	% Animas River/Ridges Basin Reservoir	% 19,980 <sup>a</sup>
% Navajo Nation	% Animas River/Ridges Basin Reservoir	% 2,340
% Animas-LaPlata Water Conservancy District	% Animas River/Ridges Basin Reservoir	% 2,600
% San Juan Water Commission	% Animas River/Ridges Basin Reservoir	% 10,400
% Subtotal		% 55,300
% Allowance for Reservoir Evaporation		% 1,800
% Total Depletion <sup>b</sup>		% 57,100

% <sup>a</sup> Support for recently introduced legislation indicates that the Colorado Ute Tribes may agree to a reallocation of 5,230 afy of  
 % project depletion to the state of Colorado and 780 afy of project depletion to the La Plata Conservancy District in New  
 % Mexico.  
 % <sup>b</sup> Through implementation of the \$40 million water acquisition fund, the Colorado Ute Tribes could acquire an additional  
 % 13,000 afy depletion.

<b>Table 5-2 Total Costs for Preferred Alternative</b>			%
Item	Description	Cost (Million)	% %
<b>Project Components</b>			%
Ridges Basin Dam	Consists of 120,000 af reservoir with a conservation pool of 30,000 af. Included in the cost of the dam are costs of relocations for County Road 211, gas pipelines, and electrical transmission facilities.	\$145.0	% % %
Durango Pumping Plant	Maximum pump capacity is 280 cubic feet per second (cfs). Pumping limited to 240 cfs in June for endangered species requirements	\$36.3	% % %
Ridges Basin Inlet Conduit	Delivers water from Durango Pumping Plant to Ridges Basin Reservoir. Length of conduit is 11,200 feet and diameter of pipe is 66 inches. Maximum design capacity of the conduit is 280 cfs.	\$8.7	% % % %
Water Acquisition Fund	A fund to be used at the discretion of the Ute Tribes for either the purchase of water rights to satisfy 13,000 af per year depletion or for other economic development by the Tribes	\$40.0	% % %
Cultural Resources Mitigation	Mitigation includes survey, recovery, protection, preservation and display of cultural resources.	\$9.0	% %
Wetland, Fish, and Wildlife Mitigation	Included in the cost is \$2.1 million for a fish hatchery and angler access.	\$12.8	% %
<b>Subtotal: Cost of Project Components<sup>a</sup></b>		<b>\$251.8</b>	%
<b>Other Components</b>			%
Navajo Nation Municipal Pipeline	Pipeline would deliver 4,680 af of water to seven Navajo chapters located between Farmington to Shiprock, New Mexico. Total length of pipeline is 28.9 miles. Capacity of pipeline and pumping plant would be 12.9 cfs. New water storage tanks of 5.5 million gallon capacity would be required.	\$24.0	% % % % %
<b>Subtotal: Cost of Other Components</b>		<b>\$24.0</b>	%
<b>COST TO IMPLEMENT THE PREFERRED ALTERNATIVE</b>		<b>\$275.8</b>	%
Project Costs Through Fiscal Year (FY) 1998	These costs, commonly referred to as sunk costs, are costs that have been expended on the project and cannot be recovered. They include planning preconstruction investigations, data gathering and analyses, and field investigations leading to the preparation of various planning and environmental reports through FY 1998.	\$68.0	% % % % % %
<b>TOTAL COSTS FOR THE PREFERRED ALTERNATIVE</b>		<b>\$343.8</b>	%
<sup>a</sup> Project costs are the costs to construct and implement the various components of the ALP Project.			%

## 5.4 ENVIRONMENTAL COMMITMENTS

This section discusses the environmental commitments that have been made by Interior or Reclamation during the development of Refined Alternative 4 (Reclamation's Preferred Alternative). Reclamation would share responsibility for implementing measures that would avoid or reduce potential environmental impacts of the ALP Project. This responsibility would be shared with other federal agencies, the Colorado Ute Tribes, and other ALP Project beneficiaries, as well as third-party entities which could include Colorado and New Mexico state agencies, local governments, and private developers.

The commitments in this chapter summarize commitments made during the planning process and incorporated into ALP Project plan as discussed in Chapter 2 of this Final Supplemental Environmental Impact State (FSEIS), and mitigation measures proposed in Chapter 3 to reduce or avoid impacts that would otherwise occur as a result of the implementation of the Preferred Alternative. These commitments supersede commitments made by Reclamation in previous ALP Project National Environmental Policy Act (NEPA) documents.

