

# BIKIS

Water Consultants LLC

## AUGMENTATION WATER RIGHTS ACQUISITION FEASIBILITY STUDY CITY OF MONTE VISTA

Prepared for:  
The City of Monte Vista  
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Monte Vista, CO 81144

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**FEASIBILITY STUDY APPROVAL**  
Pursuant to Colorado Revised Statutes 37-60-121 & 122, and  
in accordance with policies adopted by the Board, the  
CWCB staff has determined this Feasibility Study meets all  
applicable requirements for approval.

Signed

*A. Maurer*

5/10/10  
Date

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## 1.0 EXECUTIVE SUMMARY

This Feasibility Study provides the basis for a loan request in the amount of \$ 1,676,880 from the Colorado Water Conservation Board (CWCB) Construction Fund for the acquisition of water rights by the City of Monte Vista (City). The City completed a Feasibility Study dated January 31, 2010; this revised study reflects more recent information on alternatives to meet water rights requirements and supersedes the previous version.

Upcoming rules from the Office of the State Engineer (SEO) will require water users in the San Luis Valley to replace depletions from pumping of wells in the confined and unconfined aquifers tributary to the Rio Grande River. The water rights currently owned by the City are insufficient to fully replace the City's depletions.

The City needs 354 acre-feet (AF) of water to enable it to replace depletions in accordance with the upcoming rules. The City has explored alternatives for acquiring replacement water. The preferred alternative is the acquisition of water rights available for sale in the Anderson Ditch and Williams Creek Squaw Pass Diversion (a trans-basin diversion), along with acquisition of storage in Rio Grande Reservoir (RGR). 192 AF of historical consumptive use (HCU) will be purchased from the Anderson Ditch, 162 AF of Williams Creek Squaw Pass Diversion (WCSPD) water will be leased, and 241 AF of storage will be acquired in RGR. These amounts of water account for transit losses from reservoir releases.

The loan request is for the purchase of the Anderson Ditch rights and reservoir storage. An appraisal of the Anderson Ditch water rights was completed for the January 2010 version of the study, and is still relevant. Based on this appraisal and negotiations with the owners of the Anderson Ditch water rights, the total cost of acquisition is \$1,019,700. The City will enter into an agreement with the San Luis Valley Irrigation District (SLVID) (owner and operator of RGR) for storage. Based on a one-time cost of \$3,500/AF for spill-proof storage, the total cost for the 241 AF of storage required is \$843,500. Therefore, the total purchase cost is \$1,863,200. Ninety percent of this, the requested loan amount, is \$1,676,880.

The Williams Creek Squaw Pass Diversion water rights are not for sale. The City will enter into an agreement with Navajo Development Company for long-term lease of these water rights at a cost of \$8,100/yr. The City also needs to purchase a portion of the land irrigated by the Anderson Ditch. The costs for lease of WCSPD water and for purchase of the land are not included in the loan request amount.

The City will provide 10 percent of the purchase price, or \$186,320 from its Water Enterprise Fund. The City will pay back the CWCB loan from an increase in the base water rate of \$4.45/month per tap. The additional costs for lease of the WCSPD water and land purchase will also be paid through an increase in the base water rate. Therefore, the total anticipated increase in the water base rate to pay for all costs associated with coming into compliance with the new Groundwater Rule is approximately \$7.17/month per tap.

The Construction Fund Loan Application is included in Appendix A. This Feasibility Study details the need, alternatives, and information required to support this loan request.

## 2.0 INTRODUCTION AND OBJECTIVE

This study was prepared per CWCB guidelines to support a loan request of \$1,676,880 from the CWCB's Construction Fund for the acquisition of water rights and storage to meet augmentation



requirements for the City of Monte Vista (City). The City obtains its water supply from wells in confined and unconfined aquifers in the Rio Grande Basin (Basin). These wells are junior in priority to most surface water rights in the Basin. Historically, surface water rights have been administered, but wells have not, even though it has been shown that well pumping effects the amount of water available to surface rights. The passage of Senate Bill 04-222 (SB 04-222) and associated rules being promulgated by the SEO require replacement of depletions from wells such as the City's.

The City currently owns senior water rights in several irrigation ditches which can be used to replace its depletions. However, these rights are not sufficient in quantity to meet the current and future augmentation requirements of the City. Therefore, the City needs to acquire additional sources of replacement water to be able to meet its depletions according to Colorado water law. The objective of this feasibility study is to document the need for and feasibility of acquiring this additional replacement water, consistent with CWCB loan request guidelines. Ultimately, the City will submit an application for water rights and a Plan for Augmentation to water court.

Sources of information utilized for this study include:

- "City of Monte Vista Master Infrastructure Plan Update" (Integra Engineering, 2008).
- "Draft Application of RGDSS Ground Water Model to Evaluate Impacts of Monte Vista City Wells" (SEO, April 28, 2008).
- "Engineering Report Summarizing Information for Proposed City of Monte Vista Augmentation Plan" (Davis Engineering Inc., 2006).
- "Report on the Evaluation of Monte Vista's Water Distribution System" (Aquaducks Engineering, 1997).
- "Water and Sewer Utility Systems for the City of Monte Vista" (Wright-McLaughlin Engineers, 1973).
- "Valuation of Anderson Ditch" (Wright Water Engineers, Inc. January, 2010).
- "Valuation of Rio Grande Ditch No. 1" (Wright Water Engineers, Inc. January 2010).
- "Water Rights Review for the Trosper Property" (Agro Engineering, 2003).
- October 19, 2007, letter from Agro Engineering (more detailed analysis of Anderson Ditch).
- Interview with Division 3, District 20 Water Commissioners, and field observations on April 5, 2010.
- Other information and documents provided by the City.

### 3.0 PROJECT SPONSOR

The project sponsor, the City of Monte Vista, is located in the Basin, Water Division 3. Figure 1 is a vicinity map that shows the locations of the City and regional water features. Figure 2 is a location map which shows the City limits, boundary of the municipal water service area, relevant irrigation ditches, and water features in proximity to the City.

The City limits encompass approximately 1,350 acres and the municipal water service area is approximately 1,700 acres. The current population of the City is 4,300 residents, and the full build-out population is projected to be 6,250 people. The primary industries in Monte Vista are agriculture and tourism.

Residents, businesses, and public buildings as well as some public parks and recreation facilities within the water service area (Figure 2) are served by the City's water supply system. The system was constructed in 1950 and has been expanded, as necessary, since that time. Currently, the domestic system includes approximately 30 miles of lines that are supplied by five wells completed in the confined aquifer. The system currently serves 2,098 taps as well as some parks and recreation irrigation. The system does not have any storage; all demands are met by pumping. The system is owned, operated, and maintained by the City's Public Works Department.

The City began an effort in 2000 to install meters on all of the system's taps. This project has been a large success and has resulted in a significant decrease in water demand. For example, an average of 2,462.9 acre-feet per year (AF/yr) of water was pumped from 1994 to 2005; the amount of water pumped in 2005, since meters were installed, was 1,211.8 AF/yr. This represents a decrease of 51 percent in demand and is attributable to metering (Davis Engineering, 2006).

In addition to the municipal system discussed above, the City owns and operates three decreed wells in the unconfined aquifer. These wells are used to irrigate a total of 12.96 acres of parks and recreation fields.

The City's wastewater system collects and treats wastewater within the City limits. The City owns and operates two wastewater treatment plants, referred to as the Henderson and Veteran's plants. Treated effluent from both plants returns to the Rio Grande River (River) via several ditches and sloughs. The Henderson Plant, which treats most of the City's wastewater, is an aerated lagoon treatment system with a capacity of 3.09 million gallons per day (gpd) (see Figure 2). The Veteran's Plant is an extended aeration plant with a design capacity of 1.96 million gpd. This plant only operates when there is adequate inflow in the summer. The City's wastewater treatment plants receive a relatively large amount of infiltration/inflow which results in increased wastewater discharge. The infiltration/inflow water is shallow groundwater that may have a relatively small loss due to evaporation from the aerated lagoons at the Henderson Plant, but otherwise is not relevant to the City's water rights.

As detailed in Section 7.0 of this study, revenue from the City's water sales will be used to payback the requested loan. Resolution 11-2003 amended the water tap fee structure and includes an allocation of tap fees to water rights acquisition. Water rates were amended in 2009 and include a base charge and volume charge for users, based on the size of their tap. Water sales revenue averages \$736,930 per year (2005-2008). See Appendix B for the relevant resolution and water rate schedule.

Access to the three most recent financial audits for the City is provided in Appendix C.

## **4.0 PROJECT BACKGROUND AND NEED**

### **4.1 STUDY AREA AND PROJECT LANDS**

The City's water service area consists of approximately 1,700 acres within and immediately surrounding the City (see Figure 2). Land use within the City consists of a mix of residential areas interspersed with commercial and light industrial uses. As shown on Figure 2, the water service area extends to the northwest and east of the City limits and includes more rural areas. The City is in the heart of agricultural lands, and is surrounded by relatively large farms that are irrigated with surface water and/or groundwater.

The City's water supply system provides in-house and landscape irrigation to homes, businesses, and public buildings as well as 48 acres of parks and recreational facilities. An additional three wells in the unconfined aquifer are used to irrigate 13 acres more of parks. The City has not had to treat the confined well water due to its high quality in the past, but has to provide disinfection to meet current state standards. The City does not have any water storage facilities (e.g., water tanks); the aquifer serves as storage and water is pumped, as needed, to meet demands.

### **4.2 PREVIOUS STUDIES**

The City has completed studies and gathered information to support compliance with the upcoming SEO regulations. Previous studies include the sources listed in Section 2.0. Additional work has been completed over the past three years to meet the anticipated rules, including a search for and evaluation of potential additional sources of replacement water, analysis of water demands and depletions, evaluation of options for storage, and legal and technical work to support a Plan for Augmentation.

### **4.3 WATER DEMANDS**

Water demands for the City have been calculated based on water-uses and meter information. Table 1a shows the current water demand (population of 4,100 people) based on unit-rates and landscape areas defined in the Davis Engineering Report (2006). Water demands are shown for wells in the confined aquifer (domestic and some park irrigation), and unconfined aquifer (park and recreation irrigation only). The source of groundwater is an important factor in determining the timing, location, and amount of augmentation water that is required. As shown in Table 1a, the current demand for the City is 1,317 AF/yr.

Table 1b shows the full build-out demand (6,250 people) using the same assumptions in Table 1a. No increase in parks or recreation facilities is anticipated so that there is no projected increase in demand from the unconfined aquifer wells, which irrigate these areas. All the increase in water use will come from the wells in the confined aquifer. The full build-out water demand is projected to be 1,669 AF/yr.

The yield of the City's wells is adequate to meet the current and future demands, and the water supply system will be expanded, as necessary, to serve future customers.

#### 4.4 DEPLETIONS

Pumping from both the confined and unconfined aquifer wells results in depletions to the River, which is located 1 to 1.5 miles north of the City (Figure 2). These depletions affect irrigation water rights and the State of Colorado's ability to meet the Rio Grande River Compact (Compact).

Reduction of water in the River from pumping of wells has prompted administration of wells and the need to provide replacement water for depletions from the river, as stated in SB 04-222. In response to the need to regulate groundwater, the SEO has developed a groundwater model to quantify depletions from well pumping. The Rio Grande Decision Support System (RGDSS) groundwater model covers the entire San Luis Valley and simulates both confined and unconfined aquifers.

Depletions from the City's wells were estimated by the SEO using the RGDSS model in April of 2008. Model runs were based on data provided by the City on current and future water demands. The depletion for future conditions was estimated by Davis Engineering based on the results of the model run and has been used in this study to estimate the amount of augmentation water required.

Subsequent to this modeling by the SEO, the SEO determined that the RGDSS model currently may not be appropriate to predict depletions from individual wells and for small areas, such as the City's wells. In the future, the SEO may partition the model to make it appropriate for use for smaller areas. While there is uncertainty over the use of the RGDSS model to determine depletions for the City, the modeling completed to date is the most detailed estimate of depletions for the City and is used in this feasibility study. As discussed in more detail in Section 6, it is proposed to use a contingency of 15 percent to address the uncertainty in the current modeling.

The estimated depletions for current and future conditions, based on the RGDSS modeling by the SEO and Davis Engineering Report, are shown by month in Table 2. Current depletions are 528 AF/yr, and full build-out depletions are 599 AF/yr. Table 2 provides the assumptions for the depletion calculations. According to the SEO report on the model, approximately 90 percent of the depletions occur from the mainstem of the River between Del Norte and Alamosa (SEO, 2008). The locations of depletions will be refined with future analysis, but it is anticipated that most of them will remain on the mainstem of the River. The proposed storage for augmentation would be able to deliver water to any location on the mainstem that may be depleted.

**Table 2. Current and Build-out Depletions**

Month	Consumptive Use as Percentage of Total Annual Pumping		Depletions 2005			Depletions at Full Build-Out		
	Confined Aquifer	Unconfined Aquifer	Confined Aquifer	Unconfined Aquifer	Total	Confined Aquifer	Unconfined Aquifer	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
January	0.5%	0%	6.1	0.0	6.1	7.0	0.0	7.0
February	0.5%	0%	6.1	0.0	6.1	7.0	0.0	7.0
March	1.2%	7%	14.7	3.1	17.7	16.8	3.1	19.9
April	2.4%	8%	29.4	3.7	33.1	33.6	3.7	37.3
May	3.6%	10%	44.1	4.4	48.5	50.4	4.4	54.8
June	5.0%	11%	61.2	5.1	66.4	70.0	5.1	75.1
July	9.0%	12%	110.2	5.6	115.7	126.0	5.6	131.6
August	9.0%	12%	110.2	5.4	115.6	126.0	5.4	131.4
September	4.5%	11%	55.1	4.9	60.0	63.0	4.9	67.9
October	2.8%	9%	34.3	4.0	38.3	39.2	4.0	43.2
November	1.2%	0%	14.7	0.0	14.7	16.8	0.0	16.8
December	0.5%	0%	6.1	0.0	6.1	7.0	0.0	7.0
<b>Total:</b>	<b>40.2%</b>	<b>80%</b>	<b>492.2</b>	<b>36.2</b>	<b>528.4</b>	<b>562.8</b>	<b>36.2</b>	<b>599.0</b>

Sources:

Draft Application of RGDSS Ground Water Model to Evaluate Impacts of Monte Vista City Wells, SEO, April 28, 2008 (i.e. RGDSS Report)

Engineering Report Summarizing Information Needed For Proposed City of Monte Vista Augmentation Plan, Davis Engineering Service, Inc., March 2006. (i.e. Davis Report)

Column Notes:

1) Based on Table 3 of RGDSS Report.

2) Based on Table 5 of RGDSS Report. Note the Consumptive Use Rate of 80% differs from the assumption in the Davis Report of 65%.

3) Equals Total Annual Pumping in 2005 (1,244 AF/yr, per Davis Report) x Column (1).

4) Equals Total Irrigation Water Demand for 12.96 acres (at a rate of 3.48 ft/yr, per Davis Report) x Column (2). Note that this number differs from assumptions in the RGDSS report.

5) Equals Column (3) + Column (4).

6) Equals Total Annual Pumping project for 2020 (1,400 AF/yr, per Davis Report) x Column (1).

7) Equals Total Irrigation Water Demand for 12.96 acres (at a rate of 3.48 ft/yr, per Davis Report) x Column (2). No future additional irrigation with confined aquifer wells is anticipated.

8) Equals Column (6) + Column (7).

## 4.5 WATER RIGHTS

### 4.5.1 Description of Local Water Rights and Administration

The City of Monte Vista is located in the Basin and draws water from aquifers that are tributary to the River. The Rio Grande is an over-appropriated river with significant demands on water for agricultural, municipal, and other uses, as well as for meeting the Compact. The CWCB has an instream flow right decreed in Case No. 83CW042 for the River from Goose Creek to the South

Fork. This is 35 miles upstream of the City but downstream of the Rio Grande Reservoir (Reservoir). No instream flow rights exist downstream near Monte Vista.

Water is administered by the Division in the Upper Rio Grande River based on the flow at the Del Norte stream gage. The flow at the gage is adjusted to account for releases, imported water, storage, and a curtailment for the Compact. Calls are set based on the calculated "native water" in the river at the gage. The goals of the administration are to satisfy ditches to the extent possible, avoid a more senior call on the river, allocate as much water as possible, and meet the Compact obligations.

The SEO issued the Confined Aquifer New Use Rules for Division 3 in June 2004 to comply with SB 04-222. These rules include the requirement to replace stream depletions that occur due to pumping from wells within a confined aquifer (five of the City's wells are in a confined aquifer). Additionally, SB 04-222 requires augmentation due to depletions to the river from pumping of the unconfined aquifer. In effort to comply with this bill and secure its water supply, the City is seeking to purchase additional augmentation water and reservoir storage.

#### 4.5.2 Water Rights Owned by the City of Monte Vista

Water rights were decreed in 1975 for the City's wells in Case No. W-847. Well Nos. 1 - 4 are located in the confined aquifer, and Well Nos. 5 - 7 are located in the unconfined aquifer. In addition, the Prospect Street Well was decreed as an alternate point of diversion for Wells 1 - 4 in Case No. 88CW13. Water rights for the wells are summarized in Table 3 and decrees for the wells are included in Appendix D.

**Table 3. Summary of Water Rights for City Wells**

Well No.	Decree	Adjudicated Flow	
		GPM	AF/yr
Confined Aquifer			
No. 1	W-847	1,100	1,774
No. 2	W-847	1,800	2,903
No. 3	W-847	1,200	1,936
No. 4	W-847	2,300	3,710
Prospect St.*	88CW13	2,000	3,226
Sub-Total		6,400	10,323
Unconfined Aquifer			
No. 5	W-847	600	968
No. 6	W-847	190	306
No. 7	W-847	1,900	3,065
Sub-Total		2,690	4,339
Total		9,090	14,662

\* The Prospect Street Well decreed in Case No. 88CW13 is an alternate point of diversion for Wells Nos. 1 - 4, therefore its adjudicated flow is not counted towards the total.

GPM = gallons per minute

As shown in Table 3, the total decreed capacity of all the City's wells is 9,090 gpm. The decreed capacity of the wells used for the municipal water system (the wells in the confined aquifer) is 6,400 gpm. This capacity is sufficient to meet current and build-out demands, except that additional pumping is needed to meet fire protection requirements since the system has no storage.

The City currently owns surface water rights in the following four ditches: the McDonald, Anderson, Rio Grande Lariat, and Ben Ogle Ditches. Water rights information on the ditches is provided in Table 4. Documentation of the City's ownership in the ditches is included in Appendix E. All of these ditches divert from the mainstem of the River upstream of the City. Figure 3 shows the locations of the ditches and areas historically irrigated. Currently, the City leases its shares in these ditches to others for irrigation.

**Table 4. Ditch Water Rights Owned by the City\***

Ditch	Ditch Priorities	City's Shares	Total Ditch Decreed Capacity or Shares	Percent of Total Diversions owned by City
McDonald Ditch	11	1.4* cfs	14.4 + 3.0* cfs	8.05
Anderson Ditch	90/143	1.0 cfs	16.15 cfs	6.19
Rio Grande Lariat Ditch	217/1903 (several)	5 shares	106.8 (212 ½ shares)	2.35
Ben Ogle Ditch	1903- 2 ½	1.0 cfs	4.0 cfs	25

\* From Davis Engineering Report, 2006  
Cfs = cubic feet per second

An evaluation of the historical use of the four ditches was completed by Davis Engineering in their 2006 report. This evaluation estimated the HCU from the ditches based on an analysis of historically irrigated areas, cropping patterns and diversion records. Crop irrigation water requirements were taken from the RGDSS Historic Crop Consumptive Use Analysis Final Report (June 2002). This evaluation found that the total potential HCU credit from these ditches is 384.5 AF/yr.

An updated and more detailed evaluation of the HCU of the City's water rights in the ditches was completed by BWC. This evaluation considered the effects of potential sub-irrigation and actual diversions on ditch yield. HCU was determined for both average and dry year conditions. The use of the water rights was discussed with the District 20 water commissioners, and limited fieldwork was completed. The HCU available from this more detailed analysis is 278.3 AF/yr, as shown in Table 5.

**Table 5. HCU from City's Ditch Rights <sup>(1)</sup>**  
(All values are average year yield in AF.)

Month	Anderson	McDonald	Lariat	Ben Ogle <sup>(2)</sup>	Total
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	1.8	2	1.8	0.5	6.1
May	11.7	12.2	18.5	2.4	44.8
June	21.8	23.3	31.2	4.8	81.1
July	19.8	21.4	16.7	4.5	62.4
August	15.8	17.2	6.3	3.5	42.8
September	11.3	12.8	2.3	2.6	29
October	4.6	5.3	1.1	1.1	12.1
November	0	0	0	0	0
December	0	0	0	0	0
<b>Annual</b>	<b>86.8</b>	<b>94.2</b>	<b>77.9</b>	<b>19.4</b>	<b>278.3</b>

1) From HCU evaluation by BWC considering areas of potential sub-irrigation.

2) HCU for Ben Ogle Ditch was allocated using the monthly percentages for the Lariat Ditch which is in close proximity.

#### **4.6 COMPARISON OF WATER DEMAND AND EXISTING SUPPLY**

Table 6 compares the depletions from the City with the amount of HCU credits available to replace these depletions. The HCU credits available are from all four ditches owned by the City (see Table 5). The City will dry-up lands historically irrigated by the ditches and change their use to augmentation.

The amount of HCU currently owned by the City (278.3 AF/yr) is not adequate to meet depletions from current use (528 AF/yr) or full build-out use (599 AF/yr). Also, Table 6 shows the differences between depletions and available credits on a monthly basis. HCU credits do not exist in winter months, while there is a surplus of credits in June. The City needs an additional 250.0 AF of HCU to replace current depletions, and an additional 320.7 AF to meet full build-out demand. These values do not include additional water to cover transit losses from water released from storage.



**Table 6. Comparison of Depletions with HCU Credits Owned<sup>(1)</sup>**  
(All values are in AF.)

Month	Current			Future		
	Depletions	HCU Owned	Difference	Depletions	HCU Owned	Difference
January	6.1	0	-6.1	7.0	0	-7.0
February	6.1	0	-6.1	7.0	0	-7.0
March	17.7	0	-17.7	19.9	0	-19.9
April	33.1	6.1	-27	37.3	6.1	-31.2
May	48.5	44.8	-3.7	54.8	44.8	-10.0
June	66.4	81.1	14.7	75.1	81.1	6.0
July	115.7	62.4	-53.3	131.6	62.4	-69.2
August	115.6	42.8	-72.8	131.4	42.8	-88.6
September	60.0	29.0	-31	67.9	29.0	-38.9
October	38.3	12.1	-26.2	43.2	12.1	-31.1
November	14.7	0	-14.7	16.8	0	-16.8
December	6.1	0	-6.1	7.0	0	-7.0
<b>Total:</b>	<b>528.3</b>	<b>278.3</b>	<b>-250</b>	<b>599</b>	<b>278.3</b>	<b>-320.7</b>

1) For all four ditches currently owned, as shown in Table 5.

#### 4.7 ACQUISITION OF ADDITIONAL WATER RIGHTS

The City has identified water rights that are available for purchase and are adequate to provide the additional water needed to replace depletions. These rights, which are the subject of the loan request, are in the Anderson Ditch and Williams Creek Squaw Pass Diversion. These water rights are described and evaluated in detail in Section 5.

#### 4.8 WATER QUALITY ISSUES

The City's domestic water supply comes from the confined aquifer and has not required treatment in the past due to its excellent quality (Integra Engineering 2008). However, the Colorado Department of Public Health and Environment recently required the City to disinfect confined water for the domestic supply. The City is in the process of complying with this new mandate.

The quality of the water in the unconfined aquifer that is used for irrigation is excellent for this purpose. No treatment is required or provided.

Acquisition of the proposed water rights and storage will not affect the current water quality treatment requirements or treatment costs. However, the City is in the process of investigating the use of more unconfined water for irrigation to reduce the amount of confined water needing treatment.

The proposed acquisition of water rights and storage will not affect the water quality of the River or the confined and unconfined aquifers. A portion of the rights will be used to replace depletions directly during the irrigation season by drying-up historically irrigated lands and

foregoing diversions at the headgate. This will result in more water in the reach of the river between the headgates and wastewater treatment plant outfall. The remainder of the water rights will be stored by exchange in the Reservoir, and released, as needed, to replace depletions during the non-irrigation season and also months during the irrigation season which have a shortage. Additional water will be provided from the reservoir from the WCSPD rights. The rates of flow involved are relatively small (several cubic-feet-per-second maximum) and should have no impact on the dilution capacity or water quality of the river.

## **5.0 PROJECT ALTERNATIVES**

The City of Monte Vista has anticipated having to replace depletions from pumping of its wells and has investigated alternatives for water rights acquisition over the past several years. Potential water rights available for acquisition are relatively limited because the Basin is over-appropriated. The following discussion summarizes the alternative sources of replacement water that have been identified and investigated by the City. The locations of the various alternatives are shown on Figure 4.

### **5.1 NEW SUB-DISTRICTS FOR WATER RIGHTS ADMINISTRATION**

In an effort to protect groundwater levels and senior water rights, the Rio Grande Water Conservation District (RGWCD) has been working on the formation of Groundwater Management Sub-Districts (Sub-Districts) in the Basin. The goals of the Sub-Districts include reducing groundwater usage in order to protect aquifers, prevent injury to senior surface water rights, and improve compliance with the Compact via collaboration from stakeholders in the basin.

Formation of the Sub-Districts is in various stages at this time. Approximately six separate Sub-Districts are envisioned; one of the Sub-Districts could potentially include the City of Monte Vista. The formation of the Sub-Districts is dependent on the Court Ruling on the Groundwater Rules, and approval by the SEO. The Sub-District covering the City has not been formed at this time. Information indicates that the Sub-District will not be able to replace depletions from the confined aquifer so that the City would have to prepare its own augmentation plan. Therefore, this is not a viable alternative.

### **5.2 SAN JOSE/LUCERO DITCH (JAMES PROPERTY)**

A portion of the water rights in the San Jose/Lucero Ditch (0.55 cfs) is for sale on the James Property located approximately 5 miles northwest of the City (Figure 4). This is a more senior ditch, being assigned priority No. 3. Diversion records indicate an average diversion of 3.15 AF/acre per year.

Research and communications with Mr. James indicate that most of the irrigated acreage on the ranch has historically been irrigated by a junior well which feeds a center-pivot. This well (W-3842) is a replacement well that has its own water right and is not an alternate point of diversion for the San Jose/Lucero Ditch.

Mr. James indicated that he has used the ditch rights to irrigate the corners of his property not irrigated by the center-pivot (this was confirmed by the Water Commissioner). Aerial photographs show approximately 21 acres to be irrigated by the ditch, which would equate to around 42 AF/yr of HCU using unit rates from the other ditches in the area.

This amount of HCU is relatively small compared to the needs of the City. The owner would prefer to sell the land and water together. For these reasons, this alternative was not preferred.

### **5.3 ANDERSON DITCH (VALLEY CHOICE PROPERTY)**

Valley Choice owns approximately 65.6 acres of land immediately northwest of the City's golf course. Two fields on the southern portion of the property have been historically irrigated by the Anderson Ditch. The presence of this irrigation was confirmed in the field by BWC. Aerial photographs show a total of 33 acres of irrigation. A farm delivery analysis using StateCU shows an average of 68.7 AF/yr of HCU from this irrigation.

The City is in negotiations with the owner of the Valley Choice property who desires to sell the land and water together. The owner has shown a willingness to negotiate with the City so that this alternative is preferred.

### **5.4 ANDERSON DITCH (TROSPER RANCH)**

Water rights in the Anderson Ditch which have been used on the Trospers Ranch just west (upstream) of the City are available for purchase. This water right is relatively senior and the City already owns a portion of the ditch (Table 4). The City has been in negotiations with the owners of this water right for a period of time and a value of around \$4,800 AF/yr of HCU has been discussed. An issue with this alternative is potential sub-irrigation of land could reduce the yield of the rights. Acquisition of this right is preferred.

### **5.5 RIO GRANDE DITCH NO. 1 (HAUGHT RANCH)**

The Rio Grande Ditch No. 1 is a senior irrigation ditch located approximately 15 miles upstream of the City. The 3.22 cfs in this ditch which has been used on the Haught Ranch is presently for sale. This water is priority No. 8, and is more senior than the rights presently owned by the City. The City has discussed purchase of the rights with the owner who has indicated a relatively high cost (more than \$10,000/AF).

### **5.6 WILLIAMS CREEK SQUAW PASS DIVERSION**

Navajo Development Company (NDC) owns water rights in the Williams Creek Squaw Pass Diversion (WCSPD). This diversion diverts water from the upper Pine River basin (San Juan River Basin) into Squaw Creek and Rio Grande Reservoir (Rio Grande River Basin) and therefore, represents trans-basin water. This water was originally used for augmentation for 15 sub-divisions near Creede.

The water is stored in RGR under a year-to-year agreement with the SLVID. NDC pays 10 percent of the water stored to the District, and this water is spilled from the reservoir prior to the District's water. WCSPD diversions have been limited in the past by the condition of the diversion structure, but improvements to the structure in the mid-1980s have increased its yield. The average diversion since the improvements is 325 AF/yr, all of which over 87 AF/yr could be used by the City. There is currently 1,122 AF of WCSPD water stored in RGR.

Evaluation of this water right indicates that the yield of the diversion should be adequate to meet the City's needs in most years, in conjunction with acquisition of Anderson Ditch rights. Storage of all or a portion of these rights under a "spill-proof" option with the District would be pursued to increase their benefit in a dry water year.

Negotiations with NDC indicate that the WCSPD water rights are available for long-term lease, not purchase.

## **5.7 SHARES IN SANTA MARIA RESERVOIR**

The City was approached by an entity which has 15 shares of Santa Maria Reservoir water for sale. Santa Maria Reservoir is an off-channel facility near Creede that is fed by an aqueduct from North Clear Creek and local runoff. Most of the shares (90 percent) are owned by the Rio Grand Canal; the remaining 10 percent is owned by the Monte Vista Canal.

The estimated yield of a share is 1.6 AF/share/year or less. Based on this yield, the 15 shares would provide 24 AF/yr of water. The amount which could be used by the City would likely be less with transit losses. The owner of the shares suggested a relatively high cost. Due to this and the small amount of water available, this alternative was not pursued further by the City.

## **5.8 RIO GRANDE RESERVOIR (RGR)**

The City has investigated RGR for storage of HCU credits from ditches which are greater than required to meet depletions during a month ("surplus credits"), and also for storage of water from other sources (e.g., WCSPD). The SLVID is in the process of rehabilitating the dam for the reservoir and is planning on making additional storage available to others. Previously, water stored for others was released during a spill prior to the District's water. However, a spill-proof option is being investigated by the District. A transit loss of 15 percent applies to any water released from RGR down to the City.

The policies and costs for new storage in RGR are being developed at this time. Costs for storage will reflect market conditions and likely be much higher than in the past. A value of \$3,500/AF for permanent (spill-proof) storage has been suggested; a value of around \$200/AF/yr for lease storage has also been mentioned. The final costs for storage in RGR could vary from these numbers.

The alternatives for replacement water are compared in Table 7 (see attached) based on the criteria in the CWCB feasibility study guidelines.

## **6.0 SELECTED ALTERNATIVE**

### **6.1 DESCRIPTION OF WATER RIGHTS IN SELECTED ALTERNATIVE**

The selected alternative is to:

- Purchase water rights in the Anderson Ditch associated with Trospen Ranch and Valley Choice,
- Enter into a long-term lease for WCSPD water, and
- Purchase storage in Rio Grande Reservoir for surplus ditch credits and WCSPD water.

#### **6.1.1 Legal Status of Water Rights**

The Anderson Ditch water rights are summarized in Table 8. The Anderson Ditch has three priorities. The proposed acquisition includes 1.73 cfs from priorities 90 and 143. The Anderson

Ditch priority 90 water right was adjudicated in 1896, and has an administration number of 9282; priority 143 was also adjudicated in 1896, and has an administration number of 10013. Both priorities are absolute. In 2002, the ditch received an adequate supply of water and is therefore considered a secure source of augmentation water. The City currently owns 6.19 percent of the Anderson Ditch and the proposed purchase is in addition to this amount.

The WCSPD is decreed for 10 cfs in Case W-1869 for irrigation. 17.011 AF of this has been changed to augmentation use for NDC. WCSPD water is trans-basin water which can be fully consumed in the Rio Grande Basin.

**Table 8. Information for Water Rights Proposed for Acquisition**

Structure Name	Case No.	Decreed amount (cfs)	Use	Appropriation Date	Adjudication Date	Priority No.	Notes
Anderson Ditch	W-2967	16.2	Irrigation	05-01-1875 05-31-1877	05-01-1896	90,143	1.73 cfs available
WCSPD <sup>(1)</sup>	W-1869	10.0	Irrigation	09-09-1937	04-19-1962	310	

cfs = cubic feet per second

WCSPD=Williams Creek Squaw Pass Diversion

1) Other decrees for this right include W-3160, W-3930, and 01CW3.

### 6.1.2 HCU Analysis

The historical use of the Anderson Ditch rights on the Trosper Ranch was evaluated by Agro Engineering in their 2003 report. According to Agro Engineering, the Anderson Ditch rights that are for sale have been used to irrigate an average of 130.1 acres with an average diversion of 316.3 AF. Based on an irrigation efficiency of 60 percent, the estimated HCU from this ditch is 190 AF/yr.

Agro Engineering completed a subsequent evaluation of the Anderson Ditch rights in 2007 which evaluated the delivery of the water in more detail, and also considered possible sub-irrigation of certain parcels historically irrigated by the ditch. This study found that the yield of the rights would be 136 AF/yr under a “plausible scenario” and 103 AF/yr under a “worst case” scenario.

Due to the differences in reported yield of the Anderson Ditch rights, and a reported issue with sub-irrigation, BWC completed a farm field delivery analysis of use of the Anderson ditch on the Trosper Ranch and Valley Choice properties using the CDWR-endorsed program, StateCU. This provided an additional assessment of the HCU of the ditch and better documentation for future water rights applications.

Climate input files and diversion records are from the CDWR database. Soil parameters were obtained from the NRCS WebSoil Survey. Fieldwork was completed to identify the parcels on each property where there is good evidence that the land has been irrigated and no sub-irrigation occurs. National Wetland Inventory (NWI) mapping was reviewed to confirm that the parcels did not contain any wetlands (indicative of sub-irrigation). A total of approximately 33 acres in two parcels were determined to be irrigated on the Valley Choice property; a total of 98 acres in four parcels were determined to be irrigated on the Trosper Ranch; however, only

around 55 acres of these have received a full irrigation supply from the Anderson Ditch. The locations of these parcels are shown on Figures 5 and 6, respectively.

