UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Gunnison Field Office
650 S. 11th Street
Gunnison, CO 81230
(970) 642-4940

October 6, 2011

In Reply Refer To:
2800 (COS060) COC-73815

Dear Interested Party:

Enclosed is a copy of the Environmental Assessment of Lake San Cristobal Water Storage ROW (EA) and the unsigned Finding of No Significant Impact (FONSI). This EA presents the BLM's environmental analysis of a proposal to grant a right-of-way (ROW) to authorize the inundation of public lands along the shore of Lake San Cristobal.

The Lake San Cristobal Water Activity Enterprise has submitted an application to the BLM for a right-of-way (ROW) to authorize inundation of public lands along the shore of Lake San Cristobal. The Enterprise is managed by Hinsdale County, the Town of Lake City, and the Upper Gunnison River Water Conservancy District. The Enterprise proposes to install an outlet control structure at the existing lake outlet for the purpose of storing water. The proposed structure would not be located on public lands. The structure would not result in any new inundation of the lake shore; rather, it would maintain a level that has been maintained at least parts of the year for the past approximately 55 years. The proposed ROW would authorize the inundation of public lands along the lakeshore that has not been properly authorized in the past.

The BLM and conducted public scoping asking for comments on the proposed ROW in February 2011. Based on the public comments we received and the discussions of the BLM interdisciplinary team of resource specialists, the BLM identified issues related to the proposal. The EA documents the BLM's analysis of the environmental consequences of the proposed action and alternatives.

The comment period will remain open through October 21, 2011. The EA can also be accessed online at http://www.blm.gov/co/st/en/fo/gfo.html or at the Gunnison Field Office at 650 South 11th Street in Gunnison. Comments can be provided via email to mmedina@blm.gov, or can be submitted to the Gunnison Field Office at the address shown above.

After the 15-day public review period, the BLM will make any necessary changes to the EA based on public comments. The BLM will then be poised to issue a decision, which will be subject to a 30-day appeal period. If you have any questions, please contact Marnie Medina of my staff at (970) 642-4954.

Sincerely,

Brian St. George
Field Manager

Enclosures: (2)
Environmental Assessment of Lake San Cristobal Water Storage ROW
Finding of No Significant Impact

U.S. Department of the Interior
Bureau of Land Management
Gunnison Field Office
DOI-BLM-CO-S060-2011-0005-EA

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-S060-2011-0005-EA

CASEFILE/PROJECT NUMBER: COC-74815

PROJECT NAME: Lake San Cristobal Water Storage ROW

PLANNING UNIT: Gunnison Resource Area Resource Management Plan (RMP) Management Unit(s) 1

LEGAL DESCRIPTION: NMPM, T.43N., R.4W., sec. 15, lot 24;
sec. 22, lots 5, 8, 17.

APPLICANT: Lake San Cristobal Water Activity Enterprise

I. INTRODUCTION

A. BACKGROUND/INTRODUCTION: The Lake San Cristobal Water Activity Enterprise (applicant) has submitted an application to the BLM for a right-of-way (ROW) to authorize inundation of public lands along the shore of Lake San Cristobal. The Enterprise is managed by Hinsdale County, the Town of Lake City, and the Upper Gunnison River Water Conservancy District. The Enterprise proposes to install an outlet control structure at the existing lake outlet for the purpose of storing water. The proposed structure would not be located on public lands. The structure would not result in any new inundation of the lake shore; rather, it would maintain a level that has been maintained at least parts of the year for the past approximately 55 years. The proposed ROW would authorize the inundation of public lands along the lakeshore that has not been properly authorized in the past.

B. PURPOSE AND NEED: The purpose of the proposed action is to authorize the use of public land for inundation due to water storage while minimizing adverse environmental impacts to public land resources. The need for the action is established by the BLM's responsibility under FLPMA to respond to an application for a right-of-way grant.

C. DECISION TO BE MADE: The decision to be made, by the Gunnison Field Manager, is whether or not to grant a ROW for inundation of public lands along the shore of Lake San Cristobal, and if so, under what terms and conditions.

D. SCOPING AND PUBLIC INVOLVEMENT: The proposed project has been the subject of numerous public meetings held by the applicant, primarily in Lake City, Colorado, over the last

two years. In addition, BLM sent a scoping letter describing the proposed action and asking for comments on the proposal on February 25, 2010. The letter was sent to 51 interested and potentially affected parties, including landowners along the shore of Lake San Cristobal, federal and state agencies, and local governments. The letter was also published in the Lake City Silver World newspaper on March 11, 2011. The BLM received comments from four parties. Based on the public comments we received and the discussions of the BLM interdisciplinary team of resource specialists, the following eight issues were identified to be analyzed.

E. ISSUES AND CONCERNS:

1. Issues to be Analyzed

a. Riparian Areas and Wetlands - What effect would the proposed action, and connected actions, have on the riparian areas and wetlands around Lake San Cristobal and along the Lake Fork of the Gunnison River?

b. Fisheries - What effect would the proposed action, and connected actions, have on the fisheries in Lake San Cristobal and the Lake Fork of the Gunnison River?

c. Water Rights - What effect would the proposed action, and connected actions, have on water rights on Lake San Cristobal and the Lake Fork of the Gunnison River that are owned by BLM, the Colorado Water Conservation Board, and private parties?

d. Water Quality – What effect would the proposed action, and connected actions, have on water quality in Lake San Cristobal and the Lake Fork of the Gunnison River?

e. Cultural Resources – What effect would the proposed action have on cultural resources? This issue will be carried forward for analysis to demonstrate compliance with NHPA and Sec. 106 consultation.

f. Migratory Birds – What effect would the proposed action have on migratory birds? This issue will be carried forward for analysis to demonstrate compliance with migratory bird laws and regulations.

g. Threatened, Endangered, and Sensitive Species – What effect would the proposed action have on threatened, endangered, and sensitive species? This issue will be carried forward for analysis to demonstrate compliance with ESA and Sec. 107 consultation.

h. Recreation – What effect would the proposed action, and connected actions, have on the quality of recreational opportunities?

2. Issues Not Analyzed

See Appendix A for a discussion of other resources that either were not present or that were not affected to a degree that warranted detailed analysis.

II. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

A. DESCRIPTION OF PROPOSED ACTION:

The proposed action is to grant a right-of-way (ROW) to the applicant to authorize the inundation of public lands along the shore of Lake San Cristobal. The applicant proposes to install an outlet control structure at the existing lake outlet for the purpose of storing water. The proposed structure would not be located on public lands. The structure would not result in any new inundation of the lake shore; rather, it would maintain a level that has been maintained at least parts of the year for the past 55 years. The proposed ROW would authorize the inundation of public lands along the lakeshore that has not been properly authorized in the past.

The ROW would authorize inundation of two parcels of public land along the shore of Lake San Cristobal. Each parcel would account for the area between 8,992 feet and 8,995 feet elevation, which would essentially be the area occupied by the applicant's storage water right. One parcel is 0.711 acre and the other is 0.451 acre for a total ROW of 1.162 acres on public land (see attached map). The right-of-way would be subject to the attached standard stipulations that direct management of the ROW and incorporates the Plan of Development. The stipulations address actions required prior to any ground disturbance, proper ROW maintenance, noxious weed control, and protection of cultural resources, among other things.

Although the BLM's proposed action is limited to granting a ROW, the connected actions of constructing the outlet structure and of storing and releasing water, while outside of BLM's authority, will be analyzed as part of the indirect and cumulative effects of the proposed action.

Efforts to impound water at Lake San Cristobal began in the nineteenth century with uncertain results, but in 1954, Hinsdale County constructed a rock and timber dam at the outlet of the Lake that raised the natural lake level and was used to sustain it through summer and fall. When the timber structure began to deteriorate in the early 1970s, the County initiated the practice of supplementing the structure each year by placing boulders at the Lake outlet. Over time, the structure and the County's supplementation have collectively impounded enough water to raise the natural lake level approximately three feet. The proposed outlet structure will replicate the County's historical practice more efficiently and will not raise the Lake level above the level continuously achieved by the dam and boulders during the last 55 years (UGRWCD, et.al., 2010).

The Upper Gunnison River Water Conservancy District, which has acquired a conditional water storage right, will ultimately transfer the right and obligations of their water rights decree to the Enterprise. The Enterprise was formed in order to provide replacement water needed for augmentation of out-of-priority depletions by wells, surface diversion, and ponds in the Town of Lake City (including the Town's municipal water supply), in the Lake Fork Basin, and in portions of the Upper Gunnison Basin.

The District has a conditional water storage rights for 950 acre-feet to store in-priority flows of the Lake Fork of the Gunnison River in Lake San Cristobal. The conditional water right also allows for a second filling of 950 acre feet, if space is available in the lake and additional water is available within the water rights priority system. The water rights would be exercised via

construction of an outlet structure by the Enterprise. The water rights would allow continued water use in Hinsdale County and in portions of Gunnison County for multiple purposes, including domestic, municipal, commercial, industrial to include mining, milling and reclamation, irrigation, recreation, and fishery and wildlife habitat, even during drought periods when senior water rights in downstream locations are calling for water.

