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September 16, 2008

Mr. Frank Kugel – General Manager Upper Gunnison River Water Conservancy District P.O. Box 1330 Gunnison, CO 81230

Subject: Water Right Yield and Marketable Yield Analysis for a Potential Lake San Cristobal Enlargement

This letter outlines the results of my engineering investigation to analyze the reconfiguration of the Lake San Cristobal outlet works which could result in approximately 1,000 acre-feet of regulated storage ("Lake San Cristobal project"). The exact amount of storage available from the Lake San Cristobal project is not known at this time because the design of the outlet works is currently being finalized. For the purpose of this study I did the yield analysis using a storage size of 1,000 acre-feet. If the final project configuration is a smaller storage size, then the results of this study can be scaled downward by a proportional amount.

This study consisted of two parts. The first part was the estimation of the firm yield associated with 1,000 acre-feet of regulated storage in Lake San Cristobal. The firm yield analysis will also be used to support the water court application for Lake San Cristobal in Case No. 2003CW108. The water court application is shown in Attachment A.

The second part of the investigation was the marketable yield of water that would be stored in Lake San Cristobal under the proposed project. The primary purpose of the second portion of the investigation was to determine the current and future market for water impounded by the Lake San Cristobal project.

The location of Lake San Cristobal in relation to other major hydrologic features in the Gunnison Basin is shown in Figure 1. Lake San Cristobal is located in Hinsdale County approximately 3 miles south of Lake City as shown on shown in Figure 2. The Lake surface area is approximately 340 acres at an elevation of 8,995 feet. The Lake was created about 700 years ago when the Slumgullion Landslide blocked a portion of the Lake Fork of the Gunnison forming a natural Lake that contains approximately 11,500 ac-ft of storage (URS, April 2004).

Proposed Lake San Cristobal Operation

This study is part of an overall investigation to examine the feasibility of constructing a new permanent control structure at the outlet of Lake San Cristobal. This control structure would serve to regulate the Lake level, provide release of water from the Lake for augmentation purposes, and reduce the risk of failure of the Lake outlet structure during flood events. The

water regulated from this project will be used for augmentation purposes with 1/3 of the water for the Town of Lake City, 1/3 for Hinsdale County, and 1/3 for the Upper Gunnison River Water Conservancy District (UGRWCD). The UGRWCD boundaries generally encompass the portion of the Upper Gunnison drainage basin that is tributary to Blue Mesa Reservoir with a total area of approximately 3,450 square miles.

Lake San Cristobal elevation has been actively regulated by Hinsdale County to maintain the Lake at an elevation of approximately 8,995 feet in the summer and allow the Lake level to gradually lower to an elevation of approximately 8,992 feet during the winter in preparation for the spring runoff. In 1954, Hinsdale County constructed a rock and timber dam at the outlet of the Lake to raise the natural Lake level and sustain it through summer and early fall. When the timber structure began to deteriorate in the 1970s, the Hinsdale County Road and Bridge Department initiated the practice of supplementing the structure each year by placing boulders at the Lake outlet after the end of the runoff season. These boulders are placed to maintain the Lake level at an elevation of approximately 8,995 feet. The Lake level gradually decreases due to less inflow until it reaches an elevation of approximately 8,992 feet sometime in early winter. The boulders are removed in early spring. As the runoff increases in the spring, the Lake rises to an elevation of approximately 8,995 feet to create a surcharge at the outlet to pass the Lake inflow. As the runoff starts to fall off in early summer the Lake level decreases due to the reduced amount of surcharge water required on the outlet to pass the inflow in the Lake. After the runoff has decreased Hinsdale County starts the annual cycle again by placing boulders in the outlet works to maintain the Lake at an elevation of approximately 8,995 feet.

Proposed future operations of the Lake San Cristobal project will be very similar to historical operations. Starting the annual cycle in the spring, the Lake will be at an elevation of approximately 8,992 feet. As the runoff season starts, the outlet control structure will be operated to gradually increase the elevation of the reservoir to approximately 8,995 feet by the end of the runoff season in late May or early June. In most years, the Lake will be held at an elevation of approximately 8,995 feet through the summer and early fall.

One advantage of having a controllable structure at the Lake Outlet during the summer monsoon season will be the ability to more fully regulate Lake levels. If the inflow to the Lake increases due to heavy precipitation events, then the outlet structure will release the additional inflow while maintaining the Lake at the level prior to the precipitation event. Under the current operations, a heavy rainfall event can cause the Lake levels to rise to create a larger surcharge on the outlet to pass the water. Under these conditions there is the danger that the boulders placed in the outlet works could wash out, causing the potential for a surge of water downstream and resultant flooding. In late fall, Lake operations would gradually release water until the reservoir is drawn down to approximately 8,992 feet in preparation for the spring runoff.

By having a control structure at the outlet, the water being released from storage is fully regulated and can be used to augment depletions by water rights that might be called out by

downstream senior water rights. In dry years like 2002 and 2003, it would be possible that any water right junior to 1905 or 1911 would be called out for approximately 10 or 11 months. For example, the Town of Lake City water rights would be called out under these circumstances. If the Lake San Cristobal project was completed, these water rights would be able to continue to divert because of the augmentation water released from Lake San Cristobal.

In summary, it is my opinion that that the proposed operation of 1,000 acre-feet of storage in Lake San Cristobal will not be significantly different from historical operations. In extremely dry years during the summer and late fall the Lake will probably be drawn slightly farther than historical levels due to augmentation releases. In extremely dry years during the summer and late fall the Lake will probably be drawn slightly farther than historical levels due to augmentation releases. In extremely dry years during the summer and late fall the Lake will probably be drawn slightly farther than historical levels due to augmentation releases. In extremely dry years during the summer and late fall the Lake will probably be drawn slightly farther than historical levels due to augmentation releases. This means that there will not be a change in lake evaporation due to the proposed Lake operations and that no lake evaporation is owed as the result of the proposed Lake operations.

Firm Yield Analysis

For the purpose of this analysis, the firm yield is the amount of water that can be released every year including extremely dry years like those that occurred in 2002 and 2003. The firm yield is influenced by the physical inflow to Lake San Cristobal and the effect of the call from downstream water rights. Figure 3 shows a line diagram that illustrates the major water rights on the Lake Fork and the location of key streamflow gages.

The following steps were used to estimate the physical stream inflow to Lake San Cristobal:

- There is no current active stream gage to measure the inflow to Lake San Cristobal. Therefore the inflow needs to be estimated from nearby stream gage records. The drainage area upstream of the Lake San Cristobal outlet is 106 square miles.
- The United States Geological Survey ("USGS") Lake Fork at Lake City streamflow gage (USGS gage number 09123599) was maintained from 1919-1924 and from 1932-1937. The drainage area of this gage is 115 square miles and the average flow for the period of record was approximately 82,700 acre-feet per year.
- 3. The USGS Lake Fork at Gateview streamflow gage (USGS gage number 09124500) has data available from 1938 to the present. The drainage area of this gage is 334 square miles and the average flow for the 1938-2007 is approximately 169,300 acre-feet per year. The USGS records indicate that the Lake Fork Gateview gage is influenced by the irrigation of approximately 1,600 acres upstream of the gage. These irrigation depletions are estimated to have a negligible effect on this study.
- 4. The drainage area upstream of Lake San Cristobal is approximately 32% (106/334) of the drainage area upstream of the Lake Fork at Gateview gage. Using the ratio of the drainage areas would underestimate the inflow to Lake San Cristobal because the

drainage area ratio assumes that the runoff per square mile is the same throughout the basin. The runoff from the higher elevation areas upstream of Lake San Cristobal is clearly greater than the runoff from the lower elevation downstream of Lake City.

- 5. The Lake Fork at Gateview gage and Lake Fork at Lake City gage do not have an overlapping period of record to do a regression analysis to estimate the streamflow at the Lake Fork at Lake City streamflow gage.
- 6. The ratio of the historical gaged records for the flows at the Gateview Gage and the gaged flow for the Lake Fork at Lake City is 0.49 (82,700/169,300). This ratio needs to be reduced by a factor of .92 to account for the period of record at the Lake Fork at Lake City gage being wetter than the 1938-2007 period. The .92 factor was determined by comparing the runoff for the Gunnison River near Grand Junction (USGS gage number 09152500) for the periods of 1919-1924 and 1932-1937 to the runoff for the period 1938-2007. The Gunnison River near Grand Junction is one of the few gages in the basin with a continuous period of record from 1919-2007 and is a reasonable gage to use for the purpose of comparing hydrologic periods.
- 7. The result of the above analysis resulted in the estimated daily inflow to Lake San Cristobal being 41% of the streamflow recorded for the Lake Fork at Gateview Gage. The 41% was derived by multiplying the ratio of the long term runoff times the factor to adjust for different hydrologic conditions in the different study periods and then multiplied by a factor to account for the difference in drainage area between Lake San Cristobal and the drainage area above the Lake Fork at Lake City. This calculation is 0.41 = (82,700/ 169,300) x 0.92 x (106/115). It should be noted that Mr. Frank Kugel, former Division Engineer, estimated from his experience and engineering judgment that the inflow to Lake San Cristobal was approximately 40% of the streamflow at the Lake Fork at Gateview gage.

Attachment B presents the monthly stream flow records used to estimate the physical inflow to Lake San Cristobal. Once the physical inflow to Lake San Cristobal was quantified, the amount of inflow that would be called through by downstream senior water rights was analyzed. All inflow to Lake San Cristobal is not available for storage. A portion of the water must be passed to downstream senior water rights such as the Gunnison Tunnel, Redlands Power Plant, and CWCB instream flow water rights on the Lake Fork during periods of a call.