The results of the farm delivery analysis are included in Appendix F and summarized in Table 9.

**Table 9. HCU Credits Available Based on Farm Delivery Analysis**

Month	Anderson–Trosper Ranch <sup>1</sup>	Anderson–Valley Choice <sup>1</sup>	Total
January	0	0	0
February	0	0	0
March	0	0	0
April	2.4	1.4	3.8
May	20.4	11.2	31.6
June	32.6	18.3	50.9
July	29.3	15.7	45.0
August	25.0	13.1	38.1
September	11.0	6.8	17.8
October	2.6	2.2	4.8
November	0	0	0
December	0	0	0
<b>Annual</b>	<b>123.3</b>	<b>68.7</b>	<b>192.0</b>

1) For parcels irrigated by ditch that have no sub-irrigation based on aerial photograph interpretation and field observations by BWC.

As shown in Table 9, the HCU for the parcels irrigated by the Anderson Ditch on Trosper Ranch was determined to be 123.3 AF/yr. The yield of this ditch on the Valley Choice Property was determined to be 68.7 AF/yr.

The City proposes to purchase all HCU available from the two properties (192.0 AF/yr). The additional water needed to meet depletions at full build-out (320.7 AF/yr, Table 6) and to cover transit losses for released water (15 percent) will come from the WCSPD. The amounts of water needed are detailed in Table 10. As this table shows, the breakdown of the water is as follows:

- 458.5 AF/yr ditch water to replace depletions,
- 140.6 AF/yr WCSPD water to replace depletions, and
- 32.9 AF/yr for transit losses for release of stored water.

### **6.1.3 Storage and Augmentation Delivery in Rio Grande Reservoir**

HCU credits from dry-up of the irrigated lands will replace depletions directly during the irrigation season. Surplus credits will be stored by exchange in Rio Grande Reservoir (RGR) and then released to replace depletions during the non-irrigation season and other months with a deficit. Consultations indicate a transit loss of 15 percent would apply to any water released from the Reservoir down to the City.

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**Table 10. Depletion and Replacement Schedule<sup>(1)</sup>**

- Anderson Ditch-Trosper Ranch and Valley Choice, WCSPD
- Storage in Rio Grande Reservoir

(All values in AF)

Month	HCU Credits/Transbasin Water						Depletions	Balance
	Owned	Valley Choice Anderson <sup>(2)</sup>	Trosper Ranch Anderson <sup>(2)</sup>	WCSPD	Total	HCU Credits Stored(+) / Released(-) <sup>(3)</sup>		
Jan	0	0	0	7.0	7.0		7.0	0
Feb	0	0	0	7.0	7.0		7.0	0
Mar	0	0	0	19.9	19.9		19.9	0
Apr	6.1	1.4	2.4	27.5	37.4		37.4	0
May	44.8	11.2	20.4		76.4	+ 21.6	54.8	0
Jun	81.1	18.3	32.6		132.0	+ 56.9	75.1	0
Jul	62.4	15.7	29.3		107.4	- 24.2	131.6	0
Aug	42.8	13.1	25.0	8.0	88.9	- 42.5	131.4	0
Sep	29.0	6.8	11.0	21.1	67.9		67.9	0
Oct	12.1	2.2	2.6	26.3	43.2		43.2	0
Nov	0	0	0	16.8	0		16.8	0
Dec	0	0	0	7.0	0		7.0	0
<b>Total:</b>	<b>278.3</b>	<b>68.7</b>	<b>123.3</b>	<b>140.6 (161.7)<sup>(4)</sup></b>	<b>632.0<sup>(5)</sup></b>	<b>11.8<sup>(6)</sup></b>	<b>599.1</b>	<b>0</b>
<b>Additional Purchase:</b>					<b>353.7<sup>(7)</sup></b>			
<b>Storage Needed:</b>					<b>240.2<sup>(8)</sup></b>			

Notes:

NDC = Navajo Development Company.

WCSPD = Williams Creek Squaw Pass Diversion.

Footnotes:

1) For full build-out condition.

2) Based on farm delivery analysis completed by BWC.

3) Surplus credits stored in Rio Grande Reservoir (total credits stored equals 78.5 AF/yr of which 66.7 AF/yr can be used based on 15% transit loss).

4) 161.7 AF/yr needed with 15% transit loss.

5) Breakdown of replacement water:

- 391.8 AF/yr direct HCU credits.

- 66.7 AF/yr of stored HCU credits used.

- 140.6 NDC water used.

- 32.9 AF/yr transit losses (21.1 for NDC plus 11.8 for HCU credits).

6) Equals transit loss of 15%.

7) Equals 192.0 AF/yr Anderson Ditch plus 161.7 AF/yr NDC.

8) Total storage needed equals 78.5 AF/yr credits plus 161.7 AF/yr NDC.

RGR is decreed for 21,781 AF. Storage in the reservoir is reserved for irrigation of lands along the lower Rio Grande River, with the remainder available for storage for other uses and by other entities.

The Reservoir is operated as part of water rights administration of the River. Storage and releases from the Reservoir are accounted for in determining the amount of native flow in the river at the Del Norte stream gage, which in turn is used to allocate water to users and meet Compact requirements. Storage and release of water for the City will require minor modification to the river administration accounting. It will be necessary to account for release of all water stored in the same year, in particular. Discussions with Division 3 staff indicate that it should be possible to adjust the system to allow for storage and release of water in the Reservoir, as proposed.

The City will purchase 241AF/yr of spill-proof storage in RGR to store surplus HCU credits and WCSPD water. This water will be released to meet the City's depletion replacement requirements during the remainder of the year (Table 10).

## **6.2 LAND REQUIREMENTS AND RIGHT-OF-WAY**

No land acquisition is required for purchase of the water rights or storage. The City will work with the owners to cease irrigation and dry-up historically irrigated lands, as needed. Adequate documentation of dry-up will be required for the water rights application and plan for augmentation that will be filed by the City.

No rights-of-way are required for purchase of the water rights.

## **6.3 COST ESTIMATE-APPRAISAL**

The City retained Wright Water Engineers, Inc. (WWE) of Denver to provide an appraisal of the value of the Anderson Ditch water rights (see Appendix G). The value of the water right is a function of their HCU and estimated worth, per acre-foot, of HCU. Several factors affect the latter, including location, reliability, record of use, market conditions, and proposed use.

As described in Appendix G, WWE used a comparable sales approach to determine the value of the rights.

WWE placed a value of \$6,000 per acre-foot on the Anderson Ditch water rights. This value was based on one comparable sale in 2008, and on the cost of SLVWCD stored water. However, the City has been in negotiations with the owners of the Anderson Ditch rights and has an agreed upon average price of \$4,800 per acre-foot of HCU. The total purchase price for 192 AF/yr of this water is \$1,019,700.

The costs for storage in RGR are in the process of being revised. Final costs are not available at this time, but the SLVID has indicated a cost of \$3,500 AF for spill-proof storage. This results in a total cost of \$ 843,500 for the 241 AF of storage needed.

Therefore the total purchase price of the water rights and storage is \$1,863,200.

The City has been in negotiations with NDC, the owners of the WCSPD water. The City anticipates entering into a long-term lease for 162 AF/yr of WCSPD water at a cost of \$50/AF/yr for an annual cost of \$8,100/yr.



#### **6.4 INSTITUTIONAL FACTORS**

All necessary legal actions, agreements, and permits will be obtained to use the water for augmentation, including obtaining a decree for a Plan for Augmentation from water court. The City is currently preparing a Plan for Augmentation that is consistent with this study. This Plan will include a method for properly accounting for the replacement water provided, including storage and release of water from RGR, consistent with water rights administration on the river. Agreements will be executed for storage of water in the RGR and for lease of WCSPD water.

All decisions on funding and contracts for the water will be approved by the City Council.

No other permits or approvals (e.g., Section 404 Permit) are required for acquisition of the proposed water and storage.

#### **6.5 SOCIAL AND ECONOMIC IMPACTS**

The social and economic impacts of the proposed alternative are beneficial to both the City and sellers of the water rights. The water rights are being offered for sale by the landowners at their own volition and represent arms-length transactions. The sales represent the highest and best use of the water rights. The potential dry-up of the historically irrigated areas will not create a significant impact to agriculture in the region since the amount of land to be dried-up is small compared to the total acreage of irrigated land in the area. Also, the Trosper Ranch property is currently within the City and Valley Choice is adjacent to the City. The owner of the Trosper Ranch prepared a development plan in the past. Therefore, both of these properties could become developed without acquisition of the water rights by the City.

The SLVID is in the process of completing necessary rehabilitation of RGR and is seeking revenue from additional storage to help cover its costs. The proposed acquisition of storage in RGR will provide money for the work.

Acquisition of the proposed water and storage will provide the City with an uninterrupted water supply for its residents and businesses. The requested loan will reduce financial hardship of the acquisition on City residents since the loan has the lowest interest rate of loans available to the City and the cost of the loan will be spread over 30 years. There will be minimal, annual costs for using the water rights. The Plan for Augmentation will help to improve stream and aquifer conditions in the area and assure compliance with state water law.

#### **6.6 IMPLEMENTATION SCHEDULE**

The City is prepared to execute Sales Agreements with the sellers upon receiving CWCB loan approval. The City desires to file for water rights to enable use of the water rights to replace depletions as soon as possible.

The City also will finalize agreements with SLVID for the required storage in the RGR, and with NDC for long-term lease of the WCSPD water.

When the City actually starts providing replacement water will depend on recent court case rulings and progress on its Plan for Augmentation. The City may lease all or a part of the new water rights to other parties for irrigation in the interim.

## **7.0 FINANCIAL PROGRAM**

### **7.1 AMOUNT OF LOAN REQUESTED**

The City of Monte Vista is requesting a loan from the CWCB in the amount of 90 percent of the appraised value of the Anderson Ditch rights and the purchase of storage in RGR. This loan request amount is \$1,676,880. The City is not requesting money for lease of the WCSPD water or purchase of land associated with the Anderson Ditch rights in the loan request.

### **7.2 SOURCE OF FUNDING**

Funding from the City for acquisition of the water rights and storage will be from the City's Water Service Enterprise Fund. There are three sources of revenue for this fund: water tap fees, a water acquisition fee, and water sales revenues. The latter is the principal source of revenue for the Enterprise Fund and for both the City's ten percent portion of water rights acquisition cost (a one-time cost) and CWCB loan repayment (annual cost for 30 years).

### **7.3 REVENUE AND EXPENSE PROJECTIONS**

The CWWB loan would be paid back through revenues collected by the City for water service. Most of this revenue is from fees paid for water service (water sales) since the City is not anticipated to see a large increase in new growth and associated tap fees and water acquisition fees.

Water service revenues were \$ 780,504 in 2008 and have averaged \$ 736,030 per year since the City's metering program has been completed (which reduced water consumption in the City).

### **7.4 FINANCIAL IMPACTS**

The Base Water Rate is presently \$ 20.20 per month, with a rate of \$1.46 per 1,000 gallons after 5,000 gallons. The Base Rate will be raised by \$4.45 per month per tap to pay back the requested loan. The Base Rate will also be increased by \$2.72 to pay back the City's 10 percent loan match, cost of WCSPD water, and to purchase a portion of the Valley Choice Property.

### **7.5 AMENDMENT 1 (TABOR) IMPACTS**

Acquisition of the water rights is exempt from Amendment 1 because funding will be from an enterprise fund, which is not subject to Amendment 1 limitations.

In addition, residents of the City voted in 1995 to allow increases in revenues in perpetuity.

## **8.0 OPINION OF FEASIBILITY**

The City of Monte Vista will be required by State regulations to provide augmentation water for its water supply system. This system operates up to eight wells that are tributary to the River. The City has analyzed alternatives and determined that acquisition of the Anderson Ditch water rights which have been used on the Troser Ranch and Valley Choice Property, along with purchase of storage in Rio Grande Reservoir, as described in this study, are the best alternatives to meet the City's augmentation needs. A loan is requested for these acquisitions. The Anderson Ditch rights have documented HCU, are reliable (have not been called-out

historically), and have been administered as part of the water rights administration of the River. Consultations with Division of Water Resources, Division 3 staff indicate that this water right is a suitable replacement source.

In addition, the City will enter into an agreement to lease WCSPD water, which is a trans-basin diversion, to meet the balance of depletions needed. No other viable alternatives exist for sources of replacement water.

The combination of proposed sources and storage can be accommodated by the water rights administration system for the Rio Grande Basin.

The additional indebtedness from the requested loan to purchase the water rights will not place an undue financial burden on the City and its water users. The financial projections provided show the ability of the City to pay back the requested loan well within the financial means of the City, using its Water Service Enterprise Fund. This Feasibility Study has determined that the proposed acquisition of additional water rights is the recommended alternative to bring the City into compliance with State Water Law.

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# Tables

Table 1a. Current Water Demands  
City of Monte Vista  
Draft

Month	In-House (Confined Wells)					Lawn and Garden Irrigation (Confined Wells)					Parks and Rec Irrigation			Confined Total	Unconfined Total	System Leakage (9.5 %)	Total Demands
	Residential	Commercial	Multi-Unit Structure	Zero Billing	Total	Residential	Commercial	Multi-Unit Structure	Zero Billing	Total	Confined	Unconfined	Total				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
January	32.25	8.85	8.58	4.85	54.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.53	0.00	5.18	59.71
February	32.25	8.85	8.58	4.85	54.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.53	0.00	5.18	59.71
March	32.25	8.85	8.58	4.85	54.53	22.08	0.00	3.92	2.66	28.66	14.19	3.83	18.03	97.39	3.83	9.62	110.84
April	32.25	8.85	8.58	4.85	54.53	26.76	0.00	4.75	3.23	34.73	17.20	4.65	21.84	106.46	4.65	10.56	121.66
May	32.25	8.85	8.58	4.85	54.53	31.96	0.00	5.67	3.85	41.48	20.54	5.55	26.08	116.54	5.55	11.60	133.69
June	32.25	8.85	8.58	4.85	54.53	36.37	0.00	6.45	4.38	47.21	23.38	6.31	29.69	125.12	6.31	12.49	143.92
July	32.25	8.85	8.58	4.85	54.53	40.01	0.00	7.10	4.82	51.93	25.71	6.95	32.66	132.17	6.95	13.22	152.34
August	32.25	8.85	8.58	4.85	54.53	38.97	0.00	6.91	4.70	50.58	25.05	6.77	31.81	130.16	6.77	13.01	149.93
September	32.25	8.85	8.58	4.85	54.53	34.81	0.00	6.17	4.20	45.19	22.37	6.04	28.42	122.09	6.04	12.17	140.31
October	32.25	8.85	8.58	4.85	54.53	28.58	0.00	5.07	3.45	37.09	18.37	4.96	23.33	109.99	4.96	10.92	125.87
November	32.25	8.85	8.58	4.85	54.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.53	0.00	5.18	59.71
December	32.25	8.85	8.58	4.85	54.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.53	0.00	5.18	59.71
Annual	387.04	106.20	103.00	58.14	654.38	259.54	0.00	46.03	31.29	336.86	166.80	45.06	211.86	1,158.05	45.06	114.29	1,317.40

Source:  
Based on unit numbers and rates in 2006 Davis Engineering Report.

Notes:  
AF = acre-feet  
Gpdpc = gallons per day per capita  
RGDSS = Rio Grande Decision Support System  
Sq ft - square feet

Column Notes:  
1) Equals 85 gpdpc x 365 days/year x 2.5 people per residence x 1,626 residential taps / 325,851 gallons/AF / 12 months/yr.  
2) Equals 0.45 AF/yr/tap x 236 taps / 12 months/yr.  
3) Equals 1.0 AF/yr/tap x 103 taps / 12 months/yr. Multi-unit structures include veterans center, nursing home, apartment buildings, and duplexes.  
4) Equals 6.46 Af/yr/tap x 9 taps / 12 months/yr. Zero-billing structures include city-owned facilities and schools. These structures are metered but not billed.  
5) Equals Column (1) + Column (2) + Column (3) + Column (4).  
6) Residential irrigation equals 2,000 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr for bluegrass, distributed per RGDSS report.  
7) Commercial space has no lawn and garden or outdoor irrigation.  
8) Multi-unit structure irrigation equals 5,600 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr, distributed per RGDSS report.  
9) Zero-billing structure irrigation equals 43,560 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr, distributed per RGDSS report.  
10) Equals Column (6) + Column (7) + Column (8) + Column (9).

**Table 1b. Full Build-Out Water Demands**  
**City of Monte Vista**  
**Draft**

Month	In-House (Confined)				In-House Total	Lawn and Garden Irrigation (Confined)				Lawn and Garden Total	Parks and Rec Irrigation		Parks and Recreation Total	Confined Total	Unconfined Total	System Leakage (9.5 %)	Total Demands
	Residential	Commercial	Multi-Unit Structure	Zero Billing		Residential	Commercial	Multi-Unit Structure	Zero Billing		Confined	Unconfined					
	(1)	(2)	(3)	(4)		(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
January	42.69	11.70	11.33	6.46	72.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.18	0.00	6.86	72.18
February	42.69	11.70	11.33	6.46	72.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.18	0.00	6.86	79.04
March	42.69	11.70	11.33	6.46	72.18	29.23	0.00	5.17	3.55	37.95	14.19	3.83	18.03	124.32	3.83	12.17	140.33
April	42.69	11.70	11.33	6.46	72.18	35.42	0.00	6.27	4.30	45.98	17.20	4.65	21.84	135.36	4.65	13.30	153.31
May	42.69	11.70	11.33	6.46	72.18	42.29	0.00	7.48	5.14	54.91	20.54	5.55	26.08	147.63	5.55	14.55	167.73
June	42.69	11.70	11.33	6.46	72.18	48.14	0.00	8.52	5.85	62.50	23.38	6.31	29.69	158.06	6.31	15.62	179.99
July	42.69	11.70	11.33	6.46	72.18	52.95	0.00	9.37	6.43	68.75	25.71	6.95	32.66	166.65	6.95	16.49	190.08
August	42.69	11.70	11.33	6.46	72.18	51.58	0.00	9.13	6.26	66.97	25.05	6.77	31.81	164.19	6.77	16.24	187.20
September	42.69	11.70	11.33	6.46	72.18	46.08	0.00	8.15	5.60	59.82	22.37	6.04	28.42	154.38	6.04	15.24	175.66
October	42.69	11.70	11.33	6.46	72.18	37.82	0.00	6.69	4.59	49.11	18.37	4.96	23.33	139.66	4.96	13.74	158.36
November	42.69	11.70	11.33	6.46	72.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.18	0.00	6.86	79.04
December	42.69	11.70	11.33	6.46	72.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.18	0.00	6.86	79.04
Annual	512.24	140.40	136.00	77.52	866.16	343.50	0.00	60.78	41.72	446.00	166.80	45.06	211.86	1,478.97	45.06	144.78	1,668.81

Source:  
Based on unit rates in 2006 Davis Engineering Report and projected population growth for City of Monte Vista

Notes:  
AF = acre-feet  
Gpdpc = gallons per day per capita  
RGDSS = Rio Grande Decision Support System  
Sq ft - square feet

Column Notes:  
1) Equals 85 gpdpc x 365 days/year x 2.5 people per residence x 2,152 residential taps / 325,851 gallons/AF / 12 months/yr  
2) Equals 0.45 AF/yr/tap x 312 taps / 12 months/yr.  
3) Equals 1.0 AF/yr/tap x 136 taps / 12 months/yr. Multi-unit structures include veterans center, nursing home, apartment buildings, and duplexes  
4) Equals 6.46 AF/yr/tap x 12 taps / 12 months/yr. Zero-billing structures include city-owned facilities and schools. These structures are metered but not billed  
5) Equals Column (1) + Column (2) + Column (3) + Column (4).  
6) Residential irrigation equals 2,000 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr for bluegrass, distributed per RGDSS report.  
7) Commercial space has no lawn and garden or out-door irrigation.  
8) Multi-unit structure irrigation equals 5,600 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr, distributed per RGDSS report.  
9) Zero-billing structure irrigation equals 43,560 sq ft of lawn and garden per home. Irrigation is assumed to be 3.48 ft/yr, distributed per RGDSS report  
10) Equals Column (6) + Column (7) + Column (8) + Column (9).  
11) Confined aquifer wells are used to irrigate the golf course, five parks, and the baseball field, a total of 47.98 acres. No increase since 2005.  
12) Unconfined aquifer wells are used to irrigate Chapman park, the high school football field, and the high school east lawn, .a total of 12.96 acres. No increase since 2005  
13) Equals Column (11) + Column (12).  
14) Equals Column (5) + Column (10) + Column (11).  
15) Equals Column (12).  
16) Equals Column (14) + Column (15) x 9.5% system leakage.  
17) Equals Column (14) + Column (15) + Column (16).

**Table 7. Comparison of Alternatives**  
**City of Monte Vista**

Alternative	Description	Yield (AF/yr)	Cost Estimate	Social and Environmental Impacts	Economic Benefits	Institutional Requirements	Notes
1. Groundwater sub-district.	Join to-be-formed Sub-District.	Unknown	TBD	Unknown, depends on source(s) of water.	Potential water security; share district costs	Formation of Sub-district.	Formation, operation and water source of Sub-district are unknown.
2. San Jose/Lucero Ditch-James property.	Purchase or lease water on 200 acre ranch.	+/- 42	Uncertain	Dry - up of agricultural land.	Trade-off: water used for municipal uses and not agricultural.	City-approved acquisition. Need to change use of water.	May have to buy land also.
3. Anderson Ditch-Valley Choice property.	Purchase rights and/or land on 65.6 acre parcel.	68	\$4,800/AF <sup>(1)</sup>	Same as above.	Same as above.	Same as above.	Same as above.
4. Anderson Ditch-Trosper Ranch.	Purchase rights and/or land on.	123.3	\$4,800/AF <sup>(1)</sup>	Same as above.	Same as above.	Same as above.	Same as above.
5. Rio Grande Ditch No. 1-Haught Ranch.	Purchase rights in Rio Grande Ditch No. 1.	+/- 457	\$6,250/AF <sup>(2)</sup>	Same as above.	Same as above.	Same as above.	
6. Williams Creek Squaw Pass Diversion-NDC.	Lease rights from Navajo Development Co. Store in RGR.	325 <sup>(3)</sup> (214)	\$50/AF/yr	More water in river from City to RGR due to releases.	Water used in Rio Grande v. San Juan Basin. No loss of agricultural use.	Same as above.	Still have to change use.
7. Shares in Santa Maria Reservoir.	Purchase shares for storage and release.	24	Uncertain	Same as above.		Need contract for storage.	No precedent for use of water for purpose
8. Rio Grande Reservoir	Purchase or lease storage space.	NA	\$3,500/AF <sup>(4)</sup> \$200/AF/yr	Provides winter storage. Reduces amount of irrigation rights to be changed.	Provides funding needed for reservoir rehabilitation.	Need contract for storage.	Use for WCSPD and surplus credits from City's ditches.

Notes:

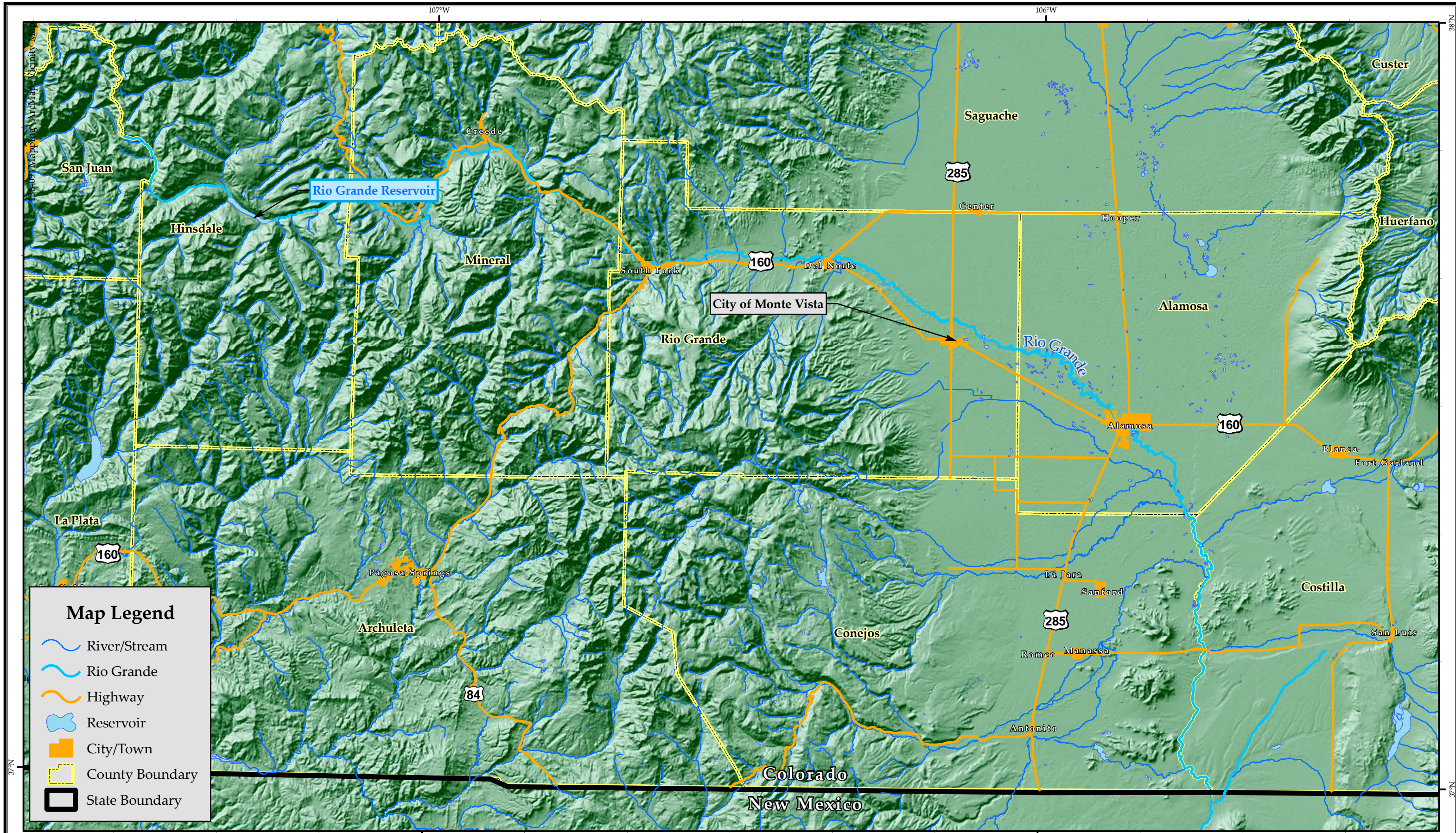
NA = not available.  
TBD = to be determined.  
RGR=Rio Grande Reservoir

Footnotes:

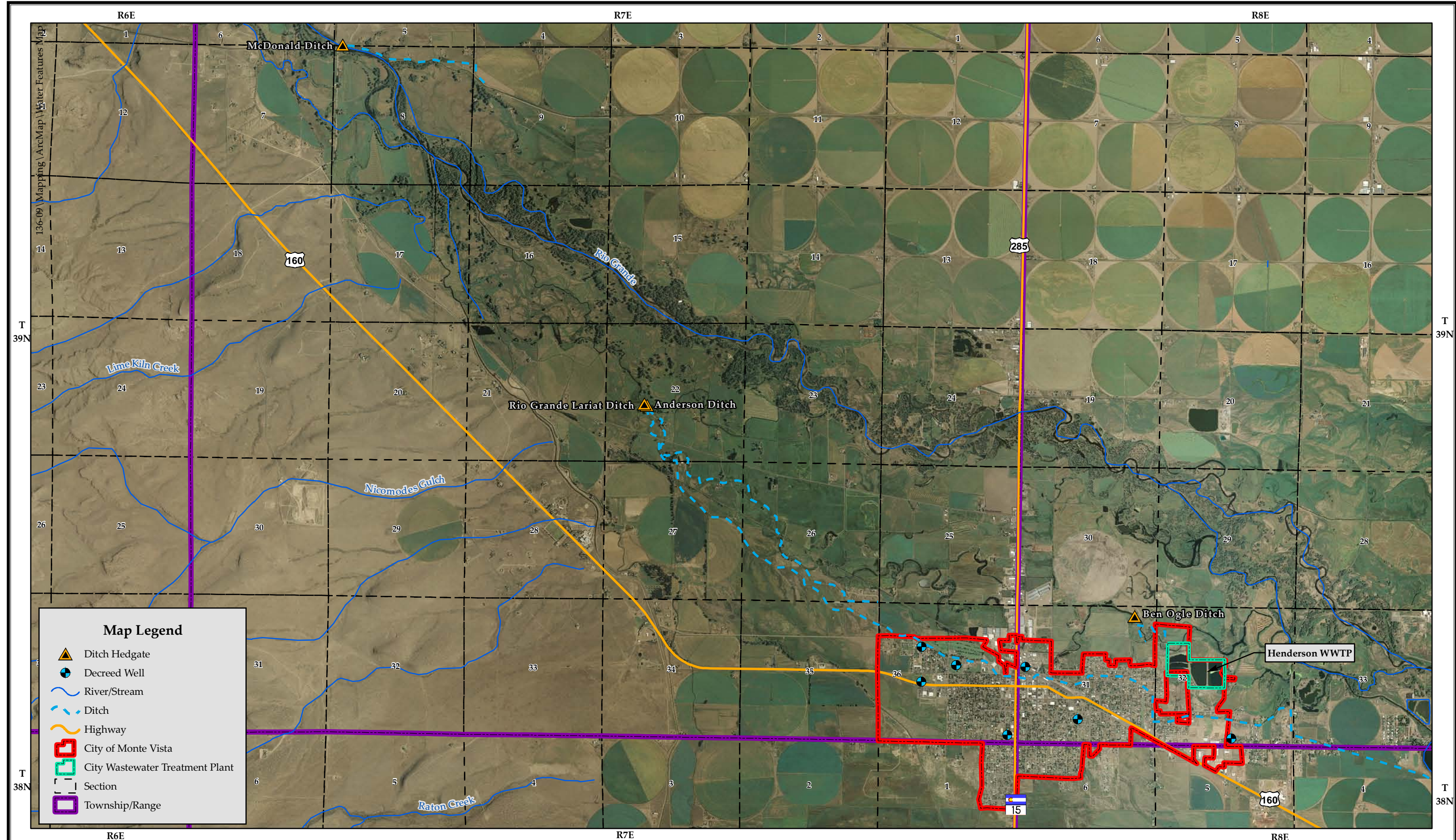
- 1) Based on negotiated price with owner.
- 2) Based on estimated value from appraisal by WWE (Appendix G). Owner suggested a price more than \$10,000/AF.
- 3) This is the average diversion reported of which 214 AF could be available (325-87X 0.9).
- 4) Very preliminary costs. \$3,500/AF is for permanent storage; \$200/AF/yr is leased storage. Both are for "spill-proof" storage.