Based upon a study of potential future demand for augmentation water in the District, Lake City, and Hinsdale County conducted in 2008 and updated in 2011, the current demand for Blue Mesa water for augmentation, and a fifty-year planning horizon, 475 acre-feet is a reasonable estimate of the three entities' anticipated future water needs in the next fifty years sufficient to qualify for the limited governmental entity water supply exception to Colorado's anti-speculation law. Those entities have therefore agreed, as part of the Settlement Agreement with Daniel L. Plies, to limit the sale of augmentation certificates to a total of 475 acre-feet during the first 40 years following the entry of the decree (District Court, 2011). [NOTE: Mr. Plies holds water rights for operation of the Crooke's Falls Flume hydroelectric power facility downstream of the Lake.]

NOTE: The October 13, 2010 Findings of Fact, Conclusions of Law, Ruling of the Referee and Decree Concerning the Application for Water Rights of the Upper Gunnison River Water Conservancy District from the District Court, Water Division 4, Colorado has been opposed. The District and the Opposer have negotiated a settlement; however, the settlement has not yet been approved by the District Court. Any elements of the proposed settlement that would change this analysis of the effects of the proposed action and alternatives, will be addressed in a revised Environmental Assessment.

In 1976, the CWCB obtained a water right for the natural lake level of Lake San Cristobal. The natural lake level decreed in case number W-3366, District Court, Colorado Water Division 4, is for a lake surface elevation of 8,995 feet. The applicant has signed a contract with the Colorado Water Conservation Board (CWCB) that describes the coordinated operation of their respective water rights.

The CWCB also holds two instream flow water rights on the Lake Fork of the Gunnison River. In 1980, the CWCB appropriated an instream flow right between Cottonwood Creek (upstream from Lake San Cristobal) and Henson Creek (downstream from Lake San Cristobal). The decree in case number 1980 CW 97, District Court, Colorado Water Division 4, established an instream flow right of 35 cubic feet per second between May 1 and September 30, and 20 cubic feet per second between October 1 and April 30. In 1980, the CWCB also appropriated an instream flow water right on the Lake Fork of the Gunnison between the confluence with Henson Creek and Blue Mesa Reservoir. The decree in case number 1980 CW 119, District Court, Colorado Water Division 4, established an instream flow right of 45 cubic feet per second between May 1 and September 30, and 25 cubic feet per second between October 1 and April 30.

The CWCB instream flow water rights downstream from Lake City are senior to water rights held by Lake City and could therefore require curtailment of the Town wells in times of shortage (District Court, 2010). The District's recently established storage water rights and the proposed storage project would allow an exchange, in which the Town's wells would divert water released from Lake San Cristobal. Via a mitigation agreement with the Upper Gunnison Water

Conservancy District, the CWCB consented that the proposed exchange will not injure its senior water rights.

Presently the Town of Lake City and the District rely on water service contracts with the Bureau of Reclamation to augment new wells and other junior water rights by exchange using replacement water stored in Blue Mesa Reservoir. The Bureau contracts expire in 19 and 37 years with no guarantee of renewal, and permit the Bureau to reduce or terminate water service under certain circumstances. The CWCB instream flow water rights downstream from the Town are senior to that exchange and could therefore require curtailment of the Town wells in times of shortage. Replacement water stored in Lake San Cristobal will serve as protection against expiration, interruption or termination of the Blue Mesa contracts and will provide for future growth (District Court, 2010). In addition, participation in the plan for augmentation will permit the Town of Lake City to cancel the Bureau of Reclamation contracts, resulting in significant reduction in the annual cost of augmenting the Town wells (District Court, 2011).

Installation of the proposed outlet structure will permit the Enterprise to control the lake surface level between 8,992 feet and 8,995 feet. The proposed outlet structure will improve existing regulation of lake levels and permit impoundment of water under a decreed storage right without altering historical conditions at the Lake (District Court, 2010).

Reservoir operations may lower the surface level below the CWCB's decreed elevation of 8,995 feet during periods when augmentation releases are required to be made from the reservoir. The District and the CWCB have reached a settlement to mitigate the injury to the CWCB natural lake level water right, which has been incorporated into the District's water rights decree. Key elements of the mitigation include:

1. Utilizing the outlet structure during most years to improve maintenance of a constant lake surface level at the decreed natural lake level of 8,995 feet. This is in contrast to the historical operation, in which lake levels typically peaked during snowmelt runoff at 8,995 feet and then gradually decreased to 8,992 feet during late summer and fall.

2. Utilizing the outlet structure to store water to provide replacement water for out-of-priority diversions on the Lake Fork of the Gunnison River, and to release water from the impoundment of the outlet structure that will supplement CWCB instream flow water rights in the Lake Fork of the Gunnison River downstream from Lake San Cristobal (these instream flow rights are entitled to call the river when flows fall below their decreed rates, but without the impoundment there would be little or no replacement water available).

3. Dedicating 100 acre-feet of water stored in priority in Lake San Cristobal under the District's storage rights for use as directed by the CWCB, in its discretion, to preserve the natural environment to a reasonable degree under its natural lake level water right.

4. All water released from Lake San Cristobal for the benefit of the CWCB pursuant to the injury with mitigation agreement shall be available for diversion by the Crooke's Falls Flume hydroelectric facility located on the Lake Fork of the Gunnison River in Hinsdale County, Colorado (District Court, 2011).

B. DESCRIPTION OF ALTERNATIVES ANALYZED IN DETAIL:

No Action Alternative: Under this alternative, BLM would not grant a ROW to the applicant. The proposed inundation of public lands along the shore of Lake San Cristobal would not be authorized on public land. The Upper Gunnison Water Conservancy District would be forced to investigate and implement other alternatives to providing augmentation water for Hinsdale County, such as construction of alternative reservoir storage sites.

No other alternatives were analyzed in detail.

C. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL:
Two other alternatives were suggested in scoping comments received from the public. One suggested alternative was to require operation of the proposed water storage right in such a way as to not interfere with senior water rights. A second suggested alternative was to require operation of the proposed water storage right such that the level of the lake would not be allowed to go below CWCB's decreed natural lake level water right of 8,995 feet elevation.

Both suggested alternatives are outside the authority of the BLM and are outside the scope of this analysis. They are subject to Colorado state water law and are under the authority of the water court. Therefore, neither of these alternatives were carried forward for detailed analysis.

D. PLAN CONFORMANCE REVIEW:
The Proposed Action is subject to, has been reviewed for, and been found to be in conformance with, the following plan (43 CFR 1610.5, BLM 1617.3). The plan conformance review included consideration of Standard Management (pgs. 2-1 to 2-19), Management Unit Prescriptions (pgs. 2-19 to 2-39), and Standards for Public Land Health (pgs. 4-7).

Name of Plan: Gunnison Resource Area Resource Management Plan (including Adoption of Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado)

Date Approved: February 1993 (amended February 1997)

Management Unit(s): 1 (Alpine Triangle Special Recreation Management Area)

Decision Number/Page:
Standard Management Direction, pg. 2-1 to 2-19;
Decision Language: (pg. 2-15) "Public lands within the Planning Area will be open to the location of rights-of-way, subject to stipulations in Management Unit prescriptions and standard terms, conditions, and stipulations contained in records of decision issued for each application."

Management Unit 1 Direction, pg. 2-21 to 2-22;
Decision Language: (pg. 2-22) "The remainder of public lands in the unit, about 12,070 acres, will be open to all other rights-of-way."

III. AFFECTED ENVIRONMENT / ENVIRONMENTAL EFFECTS

A. Riparian Areas and Wetlands - What effect would the proposed action, and connected actions, have on the riparian areas and wetlands around Lake San Cristobal and along the Lake Fork of the Gunnison River?

1. Affected Environment:
The Enterprise contracted for a preliminary delineation of wetlands around the perimeter of the lake that could potentially be affected by the proposed project (The Terra Firm, 2008). The delineation identified six wetland locations totaling 90.18 acres. The delineation identified three general wetland types around the lake: Palustrine Emergent (9.82 acres), Palustrine Shrub-Scrub (80.14 acres), and Lacustrine Emergent (0.22 acres).

The largest wetland area includes 79.64 acres located on a large delta where the Lake Fork of the Gunnison River flows into the lake. This wetland complex is a mix of historic channels, remnant beaver dams, hummocks, and patches of open water, which combine to create a very diverse community. The wetland community is comprised of cottonwood-alder at its southern limits and transitions into willow-sedge community closer to the standing water. Historic fluctuation of lake levels, combined with deposition of sediment by the Lake Fork of the Gunnison, has created a portion of the delta where emergent plants establish annually, but may be inundated when lake levels fluctuate.

The second largest wetlands area on the lake includes 9.82 acres of palustrine emergent wetland located on alluvial fan created by Slumgullion Creek as it enters the lake. This wetland is dominated by *Carex aquatilis* (water sedge).