As discussed below, the commitments described herein would be implemented by Interior, or Interior would require their implementation by construction contractors, management authorities, or third-party developers. Commitments for pre-construction activities would generally be completed by Reclamation or by contractors during the final design process and prior to construction activities. Wildlife, wetland, cultural resources and other mitigation would be completed by Reclamation as described in the following paragraphs. Some commitments, such as monitoring or additional studies, would continue beyond completion of construction of structural facilities.

The non-structural component of the Preferred Alternative (i.e., the \$40 million water acquisition fund) would be administered by Interior through the Bureau of Indian Affairs (BIA). It was assumed that the use of this fund would be for acquisition of irrigated agricultural lands and that these lands would remain in irrigated production. In the event that the Colorado Ute Tribes were to elect to fund alternative activities with the water acquisition fund or were to apply for water rights transfers, it would be the responsibility of the water acquisition fund's administering agency to determine appropriate environmental protection measures. It is possible that additional NEPA compliance may be required for such alternative uses.

The use of ALP Project water by either the Colorado Ute Tribes or other ALP Project beneficiaries would result in environmental impacts that would require the implementation of avoidance design specifications and mitigation measures. To the extent that Reclamation can require developers of ALP Project water end uses to implement environmental protection elements into design, Reclamation commits to requiring certain measures as discussed in the following sections. However, all compliance responsibilities and costs associated with end use development would be the responsibility of the third-party developers. As discussed previously, additional NEPA compliance would likely be required for the development of end use facilities to occur. At such time, the lead agency would be responsible for identifying additional environmental commitments specific to the proposed end uses.

### 5.4.1 General Commitments

Throughout the planning process for the project, efforts have been made to avoid impacts where practicable. If avoidance was not possible, then mitigation measures have been developed to reduce the

level of impact. The mitigation measures for each resource impact were discussed in Chapter 3. In addition to the specific mitigation measures identified in Chapter 3, other management practices will be employed during construction activities to minimize environmental effects and will be included in construction specifications. Many of these measures are required in order to comply with federal, state, or local laws and regulations, regardless of whether they are specifically identified in the report. Reclamation will comply with all relevant federal, state and local laws, ordinances, regulations, and standards during the implementation of the Preferred Alternative. Reclamation will prepare and implement an Environmental Commitment Plan for the project to document and track the completion of the environmental commitments.

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#### **5.4.2 Water Resources and Hydrology Commitments**

Reclamation will develop an operations plan for the Ridges Basin Pumping Plant that will schedule pumping from the Animas River in a manner to limit impacts to non-Colorado Ute Tribal entities' ability to obtain water from the San Juan River as described under Mitigation for the Refined Alternative 4 Hydrology Impact 2 in Section 3.2.

Reclamation will work with all appropriate state and federal agencies to pursue a method to protect ALP Project water return flows in the La Plata River drainage as a water supply for endangered fish as described under Mitigation for Refined Alternative 4 Hydrology Impact 3 in Section 3.2.

Reclamation will design and develop Ridges Basin Reservoir with a minimum pool of 30,000 af.

#### **5.4.3 Water Quality Commitments**

Reclamation will develop and implement a program to reduce, minimize or eliminate temporary, short-term increases in suspended sediment loading or other water quality constituents, potentially caused by project construction, through the incorporation of permits, Best Management Practices (BMPs), and sediment control structures as described under Mitigation for Refined Alternative 4 Water Quality Impacts 1-3 in Section 3.3.

Reclamation will develop and implement a program designed to reduce, minimize or eliminate the temporary, short-term increases in suspended sediment loading that may potentially occur during construction of the non-binding end uses and water conveyance systems through requiring developers and construction contractors to incorporate BMPs and sediment control devices as described under Mitigation for Refined Alternative 4 Water Quality Impact 6 in Section 3.3.

Reclamation will develop, with the Southern Ute Indian Tribe and the States of Colorado and New Mexico, and implement a program to monitor water quality in the Animas River from the Durango Pumping Plant to the confluence with the San Juan River for five years after the Durango Pumping Plant begins operation. The program will be developed to monitor compliance with Tribal and state water quality standards and criteria. The plan should include: objectives, quality assurance and control plans, and noncompliance measures.

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#### **5.4.4 Vegetation Commitments**

Reclamation will ensure that construction contractors limit ground disturbance to the smallest feasible areas, and will ensure that construction contractors implement BMPs, along with the planting or re-

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% seeding disturbed areas using native plant species to assist in the re-establishment of native vegetation as described under Mitigation for Refined Alternative 4 Vegetation Impact 5 in Section 3.4. Where feasible, directional borings will be used for river pipeline crossings.