The Colorado Water Conservation Board ("CWCB") holds two instream flow water rights that affect the yield to Lake San Cristobal. Only the portion of the streamflow that exceed the instream flow rights would be available for storage in Lake San Cristobal. The following table summarizes the two instream flow water rights that have a direct affect on this analysis:

	Reach Length	May 1 to Sept 30 flow (cfs)	Oct 1 to April 30 flow	Appropriation Date
Stream Reach of the Lake Fork	(miles)		(CIS)	
Confluence of Cottonwood Creek to the Confluence with Henson Creek	16.3	35	20	12/31/1980
Confluence of Henson Creek to Blue Mesa Reservoir	30.5	45	25	12/31/1980

To estimate the firm yield a study period of 1975-2007 was utilized. This represents a period with average, wet and dry years and is generally reflective of the conditions since the Aspinall Unit was constructed. Because streamflows can vary significantly over a month, a daily analysis was utilized to estimate the firm yield for the proposed Lake San Cristobal project using the following procedure:

- 1. The physical inflow to Lake San Cristobal was estimated using the procedure described previously.
- 2. The firm yield analysis for the purpose of this study limited the storage season for the proposed Lake San Cristobal Project to the three month storage season of April through June. Typically this is when water would be available in priority and is similar to the historical operations of the reservoir.
- 3. The available streamflow for storage in Lake San Cristobal was limited to the portion of the streamflow that is greater than the CWCB instream flow right for the reach of the Lake Fork from Lake San Cristobal down to the confluence with Henson Creek. This instream flow right is 35 cfs May 1 to September 30 and 20 cfs from October 1 to April 30.
- 4. The water available for storage in the Lake San Cristobal project was further limited to the streamflows greater than the CWCB instream flow for the reach on the Lake Fork from the confluence of Henson Creek to Blue Mesa Reservoir. This instream flow right is 45 cfs May 1 to September 30 and 30 cfs from October 1 to April 30. From interviews with Mr. Carl Hurst, former Water Commissioner for the Lake Fork, and Mr. Frank Kugel, current manager of the UGRWCD and former Division Engineer, the critical location for the instream flow in this reach is at the Lake Fork at Gateview gage. If the relatively junior instream flow is satisfied at the Lake Fork at Gateview gage, then the senior upstream irrigation surface water rights will also be satisfied.
- 5. Lake San Cristobal cannot store water under its proposed water right until the Gunnison Tunnel 1905 water right is satisfied. Since 1975, the Gunnison Tunnel only formally placed a call in 2002 and 2003. However in other years, the Gunnison Tunnel could have placed a call. Historically, the Gunnison Tunnel used releases from its Taylor Park Reservoir storage account to meet any shortage and did not place a call except in 2002 and 2003. For the purposes of this analysis, the historical 2002 and 2003 call records

were used and for other years it was assumed that the Gunnison Tunnel would have placed a call anytime the flow available to its water rights were not sufficient to meet the Gunnison Tunnel demand.

6. The Redlands Power Canal has two water rights (1911 and 1944) totaling 750 cfs that would be senior to the water rights associated with the proposed Lake San Cristobal project. In the recent extreme dry years of 2002 and 2003 the Redlands water rights would not have been the controlling factor on the ability to store water in Lake San Cristobal. From analysis of historical records, there were times that the flow available to the Redlands was less than 750 cfs, but these were times when the instream flow water rights on the Lake Fork were not satisfied.

The above limiting factors were determined each day in the 1975-2007 period. Figure 4 presents a graphical representation of the analysis for 2002, which is the driest year on record. Figure 5 presents the analysis for 2004, which is a below average runoff year. The procedure and limits outlined above are summarized in Figure 6. Figure 7 presents the estimated storable inflow to Lake San Cristobal summarized on an annual basis.

As shown in Figures 4 through 7, the water available for this project in every year exceeds the potential storage space of approximately 1,000 acre-feet in Lake San Cristobal. The average annual potential storable inflow is over 33,000 acre-feet per year and the yield for the driest year on record is 4,400 acre-feet per year. It is my opinion that the firm yield to a potential Lake San Cristobal project storage with 1,000 acre-feet of re-regulated storage would be 1,000 acre-feet per year. If the project is smaller than the 1,000 acre-feet used in this analysis then the firm yield will be the size of the project.

There are several water right issues that could affect the firm yield of the proposed Lake San Cristobal project. I consulted with John McClow, General Counsel for the Upper Gunnison River Water Conservancy District, and Frank Kugel, General Manager for the UGRWCD on how to address each of the following issues:

- The CWCB holds a natural lake level water right for Lake San Cristobal decreed in Case No. W-3366 (May 12, 1976 priority date). A copy of this decree is included as Attachment C. Mr. McClow advised me that in his opinion the parties can reach a mutual agreement that would allow the Lake San Cristobal project to proceed and that the procedures I used in the firm yield analysis are consistent with the potential agreement.
- 2. The Crooke's Falls hydro-electric plant is located approximately 2 miles downstream of Lake San Cristobal on the southern outskirts of Lake City. The hydro plant has a water right for 450 cfs of which 121 cfs is absolute and 329 cfs is conditional. The water right is decreed for hydropower purposes with a March 15, 1983 appropriation date. Mr. McClow advised me to perform my yield analysis under the assumption that some type

of an agreement would be reached with the water right holder to prevent this water right from affecting the yield of the potential Lake San Cristobal project.

- The Lake San Cristobal water right applied for in Case No. 2003CW108 would be junior to the Aspinall Unit water rights and to the Black Canyon water right. However, the Lake San Cristobal depletions would be protected under the terms of the Aspinall Subordination Agreement dated June 1, 2000.
- 4. The ability of Lake San Cristobal to augment out-of-priority depletions upstream of Lake San Cristobal and on Henson Creek could be affected by the CWCB instream flow water rights. Mr. McClow advised me that the UGRWCD and the CWCB are currently working on an agreement to address this issue.

The Division Engineer will probably administer transit losses on releases of water from Lake San Cristobal for augmentation purposes. The amount of the transit loss is not known at this time but typically the transit loss is approximately 0.1% per mile for a stream like the Lake Fork. Using the 0.1% per mile, the losses on augmentation water delivered to Blue Mesa would be approximately 3%.

Marketable Yield Analysis

The marketable yield analysis has evolved since this project was initiated. Originally I believed that the market demand and the cost of the water would need to be analyzed to identify individual users. However, after extensive work, Mr. Ralph Grover was able to craft a very straightforward solution to the problem by working with representatives of the UGRWCD, Hinsdale County and the Town of Lake City. In principle, the three entities agreed to split the yield and the cost of the project 1/3 to each entity as outlined in the letters and included in Attachment D.

The Lake San Cristobal water would be available for augmentation for only a portion of the UGRWCD service area. This area would generally be on the Gunnison mainstem downstream of Almont and some of the side tributaries in this reach including the Lake Fork. However, on a side tributary such as Tomichi Creek, the Lake San Cristobal water could not be used due to senior water rights calls. The Lake San Cristobal water could be used essentially in the same way that augmentation water is currently being utilized or sold out of Blue Mesa.

The UGRWCD entered into a long-term water service contract with the United States Department of the Interior, Bureau of Reclamation, ("Bureau") for the release of augmentation water from Blue Mesa Reservoir to replace out-of-priority depletions in the UGRWCD service area. The contract with the Bureau is for a total of 500 acre-feet per year for 40 years with the contract starting April 1, 2004. The UGRWCD must pay the United States annually for the water resold to persons covered by the UGRWCD's plan for augmentation and that cost is passed through to purchasers. The payment rate for this water is adjusted annually by the Bureau. The 2008 rate is \$69.60 per acre-foot per year. As of July 2008, the UGRWCD has

resold a total of 191 acre-feet per year from the Blue Mesa Reservoir contract pool. This water is relatively inexpensive for augmentation water; however, the source is not a permanent augmentation supply. The Bureau of Reclamation may or may not renew the contract when it expires.

A public meeting was held on October 31, 2007 in Lake City to discuss the potential Lake San Cristobal project and the need for augmentation water. The public was generally supportive of the project. Mr. Don Booher wrote a letter-of-intent to purchase 10 to 20 acre-feet from the Lake San Cristobal project if it was developed. A copy of this letter is included in Attachment D.

Mr. Grover worked with Hinsdale County and Town of Lake City officials to estimate the potential need for future augmentation water in the portion of Hinsdale County that lies within the Lake Fork drainage basin. The study is shown in Attachment E. The net result of this study is that the portion of Hinsdale County in the Lake Fork drainage could potentially need up to 1,099 acre-feet per year for future augmentation needs. This figure probably represents the upper limit of augmentation needs due to the assumption of approximately 5,000 square feet of outdoor landscape for future home sites and that all potential home sites will be developed.

In the report "Subordination of the Wayne N. Aspinall Unit Water Rights within the Upper Gunnison Basin – 2006 Annual Report", dated December 21, 2007 it was reported that in 2006 the Town of Lake City diverted 1,045 acre-feet and consumed 361 acre-feet under four water rights with priorities dates of 1967, 1972, 1975 and 1999. All of these diversions were under water rights junior to the Aspinall Unit and would need to be augmented if there is a call by a senior downstream water right. The unusually high diversion rates by the Town of Lake City will probably decrease somewhat as the Town addresses issues with high rates of leakage in its distribution system.

The Colorado Department of Local Affairs State Demography Office reports the historical and projected populations for Hinsdale County and Gunnison County as follows:

County	1085	1005	2005	Projected	Projected	Percent Growth
County	1900	1990	2003	2030	Annual Glowin	2003 10 2030
Gunnison County	10,390	11,788	14,226	19,682	1.15%	38%
Hinsdale County	472	623	765	1,250	1.54%	64%

The State Water Supply Initiative ("SWSI") published a report dated August 6, 2004 that projected future water demands by county. A summary from the SWSI report for the projected demands for Municipal, Industrial and other non-agricultural demand (in units of acre-feet per year) is summarized in the following table:

County	2005	Projected 2030	2005-2030 Change
Gunnison County	3,305	4,647	1,342
Hinsdale County	192	295	103

The SWSI investigation published another report in November of 2007 that estimated the demand shortfall in 2030 to be 1,100 acre-feet per year for Gunnison County and 100 acre-feet per year for Hinsdale County. The population projections and the SWSI demand projections indicate a need for future augmentation water supplies in Hinsdale County and Gunnison County.

Conclusion

The firm yield of the Lake San Cristobal project is 1,000 acre-feet per year for a 1,000 acre-foot operating pool. The full firm yield is available even in the driest year of record (2002). This is one of the few reservoir projects in the State of Colorado where the yield of the reservoir equals the storage space of the reservoir.

A preliminary design and construction cost to improve the outlets works at Lake San Cristobal was developed in an April 2004 report by URS Corporation. The preliminary conceptual cost for this alternative was \$960,000 or about \$940 per acre-foot of storage. Buckhorn Engineering is currently under contract to refine the initial design and cost estimates. The price for augmentation water varies a great deal throughout the State of Colorado, but augmentation water sold in small quantities will typically be in the \$10,000 to \$50,000 per acre-foot price range making the potential Lake San Cristobal project an economically attractive project to meet augmentation demands.

The UGRWCD, the Town of Lake City, and Hinsdale County have agreed in principle to share the cost and yield of the project in equal portions between the three entities. Given the estimate of the firm yield of the reservoir outlined in this report and the relatively low cost to develop the Lake San Cristobal project, it is my opinion that the project is a feasible project.

The information that I relied upon in this analysis and forming my opinions are listed in Attachment F.