Other wetland locations around the perimeter of the lake are less than 0.5 acre each and are typically at the base of steep hill slopes or around the margins of areas that have been filled in for public access and use.

None of the plant species identified as occupying the delineated wetland areas appear on BLM's sensitive species list.

The hydrology of all of the delineated wetland areas are influenced by fluctuating lake levels. The lake level rises in April through July in response to snowmelt runoff and the restricted width of the lake outlet. At peak snowmelt runoff the lake elevation approaches 8,995 feet. After snowmelt runoff is complete, lake levels gradually recede as water exits the opening of the lake to the Lake Fork of the Gunnison River. Monsoon events during the July through September period may slightly increase the lake elevation. From late September through March, when inflows are low, the historic lake level typically falls to approximately 8,992 feet. When the lake level falls below 8,995 feet during the growing season, emergent vegetation will attempt to colonize portions of the Lake Fork delta at the southern end of the lake that lie below 8,995 feet.

The hydrology of the wetland community associated with inflow from Lake Fork of the Gunnison is directly affected by flows of the river. During high flow periods, the wetland community may be temporarily inundated by over-bank flows from the river.

Soils found in the wetland area associated with the Lake Fork of the Gunnison inflow include fine sands and silts. Peat soils have formed behind large beaver dams. The wetland associated with Slumgullion Creek is composed of landslide debris and fines. Soils found in the other wetland areas are comprised of colluvial materials and fill materials associated with public use areas.

All of the wetlands around the perimeter of the lake were rated for wetland functions and values. The values and functions that were rated include water storage, flood flow attenuation, aquatic food chain support, sediment retention, nutrient/pollutant removal, shoreline stabilization, and wildlife habitat. The wetland located at the Lake Fork inflow is rated as having very high (near the top of the rating scale) wetland functions and values. The wetland located at the inflow from Slumgullion Creek was rated as having moderate wetland values and functions, because of low ratings for water storage and shoreline stabilization. All other wetland areas received low to moderate functions and values ratings.

The lake perimeter also contains very thin strips of water-dependent vegetation that do not meet the Corp of Engineer's wetlands delineation parameters. This vegetation typically consists of individual specimens of willow, alder, and very small areas of grasses and forbs.

There are no known fens or spring habitats within the proposed construction area for the dam or within the proposed area to be inundated.

Downstream from Lake San Cristobal, the Lake Fork of the Gunnison River and its associated riparian areas continue for approximately 33 miles, until it enters Blue Mesa Reservoir. Approximately 12 miles are on public lands. The riparian areas include several different vegetation communities and conditions ranging from a channel confined in a rocky canyon with a willow overstory, to a less confined, meandering channel with riparian areas characterized by cottonwood/willow overstory, Douglas-fir/aspen overstory, and/or irrigated hay meadows.

2. Environmental Effects/Mitigation:

a. Proposed Action:

Direct and Indirect Effects. The proposed action would directly affect wetland and riparian hydrology by creating more stable water levels throughout the growing season. The lake level would be held at 8,995 feet except in very dry water supply years, such as 2002-2003. During dry years, water would be released to offset out-of-priority water depletions in Hinsdale County and in other locations serviced by the Enterprise's augmentation plan. It is impossible to predict how often dry year hydrology would cause releases from the lake. However, based on historic droughts within the Gunnison River watershed, it is reasonable to assume that successive dry years will occur at least every 15 to 20 years.

The exact impacts of the proposed water elevation management will be determined by the characteristics of the soils underlying the wetlands around the perimeter of the lake. If there are no physical or chemical barriers within the soil horizons, soils beneath wetland communities can be saturated even when lake levels are at their lowest (8,992 feet) because of wicking action through soils and root cavities. The wetlands delineation that was performed by the Terra Firm noted that saturated soil conditions existed in all of the wetland sample plots around the lake. Saturated soils were noted even though the lake level was low when the sample plots were investigated in October 2008. With these types of soils, a lake elevation consistently maintained at a higher level would not be expected to change the saturation of the soils underlying wetland communities. Accordingly, very little vegetation change would be expected.

However, in locations where tight soils inhibit groundwater flow upward via wicking action, the composition of the current wetland community may be influenced by the proposed action. In locations with tighter soils, the current wetland community may be influenced by reduced groundwater availability during periods when the lake level has historically been low. With the lake consistently managed at a higher level, the percentage of the time when soils are saturated would increase. Plants that could not tolerate consistently saturated soils would be replaced with species that could tolerate consistently saturated soils.

The wetland delineation performed The Terra Firm in October 2008 noted highly variable soils conditions in the wetland complex at the inflow from the Lake Fork of the Gunnison River. While the survey did not specifically note any soil types that would inhibit upward wicking of groundwater under historic conditions, it is possible that such soil types exist in limited areas of this complex. With the lake consistently managed at 8995 feet, the percentage of the time when soils are saturated would increase in these soil types. Plants that could not tolerate consistently saturated soils would be replaced with species that could tolerate consistently saturated soils. The possible change in plant species in these soil types would not be expected to change the high rating of this wetland complex for wetland functions and values.

The applicant proposes a comprehensive, long-term monitoring program to assess potential impacts to wetlands. The proposed monitoring location is the 79.64 acre wetlands complex at the inflow of Lake Fork Gunnison River. This location was selected because it is representative of wetlands around the perimeter of the lake and represents the highest-rated functionality/value wetlands that could be affected by the project. The applicants will establish a minimum of three monitoring plots. Each plot will include shallow wells to monitor and record groundwater levels. Wetland species composition will be monitored each year at 30 and 60 days after snowmelt runoff is completed. Species health will be evaluated by annual counts of sedge (*Carex*) shoots in the monitoring plots and by measuring annual stem growth on willow (*Salix*) species within the monitoring plot. An annual report of the monitoring activities will be provided to the Enterprise.

Overall, the proposed project is expected to create minimal wetland and riparian impacts. Soils supporting the current wetland complexes are saturated even when the lake level is low (8,992 feet) and those soils will also be saturated when the lake level is maintained at 8,995 feet. The quality and stability of wetland and riparian communities may increase with more stable water levels. The wetland and riparian community is expected to be able to withstand occasional dry years when the lake level is lowered to meet water supply demands, because investigations have

revealed that wetland soils remain saturated even when lake levels are at 8992 feet. A comprehensive wetlands monitoring program will be initiated, allowing the applicant to identify and respond to any unanticipated changes in wetland and riparian communities.

The proposed project is expected to minimally impact riparian and wetland communities along the Lake Fork of the Gunnison River. The proposed changes in flow rates and water volumes are not large enough to affect size and duration of overbank flows, bank-full flows, and base flows. In addition, the proposed changes are not large enough to affect alluvial groundwater levels along the river during base flow periods. During extreme drought conditions, such as 2002, the proposed releases from the lake may temporarily reduce stress on riparian and wetland communities associated with the Lake Fork, but are expected to minimally change groundwater regimes that support wetland and riparian communities.

Cumulative Effects. The proposed action is expected to result in minimal impacts to wetland and riparian communities. Accordingly, it will not exacerbate any existing wetland losses that have occurred with the Gunnison River watershed.

b. No Action Alternative:

Direct and Indirect Effects. The applicant is required by Colorado water law to provide augmentation water to offset any out-of-priority depletions. If the proposed project is not available to the applicant, the applicant will be forced to consider other water storage alternatives in the Lake Fork watershed. Depending upon the alternative storage site selected, the alternative project could inundate and eliminate any wetland or riparian community associated with the storage site.

Cumulative Effects. If the applicant is required to select an alternative storage site, wetland acreage loss in the Gunnison River watershed could be exacerbated if the selected site requires inundation of existing wetland and riparian communities.

B. Fisheries - What effect would the proposed action, and connected actions, have on the fisheries in the Lake Fork of the Gunnison River?

1. Affected Environment:
Downstream from Lake San Cristobal, the Lake Fork of the Gunnison River and its associated riparian areas continue for approximately 33 miles, until it enters Blue Mesa Reservoir. Approximately 12 miles are on public lands. Fish habitat ranges from narrow channels confined in a rocky canyons to wide open channels with overhanging cottonwood, willow, and Douglas-fir/aspen overstory. The water is consistently cold and clear except with spring high flows and heavy rain events. The Colorado Parks and Wildlife stocks fish in the Lake Fork of the Gunnison River. The fishery is characterized by world class brown trout and rainbow trout fishing opportunities. Smaller tributaries to the Lake Fork are characterized by great fishing opportunities for brook trout and native cutthroat trout (Brauch, 2011).

2. Environmental Consequences/Mitigation:

a. Proposed Action:

Direct and Indirect Effects. The proposed action would result in an additional volume of water in storage at Lake San Cristobal during most water years. The additional water volume would create additional physical habitat for the fish population, and it would likely have the effect of slightly reducing water temperatures in the lake. The changes would likely be sufficiently small that it would be difficult to measure any changes in zooplankton production, phytoplankton production, aquatic macroinvertebrates, or changes to fish biomass. The proposed action is also expected to marginally improve water quality, which should have beneficial effects on the fishery.