% Reclamation will compensate the loss of approximately 1,645 acres of upland vegetation resulting from the construction of the Ridges Basin Reservoir, the Durango Pumping Plant, and other features as described under Mitigation for Refined Alternative 4 Vegetation Impacts 1 and 2 in Section 3.4 as part of the wildlife mitigation plan. The compensation will be part of the total estimated 2,700-2,900 acres of wildlife habitat to be acquired and enhanced to compensate the loss of wildlife habitat in Ridges Basin. The mitigation land acquisition will be completed prior to initiation of ground-breaking construction activities at the reservoir and pumping plant sites. Reclamation will attempt to acquire large contiguous acreage and will attempt to acquire these lands first in the river basins that will be affected by the ALP Project, and then outside of those basins, with the final decision made in consultation with state and federal wildlife agencies.

Reclamation will compensate the loss of 134 acres of wetland/riparian habitat at a mitigation ratio sufficient to replace or exceed the habitat value of wetland/riparian habitat lost as described under Mitigation for Refined Alternative 4 Vegetation Impacts 3 and 4 in Section 3.4. Reclamation will replace lost wetland/riparian areas at a planned ratio of 1.5:1, thus creating approximately 200 acres of replacement wetlands. Mitigation will involve a program of land acquisition, wetland development, and long-term management. To the extent possible, this program will be integrated into the wildlife habitat mitigation program to expand benefits and provide large blocks of contiguous wildlife habitat. For purposes of this FSEIS, it is assumed 600 acres will be necessary for the wetland program. Because of limited water supplies for new wetland creation in the region, restoration of degraded wetlands will be an important component of any wetland plan. As with wildlife habitat mitigation, the La Plata River Basin will be given first priority for wetland development. Lands for wetland mitigation will be acquired prior to initiation of construction of Ridges Basin Dam and overall wetland mitigation physical features will be at least 95 percent completed prior to beginning reservoir filling.

% Reclamation will also monitor the Animas River riparian corridor to help determine any effects of the pumping regime on these downstream resources. The monitoring will also include Basin Creek wetlands. Reclamation will also limit ground disturbing activities due to construction of the NNMP and other pipelines and will replace in a 2:1 ratio, riparian trees (cottonwoods) lost due to construction.

Reclamation will require that development of non-binding end uses avoids or minimizes construction impacts to wetland and riparian vegetation located within corridor alignments of the non-binding water conveyance pipelines. Reclamation will require that construction zones be kept to the minimum size needed to meet project objectives. If avoidance is not possible, a riparian/wetland mitigation and monitoring plan will be developed to compensate for the loss of vegetation cover as described under Mitigation for Refined Alternative 4 Vegetation Impact 8 in Section 3.4.

### **5.4.5 Wildlife Commitments**

% Reclamation will mitigate the direct and indirect loss of approximately 2,700-2,900 acres of wildlife habitat through the purchase, enhancement, and management of approximately 2,700-2,900 acres of suitable land as described under Mitigation for Refined Alternative 4 Wildlife Impact 1 in Section 3.5. The actual amount of land that will be acquired to obtain this level of mitigation will depend on the potential wildlife value of the lands acquired. All reasonable attempts will be made to acquire interests in lands on a willing seller basis, using fee simple purchases, conservation easements, purchase options,

or life estates, to name a few. However, this does not preclude the use of other authorities available to acquire such land interests. Priority will be given to lands in the La Plata River drainage, as well as in the vicinity of Ridges Basin, to provide replacement habitat for displaced deer, elk, and other wildlife that utilize Ridges Basin and adjacent areas that will be affected. Large, contiguous parcels will be given priority to create unfragmented habitat and to facilitate management. Lands will be managed for wildlife and other uses will not be allowed if it is determined that they will interfere with the wildlife habitat benefits. Acquisition, enhancement, and management plans will be coordinated with the U.S. Fish and Wildlife Service (Service), Colorado Division of Wildlife (CDOW), and possibly the Southern Ute Indian Tribe. Because of the preference to acquire interests in lands on a willing seller basis, it is recognized that the specific parcel location is difficult to establish at this time. If La Plata or Ridges Basin areas are unavailable, lands in other areas of the San Juan River Basin will be sought. Based on similar past programs, it will be feasible to acquire the lands; however, it should be noted that they may not be in the immediate project impact area. Wildlife mitigation land will be acquired prior to award of the contract for construction of Ridges Basin Dam, and development will occur concurrently with the construction of the dam.