Slattery Aqua Engineering, LLC

amore E. Slattery

James E. Slattery, P.E.







Figure 4 Lake Fork Streamflow Conditions for driest year on record (2002)



Figure 5 Lake Fork Streamflow Conditions for below average year in 2004 (80% of average)



Figure 6 Lake San Cristobal Storable Inflow



Note: The CWCB Instream Flow Right for the Lake Fork from Lake San Cristobal to Lake City is 20 cfs October 1 to April 30, 35 cfs May 1 to September 30. The CWCB Instream Flow Right for the Lake Fork from Lake City to Blue Mesa is 25 cfs October 1 to April 30, 45 cfs May 1 to September 30)



Figure 7 Estimated Inflow to Lake San Cristobal Available for Storage

	Attachr Water Right Application Case No. 20	nent A for Lake San Cristobal 003CW108	
DISTRICT WATER D 1200 N. Gr Montrose,	COURT, IVISION 4, COLORADO rand Avenue, Bin A CO 81401		
CONCER WATER F RIVER W DISTRICT	NING THE APPLICATION FOR RIGHTS OF UPPER GUNNISON ATER CONSERVANCY Γ		
in Hinsdale	e County.	▲ COURT USE ONLY ▲	
Attorneys Bratton & I John H. Mc John R. Hil 232 West T P.O. Box 6 Gunnison, Telephone: Facsimile: E-mail: jmc	for Applicant: McClow, LLC Clow, Atty. Reg. No. 6185 I, Jr. Atty Reg. No. 10214 Fomichi Avenue, Suite 202 69 CO 81230 (970) 641-1903 (970) 641-1943 cclow@bratton-mcclow.com	Case Number:	

APPLICATION FOR STORAGE WATER RIGHT

1. Name, address, telephone number of Applicant:

Upper Gunnison River Water Conservancy District 200 East Virginia Avenue Gunnison, CO 81230 Attention: Kathleen E. Curry, Manager Telephone: 970.641.6065

(hereafter referred to as the District).

2. Name of Reservoir: Lake San Cristobal.

3. Legal description of location of dam: Left abutment of dam is located in Hinsdale County, in the NE¹/₄NE¹/₄SW¹/₄ Section 15, Township 43 North, Range 4 West, N.M.P.M., at a point approximately 2100 feet east of the west section line and 2100 feet north of the south section line of said Section 15.

4. Source: Lake Fork of the Gunnison River.

5. Facts concerning appropriation:

(a) Appropriation for recreation and fishery initiated on June 1, 1990 by Hinsdale County raising existing dam approximately 4 feet by placement of rocks and other material. Additional impounded water put to beneficial use for recreation, fishery and wildlife on June 1, 1990.

(b) Appropriation for uses described in paragraph 7 below initiated by resolution of Upper Gunnison River Water Conservancy District Board of Directors on April 28, 2003.

6. Amount claimed: 960 acre-feet absolute for recreation and fishery and 960 acre-feet conditional for all other uses claimed claimed in paragraph 7 below.

7. Uses: Domestic, municipal, commercial, industrial to include mining, milling and reclamation, irrigation, recreation, fishery and wildlife habitat and all other lawful beneficial uses within the Upper Gunnison River Water Conservancy District directly or by augmentation or exchange.

8. Surface area of high water line: Approximately 320 acres.

9. Maximum height of dam in feet: 10 feet.

10. Length of dam in feet: 85 feet.

11. Total capacity of reservoir in acre feet: 13, 545 acre-feet existing, 14,505 acre-feet proposed.

12. Active capacity : 960 acre-feet proposed

13. Dead storage : Minimum Lake Level of 13,545 acre-feet

14. Names and addresses of the owners of the land on which structures are located and upon which water will be stored are attached as EXHIBIT A.

Dated this 30th day of April, 2003.

Bratton & McClow, LLC Attorneys for Upper Gunnison River Water Conservancy District

By: John H. McClow

VERIFICATION

STATE OF COLORADO)) ss. COUNTY OF GUNNISON)

I, Kathleen E. Curry, Manager of the Upper Gunnison River Water Conservancy District, state under oath that I have read this Application and verify its content.

Kathleen E. Curry

Subscribed and affirmed or sworn to before me in the County of Gunnison, State of Colorado, this ______ day of April, 2003.

My commission expires:

Witness my hand and official seal.

SEAL



uamall Notary Public

EXHIBIT A

Raymond & Richard St. John 1345 S. Birch St. Santa Ana, CA 92707

Amos P. Wright Trust 1620 1/8 York Dr. Vista, CA 92804

Dennis D. Sattler 3710 Linkwood Dr. Houston, TX 77025

Charles & Barbara Hayes 1110 Hillcrest Rd. Mobile, AL 36695

Andrew J. Trujillo 16401 6705 Rd. Montrose, CO 81401

Edward & Rebecca Campbell P.O. Box 1089 Lake City, CO 81235

Lynda Arend P.O. Box 397 Lake City, CO 81235

Bruce Beck P.O. Box 395 Lake City, CO 81235

Kelli Murphy P.O. Box 628 Lake City, CO 81235

Byrne C. Smith P.O. Box 550 Lake City, CO 81235 Kathryne D. Rhodes 3636 Koring Rd. Evansville, IN 47720

Howard Berg Family Limited Partnership One Woodstone Amarilla, TX 79106

Anita Distefano P.O. Box 7259 Crescent Branch Golden, CO 80403

Gordon H. Snyder Rita J. Mitchell 479 New York Ave. Pasadena, MD 21122

Irvin Nokes Franciszka Nokes P.O. Box 2378 Aspen, CO 81612

John & Marcia Miller 3508 Sydney Rd. Plant City, FL 33567

Roy W. Burnes P.O. Box F Eden, TX 76837

Martha & Joe Stevens 6004 East Douglas Wichita, KS 67208

Dan & Rosemary Bunney 6004 East Douglas Wichita, KS 67208

Charles & Barbara Barker 2800 Carmel Dr. Round Rock, TX 78681 James & Elaine Brunk 20546 N. 94th Place Scottsdale, AZ 85255

Douglas & Annegret Gaidry 177 5th St. Apalachicola, FL 32320

Robert & Sherry Toepfer 1705 Paseo Del Oro Colorado Springs, CO 80904

Richard & Judy Tinsley 12 Walnut Ridge Dr. Waller, TX 77484

Mark & Kim McGuire Charles McGuire 1116 Colonial St. Belaire, TX 77401

Sharon Skolnik, Trustee P.O. Box 38 Crestone, CO 81131

Lydia Sutherland 3330 Cannon Rd. Twinsburg, OH 44087

Burton & Norma Smith P.O. Box 5 Lake City, CO 81235

Don & Diane Campbell P.O. Box 880 Lake City, CO 81235

Jackie Jackson HC-51 Box 32 Jacksboro, TX 76458

EXHIBIT A

Emma Plauche 246 Grand Ave. Lafayette, LA 70503

Ward Investments Ward Bldg. 101 S. 4th St. Artesia, NM 88210

Lewis & Carolyn Prince 5420 Prince Ln. Flower Mound, TX 75022

McCord Family Revocable Trust 1060 Red Oak Loop NE Albuquerque, NM 87122

Don Alexander 3424 Hickory Stick Rd. Oklahoma City, OK 73120-6515

Pete Greenbank P.O. Box 142 Lake City, CO 81235

Danny & Glenda Butler P.O. Box 7378 Glen Rose, TX 76043

Ronald & Donna Harris 9921 Silver Lake Dr. Oklahoma City, OK 73162

Arthur May c/o Rick May 6032 W. 26th St. Greeley, CO 80634

Joel Swank P.O. Box 114 Lake City, CO 81235 Lance Walker 5858 Highline Cr. Littleton, CO 80121

Randall Walker 15602 E. 101st St. N. Owasso, OK 74055

Linda Williams c/o Linda Gilbert 3402 Flaming Candle Spring, TX 77388

Henry Kates 2413 Emily Dr. Jacksonville, FL 32216

SW Plauche III 307 Aundria LaFayette, LA 70503

Lanie Lake 4360 Deerwood Ln. Evans, GA 30807

John Simmons P.O. Box 248 Lake City, CO 81235

Colorado Division of Wildlife c/o Jim Young 300 W. New York Gunnison, CO 81230

United States of America Bureau of Reclamation c/o Barry Tollefson 216 N. Colorado Gunnison, CO 81230





ATTACHMENT B

ANALYSIS AND SUPPORTING DATA TO ESTIMATE THE INFLOW TO LAKE SAN CRISTOBAL

106 <--- Drainage Area above Lake San Cristobal in square miles (determined by Randy Hendrix using USGS quad maps and Arcview)

115 <--- Drainage Area above Lake Fork at Lake City Streamflow Gage in square miles (Reported by USGS for Gage Number 09123500)

82.5 <--- Drainage Area above Henson Creek at Lake City (Reported by USGS for Gage Number 09124000)

334 <--- Drainage Area above Lake Fork at Gateview Gage in square miles (Reported by USGS for Gage Number 09124500)

7,928 <--- Drainage Area above Gunnison River near Grand Junction Gage in square miles (Reported by USGS for Gage Number 09124500)

0.32 <--- Ratio of San Cristobal Drainage Area to Lake Fork at Gateview Gage drainage area

0.92 <--- Ratio of San Cristobal Drainage Area to Lake Fork at Lake City drainage area

719 <---- Average Annual Runoff per square mile of drainage area for Lake Fork at Lake City Streamflow Gage (for P.O.R..)

879 <---- Average Annual Runoff per square mile of drainage area for Henson Creek at Lake City Streamflow Gage (for P.O.R..)

- 507 <---- Average Annual Runoff per square mile of drainage area for Lake Fork at Gateview Streamflow Gage (for P.O.R..)
- 233 <---- Average Annual Runoff per square mile of drainage area for the Gunnison River near Grand Junction Streamflow Gage (for P.O.R..)