The proposed action is expected to result in a one-time 950 acre foot reduction in flows in the Lake Fork of the Gunnison during the year in which the storage structure first fills. After the first fill of the storage project, diversions to storage would generally be limited to diversions necessary to replace the 100 acre foot annually that is transmitted to the Colorado Water Conservation Board for mitigation purposes. After successive dry years in which the storage yield is used to offset out-of-priority depletions, larger diversions (up to 950 acre feet) may be necessary to fill the storage space. Diversions to refill the storage space would be most likely to occur during May and June, when large snowmelt runoff flows make water available within the water rights priority system.

Even if the entire 950 acre feet were diverted during May or June, the resulting reduction in flow volume in the Lake Fork of the Gunnison would be small. For example, the average flow volume in the Lake Fork during May is 33,810 acre feet, and a reduction of 950 acre feet would represent 2.8% of that volume. During June, the average flow volume is 56,694 acre feet, and a reduction of 950 acre would represent 1.7% of that volume. These figures rely upon the average monthly flow volumes as recorded the USGS stream flow gage at Gateview. Since usable fish habitat is typically very limited during snowmelt runoff because of high stream velocities, the slight reduction in flows is expected to create minimal changes to fish habitat.

Conversely, flows may be released from storage to offset out-of-priority depletions. In addition, flows may be released to benefit fish habitat as part of the mitigation the District negotiated with CWCB. Under both of these scenarios, it would be expected that releases from storage would occur during low flow periods, typically August through October. If 100 acre feet were released during September with an average volume of 7,930 acre feet at the Gateview stream flow gage, the volume of flow would increase approximately 1.2%. If 500 acre feet were released during an average September, the volume of flow would increase 6.3%. In a drought month such as September 2002, when 4,087 acre feet passed the Gateview gage, the release of 500 acre feet would increase the overall flow volume by 12.2%. Such releases may marginally increase the amount of physical habitat available to fish species, and may marginally decrease water temperatures during higher stress periods for the fish.

BLM is not aware of any fish movement between Lake San Cristobal and Lake Fork of the Gunnison River that would be affected by construction of an operational dam. In addition, BLM is not aware of any spawning areas located in the proposed project construction area.

Cumulative Effects. The proposed action is not expected to result in cumulative effects to the fishery in Lake San Cristobal because fish biomass, diversity, and health are controlled by factors other than the volume of water stored in the lake. These factors include the short aquatic growing season at high altitude, fish stocking practices, and recreational fishing practices and management.

The proposed action is not expected to create cumulative effects on the Lake Fork of the Gunnison River. In most years, the proposed flow reductions during snowmelt runoff and flow increases during low flow months would create minimal changes in fish habitat. During dry years, flow releases during low flow months may markedly benefit fish habitat.

b. No Action Alternative:

Direct and Indirect Effects. The applicant would be required to operate a storage facility in another location. Depending upon the storage location selected (on- or off-channel), a new reservoir fishery could be created, or the proposed reservoir location could inundate an existing stream fishery.

Cumulative Effects. There are no other reasonably foreseeable projects at this time that could impact the overall stream miles/lake acres of sport fisheries in the Gunnison River watershed.

C. Water Rights - What effect would the proposed action, and connected actions, have on water rights at Lake San Cristobal and on the Lake Fork of the Gunnison River?

1. Affected Environment:
As described previously, the Colorado Water Conservation Board holds a water right for a natural lake level in Lake San Cristobal. The CWCB also holds two instream flow water rights on the Lake Fork of Gunnison River.

The Bureau of Land Management holds a reserved water right, awarded in case number W-436, Water Division 4, for 0.5 acre feet annually for livestock and wildlife use from Lake San Cristobal. This water right holds a 1926 priority. In addition, the BLM holds a water right for 0.5 cubic feet per second from the Lake Fork of the Gunnison River for wildlife, livestock, fire suppression, and recreation uses. This water right holds an 1882 priority.

During the 1990s, BLM acquired two properties that straddle the Lake Fork of the Gunnison. These acquisitions included multiple water rights for irrigation diversions from the river. The Smock Ranch acquisition included 16.23 cfs of irrigation water rights from the Lake Fork, with priorities ranging from 1892 to 1904. The Thomas Ranch included 12.42 cfs of irrigation rights from the Lake Fork, with priorities ranging from 1902 to 1953.

Multiple privately-owned ranches are located along the Lake Fork of the Gunnison River, and many of these ranches hold water rights from the Lake Fork for irrigation, livestock, and domestic purposes.

The Town of Lake City holds water rights from the Lake Fork of the Gunnison for municipal purposes. The applicant's proposed project is designed to make these water rights more reliable during low flow periods.

Daniel Plies owns the Crooke's Falls Flume water right, which was originally decreed for 450 cubic feet per second, conditional, in case number 1989 CW 03. Of this amount, 121 cubic feet per second were decreed absolute in case number 1995 CW 83. The remaining 329 cubic feet per second, conditional, were confirmed and continued by the water court. Mr. Plies has continued to make diligence filings on the remaining conditional water rights. Mr. Plies also claims an ownership interest in the Lake San Cristobal Reservoir No. 1 storage right and the Lake City Power Company Pipeline, both adjudicated in Civil Action 3516, District Court, Montrose County. Mr. Plies has formally protested the ruling of the water court referee in case number 2003 CW 108, in which the Applicant sought water rights for the proposed action. A trial for this case has been set for April 16-20, 2012.

2. Environmental Consequences/Mitigation:

a. Proposed Action:

Direct and Indirect Effects. The proposed action would allow operation of a junior water right sought by the applicant in case number 03 CW 108. Under Colorado Water Law, operation of a junior water right cannot impact the operation of any senior water rights. All of the water rights described in the "Affected Environment" section above are senior in priority to the proposed storage water right. In addition, the proposed project would provide water to offset out-of-priority depletions in Hinsdale County that formerly were not augmented because of a lack of a secure augmentation source. The proposed action would reduce the frequency that senior water rights would be injured by unagumented, out-of-priority diversions.

The CWCB has signed a stipulation and mitigation agreement with the applicant that is designed to avoid impacts to the CWCB's water rights. Similarly, the BLM has signed a stipulation with the applicant in case number 2003 CW 108 that is designed to avoid any impact to BLM water rights. In addition, Mr. Plies has signed a stipulation with the applicant and the District that is designed to avoid impacts to Mr. Plies' water rights.

Normal operation of the water rights system, in which owners of senior water rights may place calls against owners of junior water right to insure delivery of water, should prevent impacts to senior irrigation water rights owned by private property owners along the Lake Fork of the Gunnison.

Cumulative Effects. The proposed action is expected to reduce cumulative impacts on senior water rights associated with unaugmented, out-of-priority depletions with Hinsdale County and within other areas serviced by the Enterprise.

b. No Action Alternative:

Direct and Indirect Effects. Unaugmented, out-of-priority depletions on the Lake Fork would continue until the applicant could secure an alternative source of augmentation water.

Cumulative Effects. Unaugmented, out-of-priority depletions on the Lake Fork would continue until the applicant could secure an alternative source of augmentation water.

D. Water Quality - What effect would the proposed action, and connected actions, have on water quality in Lake San Cristobal or Lake Fork of the Gunnison River?

1. Affected Environment:
Colorado Department of Public Health and Environment (CDPHE) regulates water quality in Colorado through implementation of the Federal Clean Water Act (CWA). CDPHE implements the CWA by establishing water quality standards and classifications for all water bodies in the state. In order to meet classifications designated by CDPHE, water quality for pH, metals, bacteria, and nutrients must meet water quality standards. Within the project area are Lake San Cristobal and Lake Fork of the Gunnison River, which flows into Blue Mesa Reservoir. Both Lake San Cristobal and Lake Fork of the Gunnison River have been identified as supporting the following uses:

- Aquatic Life Cold Water-Class I: These are waters that (1) currently are capable of sustaining a wide variety of cold water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of species.
- Recreation E: These surface waters are suitable or intended to become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur. Such waters include but are not limited to those used for swimming, rafting, kayaking and water-skiing. These surface waters are suitable or intended to become suitable for recreational uses on or about the water which are not included in the primary contact subcategory, including but not limited to fishing and other streamside or lakeside recreation.
- Water Supply: These surface waters are suitable or intended to become suitable for potable water supplies. After receiving standard treatment (defined as coagulation, flocculation, sedimentation, filtration, and disinfection with chlorine or its equivalent) these waters will meet Colorado drinking water regulations and any revisions, amendments, or supplements thereto.
- Agriculture: These surface waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock (BLM date unknown).

Water quality in the Lake Fork is sampled at its confluence with Deadman Gulch on a rotating basis as part of the Upper Gunnison Upper Gunnison Basin Water-Quality Monitoring Program, which includes state, local, and federal agencies. Water quality sampling is scheduled in 2011 for

this site. Water quality in both water bodies have been measured by the BLM, CDPHE, Lake Fork Valley Conservancy (LFVC), National Park Service (NPS), and United States Geologic Survey (USGS) between 1960 and 2010.