Reclamation will develop construction specifications to include noise, traffic, and human use restrictions to minimize disturbance to wildlife near the construction zone of Ridges Basin as described under Mitigation for Refined Alternative 4 Wildlife Impact 2 in Section 3.5. The Carbon Mountain gas pipeline route, which could significantly impact golden eagle nesting, will not be considered. Reclamation will make efforts to avoid construction during the May-July period in the vicinity of elk calving areas to minimize impacts to elk.

Reclamation will ensure that recreational facilities and the new alignment for County Road (CR) 211 are sited or restricted in such a way to minimize the disruption of deer and elk habitat utilization and behavior as described under Mitigation for Refined Alternative 4 Wildlife Impact 3 in Section 3.5. Designs of road crossings, particularly in the vicinity of Wildcat Creek, will contain special provisions to minimize wetland/riparian resources as described in Section 3.4, Mitigation for Refined Alternative 4 Impacts 1 and 2. Habitat impacts discussed previously include indirect impacts. Indirect impacts will be managed through a plan that will support the minimization or elimination of those conflicts/impacts. Recreation facilities will not be permitted on the west or south sides of the reservoir to reduce impacts to big game migration corridors. Trails will be restricted to foot traffic. Wildlife-related activities will be encouraged. Future use of Reclamation lands for cabin sites or similar uses will not be allowed. Sufficient land will be acquired at the time reservoir right-of-way is acquired at the upper (western) end of the reservoir (at least one-quarter mile) and along the southern shore to maintain a wildlife migration corridor around the reservoir and to winter ranges to the south.

Reclamation will collaborate with raptor specialists from the Service and CDOW on road realignment and construction activities at Ridges Basin Dam to identify and implement measures minimizing effects on existing golden eagles and their nests on Carbon Mountain as described under Mitigation for Refined Alternative 4 Wildlife Impact 4. All reasonable means to preclude human activity on Carbon Mountain will be pursued. All power lines will be designed raptor-proof.

Reclamation will require that a 0.25-mile buffer around the existing golden eagle nests be identified and that all reasonable measures are pursued to preclude human activity on Carbon Mountain during the nesting period of golden eagles (December 1 through July 15), as described under Mitigation for Refined Alternative 4 Wildlife Impact 5 in Section 3.5.

Reclamation will ensure that development of non-binding end uses and conveyance systems avoid or minimize construction impacts to wetland and riparian vegetation wildlife habitat located within the potential corridor alignments of the non-binding water conveyance pipelines and that construction zones are the minimum necessary to meet project objectives as described under Mitigation for Refined Alternative 4 Wildlife Impact 7 in Section 3.5. If avoidance is not possible, Reclamation will require that a riparian/wetland habitat mitigation and a monitoring plan is developed to compensate for the loss of habitat value.

#### **5.4.6 Aquatic Resources Commitments**

% The Service recommended that water pumped to Ridges Basin Reservoir from the Animas River be  
% delivered into the reservoir at an elevation below the thermocline. This could lessen the likelihood of  
% periodically having reservoir water temperatures becoming too warm to support trout and could increase  
% oxygen levels in the reservoir. Reclamation does not believe there is sufficient information to adopt this  
% measure at this time. Reclamation will, therefore, fund a more further detailed evaluation of Ridges  
% Basin Reservoir's expected limnological conditions to better determine whether or not there is a  
% significant concern to include this recommendation in the project plan. This commitment is described  
% under Mitigation for Refined Alternative 4 Aquatic Resources Impact 2 in Section 3.6. The evaluation  
% will be completed in coordination with the Service as part of the design data collection activities.

% Reclamation will develop and implement a monitoring program at Ridges Basin Reservoir to determine  
% the extent of bioaccumulation of trace elements in fish within the reservoir. The reservoir basin's  
% vegetation will be largely cleared in order to reduce the magnitude of productivity and reduction  
% potential. This, in turn, will limit mercury becoming methylated, the form in which it is available to  
% bioaccumulate within the food chain. Trout will be the only fish stocked. Trout are not at the top of the  
% fish food chain; therefore, they will not be expected to accumulate significant levels of bioaccumulated  
% trace elements. The program will last two consecutive years and be initiated two years after the reservoir  
% is filled. If significant bioaccumulation effects are identified, Reclamation will work with the appropriate  
% local, state or federal agencies to either minimize the impact or otherwise offer protection to potentially  
% impacted fish and wildlife species and to possibly post human fish consumption advisories at the  
% reservoir. This commitment is also described under mitigation for Refined Alternative 4 Aquatic  
% Resources Impact 3 in Section 3.6