## Figures

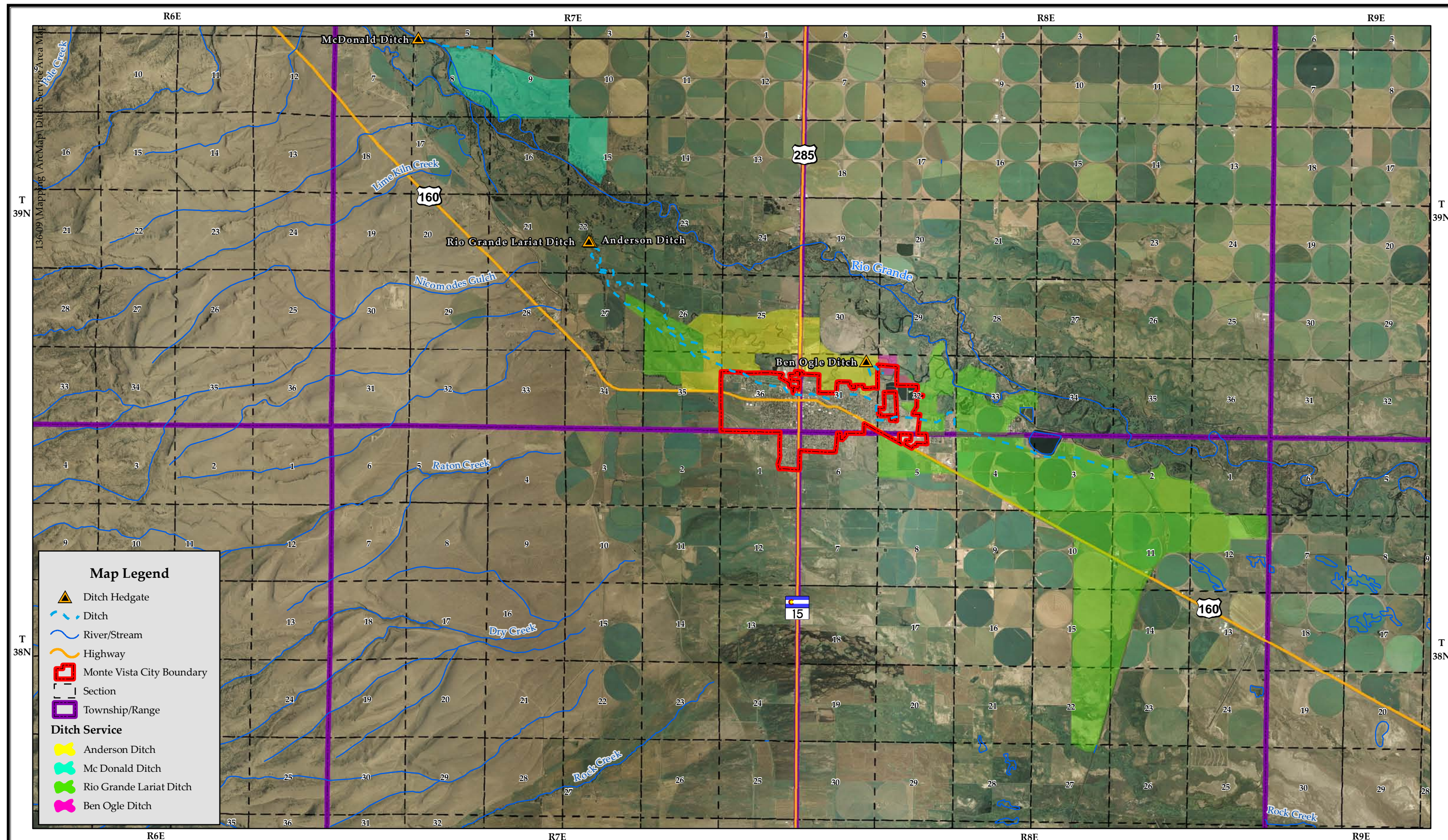












555 RiverGate Lane, Suite B4-82  
Durango, CO 81301  
(970) 385-2340ph 385-2341fx  
www.BikisWater.com



0 0.5 1 2 3 Miles  
1 inch = 6,000 feet

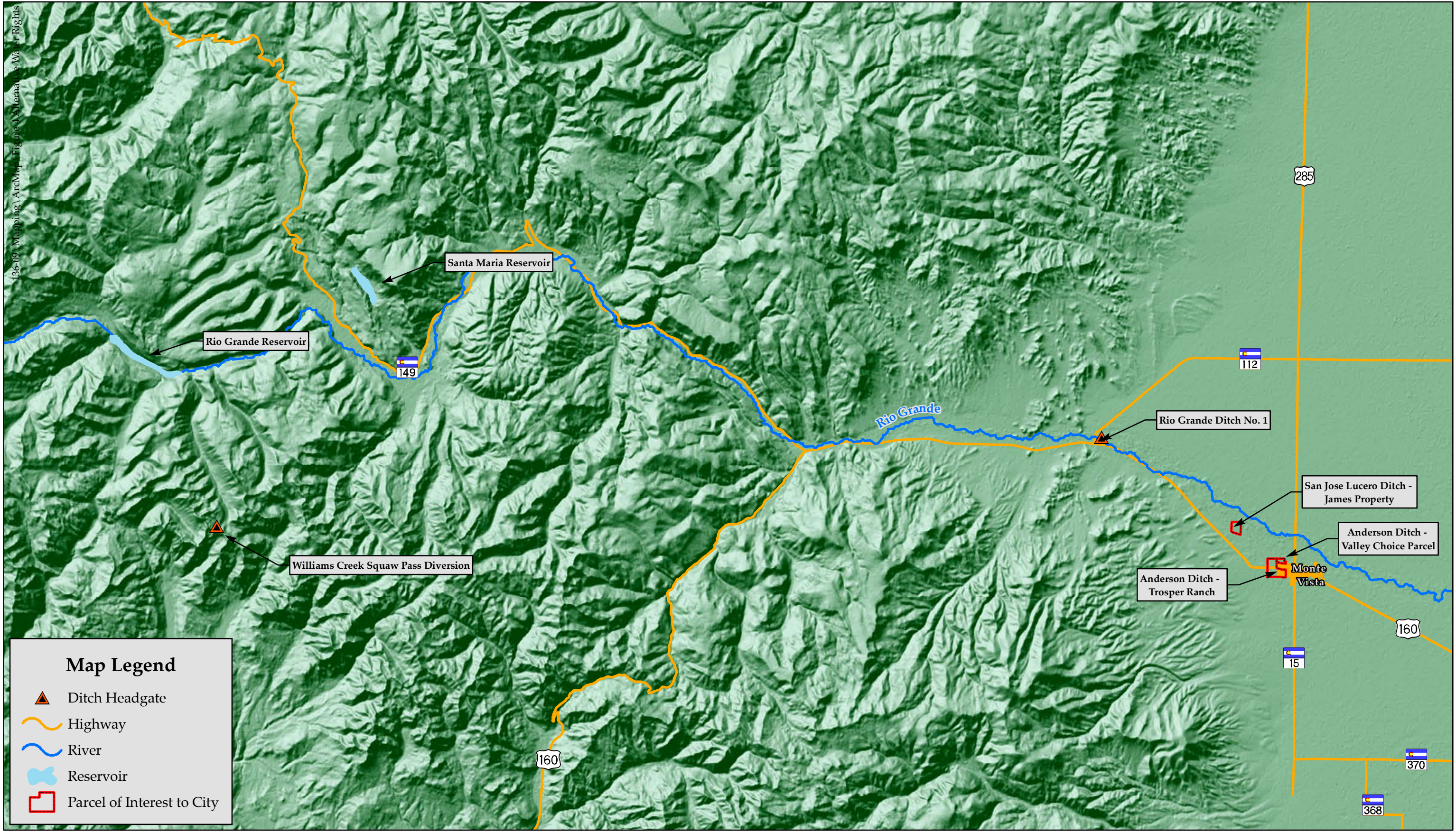
Map Sources:  
Aerial Photography - USDA/FSA, Summer 2009  
Roads - Colorado Department of Transportation  
Rivers and Streams and Ditch Data - Colorado Decision Support Systems  
Township/Range and Sections - US Bureau of Land Management  
Town Boundary - ESRI ArcGIS Data, 2009

Designed by: MJK  
Detail by: DBM  
Date: 04/07/2010  
Scale: 1:72,000

City of Monte Vista  
Ditch Service Area Map

Figure 3





136-09 Mapping / ArcMap / Figure 4 Alternative Water Rights

**Map Legend**

- Ditch Headgate
- Highway
- River
- Reservoir
- Parcel of Interest to City

**BKIS**  
Water Consultants LLC

555 RiverGate Lane, Suite B4-82  
Durango, CO 81301  
(970) 385-2340ph 385-2341fx  
www.BikisWater.com

0 2.5 5 10 15 Miles  
1 inch = 5 miles

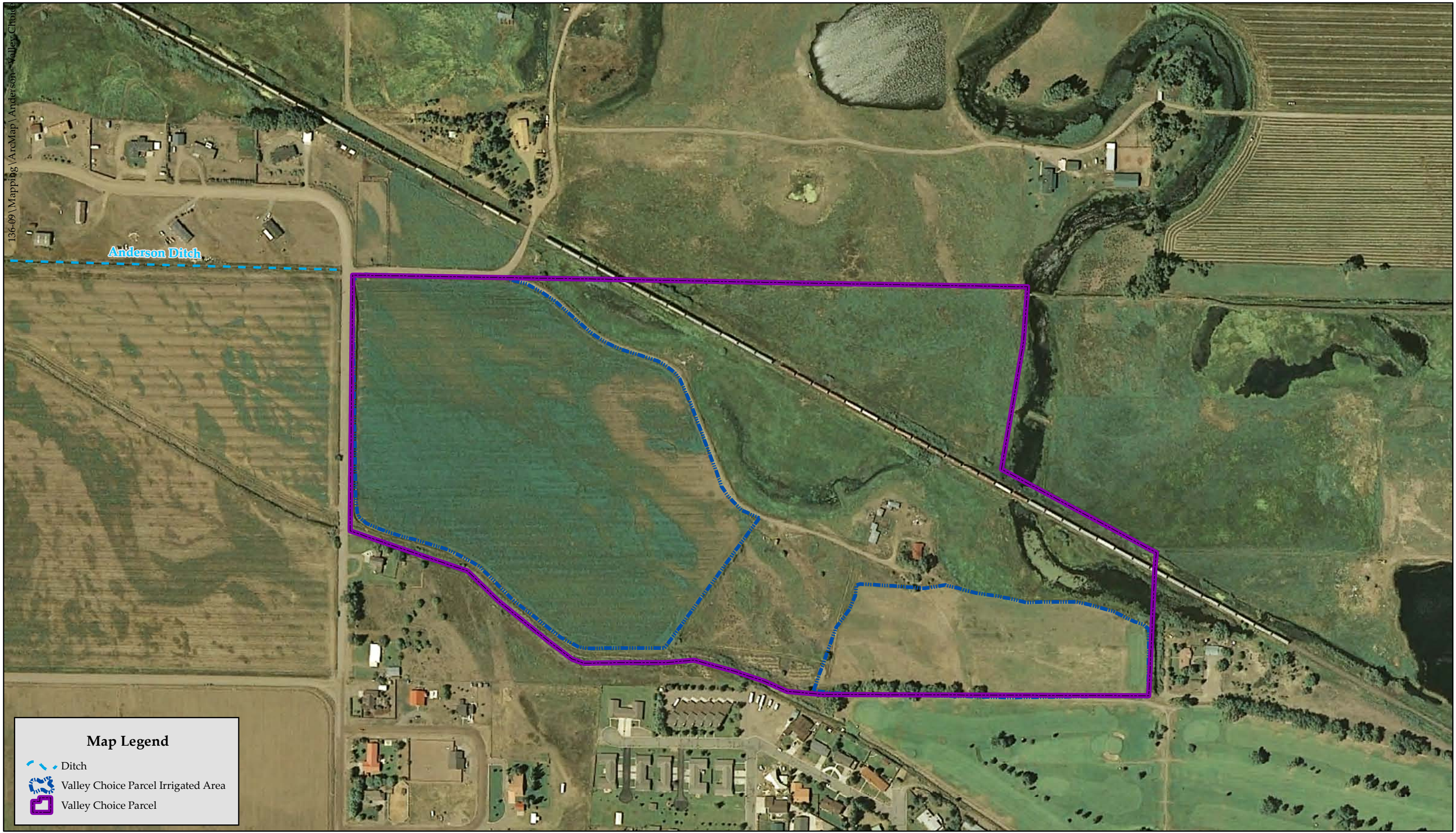
Map Sources:  
Base Map - 30M DEM, USGS  
Parcels - Rio Grande County Assessor  
Hydrography - Colorado Division of Wildlife  
Highways - Colorado Department of Transportation  
Water Rights - Colorado's Decision Support Systems

Designed by: MJK  
Checked by: DBM  
Date: 04/07/2010  
Scale: 1:316,800




**City of Monte Vista**  
**Locations of Alternatives for**  
**Water Rights and Storage Acquisition**

Figure 4





### Map Legend

-  Ditch
-  Valley Choice Parcel Irrigated Area
-  Valley Choice Parcel



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[www.BikisWater.com](http://www.BikisWater.com)



0 150 300 600 900 Feet  
1 inch = 300 feet

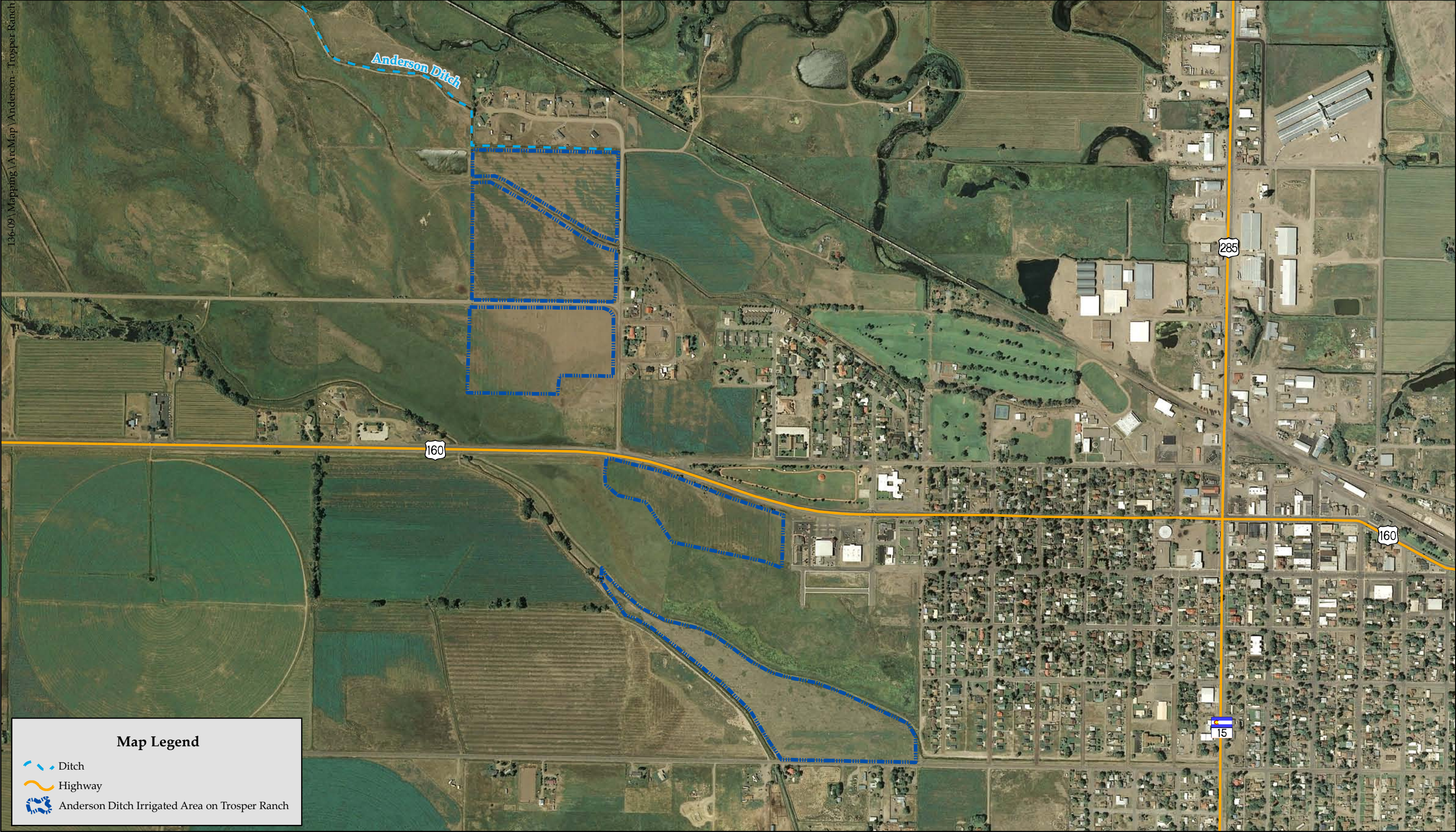
Map Sources:  
Aerial Photography - USDA/FSA, Summer 2009  
Ditch Data - Colorado's Decision Support Systems  
Irrigated Area - BWC Site Visit, 4/5/2010  
Valley Choice Parcel - Rio Grande County Assessor

Designed by: MJK  
Checked by: DBM  
Date: 04/07/2010  
Scale: 1:3,600

City of Monte Vista  
**Anderson Ditch - Valley Choice Parcel  
Irrigated Areas Per 4/5/2010 Field Trip**

Figure 5







**Appendix A:**  
**Construction Fund Loan Application**

# COLORADO WATER CONSERVATION BOARD

## CONSTRUCTION FUND LOAN APPLICATION

**Instructions:** This application should be typed or printed neatly with black ink. Attach additional sheets as necessary to fully answer any question or to provide additional information that would be helpful in the evaluation of this application. When finished, please return this application to:

**THE COLORADO WATER CONSERVATION BOARD**  
Water Supply Planning and Finance Section  
1580 Logan St., Suite 750  
Denver, CO 80203  
Attn: Kirk Russell, P.E. or Anna Mauss, P.E.  
Phone (303) 866-3441 - Fax (303) 894-2578  
e-mail: [kirk.russell@state.co.us](mailto:kirk.russell@state.co.us) or [anna.mauss@state.co.us](mailto:anna.mauss@state.co.us)

**Part A. - Description of the Applicant** (Generally, the applicant is also the prospective owner and sponsor of the proposed project. If this is not the case, please contact the CWCB staff before completing this application.)

1. Name of applicant \_\_\_\_\_ City of Monte Vista \_\_\_\_\_

\_\_\_\_\_ Mailing Address \_\_\_\_\_ 4 Chico Camino \_\_\_\_\_

\_\_\_\_\_ Monte Vista, CO 81144 \_\_\_\_\_

Business Phone ( 719 ) 852-2692 \_\_\_\_\_ Fax Phone ( 719 ) 852-6172 \_\_\_\_\_

Federal ID Number 076477868 \_\_\_\_\_ e-mail Address CityMgr@ci.monte-  
vista.co.us \_\_\_\_\_

2. Person to contact regarding this application:

Name \_\_\_\_\_ Don Van Wormer \_\_\_\_\_

Position/Title \_\_\_\_\_ City Manager \_\_\_\_\_

Address \_\_\_\_\_ 4 Chico Camino, Monte Vista, CO 81144 \_\_\_\_\_

Business Phone ( 719 ) 852-2692 \_\_\_\_\_ Home Phone ( 719 ) 850-2805 \_\_\_\_\_

e-mail Address \_\_\_\_\_ CityMgr@ci.monte-vista.co.us \_\_\_\_\_

3. Type of organization (Ditch Co., Irrigation District, Municipality, etc.): \_\_\_\_\_ Municipality \_\_\_\_\_

Date of Annual Meeting \_\_\_\_\_ NA \_\_\_\_\_

Is the organization incorporated in the State of Colorado? YES \_\_\_\_\_ NO X (If YES, please



## CWCB Construction Fund Loan Application

---

include a copy of the articles of incorporation, and the bylaws with this application form.)

4. Please provide a brief description of the owner's existing water supply facilities and describe any existing operational or maintenance problems. Attach separate sheets if needed, and a map of the service area. The city's water system consists of five wells in the confined aquifer and three wells in the unconfined aquifer (see Feasibility Study for more detail)

---

For existing facilities indicate:

Number of shareholders NA or Number of customers served 6,250 people

Current Assessment per share \$ NA Number of shares NA

Number of acres irrigated 128 Water Right: CFS.

Average water diverted per year: 1,590 acre-feet.

### Part B. - Description of the Project

1. Name of the project or facility Water Rights and Storage Acquisition for Augmentation
2. Purpose of this loan application. Check one.
- ☐ New project
- ☐ Rehabilitation or replacement of existing facility
- ☐ Enlargement of existing facility
- ☐ Emergency Repair
- ☒ Other (describe) Acquisition of water rights to replace depletions
3. If the project is for rehabilitation of an existing reservoir, is the reservoir currently under a storage restriction order from the State Engineer? YES ☐ NO ☒
4. General location of the project. (Please include county, and approximate distance and direction from nearest town, as well as legal description, if known. Water rights are in Anderson Ditch, Williams Creek Squaw Pass Diversion (WCSPD, and Rio Grande Reservoir (see Feasibility Study).
- 5.
6. Please provide a brief narrative description of the proposed project including purpose, need, facilities, type of water uses to be served and service area. Attach separate sheet, if needed. The city requires 321 acre-feet of water to replace depletions from pumping of its wells under full build-out, including transit losses and evaporation. Water is for sale in the Anderson Ditch

- If YES, please explain. The loan is to purchase water rights and storage.

- | <u>NAME</u>                     | <u>ADDRESS and PHONE</u>                               |
|---------------------------------|--|
| <u>Peter Nichols, Attorney</u>  | <u>Trout, Raley, Montañó, Witwer &amp; Freeman, PC</u> |
| <u>(303) 339-5825</u>           | <u>1120 Lincoln Street, Suite 1600</u>                 |
|                                 | <u>Denver, Colorado 80203-2141</u>                     |
| <u>David Mehan, Hydrologist</u> | <u>Bikis Water Consultants, LLC</u>                    |
| <u>(970) 385-2340</u>           | <u>555 RiverGate Lane, Suite B4-82</u>                 |
|                                 | <u>Durango, CO 81301</u>                               |

- Estimated Total Costs: \$

## CWCB Construction Fund Loan Application

---

### Part C. - Project Sponsor Financial Information

Because the CWCB Construction Fund is a revolving fund, it is important that the project sponsor have the financial capacity to repay any loans made by the CWCB. The following information is needed to assist the CWCB in a preliminary assessment of the applicant's financial capacity. It is also requested that the project sponsor submit with this application, copies of the three most recent annual reports, financial statements, corporate reports or other current documentation of financial condition and operations.

1. List any existing long-term liability (multi-year) or indebtedness that exceeds one thousand dollars. For example, bank loans, government agency loans, bond issues, accounts payable, etc. Include names and addresses of lenders, amounts, due dates and maturity dates. Attach a separate schedule, if needed.

<u>Lender Name &amp; Address</u>	<u>Remaining Amount</u>	<u>Annual Payment</u>	<u>Maturity Date</u>
<u>Colorado Water Resources &amp; Power Authority</u>	<u>\$573,785</u>	<u>\$74,892</u>	<u>5/31/2019</u>
<u>SunTrust Equipment Finance &amp; Leasing</u>	<u>\$3,495,000</u>	<u>\$281,430</u>	<u>12/1/2028</u>
<u>Accrued Compensated Absences</u>	<u>\$271,000</u>	<u>Payable upon termination</u>	

2. Are any of the above liabilities now in default, or been in default at any time in the past?  
YES\_\_\_\_ NO X. If YES, please give detailed explanation. \_\_\_\_\_  
\_\_\_\_\_

3. Please provide a brief narrative description of sources of funding, in addition to the CWCB, which have been explored for this project (Examples would be Banks, USDA Rural Development, NRCS, Colorado Water Resources and Power Development Authority, Colorado Division of Local Government, etc.). The only other source of funding which could be available is a loan from a local bank.  
\_\_\_\_\_  
\_\_\_\_\_

4. What collateral will you be offering for this loan? Possibilities include a pledge of revenues, the project itself, real estate, water rights. The water rights being purchased.  
\_\_\_\_\_

The above statements are true, to the best of my knowledge:

Signature of Applicant \_\_\_\_\_

Printed Name Don Van Wormer

### Part C. - Project Sponsor Financial Information

1. List any existing long-term liability (multi-year) or indebtedness that exceeds one thousand dollars. For example, bank loans, government agency loans, bond issues, accounts payable, etc. Include names and addresses of lenders, amounts, due dates and maturity dates. Attach a separate schedule, if needed.

2. Are any of the above liabilities now in default, or been in default at any time in the past?  
YES\_\_\_ NO X . If YES, please give detailed explanation. \_\_\_\_\_

3. Please provide a brief narrative description of sources of funding, in addition to the CWCB, which have been explored for this project (Examples would be Banks, USDA Rural Development, NRCS, Colorado Water Resources and Power Development Authority, Colorado Division of Local Government, etc.). The only other source of funding which could be available is a loan from a local bank.

4. What collateral will you be offering for this loan? Possibilities include a pledge of revenues, the project itself, real estate, water rights. The water rights being purchased.

The above statements are true, to the best of my knowledge:

Signature of Applicant [Signature]

Printed Name Don Van Wormer

## **CWCB Construction Fund Loan Application**

---

Title City Manager

Date January 31, 2010

## **Appendix B:**

### **Water User Rate Schedule**

**RESOLUTION NO. 14-2003**

**CITY OF MONTE VISTA  
WATER RATES AND FEES  
5 Year Rate Schedule**

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Unmetered Customers					
<i>Per equivalent residential unit</i>	\$ 32.80	\$ 32.80	\$ 32.80	\$ 32.80	\$ 32.80
Metered Customers					
<i>Service Charge per month</i>					
<i>¾-inch meter</i>	\$ 7.15	\$ 8.60	\$ 10.05	\$ 11.50	\$ 12.90
<i>1-inch meter</i>	\$ 14.50	\$ 15.00	\$ 15.50	\$ 16.00	\$ 16.60
<i>1 ½-inch meter</i>	\$ 23.50	\$ 26.00	\$ 28.50	\$ 31.00	\$ 33.70
<i>2-inch meter</i>	\$ 31.70	\$ 35.40	\$ 39.10	\$ 42.80	\$ 46.40
<i>3-inch meter</i>	\$ 49.10	\$ 56.20	\$ 63.30	\$ 70.40	\$ 77.50
<i>4-inch meter</i>	\$ 73.60	\$ 91.20	\$ 108.80	\$ 126.40	\$ 144.00
<i>6-inch meter</i>	\$ 98.10	\$ 122.60	\$ 147.10	\$ 171.60	\$ 196.10
<i>Volume Charge</i>					
<i>Per thousand gallons</i>	\$ 1.03	\$ 1.14	\$ 1.25	\$ 1.35	\$ 1.46

**Rates for water service customers outside of the City's corporate boundaries shall be two times the above listed rates for all categories.**

RESOLUTION NO: 11-2003 AMENDED

CITY OF MONTE VISTA POLICY REGARDING WATER TAP FEES

WHEREAS, it is the policy of the City of Monte Vista to recognize the growth potential and the need for an equitable rate structure for water taps based on the size of tap and water needed for the future growth potential; and

WHEREAS, Resolution 5-2003, dated April 17, 2003, provided for an increase in water tap fees to \$2,500 for a ¾ inch tap with further incremental increases for larger taps (as set by Resolution) and which amended Resolution No. 9-96 (setting previous water tap fees for the City of Monte Vista) on July 18, 1996.

THEREFORE, it is hereby resolved by the City Council of the City of Monte Vista, that water tap fees for connections to the City water system are set as follows:

TAP SIZE	INSIDE CITY LIMITS			OUTSIDE CITY LIMITS (if allowable-certain restrictions may apply)		
	Allocation of Tap Fee for Acquisition of Water Rights	Basic Tap Fee	Total Tap Fee	Allocation of Tap Fee for Acquisition of Water Rights	Tap Fee	Total Tap Fee
Water Tap Rates						
¾-1 Inch (Residential)	\$1,700	\$800	\$2,500	\$3,400	\$1,600	\$5,000
1 Inch (Commercial)	\$1,700	\$1,500	\$3,200	\$3,400	\$3,000	\$6,400
1 ½ Inch	\$2,400	\$2,000	\$4,400	\$4,800	\$4,000	\$8,800
2 Inch	\$3,200	\$2,500	\$5,700	\$6,400	\$5,000	\$11,400
3 Inch	\$4,200	\$3,400	\$7,600	\$8,400	\$6,800	\$15,200
4 Inch	\$5,400	\$4,300	\$9,700	\$10,800	\$8,600	\$19,400

Acquisition fee and tap fee shall be segregated into separate funds for the acquisition of water rights, new well construction, and for upgrading of the distribution system.

DONE and SIGNED this 5<sup>th</sup> day of June 2003.

  
Mayor

ATTEST:

  
Rhonda Valdez, Deputy City Clerk



Ernest Martinez  
Councilor

Jose A. Maldonado  
Councilor

Miguel A. Velez  
Councilor

Quinn Crossner  
Councilor

## **Appendix C:**

### **Financial Statements**

Comprehensive Annual Financial Report (CAFR)

- 2008 CAFR
- 2007 CAFR
- 2006 CAFR
- 2005 CAFR

The City of Monte Vista financial statements may be found at the following website:

<http://www.cityofmontevista.com/resource-documents.htm>

City of Monte Vista City Service Utility Fund  
Water and Sewer Allocation  
December 31, 2009

	CITY SERVICE UTILITY FUND	ALLOCATION OF CITY UTILITY	
		WATER UTILITY	SEWER UTILITY
<b>ASSETS</b>			
<b>Current Assets:</b>			
Cash and Cash Equivalents	\$ 941,392	470,696	470,696
Restricted Cash and Cash Equivalents	102,447	102,447	-
Accounts Receivable	72,422	15,479	56,943
Due From County Treasurer	17,741	7,631	10,110
Inventory	77,783	66,900	10,883
<b>Total Current Assets</b>	<b>\$ 1,211,785</b>	<b>\$ 663,153</b>	<b>\$ 548,632</b>
<b>Noncurrent Assets:</b>			
Land	\$ 22,000	\$ 11,000	\$ 11,000
Water Rights	129,751	129,751	-
Buildings	47,650	23,825	23,825
Equipment	506,781	246,688	260,093
Treatment Plant	4,275,923	600,549	3,675,374
Transmission and Distribution	3,204,656	1,477,340	1,727,316
Vehicles	194,555	97,278	97,278
Accumulated Depreciation	(6,970,548)	(2,235,648)	(4,734,900)
Bond Issue Costs	38,949	-	38,949
Accumulated Amortization	(22,719)	-	(22,719)
<b>Total Noncurrent Assets</b>	<b>\$ 1,426,998</b>	<b>\$ 350,783</b>	<b>\$ 1,076,216</b>
<b>TOTAL ASSETS</b>	<b>\$ 2,638,783</b>	<b>\$ 1,013,936</b>	<b>\$ 1,624,847</b>
<b>LIABILITIES</b>			
<b>Current Liabilities</b>			
Accounts Payable	\$ 52,838	32,873	19,965
Notes Payable	49,624	-	49,624
Accrued Interest Payable	4,303	-	4,303
<b>Total Current Liabilities</b>	<b>\$ 106,765</b>	<b>\$ 32,873</b>	<b>\$ 73,892</b>
<b>Noncurrent Liabilities</b>			
Notes Payable	\$ 524,161	\$ -	\$ 524,161
Accrued Compensated Absences	92,979	46,490	46,490
<b>Total Noncurrent Liabilities</b>	<b>\$ 617,140</b>	<b>\$ 46,490</b>	<b>\$ 570,651</b>
<b>TOTAL LIABILITIES</b>	<b>\$ 723,905</b>	<b>\$ 79,363</b>	<b>\$ 644,543</b>
<b>NET ASSETS</b>			
Invested in Capital Assets, Net of Related Debt	\$ 853,213	\$ 350,783	\$ 502,431
Unrestricted	\$ 1,061,665	\$ 583,791	\$ 477,874
<b>TOTAL NET ASSETS</b>	<b>\$ 1,914,878</b>	<b>\$ 934,573</b>	<b>\$ 980,305</b>

City of Monte Vista City Utility Service Fund  
Water and Sewer Allocation  
December 31, 2008

	CITY SERVICE UTILITY FUND	ALLOCATION OF CITY UTILITY	
		WATER UTILITY	SEWER UTILITY
<b>ASSETS</b>			
<b>Current Assets:</b>			
Cash and Cash Equivalents	\$ 955,856	477,928	477,928
Restricted Cash and Cash Equivalents	100,501	100,501	-
Accounts Receivable	57,704	17,140	40,564
Due From County Treasurer	17,230	8,090	9,140
Inventory	68,516	57,203	11,313
<b>Total Current Assets</b>	<b>\$ 1,199,807</b>	<b>\$ 660,862</b>	<b>\$ 538,945</b>
<b>Noncurrent Assets:</b>			
Land	\$ 22,000	\$ 11,000	\$ 11,000
Water Rights	129,751	129,751	-
Buildings	47,650	23,825	23,825
Equipment	506,781	246,688	260,093
Treatment Plant	4,275,923	600,549	3,675,374
Transmission and Distribution	3,204,656	1,477,340	1,727,316
Vehicles	194,555	97,278	97,278
Accumulated Depreciation	(6,829,488)	(2,192,518)	(4,636,970)
Bond Issue Costs	38,949	-	38,949
Accumulated Amortization	(21,421)	-	(21,421)
<b>Total Noncurrent Assets</b>	<b>\$ 1,569,356</b>	<b>\$ 393,913</b>	<b>\$ 1,175,444</b>
<b>TOTAL ASSETS</b>	<b>\$ 2,769,163</b>	<b>\$ 1,054,775</b>	<b>\$ 1,714,389</b>
<b>LIABILITIES</b>			
<b>Current Liabilities</b>			
Accounts Payable	\$ 72,300	22,907	49,393
Notes Payable	47,464	-	47,464
Accrued Interest Payable	4,659	-	4,659
<b>Total Current Liabilities</b>	<b>\$ 124,423</b>	<b>\$ 22,907</b>	<b>\$ 101,516</b>
<b>Noncurrent Liabilities</b>			
Notes Payable	\$ 573,785	\$ -	\$ 573,785
Accrued Compensated Absences	89,517	44,759	44,759
<b>Total Noncurrent Liabilities</b>	<b>\$ 663,302</b>	<b>\$ 44,759</b>	<b>\$ 618,544</b>
<b>TOTAL LIABILITIES</b>	<b>\$ 787,725</b>	<b>\$ 67,666</b>	<b>\$ 720,060</b>
<b>NET ASSETS</b>			
Invested in Capital Assets, Net of Related Debt	\$ 928,947	\$ 384,333	\$ 544,615
Unrestricted	\$ 1,052,491	\$ 602,777	\$ 449,715
<b>TOTAL NET ASSETS</b>	<b>\$ 1,981,438</b>	<b>\$ 987,109</b>	<b>\$ 994,329</b>

City of Monte Vista City Service Utility Fund  
Water and Sewer Allocation  
December 31, 2007

	CITY SERVICE UTILITY FUND	ALLOCATION OF CITY UTILITY	
		WATER UTILITY	SEWER UTILITY
<b>ASSETS</b>			
<b>Current Assets:</b>			
Cash and Cash Equivalents	\$ 929,690	464,845	464,845
Restricted Cash and Cash Equivalents	82,706	82,706	-
Accounts Receivable	30,537	15,040	15,497
Due From County Treasurer	14,574	6,386	8,188
Inventory	59,118	10,013	49,105
<b>Total Current Assets</b>	<b>\$ 1,116,625</b>	<b>\$ 578,990</b>	<b>\$ 537,635</b>
<b>Noncurrent Assets:</b>			
Land	\$ 22,000	\$ 11,000	\$ 11,000
Water Rights	129,751	129,751	-
Buildings	46,018	23,009	23,009
Equipment	499,290	242,335	256,955
Treatment Plant	4,275,923	620,220	3,655,703
Transmission and Distribution	3,185,215	1,457,900	1,727,315
Vehicles	194,555	97,278	97,278
Accumulated Depreciation	(6,690,449)	(2,170,866)	(4,519,583)
Bond Issue Costs	38,949	-	38,949
Accumulated Amortization	(20,122)	-	(20,122)
<b>Total Noncurrent Assets</b>	<b>\$ 1,681,130</b>	<b>\$ 410,627</b>	<b>\$ 1,270,504</b>
<b>TOTAL ASSETS</b>	<b>\$ 2,797,755</b>	<b>\$ 989,617</b>	<b>\$ 1,808,139</b>
<b>LIABILITIES</b>			
<b>Current Liabilities</b>			
Accounts Payable	\$ 23,670	11,671	11,999
Notes Payable	57,360	-	57,360
Accrued Interest Payable	8,083	-	8,083
<b>Total Current Liabilities</b>	<b>\$ 89,113</b>	<b>\$ 11,671</b>	<b>\$ 77,442</b>
<b>Noncurrent Liabilities</b>			
Notes Payable	\$ 691,022	\$ -	\$ 691,022
Accrued Compensated Absences	89,358	44,679	44,679
<b>Total Noncurrent Liabilities</b>	<b>\$ 780,380</b>	<b>\$ 44,679</b>	<b>\$ 735,701</b>
<b>TOTAL LIABILITIES</b>	<b>\$ 869,493</b>	<b>\$ 56,350</b>	<b>\$ 813,143</b>
<b>NET ASSETS</b>			
Invested in Capital Assets, Net of Related Debt	\$ 913,921	\$ 401,212	\$ 512,709
Unrestricted	\$ 1,014,341	\$ 532,055	\$ 482,287
<b>TOTAL NET ASSETS</b>	<b>\$ 1,928,262</b>	<b>\$ 933,267</b>	<b>\$ 994,996</b>

**CITY OF MONTE VISTA, COLORADO**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**December 31, 2008**

**NOTE 9 SEGMENT INFORMATION FOR ENTERPRISE FUND**

Because several of the segments are provided for in one fund, several items cannot be allocated between each segment. Therefore, a condensed statement of net assets and statement of cash flows, as well as some line items have been omitted in the segment information.

The following is a summary of operating income and expense information on the various segments of the Enterprise Funds.