LFVC measured water quality in Lake San Cristobal in 2010 and average dissolved oxygen (DO) at depths between 3 and 23 feet was 7.3 milligrams per liter (mg/L); and pH averaged 7.7. These values meet water quality standards. Results from sampling events by the other entities in 1974, 2004, and 2005 show that these two standards were met. The data collected by the other agencies during these years also include metals, nitrogen (i.e. NH_4 and NO_3), and phosphorous (i.e. P, PO_4, and PO_4^{3-}). Data indicates that water quality has been met for these constituents. For instance, the water quality standard for arsenic (As) is 340 µg/L; and the highest concentration was <1 µg/L. Water quality standard for iron (Fe) is 1,000 µg/L and maximum concentration was 140 µg/L.

Water quality in the Lake Fork of the Gunnison River has been measured at the outlet of Lake San Cristobal, in Lake City at Deadman Gulch, and around USGS gage at Gateview. Water quality sampling at 10 sites on the Lake Fork by LFVC in 2010 indicates that pH and DO as well other water quality parameters met water quality standards. Average pH was 7.4 and average DO was 8.6 mg/L. Maximum concentration of Fe between 1977 and 2008 was 76 µg/L. Below Lake San Cristobal, concentration of As was <1 µg/L during 6 sampling events in 2000. Data for all water quality can be found at the EPA Storet website:

http://iaspub.epa.gov/storpubl/DW_resultcriteria_geo

Neither water body is a Designated Critical Water Resource.

2. Environmental Consequences/Mitigation:

a. Proposed Action:

Because of the small volume of water to be stored relative to the total volume of water stored in the lake, the proposed action is not expected to result in any changes in the ability of the lake to meet numerical or narrative water quality standards. In addition, the water diverted into storage is expected to have very similar water quality characteristics to water already in storage at the lake.

Under the historic practice of managing lake levels, there is a considerable amount of exposed, unvegetated shoreline present when lake levels are below 8,995 feet. Wind-driven wave action against the shoreline can create areas of suspended sediment and turbidity close to the shoreline. The proposed action is anticipated to minimize suspended sediments and turbidity by reducing the area of unvegetated shoreline that is subject to wave action.

Because the volume of water to be stored and released is small relative to the total volume of water in the Lake Fork of the Gunnison, the proposed action is not expected to result in any changes in the ability of the river to meet numerical or narrative water quality standards. In addition, the water released from storage is expected to have identical water quality characteristics to water already flowing from the lake due to natural hydrologic processes.

Construction processes may temporarily diminish water quality by introducing sediments into Lake San Cristobal and Lake Fork of the Gunnison River. Any impacts are expected to be minimal, because the proposed construction footprint occurs within existing rip-rapped banks and the hardened bottom of the outlet channel from the lake.

E. Cultural Resources – What effect would the proposed action have on cultural resources? This issue will be carried forward for analysis to demonstrate compliance with NHPA and Sec. 106 consultation.

1. Affected Environment: An inventory of the project area revealed no significant cultural resources within the area of the proposed action.

2. Environmental Consequences/Mitigation:

a. Proposed Action:

There would be no direct, indirect, or cumulative effects to cultural resources as a result of the proposed action.

b. No Action Alternative:

There would be no direct, indirect, or cumulative effects to cultural resources as a result of the no action alternative.

F. Migratory Birds – What effect would the proposed action have on migratory birds? This issue will be carried forward for analysis to demonstrate compliance with migratory bird laws and regulations.

Neither the construction of the outlet structure, nor storage and operation of the seasonal releases of water down the Lake Fork are expected to impact migratory birds. Only minimal impacts to riparian habitat are expected, as discussed above under Riparian Areas and Wetlands. No impacts to water quality are expected as discussed above under Water Quality. The proposed action is not expected to result in the take of migratory birds.

G. Threatened, Endangered, and Sensitive Species - What effect would the proposed action have on threatened, endangered, and sensitive species? This issue will be carried forward for analysis to demonstrate compliance with ESA and Sec. 107 consultation.

1. Affected Environment: The proposed action will not require ESA Section 7 consultation to address water depletions that could impact threatened and endangered fishes on the Colorado and Gunnison Rivers. The proposed action is expected to alter the timing of flows in the Lake Fork, but it is not expected to alter the overall annual volume of flows in the Lake Fork. The proposed action will not increase the acreage of the evaporative surface at Lake San Cristobal. By retaining additional water in storage at a high altitude location, the proposed action may slightly decrease evaporative losses on water that would otherwise be stored at Blue Mesa Reservoir.

Of the threatened, endangered, candidate, and sensitive species within the Gunnison Field Office, those that warrant discussion are Canada lynx, Gunnison sage-grouse, and bald eagle. Canada lynx is threatened under the Endangered Species Act. Gunnison sage-grouse is a Candidate species and a BLM sensitive species, while bald eagle is a BLM sensitive species.

Canada lynx
The project area is within the 120,219 acre Lake Fork of the Gunnison Lynx Analysis Unit (LAU). There is mapped lynx habitat scattered along the length of the project area from Lake San Cristobal to the Curecanti Recreation Area on the Lake Fork.

Bald eagle
The length of the project area from Lake San Cristobal to the Curecanti Recreation Area on the Lake Fork is within mapped bald eagle winter concentration corridors. Bald eagles use large cottonwoods and other mature trees to perch during this time.

2. Environmental Consequences/Mitigation: Neither the construction of the outlet structure, nor storage and operation of the seasonal releases of water down the Lake Fork are expected to impact any threatened, endangered, candidate, or sensitive species. Only minimal impacts to riparian habitat are expected, as discussed above under Riparian Areas and Wetlands. No impacts to water quality are expected as discussed above under Water Quality.

H. Recreation/Visuals – What effect would the proposed action, and connected actions, have on the quality of recreational opportunities, particularly of visual resources in the area?

1. Affected Environment: The primary recreation activities at Lake San Cristobal are fishing, boating, and sight-seeing. Along the Lake Fork, the primary activities are fishing, some rafting (limited to certain reaches of the river), and sight-seeing. The Visual Resource Management class for the project area is Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

2. Environmental Consequences/Mitigation:

a. Proposed Action:

The proposed outlet control structure is an Obermeyer Hydro Gate operated by an air-filled bladder to raise the gate through its proposed three-foot operational range. The gate will be controlled through a telemetry system, minimizing the need for on-site control devices. A discharge monitoring weir is proposed downstream of the outlet control structure so accurate measurements of released water can be obtained. The structures are designed to look as natural as possible and to allow continuous release of water from the lake. The dam is designed to hold the lake level at 8,995 feet at all times when water releases are not needed for water supply purposes.

Visual impacts from the proposed construction site are expected to be minimal, because construction will be of short duration, and the entire structure is designed to be as natural-looking as possible. Continuous flow of water over the dam will hide views of the mechanical components necessary to operate the dam. Maintenance of a stable water level around the lake is expected to reduce wave-related turbidity and suspended sediment, improving the visual quality of lake water.

b. No Action Alternative:

No impacts to existing recreation activities or visual resources would be expected.

G. CUMULATIVE IMPACTS SUMMARY:
The proposed action is expected to result in minimal impacts to wetland and riparian communities. Accordingly, it will not exacerbate any existing wetland losses that have occurred with the Gunnison River watershed. It is not expected to result in cumulative effects to the fishery in Lake San Cristobal or on the Lake Fork of the Gunnison River. In most years, the proposed flow reductions during snowmelt runoff and flow increases during low flow months would create minimal changes in fish habitat. During dry years, flow releases during low flow months may markedly benefit fish habitat. The proposed action is expected to reduce cumulative impacts on senior water rights associated with unaugmented, out-of-priority depletions with Hinsdale County and within other areas serviced by the Enterprise.

IV. TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:

The following individuals, organizations, and agencies were sent a scoping letter on February 25, 2011. In addition, there had been ongoing coordination between BLM and the applicant as well as with Colorado Division of Wildlife, the Colorado Water Conservation Board, and the US Army Corps of Engineers. BLM also consulted with the US Federal Energy Regulatory Commission.

