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**To: La Plata County Planning Office,  
Colorado Division of Water Resources-State Engineer**

**Ref: Animas Water Company supply, Quality, Quantity, Dependability**

This water report is written to La Plata County Planners for their relevant project review use, and to be provided to the office of the State Engineer, Division of Water Resources, per their guidelines in support of the water supply capability of the Animas Water Company, Durango/Hermosa Colorado.

The Animas Water Company is a non-profit company that serves residents of the Animas Valley North of Durango, Colorado. Current service is to approximately the 14 miles of the Animas Valley directly North of Durango.

The Company, being a Company and not a District or other quasi municipality, does not have a boundary and service area per se other than the natural boundaries formed by the valley and as may be limited by the AWC water decrees. The Company will consider any applicants for service lying within the general area described. Applicants outside that general area described would be considered on a case by case basis.

Any applicant applying for service requiring additional infrastructure to reach their project would be required to install same at their expense. The Company prefers, but does not require, potential users within its general boundary to utilize its services. The Company reserves the right to challenge, under State law, any new wells deemed to have possible negative effects on the current Company supply wells. The AWC's first responsibility is to current users and any new service proposals are considered with that in mind.

The Company provides water service primarily to domestic users. A small amount of commercial and industrial use exists in the Animas Valley, but at present is not significant enough to be considered a major portion of the water served. The Company was first established as a rural Water Company, in the late 1960's with the prime aim of providing in house domestic water to rural users.

Providing only the domestic requirement is a common goal among water companies in Colorado and elsewhere, when individual wells do not provide the same level of public benefit, or a reliable public supply is desired.

Although some projects constructed since Company inception have been able to provide their own infrastructure to AWC, of a size and capability to provide adequate fire flow to those particular users, the Company has no overall policy to provide fire flows to areas that have satisfactory domestic service only. Individual customers are encouraged to become aware of their own proximal fire flow possibilities and to understand those limits. .

Most of the Company customers are single family homes with, in addition, a significant number of multifamily apartments and mobile home parks. AWC estimates that the **overall equivalent single family tap use in 2022 is about 1910 equivalents**. In many cases an entire mobile home park may be one billing entity/meter location, yet represent 50-60 users.

Water System Essential Facts- Detail Below is in Accordance with Attachment A 1.b. of the State Engineer's memo of March 16, 2005 to AWC.

## **i.) A Summary of the Water Rights owned and controlled by the Company-**

Animas Water Company has the following absolute water rights:

- (1) 94 CW 80 Chapin Well 1.0 c.f.s.
- (2) 96 CW 102 Red Rocks Well - .89 c.f.s.
- (3) 96 CW 106 Hermosa Meadows Well .89 c.f.s.
- (4) 2006 CW 86 School Well 0.888 CFS

Total absolute water rights: 3.67 CFS (1670 gpm). The above referenced wells are all operational and produce water for the Animas Water Company on a daily basis, although never all at once at those rates-- as demand does not require it..

Animas Water Company has the following additional conditional water rights:

- (1) 2006 CW 86 – School Wells #1 and #2 – 1.112 c.f.s.
- (2) 2004 CW 89 – Smith, Hermosa Meadows, Red Rocks, Chapin and Dillon – 2.5 c.f.s.
- (3) 2002 CW 118 – Smith Well – 1.0 c.f.s.

Total conditional water rights:4.6 c.f.s.

Total water supply for AWC including conditional and absolute water rights is 8.2 c.f.s. (up to 3730 gpm)

**ii.) The anticipated yield of these rights in both an average and dry year.**

To date Animas Water Company has seen no variance in water supply through the Animas Valley Aquifer in either a wet or dry year. Demand placed upon the aquifer by the Company and its members is far less than flows actually available in that aquifer. Well drawdown during pumping is insignificant. No change in that operational status has been observed in over 30 years of operations. Even during very low flow periods of the Animas River, absolutely no variation in well production is observed at current rates of peak withdrawal.