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
Operating Revenue	\$ 789,767	\$ 762,142	\$ 1,551,909
Operating Expense	607,403	669,228	1,276,631
Depreciation Expense	70,752	68,287	139,039
Total Operating Expense	<u>678,155</u>	<u>737,515</u>	<u>1,415,670</u>
OPERATING INCOME (LOSS)	111,612	24,627	136,239
Nonoperating Revenues (Expenses)	7,349	(23,970)	(16,621)
Capital Contributions	7,200	12,000	19,200
Operating Transfers	<u>(43,938)</u>	<u>(41,704)</u>	<u>(85,642)</u>
NET INCOME (LOSS)	<u>\$ 82,223</u>	<u>\$ (29,047)</u>	<u>\$ 53,176</u>
Property, Plant and Equipment			
Additions	\$ 24,002	\$ 4,561	\$ 28,563
Accumulated Depreciation	\$ 1,947,684	\$ 4,881,804	\$ 6,829,488
Notes Payable	\$ 310,624	\$ 310,625	\$ 621,249

**CITY OF MONTE VISTA, COLORADO**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**December 31, 2007**

**NOTE 9 SEGMENT INFORMATION FOR ENTERPRISE FUND**

Because several of the segments are provided for in one fund, several items cannot be allocated between each segment. Therefore, a condensed statement of net assets and statement of cash flows, as well as some line items have been omitted in the segment information.

The following is a summary of operating income and expense information on the various segments of the Enterprise Funds.

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
Operating Revenue	\$ 748,064	\$ 711,065	\$ 1,459,129
Operating Expense	467,502	476,560	944,062
Depreciation Expense	46,346	139,036	185,382
Total Operating Expense	<u>513,848</u>	<u>615,596</u>	<u>1,129,444</u>
OPERATING INCOME (LOSS)	234,216	95,469	329,685
Nonoperating Revenues (Expenses)	(61,734)	(93,202)	(154,936)
Capital Contributions	3,200	6,000	9,200
Operating Transfers	<u>(138,656)</u>	<u>(31,398)</u>	<u>(170,054)</u>
NET INCOME (LOSS)	<u>\$ 37,026</u>	<u>\$ (23,131)</u>	<u>\$ 13,895</u>
Property, Plant and Equipment			
Additions	\$ 57,991	\$ 39,590	\$ 97,581
Accumulated Depreciation	\$ 1,876,932	\$ 4,813,517	\$ 6,690,449
Notes Payable	\$ 374,191	\$ 374,191	\$ 748,382



**CITY OF MONTE VISTA, COLORADO**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**December 31, 2006**

The total covered payroll for the police pension plan was \$403,132. The 14.2% contribution for 2006 was \$57,245 for the City, and the 6.2% contribution for 2006 was \$24,994 for the employees. There were 11 employees participating in the plan. Employees are automatically vested in their contributions and they become fully vested in the City's contributions and earnings after five years of service.

The financial report can be obtained by writing to ICMA Retirement Corporation, 777 North Capital Street NE, Washington DC, 20002-4240 or by calling 1-800-669-7400.

**NOTE 8 SEGMENT INFORMATION FOR ENTERPRISE FUND**

Because several of the segments are provided for in one fund, several items cannot be allocated between each segment. Therefore, a condensed statement of net assets and statement of cash flows, as well as some line items have been omitted in the segment information.

The following is a summary of operating income and expense information on the various segments of the Enterprise Funds.

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
Operating Revenue	\$ 732,817	\$ 753,610	\$ 1,486,427
Operating Expense	404,015	413,033	817,048
Depreciation Expense	77,910	237,826	315,736
Total Operating Expense	<u>481,925</u>	<u>650,859</u>	<u>1,132,784</u>
OPERATING INCOME (LOSS)	250,892	102,751	353,643
Nonoperating Revenues (Expenses)	(68,675)	(98,374)	(167,049)
Capital Contributions	8,800	16,500	25,300
Operating Transfers	<u>(31,374)</u>	<u>(31,374)</u>	<u>(62,748)</u>
NET INCOME (LOSS)	<u>\$ 159,643</u>	<u>\$ (10,497)</u>	<u>\$ 149,146</u>
Property, Plant and Equipment			
Additions	\$ 38,065	\$ 7,292	\$ 45,357
Accumulated Depreciation	\$ 1,808,415	\$ 4,696,652	\$ 6,505,067
Notes Payable	\$ 401,599	\$ 401,599	\$ 803,198

**Appendix D:**  
**Decrees for City Wells**  
**(Case Nos. W847 and 88CW13)**

COPY

THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

WATER DIVISION 3  
STATE OF COLORADO  
JUL 3 1975  
well Adjudication

CASE NO. W- 847

CARLA R. SHAWCROFT  
WATER CLERK

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO. )  
)  
)  
)  
)  
)

JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

WELL NO. 1 W-847

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 1975 and served as provided by law, that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 1 Registration No. 4571<sup>5</sup>
3. Location of well and point of diversion:  
SE $\frac{1}{4}$  SE $\frac{1}{4}$ , Section 36, Township 39 North, Range 7 East, NMPM,  
at a point 150 feet from South Section line and 250 feet from  
East Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Domestic and municipal.
6. Amount and source and means of diversion:  
1100 gallons per minute, being 2.45 cubic feet of water per second of time,  
being 4.90 acre feet of water in a period of twenty-four hours, from  
(confined) (~~unconfined~~) aquifer.
7. Priority date of appropriation:  
September 30, 1950.

8. That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 197 5.

Donald G. Smith  
Donald G. Smith, Water Judge

RECEIVED

MAY 1 '78

WATER RESOURCES  
STATE ENGINEER  
GOLD

## PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

(X) A PERMIT TO USE GROUND WATER  
(X) A PERMIT TO CONSTRUCT A WELL  
FOR: (X) A PERMIT TO INSTALL A PUMP

(X) REPLACEMENT FOR NO. 4551

(X) OTHER change in point of diversion W-847

**(1) APPLICANT** - mailing address

NAME City of Monte Vista  
STREET P. O. Box 431  
CITY Monte Vista, Colorado 81144  
(State) (Zip)  
TELEPHONE NO. 852-5926

**(2) LOCATION OF PROPOSED WELL**

County Rio Grande  
SE ¼ of the SE ¼, Section 36  
Twp. 39 N. Rng. 7 E. N.M. P.M.

### (3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 1,100

Average annual amount of ground water  
to be appropriated (acre-feet): 1774 *SEE COND.  
NO. 7*

Number of acres to be irrigated: approx. 910

Proposed total depth (feet): 1,000

Aquifer ground water is to be obtained from:  
confined

Owner's well designation NO. 1

**GROUND WATER TO BE USED FOR:**

( ) HOUSEHOLD USE ONLY - no irrigation (0)  
 (X) DOMESTIC (1) (X) INDUSTRIAL (5)  
 ( ) LIVESTOCK (2) ( ) IRRIGATION (6)  
 (X) COMMERCIAL (4) (X) MUNICIPAL (8)  
 ( ) OTHER (9)

(4) DRILLER

Name Not determined at this time but  
 Street will be licensed driller  
 City \_\_\_\_\_ (State) \_\_\_\_\_ (Zip)  
 Telephone No. \_\_\_\_\_ Lic. No. \_\_\_\_\_

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 92 H/ 1

Basin \_\_\_\_\_ Dist. \_\_\_\_\_

### CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED AS A REPLACEMENT OF WELL NO:4551-R FOR A PUMPING RATE NOT TO EXCEED 1100 GPM. PURSUANT TO 1973 C.R.S 37-90-103(13), THE EXISTING WELL MUST BE ABANDONED WITH THE COMPLETION OF THE NEW WELL, AND PLUGGED ACCORDING TO RULES AND REGULATIONS FOR WATER WELL AND PUMP INSTALLATION CONTRACTORS. THE ENCLOSED AFFIDAVIT MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE NEW WELL, TO AFFIRM PLUGGING OF REPLACED WELL NO. 4551-R.

2) APPLICATION FOR CHANGE IN WATER RIGHT AND ABANDONMENT OF THAT AMOUNT OF WATER NOT PUT TO USE THROUGH THIS WELL SYSTEM MUST BE SUBMITTED TO THE DIV. 3 WATER COURT.

3) TOTALIZING FLOW METERS MUST BE INSTALLED ON THE DISCHARGE OF THIS WELL AND WELL NOS. 4552-R 4553-R, 13163-F AND 19347-F WHEN THE WATER IS PUT TO USE. DIVERSION RECORDS SHALL BE SUBMITTED UPON REQUEST AND AS REQUIRED TO THE DIVISION OF WATER RESOURCES.

4) DEPTH OF THIS WELL SHALL NOT EXCEED 1000 FEET OR CONFINING CLAY LAYER, WHICHEVER COMES FIRST: THE CONFINING CLAY LAYER BEING THE SEPARATION BETWEEN THE UNCONFINED AND CONFINED AQUIFERS. (CONT. ON ATTACHED SHEET)

APPLICATION APPROVED

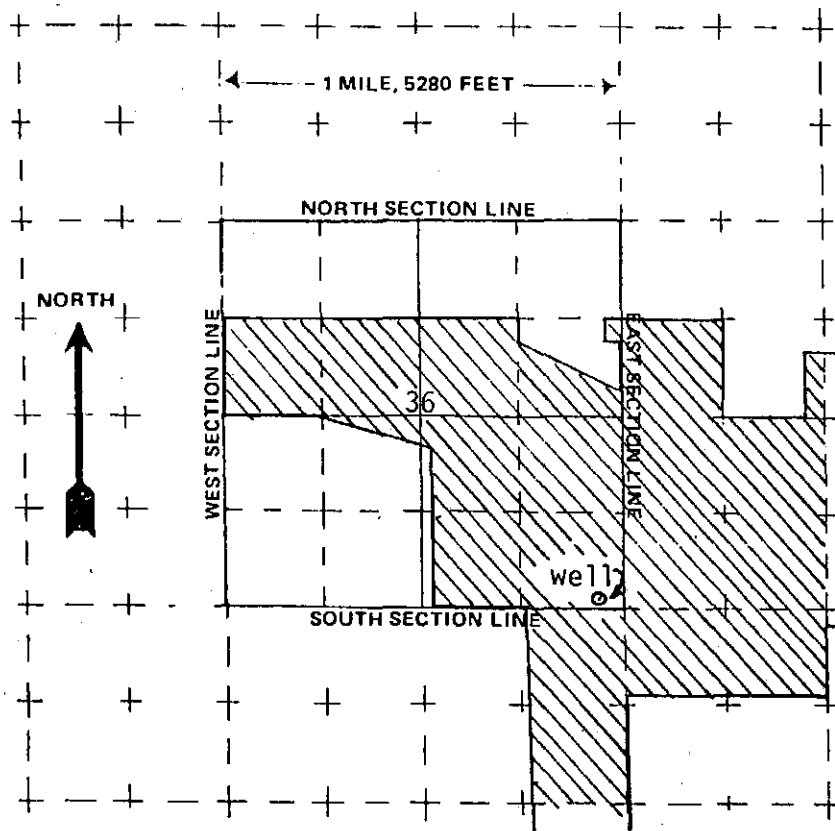
PERMIT NUMBER A49551-KF

DATE ISSUED JUN 08 1978

EXPIRATION DATE JUN 08 1979

BY Bruce E. DeJure  
(STATE ENGINEER)

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

150 ft. from south sec. line  
(north or south)  
320 ft. from east sec. line  
(east or west)

LOT 24 BLOCK 1 FILING #  
Glendale Addition  
SUBDIVISION City of Monte Vista

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: City of Monte Vista  
No. of acres city lot; 0.09 ac. Will this be the only well on this tract? Yes

**(8) PROPOSED CASING PROGRAM**

Plain Casing  
16 in. from 0 ft. to 550 ft.  
Perforated casing  
12 in. from 550 ft. to 1000 ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

S. 28° W., 150 feet  
Old well will be plugged in accordance with Rules and Regulations and Water Well and Pump Installation Contractors Law

**(10) LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): City of Monte Vista No. of acres: approx. 910  
Legal description: Portion of S. 36, T. 39N., R. 7E., N.M.P.M., S. 1, T. 38N., R. 7E., N.M.P.M., S. 31, 32, 33, T. 39N., R. 8E., N.M.P.M., S. 4, 5, 6, T. 38N., R. 8E., N.M.P.M.

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

All uses associated with activities in and functions of a municipality. A municipal sewerage system and sewage treatment lagoons are in operation.

**(12) OTHER WATER RIGHTS** used on this land, including wells.

Type or right	Used for (purpose)	Description of land on which used
Well No.'s 4552, 4553 and 13163-F	Municipal water supply	Same as description in Item 10 above.

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

*[Signature]* City Manager, City of Monte Vista  
SIGNATURE OF APPLICANT(S)

\* (8) Driller has proposed cementing casing to 550 feet to prevent unconfined aquifer infiltration.

CONDITIONS OF APPROVAL

CITY OF MONTE VISTA (CONT.)

- 5) APPLICATION FOR CHANGE IN WATER RIGHT MUST BE SUBMITTED TO THE DIV. 3 WATER COURT.
- 6) PLAIN NON-PERFORATED CASINGS MUST BE INSTALLED AND PROPERLY SEALED TO A MINIMUM DEPTH OF 332 FEET TO PREVENT PUMPING OR APPROPRIATION FROM THIS ZONE.
- 7) AVERAGE ANNUAL APPROPRIATION FROM THIS WELL COMBINED WITH WELL NOS. 4552-R, 4553-R, 13163-F, AND 19347-F SHALL NOT EXCEED THAT AMOUNT OF GROUND WATER HISTORICALLY DIVERTED FOR MUNICIPAL PURPOSES IN THE CITY OF MONTE VISTA. *QNB*

IN THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN DISTRICT COURT  
WATER DIVISION 3  
STATE OF COLORADO

JUL 3 1975

CASE NO. W-847

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO )  
)  
)  
)  
)  
)

CARLA R. SHAWCROFT  
WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

WELL NO. 2 W-847.


THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 1975 and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 2. Registration No. 4552.
3. Location of well and point of diversion:  
SE $\frac{1}{4}$  SW $\frac{1}{4}$ , Section 31, Township 39 North, Range 8 East, NMPM,  
at a point 2420 feet from West Section line and 900 feet  
from South Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Domestic and municipal.
6. Amount and source and means of diversion:  
1800 gallons per minute, being 4.01 cubic feet of water per second of time,  
being 8.02 acre feet of water in a period of twenty-four hours, from  
(confined) ~~unconfined~~ aquifer.
7. Priority date of appropriation:  
September 30, 1950.

8. That said well may be used as an alternate point of diversion for the following surface  
water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 1975.

  
Donald G. Smith, Water Judge

STATE OF COLORADO  
DIVISION OF WATER RESOURCES  
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION  
REGISTRATION NO. 4552 OF WELL

RECEIVED

OCT - 8 1957  
GROUND WATER SECTION

STATE ENGINEER

Registrant City Manager, City of Monte Vista

Date Sept. 18 1957

P.O. Address Monte Vista, Colo.

#2 WELL LOCATION  
County Rio Grande

WELL DATA  
Depth 435 ft. Diameter 12 in.

Casing : 361 ft. Plain;        ft. Perfor.

SE  $\frac{1}{4}$ , SW  $\frac{1}{4}$  Section 31

Static Water Level        flowing        ft. from top

Twp. 39 N. Rge. 8 E. N.M. PM

Yield 1800 (gpm)(cfs) from 50 ft.

Used for Municipal water supply on/at

City of Monte Vista  
(legal description of land or site)

Water conveyed by pipe       , size 4", 6", 8", 12"

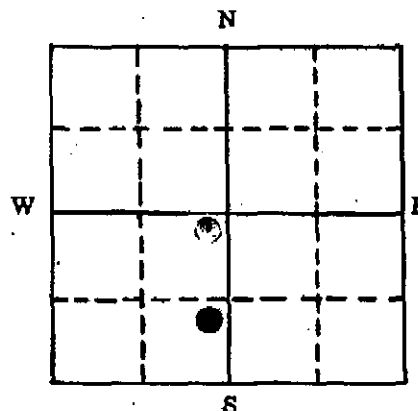
PUMP DATA  
Type Turbine Size 10"

Driven by Electric and Gasoline RPM 1800

Well was first used September, 1950  
Standby        cfs  
for City water using 1200 gpm

Well enlarged no, 19       to  
deepened        (gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE  
SIDE IF AVAILABLE



WELL TO BE LOCATED AS ACCUR-  
ATELY AS POSSIBLE WITHIN A  
SMALL SQUARE WHICH REPRESENTS  
40 ACRES; OR IF IN A TOWN OR  
SUBDIVISION FILL IN THE FOLLOW-  
ING:

Monte Vista  
Town or Subdivision  
Lot 12, block 34, Original town  
Street address or Lot and Block

The above well ~~has~~ (has not) been registered in the Office of the State Engineer prior to May 1, 1957. If Registered give Filing No.       .

If NOT Registered prior to May 1, 1957, a \$5.00 filing fee accompanies this form.

The above statements are true and correct to the best of my knowledge and belief.  
Subscribed and Sworn before me

this 24th day of Sept, 1957  
My commission expires 6-13-60

(SEAL) Ronald Isak City Mgr  
Notary Public

FOR STATE ENGINEER'S USE  
Located in 3-20 district, Rio Grande County for Municipal  
Registration No. 8 in 3-20, on       , 19      .



# WELL NO. 2

DEPTH	ELEV.	DEPTH	LOG	REMARKS
	7554	0	GR. EL.	
			GRAVEL & SAND	45 ft. OF 20" CASING
	7602	45		ELEV. 7608 BOTTOM OF 20" CASING.
			BLUE CLAY	
	7544	110		
	7534	120		
				ELEV. 7509 BOTTOM OF 18" CASING
			CLAY & BOULDERS	
	7424	230		97 ft. OF 16" CASING
	7409	245	SAND & GRAVEL	ELEV. 7419 BOTTOM OF 16" CASING
			BROWN CLAY & BOULDERS	
	7354	280		
			SAND AND BOULDERS	
	7300	324		120 ft. OF 12" CASING
	7284	341	ROCK	ELEV. 7282 BOT. OF 12" CASING
	7189	354	SAND & ROCK	
	7172	368	SAND ROCK	
			LAVA	
	7134	400		
	7119	415	BOULDERS & SAND	
	7104	430	WATER SAND	
	7113	445	WATER GRAVEL	STOPPED DRILLING HERE

IN THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN DISTRICT COURT  
WATER DIVISION 3  
STATE OF COLORADO

JUL 3 1975

CASE NO. W- 847

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )

CITY OF MONTE VISTA, COLORADO )

CARLA R. SHAWCROFT,  
WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

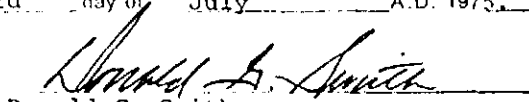
WELL NO. 3 W-847.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 19 75 and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 3. Registration No. 4553.
3. Location of well and point of diversion:  
SW $\frac{1}{4}$  NW $\frac{1}{4}$ , Section 31, Township 39 North, Range 8 East, NMPM,  
at a point 2500 feet from North Section line and 100 feet  
from West Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Domestic.
6. Amount and source and means of diversion:  
1200 gallons per minute, being 2.67 cubic feet of water per second of time,  
being 5.34 acre feet of water in a period of twenty-four hours, from  
(confined) ~~unconfined~~ aquifer.
7. Priority date of appropriation:  
April 30, 1957.
8. That said well may be used as an alternate point of diversion for the following surface  
water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 1975.



STATE OF COLORADO  
DIVISION OF WATER RESOURCES  
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION  
REGISTRATION NO. 4553 OF WELL

RECEIVED  
OCT - 8 1957  
GROUND WATER SECT.  
COLORADO  
STATE ENGINEER

Registrant City Manager, City of Monte Vista

Date Sept. 18, 1957

P.O. Address Monte Vista, Colo.

#3 WELL LOCATION  
County Rio Grande 53

WELL DATA  
Depth 700 ft. Diameter 16" - 12" in.

SW 1/4, NW 1/4 Section 31

Casing : 450 ft. Plain; 250 ft. Perfor.

Twp. 39 N. Rge. 8 E. N.M. PM

Static Water Level Flowing ft. from top

Yield 1200 (gpm) ~~(cfs)~~ from 25 ft.

Used for Municipal water supply on/at

for City of Monte Vista  
(legal description of land or site)

Water conveyed by Pipe size 4", 6", 8", 12"

PUMP DATA  
Type Turbine Size 8"

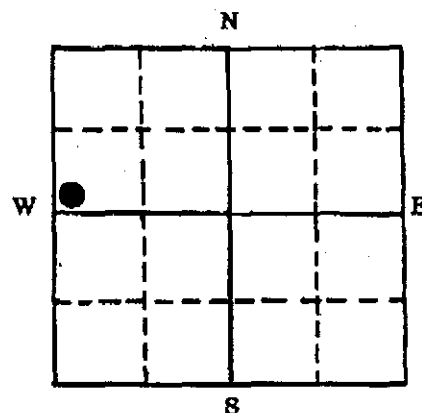
Driven by Electric at 1800 RPM

Well was first used April, 1957

for City water using 1200 g.p.m. ~~(cfs)~~

Well enlarged no, 19   to  
deepened                      (gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE  
SIDE IF AVAILABLE



WELL TO BE LOCATED AS ACCUR-  
ATELY AS POSSIBLE WITHIN A  
SMALL SQUARE WHICH REPRESENTS  
40 ACRES; OR IF IN A TOWN OR  
SUBDIVISION FILL IN THE FOLLOW-  
ING:

Aldrich Addition, Monte Vista  
Town or Subdivision

The above well ~~has not~~ has not been registered in the Office of the State Engineer prior  
to May 1, 1957. If Registered give Filing No.                     

If NOT Registered prior to May 1, 1957, a \$5.00 filing fee accompanies this form.

The above statements are true and correct to the best of my knowledge and belief.  
Subscribed and Sworn before me

this 17th day of Sept., 1957

My commission expires 6-13-60

(SEAL) Paul J. Sanders  
Notary Public

City of Monte Vista  
Registrant

Ronald Iscke, City Mgr.

FOR STATE ENGINEER'S USE  
Located in 3-20 district, Rio Grande County for MUNICIPAL

Registration No. 9 in 3-20, on                     , 19

# LOG OF WELL

## DESCRIPTION OF MATERIAL DRILLED

## METHOD OF DRILLING

ROTARY RIG

### Feet

1	to	3	Top Soil
3	to	30	Sand & Clay Streak
30	to	52	Sand & Clay Streak
52	to	74	Blue Clay & Sand Streak
74	to	97	Blue Clay & Sand Streak
97	to	110	Blue Sand
110	to	124	Blue Clay
124	to	152	Clay & Sand Streak
152	to	175	Clay & Sand Streak
175	to	198	Clay & Gravel Streak
198	to	220	Blue Clay & Sand Streak
220	to	243	Blue Clay & Sand Streak
243	to	266	Rock Gravel & Sand Streak
266	to	289	Rock Gravel & Sand Streak
289	to	308	Rock Streaks
308	to	330	Rock Streaks
330	to	353	Rock Streaks Hard
353	to	375	Rock Streak
375	to	398	Rock Streak
398	to	420	Rock Streak
420	to	442	Sand & Gravel W/Boulders
442	to	466	Sand & Gravel W/Boulders
466	to	490	Gravel & Clay Streaks
490	to	513	Gravel & Sand Streaks
513	to	536	Rock Sand & Blue Clay Streaks
536	to	556	" " " " "
556	to	579	" " " " "
579	to	601	" " " " "
601	to	624	" " " " "
624	to	646	" " " " "
646	to	669	Hard Gravel
669	to	691	Hard Gravel
691	to	700	Sand & Clay Streaks
END			

THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN DISTRICT COURT  
WATER DIVISION 3  
STATE OF COLORADO

CASE NO. W-847

JUL 3 1975

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO )  
)  
)  
)  
)  
)

CARLA R. SHAWCROFT,  
- WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

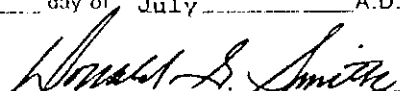
WELL NO. 4 W-847

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 19 72; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 19 75 and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 4 Registration No. 13163-F
3. Location of well and point of diversion:  
SW $\frac{1}{4}$  SE $\frac{1}{4}$ , Section 32, Township 39 North, Range 8 East, NMPM,  
at a point 2725 feet from West Section line and 100 feet  
from South Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Domestic and municipal.
6. Amount and source and means of diversion:  
2300 gallons per minute, being 5.12 cubic feet of water per second of time,  
being 10.24 acre feet of water in a period of twenty-four hours, from  
(confined) ~~unconfined~~ aquifer.
7. Priority date of appropriation:  
September 23, 1968.
8. That said well may be used as an alternate point of diversion for the following surface  
water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 197 5.

  
Donald G. Smith, Water Judge

**RECEIVED**  
JUL 29 1968  
GROUND WATER SECT.  
COLORADO  
STATE ENGINEER

APPLICATION FOR: ☒ A PERMIT TO USE GROUND WATER  
☒ A PERMIT TO CONSTRUCT A WELL  
☐ REPLACEMENT FOR NO. \_\_\_\_\_  
(Reason)  
☐ OTHER

## PRINT OR TYPE

## LOCATION OF WELL

APPLICANT City of Monte Vista  
Street Address 720 First Ave.  
City & State Monte Vista, Colo.  
Use of ground water: Municipal Water Sys  
Owner of land on which well  
Is located City of Monte Vista  
Number of acres  
to be 840 Acres in City  
Legal description of  
Irrigated land SE 1/4 Sec 32, T 39N 8E NM  
Other water rights on  
this land none  
Owner of irrigated  
land City of Monte Vista  
Aquifer(s) ground water is to be obtained  
from Below 450'

COUNTY Rio Grande  
SW 1/4, SE 1/4, sec. 32  
T. 39N, R. 8E, NM P.M.  
Street or  
Lot & Block Sherman Ave.  
City or  
Subdivision Stampede Grounds  
Ground Water Basin \_\_\_\_\_  
Water Management  
District \_\_\_\_\_

## LOCATE WELL ON THE BACK OF THIS SHEET

Driller Licensed No. \_\_\_\_\_  
Driller's  
Address \_\_\_\_\_

## ESTIMATED WELL DATA

Est. quantity of ground water to be claimed:  
Est. Max. Yield 2000 GPM or CFS  
Est. average annual amount to be  
used in acre-feet 350  
Storage capacity none AF

Anticipated start of drilling Aug. 15, 1968

## Hole Diameter:

19 in. from 0 ft. to 450 ft.  
15 in. from 450 ft. to 800 ft.

## Casing:

Plain 16 in. from 0 ft. to 450 ft.  
12 in. from 450 ft. to 600 ft.  
Perf. 12 in. from 600 ft. to 800 ft.  
in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

## PUMP DATA:

Type \_\_\_\_\_ HP \_\_\_\_\_ Outlet  
Size \_\_\_\_\_

FOR STATE ENGINEER OR COMMISSION USE

City of Monte Vista  
Signature of Applicant  
Ronald S. Skae, City Manager  
CONDITIONS OF APPROVAL

NO. GW 2793

APPLICATION APPROVED:  
VALID FOR ONE (1) YEAR AFTER DATE ISSUED  
UNLESS EXTENDED FOR GOOD CAUSE SHOWN TO  
THE ISSUING AGENCY

PERMIT NO. 013163-F CONDITIONAL ☐

DATE ISSUED AUG 30 1968

STATE ENGINEER Ralph Owen or CHAIRMAN GROUND  
WATER COMMISSION

By Harlan W. Skae

APPLICATION MUST BE COMPLETED SATISFACTORILY BEFORE ACCEPTANCE

(OVER)

Index No. 1337  
IDWDs 3-20  
Use 8  
Registered \_\_\_\_\_

STATE OF COLORADO  
DIVISION OF WATER RESOURCES  
OFFICE OF THE STATE ENGINEER

**RECEIVED**  
OCT 22 1968  
GROUND WATER SECT.  
COLORADO  
STATE ENGINEER

MAP AND STATEMENT FOR WATER WELL FILING  
PERMIT NUMBER 013163-F

STATE OF COLORADO )  
COUNTY OF Rio Grande ) SS

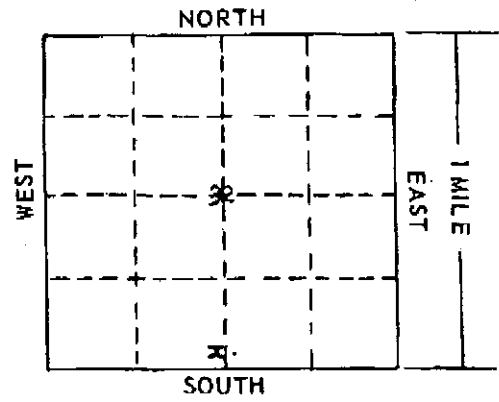
WELL LOCATION  
53 County

Know all men by these presents: That the undersigned  
CITY OF MONTE VISTA, COLO.  
Ronald Iske, City Manager  
claimant(s), whose address is No. 720 First Ave

Rio Grande County  
SW SE  
SS SW 1/4 of 1/4 sec. 32  
T. 39N R. 8E NM P.M.

INDICATE WELL LOCATION ON DIAGRAM

City Monte Vista, Colorado, states:  
Claimant(s) is ### the owner(s) of the well described hereon;  
the total number of acres of land to be irrigated from this well  
Municipal  
Water supply  
is 1.2 acre, work was commenced on this well by actual con-  
struction First day of Sept., 1968;  
the yield to be used from said well is 2000 (gpm), for  
which claim is hereby made for Municipal supply purposes;  
that the average annual amount of water to be diverted is  
about 350 acre-feet; and that the aforementioned  
statements are made and this map and statement are filed in



WELL SHALL BE LOCATED WITH REFERENCE  
TO GOVERNMENT SURVEY CORNERS OR MON-  
UMENTS, OR SECTION LINES BY DISTANCE  
AND BEARING.

compliance with the law!  
Ronald Iske  
City of Monte Vista by City Manager  
Claimant(s)  
Subscribed before me on this 18th day of  
October, 1968.

80' ft. from South section line.  
(North or South)  
2680 ft. from West section line.  
(East or West)

My commission expires August 7, 1971  
Roy F. Howard  
Notary Public

Ground Water Basin \_\_\_\_\_  
Water Management  
District \_\_\_\_\_  
Domestic wells may be located by the following:  
LOT \_\_\_\_\_, BLOCK \_\_\_\_\_  
SUBDIVISION \_\_\_\_\_  
FILING # \_\_\_\_\_

WELL DATA  
Date Completed 9/23/68  
Static Water Level Flow  
Total Depth 750'

ACCEPTED FOR FILING IN THE OFFICE OF THE STATE ENGINEER OF COLORADO ON THIS  
\_\_\_\_\_ DAY OF \_\_\_\_\_, 19\_\_\_\_

State Engineer

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM MUST BE AN ORIGINAL COPY ON BOTH SIDES AND SIGNED.  
WHITE copy & GREEN copy must be filed with the State Engineer within 30 days after well is completed. PINK copy  
is for the Owner & YELLOW copy is for the Driller.

## WELL LOG

From	To	Type of Material	Water Loc.
0	3	Top Soil	
3	50	Sand & Gravel	
50	109	Blue clay w/sand st.	
109	159	Blue clay w/sand st.	
159	371	Sand w/clay st.	
371	410	Sand w/clay st. & gravel	
410	427	Hard Malpie Gravel	
427	450	Malpie Gravel Hard	
450	560	Malpie Gravel sand st.	
560	610	Course gravel	
610	670	Course Gravel clay st.	
670	740	Course Gravel & Sand	
740	750	Hard brown sand	

Use additional paper if necessary to complete log.

## WELL DATA

Type Drilling Rotary

## HOLE DIAMETER:

18 1/2 in. from 0 ft. to 427 ft.15 in. from 427 ft. to 750 ft.       in. from        ft. to        ft.

## CASING RECORD

Cemented from       

## Plain Casing

Size 16" kind steel from 0 ft. to 427 ft.Size 12 3/4" kind XXX from 427 ft. to 497 ft.Size       " kind        from        ft. to        ft.

## Perforated Casing

Size 12 3/4" kind steel from 497 ft. to 750 ft.Size       " kind        from        ft. to        ft.Size       " kind        from        ft. to        ft.

## TEST DATA

Date Tested 9/23/68Type of Pump TurbinLength of Test 18 hrsConstant Yield 2300Drawdown 31'

## WELL DRILLERS STATEMENT

C.E. Merrifield

being duly sworn, deposes and says:  
 he is the driller of the well hereon  
 described; he has read the statement  
 made hereon; knows the content there-  
 of, and the same is true of his own  
 knowledge.

X C.E. MerrifieldLicense No. 28State of Colorado, County of Rio Grande ) ssSubscribed and sworn to before me this 16 day of Oct., 19 68My Commission expires September 3, 1972, 19       V. M. Jennings  
Notary Public



THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN DISTRICT COURT  
WATER DIVISION 3  
STATE OF COLORADO

CASE NO. W-847

JUL 3 1975

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO )  
)  
)  
)  
)  
)

CARLA R. SHAWCROFT  
WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

WELL NO. 5 W-847.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 1975, and served as provided by law, that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 5. Registration No. 9347-F.
3. Location of well and point of diversion:  
NE $\frac{1}{4}$  SW $\frac{1}{4}$ , Section 36, Township 39 North, Range 7 East, NMPM,  
at a point 2575 feet from South Section line and 1550 feet  
from West Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Domestic and municipal.
6. Amount and source and means of diversion:  
600 gallons per minute, being 1.34 cubic feet of water per second of time,  
being 2.68 acre feet of water in a period of twenty-four hours, from  
(~~confined~~) (unconfined) aquifer.
7. Priority date of appropriation:  
April 30, 1965.
8. That said well may be used as an alternate point of diversion for the following surface  
water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 197 5.

Donald G. Smith  
Donald G. Smith, Water Judge

Form C Rev.  
9-62/10M

STATE OF COLORADO

APPLICATION FOR: ☒ A PERMIT TO USE GROUND WATER **RECEIVED**  
☒ A PERMIT TO CONSTRUCT A WELL **APR 16 1965**  
**GROUND WATER SECT.**

Applicant City of Monte Vista

P.O. Address Monte Vista, Colo.

Quantity applied for 200 gpm or  
AF Storage

Irrigation of Hospital Park area  
Used for Water Purposes

on/at \_\_\_\_\_  
(legal description of land site)

Total acreage irrigated and other rts.

ESTIMATED DATA OF WELL

Hole size: 18 in. to 47 ft.  
\_\_\_\_\_ in. to \_\_\_\_\_ ft.