GUNNISON COUNTY COMMISSION
HINSDALE COUNTY COMMISSION
UPPER GUNNISON RIVER WATER CONSERVANCY BOARD*
COLORADO WATER CONSERVATION BOARD
US ARMY CORPS OF ENGINEERS
LAKE CITY SILVER WORLD
CITY OF GUNNISON
TOWN OF LAKE CITY
BUCKHORN GEOTECH
COLORADO DIVISION OF WILDLIFE

LYNDA AREND
EDWARD AND REBECCA CAMPBELL
JEFFREY AND CYNTHIA CHADD
PAUL AND PATRICIA ELLIS
DAVID S HAYES, PETROS & WHITE LLC*
LYNDA KNITTEL*
GERRARD AND KATHRYN KOEHN
L & N, INC.
MEJO
HOWARD BERG FAMILY LP
DONALD AND LANONA CAMPBELL
JOHN AND PATSY DANIEL
JON AND DALIA GERRISH
TENA HOLLINGSWORTH
LAKEVIEW ESTATES MGMT ASSOC
STEPHEN AND ADELAIDE MILFORD
M4 MURPHY LLC

DANIEL AND MICHELLE MURPHY	KELLI M MURPHY TRUST
KURT AND SHERI MUSZYNSK	NELSON & NELSON, SPIREK & SPIREK
DIANE AND PAUL OLSON	DANIEL PLIES*
KATHERINE PRIESTER	PRINCE FAMILY TRUST
KATHRYNE RHODES	MARVIN SCHUTZIUS
SCS INVESTMENTS LLC	MICHAEL SCHELL
BRIAN AND TANNAH SNOW	MARTHA AND JOE STEVENS
STEINBECK, ET AL	JIMMY AND LINDA STIRDEVANT
SWANK, ET AL	LUCINDA SZALANKIEWICZ
WHITELOCK MINISTRIES, INC	KENT TAYLOR
RICHARD AND JUDY TINSLEY	BROCK VICKERY AND R WINEBRENNER
TIMOTHY BYERS AND RITA WECHTER	LARRY AND SHEILA WYSS

Parties who provided comments are marked by an asterisk.

V. LIST OF PREPARERS:

Name	Title	Area(s) of Responsibility
Gay Austin	Natural Resource Specialist	Aquatic Wildlife Wetlands and Riparian Areas
Andrew Breibart	Hydrologist	Floodplains Water Quality Hydrology and Water Rights Soils
Brian Brown	Forester	Forestry and Fuels Vegetation Management
Tara de Valois	Rangeland Management Specialist	Invasive, Non-Native Species Upland Vegetation Rangeland Management
Elizabeth Francisco	Archaeologist	Cultural Resources Native American Religious Concerns Paleontology
Tom Fresques	Fisheries Biologist	Aquatic Wildlife
Russell Japuntich	Wildlife Biologist	Migratory Birds Threatened, Endangered and Sensitive Species Terrestrial Wildlife
David Lazorchak	Geologist	Geology and Minerals Hazardous Materials
Marnie Medina	Realty Specialist/NEPA Coordinator	Lands Authorizations NEPA Environmental Justice Prime and Unique Farmlands
Roy Smith	Hydrologist	Aquatic Wildlife Wetlands and Riparian Areas

Sally Thode	Recreation Planner	Water Quality Hydrology and Water Rights Wild and Scenic Rivers Wilderness Access and Transportation Recreation Visual Resources

VI. REFERENCES CITED:

Brauch, Dan. Colorado Parks and Wildlife. "Status of Fisheries in the Lake Fork of the Gunnison", presentation at 2011 Lake Fork Valley Land and Water Workshop. July 22, 2011.

District Court, Water Division 4, Colorado. Finding of Fact, Conclusions of Law, Ruling of the Referee and Decree, Concerning the Application for Water Rights of the Upper Gunnison River Water Conservancy District, Case Number: 03 CW 108. October 13, 2010.

District Court, Water Division 4, Colorado. (Draft) Finding of Fact, Conclusions of Law, and Decree Concerning the Application for Water Rights of the Upper Gunnison River Water Conservancy District, Case Number: 03 CW 108. August 2011.

District Court, Water Division 4, Colorado. (Draft) Stipulation of Upper Gunnison River Water Conservancy District, Lake San Cristobal Water Activity Enterprise, and Daniel L. Plies. August 2011.

Lake San Cristobal Water Activity Enterprise. Draft Wetlands Monitoring Plan – Lake San Cristobal – Lake City, Colorado. May 7, 2010.

Lake San Cristobal Water Activity Enterprise. Preliminary Wetlands Determination – Lake San Cristobal – Lake City, Colorado. 2008.

The Terra Firm. Pre-Construction Notification for Nationwide Permits 5, 7, 13, and 33 for the proposed outlet control structure at Lake San Cristobal near Lake City in Hinsdale County, Colorado. April 22, 2009.

Upper Gunnison River Water Conservancy District (UGRWCD), Hinsdale County, Town of Lake City. Injury With Mitigation Proposal for Lake San Cristobal Outlet Works Enhancement. May, 2010.

APPENDIX A
INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

NUMBER: DOI-BLM-COS060-2011-OO05- EA
PROJECT NAME: Lake San Cristobal Water Storage ROW
DETERMINATION OF STAFF:

NP = not present in the area impacted by the proposed or alternative actions
NA = present, but not affected to a degree that detailed analysis is required
PA = present and requires further analysis because 1) analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) analysis of the issue is necessary to determine the significance of impacts.
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section C of the DNA form.

PHYSICAL RESOURCES			
Air Quality (Clean Air Act)	Determination	Signature	Date
	NA	*Andrew Breibart*	**9/23/2011**
	Rationale for Determination: There may be minimal, short-term, localized impacts to air quality during construction of the outlet structure.		
Aquatic Wildlife (Fisheries)	Determination	Signature	Date
	NA	*Gay Austin*	9/23/2011
	Rationale for Determination: Minimal impacts on fish and fish habitat (see Environmental Consequences/Mitigation section 2b.).		
Geology/Minerals	Determination	Signature	Date
	NA	David Lazorchak	**09/07/2011**
	Rationale for Determination: Neither the proposed action, nor the connected actions will have any effect on geology or minerals.		
Paleontology	Determination	Signature	Date
	NP	*Elizabeth Francisco*	**10/4/11**
	Rationale for Determination: There are no known paleontological resources in the analysis area.		
Soils (includes Public Land Health Standard 1)	Determination	Signature	Date
	NA	*Andrew Breibart*	**9/23/2011**
	Rationale for Determination: There may be minimal, short-term, localized impacts to soil productivity and quality during construction of the outlet structure.		
Floodplains (EO11988)	Determination	Signature	Date
	NA	*Andrew Breibart*	**9/23/2011**
	Rationale for Determination: The proposed action may have minimal impacts to floodplains. Refer to section III.A of the EA for more discussion of impacts to flows.		
Water Quality	Determination	Signature	Date

(drinking/ground) (Clean Water Act and others) **(includes Public Land Health Standard 5)**	**PA**	*Andrew Breibart*	**9/23/2011**
	Rationale for Determination: See section III.C of the EA.		
BIOLOGICAL RESOURCES			
Fire and Fuels Management	Determination	Signature	Date
	NA	*Brian Brown*	**9/29/2011**
	Rationale for Determination: The proposed action will have no effect on fire and fuels management.		
Invasive, Non-native Species (Federal Noxious Weed Act and EO 13112)	Determination	Signature	Date
	NA	*Tara de Valois*	**9/15/11**
	Rationale for Determination: The proposed action will have no effect on invasive, non-native weed species.		
Forest Vegetation (includes Public Land Health Standard 3)	Determination	Signature	Date
	NA	*Brian Brown*	**9/29/2011**
	Rationale for Determination: The proposed action will have no effect on forest vegetation.		
Upland Vegetation (includes Public Land Health Standard 3)	Determination	Signature	Date
	NA	*Tara de Valois*	**9/15/11**
	Rationale for Determination: The proposed action will have no effect on upland vegetation.		
Threatened, Endangered, Candidate (ESA), **and/or Sensitive Plant Species (includes Public Land Health Standard 4)**	Determination	Signature	Date
	NP	*Russell Japuntich*	**9/7/11**
	Rationale for Determination: There are no special status plant species in the analysis area.		
Riparian Zones and Wetlands (EO 11990) **(includes Public Land Health Standard 2)**	Determination	Signature	Date
	PA	*Gay Austin*	**9/23/11**
	Rationale for Determination: See section III.A of the EA.		
Wildlife (includes Public Land Health Standard 3)	Determination	Signature	Date
	NA/PA	*Russell Japuntich*	**9/7/11**
	Rationale for Determination: The proposed action will have no effect on terrestrial wildlife. See section III.B of the EA for an analysis of effects to fisheries.		
Migratory Birds (EO 13186 and Migratory Bird Treaty Act)	Determination	Signature	Date
	PA	*Russell Japuntich*	**9/7/11**
	Rationale for Determination: See section III.F of the EA. This issue is also carried forward for		