% To minimize downstream stranding of fish due to the operation of the pumping plant, changes in the  
% pumping will be staged in the following manner: An increase in pumping not to exceed 50 cfs per hour  
% (hr) stage decrease and a decrease in pumping not to exceed 100 cfs/hr (stage increase) when natural  
% river flows are above 500 cfs. At lower flow, these ramping rates could substantially change river stage.  
% Therefore, when river flows are at or below 500 cfs, increases in pumping will not exceed 25 cfs/hr and  
% decreases in pumping will not exceed 50 cfs/hr. This commitment is also described under Mitigation for  
% Refined Alternative 4 Aquatic Resources Impact 6 in Section 3.6. Seasonal bypass flows will be met  
% (ranging from 125 - 225 cfs) as described under mitigation for Refined Alternative 4 Aquatic Resources  
% Impact 1.

% Monitoring studies of project-affected waters on the Animas River will be implemented both prior to and  
% continuing for at least four years after project operations begin (project pumping). These studies will be  
% designed to better define the native fishery, to include better understanding apparent problems with  
% native sucker recruitment, and to monitor trout populations. If it is concluded that the operation of the  
% project is having significant adverse impacts to the downstream aquatic ecosystem, Reclamation will  
% make every reasonable effort to modify project operations to either reduce or eliminate these impacts.

The potential impact to native fishes in the Animas River, especially the effects of chronic habitat reduction, may not be directly mitigatable on the Animas River. Investigations should be initiated to determine whether or not fish barriers exist, whether small fish/young-of-the-year fish are significantly lost through entrainment in canals, and whether any significant loss to the trout fishery occurs. The monitoring program will be initiated in 2000 that will incorporate these additional elements into a monitoring study currently being conducted on the Animas River. A firm recommendation for mitigation due to the effects on native fishes will be made by no later than 2005, at least two years prior to project pumping from the Animas River. Once this mitigation recommendation is approved and agreed to by the Service, CDOW, New Mexico Department of Game and Fish (NMDGF), and perhaps the Southern Ute Indian Tribe, its implementation will immediately begin. This commitment is also described under mitigation for Refined Alternative 4 Aquatic Resources Impact 4 in Section 4.6.

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Reclamation will review and adopt established guidelines for screening facilities to minimize fish entrainment and impingement at the Ridges Basin Pumping Plant. Reclamation will also ensure that design specifications include Best Available Technologies as described under Mitigation for Refined Alternative 4 Aquatic Resources Impact 5 in Section 3.6.

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Reclamation will either screen or implement other physical structures to prevent live fish from being released from Ridges Basin Reservoir. The reservoir outlet system will be designed and fitted with devices to eliminate survival of fish escaping the reservoir. Reclamation will monitor escapement from the reservoir and Basin Creek as described under mitigation for Refined Alternative 4 Aquatic Resources Impact 7 in Section 3.6.

Reclamation will fund the acquisition and stocking of wild strains of trout annually in the Animas River within the boundaries of the Southern Ute Indian Reservation to compensate for fish loss due to the reduction in usable trout habitat. Individual stocks of trout will be marked in such a manner that age groups could be monitored over time. This monitoring plan will be developed in consultation with the Service, CDOW, NMDGF, and the Tribe. The relative success of this effort will be assessed after four years. If it is deemed a success—that is, if the trout biomass within the stocked reaches of the river is elevated to a point of supporting a recreational fishery—the stocking program will continue. For the acquisition of trout stock, Reclamation will consider the development of a new hatchery in cooperation with the Southern Ute Indian Tribe and others. This same hatchery could very well be utilized for providing for fish stocking for Ridges Basin Reservoir.

Reclamation will commit to providing trout to be stocked at Ridges Basin Reservoir to provide a recreational fishery. The source of fish could be from an existing Colorado River Storage Project (CRSP) hatchery facility or from the acquisition and/or construction of a new hatchery facility. This commitment is for the purposes of enhancing the fishery at Ridges Basin Reservoir.

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As described in Section 5.4.11, Reclamation will acquire at least two new public access points on the Animas River for fishing and other recreational use.