Casing Plain 16 in. from 0 to 7 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

Open or Perf. 16 in. from 7 to 47 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

PUMP \_\_\_\_\_ Outlet

DATA: Type ✓ HP ✓ Size ✓

Use initiation date Soon as possible  
(Use Supplemental pages for additional data)

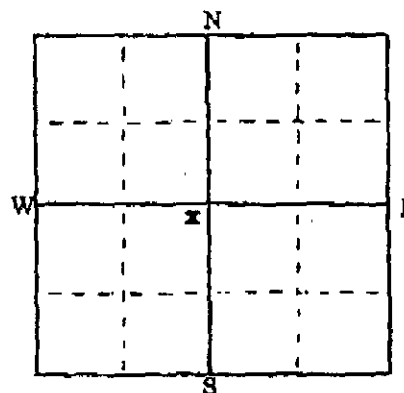
LOCATION OF WELL **RECEIVED**  
County Rio Grande **STATE ENGINEER**

NE 1/4 of SW 1/4 of Sect. 36, Twp. 39N

Rge. 7 NM P.M. OR

Street Address or Lot & Block **RECEIVED**

Town or Subdivision



**APR 22 1965**  
**GROUND WATER SECT.**  
**COLORADO**  
**STATE ENGINEER**

Locate  
well in  
40 acre  
(small)  
square  
as near  
as possible.

Large square  
is one section.

\$25.00 fee required for uses other  
than Domestic or Livestock.

Applicant City of Monte Vista

Agent or

Driller M & G Drilling & Supply No. 28

Address Monte Vista, Colo.

THIS APPLICATION APPROVED

PERMIT NO. 9347 - F

ISSUED:

DATE APR 22 1965 19

**NOTE** — SATISFACTORY COMPLETION REQUIRED FOR APPROVAL OF APPLICATION

JUN 15 1965

Form 5 (Rev.)  
10-63

*ent*

**STATE OF COLORADO**  
**DIVISION OF WATER RESOURCES**  
**OFFICE OF THE STATE ENGINEER**  
**GROUND WATER SECTION**

CHAPMAN PARK WELL

**RECEIVED**

MAY 12 1965  
GROUND WATER SECT.  
COLORADO  
STATE ENGINEER

Index No. 898  
IDWD 8-20  
Use 6  
Registered 5-12-65

(For State Engineer's Use)

**LOG AND HISTORY OF WELL**PERMIT NO. 9347-F**WELL LOCATION**Driller M & G Drilling & Supply Lic. No. 28Owner City of Monte VistaStreet \_\_\_\_\_ City Monte Vista, Colo.

Tenant \_\_\_\_\_

Use of Water Domestic MunicipalOn or By \_\_\_\_\_ No. \_\_\_\_\_  
(description of site or land) Acres \_\_\_\_\_Date Started April, 1965Date Completed April, 1965Yield 600 GPM or \_\_\_\_\_ CFS**WELL DESCRIPTION:**Depth to Water 85 ft. Total Depth 47 ft.  
(measured from ground surface)

Hole Diameter { from 0 ft. to 47 ft., 18 in.  
from \_\_\_\_\_ ft. to \_\_\_\_\_ ft., \_\_\_\_\_ in.  
from \_\_\_\_\_ ft. to \_\_\_\_\_ ft., \_\_\_\_\_ in.

**TEST DATA:**

How Tested \_\_\_\_\_ Pump or \_\_\_\_\_ Bailed

Date Tested \_\_\_\_\_, 19\_\_\_\_ Length \_\_\_\_\_ hrs.

Rate \_\_\_\_\_ GPM Drawn Down \_\_\_\_\_ ft.

**PUMP DATA:**

Pump Type \_\_\_\_\_ Outlet Size \_\_\_\_\_ in.

Driven by \_\_\_\_\_ HP

**CASING RECORD:****Plain Casing**Size 16, Kind \_\_\_\_\_ from -1 ft. to 7 ft.

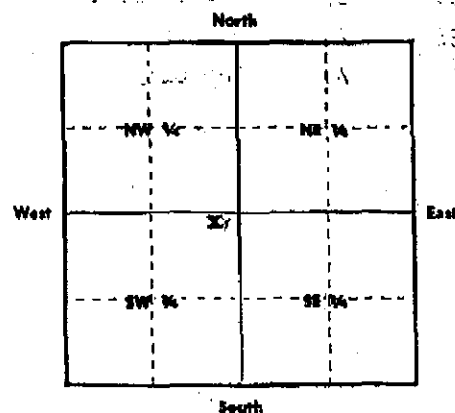
Size \_\_\_\_\_, Kind \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Size \_\_\_\_\_, Kind \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Perforated Casing**Size 16, Kind \_\_\_\_\_ from 7 ft. to 47 ft.

Size \_\_\_\_\_, Kind \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Size \_\_\_\_\_, Kind \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Rio Grande 53 CountyNE  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of Sect. 36Twp 39N Rge 7 E NM PM

ABOVE DIAGRAM REPRESENTS ONE FULL SECTION. LOCATE WELL ACCURATELY IN SMALL SQUARE REPRESENTING 40 ACRES.

or

If the above is not applicable fill in:

No. \_\_\_\_\_ Street \_\_\_\_\_

City or Town \_\_\_\_\_

or

Lot \_\_\_\_\_, Block \_\_\_\_\_

\_\_\_\_\_ Subdivision  
(include filing or number)

**TO BE MADE OUT IN QUADRUPPLICATE:**

Original Blue and Duplicate Green Copy must be filed with the State Engineer within 30 days after well is completed. White copy is for the Owner and Yellow copy for the Driller. **SIGN BLUE COPY**

## WELL LOG

**Ground Elevation.**

\_(if known)

### How Drilled.

**Spider**

[illegible]

(if more space is required use additional sheet) —

### WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed

By

7-21-89

68

THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN WATER DIVISION 3  
STATE OF COLORADO

JUL 3 1975

CASE NO. W-847

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO )

CARLA R. SHAWCROFT  
WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

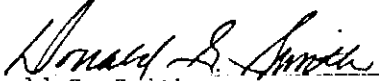
WELL NO. 6 W-847.

THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 19 72. that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 19 75 and served as provided by law; that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 6. Registration No. none.
3. Location of well and point of diversion:  
SE $\frac{1}{4}$  NW $\frac{1}{4}$ , Section 36, Township 39 North, Range 7 East, NMPM,  
at a point 1575 feet from North Section line and 1700 feet  
from West Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Irrigation.
6. Amount and source and means of diversion:  
190 gallons per minute, being .423 cubic feet of water per second of time,  
being .846 acre feet of water in a period of twenty-four hours, from  
~~expected~~ (unconfined) aquifer.
7. Priority date of appropriation:  
June 30, 1949.
8. That said well may be used as an alternate point of diversion for the following surface  
water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 197 5.

  
Donald G. Smith, Water Judge

THE DISTRICT COURT IN AND FOR  
WATER DIVISION 3  
STATE OF COLORADO

FILED IN DISTRICT COURT  
WATER DIVISION 3  
STATE OF COLORADO

CASE NO. W-847

JUL 3 1975

IN THE MATTER OF THE APPLICATION )  
FOR WATER RIGHTS OF )  
CITY OF MONTE VISTA, COLORADO )

CARLA R. SHAWCROFT  
WATER CLERK  
JUDGMENT AND DECREE  
ADJUDICATING  
WATER RIGHT

IN RIO GRANDE COUNTY

WELL NO. 7 W-847.

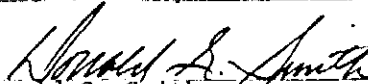
THIS MATTER came on to be heard this day upon the Referee's Ruling. The Court finds that the application for adjudication herein was filed on May 15, 1972; that the Referee's Ruling granting the hereinafter described water right to applicant was entered on the 3rd day of June, A.D. 1975 and served as provided by law, that no protest has been filed and that the time for filing protests has expired; and that the Ruling of the Referee should be confirmed and approved and a water right granted.

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the Ruling of the Referee herein be, and the same hereby is confirmed and approved and that the applicant is hereby granted the indicated water right and priority as follows:

1. Applicant's name and address:  
City of Monte Vista, Colorado  
Monte Vista City Hall  
Monte Vista, CO 81144.
2. Name or designation of well:  
Well No. 7. Registration No. none.
3. Location of well and point of diversion:  
SW $\frac{1}{4}$  NE $\frac{1}{4}$ , Section 36, Township 39 North, Range 7 East, NMPM,  
at a point 2575 feet from North Section line and 2420 feet  
from East Section line, in Rio Grande County, Colorado.
4. Alternate points of diversion, if any:  
None.
5. Type of beneficial use:  
Irrigation.
6. Amount and source and means of diversion:  
1900 gallons per minute, being 4.23 cubic feet of water per second of time,  
being 8.46 acre feet of water in a period of twenty-four hours, from  
~~unconfined~~ (unconfined) aquifer.
7. Priority date of appropriation:  
January 2, 1954.

8. That said well may be used as an alternate point of diversion for the following surface water rights: Not applied for.

Done and signed in open Court this 3rd day of July, A.D. 1975.

  
Donald G. Smith, Water Judge

11-1-9/6/88  
**COPY**  
DISTRICT COURT, WATER DIVISION 3, STATE OF COLORADO

Case No. 88 CW 13

*Filed in District Court  
Water Division 3, Colorado*

-----  
REFEREE'S REPORT AND RULING  
Change of Water Right - Well No. 8  
-----

APR 24 1989

THE APPLICATION FOR WATER RIGHTS

OF CITY OF MONTE VISTA, COLORADO,

IN RIO GRANDE COUNTY.  
-----

*Carol S. Redding  
Clerk Of The Water Court*

APR 25 1989

DIVISION OF WATER  
RESOURCES  
STATE OF COLORADO

THIS MATTER came on for hearing before the Water Referee, on January 19, 1989, pursuant to the Statement of Opposition filed herein and the Court, after having heard evidence presented, reviewed the matters herein on file and now being fully advised on the premises, doth find:

1. That the application of the City of Monte Vista, Colorado, for a change of underground water right was filed on or about the 28th day of March, 1988.

2. That the Water Clerk for Water Division 3 issued and caused a resume of said application to be published and mailed as required by statute.

3. That the time for filing statements of opposition expired on the 31st day of May, 1988. A Statement of Opposition was filed herein by Richard W. Nielsen and Pauline E. Nielsen on June 1, 1988, pursuant to Order on Motion to Intervene.

4. The Water Judge finds that at the time of filing said application and since, the applicants were the owners of the following described underground water rights:

Well #1 -- Well No. 1, W-847, Registration No. 4541, adjudicated and decreed by this Court on July 3, 1975, for 1100 gpm, being 2.45 cubic feet of water per second of time, being 4.90 acre feet of water in a period of twenty-four hours, from confined aquifer with an appropriation date of September 30, 1950, for domestic and municipal purposes. That this well is located in SE 1/4 SE 1/4, Section 36, Township 39 North, Range 7 East, NMPM, at a point 150 feet from South Section line and 250 feet from East Section line, in Rio Grande County, Colorado.

Well #2 -- Well No. 2, W-847, Registration No. 4552, adjudicated and decreed by this Court on July 3, 1975, for 1800 gpm, being 4.01 cubic feet of water per second of time, being 8.02 acre feet of water in a period of twenty-four hours from a confined aquifer with an appropriation date of September 30, 1950, for domestic and municipal purposes. That this well is

located in SE 1/4 SW 1/4, Section 31, Township 39 North, Range 8 East, NMPM, at a point 2420 feet from West Section line and 900 feet from South Section line, in Rio Grande County, Colorado.

Well #3 -- Well No. 3, W-847, Registration No. 4553, adjudicated and decreed by this Court July 3, 1975, for 1200 gpm, being 2.67 cubic feet of water per second of time, being 5.34 acre feet of water in a period of twenty-four hours, from confined aquifer with an appropriation date as of April 30, 1957, for domestic purposes. That this well is located in the SW 1/4 NW 1/4, Section 31, Township 39 North, Range 8 East, NMPM, at a point 2500 feet from North Section line and 100 feet from West Section line, in Rio Grande County, Colorado.

Well #4 -- Well No. 4, W-847, Registration No. 13163-F, adjudicated and decreed by this court on July 3, 1975, for 2300 gpm, being 5.12 cubic feet of water per second of time, being 10.24 acre feet of water in a period of twenty-four hours, from confined aquifer with an appropriation date as of September 23, 1968, for domestic and municipal purposes. That this well is located in the SW 1/4 SE 1/4, Section 32, Township 39 North, Range 8 East, NMPM, at a point 2725 feet from West Section line and 100 feet from South Section line, in Rio Grande County, Colorado.

5. That the applicants propose, for use in the future, to change the point of diversion of said underground water right to a new location; the details of which are as follows:

Well #8, Permit 033733-F, is located in the watershed of confined aquifer of the Rio Grande River, at a point which is 2550 feet from North section line, 2550 feet from East Section line, in the SW 1/4 NE 1/4, Section 36, Township 39 N., Range 7 East, NMPM, in the County of Rio Grande, State of Colorado, and draws its supply of water from the same confined aquifer into which such well penetrates; that the depth of the well is 881 feet; that the well has plain 24 inch casing from a depth of 0 feet to 120 feet, 16 inch plain casing from 0 feet to 324 feet, 10 3/4 inch plain casing from a depth of 324 feet to 880.7 feet, and 10 3/4 inch perforated casing from 340 feet to 875 feet, alternated every 20 feet, and 20 feet blank casing from 20 feet of well screen; and produces 2,000 gallons of water per minute, being 4.456328 cubic feet of water per second of time, by pumping. That the well shall be used for domestic and municipal purposes.

6. That the well is alternate point of diversion for wells #1 - #4 as above described.

7. That this change of underground water right will not injuriously affect the vested water rights of any other appropriators. Specifically, the water well will not affect the water of any other user, especially the objectors, Richard W. Nielsen and Pauline E. Nielsen.



THEREFORE, IT IS HEREBY RULED AND ORDERED, that the applicants be and hereby are granted the requested change of underground water right as follows:

1. Applicants' name and address:

City of Monte Vista  
720 First Ave., Monte Vista, Colorado 81144

2. Name or designation of well:

Well No. 8, Permit #033733-F  
Approved for use of an existing well constructed under  
Permit #24019-F (expired).

3. Location of well and point of diversion:

2550 feet from North Section line, 2550 feet from East  
Section line, in the SW 1/4 NE 1/4, Section 36,  
Township 39 N., Range 7 East, NMPM, in the County of  
Rio Grande, State of Colorado.

4. Amount and source of diversion:

2000 gpm, APD Well  
The simultaneous maximum pumping rate of this well and  
well #R-4551, R-4552, R-4553, and 13163-F shall not  
exceed 6400 gallons per minute.

5. Type of beneficial use:

Domestic and municipal  
(Use of this well is restricted to supplying the City  
of Monte Vista's municipal water system.)

6. Priority date of appropriation:

Same as Wells #1 through #4 since well is an alternate  
point of diversion. (September 30, 1950, April 30,  
1957, and September 23, 1968).

7. That said well is and shall be used as an alternate  
point of diversion for Wells #1 - #4, Case No. W-847, permits #R-  
4551, R-4552, R-4553 and 13163-F.

8. Production is limited to the confined aquifer.

9. A totalizing flow meter is installed on this well and is  
and shall be maintained in good working order. Permanent records  
of all diversions shall be maintained by the well owner at least  
monthly and submitted to the Water Commissioner monthly upon  
request.


10. The owner shall mark the well in a conspicuous place with appropriate well permit number, court case number and name of aquifer. He shall take necessary means and precautions to preserve these markings.

11. The Water Court, Water Division 3, shall retain continuing jurisdiction of this case for a period of three (3) years, for the purpose of reconsidering the question of injury to the vested rights of other appropriators.

12. That this change of underground water right will not injuriously affect the vested water rights of any other appropriators. Specifically, the water well will not affect the water of any other user, especially the objectors, Richard W. Nielsen and Pauline E. Nielsen.

IT IS FURTHER ORDERED that the Water Clerk shall mail copies of this report and ruling as provided by statute.

Dated and entered of record this 24<sup>th</sup> day of April, 1989.

  
Robert W. Ogburn,  
Water Judge as Acting Water Referee  
Water Division 3

Previously Received 4/21/88 130

**COLORADO DIVISION OF WATER RESOURCES**  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

**PERMIT APPLICATION FORM**

Application must be complete when applicable. Type of print in BLACK INK. No overstrikes or erasures unless initialed.

**RECEIVED**

MAY 23 1988

WATER RESOURCES  
STATE ENGINEER  
COLORADO

(X) A PERMIT TO USE GROUND WATER  
( ) A PERMIT TO CONSTRUCT A WELL  
FOR: ( ) A PERMIT TO INSTALL A PUMP

( ) REPLACEMENT FOR NO. \_\_\_\_\_

(X) OTHER \_\_\_\_\_

WATER COURT CASE NO. 88-CW-13**(1) APPLICANT - mailing address**NAME City of Monte VistaSTREET 720 1st. Ave.CITY Monte Vista, CO 81144

(State)

(Zip)

TELEPHONE NO. 719-852-5926**(2) LOCATION OF PROPOSED WELL**County Rio GrandeSW    % of the NE    % of the Section 36Twp. 39 Rng. 7 E    N.M. P.M.

(N.S.)

(E.W.)

**(3) WATER USE AND WELL DATA**Proposed maximum pumping rate (gpm) 2,000Average annual amount of ground water to be appropriated (acre-feet): 700 A.F.Number of acres to be irrigated: not applicableProposed total depth (feet): 600

Aquifer ground water is to be obtained from:

ConfinedOwner's well designation Monte Vista Well #8**GROUND WATER TO BE USED FOR:**

( ) HOUSEHOLD USE ONLY - no irrigation (0)  
(X) DOMESTIC (1) not exempt ( ) INDUSTRIAL (5)  
( ) LIVESTOCK (2) ( ) IRRIGATION (6)  
( ) COMMERCIAL (4) (X) MUNICIPAL (8)

( ) OTHER (9) \_\_\_\_\_

DETAIL THE USE ON BACK IN (11)

**(4) DRILLER**Name Colorado License Driller

Street \_\_\_\_\_

City \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_

Telephone No. \_\_\_\_\_ Lic. No. \_\_\_\_\_

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 86987

Basin \_\_\_\_\_

Dist. \_\_\_\_\_

**CONDITIONS OF APPROVAL**

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

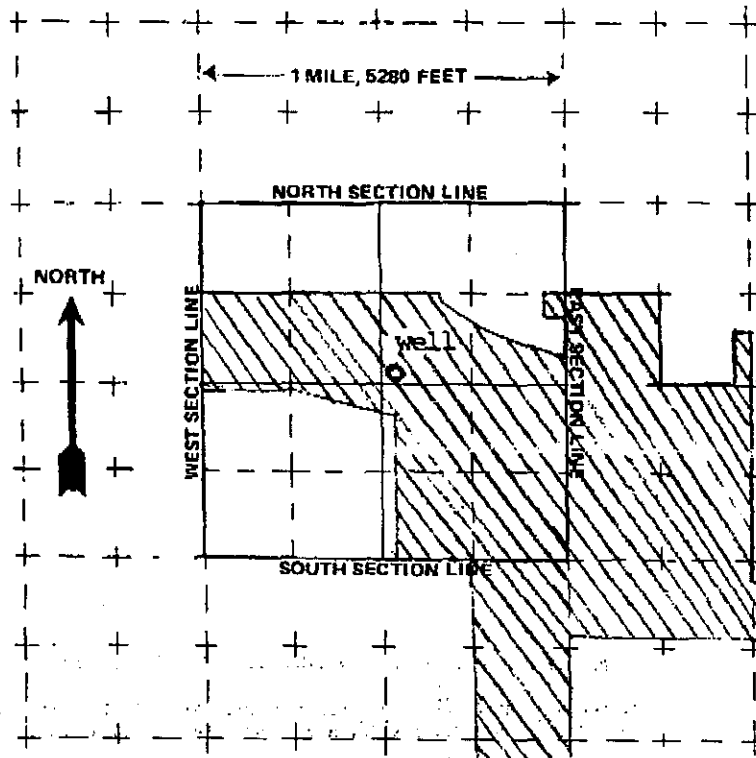
- 1) APPROVED FOR USE OF AN EXISTING WELL CONSTRUCTED UNDER PERMIT NO. 24019-F (EXPIRED).
- 2) APPROVED AS AN ALTERNATE POINT OF DIVERSION FOR WELL PERMIT NOS. R-4551, R-4552, R-4553, AND 13163-F (WELL NOS. 1, 2, 3, AND 4 OF CASE NO. W-847).
- 3) THE SIMULTANEOUS MAXIMUM PUMPING RATE OF THIS WELL AND WELL NOS. R-4551, R-4552, R-4553, AND 13163-F SHALL NOT EXCEED 6400 G.P.M.
- 4) USE OF THIS WELL IS RESTRICTED TO SUPPLYING THE CITY OF MONTE VISTA'S MUNICIPAL WATER SYSTEM.
- 5) PRODUCTION IS LIMITED TO THE CONFINED AQUIFER.
- 6) A TOTALIZING FLOW METER MUST BE INSTALLED ON THIS WELL AND MAINTAINED IN GOOD WORKING ORDER. PERMANENT RECORDS OF ALL DIVERSIONS MUST BE MAINTAINED BY THE WELL OWNER (RECORDED AT LEAST ANNUALLY) AND SUBMITTED TO THE DIVISION ENGINEER UPON REQUEST.
- 7) THE USE OF THIS WELL AS AN ALTERNATE POINT OF DIVERSION IS A CHANGE IN WATER RIGHT. THIS WELL SHALL BE JUNIOR TO ALL VESTED WATER RIGHTS UNTIL SUCH TIME AS THE CHANGE IN WATER RIGHT HAS BEEN APPROVED BY THE DIVISION WATER COURT AND THE WELL THEN MUST BE OPERATED PURSUANT TO THE TERMS AND CONDITIONS OF THAT DECREE.
- 8) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER, COURT CASE NUMBER, AND NAME OF AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. *RWH 6-3-88*

**APPLICATION APPROVED**PERMIT NUMBER 033733-FDATE ISSUED JUN 06 1988EXPIRATION DATE JUN 06 1989

*John A. Danilow*  
(STATE ENGINEER)

BY *Steve Lautenschlager*I.D. 3-20COUNTY 53

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

2,550 ft. from north sec. line  
(north or south)

2,550 ft. from east sec. line  
(east or west)

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING # \_\_\_\_\_

SUBDIVISION \_\_\_\_\_

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Monte Vista

No. of acres Not applicable . Will this be the only well on this tract? no

(8) **PROPOSED CASING PROGRAM**

Plain Casing

24 in. from 0 ft. to 120 ft.

16 in. from 0 ft. to 334 ft.

Perforated casing

10-3/4 in. from 340 ft. to 875 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

not applicable

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): City of Monte Vista No. of acres: approx. 910  
Portions of S.36, T.39N., R.7E., S.1, T.39N., R.7E., S.31, 32, 33, T.39N., R.8E.,  
Legal description: and S.4, 5, 6, T.39N., R.8E., N.M.P.M.

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Municipal - alternate point of diversion for other City wells #1 - #4 from the confined aquifer as decreed in Case W-847

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
Wells #1 - #4 Case W-847		See #10 above

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

Robert S. Crites, Jr. - Attorney for the City of Monte Vista, Colorado  
SIGNATURE OF APPLICANT(S)  
Robert S. Crites, Jr.

## **Appendix E:**

### **Ownership of Ditch Water Rights**

DEED OF REAL ESTATE

THIS INDENTURE made the 14<sup>th</sup> day of June, A.D. 1939 between NORMAN SHREVE CHAPMAN, of the County of Rio Grande and State of Colorado, party of first part, and the City of Monte Vista, a municipal corporation of the State of Colorado, situated in the County of Rio Grande, party of second part, WITNESSETH,

That the said party of the first part, for and in consideration of certain public benefits that will accrue to the inhabitants of the said City of Monte Vista from this conveyance, does hereby give, grant, convey and confirm unto the said party of second part, its successors and assigns, the following described parcel of land situated in the County of Rio Grande and State of Colorado, to-wit:

A tract of land located in the NORTH-EAST QUARTER of the SOUTHWEST QUARTER (NE $\frac{1}{4}$  of SW $\frac{1}{4}$ ) of Section THIRTY-SIX (36), Township THIRTY-NINE (39) NORTH, Range SEVEN (7) EAST, N. E. P. M., described by metes and bounds as follows: Beginning at a point on the north and south center line of said Section Thirty-six (36) whence the corner at the center of said Section Thirty-six (36) bears north forty-five (45) feet; thence south along the said north and south center line of said Section Thirty-six (36), three hundred thirty-five (335) feet; thence (westerly along the north boundary line of U. S. Highway No. 160) on a course north eighty-nine (89) degrees fifty-two (52) minutes west, four hundred (400) feet; thence north three hundred thirty-four and ninety-nine hundredths (334.99) feet; thence east four hundred (400) feet to the place of beginning, containing approximately 3.076 acres; together with an undivided two one-hundredths (.02) of a cubic foot of water per second of time in the Anderson Ditch.

*Bot! Does this count as add. water for the City? I sent it to Robin too.*

*Original Read - Hospital file.*

TO HAVE AND TO HOLD the said premises, with all the rights, easements and appurtenances thereto belonging unto the said party of second part, its successors and assigns forever.

And the said party of the first part, for himself, his heirs, executors, and administrators, does covenant and agree to and with the said party of second part, its successors and assigns, that at the time of signing and delivering these presents he has good right, full power and lawful authority to grant and convey the said premises in manner and form aforesaid; that he, his heirs, executors and administrators will warrant and defend the same to the said party of the second part, its successors and assigns forever against the lawful claims and demands of all persons claiming by, through or under him, and that the said premises are free and clear of all liens and encumbrances made or suffered by said party of first part, excepting taxes for the year 1939, and subsequent years.

IN WITNESS WHEREOF, The said party of the first part has hereunto set his hand and seal the day and year first above written.

*Norman Shreve Chapman* (SEAL)

STATE OF COLORADO )  
COUNTY OF RIO GRANDE ) ss.

The foregoing instrument was acknowledged before me this 14th day of June, A. D. 1939, by NORMAN SHREVE CHAPMAN.

Witness my hand and official seal.

My commission expires: June 8 1940

*John H. Brady*  
Notary Public

THIS DEED, Made this 29th day of September, 1976,  
between RICHARD S. ANDERSON and THEODORE S.  
ANDERSON, Joint Tenants

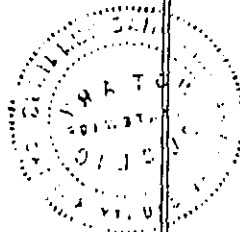
of the County of and State of Colorado,  
of the first part, and THE CITY OF MONTE VISTA, COLORADO,  
a Municipal Corporation

of the County of Rio Grande and State of Colorado, of the second part:

WITNESSETH, That the said parties of the first part, for and in consideration of the sum of  
Ten Thousand and no/100-----DOLLARS,

to the said parties of the first part in hand paid by the said party of the second part, the receipt whereof is  
hereby confessed and acknowledged, have granted, bargained, sold and conveyed, and by these presents do  
grant, bargain, sell, convey and confirm, unto the said party of the second part, its  
heirs and assigns forever, all the following described lot or parcel of land, situate, lying and being in the  
County of Rio Grande and State of Colorado, to-wit:

.980 cubic feet per second of water in  
the Anderson Ditch, being all the right  
title and interest of Richard S. Anderson  
and Theodore S. Anderson in and to all  
that certain water right in the Anderson  
Ditch, under Priorities No. 90, dated  
May 31, 1875 and No. 143, dated May 31,  
1877 as the same was recorded in Book  
149 at Page 242 of the records of the  
County Clerk and Recorder of Rio Grande  
County, Colorado.



OK # 32. 7/5 - 9/5/75  
Option payment on  
Anderson's water - 500"  
OK # 358 7/5 - 5/20/77 - 9500"  
Final payment of \$10,000  
to Anderson's for water.

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging, or in anywise  
appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all  
the estate, right, title, interest, claim and demand whatsoever of the said parties of the first part, either in law  
or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.



TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the said part Y of the second part, its heirs and assigns forever. And the said parties of the first part, for themselves ~~their~~ heirs, executors, and administrators, do covenant, grant, bargain and agree to and with the said part Y of the second part, its heirs and assigns, that at the time of the ensembling and delivery of these presents are well seized of the premises above conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and have good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and encumbrances of whatever kind or nature soever.

and the above bargained premises in the quiet and peaceable possession of the said part Y of the second part, its heirs and assigns against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said parties of the first part shall and will WARRANT AND FOREVER DEFEND.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set ~~their~~ hands and seals the day and year first above written.

Signed, sealed and Delivered in the Presence of

*Theodore S. Anderson* [SEAL]  
*Richard S. Anderson* [SEAL]



No. 100. NOTARY'S ACKNOWLEDGMENT.—The Bradford-Robinson Ptg. Co., Mfrs. Robinson's Legal Blanks, 1224 Stout St., Denver, Colo.

STATE OF ARIZONA

COUNTY OF YAVAPAI

I, *Lolores A. Elder*

, a Notary Public

in and for the said Yavapai County, in the State aforesaid, do hereby certify that

*Richard S. Anderson*

who is personally known to me to be the person whose name is subscribed to the annexed instrument of writing, appeared before me this day in person, and acknowledged that he signed, sealed and delivered the said instrument of writing as his free and voluntary act and deed, for the uses and purposes therein set forth.

Given under my hand and notarial seal, this *9<sup>th</sup>* day of

*October*

A. D. 19 *76*

My commission expires *My Commission Expires June 15, 1980*, 19

*Lolores A. Elder*

Notary Public.

No.

WARRANTY DEED

TO

STATE OF COLORADO,

County of

I hereby certify that this instrument was filed for record in my office this day of

19

at o'clock M., and duly recorded

in Book Page

Film No. Reception No.

Recorder.

By

Deputy.

Fees, \$

Mailed (or return to)

Send future tax statements to:

BRADFORD-ROBINSON PUBLISHING CO., DENVER

THIS DEED, Made this 11 day of December, 1979.

between WILLIAM T. LECK and DOROTHA E. LECK, husband and wife

of the \_\_\_\_\_ County of Rio Grande and state of  
Colorado, of the first part, and

THE CITY OF MONTE VISTA, COLORADO.

whose legal address is 720 First Avenue, Monte Vista, Colorado 81144

of the \_\_\_\_\_ County of Rio Grande and state of  
Colorado, of the second part,

WITNESSETH, That the said part ~~ies~~ of the first part, for and in consideration of the sum of

One Hundred Twenty Thousand and no/100-----DOLLARS,  
to the said part \_\_\_\_\_ of the first part in hand paid by the said part Y \_\_\_\_\_ of the second part, the receipt whereof  
is hereby confessed and acknowledged, ha ~~V~~emised, released, sold, conveyed and QUIT CLAIMED, and by these  
presents do remise, release, sell, convey and QUIT CLAIM unto the said part Y of the second part, its heirs,  
successors and assigns, forever, all the right, title, interest, claim and demand which the said part ~~ies~~ of the first part  
have in and to the following described lot or parcel of land situate, lying and being in the \_\_\_\_\_ County  
of Rio Grande and State of Colorado, to wit:

0.7 cu. ft. of water per second of time being a part of 16.4  
cu. ft. of water per second of time decreed to the McDonald Ditch  
has of May 1, 1872 and having an appropriation No. of 11 in  
Water District #20 and now diverted at the headgate of the  
Prairie Ditch Co.

This transfer is in addition to 0.7 cu. ft of water transferred  
on March 26, 1979.

also known as street and number

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto  
belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the  
said part ~~ies~~ of the first part, either in law or equity, to the only proper use, benefit and behoof of the said part Y of  
the second part, its heirs and assigns forever.

IN WITNESS WHEREOF, The said part ~~ies~~ of the first part have hereunto set the ~~hand~~ and S  
and seal ~~S~~ the day and year first above written.

Signed, Sealed and Delivered in the Presence of

William T. Leck [SEAL]  
William T. Leck

[SEAL]

Dorotha E. Leck [SEAL]  
Dorotha E. Leck

[SEAL]

STATE OF COLORADO,

ss.

County of Rio Grande

The foregoing instrument was acknowledged before me this 11 day of December  
1979, by William T. Leck and Dorotha E. Leck, husband and wife.

My commission expires 3/16/83 . Witness my hand and official seal.

John E. McClure  
Notary Public.

THIS DEED, Made this 26 day of March, 1979,

between WILLIAM T. LECK and DOROTHA E. LECK, husband and wife

of the \_\_\_\_\_ County of Rio Grande and state of  
Colorado, of the first part, and

THE CITY OF MONTE VISTA, COLORADO.

whose legal address is P.O. Box 431, Monte Vista, Colorado 81144

of the \_\_\_\_\_ County of Rio Grande and state of  
Colorado, of the second part,

WITNESSETH, That the said part ~~ies~~ of the first part, for and in consideration of the sum of NO DOLLARS and a gift and donation as a community service-----~~XXXXXXXXXX~~ to the said part ~~ies~~ of the first part in hand paid by the said part ~~y~~ of the second part, the receipt whereof is hereby confessed and acknowledged, have remised, released, sold, conveyed and QUIT CLAIMED, and by these presents do remise, release, sell, convey and QUIT CLAIM unto the said part ~~y~~ of the second part, its heirs, successors and assigns, forever, all the right, title, interest, claim and demand which the said part ~~y~~ of the first part has in and to the following described lot or parcel of land situate, lying and being in the \_\_\_\_\_ County of Rio Grande and State of Colorado, to wit:

0.7 cu. ft. of water per second of time being a part of  
16.4 cu. ft. of water per second of time decreed to the  
McDonald Ditch as of May 1, 1872 and having an appropriation  
No. of 11 in Water District #20 and now diverted at the  
headgate of the Prairie Ditch Co.

also known as street and number

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the said part ~~ies~~ of the first part, either in law or equity, to the only proper use, benefit and behoof of the said part ~~y~~ of the second part, its heirs and assigns forever.

IN WITNESS WHEREOF, The said part ~~ies~~ of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in the Presence of

William T. Leck [SEAL]  
William T. Leck  
Dorotha E. Leck [SEAL]  
Dorotha E. Leck [SEAL]  
[SEAL]

STATE OF COLORADO,

County of Rio Grande

The foregoing instrument was acknowledged before me this 26<sup>th</sup> day of March, 1979, by William T. Leck and Dorotha E. Leck, husband and wife.

My commission expires March 16, 1983. Witness my hand and official seal.

June L. McElure

Notary Public.