<table>
<tr><td></td><td colspan="3">analysis to demonstrate compliance with migratory bird laws and regulations.</td></tr>
<tr><td rowspan="3">Threatened, Endangered, Candidate (ESA), and/or Sensitive Animal Species (includes Public Land Health Standard 4)</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>PA</td><td>Russell Japuntich</td><td>9/7/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
See section III.G of the EA. This issue is also carried forward for analysis to demonstrate compliance with ESA and Sec. 107 consultation.</td></tr>
<tr><td colspan="4">HERITAGE RESOURCES and HUMAN ENVIRONMENT</td></tr>
<tr><td rowspan="3">Cultural Resources (National Historic Preservation Act)</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NP/PA</td><td>Elizabeth Francisco</td><td>10/4/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
There are no significant cultural resources in the project area. This issue is carried forward for analysis to demonstrate compliance with NHPA and Sec. 106 consultation (see section III.E of the EA).</td></tr>
<tr><td rowspan="3">Environmental Justice (EO 12898)</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NA</td><td>Marnie Medina</td><td>9/12/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
The proposed action has no disproportionate impact on any racial, ethnic, or socioeconomic group.</td></tr>
<tr><td rowspan="3">Native American Religious Concerns (American Indian Religious Freedom Act)</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NP</td><td>Elizabeth Francisco</td><td>10/4/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
No Native American religious concerns have been identified in the project area.</td></tr>
<tr><td rowspan="3">Socio-economics</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NA</td><td>Marnie Medina</td><td>9/12/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
The proposed action will have no effect on socio-economics. The connected actions of storing and selling water for augmentation will likely have a positive impact to socio-economics of the Town of Lake City, Hinsdale County, and the Upper Gunnison River Water Conservancy District and the citizens in those areas.</td></tr>
<tr><td rowspan="3">Visual Resources</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NA</td><td>Kristi Murphy</td><td>9/12/11</td></tr>
<tr><td colspan="3">Rationale for Determination:
See section III.F of the EA.</td></tr>
<tr><td rowspan="3">Wastes (hazardous or solid) (RCRA and CERCLA)</td><td>Determination</td><td>Signature</td><td>Date</td></tr>
<tr><td>NP</td><td>David Lazorchak</td><td>09/07/2011</td></tr>
<tr><td colspan="3">Rationale for Determination:
There were no hazardous or solid wastes identified on public land in the project area and no such wastes will be generated by the proposed action.</td></tr>
</table>

LAND USES and SPECIAL DESIGNATIONS			
Areas of Critical Environmental Concern (FLPMA)	Determination	Signature	Date
	NP	*Marnie Medina*	**9/12/11**
	Rationale for Determination: There are no designated ACEC's in the analysis area.		
Farmlands (Prime or Unique) (SMCRA and Farmland Protection Policy Act)	Determination	Signature	Date
	NP	*Marnie Medina*	**9/12/11**
	Rationale for Determination: There are no prime or unique farmlands in the analysis area. The District Conservationist for the NRCS has determined that in Gunnison County there are only "Farmlands of Statewide Importance", and only lands that are under irrigation fall into that category within the Important Farmland Inventory for the State of Colorado. There are no irrigated lands on public land in the analysis area.		
Lands/Realty Authorizations	Determination	Signature	Date
	NA	*Marnie Medina*	**9/12/11**
	Rationale for Determination: The proposed action will have no effect on lands authorizations in the area.		
Rangeland Management	Determination	Signature	Date
	NA	*Tara de Valois*	**9/15/11**
	Rationale for Determination: The proposed action will have no effect on rangeland management in the analysis area.		
Recreation	Determination	Signature	Date
	PA	***Kristi Murphy***	**9/12/11**
	Rationale for Determination: See section III.F of the EA.		
Access and Transportation	Determination	Signature	Date
	NA	***Kristi Murphy***	**9/12/11**
	Rationale for Determination: The proposed action will have no effect on access and transportation.		
Wild and Scenic Rivers (Wild and Scenic Rivers Act)	Determination	Signature	Date
	NP	***Kristi Murphy***	**9/12/11**
	Rationale for Determination: There are no designated Wild or Scenic Rivers in the analysis area.		
Wilderness (FLPMA and Wilderness Act)	Determination	Signature	Date
	NP	***Kristi Murphy***	**9/12/11**
	Rationale for Determination: There are no designated Wilderness Areas in the analysis area.		

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
NEPA Coordinator	Marnie Medina	10/4/11	
Field Manager		10/5/11	

U.S. Department of the Interior
Bureau of Land Management
Gunnison Field Office
DOI-BLM-COS060-2011-OO05-EA

FONSI
FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the referenced environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the action will not have a significant effect on the human environment. Therefore, preparation of an environmental impact statement is not necessary.

RATIONALE:

Context:

The Proposed Action is to grant a right-of-way for inundation of public lands along the shore of Lake San Cristobal, due to water storage, in Hinsdale County, Colorado. The ROW area includes the following lands:

NMPM, T.43N., R.4W., sec. 15, lot 24;
sec. 22, lots 5, 8, 17.

The proposed ROW area includes 1.162 acres of public land.

Intensity:

The Council on Environmental Quality (CEQ) regulations include the following ten considerations for evaluating intensity (40 CFR 1508.27):

Impacts that may be both beneficial and adverse:
None of the environmental effects discussed in detail in the EA are considered significant, nor do the effects exceed any known threshold of significance, either beneficial or adverse.

Public health and safety:
The proposed action is to grant a ROW authorizing inundation of public land. It would essentially authorize an activity that has been historically occurring over the past 60 or more years. Construction of the outlet structure, which is outside the authority of BLM, will be permitted by the State of Colorado Engineer's Office according to the State's "Rules and Regulations for Dam Safety and Dam Construction".

Unique characteristics of the geographic area:
There are no prime or unique farmlands, wild or scenic rivers, designated wilderness or wilderness study areas, or areas of critical environmental concern in the analysis area. The area does not include any known cultural resources.

Degree to which effects are likely to be highly controversial:
Effects of the proposed action are not controversial. Since the proposed action is essentially a continuation of an historical water management practice, the effects are generally predictable. In addition, the CWCB and Colorado Parks and Wildlife extensively evaluated the effects in coordination with BLM, and there is general agreement on those effects.

Degree to which effects are highly uncertain or involve unique or unknown risks:
For the same reasons discussed above, the effects are not uncertain and do not involve unique or unknown risks. Since the proposed action is essentially a continuation of an historical water management practice, the effects are generally predictable.

Consideration of whether the action may establish a precedent for future actions with significant impacts:
The grant of a right-of-way will not create a precedent for future actions with significant effects nor does is it represent a decision in principle about a future consideration. The Gunnison Resource Area Resource Management Plan (as amended by the Record of Decision for Geothermal Leasing in the Western United States, December 2008) allocated much of the Gunnison Field Office as open for ROW's, subject to existing laws, regulations, and stipulations attached to the ROW grant.

Consideration of whether the action is related to other actions with cumulatively significant impacts:
As the analysis in the EA describes, the actions related to the proposed action will not have cumulatively significant impacts.

Scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places:
As described in the EA, there are no known cultural or historical resources in the project area.

Threatened or endangered species and their critical habitat:
As described in the EA, neither the construction of the outlet structure, nor storage and operation of the seasonal releases of water down the Lake Fork are expected to impact any threatened, endangered, candidate, or sensitive species.

Any effects that threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment: *This factor will often overlap with other factors: for example, violations of the Clean Water Act or Clean Air Act would usually involve effects that would adversely affect public health and safety.*
As described in the EA, neither the Proposed Action nor related actions will violate any known Federal, State, or local law or requirement imposed for protection of the environment.

ROW Grant Stipulations COC-74815

1. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

2. Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

3. The holder shall be responsible for weed control within the limits of the right-of-way. The holder shall be responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods.

4. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. The plan should be submitted no later than December 1 of any calendar year to cover the proposed activities for the next fiscal year. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.

5. No burning of trash, litter, trees, brush or other vegetative material generated by clearing the site shall be allowed under this permit.

6. The holder shall comply with applicable State standards for public health and safety, environmental protection and siting, construction, operation and maintenance, if these State standards are more stringent than Federal standards for similar projects.

7. The holder of this permit or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of Interior issued pursuant thereto.

8. The holder shall conduct all activities associated with the operation, maintenance and termination of the right-of-way within the authorized limits of the right-of-way. The holder shall, to the extent feasible, preserve plant life and other natural features within the right-of-

way.

9. No construction activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment created ruts in excess of 3 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