82,732 <--- Lake Fork at Lake City 1919-1924, 1932-1937 Average

169,262 <--- Lake Fork at Gateview 1938-2007 Average

0.49 <--- Ratio of Lake Fork at Lake City to Lake Fork at Gateview

1,928,600 <--- Gunnison River near Grand Junction 1919-1924, 1932-1937 Average

1,767,324 <--- Gunnison River near Grand Junction 1938-2007 Average

0.92 <--- Ratio of Gunnison River near Grand Junction 1938-2006 Average compared to the 1919-1924, 1932-1937 Average

0.41 <--- Ratio factor used to estimate Lake Fork at San Cristobal (Ratio of Gaged Flows x Hydrologic Factor x Drainage Area Adjustment)

LAKE FORK AT LAKE CITY, CO (USGS Gage 09123500, values in ac-ft)

_	Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
_	1919	2,168	1,573	1,107	984	778	746	2,912	21,394	30,205	17,141	6,930	3,279	89,216
	1920	2,033	1,289	1,045	984	1,035	1,269	1,053	19,178	40,311	19,224	6,458	2,003	95,884
	1921	2,374	1,982	1,164	1,168	944	1,357	2,202	15,565	56,567	27,071	11,371	5,796	127,561
	1922	2,416	1,371	1,365	841	732	867	3,449	22,527	44,081	14,936	5,718	2,039	100,341
	1923	1,115	910	861	861	722	738	1,698	16,074	33,537	20,853	10,760	4,780	92,909
_	1924	3,981	1,835	1,353	1,107	863	841	4,197	19,589	34,084	11,004	2,801	1,111	82,766
	1932	2,854	1,313	793	532	625	750	2,533	21,263	31,766	19,165	6,474	2,727	90,795
	1933	1,321	1,119	1,093	1,212	682	807	1,073	9,194	31,163	12,425	4,415	2,696	67,199
	1934	2,537	1,874	1,599	1,353	1,111	1,045	5,328	17,090	6,415	2,735	2,938	2,184	46,208
	1935	1,833	1,192	1,107	1,045	889	984	1,488	6,173	36,375	15,640	5,593	2,991	75,310
	1936	2,067	1,267	1,055	811	678	885	6,639	24,022	16,763	6,347	6,962	3,384	70,880
	1937	1,952	1,301	801	706	593	732	2,936	20,200	13,520	6,427	2,537	2,009	53,713
_	Average	2,221	1,419	1,112	967	804	918	2,959	17,689	31,232	14,414	6,080	2,917	82,732
	Min	1,115	910	793	532	593	732	1,053	6,173	6,415	2,735	2,537	1,111	46,208
	Max	3,981	1,982	1,599	1,353	1,111	1,357	6,639	24,022	56,567	27,071	11,371	5,796	127,561

Henson Creek at Lake City, CO (USGS Gage 09124000, values in ac-ft)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1918	2,152	1,488	1,230	1,230	833	1,230	2,122	15,394	32,057	8,930	5,411	4,189	76,266
1919	2,087	1,726	1,230	1,107	833	1,051	3,662	21,063	26,599	16,586	7,446	3,622	87,010
1932	2,164	1,327	1,384	1,258	908	972	2,809	21,991	36,609	21,535	7,585	3,235	101,777
1933	2,224	1,414	1,083	1,238	799	1,109	1,212	12,353	33,850	10,296	4,643	2,565	72,787
1934	2,222	1,537	1,107	861	833	1,230	4,983	17,846	6,581	2,965	3,693	2,317	46,174
1935	1,999	1,492	1,045	861	722	1,045	1,309	6,488	28,975	12,367	5,314	3,108	64,726
1936	2,273	1,624	996	807	813	1,075	7,153	25,821	17,883	6,232	6,494	2,997	74,169
1937	1,843	1,232	863	823	829	920	3,618	20,777	14,361	6,512	3,186	2,565	57,527
Average	2,120	1,480	1,117	1,023	821	1,079	3,358	17,717	24,614	10,678	5,471	3,075	72,554
Min	1,843	1,232	863	807	722	920	1,212	6,488	6,581	2,965	3,186	2,317	46,174
Max	2,273	1,726	1,384	1,258	908	1,230	7,153	25,821	36,609	21,535	7,585	4,189	101,777

Estimated Inflow to Lake San Cristobal (values in ac-ft)													
Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1975	1,504	1,135	959	932	853	1,054	2,013	9,810	30,050	29,300	6,784	2,728	87,122
1976	1,789	1,500	1,223	856	795	1,504	1,943	11,397	18,269	6,002	3,071	1,796	50,145
1977	1,506	1,072	988	818	708	769	1,970	5,156	6,406	2,689	2,256	1,995	26,333
1978	1,479	1,160	963	938	808	1,279	3,033	9,589	30,378	15,812	4,322	1,906	71,667
1979	1,465	1,404	1,209	1,206	1,034	1,584	3,179	14,487	27,994	16,602	4,965	2,030	77,159
1980	1,557	1,295	1,173	1,182	1,140	1,182	2,822	11,536	28,800	11,617	3,756	2,680	68,741
1981	1,600	1,186	986	830	725	856	1,687	5,226	12,939	6,186	3,181	2,640	38,041
1982	2,291	1,695	1,304	1,110	1,008	1,364	2,303	9,233	24,441	15,959	12,085	7,339	80,131
1983	3,789	2,102	1,498	1,250	1,057	1,353	1,613	8,614	29,522	23,968	11,397	3,509	89,673
1984	2,379	1,789	1,909	1,675	1,418	2,101	4,943	29,064	36,108	24,900	11,146	5,488	122,920
1985	3,651	2,475	1,709	1,303	1,126	2,095	5,575	17,536	37,646	16,679	5,584	3,887	99,267

1986	3,671	2,297	1,594	1,649	1,617	2,180	3,751	13,030	28,045	15,506	4,234	4,196	81,770
1987	3,713	2,555	1,804	1,427	1,358	1,908	5,182	17,021	30,562	11,598	6,108	2,675	85,911
1988	1,625	1,407	1,294	1,216	1,049	1,583	2,126	8,302	19,198	7,339	4,079	3,163	52,379
1989	2,392	1,529	1,574	1,419	1,182	2,454	3,817	9,601	11,863	5,989	4,033	1,802	47,654
1990	1,596	1,233	1,006	870	691	856	1,301	9,499	20,481	5,606	2,478	1,978	47,595
1991	3,305	2,040	1,216	1,137	999	1,196	2,201	14,021	24,309	8,968	3,483	2,502	65,378
1992	1,707	1,355	900	982	934	1,262	2,173	10,670	17,123	8,066	3,960	2,428	51,559
1993	1,508	1,282	1,037	923	882	1,248	2,325	17,684	28,479	11,857	4,073	3,268	74,566
1994	1,993	1,358	1,206	1,111	991	1,378	2,256	12,755	21,088	4,300	2,492	2,977	53,904
1995	2,986	1,713	1,013	941	869	1,636	1,958	7,178	33,980	28,096	10,499	4,611	95,483
1996	2,667	1,766	1,253	1,255	1,214	1,322	2,985	17,898	19,553	6,924	2,498	2,219	61,555
1997	3,401	2,151	1,578	1,372	1,112	2,389	4,389	16,781	32,773	14,564	7,801	5,018	93,329
1998	4,282	2,018	1,284	1,251	1,120	1,114	1,704	10,320	18,413	12,784	5,035	3,291	62,616
1999	2,928	2,172	1,612	1,540	1,367	1,569	2,217	12,658	30,083	16,943	12,107	6,584	91,781
2000	3,002	1,701	1,618	1,539	1,322	1,535	5,015	19,089	15,382	5,220	3,672	3,106	62,202
2001	2,541	1,734	1,009	936	857	1,261	2,920	19,330	19,168	7,814	5,974	2,536	66,079
2002	1,801	1,144	829	755	726	1,092	2,418	5,898	4,282	1,593	1,213	1,923	23,674
2003	1,733	1,279	1,205	954	834	1,314	1,650	12,510	14,841	4,313	3,545	5,119	49,297
2004	2,347	1,357	1,409	1,231	1,030	2,359	3,282	14,605	16,418	6,488	2,358	2,567	55,452
2005	2,311	1,562	1,368	1,279	1,110	1,256	3,414	16,819	22,725	10,429	4,849	1,696	68,818
2006	3,316	2,217	1,706	1,486	1,217	1,530	4,192	16,946	16,490	6,894	6,025	3,145	65,164
2007	5,791	2,567	1,513	1,208	1,127	2,362	3,347	16,954	22,138	8,640	7,142	3,884	76,672
Avg	2,534	1,674	1,301	1,169	1,039	1,514	2,900	13,067	22,726	11,504	5,339	3,233	68,001
Min	1,465	1,072	829	755	691	769	1,301	5,156	4,282	1,593	1,213	1,696	23,674
Max	5,791	2,567	1,909	1,675	1,617	2,454	5,575	29,064	37,646	29,300	12,107	7,339	122,920

LAKE FORK AT GATEVIEW, CO (USGS Gage 09124500, values in ac-ft)

 Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
 1938	4,304	2,975	2,460	3,074	3,055	3,689	12,532	37,212	90,819	45,252	12,246	10,520	228,138
1939	10,473	5,246	2,767	2,460	2,222	6,296	8,706	35,386	38,371	14,198	8,039	7,141	141,303
1940	3,975	2,539	2,126	2,190	2,206	2,680	6,996	34,229	36,014	11,350	5,361	5,227	114,892
1941	5,637	3,235	2,767	2,951	2,333	2,644	3,860	42,750	77,315	48,314	15,104	10,380	217,290
1942	14,882	8,517	4,586	2,959	1,987	2,997	10,860	37,645	87,064	43,542	16,041	7,145	238,224
1943	4,842	4,308	4,021	3,689	2,777	3,689	15,451	31,548	55,427	26,918	24,290	13,305	190,265
1944	6,224	5,290	4,493	3,074	2,588	3,074	7,008	54,977	94,373	50,805	16,007	5,925	253,838
1945	5,060	3,703	2,721	2,426	1,999	2,432	4,330	27,497	51,170	31,869	16,763	7,166	157,137
1946	5,665	3,880	3,118	2,535	2,335	3,108	11,617	23,616	61,135	20,557	11,381	6,565	155,512
1947	4,963	3,695	3,029	2,392	2,271	3,850	8,656	52,821	73,140	47,840	17,118	16,880	236,653
1948	10,199	5,548	4,001	3,301	3,322	3,796	12,663	56,139	85,903	39,601	13,188	6,363	244,024
1949	5,921	4,467	4,411	3,209	2,160	3,178	12,752	41,237	82,887	57,906	13,553	6,250	237,931
1950	5,145	3,997	3,523	3,396	2,640	2,676	8,831	21,515	46,142	20,232	6,292	3,933	128,321
1951	3,511	2,882	2,993	2,953	2,588	3,441	4,784	22,431	46,124	19,998	8,686	3,894	124,286
1952	3,257	3,057	3,689	3,285	2,559	3,017	20,202	45,509	93,296	39,482	20,611	11,431	249,393
1953	6,885	3,759	3,162	3,243	2,563	3,626	6,308	16,899	57,720	21,160	11,092	4,386	140,801
1954	3,685	3,701	2,840	2,440	2,370	2,727	6,363	22,917	21,283	19,290	8,376	4,931	100,924
1955	5,381	2,924	2,640	2,388	2,138	2,686	4,320	19,615	43,583	13,764	10,481	4,673	114,593
1956	3,029	2,672	2,430	2,148	1,841	2,985	6,597	30,841	39,603	9,965	5,072	2,705	109,888
1957	2,479	2,704	2,350	2,261	2,182	2,638	7,254	20,408	92,403	77,831	27,229	11,776	251,516
1958	6,204	5,316	4,433	3,481	2,727	3,263	9,003	63,976	80,070	23,459	10,021	6,534	218,487
1959	5,211	3,977	3,384	2,840	2,436	2,622	5,401	22,102	50,367	13,371	8,672	5,197	125,579
1960	6,315	4,257	2,529	2,360	2,043	5,141	14,993	30,798	64,898	22,634	7,629	4,580	168,177
1961	4,401	3,354	2,360	2,154	1,920	2,664	5,028	37,185	50,740	13,305	10,600	9,285	142,996
1962	8,700	5,893	4,007	3,525	3,217	3,261	17,251	40,235	63,381	40,166	10,223	5,966	205,824
1963	5,472	4,165	2,767	2,460	2,777	4,292	8,069	37,280	22,015	11,955	9,646	8,103	119,000
1964	4,074	3,499	2,583	2,460	2,013	2,311	3,989	33,650	44,686	18,843	12,163	6,111	136,381
1965	4,594	3,515	3,293	3,118	2,610	2,985	11,849	37,441	73,473	59,951	22,227	12,851	237,907
1966	11,562	6,587	4,572	3,382	2,499	3,868	8,140	42,854	38,760	17,695	8,521	4,473	152,912
1967	3,733	2,902	2,787	2,690	2,432	3,368	4,590	28,620	27,414	12,698	7,172	4,572	102,977
1968	3,513	3,003	2,761	2,422	1,966	2,130	4,530	29,659	78,892	26,133	20,985	6,222	182,216
1969	4,205	3,354	3,120	2,501	2,100	2,705	5,771	40,305	33,345 55 500	20,320	9,707	9,402	144,901
1970	9,100	6,014 5.079	3,860	3,503	2,930	3,243	5,052	55,054 20,156	52,598	20,900	14,709	25,607	213,702
1971	0,991	5,978	4,542	3,957	2,319	4,528	7 225	20,150	52,900	20,700	6 205	6,450	101,201
1972	4,909	4,000	3,300	2,745	2,401	4,330	1,333	27,559	39,003	11,103	0,395	0,200	19,031
1973	5,520 4 211	2,050	3,079	3,209	2,407	3,917	4,107	27,000	26,003	40,009	7 000	2,070	110 215
1075	3,667	2,353	2,775	2,032	2,200	2,571	4,000	22 027	72 202	71 464	16.546	6,507	212 402
1975	4 364	2,709	2,339	2,273	1 9/0	2,571	4,909	23,927	13,292	14 640	7 /00	4 380	122,492
1970	3 673	2 614	2,903	2,009	1,940	3,009	4,739	12 575	15 624	6 550	5 502	4,300	64 226
1078	3 608	2,014	2,410	2 280	1,720	3 1 2 0	7 396	23 387	74 004	38 565	10 540	4,000	17/ 708
1970	3,000	2,000	2,340	2,203	2 521	3 864	7,330	25,307	68 278	40 493	12 109	4,045	188 192
1980	3 796	3 160	2,545	2,342	2,321	2 884	6 883	28 136	70 244	28 334	9 162	6,538	167 661
1981	3 902	2 892	2,000	2,004	1 767	2,004	4 114	12 746	31 559	15 088	7 757	6 4 3 8	92 782
1982	5 588	4 134	3 180	2,020	2 460	3 326	5 617	22 521	59 612	38 924	29 475	17 899	195 442
1983	9 241	5 127	3 654	3 049	2 579	3 301	3 933	21 009	72 005	58 460	27 799	8 559	218 715
1984	5,802	4,364	4,655	4,086	3,459	5,125	12,056	70,888	88,067	60,731	27,186	13,385	299 804
1985	8,906	6,038	4,167	3,178	2,747	5,110	13,597	42,770	91,820	40,682	13,619	9,481	242 114
	0,000	0,000	.,	0,0	_,	5,5		,	5.,520			0,.01	,

1986	8,954	5,601	3,888	4,023	3,943	5,318	9,150	31,780	68,403	37,819	10,326	10,235	199,439
1987	9,057	6,232	4,399	3,481	3,312	4,653	12,639	41,515	74,542	28,287	14,898	6,524	209,539
1988	3,963	3,431	3,156	2,965	2,559	3,860	5,185	20,248	46,824	17,899	9,949	7,714	127,753
1989	5,833	3,729	3,838	3,461	2,884	5,986	9,309	23,417	28,933	14,606	9,836	4,395	116,229
1990	3,892	3,007	2,454	2,122	1,686	2,087	3,174	23,167	49,954	13,674	6,044	4,824	116,084
1991	8,061	4,977	2,965	2,773	2,438	2,918	5,367	34,198	59,291	21,874	8,495	6,103	159,460
1992	4,163	3,305	2,196	2,394	2,279	3,078	5,300	26,024	41,763	19,674	9,658	5,921	125,754
1993	3,677	3,126	2,529	2,251	2,150	3,045	5,671	43,131	69,462	28,919	9,933	7,972	181,867
1994	4,862	3,312	2,942	2,709	2,416	3,362	5,502	31,109	51,434	10,487	6,077	7,262	131,474
1995	7,283	4,179	2,471	2,295	2,120	3,991	4,776	17,508	82,879	68,528	25,607	11,246	232,885
1996	6,504	4,308	3,057	3,061	2,961	3,225	7,279	43,653	47,691	16,888	6,093	5,413	150,133
1997	8,295	5,246	3,848	3,346	2,711	5,828	10,705	40,930	79,935	35,523	19,026	12,240	227,632
1998	10,445	4,921	3,132	3,051	2,731	2,717	4,155	25,171	44,910	31,181	12,280	8,027	152,722
1999	7,143	5,298	3,931	3,757	3,334	3,826	5,407	30,873	73,374	41,324	29,530	16,058	223,856
2000	7,321	4,149	3,947	3,755	3,225	3,745	12,232	46,559	37,516	12,732	8,956	7,575	151,712
2001	6,196	4,229	2,462	2,283	2,091	3,074	7,123	47,146	46,751	19,057	14,571	6,185	161,167
2002	4,391	2,791	2,021	1,841	1,771	2,664	5,897	14,386	10,445	3,886	2,957	4,691	57,742
2003	4,227	3,120	2,940	2,327	2,033	3,205	4,025	30,512	36,197	10,519	8,646	12,486	120,236
2004	5,724	3,310	3,437	3,003	2,513	5,754	8,005	35,622	40,043	15,824	5,752	6,260	135,249
2005	5,637	3,810	3,336	3,120	2,707	3,063	8,327	41,021	55,427	25,436	11,828	4,138	167,850
2006	8,087	5,407	4,161	3,624	2,969	3,731	10,225	41,332	40,219	16,814	14,696	7,670	158,936
2007	14,124	6,260	3,689	2,945	2,749	5,761	8,164	41,351	53,995	21,072	17,420	9,473	187,004
Avg	6,002	4,102	3,224	2,857	2,471	3,508	7,819	33,373	56,903	28,553	12,664	7,787	169,262
Min	2,479	2,539	2,021	1,841	1,686	1,874	3,174	12,575	10,445	3,886	2,957	2,705	57,742
Max	14,882	8,517	4,655	4,086	3,943	6,296	20,202	70,888	94,373	77,831	29,530	25,607	299,804
75-07 Avg	6,181	4,084	3,174	2,852	2,534	3,692	7,073	31,871	55,429	28,060	13,023	7,885	165,856

Gunnison River near Grand Junction, CO (USGS Gage 09152500, values in ac-ft)