## ANNEXATION AGREEMENT

This agreement is made and entered into this 5<sup>th</sup> day of June, 1997, by and between the City of Monte Vista, Colorado, a Municipal Corporation of the State of Colorado, ("City"), and Wilma O. Trosper, ("Owner"), witnesseth:

WHEREAS, owner has petitioned for annexation of a tract of land located at:

A tract of land situated in a part of Section 36 and the east half of Section 35, Township 39 North, Range 7 East, New Mexico Principal Meridian, Rio Grande County, Colorado and being more fully described in Exhibit 1, attached.

and which shall otherwise be known as the #2 Trosper addition, and

WHEREAS, the Monte Vista City Council has passed an ordinance commensurate with certain understandings with the owner, and

WHEREAS, the Monte Vista City Council has divided said land into seven parcels which are zoned as follows: tract 1 is zoned as commercial highway (CH), tracts 2, 3, 4, 5 & 6 are zoned residential low density (RL) and tract 7 is zoned residential high density (RH).

WHEREAS, the owner desires to annex said land in accordance with its zoning classification.

NOW THEREFORE it is hereby agreed between the City and the Owner as follows:

1. The owner shall be bound by all provisions of the Monte Vista Subdivision Regulations and Monte Vista Zoning Regulations pertaining to the development of the above referenced annexed tract of land.
2. In accordance with Resolution # 5-96 of the City of Monte Vista, the owner shall convey, procure and transfer all of the necessary easements and rights-of-way for the installation and maintenance of water/sewer lines and any system equipment made necessary thereby. In addition, the owner will deed, convey, assign, and transfer four (4) shares to the Lariat ditch (being all water rights owned by "Owner" to said ditch) not later than the date as described in paragraph #8 of this agreement.

3. The City of Monte Vista will lease these water rights back to the owner for \$1.00 per year until such time that the City of Monte Vista deems it necessary that said water rights are needed for City use.

4. The areas designated as tracts 3, 5 and 6 on the annexation plat shall be conveyed to the City of Monte Vista.

5. The property owners or developers are responsible for identifying any wetland areas before development occurs and for any federal or state regulations concerning wetlands.

6. Legal and filing fees shall be paid by the Owners to the City.

7. This agreement shall be construed and enforced in accordance with the laws of the State of Colorado and no form of joint venture or partnership shall be deemed to exist between the City and the Owner pertaining to the terms of this agreement. No waiver of one or more of the terms of this agreement shall constitute a waiver of other terms.

8. These covenants shall be performed by Owner not later than the effective date of the ordinance annexing such property to the City.

DONE AND SIGNED this 5<sup>th</sup> day of June, 1997.

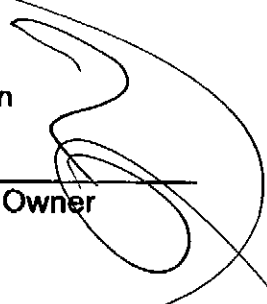
City of Monte Vista  
Monte Vista, Colorado  
A Municipal Corporation

  
Britt Jardon, Mayor

ATTEST:

  
Rhonda Valdez, Deputy City Clerk

#2 Trosper Addition

  
Wilma O. Trosper, Owner

ATTEST:

\_\_\_\_\_

Know all Men by these Presents: That I,  
CHARLES N. SHAKESPEARE, also known as  
C. N. SHAKESPEARE,

of the County of Rio Grande, and State of Colorado,

for the consideration of Three Hundred and no/100-----  
Dollars,

in hand paid, hereby sell and convey to

CITY OF MONTE VISTA,

of the County of Rio Grande, and the State of Colorado,

the following real property, situate in the County of Rio Grande,

and State of Colorado, to-wit:

A six acre tract of land described as follows, to-wit:

*Handwritten:* Beginning at a point eighty (80) rods north of the south-west corner of the North-west quarter (NW $\frac{1}{4}$ ) of Section thirty-two (32), Township Thirty-nine (39) North, of Range Eight (8) E.N.P.M.; thence east four hundred and eighty (480) feet; thence south five hundred and forty-six (546) feet; thence west four hundred and eighty (480) feet; thence north five hundred and forty-six (546) feet to the place of beginning, together with a six acre pro rata water right in the Ben Oggle Ditch; being a pro-rata of a one-third interest to water belonging to the whole above described north-west quarter of said section thirty-two (32).

The grantor reserves from this conveyance certain brick and certain machinery now located on said premises heretofore used in conducting a brick yard thereon, and which said brick and machinery may be removed therefrom by the grantor.

with all its appurtenances, and warrant the title to the same, except the second half of taxes for the year of 1926 and subsequent taxes.

23777

CONTINUATION OF ABSTRACT

of title to

The  
Rio Grande  
Abstract  
Company

The SOUTHEAST QUARTER of the NORTHWEST QUARTER of Section THIRTYTWO  
Township THIRTYNINE North, Range EIGHT East, New Mexico Principal  
Meridian.

Also a parcel of land beginning at the northeast corner of the  
NORTHEAST QUARTER of the SOUTHWEST QUARTER of Section THIRTYTWO,  
Township THIRTYNINE North, Range EIGHT East, New Mexico Principal  
Meridian; running thence south 429 feet; thence west the full  
width of said NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of said Sec. 32; thence north 429  
feet; thence east to the place of beginning, containing 13 acres,  
more or less, from 8:00 A. M. July 10, 1957.

-- 1 --

Rio Grande  
County

193167  
John W. Getz,  
Ruth Getz,

to

The City of Monte Vista  
a municipal corporation.

Warranty Deed.  
Dated July 23, 1958.  
Recorded July 26, 1958, 9:02 A. M.  
Book 253, page 23.  
Consideration \$10,150.00.  
Acknowledged July 25, 1958 before  
Ina F. Sanderson, N. P., Rio Grande  
County, Colorado. Seal.  
Com. exp. June 13, 1960.

Conveys: Parcel No. 1: the North 13 acres of the NE $\frac{1}{4}$  of the  
SW $\frac{1}{4}$ , Sec. 32, T. 39 N., R. 8 E., N.M.P.M.;

Parcel No. 2; The South 20 $\frac{1}{2}$  acres of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Sec.  
32, T. 39 N., R. 8 E., N.M.P.M., together with an undivided 1/6  
interest to the Ben Ogle Ditch and the water and water rights  
appropriated, diverted by and decreed to said ditch.

- Parcel No. 3; An easement and right of way 12 feet wide beginning  
at the center of Sec. 32, and running East along the center line of  
Sec. 32, 400 feet more or less, to the center line of a slough;  
thence North 12 ft; thence West 400 feet, more or less, to the North  
and South center line of Sec. 32; thence South along the center  
line of Sec. 32, 12 feet to the place of beginning, located in  
T. 39 N., R. 8 E., N. M. P. M., said right of way to be used for  
drainage and for the overflow of oxidation ponds to be constructed  
by the City of Monte Vista on the land described above in parcels  
1 and 2.

Subject to taxes and assessments, if any for the year 1958 and  
subsequent years.

Grantors described as "husband and wife," in body.

El Norte,  
Colorado

*Oxidation Ponds*

Edward R. Lobato; Jar . . Matoni  
Grace Lobato now known by marriage  
as Grace Vaughn; Eva L. Doughert  
as Grace Vaughn; Juan B. Lobato and Pablita S. Lobato

Know All Men by These Presents, That whereas Juan B. Lobato and Pablita S. Lobato of the County of Rio Grande, in the State of Colorado, by one certain Mortgage Deed, dated the 6th day of July A. D. 1954, filed for record in the office of the County Clerk and Recorder of the County of Rio Grande, in the State of Colorado, on the 15th day of July A. D. 1954, and duly recorded in book 228 of the records in said office at page 371, did grant, bargain, sell and convey unto

**THE MONTE VISTA BUILDING ASSOCIATION,**

a corporation, duly organized and existing under and by virtue of the laws of the State of Colorado, certain real estate in said Mortgage Deed described, to secure the payment of their one certain promissory note with interest and all charges thereon, as in said Mortgage Deed and note mentioned; and whereas said Mortgage Deed and Note have not been assigned

AND WHEREAS, The said indebtedness has been paid, together with all interest and charges thereon, NOW, THEREFORE, In consideration of the premises, and in further consideration of the sum of two dollars to it in hand paid, the receipt whereof is hereby acknowledged, the said MONTE VISTA BUILDING ASSOCIATION hereby remises, releases, and forever quit-claims unto the present owner or owners of said real estate and unto the heirs, successors and assigns of said owner or owners forever all the right, title and interest which it has by virtue of said Mortgage Deed in and to the said real estate in said Mortgage Deed particularly described, reference to which is hereby made for greater certainty,

The Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ NW $\frac{1}{4}$ ) of Section Thirty-two (32), Township Thirty-nine (39) North, Range Eight (8) East of the New Mexico Principal Meridian, except a six (6) acre tract described as follows: Beginning at a point 80 rods North of the Southwest corner of the Northwest Quarter (NW $\frac{1}{4}$ ) of said Section Thirty-two (32); thence East 480 feet; thence South 548 feet; thence West 480 feet; thence North 546 feet to the place of beginning, together with a water right represented by a one-half share of the capital stock of the Lariat Irrigation Company and the above described land's pro rata share of a one-twelfth interest in the Ben Ogle Ditch for use on the tract of land above describe. The tract of land hereby conveyed contains 34 acres of land more or less according to the government survey thereof.

TO HAVE AND TO HOLD THE SAME, Together with all and singular the privileges and appurtenances thereunto belonging forever.

And further, that the said Mortgage Deed is, by these presents, to be considered and is fully and absolutely released and canceled and forever discharged.

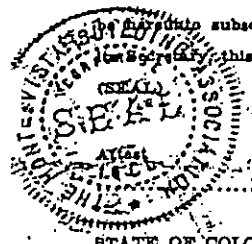
IN WITNESS WHEREOF, THE MONTE VISTA BUILDING ASSOCIATION has caused its corporate name to

be subscribed by its President, and its corporate seal to be hereunto affixed, attested by this 19th day of September A. D. 1956

THE MONTE VISTA BUILDING ASSOCIATION

By *Henry Chapman* President

*[Signature]*  
Secretary



STATE OF COLORADO )  
County of Rio Grande ) ss.

The foregoing instrument was acknowledged before me this 19th day of September 1956 by Henry Chapman as President and H. Leonard as Secretary of THE MONTE VISTA BUILDING ASSOCIATION, a corporation.

My commission expires October 6, 1958  
Witness my hand and official seal

*My Comm. Expires*  
Notary Public





WARRANTY DEED

THIS DEED, Made this 11th day of December, 1985,  
between JAMES HUFFAKER, CAROL EMRICH, DEBORAH S. HUFFAKER  
AND QUENTIN HUFFAKER

XXXXXX  
CITY OF MONTE VISTA

whose legal address is Monte Vista, Colorado 81144

of the County of Rio Grande, State of Colorado, grantee(s):

State Documentary Fee  
Date JAN 06 1986  
\$ 3.00 Paid

WITNESSETH, That the grantor(s), for and in consideration of the sum of -----THIRTY THOUSAND AND NO/100-----  
DOLLARS,  
the receipt and sufficiency of which is hereby acknowledged, have granted, bargained, sold and conveyed, and by these presents do grant,  
bargain, sell, convey, and confirm, unto the grantee(s), its successors, heirs and assigns forever, all the real property, together with improvements,  
if any, situate, lying and being in the County of Rio Grande, State of Colorado,  
described as follows:

SEE EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

XXXXXXXXXXXXXXXXXXXX

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging, or in anywise appertaining, and the reversion and  
reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the  
grantor(s), either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described with the appurtenances, unto the grantee(s), its successors,  
assigns forever. And the grantor(s), for themselves, their heirs and personal representatives, do covenant, grant, bargain, and  
agree to and with the grantee(s), its successors, heirs and assigns, that at the time of the enfeoffing and delivery of these presents, they are well  
seized of the premises above conveyed, have good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and  
have good right, full power and authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free  
and clear from all former and other grants, bargains, sales, liens, taxes, assessments, encumbrances, and restrictions of whatever kind or nature soever,  
XXXXXX

The grantor(s) shall and will WARRANT AND FOREVER DEFEND the above-bargained premises in the quiet and peaceable possession of the  
grantee(s), its successors, heirs and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.  
IN WITNESS WHEREOF, the grantor(s) have executed this deed on the date set forth above.

James Huffaker  
JAMES HUFFAKER  
Carol Emrich  
CAROL EMRICH

Deborah S. Huffaker by marriage having become  
DEBORAH S. HUFFAKER  
Quentin Huffaker  
QUENTIN HUFFAKER

ARIZONA  
STATE OF ARIZONA

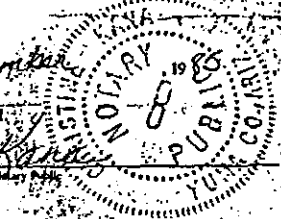
County of Yuma

The foregoing instrument was acknowledged before me this  
by James Huffaker  
My commission expires

My Commission Expires April 30, 1988

Witness my hand and official seal

Christine R. Rios  
Notary Public



\*If in Denver, insert "City and".

EXHIBIT "A"

All that part of the Northeast Quarter of the Southwest Quarter of Section Thirtytwo, Township Thirtynine North, Range Eight East, New Mexico Principal Meridian, Rio Grande County, Colorado, described as follows:

Beginning at a point on the E. side line of said NE $\frac{1}{4}$ SW $\frac{1}{4}$  of said Sec. 32, 429 feet S. of the NE corner of said NE $\frac{1}{4}$ SW $\frac{1}{4}$  of said Sec. 32, said corner being the center of said Sec. 32;  
thence S., along the N. and S. centerline of said Sec. 32, 380 feet, more or less, to a point;  
thence S. 33° W., 630 feet, more or less, to a point on the S. line of said NE $\frac{1}{4}$ SW $\frac{1}{4}$  of said Sec. 32;  
thence W., along the S. line of the said NE $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 32, 970 feet, more or less, to the SW corner of the NE $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 32;  
thence N., along the W. line of said NE $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 32, 891 feet, more or less, to a point;  
thence E. 1320 feet, more or less, to the point of beginning;

EXCEPTING one half acre which is described in a certain Quit-Claim Deed, recorded in the office of the County Clerk and Recorder of Rio Grande County, in Book 73 at Page 322;

EXCEPTING a tract of land, containing 3.5 acres, more or less, described in Book 319, Page 606, Rio Grande County Records;

EXCEPTING a tract of land, containing 1.04 acres, more or less, described in Personal Representative's Deed recorded in Book 360 at Page 768 of the records of the Rio Grande County Clerk & Recorder.

TOGETHER WITH One (1) share of water stock in the Lariat Irrigation Company and together with 2/18ths interest in the Ben Ogle Ditch and the water decreed thereto.

*Heffner Property*  
*from Severel Retention Pond*

**Appendix F:**  
**StateCU Farm Deliver Analysis**  
**(Tables F-1 and F-2)**

**Table F1. Farm Delivery Analysis**  
**Anderson Ditch - Valley Choice Parcel - Monthly Averages**  
**City of Monte Vista**  
**(All values in acre-feet.)**

Month	Potential Crop ET	Effective Precip	Irrigation Water	Farm Headgate Delivery	Total Crop CU	CU Per Acre
January	0.00	0.00	0.00	0.28	0.00	0.00
February	0.00	0.00	0.00	0.25	0.00	0.00
March	0.00	0.00	0.00	0.90	0.00	0.00
April	1.53	0.13	1.40	8.87	1.40	0.04
May	12.31	1.15	11.16	30.39	11.16	0.34
June	19.44	1.17	18.27	35.39	18.27	0.55
July	18.70	2.93	15.77	35.45	15.77	0.48
August	16.46	3.11	13.34	29.84	13.16	0.40
September	8.03	1.25	6.77	23.37	6.77	0.21
October	2.44	0.25	2.19	17.60	2.19	0.07
November	0.00	0.00	0.00	2.15	0.00	0.00
December	0.00	0.00	0.00	0.51	0.00	0.00
<b>Total</b>	<b>78.90</b>	<b>10.00</b>	<b>68.90</b>	<b>185.00</b>	<b>68.72</b>	<b>2.08</b>

Source:

Colorado Division of Water Resources diversion (1950-2008), values from StateCU Consumptive Use Analysis Structure Scenario per CDWR recommendations.

Notes:

Period of record 1950-2008.

- 1) Analysis assumes a maximum of 60% flood irrigation efficiency and 90% ditch efficiency.
- 2) Analysis assumes 0% of soil moisture capacity initially filled in 1950.
- 3) Analysis conducted using irrigated area from 4/5/2010 site visit
- 4) Analysis performed using Monte Vista 2 W Climate Station data.
- 5) Analysis assumes that 0% of winter precipitation went to the soil moisture reservoir.
- 6) Total irrigated area = 33 acres
- 7) Crop types used were alfalfa and pasture grass (50% each)

**Table F2. Farm Delivery Analysis**  
**Anderson Ditch - Trosper Ranch - Monthly Averages**  
**City of Monte Vista**  
**(All values in acre-feet.)**

Month	Potential Crop ET	Effective Precip	Irrigation Water	Farm Headgate Delivery	Total Crop CU	CU Per Acre
January	0.00	0.00	0.00	0.60	0.00	0.00
February	0.00	0.00	0.00	0.55	0.00	0.00
March	0.00	0.00	0.00	1.97	0.00	0.00
April	2.66	0.23	2.43	19.39	2.43	0.04
May	22.44	2.09	20.35	66.45	20.35	0.34
June	34.73	2.15	32.57	77.37	32.57	0.54
July	34.66	5.39	29.27	77.51	29.27	0.49
August	31.14	5.80	25.34	65.24	25.03	0.41
September	12.97	1.98	10.99	51.10	10.99	0.18
October	3.03	0.40	2.63	38.47	2.63	0.04
November	0.00	0.00	0.00	4.71	0.00	0.00
December	0.00	0.00	0.00	1.12	0.00	0.00
<b>Total</b>	<b>141.62</b>	<b>18.05</b>	<b>123.57</b>	<b>404.48</b>	<b>123.27</b>	<b>2.04</b>

Source:

Colorado Division of Water Resources diversion (1950-2008), values from StateCU Consumptive Use Analysis Structure Scenario per CDWR recommendations.

Notes:

Notes:

Period of record 1950-2008.

- 1) Analysis assumes a maximum of 60% flood irrigation efficiency and 90% ditch efficiency.
- 2) Analysis assumes 0% of soil moisture capacity initially filled in 1950.
- 3) Analysis conducted using irrigated area from BWC site visit, and Agro Engineering Report
- 4) Analysis performed using Monte Vista 2 W Climate Station data.
- 5) Analysis assumes that 0% of winter precipitation went to the soil moisture reservoir.
- 6) Total irrigated area ≈ 55-62 acres
- 7) Crop types used were alfalfa, pasture grass, and potato with Rio Grande Calibrated Coefficients
- 8) Analysis assumed that Trosper Ranch owns 10.7% of the Anderson Ditch

## **Appendix G:**

### **Water Rights Appraisal**

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## **SUMMARY OF SALIENT FACTS AND CONCLUSIONS**

<b>Subject Water Right</b>	1.73 cfs Anderson Ditch
<b>Location</b>	Diverts from the south bank of Rio Grande River in Section 22, T39N, R7E of the New Mexico P.M., Rio Grande County, Colorado
<b>Type of Report</b>	Summary Appraisal Report
<b>Client</b>	City of Monte Vista 4 Chico Camino Monte Vista, CO 81144
<b>Valuation Date</b>	January 27, 2010
<b>Report Date</b>	January 29, 2010
<b>Purpose and Intended Use</b>	To assist the City of Monte Vista in decision making regarding offering price for the subject water rights
<b>Extraordinary Assumption</b>	Consumptive Use after consideration of subirrigation is 100 acre feet
<b>Highest and Best Use</b>	Municipal and Augmentation Use
<b>Market Value</b>	\$6,000 per Acre Foot Consumptive Use  Estimated consumptive use 100 Acre Feet  $100 \text{ Acre Feet @ } \$6,000 = \$ 600,000$



## **FIGURES (END OF REPORT)**

- Figure 1 Vicinity Map-Rio Grande River and Anderson Ditch
- Figure 2 Anderson Ditch Historically Irrigated Area
- Figure 3 Anderson Ditch Topography
- Figure 4 Water Neighborhood

## **APPENDICES**

- A Anderson Ditch Decree – Adjudication Date 05/01/1896
- B Excerpts from Agro Engineering October 19, 2007 Report, Anderson Ditch  
Sun Peak Property

## VALUATION OF ANDERSON DITCH

### City of Monte Vista, Colorado

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#### 1.0 IDENTIFICATION OF SUBJECT WATER RIGHTS

The subject water right is a 1.73 cubic feet per second (cfs) ownership interest in the Anderson Ditch, Priorities 90 and 143 which diverts from the Rio Grande River at an upstream location west of the City of Monte Vista. Figure 1 shows the location of the subject Anderson Ditch and the location of the property on which the subject water right was historically used. The subject Anderson Ditch (Structure ID 512) water right is located within Water Division 3, Water District 20.

The appropriation and adjudication dates for the Anderson Ditch are summarized below:

	Amount	Adjudication Date	Appropriation Date	Administration No.
Priority 90	11.33 cfs	5/1/1896	5/1/1875	9282.00000
Priority 143	<u>1.92 cfs</u>	5/1/1896	5/31/1877	10013.00000
Total	13.25 cfs			

The subject 1.73 cfs represents a 13.06 percent interest in the two priorities, 1.48 cfs Priority 90 and 0.25 cfs Priority 143. The Anderson Ditch was decreed in the May 1, 1896 Adjudication (Anderson Ditch excerpts are given in Appendix A). The decree amounts listed above are the net amounts after portions of the original priorities were transferred to the Atkins Ditch. The Anderson Ditch is decreed for irrigation use.

The Colorado Decision Support System (CDSS) reports the following data for the Anderson Ditch:

	All Values in Acre Feet	
	Total Ditch	Subject Interest
Diversion (1950-2008)	4192	547
Diversion Maximum Year (2006)	6430	840
Dry Year Diversion (2002)	4201	549

An analysis of the historic consumptive use of the Anderson Ditch has been prepared by Agro Engineering and this appraiser has reviewed and relied upon in part the findings of Agro

Engineering. Agro Engineering is known to be a competent and credible firm with appropriate expertise. An excerpt of the Agro Engineering October 19, 2007 report is included in Appendix B.

The area historically irrigated by the subject 1.73 cfs Anderson Ditch is shown on Figure 2. The parcel labels and irrigated land areas are taken from the Agro Engineering Report. In addition to the Anderson Ditch water right, other water rights used on the property included the Rio Grande Lariat Ditch (Lariat Ditch) water right, the Rio Grande Piedra Valley Ditch (Piedra Valley Ditch) water right, and Well 1 (Case W438). The Agro Engineering Report allocated the water right use by parcel with parcels 7, 8, and 9 irrigated solely by the Anderson Ditch, with Anderson Ditch being a supplemental supply after the Lariat Ditch for parcels 11 and 12, Anderson Ditch being the primary supply for parcel 2, and any surplus Anderson water going to parcels 13 and 14. The total average irrigated area and pond area report by Agro for the subject 1.73 cfs of the Anderson Ditch is 126 acres.

Figure 3 is a topographic map with the subject historically irrigated area outlined. The elevation of the historically irrigated land ranges from 7665 feet in the southeast portion of the property to approximately 7685 feet at the northwest corner of the property. The Rio Grande directly to the north has streambed elevations of 7665 to 7675 feet which points to the concern of subirrigation of portions of the historically irrigated area. If the areas are sub-irrigated (i.e. high water table) the historic consumptive use credits will be reduced. Water court action is required to quantify the historic consumptive use and to change the water right in the type or place of use. To claim consumptive use credit in a change of use from irrigation to municipal or augmentation use, verifiable dry-up of irrigated lands is required.

Due to concerns raised about subirrigation, Agro Engineering provided various scenarios regarding the potential reduction in consumptive use due to subirrigation. The total consumptive use for the three scenarios is summarized as follows:

Best Case Scenario	167.4 acre feet
Plausible Scenario	135.9 acre feet
Worst Case	103.4 acre feet

We understand that piezometers were installed on the property in 2009 to monitor the depth to water so that the extent of subirrigation could be measured. We have not had access to the monitoring data; however, we have reviewed the *Soil Survey of Rio Grande County Area, Colorado* with regard to typical depths to water table for the various soils. For instance, the soils for parcel 2 are mapped largely as marsh. The soils mapped for parcels 7, 8 and 9 are reported as having depths to water of about 3 feet. The soils mapped in parcels 11, 12 and 13 have reported depths to water in 2 to 3 foot range. Based on the topography of the property related to water features in the vicinity, our review of the soils mapping, and our experience in other transfer cases, we believe that a consumptive use of 100 acre feet is most appropriate estimate of transferrable consumptive use.

## 2.0 PURPOSE OF THE APPRAISAL

The purpose of the appraisal is to estimate the market value, as of the effective date of January 27, 2010, of a 1.73 cfs interest in the Anderson Ditch. Market value, as used herein, is defined as follows:

**Market value** means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. buyer and seller are typically motivated;
2. both parties are well informed or well advised and acting in what they consider their own best interests;
3. a reasonable time is allowed for exposure in the open market;
4. payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and

5. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

*(Title XI of the Financial Institutions  
Reform, Recovery, and Enforcement Act  
[FIRREA] of 1989)*

The market value is estimated as of the effective date of January 27, 2010.

### **3.0 EXPOSURE TIME**

Exposure time is a retrospective opinion based on an analysis of past events, assuming a competitive and open market. Based on our experience with water rights and our review of the local basin, it is our opinion that the estimated exposure time is 18 months for the subject water rights.

### **4.0 INTENDED USERS AND INTENDED USE OF THE REPORT**

The intended user of this report is the City of Monte Vista. The intended use of the report is to assist the City in its decision-making process regarding an offering price for the subject water right.

### **5.0 SCOPE OF THE VALUATION**

This opinion of value scope of work has included the following tasks:

- Obtain and review water rights decree.
- Review Colorado Decision Support System (CDSS) database information for subject water rights.
- Review aerial photographs of the subject historically irrigated lands.
- Interview District 20 Water Commissioner Steve Baer.

- Review year 2003 and 2007 reports by Agro Engineering regarding the subject water rights.
- Review soil survey mapping and topography to estimate likely transferrable consumptive use.
- Define “Neighborhood” for market analyses. This task included reliance review of working draft of “Rules Governing the Withdrawal of Ground Water in Water Division No. 3,” and on past WWE experience in the Rio Grande River basin.
- Consider highest and best use analysis of the subject water rights.
- Search for comparable transactions for the sales comparison approach. The comparables search has been conducted by a review of Wright Water Engineers, Inc. (WWE) files of transactions, telephone interviews of water providers, water attorneys, real estate professionals and other knowledgeable water professionals. Adjustments include items such as time of sale, volume of transaction, and reliability.
- Reconciliation process and developing engineering opinion of value.

## **6.0 EXTRAORDINARY ASSUMPTION**

In preparing this appraisal, we have made an extraordinary assumption that the with regard to the quantification of the transferrable consumptive use due to subirrigation effects. We have not reviewed the monitoring data regarding the depth of water that has been performed by others. Such data would make the estimate of transferrable consumptive use more reliable. We have made the assumption that the transferrable consumptive use is 103 acre feet. This “extraordinary assumption” presumes as a fact that uncertain information regarding subirrigation. This presumed fact if found to be false, could alter the valuation opinion of value.

## **7.0 WATER NEIGHBORHOOD**

The regional water setting for the subject Anderson ditch water right is Water District 20 within the Upper Rio Grande basin as shown on Figure 4. The Rio Grande Basin is over-appropriated. Colorado is required to make deliveries to New Mexico in compliance with the Rio Grande Compact. Withdrawals of ground water can injure senior water rights and the pending “Rules Governing the Withdrawal of Ground Water in Water Division No. 3” will address these issues. The pending implementation of new ground water withdrawal rules will require that injury be groundwater withdrawals be remedied through an augmentation plan or by a Groundwater Management Plan operated by a Subdistrict. The need for replacement water will increase the demand for senior surface water rights.

## **8.0 HIGHEST AND BEST USE**

The highest and best use of the subject water is defined as follows:

The reasonably probable and legal use of the water, which is physically possible, legally permissible, financially feasible, and that results in the highest value.

### **8.1 Legally Feasible**

In evaluating a water right, one must consider both the legal availability and physical availability. With regard to legal availability, a water rights decree in addition to awarding a priority date and the amount of the water right, also states the type of use, diversion location, and often the place of use. If a water right is changed in type of use or diversion location, and in most cases, if the place of use is changed, a Water Court action is needed. With Water Court action the change is subject to the scrutiny of other water rights owners. If a water right is junior in date it may be subject to call to downstream senior rights in times of shortages, and must either curtail diversions or replace its depletions to the stream through an augmentation plan or by an exchange. Therefore, in evaluating a water right, the water rights ability to divert in-priority is a factor in its value.

The subject water right is decreed for irrigation use. While the transferable historic use has not been quantified by the Water Court, it is reasonable to expect that the historical use can be quantified in a decree with such historic consumable credits suitable for municipal and augmentation use.

## **8.2 Physically Possible**

With regard to physical yield, a water right can be in-priority but not have water physically available to divert. The water has historically been diverted from the Rio Grande River, so it is physically possible to continue diversion. Subirrigation will likely have an impact on the transferrable consumptive use.

## **8.3 Financially Feasible**

There is limited availability of senior surface water irrigation rights in the Upper Rio Grande River basin. The use of the subject water for municipal and augmentation use is financially feasible due to the short supply of alternative water rights. Use of the subject water for augmentation is financially feasible.

## **8.4 Maximally Productive**

The maximally productive use of the subject water right is the use that would provide the highest value. The highest value use is typically for municipal use and augmentation use. The maximum value is for the use of the historic consumptive use credits for augmentation.

## **8.5 Highest and Best Use Conclusion**

After considering the above and data review and analysis, the highest and best use of the subject water right is use of the historic consumptive use credits for municipal or augmentation use.

## **9.0 APPROACH TO VALUE**

Three approaches to value were considered. They are described as follows:



- In the **sales comparison approach**, the subject water right is compared to other applicable recent water sales. This method is most commonly used for water rights when adequate data is available. Data for generally comparable sales are used, and comparisons are made to demonstrate a probable price at which the subject water would be priced on the market.
- In the **cost approach**, an estimated replacement cost of the water right as of the date of the value is developed. That total represents the subject value indicated by the cost approach.
- In the **income capitalization approach**, the current potential income value for the water right interest is shown. The prospective net operating income is estimated. An applicable capitalization method and appropriate capitalization rate are developed and used in computations that lead to an indication of value.

## **9.1 Sales Comparison Approach**

The water market in the neighborhood is inactive. In the general area, when irrigated land is sold, the water right is often not severed from the land but is sold jointly with the land.

### **9.1.1 Pine River Weminuche Pass Ditch**

The San Luis Valley Water Conservation District (SLVWCD) sought funding from CWCB in July 2008 for the purchase of a one-third interest in the Pine River Weminuche Pass Ditch water right. This water right is a transmountain diversion from Division 7, Water District 31 into the Rio Grande basin. SLVWCD already had a one-half interest in the water right and has leased storage space in the Rio Grande, Santa Maria and Continental Reservoirs (Location of reservoirs show on Figure 4).

The Pine River Weminuche Pass Ditch (WDID 4638) water rights are summarized below:

	Amount	Adjudication Date	Appropriation Date	Administration No.
Priority 65-13	6.0 cfs	3/7/1966	10/11/1934	30964.00000
Priority 65-14	6.0 cfs	3/7/1966	11/2/1934	30986.00000
Priority 65-19	6.0 cfs	3/7/1966	6/30/1936	31592.00000

CDSS reports the following diversion for the Pine River Weminuche Pass Ditch:

All Values in Acre Feet	
	Total Ditch
Diversion (1967-2008)	542
Diversion Maximum Year (1976)	2094
Dry Year Diversion (1977)	Water not available
(2002)	Water available, but not taken

For a third interest in the water right, the average yield based on the diversions as given by CDSS would be 181 acre feet. SLVWCD reported the estimated yield to be 141 acre feet annually. The water because of its transmountain character is fully consumable. Because of a previous SLVWCD change case through Water Court, the objections to the change of the 1/3 interest were assumed to be generally answered.

The purchase price in year 2008 of \$800,000 for 141 acre feet gives a unit price per acre foot of consumptive use of \$5,674 per acre foot. Adjustments are made to the Comparable Sale to make the Comparable similar to the Subject water right. If the Comparable has a characteristic that is superior to the subject water right, then a negative adjustment is made to the comparable. Vice versa, if the Comparable is inferior to the Subject water right, a positive adjustment is made to the Comparable. An adjustment is also made for the appreciation of the water right over the last year. The adjustments and resulting indicated value per acre foot of consumptive use for the subject water right are summarized as follows:

Year 2008 price	\$5,674 per acre foot CU
Time Adjustment	+300 (5% increase)
Priority (Superior)	+1,000
Use (Inferior)	<u>-1,000</u>
Indicated Value	\$5,974 per acre foot CU

### 9.1.2 San Luis Valley Water Conservancy District

The San Luis Valley Water Conservancy District (SLVWCD) supplies water for residential properties of 35 acres or less and for temporary uses. This water can be thought of as “retail water” versus “wholesale water”. The unit cost of a small amount of water is much higher than a large block of wholesale water. The San Luis Valley Water Conservancy District water differs from the Anderson Ditch water in that allowed uses include domestic, and augmentation use. The SLVWCD has water storage available to release water at times needed and the augmentation water and related administration is supported by the SLV Water Conservancy District. The water is “on-the-shelf, ready-to-go” water and as compared to wholesale type water such as the Anderson Ditch irrigation water.

Current price	\$15,000 per acre foot
Time Adjustment	0
Priority (Superior)	+1,000
Use (Inferior)	-1,000
Retail / Wholesale (Superior)	<u>-9,000</u> (Small quantity)
Indicated Value	\$6,000 per acre foot CU

### 9.1.3 Sales Comparison Approach Reconciliation

The indicated value for the subject 1.73 cfs Anderson Ditch after adjustments is \$6,000 per acre foot of consumptive use. For the estimated consumptive use of 100 acre feet the indicated value of the Anderson Ditch is \$600,000.

## **9.2 Cost Approach**

The cost approach was considered but was not used.

## **9.3 Income Approach**

The income approach was considered but was not used.

## **10.0 RECONCILIATION**

Reliance is placed on the sales comparison approach. The cost and income approaches were not used. The indicated value from the sales comparison approach is \$6,000 per acre foot of consumptive use credits for a total market value of \$600,000 as of the effective date of January 27, 2010.

## **11.0 CONTINGENT AND LIMITING CONDITIONS**

This engineering opinion of value report has been made with the following general assumptions:

1. The subject water right is described in general terms. The engineers have not reviewed all documents relating to the subject water. No responsibility is assumed for matters including legal or title considerations. Title to the properties is assumed to be good and marketable unless otherwise stated.
2. The subject water right is valued free and clear of any and all liens or encumbrances unless otherwise stated.
3. The general information regarding the subject water right furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
4. We have relied in part of information provided in the Agro Engineering report.
5. A field inspection of the Anderson Ditch irrigated area has not been conducted. The estimate of consumptive use credits is preliminary in nature and the quantity is subject to

revision pending depth to water monitoring results and Water Court action. The total market value will vary with the quantified historic consumptive use credits.