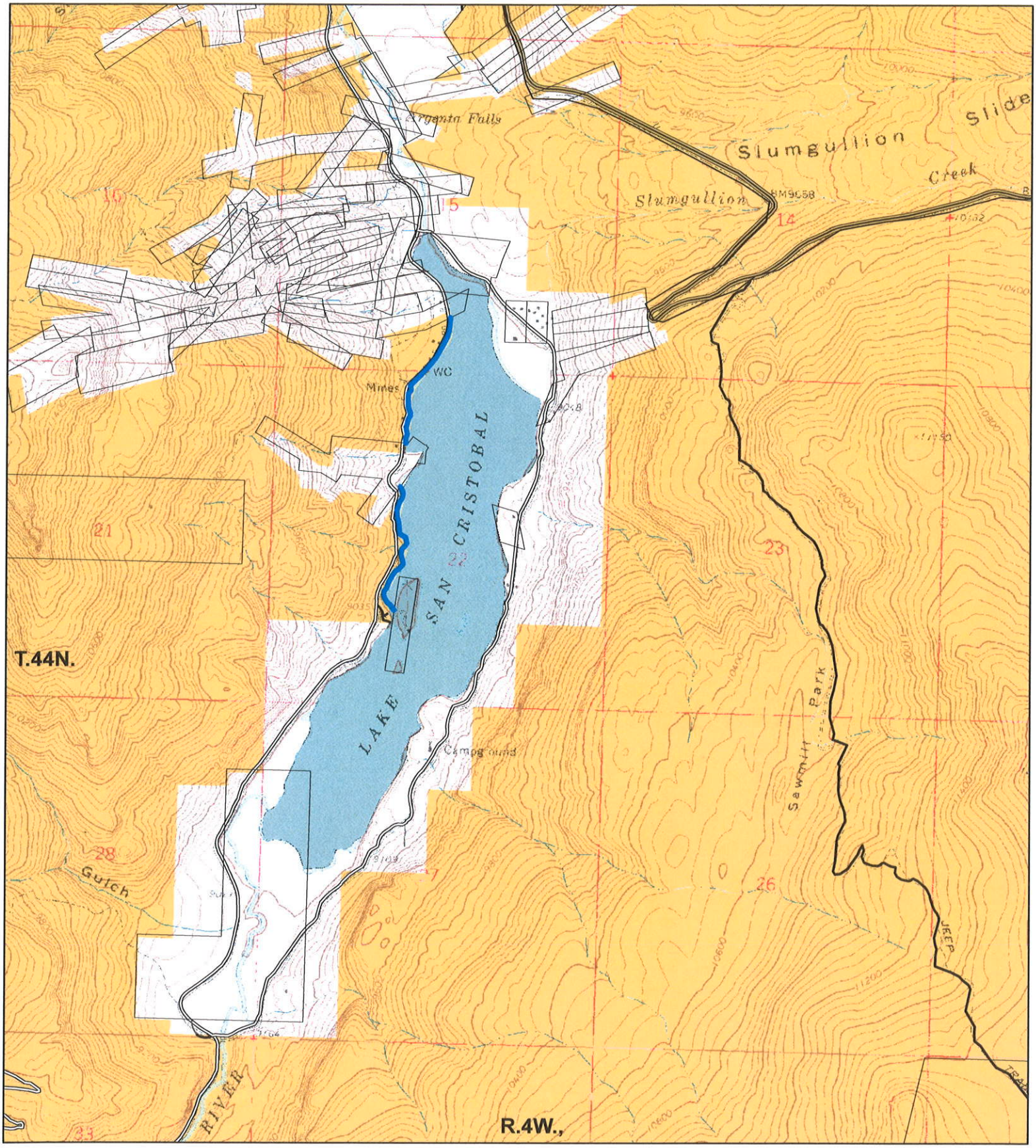
10. Prior to moving any construction equipment to the right-of-way for any construction or maintenance activities, the Holder shall remove all dirt and vegetative debris that may contain any weed seeds by thoroughly washing construction equipment with a suitable power washer.

11. The holder shall revegetate all disturbed areas using a seed mixture specified by the authorized officer. Seeding shall not be initiated prior to October 1 of the year of completion of the construction activities and shall be completed prior to the following growing season. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)/acre. There shall be **no** primary or secondary noxious weed seed in the seed mixture. Seed shall be **certified** seed; exceptions to this requirement must be approved in writing by the authorized officer. The seed mixture container shall be tagged in accordance with State law(s) and the tag(s) submitted for inspection by the authorized officer. Seeding shall be repeated if a satisfactory stand is not obtained as determined by the authorized officer upon evaluation after the second growing season.

12. The authorized officer may suspend or terminate in whole or in part any operation or maintenance activities when, in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

13. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the plans of development which were approved and made part of the grant, including:
    a) March 2009 Draft Plan of Development;
    b) May 7, 2010 Draft Wetland Monitoring Plan;
    c) District Court, Water Division 4 Stipulation of Upper Gunnison River Water Conservancy District, Lake San Cristobal Water Activity Enterprise, and Daniel L. Plies; and,
    d) District Court, Water Division 4, Case Number 03CW108, Findings of Fact, Conclusions of Law, and Decree.

    Any relocation, additional construction, or use that is not in accord with the approved plan(s) of development, shall not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations and approved plan(s) of development, shall be made available on the right-of-way area during construction, operation, and termination. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.



COC-74815

Land Ownership

Bureau of Land Management

Private

N

0.25 0.125 0 0.25 0.5 0.75 1 Miles

1:24000

M.Medina 10/4/11

BUCKHORN GEOTECH
Civil, Structural & Geotechnical Engineers
222 So. Park Ave., Monte Vista, CO 81144
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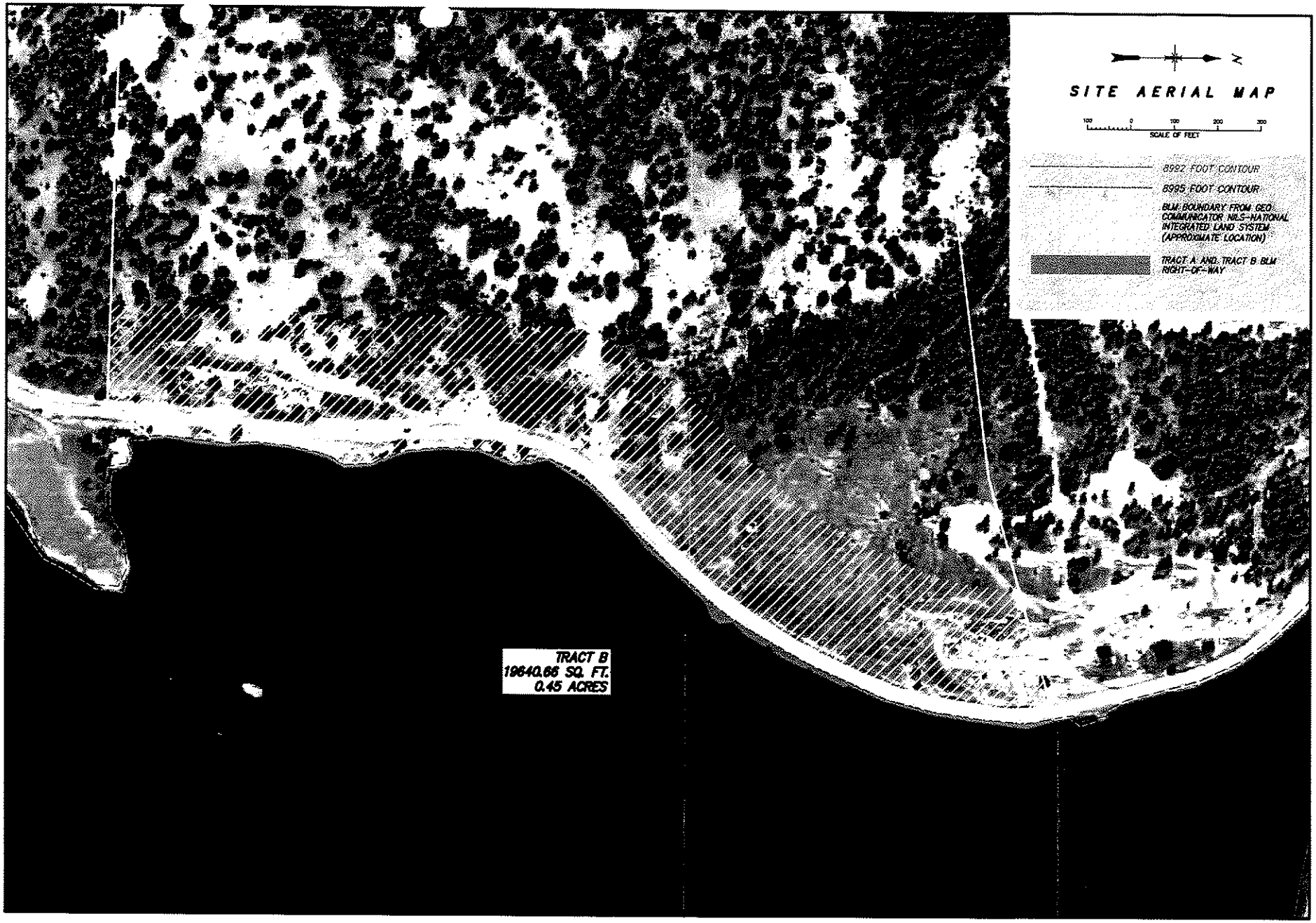
DATE
REVISIONS

LAKE SAN CRISTOBAL, OUTLET PROJECT
LOCATE IN SECTIONS 15, 22 & 27, T.43N., R.4W., N.M.P.M.
BLM TRACT A RIGHT-OF-WAY

DESIGNED DCD
DRAWN DJP
DATE 01.28.09
PROJ. NO. 08-101CV
DRAWING NUMBER
EX-A
OF SHEETS



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DATE

REVISIONS

LAKE SAN CRISTOBAL, OUTLET PROJECT
LOCATE IN SECTIONS 15, 22 & 27, T.43N., R.4W., N.M.P.M.
BLM TRACT B RIGHT-OF-WAY

DESIGNED	DCO
DRAWN	DJP
DATE	01.26.09
PROJ. NO.	08-101CIV

DRAWING NUMBER
EX-B
OF DWGS.