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1897	67,637	62,480	61,489	58,414	49,984	73,786	357,030	1,020,907	664,413	198,687	63,333	42,368	2,720,529
1898	90.527	57.303	52.265	49,191	41.654	73,786	148,763	327,139	526.778	156.439	42.336	28,497	1.594.677
1899	32,777	29,554	30,744	30,744	27,769	49,191	211,203	594,594	642.654	256.407	118,153	52.071	2.075.862
1902	61,489	59,505	58,414	55.340	49.984	52.265	123,929	364,488	176.766	35.064	37.567	39.749	1,114,560
1903	31.042	29,753	30,744	30,744	27,769	30,744	134,680	502,123	745,796	315.575	80,748	76.395	2.036.112
1904	54,725	50.232	49.806	44.512	44.557	39.864	133,797	345,803	273.902	81,103	101.059	65,719	1.285.080
1905	80,086	45,819	34 434	41 197	41 654	73 786	148 489	782 947	1 000 874	171 236	87 950	57 307	2 565 778
1906	67 856	62 480	61 489	58 414	49 984	67 637	273 148	910 883	857 170	289 333	128 094	100 167	2 926 654
1917	61 489	56 530	55 340	52 265	49 984	79 935	207 038	632,399	1 088 604	406 499	108 529	49 865	2 848 477
1918	55 875	61 875	55 479	55 270	58 017	83 783	162 349	555,380	662 291	149 149	46 717	77 852	2 024 039
1919	62 887	74 639	68 407	49 945	48 893	81 284	256 685	505 297	292 289	126 101	68 459	42 588	1 677 472
1920	55 631	70 527	59 951	56 490	75 254	66 501	110 858	1 160 586	953 032	284 117	88 335	44 258	3 025 540
1921	79 915	82 962	57 141	64 563	59 584	89,853	127 837	633 609	1 031 261	286,636	154 594	90,836	2 758 791
1022	65 692	76 514	7/ 082	61 094	51 254	74 262	177 /2/	016 803	609.054	11/ 597	57 083	29 346	2,700,791
1022	45 656	61 772	61 206	54 912	11 997	50 800	129 629	712 275	674 609	296 902	120 226	105 165	2,300,133
1923	43,030	80.206	65 276	60 100	57 125	55 643	207 217	622 509	580.004	200,093	17 504	22 229	1 006 020
1924	75 454	80 252	60 208	58 136	57,125	02 420	207,317	376 667	310,094	149 445	05 522	120 220	1,990,930
1925	120,434	80,232	61 490	40 101	57,204	93,439	240,032	570,007	510,001	140,445	90,020 40,916	22,220	1,724,431
1920	129,120	74 222	64 960	49,191	50,252	76 202	202,109	720 521	512,279	130,470	49,010	23,905	1,994,403
1927	120 622	74,223	04,000	39,001	67 026	104.015	102 102	729,001	547,220	235,401	62 712	172,307	2,433,479
1920	130,033	96,560	59,204	02,030	46,400	104,015	102,403	071,292	337,103	191,705	02,712	42,905	2,472,027
1929	11,014	64,259	38,240	40,303	40,403	70 100	202,892	405.070	100,440	273,340	217,808	295,065	3,068,766
1930	151,500	114,745	73,651	49,885	77,374	72,122	389,083	405,070	444,760	107,645	162,012	52,067	2,099,916
1931	83,585	70,940	67,530	66,412	57,541	52,005	60,967	129,721	126,942	32,188	15,854	23,136	786,821
1932	85,469	76,761	66,408	47,039	68,451	76,246	342,154	703,666	483,696	192,935	74,367	42,066	2,259,258
1933	56,530	67,076	52,743	38,061	40,598	64,563	74,976	359,529	553,853	82,099	32,694	43,972	1,466,695
1934	55,401	61,290	57,430	46,116	44,430	43,403	74,141	154,971	34,346	10,120	9,398	15,878	606,925
1935	16,499	30,683	48,774	44,254	38,246	45,004	59,075	265,472	582,971	147,733	55,554	52,539	1,386,802
1936	63,631	60,907	49,925	50,117	44,867	55,183	291,523	629,305	301,948	72,683	79,372	53,473	1,752,934
1937	51,379	61,042	52,831	44,325	43,986	64,851	163,210	623,989	246,906	82,353	27,819	33,241	1,495,932
1938	57,886	62,343	61,855	54,288	45,363	78,126	355,175	644,400	749,089	182,006	51,615	111,548	2,453,695
1939	76,537	75,849	67,086	64,188	55,391	106,395	214,020	376,746	232,427	35,227	38,111	61,185	1,403,162
1940	51,573	59,763	49,949	48,360	44,958	61,393	128,342	335,727	162,532	29,877	31,520	48,947	1,052,941
1941	87,619	62,137	55,171	50,663	50,528	63,349	123,175	870,995	563,235	191,923	95,210	80,994	2,294,999
1942	197,715	121,351	83,704	70,702	62,308	75,893	546,494	759,542	687,898	167,229	67,621	55,510	2,895,966
1943	56,922	65,301	58,355	56,609	47,931	56,097	279,535	388,726	397,335	113,190	153,622	87,226	1,760,850
1944	68,681	74,556	61,032	51,396	47,967	53,388	101,976	757,439	693,610	230,384	51,385	44,811	2,236,624
1945	58,261	71,051	63,613	54,876	46,688	52,140	90,745	627,698	407,054	163,599	122,344	46,180	1,804,249
1946	76,484	72,800	57,805	58,220	48,253	58,388	182,403	228,460	320,930	64,133	56,222	53,624	1,277,721
1947	69,026	66,969	55,738	45,337	46,944	55,359	95,831	454,698	501,548	242,285	120,141	95,460	1,849,334
1948	114,273	96,041	69,952	58,176	64,920	75,619	324,005	835,014	546,196	140,769	71,350	48,582	2,444,898
1949	57,004	70,109	69,672	50,655	52,444	68,655	235,362	481,237	651,143	264,639	64,886	53,430	2,119,235
1950	70,428	73,667	54,142	54,233	56,468	60,386	219,155	309,248	319,304	87,823	36,784	45,664	1,387,302
1951	36,631	49,098	60,072	47,108	46,007	55,137	62,226	264,678	323,370	92,649	52,600	37,389	1,126,967
1952	49,282	59,789	45,732	52,523	47,580	53,398	341,698	818,452	758,867	200,572	120,696	76,490	2,625,077
1953	66,652	63,779	71,624	65,102	50,496	61,199	85,838	230,126	437,144	86,018	67,401	46,099	1,331,478
1954	57,652	73,548	51,579	48,423	45,160	44,916	69,686	110,461	39,301	39,916	31,296	51,537	663,477
1955	64,424	50,782	49,191	46,235	40,265	58,577	107,752	261,921	218,740	46,301	52,400	35,449	1,032,037

1956	37,956	53,917	57,047	50,206	44,282	56,335	141,900	323,826	261,519	36,849	28,729	20,299	1,112,867
1957	34,515	55,086	47,370	52,087	54,774	55,909	135,513	553,635	1,168,282	719,376	223,759	108,339	3,208,643
1958	106,185	111,136	91,896	65,495	70,095	82,157	254,364	872,919	569,879	65,350	42,592	51,139	2,383,205
1959	51,738	71,331	65,083	56,843	49,607	51,958	55,133	167,269	255,911	33,868	51,079	41,118	950,938
1960	96,180	72.067	50,282	49.074	40.926	87.324	269,736	259,283	335.886	57.968	33,723	37.627	1.390.075
1961	50,649	58,295	51.071	41,316	39,470	54.737	66,608	266,404	208.690	34.082	44,123	99,996	1.015.441
1962	106,930	86,362	56 976	52 563	58 073	53 459	395 014	574 580	476 675	219 117	51 549	62 790	2 194 088
1963	70 196	67 661	53 761	48 140	70 434	81 601	102 313	188 095	92 247	37 042	51 791	50 559	913 840
1964	54 695	65 535	49 080	43 439	45 305	42 570	77 753	417 765	315 634	82 859	93 377	59 483	1 347 495
1965	53 445	64 807	58 977	5/ 080	40,000	52 025	228 /70	581 721	681 233	171 001	157 620	160 921	2 610 986
1903	116 015	63 254	60 440	51 052	44,700 26 701	68 122	166 226	210 906	124 742	50 961	28 442	57 004	2,010,900
1900	65 199	45 101	55 002	47.040	41 021	62 200	86.005	210,000	124,742	50,001	50,442	70 021	1,045,500
1907	05,100	40,121	104.000	47,049	41,921	02,200	60,005	143,204	050 400	59,095	107.067	70,031	4 4 4 2 0 7 4
1908	00,300	105,562	104,908	110,014	96,081	04,870	00,070	200,200	200,192	59,473	107,067	67,500	1,443,974
1969	86,619	133,390	148,882	146,045	75,048	144,815	304,229	331,740	194,125	99,687	91,301	119,109	1,874,991
1970	155,030	142,376	128,406	129,344	121,589	149,219	137,397	404,158	415,147	174,389	100,762	195,573	2,253,389
1971	188,115	170,442	181,431	196,367	201,147	239,012	265,789	209,140	211,659	114,297	113,708	133,311	2,224,418
1972	119,823	131,962	144,081	125,794	110,243	109,100	66,921	115,400	117,469	35,731	38,462	84,499	1,199,486
1973	103,717	125,238	156,935	154,812	75,288	82,950	93,004	455,630	414,155	163,758	147,850	109,588	2,082,925
1974	124,901	88,922	170,026	216,142	213,504	203,606	140,908	261,366	121,132	51,422	42,381	64,902	1,699,213
1975	84,120	116,828	111,016	113,895	96,378	99,274	157,849	397,612	335,569	164,710	62,891	75,974	1,816,116
1976	109,688	141,047	152,313	133,866	95,466	86,798	83,059	207,296	127,737	53,965	50,220	72,689	1,314,144
1977	91,142	105,026	119,546	116,253	68,968	47,622	34,521	42,943	36,627	37,758	36,447	35,917	772,770
1978	49,627	50,579	43,312	49,385	45,579	51,809	132,637	292,090	314,424	143,030	58,620	85,542	1,316,635
1979	67,776	86,778	133,747	137,893	155,268	193,966	278,682	509,244	389,897	178,932	99,810	110,858	2,342,851
1980	106,811	94,494	146,620	141,106	133,926	149,159	226,516	560,121	405,983	138,766	69,885	75,976	2,249,362
1981	75,504	139,440	142,772	129,068	75,575	70,478	70,492	92,897	79,064	57,948	51,605	76,446	1,061,290
1982	102,521	75,903	72,378	78,503	113,417	139,103	153,186	313,988	249,762	125,853	121,093	158,700	1,704,406
1983	163,500	150,409	150,806	139,876	122,481	142,792	149,457	489,389	808,038	493,396	206,086	131,228	3,147,458
1984	151,063	134,620	161,695	185,140	189,127	223,045	258,748	848,760	864,013	404,832	184,089	160,544	3,765,675
1985	191,983	166.852	148,386	201,464	187.937	235.005	472.252	657,570	461,203	189,543	105,126	140,908	3,158,228
1986	196,109	163.619	165.543	179,130	165,503	223.818	334,220	513,905	332.554	293.399	138.647	185,120	2.891.566
1987	213 920	196 525	198 330	186 350	174 548	220 149	312 679	388 627	200 016	134 144	130 772	121 172	2 477 233
1988	121 450	133 609	132 359	127 499	124 008	137 873	150 806	141 245	106 355	54 878	53 108	91 578	1 374 768
1989	70 254	56 157	52 497	53 513	54 927	83,392	151 262	115 479	82 813	50 647	61 794	71 801	904 536
1990	84 953	59 852	57 387	49 403	37.018	43 449	59 009	102 329	91 021	56 798	51 676	72 834	765 728
1001	85 8/8	62 403	50 007	63 452	50,822	66 665	107 120	205 038	285 081	120 894	101 952	131 625	1 441 707
1002	110 022	122,400	120 210	09,452	60,620	83 040	174 549	293,930	167 794	111 076	101,552	02 442	1,441,707
1992	106 722	91 462	62 640	50,770	09,000	106 091	201 450	202,377	F20 750	201 622	100,022	141 442	2 606 690
1993	100,732	127 422	120 420	107 207	59 240	190,901	201,409	797,902	152 790	201,023	79 451	141,443	2,090,009
1994	140,029	137,437	130,420	72 244	56,349	03,100	121,102	207,047	776 242	77,000	104 400	101,210	1,404,441
1995	108,021	60,103	64,319	13,211	66,705	147,110	229,610	578,289	776,342	134,847	194,423	142,772	3,221,819
1996	174,905	176,968	165,226	125,754	105,026	131,923	204,896	342,273	240,063	140,352	85,548	120,339	2,013,272
1997	124,921	133,470	122,660	137,655	136,862	252,936	331,998	522,216	486,969	221,041	152,115	193,828	2,816,669
1998	206,621	172,366	169,212	143,209	116,947	141,681	202,694	425,481	194,760	117,661	90,507	111,830	2,092,969
1999	130,336	108,577	97,509	83,168	69,720	82,514	92,744	269,240	211,203	148,961	210,152	188,770	1,692,893
2000	180,618	114,289	111,374	88,484	74,084	87,056	163,540	220,545	115,499	93,482	110,263	107,049	1,466,283
2001	104,907	89,694	82,771	69,780	59,009	78,945	106,673	208,843	100,524	80,887	92,431	96,140	1,170,604
2002	101,476	84,160	74,401	67,068	56,268	63,676	69,298	54,479	50,702	58,249	57,051	68,270	805,099
2003	71,366	51,285	43,304	38,432	33,293	41,291	65,507	186,112	122,086	61,169	64,376	82,051	860,274
2004	67,556	54,366	46,414	42,185	39,073	65,626	122,600	147,434	76,359	62,439	65,479	94,851	884,381
2005	103,122	65,198	58,946	73,352	79,419	116,650	286,358	474,652	281,022	106,613	91,102	97,826	1,834,259
2006	118,871	82,494	67,961	69,206	60,421	77,158	202,555	205,074	131,526	121,767	136,941	149,953	1,423,927
2007	180,284	117,165	146,958	138,657	92,637	149,233	156,498	196,025	115,142	83,255	109,265	132,280	1, <u>6</u> 17,399
Avq	91,903	86,118	82,759	77,654	70,450	89,532	182,284	442,314	399,666	152,051	86,249	83,749	1,844,729
Min	16,499	29,554	30,744	30,744	27,769	30,744	34,521	42,943	34,346	10,120	9,398	15,878	606,925
Max	213.920	196.525	198.330	216.142	213.504	252.936	546.494	1.160.586	1.168.282	734.847	223.759	295.065	3,765.675
75-07 Ava	121,417	109,450	110.368	106,285	94,123	121.618	180,140	337,821	270.684	155,169	101.821	112,757	1,821,653
	,	,	.,		,	,			.,		. ,	,	, ,