6. It is assumed that there are no hidden or unapparent conditions of the water right that renders it more or less valuable. No responsibility is assumed for such conditions or for studies or legal analyses that may be required to discover them.
7. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report.
8. It is assumed that all required approvals for construction, permits, and administrative requirements from state government have been or can be obtained or renewed for the stated property use.
9. WWE is experienced in water engineering and in performing valuations. Patricia K. Flood has appraised numerous water rights and water facilities in Colorado and several other western states.
10. The forecasts, projections, or operating estimates contained herein are based upon current market conditions, anticipated supply and demand factors, and a stable economy. These forecasts are, therefore, subject to changes in future conditions.

This engineering report has been made with the following general limiting conditions:

1. The subject water right has been identified and has been described in terms of use and a general location.
2. No legal opinion was obtained relative to property ownership or legal status.
3. Possession of this report, or a copy thereof, does not carry with it the right of publication.

4. The engineer, by reason of this valuation, is not required to give further consultation or testimony or to be in attendance in court with reference to the property in question unless arrangements have been previously made.
5. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the engineer, or the firm with which the valuation is connected) shall be disseminated without the prior written consent and approval of the engineer.

## 12.0 CERTIFICATE OF VALUE

I, the undersigned, do hereby certify that Patricia K. Flood has prepared this appraisal of the Anderson Ditch water right and to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited by the reported assumptions and limiting conditions and are personal unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
4. Compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
5. The confidentiality of the appraiser-client relationship has been protected.


The market value of the 1.73 cfs Anderson Ditch water right for municipal and augmentation purposes as of January 27, 2010 is:

\$6,000 per acre-foot consumptive use

Preliminary estimate of historic consumptive use 100 acre feet

For a total estimated market value of \$600,000.

### WRIGHT WATER ENGINEERS, INC.

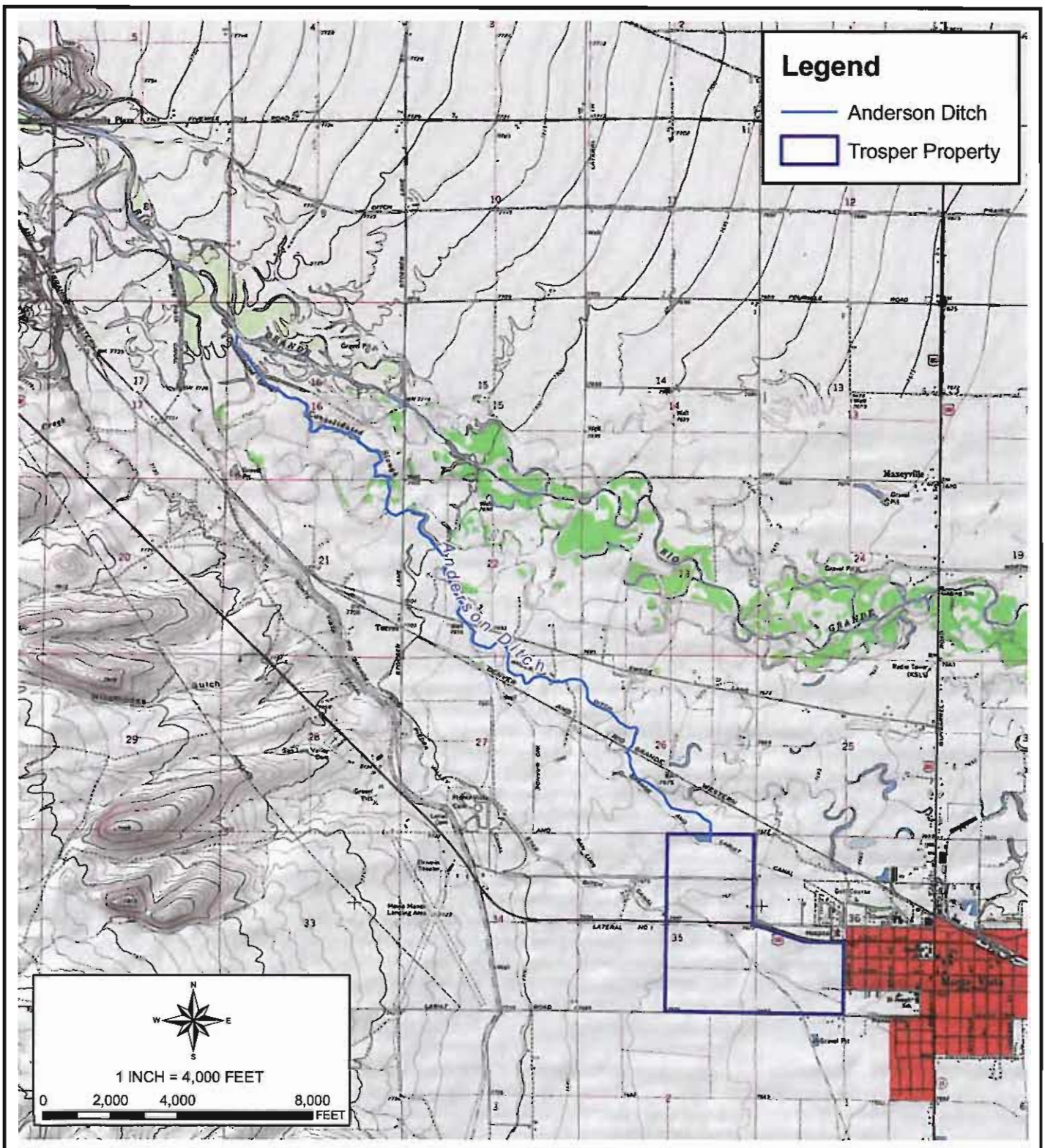
By:   
Patricia K. Flood, P.E.  
Senior Consultant  
Colorado Certified General Appraiser #1318801

## QUALIFICATIONS

Patricia K. Flood, P.E. with a B.S. Degree in civil engineering from the University of Kansas and graduate studies in water resources at Colorado University, is a registered professional engineer, a LEED Accredited Professional, and has held a Certified General Appraiser license since 1996. She has prepared numerous valuations of water rights and water and wastewater facilities. Patricia has provided expert testimony in water court and in civil court. Clients have included the Federal Deposit and Insurance Corporation, the U.S. Department of Defense, the U.S. Department of Agriculture, banks and private industry clients. Ms. Flood recently gave a presentation at a Colorado Bar Association Continuing Education seminar on Valuation of Water Rights. She was a co-author of the book, *Water Rights Handbook for Colorado Conservation Easements, Colorado Water Trust for Conservation Organizations*. Patricia is author of the chapters "Water Rights of the 50 States and Territories" and "Water Rights of the Eastern United States" in the American Water Works Association manuals on water rights.

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Base Map: USGS Topo, NGS 2009

**WWE**  
 WRIGHT WATER ENGINEERS, INC.  
 2490 W 26TH AVE 100A  
 DENVER, CO. 80211  
 (303) 480-1700

**RIO GRANDE COUNTY, COLORADO**

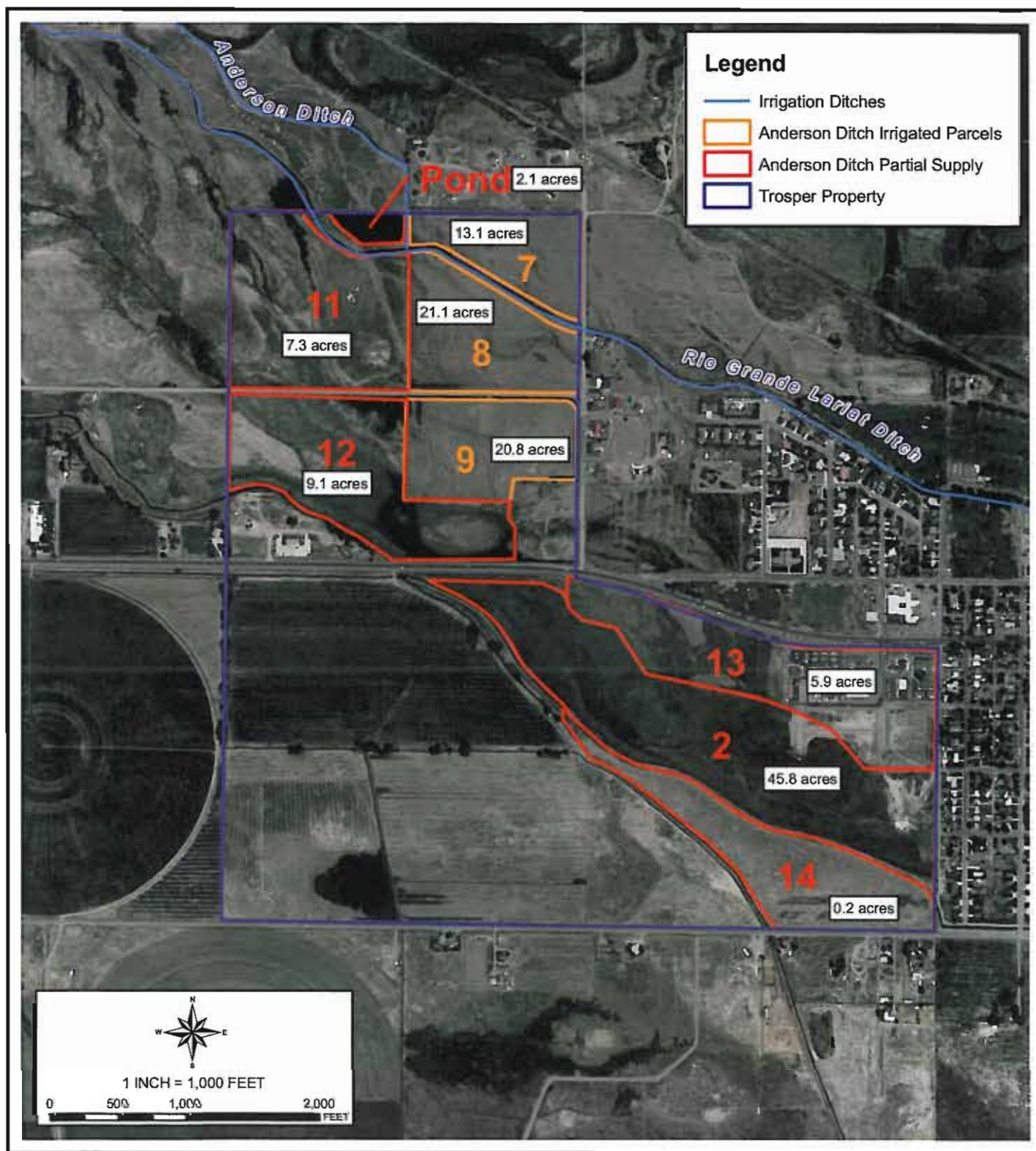
**VICINITY MAP**

ANDERSON DITCH FROM  
 RIO GRANDE RIVER TO TROSPER PROPERTY

PROJECT NO.  
 101-004.000

FIGURE  
 1





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Base Map: ESRI World Imagery

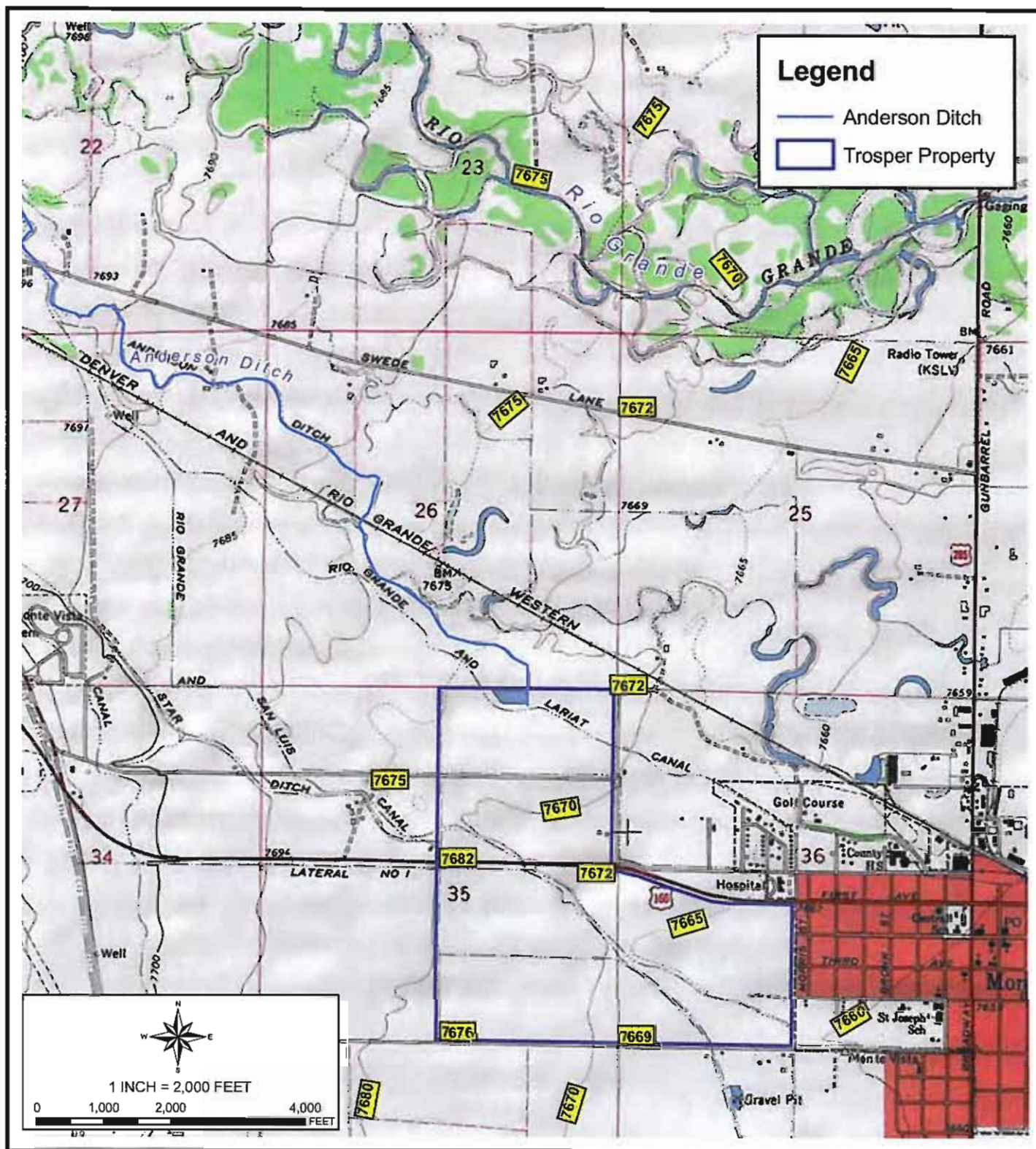
**WWE**  
 WRIGHT WATER ENGINEERS, INC.  
 2490 W 26TH AVE 100A  
 DENVER, CO. 80211  
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RIO GRANDE COUNTY, COLORADO  
**ANDERSON DITCH**  
 HISTORICALLY IRRIGATED AREA

PROJECT NO.  
 101-004.000

FIGURE  
 2





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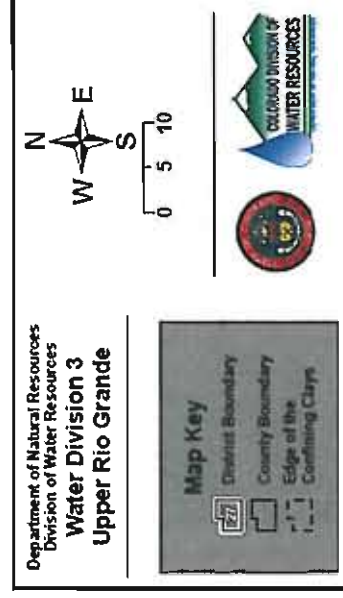
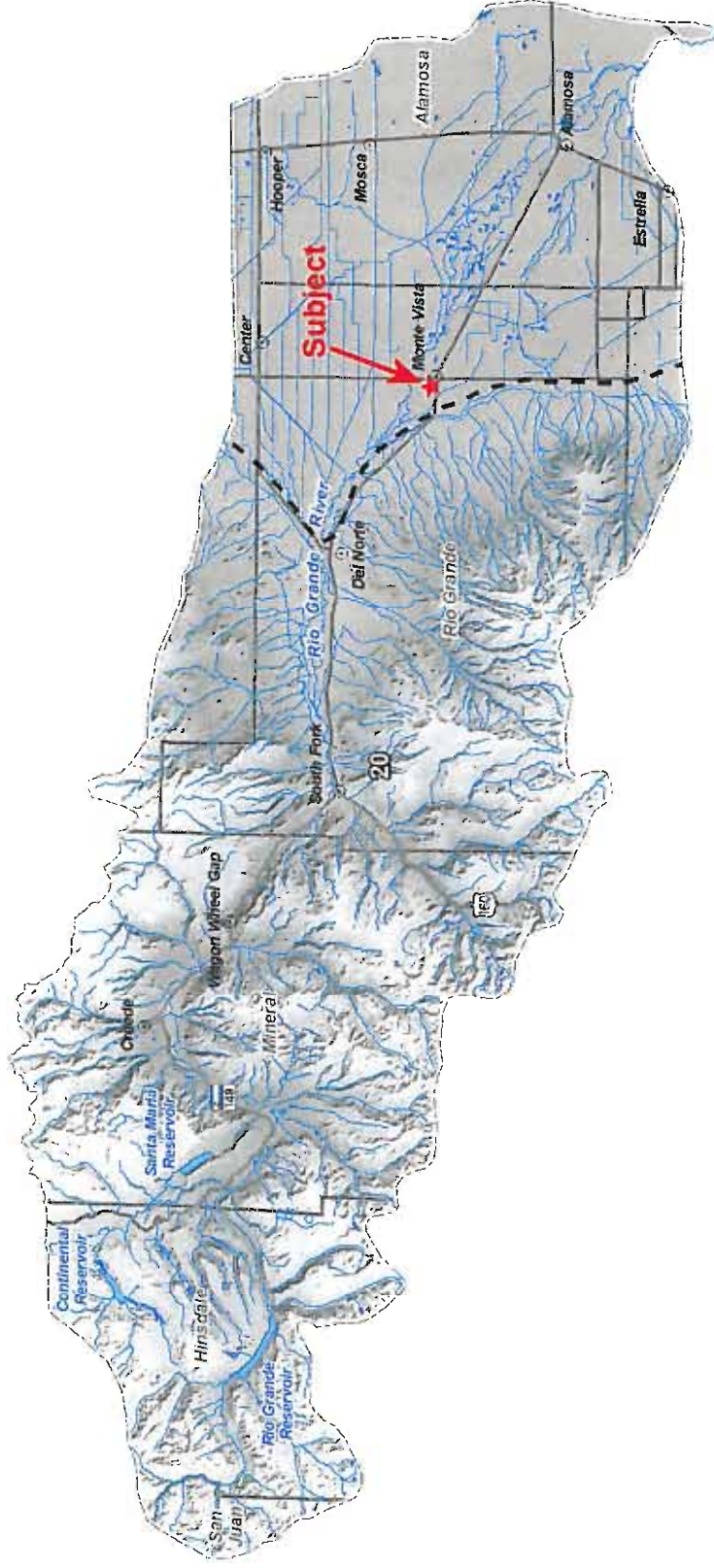
Base Map: ESRI World Imagery

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RIO GRANDE COUNTY, COLORADO  
**ANDERSON DITCH**  
 TOPOGRAPHY

PROJECT NO.  
 101-004.000

FIGURE  
 3



**FIGURE 4—Water Neighborhood  
Division 3, Water District 20**



**Wright Water Engineers, Inc.**

2490 West 26th Ave., Suite 100A  
Denver, Colorado 80211  
(303) 480-1700 TEL  
(303) 480-1020 FAX

www.wrightwater.com  
e-mail:wwe@wrightwater.com

February 1, 2010

**Via Mail and Email**

Don Van Wormer, City Manager  
City of Monte Vista  
4 Chico Camino  
Monte Vista, CO 81144

Re: Appraisal of 3.22 cfs Rio Grande Ditch No. 1 water right

Dear Mr. Van Wormer,

Attached is the appraisal report of the 3.22 cfs of the Rio Grande Ditch No. 1, Priority 8 water, which diverts from the Rio Grande River.

The market value of the 3.22 cfs Rio Grande Ditch No. 1 water right for municipal and augmentation purposes as of January 27, 2010 is:

\$6,250 per acre-foot consumptive use

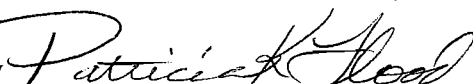
Estimate of historic consumptive use 400 acre feet

For a total estimated market value of \$2,500,000.

We have appreciated the opportunity to perform this work with Bikis Water Consultants and for the City of Monte Vista.

Very truly yours,

WRIGHT WATER ENGINEERS, INC.

By 

Patricia K. Flood, P.E.

Senior Consultant

Colorado Certified General Appraiser #1318801

cc: David Mehan, Bikis Water consultants  
Attachment

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## **FIGURES (END OF REPORT)**

Figure 1	Vicinity Map-Rio Grande River and Rio Grande No. 1 Ditch
Figure 2	Subject Rio Grande No. 1 Ditch Historically Irrigated Area
Figure 3	Rio Grande No. 1 Ditch Topography
Figure 4	Water Neighborhood

## **TABLES**

Table 1	Rio Grande Ditch No. 1 Monthly Diversions 1950-2008
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## **APPENDICES**

A	Rio Grande No. 1 Ditch Decree – Adjudication Date 05/01/1896
B	Bikis Water Consultants, Draft <i>Figure 1. Farm Delivery Analysis Rio Grande Ditch #1 on Haught Ranch Monthly Averages</i> and Draft <i>Figure 4 City of Monte Vista Rio Grande Ditch No. 1 Service Area Map</i>

## SUMMARY OF SALIENT FACTS AND CONCLUSIONS

<b>Subject Water Right</b>	3.22 cfs of the Rio Grande No. 1 Ditch
<b>Location</b>	Diverts from the Rio Grande River in Section 29, T40N, R6E of the New Mexico P.M., Rio Grande County, Colorado
<b>Type of Report</b>	Summary Appraisal Report
<b>Client</b>	City of Monte Vista 4 Chico Camino Monte Vista, CO 81144
<b>Valuation Date</b>	January 27, 2010
<b>Report Date</b>	February 1, 2010
<b>Purpose and Intended Use</b>	To assist the City of Monte Vista in decision making regarding offering price for the subject water rights
<b>Extraordinary Assumption</b>	No bylaw prohibition against transfer of water out of Ditch Service Area
<b>Highest and Best Use</b>	Municipal and Augmentation Use
<b>Market Value</b>	\$6,250 per Acre Foot Consumptive Use  Estimated consumptive use 400 Acre Feet  400 Acre Feet @ \$6,250 = \$ 2,500,000



# VALUATION OF RIO GRANDE DITCH NO. 1

## City of Monte Vista, Colorado

---

### 1.0 IDENTIFICATION OF SUBJECT WATER RIGHTS

The subject water right is a 3.22 cubic feet per second (cfs) ownership interest in the Rio Grande Ditch No. 1, Priority 8 which diverts from the Rio Grande River at an upstream location west of the City of Monte Vista. Figure 1 shows the location of the subject Rio Grande Ditch No. 1 and the location of the property on which the subject water right was historically used. The subject Rio Grande Ditch No. 1 (Structure ID 810) water right is located within Water Division 3, Water District 20.

The appropriation and adjudication dates for the Rio Grande Ditch No. 1 are summarized below:

	Amount	Adjudication Date	Appropriation Date	Administration No.
Priority 8	12.8 cfs	5/1/1896	8/1/1870	7518.00000

The subject 3.22 cfs represents a 25.16 percent interest in the Priority 8 and was used on the Haught property located in portions of Sections 2 and 3, Township 39 North, Range 6 East of the New Mexico Principal Meridian. The Rio Grande Ditch No. 1 was decreed in the May 1, 1896 Adjudication (Rio Grande Ditch No. 1 excerpts are given in Appendix A). The Rio Grande Ditch No. 1 is decreed for irrigation use.

The Rio Grande Ditch No. 1 monthly irrigation use diversions with a 12.8 cfs rate limitation are given in Table 1 and are summarized below for the total ditch and for the subject 3.22 cfs:

	All Values in Acre Feet	
	Total Ditch	Subject Interest
Diversion (1950-2008)	4,158	1046
Diversion Maximum Year (2003)	5,122	1,289
Dry Year Diversion (2002)	4,736	1,192
(1977)	4,695	1,181

The Rio Grande Ditch No 1 dry year diversions are higher than its average year diversions, which is a reflection of the ditch's senior priority.

A preliminary analysis of the historic consumptive use of the subject 3.22 cfs interest in the Rio Grande Ditch No. 1 has been prepared by Bikis Water Consultants, LLC (Bikis) and this appraiser has reviewed and relied upon in part on the findings of Bikis. We are familiar with the Bikis firm and know the firm has expertise in the field of water rights. Two figures from Bikis are included in Appendix B. They include 1) a map of the Ditch service area and the subject associated Haught property and 2) a draft farm headgate delivery analysis with estimated historic consumptive use.

The area historically irrigated by the subject 3.22 cfs Rio Grande Ditch No. 1 is shown on Figure 2. Figure 3 is a topographic map with the subject historically irrigated area outlined. The elevation across the irrigated lands ranges from \_\_\_\_ to \_\_\_\_ feet.

The Bikis consumptive use analysis used a total irrigated area of 215.16 irrigated acres (75.62 acres of alfalfa and 139.54 acre of pasture grass). With a subject 3.22 cfs and 215.16 acres, the duty of the subject water would be 66.8 acres per cfs. The Bikis analysis indicates a total consumptive use for the subject 3.22 cfs of 457 acre feet, which is 2.1 acre feet per acre of historically irrigated land. In the process of the obtaining a Water Court Decree, the transferrable consumptive use is typically reduced in the process of negotiation or by the effects of terms and conditions. The consumptive use quantity used in this appraisal is 400 acre feet, a reduction of slightly over 10 percent due to risks and uncertainties in the water change process.

## **2.0 PURPOSE OF THE APPRAISAL**

The purpose of the appraisal is to estimate the market value, as of the effective date of January 27, 2010, of a 3.22 cfs interest in the Rio Grande Ditch No. 1. Market value, as used herein, is defined as follows:

**Market value** means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. buyer and seller are typically motivated;
2. both parties are well informed or well advised and acting in what they consider their own best interests;
3. a reasonable time is allowed for exposure in the open market;
4. payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

*(Title XI of the Financial Institutions Reform, Recovery, and Enforcement Act [FIRREA] of 1989)*

The market value is estimated as of the effective date of January 27, 2010.

### **3.0 EXPOSURE TIME**

Exposure time is a retrospective opinion based on an analysis of past events, assuming a competitive and open market. Based on our experience with water rights and our review of the local basin, it is our opinion that the estimated exposure time is 18 months for the subject water rights.

### **4.0 INTENDED USERS AND INTENDED USE OF THE REPORT**

The intended user of this report is the City of Monte Vista. The intended use of the report is to assist the City in its decision-making process regarding an offering price for the subject water right.

### **5.0 SCOPE OF THE VALUATION**

This opinion of value scope of work has included the following tasks:

- Obtain and review water rights decree.
- Review Colorado Decision Support System (CDSS) database information for subject water rights.

- Review aerial photographs of the subject historically irrigated lands.
- Interview District 20 Water Commissioner Steve Baer.
- Review draft consumptive use analysis by Bikis Water Consultants regarding the subject water rights.
- Define “Neighborhood” for market analyses. This task included reliance review of working draft of “Rules Governing the Withdrawal of Ground Water in Water Division No. 3,” and on past WWE experience in the Rio Grande River basin.
- Consider highest and best use analysis of the subject water rights.
- Search for comparable transactions for the sales comparison approach. The comparables search has been conducted by a review of Wright Water Engineers, Inc. (WWE) files of transactions, telephone interviews of water providers, water attorneys, real estate professionals and other knowledgeable water professionals. Adjustments include items such as time of sale, volume of transaction, and reliability.
- Reconciliation process and developing engineering opinion of value.

## **6.0 EXTRAORDINARY ASSUMPTION**

In preparing this appraisal, we have made an extraordinary assumption that the with regard to the quantification of the transferrable consumptive use and that ditch bylaws allow or will be modified to allow transfer of water out of ditch service area. We have made the assumption that the transferrable consumptive use is 400 acre feet. This “extraordinary assumption” presumes as fact uncertain information. This presumed fact if found to be false, could alter the valuation opinion of value.

## **7.0 WATER NEIGHBORHOOD**

The regional water setting for the subject Rio Grande Ditch No. 1 water right is Water District 20 within the Upper Rio Grande basin as shown on Figure 4. The Rio Grande Basin is over-appropriated. Colorado is required to make deliveries to New Mexico in compliance with the Rio Grande Compact. Withdrawals of ground water can injure senior water rights and the pending “Rules Governing the Withdrawal of Ground Water in Water Division No. 3” will address these issues. The pending implementation of new ground water withdrawal rules will require that injury be groundwater withdrawals be remedied through an augmentation plan or by a Groundwater Management Plan operated by a Subdistrict. The need for replacement water will increase the demand for senior surface water rights.

## **8.0 HIGHEST AND BEST USE**

The highest and best use of the subject water is defined as follows:

The reasonably probable and legal use of the water, which is physically possible, legally permissible, financially feasible, and that results in the highest value.

### **8.1 Legally Feasible**

In evaluating a water right, one must consider both the legal availability and physical availability. With regard to legal availability, a water rights decree in addition to awarding a priority date and the amount of the water right, also states the type of use, diversion location, and often the place of use. If a water right is changed in type of use or diversion location, and in most cases, if the place of use is changed, a Water Court action is needed. With Water Court action the change is subject to the scrutiny of other water rights owners. If a water right is junior in date it may be subject to call to downstream senior rights in times of shortages, and must either curtail diversions or replace its depletions to the stream through an augmentation plan or by an exchange. Therefore, in evaluating a water right, the water rights ability to divert in-priority is a factor in its value.

The subject water right is decreed for irrigation use. While the transferable historic use has not been quantified by the Water Court, it is reasonable to expect that the historical use can be quantified in a decree with such historic consumable credits suitable for municipal and augmentation use.

## **8.2 Physically Possible**

With regard to physical yield, a water right can be in-priority but not have water physically available to divert. The water has historically been diverted from the Rio Grande River, so it is physically possible to continue diversion.

## **8.3 Financially Feasible**

There is limited availability of senior surface water irrigation rights in the Upper Rio Grande River basin. The use of the subject water for municipal and augmentation use is financially feasible due to the short supply of alternative water rights. Use of the subject water for augmentation is financially feasible.

## **8.4 Maximally Productive**

The maximally productive use of the subject water right is the use that would provide the highest value. The highest value use is typically for municipal use and augmentation use. The maximum value is for the use of the historic consumptive use credits for augmentation.

## **8.5 Highest and Best Use Conclusion**

After considering the above and data review and analysis, the highest and best use of the subject water right is use of the historic consumptive use credits for municipal or augmentation use.

## **9.0 APPROACH TO VALUE**

Three approaches to value were considered. They are described as follows:

- In the **sales comparison approach**, the subject water right is compared to other applicable recent water sales. This method is most commonly used for water rights when

adequate data is available. Data for generally comparable sales are used, and comparisons are made to demonstrate a probable price at which the subject water would be priced on the market.

- In the **cost approach**, an estimated replacement cost of the water right as of the date of the value is developed. That total represents the subject value indicated by the cost approach.
- In the **income capitalization approach**, the current potential income value for the water right interest is shown. The prospective net operating income is estimated. An applicable capitalization method and appropriate capitalization rate are developed and used in computations that lead to an indication of value.

## **9.1 Sales Comparison Approach**

The water market in the neighborhood is inactive. In the general area, when irrigated land is sold, the water right is often not severed from the land but is sold jointly with the land.

### **9.1.1 Pine River Weminuche Pass Ditch**

The San Luis Valley Water Conservation District (SLVWCD) sought funding from CWCB in July 2008 for the purchase of a one-third interest in the Pine River Weminuche Pass Ditch water right. This water right is a transmountain diversion from Division 7, Water District 31 into the Rio Grande basin. SLVWCD already had a one-half interest in the water right and has leased storage space in the Rio Grande, Santa Maria and Continental Reservoirs (Location of reservoirs show on Figure 4).



The Pine River Weminuche Pass Ditch (WDID 4638) water rights are summarized below:

	Amount	Adjudication Date	Appropriation Date	Administration No.
Priority 65-13	6.0 cfs	3/7/1966	10/11/1934	30964.00000
Priority 65-14	6.0 cfs	3/7/1966	11/2/1934	30986.00000
Priority 65-19	6.0 cfs	3/7/1966	6/30/1936	31592.00000

CDSS reports the following diversion for the Pine River Weminuche Pass Ditch:

All Values in Acre Feet	
	Total Ditch
Diversion (1967-2008)	542
Diversion Maximum Year (1976)	2094
Dry Year Diversion (1977)	Water not available
(2002)	Water available, but not taken

For a third interest in the water right, the average yield based on the diversions as given by CDSS would be 181 acre feet. SLVWCD reported the estimated yield to be 141 acre feet annually. The water because of its transmountain character is fully consumable. Because of a previous SLVWCD change case through Water Court, the objections to the change of the 1/3 interest were assumed to be generally answered.

The purchase price in year 2008 of \$800,000 for 141 acre feet gives a unit price per acre foot of consumptive use of \$5,674 per acre foot. Adjustments are made to the Comparable Sale to make the Comparable similar to the Subject water right. If the Comparable has a characteristic that is superior to the subject water right, then a negative adjustment is made to the comparable. Vice versa, if the Comparable is inferior to the Subject water right, a positive adjustment is made to the Comparable. An adjustment is also made for the appreciation of the water right over the last year. The adjustments and resulting indicated value per acre foot of consumptive use for the subject water right are summarized as follows:

Year 2008 price	\$5,674 per acre foot CU
Time Adjustment	+300 (5% increase)
Priority (Superior)	+1,250
Use (Inferior)	<u>-1,000</u>
Indicated Value	\$6,224 per acre foot CU
Round to	\$6,225 per acre foot CU

### 9.1.2 San Luis Valley Water Conservancy District

The San Luis Valley Water Conservancy District (SLVWCD) supplies water for residential properties of 35 acres or less and for temporary uses. This water can be thought of as “retail water” versus “wholesale water”. The unit cost of a small amount of water is much higher than a large block of wholesale water. The San Luis Valley Water Conservancy District water differs from the Rio Grande Ditch No. 1 water in that allowed uses include domestic, and augmentation use. The SLVWCD has water storage available to release water at times needed and the augmentation water and related administration is supported by the SLVWC District. The water is “on-the-shelf, ready-to-go” water and as compared to wholesale type water such as the Rio Grande Ditch No. 1 irrigation water.