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#### **5.4.7 Special Status Species Commitments**

Reclamation will implement conservation measures found in the latest Biological Opinion on the project (see Attachment G for complete list). These measures address the Colorado pikeminnow and razorback sucker that are found in the San Juan River and the bald eagle that is found throughout the project area.

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% The conservation measures include Reclamation's commitment to operate Navajo Reservoir and the Durango Pumping Plant to mimic the natural hydrograph of the San Juan River to benefit the endangered fish and their habitat. Also, Ridges Basin outlet facilities will be designed to prevent escapement of nonnative fish, that might compete with native fish, into the Animas or other area waterways.

% Reclamation will develop and implement a monitoring program for potential adverse bioaccumulation of trace elements in bald eagle food items in Ridges Basin Reservoir. If the program identifies a problem with trace elements, Reclamation will develop and implement an action plan to minimize impacts to bald eagles. Bypass flows compatible with the endangered fish recovery efforts will be incorporated into the project plan to promote natural recruitment of cottonwood trees. This should avoid impacts to future bald eagle habitat. Also, electrical transmission lines associated with the project will be designed to avoid injury to raptors, including bald eagles.

% Project wildlife and wetland mitigation areas should provide high quality, protected habitats for species such as the southwestern willow flycatcher and bald eagle in the area.

#### **5.4.8 Geology and Soils Commitments**

% Reclamation will reduce or eliminate the potential for earthquake damage to the Ridges Basin Dam site through specific design specifications. Dam specifications will require design performance to withstand a maximum credible earthquake for seismic sources in the vicinity of Ridges Basin Dam site as described under Mitigation for Refined Alternative 4 Geology Impact 1 in Section 3.8.

Reclamation will develop and implement a controlled program for filling Ridges Basin Reservoir to reduce the potential for induced seismic impacts as described under Mitigation for Refined Alternative 4 Geology Impact 2 in Section 3.8.

Reclamation will develop and implement a facilities operation program that includes monitoring the reservoir shoreline and slopes for landslide and slumping. Reclamation will also provide for public notification and control public access in areas where high landslide and slumping potential exists as described under Mitigation for Refined Alternative 4 Geology Impact 3 in Section 3.8.

Reclamation will develop an engineered process plan to limit, control, and manage dam site methane gas releases during construction. Reclamation will also monitor the area for methane gas releases during operations as described under Mitigation for Refined Alternative 4 Geology Impact 4 in Section 3.8.

Reclamation will investigate the potential of gas release due to man-made intrusions within Ridges Basin and the proposed dam site. Specifically, construction investigations will study the integrity of abandoned exploration wells and the Gates Coal Mine as described under Mitigation for Refined Alternative 4 Geology Impact 5 in Section 3.8.

Reclamation will mandate that construction contractors use and implement measures contained in erosion control guidelines and BMPs to control soil erosion from construction areas as described under Mitigation for Refined Alternative 4 Soils Impact 1 in Section 3.8.

Reclamation will develop and implement a program to control reservoir filling and drawdown at rates sufficient to reduce significant erosion and sedimentation potential as described under Mitigation for Refined Alternative 4 Soils Impact 2 in Section 3.8.

### **5.4.9 Cultural and Paleontologic Resources Commitments**

Reclamation will ensure compliance with historic/archaeological treatment measures and disseminate results pursuant to the Programmatic Agreement executed to meet Section 106 requirements for Refined Alternative 4 Cultural Impacts 1-3 in Section 3.9. Attachment H contains a Draft Amended Programmatic Agreement for the ALP Project. Reclamation will also finalize a Historic Preservation Management Plan which puts the Programmatic Agreement into operation. %  
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Reclamation will ensure compliance with mitigation measures developed in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA) and Executive Order 13007 as described under Mitigation for Refined Alternative 4 Cultural Impact 4 in Section 3.9. Appendix H contains a draft NAGPRA Plan for the ALP Project.

Reclamation will ensure that areas to be disturbed are field surveyed prior to construction disturbance and will ensure that construction monitoring is conducted where deemed appropriate as described under Mitigation for Refined Alternative 4 Paleontologic Impact 1 in Section 3.9.

Reclamation will ensure that periodic shoreline monitoring is conducted as part of the facilities operations plan as described under Mitigation for Refined Alternative 4 Paleontologic Impact 2 in Section 3.9.