Attachment C
CWCB Decree and Amended Decree in Case No 3366 - Minimum Lake Level for Lake San
Cristobal
WATER DIVISION ND. 4

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FILED IN THE DISTRICT COURT WATER DISTRICT #4 JAN 1 0 1980 . WATER CLERK

STATE OF COLORADO

DEPUTY

Case No. 3366

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W.D.62

By,

IN THE MATTER OF THE APPLI-CATION FOR WATER RIGHTS OF THE COLORADO WATER CONSERVATION BOARD, ON BEHALF OF THE PEOPLE OF THE STATE OF COLORADO

IN SAN CRISTOBAL LAKE A NATURAL LAKE

IN THE WATERSHED OF THE GUNNISON RIVER

IN HINSDALE COUNTY.

RULING OF THE REFEREE

. . . ce Mila.

The undersigned water referee, having investigated the matter of the application on file herein, hereby makes the following findings and ruling thereon:

EINDINGS_AND_EACT

 That the said application concerns San Cristobal Lake located in Hinsdale County, Colorado, and used for such minimum flows as are required to preserve the natural environment to a reasonable degree, and the claim for appropriation is made under the provisions of C.R.S. 1973, 37-92-103(3), (4) and (10).

2. That applicant has furnished acceptable proof as to claims made.

That the said application was filed on December
30, 1977.

4. That the water clerk caused publication of such filing as provided by statute; that the time for filing statements of opposition expired on the last day of February, 1978.

** Method used to determine elevation

5. That the United States of America filed a statement of opposition on February 28, 1978.

6. That a stipulation has been reached between the United States and the applicant herein and such stipulation is made part of and incorporated into any order entered in this case.

IT IS, THEREFORE, DRDERED AS FOLLOWS: That applicant be, and is hereby, awarded an absolute surface water right to wit:

NAME AND ADDRESS:

The Colorado Water Conservation Board 1313 Sherman Street, Room 823 Denver, Colorado 80203

WATER_RIGHT

NAME_OF_DIICH, SPRING, OR_OTHER_STRUCTURE:

San Cristobal Lake, a natural lake.

LOCATION:

• •

Legal description of location of outlet of natural lake: The lake is located at sec. 15, 22 & 27, T43N, R4W, NM P.M., in Hinsdale County, Colorado. The lake is located in the natural drainage of Lake Fork Gunnison, and may be located on the Lake San Cristobal U.S.G.S. quadrangle.

DESCRIPTION OF DITCH AND/OR PIPELINE: (Means of Diversion):

Not applicable

SOURCE_OF_WAIER:

San Cristobal Lake in its natural condition.

PRIORITY DATE:

May 12, 1976 provided, however, that this right shall be junior to all priorities awarded in cases filed prior to 1977, and otherwise junior as provided in C.R.S. 1973, 37-92-306.

AMOUNT_OF_WATER:

Volume in acre feet and elevation of the minimum lake surface level:** The lake in its natural condition contains approximately 13,545 acre feet and the eleva-

-2-

Page 28 of 41

tion of the natural water surface is approximately 8,995 feet, as derived from the applicable U.S.G.S. quadrangle.

USE_DE_WATER:

To maintain such minimum flows as are required to preserve the natural environment to a reasonable degree.

IT IS FURTHER ORDERED that applicant shall install and maintain such water measurement devices, recording devices, content gauges and inlet and outlet measurement and recording devices, as the case may be, as are deemed essential by the Office of the State Engineer, and the same shall be installed and operated in accordance with instructions from said office.

IT IS FURTHER ORDERED that copies of this ruling shall be mailed as provided by statute.

DATED and filed with the water clerk this $\frac{10}{100}$ day 7--- 1979.1980

No protost pas files in this enter. The farescing suffers is configued to composed, and is sets the -- segment and Desce of this court.

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WATER REFEREE Water Division No. 4 State of Colorado

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- 3 -

DISTRICT COURT, WATER DIVISION 4, COLORADO

Case No. W-3366

AMENDED DECREE

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF THE COLORADO WATER CONSERVATION BOARD ON BEHALF OF THE PEOPLE OF THE STATE OF COLORADO,

IN SAN CRISTOBAL LAKE, A NATURAL LAKE,

IN THE WATERSHED OF THE GUNNISON RIVER,

IN HINSDALE COUNTY, COLORADO.

The undersigned water judge hereby makes the following findings and ruling thereon:

Findings and Facts

1. That the application concerns San Cristobal Lake located in Hinsdale County, Colorado, and seeks a water right to insure the preservation of such minimum lake level and volume as are required to preserve the natural environment to a reasonable degree, and the claim for appropriation is made under the provisions of §37-92-102(3) C.R.S. (1990).

2. That applicant has furnished acceptable proof as to claims made.

3. That the said application was filed on December 30, 1977.

4. That the water clerk caused publication of such filing as provided by statute; the time for filing statements of opposition expired on the last day of February, 1978.

5. That the United States of America filed a statement of opposition on February 28, 1978.

6. That a stipulation has been reached between the United States and the applicant herein and such stipulation is made part of and incorporated into any order entered in this case.

IT IS, THEREFORE, ORDERED AS FOLLOWS: That applicant be, and is hereby, awarded an absolute surface water right to wit:

Name and Address:

Colorado Water Conservation Board 1313 Sherman St., Room 720 Denver, CO 80203

Water Right

Name of Ditch, Spring, or Other Structure:

San Cristobal Lake, a natural lake.

Location:

Legal Description of location of outlet of natural lake: The lake is located at Section 15, 22, and 27, T43N, R4W, NM P.M., in Hinsdale County, Colorado. The lake is located in the natural drainage of Lake Fork Gunnison, and may be located on the Lake San Cristobal U.S.G.S quadrangle.

Description of Ditch and/or Pipeline: (Means of Diversion): Not applicable

Source of Water:

San Cristobal Lake in its natural condition.

Priority Date:

May 12, 1976 provided, however, that this right shall be junior to all priorities awarded in cases filed prior to 1977, and otherwise junior as provided in §37-92-306 C.R.S. (1990).

Amount of Water:

Volume in acre feet and elevation of the minimum lake surface level: The lake in its natural condition contains approximately 13,545 acre feet and the elevation of the natural water surface is approximately 8,995 feet, as derived from the applicable U.S.G.S. quadrangle.

Use of Water:

To maintain such minimum lake level and volume as are required to preserve the natural environment to a reasonable degree.

IT IS FURTHER ORDERED that applicant shall install and maintain such water measurement devices, recording devices, content gauges and inlet and outlet measurement and recording devices, as the case may be, as are deemed essential by the Office of the State Engineer, and the same shall be installed and operated in accordance with instruction form said office.

IT IS FURTHER ORDERED that copies of this decree shall be mailed as provided by statute.

Dated and filed with the water clerk this $\frac{2/54}{1991}$ day of March 1991.

BY THE COURT:

Judge

AG Alpha No. NR WC IAAGA AG File No. E91MRHL.96

DISTRICT COURT, WATER DIVISION 4, COLORADO

Case No. W-3366

ORDER

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF THE COLORADO WATER CONSERVATION BOARD ON BEHALF OF THE PEOPLE OF THE STATE OF COLORADO,

IN SAN CRISTOBAL LAKE, A NATURAL LAKE,

IN THE WATERSHED OF THE GUNNISON RIVER,

IN HINSDALE COUNTY, COLORADO.

The Court, upon review of the Motion to Amend Decree, hereby grants said motion and enters the attached Amended Decree, as of the date of this order.

Entered this 21st day of March, 1991.

BY THE COURT:

Judge

AG Alpha No. NR WC IAAGA AG File No. E9117338.53 December 6, 2007

Mr. Jim Slattery Slattery Aqua Engineering LLC 8357 Windhaven Drive Parker, CO 80134

Attachment D Letter of Interest from: 1. Mr.. Donald Booher 2. Hinsdale County 3. Lake City 4. Upper Gunnison River Water Conservancy District

Re: Lake San Cristobal Water Project-Letter of Intent

Dear Mr. Jim Slattery:

At the recommendation of Mr. Ralph Grover, I am following up on our prior discussion and emails with this letter. Mr. Grover suggested that you would be the proper individual to communicate with at this stage of project development. Please feel free to share this letter in confidence with whomever you determine appropriate.

The purpose of this letter is to document my interest in participating in the Lake San Cristobal Water Project. For planning and analysis purposes, please **consider this a letter-of-intent to purchase 10-20 acre-feet of water** at a mutually agreed upon price to support further improvement of family-owned property on Henson Creek.

By way of background, my wife and I have placed approximately 60 acres into a family trust known as the D&LB Trust. This acreage is suitable for multiple uses (e.g. livestock, fishery, Lodge), and a sizeable pond site is available for these purposes and more, not least of which is enhancing fire protection resources in the area. In addition, a portion of the property is currently platted as a subdivision which I understand will require augmentation. Given all this, it seems prudent to secure Lake San Cristobal water that would greatly facilitate assuring the highest beneficial use of the property.