Current price	\$15,000 per acre foot
Time Adjustment	0
Priority (Superior)	+1,250
Use (Inferior)	-1,000
Retail / Wholesale (Superior)	<u>-9,000</u> (Small quantity)
Indicated Value	\$6,250 per acre foot CU

### 9.1.3 Sales Comparison Approach Reconciliation

The indicated value for the subject 3.22 cfs Rio Grande Ditch No. 1 after adjustments is \$6,250 per acre foot of consumptive use. For the estimated consumptive use of 400 acre feet the indicated value of the Rio Grande Ditch No. 1 is \$2,500,000.

## **9.2 Cost Approach**

The cost approach was considered but was not used.

## **9.3 Income Approach**

The income approach was considered but was not used.

## **10.0 RECONCILIATION**

Reliance is placed on the sales comparison approach. The cost and income approaches were not used. The indicated value from the sales comparison approach is \$6,250 per acre foot of consumptive use credits for a total market value of \$2,500,000 as of the effective date of January 27, 2010.

## **11.0 CONTINGENT AND LIMITING CONDITIONS**

This engineering opinion of value report has been made with the following general assumptions:

1. The subject water right is described in general terms. The engineers have not reviewed all documents relating to the subject water. No responsibility is assumed for matters including legal or title considerations. Title to the properties is assumed to be good and marketable unless otherwise stated.
2. The subject water right is valued free and clear of any and all liens or encumbrances unless otherwise stated.
3. The general information regarding the subject water right furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
4. We have relied in part on information provided Bikis Water Consultants.
5. A field inspection of the Rio Grande Ditch No. 1 irrigated area has not been conducted. The estimate of consumptive use credits is preliminary in nature and the quantity is

subject to revision pending Water Court action. The total market value will vary with the quantified historic consumptive use credits.

6. It is assumed that there are no hidden or unapparent conditions of the water right that renders it more or less valuable. No responsibility is assumed for such conditions or for studies or legal analyses that may be required to discover them.
7. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report.
8. It is assumed that all required approvals for construction, permits, and administrative requirements from state government have been or can be obtained or renewed for the stated property use.
9. WWE is experienced in water engineering and in performing valuations. Patricia K. Flood has appraised numerous water rights and water facilities in Colorado and several other western states.
10. The forecasts, projections, or operating estimates contained herein are based upon current market conditions, anticipated supply and demand factors, and a stable economy. These forecasts are, therefore, subject to changes in future conditions.

This engineering report has been made with the following general limiting conditions:

1. The subject water right has been identified and has been described in terms of use and a general location.
2. No legal opinion was obtained relative to property ownership or legal status.
3. Possession of this report, or a copy thereof, does not carry with it the right of publication.

4. The engineer, by reason of this valuation, is not required to give further consultation or testimony or to be in attendance in court with reference to the property in question unless arrangements have been previously made.
5. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the engineer, or the firm with which the valuation is connected) shall be disseminated without the prior written consent and approval of the engineer.

## 12.0 CERTIFICATE OF VALUE

I, the undersigned, do hereby certify that Patricia K. Flood has prepared this appraisal of the Rio Grande Ditch No. 1 water right and to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited by the reported assumptions and limiting conditions and are personal unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
4. Compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
5. The confidentiality of the appraiser-client relationship has been protected.


The market value of the 3.22 cfs Rio Grande Ditch No. 1 water right for municipal and augmentation purposes as of January 27, 2010 is:

\$6,250 per acre-foot consumptive use

Preliminary estimate of historic consumptive use 400 acre feet

For a total estimated market value of \$2,500,000.

### WRIGHT WATER ENGINEERS, INC.

By: 

Patricia K. Flood, P.E.

Senior Consultant

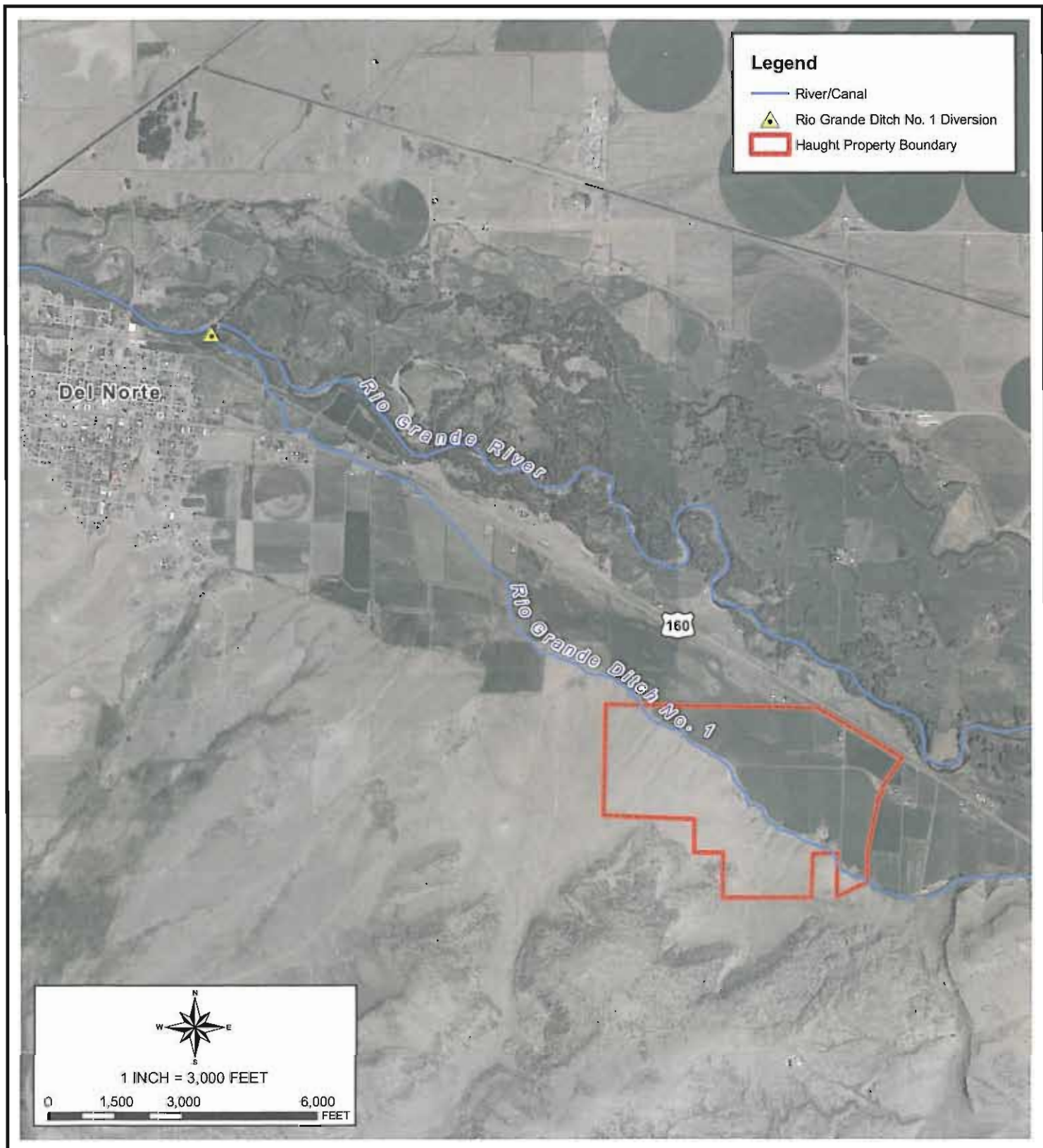
Colorado Certified General Appraiser #1318801

## QUALIFICATIONS

Patricia K. Flood, P.E. with a B.S. Degree in civil engineering from the University of Kansas and graduate studies in water resources at Colorado University, is a registered professional engineer, a LEED Accredited Professional, and has held a Certified General Appraiser license since 1996. She has prepared numerous valuations of water rights and water and wastewater facilities. Patricia has provided expert testimony in water court and in civil court. Clients have included the Federal Deposit and Insurance Corporation, the U.S. Department of Defense, the U.S. Department of Agriculture, banks and private industry clients. Ms. Flood recently gave a presentation at a Colorado Bar Association Continuing Education seminar on Valuation of Water Rights. She was a co-author of the book, *Water Rights Handbook for Colorado Conservation Easements, Colorado Water Trust for Conservation Organizations*. Patricia is author of the chapters "Water Rights of the 50 States and Territories" and "Water Rights of the Eastern United States" in the American Water Works Association manuals on water rights.

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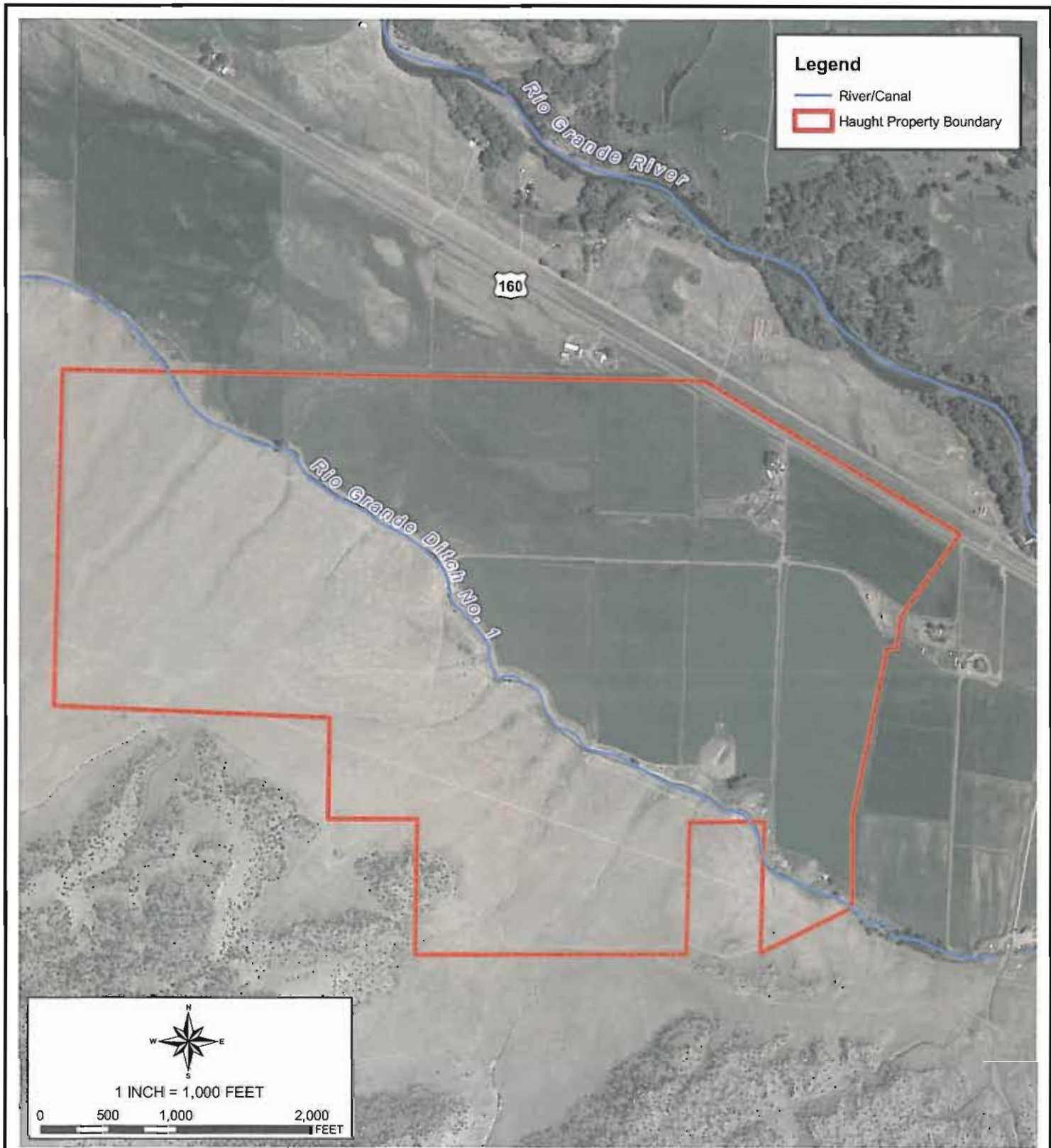
Base Map: NAIP 2005

**WWE**  
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 2490 W 26TH AVE 100A  
 DENVER, CO. 80211  
 (303) 480-1700

**RIO GRANDE COUNTY, COLORADO**  
**VICINITY MAP**  
**RIO GRANDE DITCH NO. 1**  
**HAUGHT PROPERTY**

PROJECT NO.  
 101-004.000

FIGURE  
 1



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Base Map: NAIP 2005

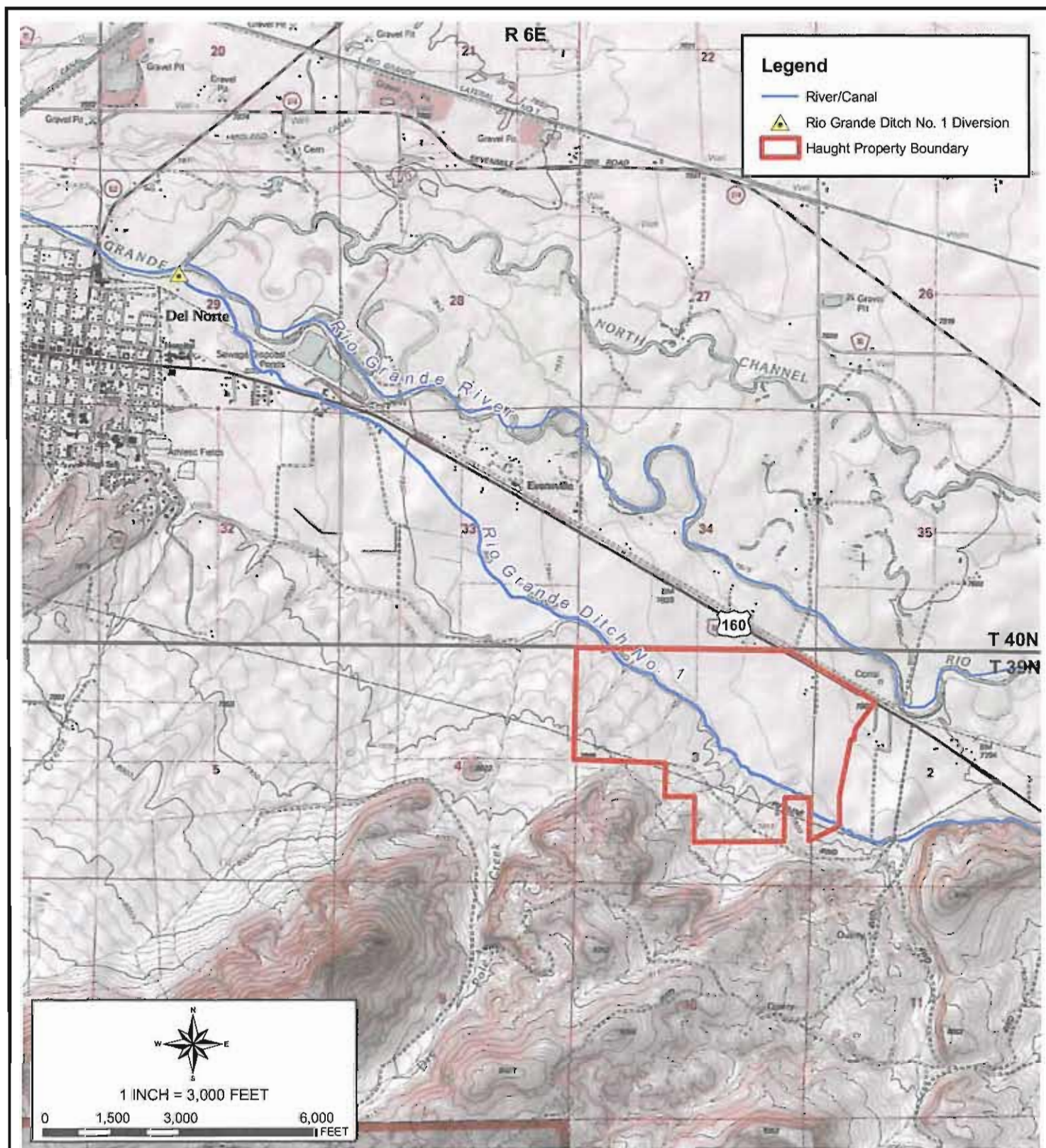
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RIO GRANDE COUNTY, COLORADO  
**RIO GRANDE DITCH NO. 1**  
 HISTORICALLY IRRIGATED AREA

PROJECT NO.  
 101-004.000

FIGURE  
 2





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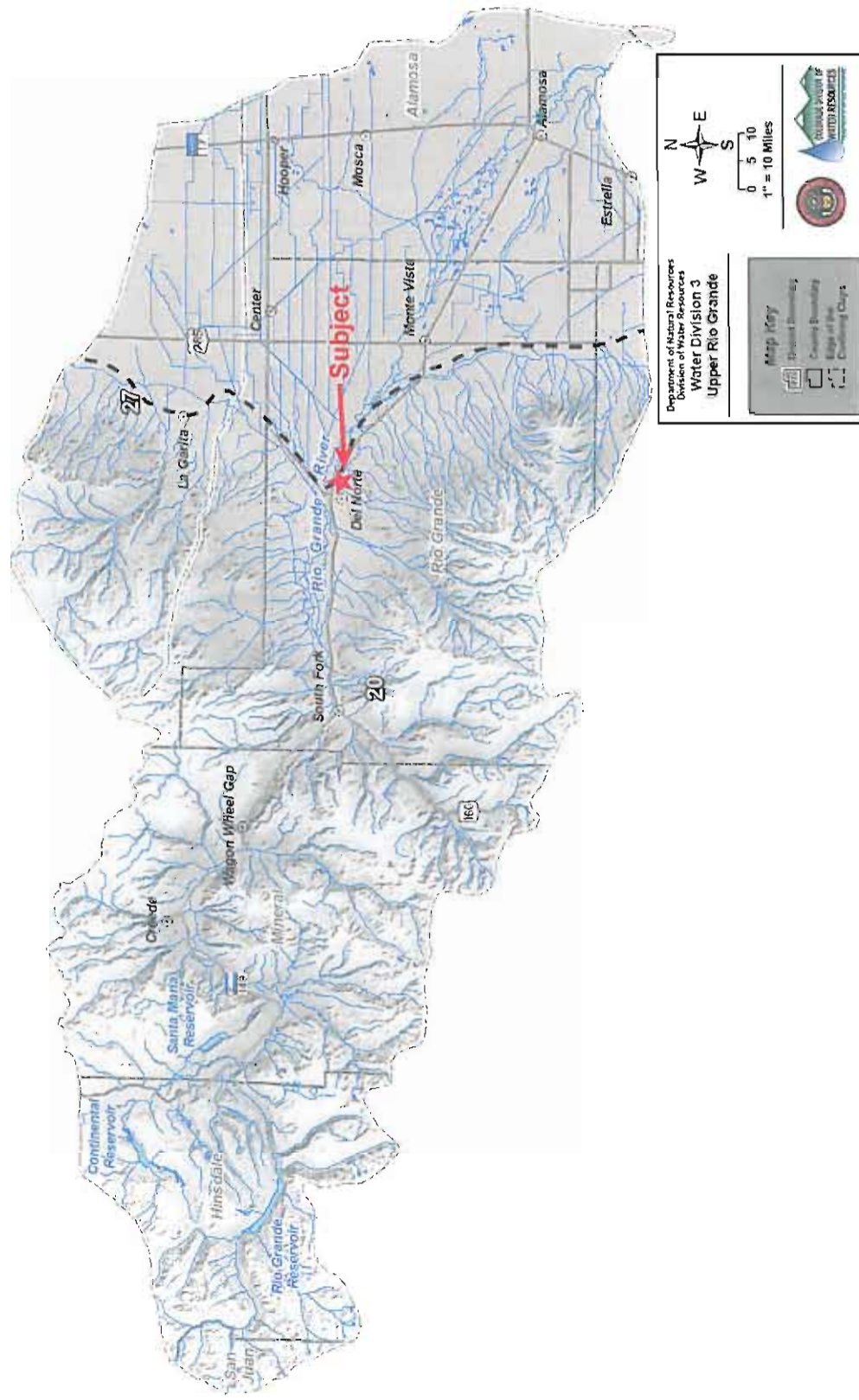
Base Map: USGS 1:24k Topo, Del Norte Quad

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RIO GRANDE COUNTY, COLORADO  
**RIO GRANDE DITCH NO. 1**  
 TOPOGRAPHY

PROJECT NO.  
 101-004.000

FIGURE  
 3



**FIGURE 4—Water Neighborhood  
Division 3, Water District 20**



**Table 1 Rio Grande Ditch No. 1 Monthly Diversions 1950-2008**

RIO GRANDE DITCH NO. 1, District 20 Structure ID 810

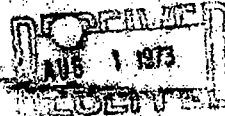
Priority 8      12.8 cfs      Subject Haught Ownership      3.22 cfs      25.2% Ownership

Year	(All values in Acre Feet)												
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1950	0	0	0	0	111	623	770	760	786	635	464	274	4423
1951	103	0	0	0	0	99	601	760	786	692	298	307	3646
1952	129	0	0	0	0	0	107	724	786	514	171	411	2841
1953	167	0	0	0	0	190	363	708	786	786	760	670	4430
1954	0	0	0	0	26	618	786	760	786	786	760	264	4786
1955	179	0	0	0	40	190	747	760	786	786	670	315	4472
1956	60	0	0	0	0	32	712	760	786	786	685	652	4473
1957	0	0	0	0	0	0	313	760	786	703	371	113	3046
1958	0	0	0	0	0	0	373	760	786	701	433	458	3512
1959	0	0	0	0	0	135	673	760	786	786	619	24	3782
1960	0	0	0	0	0	60	645	747	786	749	760	328	4075
1961	0	0	0	0	0	140	0	518	786	693	272	363	2771
1962	71	0	0	0	0	48	587	760	786	668	474	218	3613
1963	24	0	0	0	0	371	786	760	752	510	383	573	4158
1964	167	0	0	0	0	60	627	760	762	690	496	462	4024
1965	0	0	0	0	0	131	498	745	619	536	254	113	2896
1966	24	0	0	0	0	359	786	751	693	603	391	274	3880
1967	0	0	0	0	205	655	741	569	651	641	301	432	4195
1968	0	0	0	0	0	97	772	760	786	524	349	488	3775
1969	101	0	0	0	20	701	654	618	645	469	240	251	3698
1970	0	0	0	0	0	155	714	745	720	682	467	84	3567
1971	0	0	0	0	0	561	786	760	765	736	402	149	4158
1972	0	0	0	0	61	760	786	760	676	750	619	563	4976
1973	0	0	0	0	0	72	778	760	732	698	593	123	3756
1974	0	0	0	0	0	466	786	737	753	726	606	604	4679
1975	32	0	0	0	0	158	755	706	672	765	690	507	4284
1976	0	0	0	0	0	327	735	617	609	685	570	356	3899
1977	2	0	0	0	0	461	770	760	765	704	647	586	4695
1978	0	0	0	0	56	706	604	740	727	709	702	544	4786
1979	0	0	0	0	0	99	699	760	677	602	601	658	4097
1980	135	0	0	0	0	82	685	760	726	609	606	286	3889
1981	42	0	0	0	0	660	764	721	549	478	554	205	3973
1982	0	0	0	0	0	499	786	760	748	442	55	221	3511
1983	0	0	0	0	0	82	743	760	786	708	461	527	4067
1984	261	0	0	0	0	191	786	760	758	664	586	337	4343
1985	269	0	0	0	0	151	786	760	746	648	760	647	4768
1986	0	0	0	0	0	464	786	760	786	786	590	636	4807
1987	0	0	0	0	0	40	786	760	786	786	647	641	4445
1988	0	0	0	0	0	180	786	760	727	749	654	727	4582
1989	0	0	0	0	0	255	786	760	786	552	718	475	4332
1990	0	0	0	0	79	680	786	760	711	744	651	161	4573
1991	0	0	0	0	0	157	786	760	728	690	504	454	4079
1992	0	0	0	0	0	7	786	760	731	760	683	623	4350
1993	0	0	0	0	0	0	786	760	786	758	531	345	3965
1994	0	0	0	0	0	96	786	760	786	769	642	409	4248
1995	0	0	0	0	0	117	786	760	786	781	760	612	4601
1996	0	0	0	0	0	535	786	744	778	786	597	660	4886
1997	0	0	0	0	0	187	786	760	786	659	234	157	3569
1998	0	0	0	0	0	225	786	760	786	786	706	504	4553
1999	0	0	0	0	0	376	786	760	786	301	606	474	4088
2000	0	0	0	0	0	180	786	760	740	715	747	490	4418
2001	0	0	0	0	0	365	786	760	786	660	618	462	4438
2002	0	0	0	0	0	520	757	677	779	767	550	686	4736
2003	0	0	0	0	0	664	786	760	753	786	570	803	5122
2004	210	0	0	0	0	0	786	760	750	661	603	451	4221
2005	0	0	0	0	0	173	786	760	786	674	655	313	4146
2006	24	0	0	0	0	408	786	760	749	680	607	830	4844
2007	0	0	0	0	0	0	786	760	727	786	662	335	4056
2008	0	0	0	0	0	132	786	760	715	691	598	626	4309
Average	34	0	0	0	10	266	704	742	747	681	546	428	4158
Share River Headgate	8.5	0.0	0.0	0.0	2.5	67	177	187	188	171	137	108	1046

## **APPENDIX A**

**Rio Grande Ditch No. 1 Decree**

**Adjudication Date 05/01/1896**



PIN 20

# Best Copy Available

## INDEX

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List of Appropriations by Original Construction (only)  
Full List of Priorities

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"    "    "    No. 2.....	100.
"    "    "    No. 3.....	100.





State of Colorado, {  
County of Costilla, { ss.

IN THE DISTRICT COURT THEREOF.

In the Matter of the Adjudication {  
of the Priorities of Water Rights {  
in Water District No. 20. }

FINAL DECREE.

This matter having, on the 1st day of May, A.D. 1896, come on for final hearing and adjudication upon a former decree entered herein on the 17th day of November, A.D., 1891, and the report of A. W. McIntire, Referee therein, appointed by order of said District Court on the 18th day of May, A. D. 1890, and upon Petition filed herein on behalf of The Farmers Union and Prairie Ditch Companies, respectively, on October 10th, A. D. 1893 and October 27th, A. D. 1893; and upon said Petitions, the same having on the 4th day of January, A.D., 1894 been duly considered and referred to the said A. W. McIntire, the said former Referee, to make report and file into said Court his Abstract of Testimony and Findings of Fact, as provided by Statute; and said Abstract of Testimony and Findings of Fact having been duly filed in said Court on the 10th day of March, A. D., 1894, <sup>and said matter upon said Petitions, on the 1st day of June, A.D. 1894,</sup> having been re-opened for further hearing upon the testimony, findings, report of Referee and Decree hereinbefore entered,

And it now appearing to the Court that due notice has been given as by order of re-reference set forth, and full hearing and argument of counsel upon exceptions filed to the said report of findings of the Referee and said former Decree rendered herein; and now further findings of the Court being made and filed herein, of the date of entry of this Final Decree; and the Court being now fully advised in the premises doth find, order and decree that the said former Decree entered herein having been re-opened is hereby wholly set aside, discontinued and held for naught, the same being fully re-entered herein upon said re-opening and re-hearing, as provided by Statute, as hereinbefore set forth; and in respect to each and every ditch, canal, reservoir and spring in said Water District No. 20, concerning which proof and evidence have been offered before the said A. W. McIntire, Referee herein (each ditch canal, reservoir and spring being separately and particularly mentioned) the Court doth adjudge, order and decree, as follows, to-wit:

LIST OF APPROPRIATIONS BY ORIGINAL CONSTRUCTION (only).

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(See "List of Priorities" for such further appropriations to which ditch is entitled.)

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The following is a list of ditches in Water District No. 20, taking their supply of water from the Rio Grande River and its tributaries, giving the name of the ditch, the date of appropriation of water by original construction (only), and its priority number therefor, and the number of cubic feet of water per second of time to which the ditch is entitled thereby.

Const'n No.	Name	Date	Cubic Feet.
1	Silva	March 12th, 1866	3.
2	Atencole	April 18th 1868	0.74
3	San Jose or Lucero	April 30th 1868	0.9
4	Montoya 1, 2 & 5	March 10th 1867	3.6
5	Montoya No. 3	April 30th 1870	0.8
6	Montoya No. 4	April 30th 1870	0.1
7	Rio Grande Ditch No. 1	August 1st 1870	13.6
8	Mexican	June 1st 1871	1.7

# LIST OF PRIORITIES.

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(Showing all priorities to which each ditch is entitled by original construction and further appropriation of water.)

-----:00000:-----

The following is a list of ditches in Water District No. 20, taking their supply of water from the Rio Grande River and its tributaries, giving the name of the ditch, the date <sup>or dates</sup> of appropriation of water thereby, and its appropriation priority number, and the number of cubic feet of water per second of time to which said ditch is entitled.

Pri.No.	Name	Date	Cubic Feet
1	Silva	March 18th, 1888	8.
2	Atencio	April 15th, 1888	0.74
3.	San Jose or Lucero	April 30th, 1888	0.9
4	Montoya 1, 2 & 3	March 10th, 1887	3.8
5	Montoya No. 3	April 30th, 1870	0.9
6	Montoya No. 4	April 30th, 1870	1.
7	Silva	May 31st, 1870, (2nd pr.)	11.
8	Rio Grande Ditch No. 1	August 1st, 1870	12.8
9	Mexican	June 1st, 1871	1.7
10	James McLeary	May 1st, 1872	2.
<b>XXXXXXXX</b>			
11	McDonald	May 1st, 1872	16.4
12.	College Ditches Nos. 1 & 2	May 30th, 1872	1.5
13	Cochran Pioneer	June 8th, 1872	4.2
14	Horne	April 15th, 1875	2.8

No. 7

THE RIO GRANDE DITCH No. 1

Upon the findings of fact in the Referee's report duly reported and filed herein, and the same being duly considered:-

It is therefore ordered, adjudged and decreed that the said <sup>Ditch</sup> The Rio Grande No. 1 is entitled to Construction Priority No. 7, and to Appropriation Priority No. 8.

That the claimant is <sup>Live</sup> The Del Norte Stock & Real Estate Co., A. B. Espinosa, Alex. McIntosh, Volina Dyer & Benafacio Martinez.

That said ditch is used for the irrigation of lands, and takes its supply of water from a natural stream known as The Rio Grande River; its headgate is located N. 1d. W. 15.75 chains from N. E. corner S. E.  $\frac{1}{4}$  S. W. Sec. 29, Tp. 40, R. 6 E. N. H. M.

It is further ordered, adjudged and decreed that there be allowed to flow into and through the said The Rio Grande Ditch No. 1 from the said Rio Grande River, for the use aforesaid, for the benefit of the parties lawfully entitled thereto, under and by virtue of the appropriation of water thereby made, the amount of water, as of priority number and date, as follows, to-wit:-

By Original Construction:-

App. Priority No. 8, August 1st, 1870, 12.8 cu.ft. per second of time.



## **APPENDIX B**

**Bikis Water Consultants, LLC**

**DRAFT Figure 1. Farm Delivery Analysis Rio Grande Ditch #1  
on Haught Ranch Monthly Averages**

**DRAFT Figure 4. City of Monte Vista Rio Grande Ditch No. 1  
Service Area Map**

**Figure 1. Farm Delivery Analysis**  
**Rio Grande Ditch #1 on Haight Ranch**  
**Monthly Averages**  
**City of Monte Vista**  
 (All values in acre-feet)  
 DRAFT

Month	Potential Crop ET	Effective Precip	Irrigation Water Requirement	River Diversion	Farm Headgate Delivery	Total Crop CU	CU Per Acre
January	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	2.55	2.29	0.00	0.00
April	15.45	1.74	13.71	66.87	60.18	13.71	0.06
May	76.79	10.24	66.55	174.81	157.33	66.55	0.31
June	126.06	10.57	115.49	183.50	165.15	114.65	0.53
July	122.12	23.20	98.92	185.89	167.30	98.91	0.46
August	106.54	24.50	82.04	170.49	153.44	82.04	0.38
September	68.99	11.85	57.14	137.03	123.33	56.93	0.26
October	27.80	3.46	24.33	107.31	96.57	24.33	0.11
November	0.00	0.00	0.00	8.52	7.67	0.00	0.00
December	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>543.75</b>	<b>85.57</b>	<b>458.17</b>	<b>1036.97</b>	<b>933.27</b>	<b>457.13</b>	<b>2.12</b>

Source:  
 Colorado Division of Water Resources diversion (1950-2008), values from StateCU Consumptive Use Analysis Structure  
 Scenario per CDWR recommendations.

**Notes:**

Period of record 1950-2008

- 1) Analysis assumes a maximum of 60% flood irrigation efficiency and 90% ditch efficiency.
- 2) Analysis assumes an available water capacity of 0.121 in/in (NRCS Soil Survey) and soil moisture reservoir capacity of 100.55.
- 3) Analysis assumes 0% of soil moisture capacity initially filled in 1950.
- 4) Analysis conducted using a total of 215.16 irrigated acres (75.62 acres of alfalfa and 139.54 of pasture grass)
- 5) Analysis performed using Del Norte 2 E Climate Station data.
- 6) Analysis assumes that 0% of winter precipitation went to the soil moisture reservoir.

R7E

R6E



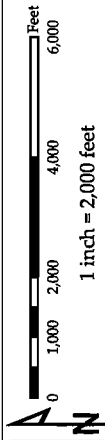
R7E

R6E

**Map Legend**

- Rio Grande Ditch No. 1 Headgate
- Rio Grande Ditch No. 1
- Rivers and Streams
- Highway
- Rio Grande Ditch No. 1 Service Area
- Haught Ranch
- City/Town
- Section
- Township/Range

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Map Sources:  
Aerial Photography - USDA/RS-A, Summer 2009  
Roads - Colorado Department of Transportation  
Rivers and Streams and Ditch Data - Colorado Decision Support Systems  
Haught Ranch - Rio Grande County Assessor  
Township/Range and Sections - US Bureau of Land Management  
Town Boundary - ESRI ArcGIS Data, 2009

Designed by: MJK  
Detail by: DBM  
Date: 01/21/2010  
Scale: 1:24,000

**City of Monte Vista  
Rio Grande Ditch No. 1  
Service Area Map**

**DRAFT  
Figure 4**



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