### **5.4.10 Agriculture Commitments**

Location, design, and construction timing of the NNMP would protect agricultural lands as described under Mitigation for Refined Alternative 4 Agriculture Impact 2 in Section 3.10. %  
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### **5.4.11 Recreation Commitments**

Reclamation will pursue pumping regimes that reduce adverse flow effects on boating opportunities within the Animas River when possible and will take steps to improve public access to the river as described under Mitigation for Refined Alternative 4 Recreation Impacts 1 and 2 in Section 3.11.

Reclamation will alter pumping regimes during periods of competitive events as described under Mitigation for Refined Alternative 4 Impact 3 in Section 3.11.

Reclamation, as part of both the fishery and recreation mitigation program, will acquire or provide funding (not to exceed \$500,000) for the acquisition of public access at a minimum of two points on the Animas River between the High Bridge and Basin Creek to reduce effects to anglers on the Animas River as described under Mitigation for Refined Alternative 4 Recreation Impact 4 in Section 3.11. %

### **5.4.12 Socioeconomics Commitments**

No environmental commitments are made for socioeconomic resources.

### **5.4.13 Land Use Commitments**

No environmental commitments are made for land use resources.

### **5.4.14 Hazardous Materials Commitments**

Reclamation will ensure that the Durango Pumping Plant is designed to minimize the disturbance of contaminated materials. Reclamation will also ensure that procedures will be developed for radiological monitoring of excavated soils and groundwater encountered and that remedial procedures are planned in advance to counteract the potential for human exposure and for the prevention of contaminated groundwater release from the construction site as described under Mitigation for Refined Alternative 4 Hazardous Materials Impact 1 in Section 3.14.

Reclamation will ensure that all federal and state requirements pertaining to the management and handling of hazardous materials, mixed wastes and radioactive waste are followed and will include those requirements within construction contract language inclusive of construction safety and environmental compliance as described under mitigation for Refined Alternative 4 Hazardous Materials Impact 2 in Section 3.14.

Reclamation will require that construction specifications for Ridges Basin Dam and Reservoir, the Ridges Basin Inlet Conduit, road relocation, and related work prohibit contractors from disturbing the disposal cell. Reclamation will take steps to ensure that the disposal cell has appropriate signage to make the public aware of its presence and any personal hazards that it could present, as described under Mitigation for Refined Alternative 4 Hazardous Materials Impact 3 in Section 3.14.

Reclamation will confer with DOE and their Long-Term Surveillance and Maintenance Program to understand the current operational scheme and parameters for the Bodo Canyon disposal cell. As well, Reclamation will reactivate sampling and monitoring of wells DH-228 and DH-229 for indicator parameters including but not limited to Molybdenum, Selenium, and Uranium, as described under Mitigation for Refined Alternative 4 Hazardous Materials Impact 5 in Section 3.14.

Reclamation will require that preconstruction surveys are conducted for non-binding water end use facilities and conveyance system development and that hazardous material standards relating to construction are adhered to as described under Mitigation for Refined Alternative 4 Hazardous Materials Impact 6 in Section 3.14.

### **5.4.15 Transportation Commitments**

Reclamation will conduct a transportation survey prior to construction of Ridges Basin Dam and Reservoir and will implement methods to reduce traffic-related impacts as described under Mitigation for Refined Alternative 4 Transportation Impacts 1 and 2 in Section 3.15.

Reclamation will ensure to maintain CR 211 roadway, shoulder, drainage, and roadside to standards adequate to avoid noticeable degradation as described under Mitigation for Refined Alternative 4 Transportation Impact 3 in Section 3.15.

Reclamation will require third-party developers of recreation facilities at Ridges Basin Reservoir to conduct traffic engineering impacts analysis studies and to mitigate recreation facility impacts according

to state and county standards. Associated costs will be the responsibility of the developing entity as described under Mitigation for Refined Alternative 4 Transportation Impact 7 in Section 3.15.

#### **5.4.16 Air Quality Commitments**

Reclamation will require that construction contractors implement measures to control fugitive dust and exhaust emissions during construction as described under Mitigation for Refined Alternative 4 Air Quality Impact 1 in Section 3.16.

Reclamation, or other responsible federal agency, will require third-party developers to implement measures to control fugitive dust and other emissions during construction and operation of non-binding end uses.

#### **5.4.17 Noise Commitments**

Reclamation will require that the Durango Pumping Plant construction contractor restrict operation of heavy equipment during the nighttime hours as described under Mitigation for Refined Alternative 4 Noise Impact 1 in Section 3.17.