As previously discussed, the exact quantity of water to be acquired (in the name of the D&LB Trust) depends on a number of factors yet to be refined, but for the purposes of this letter I agree with you that a conservative calculation would fall within the 10-20 acre-feet range. With your assistance, a precise quantity can be documented when the need arises.

Jim, on behalf of the D&LB Trust, thank you in advance for including the D&LB Trust in your planning and analysis, and for the opportunity to participate directly in the Lake San Cristobal project. Please keep me and the D&LB Trust informed of developments and schedules as you know them. Thank you again for your assistance. For my part, I would be happy to assist you and the project in any way I am able.

Sincerely, mal Beehans

Donald C. Booher

8730 S. Grizzly Way Evergreen, CO 80439 (720) 480-1763 Email: <u>don@nucfil.com</u> cc:

D&LB Trust Attn: Ross I. Booher, Trustee 2420 McIntyre Court Franklin, TN 37069 (615) 942- 8983 Email: annabooher@comcast.net Hinsdale County 311 North Henson Street P.O. Box 277 • Lake City • CO 81235

Fax: (970) 944-2630 Email: countyadministrator@hinsdalecountycolorado.us www.hinsdalecountycolorado.us



November 7, 2007

James E. Slattery, PE 8357 Windhaven Drive Parker, CO 80134

Dear Jim:

Thank you for your work and presentation on the Lake San Cristobal project. Hinsdale County wishes to express an interest in purchasing one-third of the firm yield from the project, with the understanding that that the purchase price will fall in the \$300,000 to \$350,000 range, with an overall project cost in the neighborhood of \$1,000,000 for the construction on the lake outlet. Naturally, we are hopeful that grants will be found to aid in the construction, further lowering the purchase price for the Upper Gunnison, Hinsdale County and the Town of Lake City.

We further anticipate that the Upper Gunnison, Hinsdale County and the Town of Lake City will be able to participate as equal partners in the formation of an enterprise entity that will manage the water for the benefit of our valley and ultimately recoup the initial investment that each of these three entities invest in the outlet structure.

If you have further questions about our interest in this project, please do not hesitate to contact us.

Sincerely,

Hinsdale County Board of County Commissioners

By: <u>JOynn Mangum</u> Flynn Mangum, Chair

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Town of Lake City 230 N. Bluff Street P.O. Box 544 • Lake City • CO 81235

Phone: (970) 944-2333 Fax: (970) 944-2337 Email: lakecity@lakecity.com • Web: www.lakecity.com



November 8, 2007

James E. Slattery, PE Slattery Aqua Engineering LLC 8357 Windhaven Drive Parker, CO 80134

Re: Proposed Lake San Cristobal Storage Project

Dear Mr. Slattery,

After further consideration at their regular meeting on November 7, 2007, the Lake City Trustees agreed to revise the commitment made in our letter of October 19, 2007 regarding the Lake San Cristobal Storage Project.

We understand that the cost to build the control structure at the outlet of the lake could be in the neighborhood of \$1,000,000 and that we're looking at a possible firm yield of 1,000 acre feet of water. With this in mind, the Trustees have agreed to commit to purchasing 1/3 of the firm yield in the proposed storage project.

Furthermore, based on recent conversations with Hinsdale County and Upper Gunnison River Water Conservancy District officials, the Trustees also want to express their very strong interest in participating as equal partners with both entities to form an enterprise to fund and construct the project.

We look forward to more discussion about this exciting opportunity with all parties in the near future. Thank you and please feel free to contact me if I can be of further assistance.

Sinderely,

Welu

Michelle Pierce Town Manager

Cc: Board of Trustees Hinsdale County Board of Commissioners Upper Gunnison River Water Conservancy District Ralph Grover

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Attachment E Future Demands Projections Study Prepared by Ralph Grover

Lake San Cristobal Marketing and Feasibility Study

Forecasted consumptive use for Hinsdale County on the Lake Fork and the Town of Lake City

GIS mapping was used to determine the available private land that could be developed between the confluence of Cottonwood Creek and the Hinsdale and Gunnison County line on the Lake Fork of the Gunnison. This data was integrated with the County's newly passed zoning regulations of one house on a minimum of one-acre. This yielded a potential 4,130 acres that could be developed.

This does not represent the total private land available for development, as some land was deemed unavailable or unsuitable for development. Land unavailable included state and federal land. Land unsuitable comprised the Lake Fork of the Gunnison, which was represented by a 50-foot line either side of the river to provide for a 100-foot exclusion, and slopes in excess of 20 degrees. The Town of Lake City was also excluded from this estimate because it has separate zoning requirements.

Lots available for development within the Town of Lake City were assessed separately. The Town currently has 528 water taps on its water distribution system, which represents all residences, businesses, non-profits, etc. These water taps also represent sewer connections. There is an estimated of 350 + vacant parcels that could still be added to the Town's water system. For purposes of calculating water consumption for the available town lots it was assumed that one house on a 5000 sq. ft. lot. The lot was planted with grass and had a graden.

Using these estimates the consumptive water use was calculated. For the Lake Fork drainage (County only) annual consumptive use for a typical residence with a lawn and garden irrigation would be 0.2366 af depletion. This assumes:

- Household use, individual septic: 0.0392 af
- Lawn & garden irrigation (assume 5000 sq. ft. @ elev. 8500): 1.72 af/ac x 5000 sq. ft./43,560 sq. ft./ac = 0.1974 af

For 4,130 acre parcels this totals 976 af/yr.

The Town's consumptive use for its water system is assumed to be 0.04 af/yr per house and 0.29 af/yr for the lawn and garden. This totals 123 af/yr.

This 1,099 af/yr represents the consumptive water use assuming current allowable maximum development within Hinsdale County.

Hello Ralph,

I have completed the analysis of data in response to your request as per our phone conversation Monday, Feburary 4, 2008. The attached .pdf file is a map showing the area requested. The following is a brief summary of the data that was used in this analysis:

Slopes indicated on this map and used when calculating acres are not exact. Area (in acres) was derived for 0-20% slopes using 10 meter Digital Elevation Models (raster data) which was then converted to polygon data. The acres represented for the area requested includes private land within the Colorado Hydrologic Unit Level 6 Subwatershed-Upper Lake Fork from a line drawn north to south at the confluence of Cottonwood Gulch and the Lake Fork of the Gunnison River downstream to the outlet of Lake San Cristobal; and Colorado Hydrologic Unit Level 6 Subwatershed-Lower Lake Fork C from the outlet of Lake San Cristobal to a line drawn east to west along the Gunnison/Hinsdale County Line (see attached .pdf file).

Digital Elevation Models excluded Lake San Cristobal from 0-20% slope acreage calculations. The area excluded appears to have been taken from USGS cartography.

The Lake Fork of the Gunnison River was digitized using 2005 NAIP aerial photograph. The line representing the river was then buffered 50' on each side to provide for exclusion of the requested 100' width.

The boundary for the Town of Lake City was taken from a USGS 7½ minute topographic map (1963- Photorevised 1982) and was excluded from the 0-20% slope acreage calculations. It appears that when looking at more recent aerial photography, there is considerable development both north and south of this town boundary.

Using the parameters mentioned above, the area for private land with 0-20% slopes, excluding the Town of Lake City, Lake San Cristobal and 100' width for the Lake Fork Gunnison River is approximately 4,130 acres.

Please note the disclaimer printed on the attached map.

(See attached file: Ralph_Grover.pdf)

Sandy Hayes BLM, Gunnison Field Office 216 N. Colorado St. Gunnison, CO 81230 phone: 970-642-4447 fax: 970-642-4425 Ralph,

A typical residence (household plus lawn & garden) in the Lake Fork drainage would have the following annual consumptive use:

- • Household use, individual septic: 0.0392 af
- Lawn & garden irrigation (assume 5000 sq. ft. @ elev. 8500): 1.72 af/ac x 5000 sq. ft./43,560 sq. ft./ac = 0.1974 af

Total annual depletion = 0.2366 af

Please let me know if you need further information.

Frank Kugel General Manager Upper Gunnison River Water Conservancy District 234 Main St., Suite 3C P.O. Box 1330 Gunnison, CO 81230 (970)641-6065 fkugel@ugrwcd.org

Hi Ralph,

Okay – so here's something I pulled out of the air! We currently have 528 water taps on our water distribution system, which represents all residences, businesses, non-profits, etc. I believe we have somewhere in the neighborhood of 350 + vacant parcels that could still be served by our system. Keep in mind that the water distribution system extends outside town limits so I've tried to come up with a figure that combines town and county census and demographic data.

Hope this helps. Thanks.

Michelle

Attachment F

Documents and Information Relied Upon

- 1. USGS Quad maps shown in Figure 2.
- 2. Water Right Application for Case No. 2003CW108 shown in Attachment A.
- USGS streamflow records for gages shown in Figure 3. USGS streamflow records for the Gunnison River near Grand Junction streamflow gage as summarized in Attachment B.
- 4. Division of Water Resources Water Rights tabulations as shown in the CDSS database.
- 5. Diversion records from the CDSS for ditches shown on Figure 3.
- 6. Division of Water Resources "Gunnison River Accounting" spreadsheets for 2002-2007.
- CWCB water right for Lake San Cristobal minimum lake level in Case No. 3362 shown in Attachment C.
- 8. Letter on Interest listed in Attachment D.
- 9. Future Demand Study complied by Ralph Grover shown in Attachment E.
- 10. Water Right Decree for Crooke's Fall in Case No. 89CW003.
- 11. Report by URS Corporation entitled "Feasibility Study Controlled Outlet Structure Lake San Cristobal Hinsdale County, Colorado" dated April 2004.
- 12. Grant Application to the CWCB from Ralph Grover dated March 14, 2007.
- 13. Interviews with Wayne Schieldt, Ralph Grover, John McClow, and Carl Hurst.
- Report by Slattery Aqua Engineering LLC entitled ""Subordination of the Wayne N. Aspinall Unit Water Rights within the Upper Gunnison Basin – 2006 Annual Report", dated December 21, 2007.
- 15. Population data and projected population growth from the Colorado Department of Local Affairs State Demography Office.
- 16. Report entitled "Colorado Statewide Water Supply Initiative SWSI Water Supply Demand Forecast", dated August 6, 2004 prepared by CDM.

- 17. Report entitled "Colorado Water Supply Future Statewide Water Supply Initiative – Phase 2", dated November 2007 prepared by CDM.
- 18. My educational training and my 22 years of professional engineering experience in addressing water resource issues.