Reclamation will ensure that construction contractors provide blasting notification to residents, sound pre-blast alarms, and follow the construction safety plan as described under Mitigation for Refined Alternative 4 Noise Impact 2 in Section 3.17.

Construction and operation of the Durango Pumping Plant will be carried out to reduce noise impacts as described under Mitigation for Refined Alternative 4 Noise Impacts 3 and 4 in Section 3.17.4.1. Noise reduction will be provided in the form of sound insulation within the pumping plant and vegetation screening designed as part of site landscaping. Ridges Basin specifications will provide for noise control, particularly relating to golden eagle nesting. %  
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Reclamation will ensure that construction contractors schedule construction activities to avoid or minimize loud activities in the vicinity of golden eagle nesting areas during the nesting season and that nesting areas are “off limits” to construction forces and visitors as described under Mitigation for Refined Alternative 4 Noise Impact 4 in Section 3.17.

Reclamation will require that third-party developers of recreation facilities at Ridges Basin Reservoir incorporate in a recreation development/management plan the requirement to prohibit particularly loud forms of watercraft and to include signing to advise people of eagle nesting sensitivity to human presence and noise as described under Mitigation for Refined Alternative 4 Noise Impact 5 in Section 3.17.

Reclamation will ensure that developers and contractors associated with construction and operation of the non-binding end uses incorporate methods to minimize noise disturbances as described under Mitigation for Refined Alternative 4 Noise Impact 6 in Section 3.17.

#### **5.4.18 Public Health and Safety Commitments**

Reclamation will ensure that public access to structural component construction areas will be controlled by signage and by fencing around construction areas as described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 1 in Section 3.18.

Reclamation will ensure that contractors configure haul routes and access roads to prevent or discourage public vehicular entry, including placement of signs warning against entry as described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 2 in Section 3.18.

Reclamation will ensure that all the potentially affected gas companies will be contacted prior to construction crossings of gas pipelines which will be precisely located and appropriately marked in the field and on the specifications as described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 3 in Section 3.18.

Reclamation will ensure that public access to end use and delivery system construction areas is controlled by signage and by fencing around construction areas as described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 4 in Section 3.18.

% Reclamation will investigate the potential for gas release due to man-made intrusions, prior to  
% construction, and will monitor excavations for the presence of coal bed methane gas, as described under  
% Mitigation for Refined Alternative 4, Public Health and Safety Impact 5 in Section 3.18.

% Reclamation will control public access to operation areas that could pose a threat to public safety as  
% described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 6.

Reclamation will ensure that recreation area planning, final design of facilities, and reservoir access points are developed to promote safety and use of accident management techniques as described under Mitigation for Refined Alternative 4 Public Health and Safety Impact 7 in Section 3.18.

#### **5.4.19 Public Services and Utilities Commitments**

% Reclamation will ensure that construction contractors adequately secure and patrol their work sites and  
% will coordinate with city or county law enforcement agencies as described under Mitigation for Refined  
Alternative 4 Public Services and Utilities Impact 1 in Section 3.19.

Reclamation will ensure that contractors will mark the locations of existing buried utilities and develop a notification system for coordination with affected utilities during construction as described under Mitigation for Refined Alternative 4 Public Services Utilities Impact 4 in Section 3.19.

#### **5.4.20 Visual Resources Commitments**

Reclamation will ensure that as part of construction design, the Durango Pumping Plant blends into the natural landform and that, following construction, the site is adequately revegetated as described under Mitigation for Refined Alternative 4 Visual Impact 1 in Section 3.20.

Reclamation will ensure that the design of structural facilities incorporates, to the extent practicable, non-intrusive design elements and that restoration of disturbed areas be conducted as described under Mitigation for Refined Alternative 4 Visual Impact 2 in Section 3.20.

#### **5.4.21 Indian Trust Assets and Environmental Justice Commitments**

Interior will support the modification of the Settlement Agreement, through legislated amendments to the Settlement Act, to recognize the new limits placed on the use and amount of water provided to the Colorado Ute Tribes and establishment of the water acquisition fund.

Interior will pursue the development of operation plans for Ridges Basin and Navajo Reservoirs that will optimize more efficient delivery of the flow recommendations for endangered fish in the San Juan River and limit certain project pumping to allow for making additional depletions and developable water available for other Indian tribes' present and future water needs.

Interior will facilitate discussions between the Jicarilla Apache Tribe and other parties with interest in the San Juan River Basin to develop options of obtaining 25,500 afy depletion as authorized under the Jicarilla Apache Tribe Water Rights Settlement Act.