**iii) The present demand on the Company and the anticipated demand due to commitments for service entered into by the Company that are not yet supplied.**

Available Quantity-

Current water supply is via four wells located at various spots in the Animas Valley. These wells are named as follows and listed with their normal average current delivery and their capability for peak use. Capability for peak use would consist simply of upgrading power, some piping, and pump size for each well, as they all have had quantity testing valid at the maximum capabilities shown.

| Well  | Typical Current Supply Capability Level | Capability with Improvements |
|---|---|------------------------------|
| Red Rock Well                                   | 455 gpm                                 | 455 gpm                      |
| Hermosa Meadows Well                            | 300 gpm                                 | 455 gpm                      |
| School Well                                     | 400 gpm                                 | 500 gpm                      |
| Chapin Well                                     | 150 gpm                                 | 455 gpm                      |
| Totals, gpm                                     | 1305 gpm                                | 1865 gpm                     |
| Totals, gpd at 50% duty (pumping half the time) | 0.93 mgd                                | 1.34 mgd                     |

Improvements to wells as listed take the nature of simple upgrade of well pumps, improvement of well supply piping, metering, and other items, and do not require major investment. "Capability with Improvements" is essentially an expression of standby production capacity. For instance in 2022, the Red Rock Well had its pump and pipe sizing upgraded to allow an increase from 300 gpm to 455 gpm, a relatively inexpensive improvement.

Demand-

AWC feels that considering production from the wells in millions of gallons per month is the best way of watching water supply and usage.

Overall capability from the wells is estimated conservatively at a 50% duty cycle to accommodate any equipment replacement, maintenance, etc. that would occur during peak production. The aquifer has shown that it will withstand 100% duty, but the Company chooses not to plan on that basis to be cautious.

|   |                              |
|---|------------------------------|
| Total Current Supply <u>Capability</u> Level at 50% duty- | 28 million gallons per month |
| Total Well <u>Capability</u> in place-                    | 40 million gallons per month |

Note: It is important to understand the simple reliability decision of 50% duty. The actual water supply available in times of extreme stress, such as a fire fighting scenario, is double the numbers shown above, or more.

**Total Experienced Current Demand-**

|              |   |
|--------------|---|
| Summer-      | 20 million gallons per month (0.67 MGD)   |
| Winter-      | 8 million gallons per month (0.27MGD)     |
| Yearlong Avg | 11.7 million gallons per month (0.40 MGD) |

Average per equivalent user (single tap) use per day is about 350 gpd per equivalent user (total household equivalent) summer (outside irrigation), and 140 gpd per user winter for a year around average of 245 gpd per user/household. The summer increase is due to outside irrigation uses, which varies widely among customers.

Dependability-

Dependability of water supply takes two forms, that of physical reliability and that of water rights. Water rights are listed above.

The wells drilled in the Animas Aquifer have all had extensive well drawdown testing prior to use and well levels are

monitored on occasion with ongoing service. All wells are in extensive gravel and sand alluvium. The evidence to date is that drawdown of the wells is nearly an insignificant number and the aquifer easily keeps up with the demands placed on it.

Animas Water Company does monitor events that could affect the water supply in their aquifer but to date no event worthy of alarm has occurred. AWC is proactively involved in Animas River watershed protection groups.

#### Quality-

The water supply all comes from wells drilled in the Animas River Aquifer. These wells are excellent producers and provide high quality water. The only concentration of note in the water is hardness varying from 150-200 mg/l which is not excessive. The only treatment that occurs with the water supply is contact chlorination at the wells. No other treatment is employed. Chlorination is only applied to meet minimum CDPHE standards at remote areas of the system. The raw water has an extremely low chlorine demand (is free of particulates etc). Since no surface water is treated at AWC, treatment requirements are kept to a very low level.

Regular testing to monitor water quality occurs both voluntarily by AWC and in accordance with CDPHE requirements. The testing results are always available to all AWC customers. No significant levels or exceedances of EPA limits, of metals, organics, radioactivity, or other pollutants of interest have been detected in chemical testing of the wells.

It is worth noting that after the 2015 Gold King mine spill to the Animas River near Silverton, the EPA began almost immediately monitoring AWC wells, as all AWC wells are in the Animas River or Hermosa Creek aquifer. The spill is estimated to have discharged one million gallons of mine waste to the Animas River during a time (August) when the Animas typically flows at about 100 million gallons per day. Weekly or even more frequent tests were made of the AWC wells post-spill, testing for the known heavy metals that would have appeared in the spill. No increase from normal levels in any of the AWC wells was noted at any time during this testing. The wells have proven to have little or no influence from short term surface water events.

#### **iv.) The amount of uncommitted firm supply the Company has available for future commitment and development.**

Future development pressures from outside the current service area are unknown. Anything can happen. Water in Colorado is a precious resource and it would be foolish to assume no new large user would appear at the AWC door. However, development through the 1980s, 1990s and 2000s did much to provide infill East of Highway 550 and current La Plata County planning/density restrictions, and overall land available do provide a finite limit to future user increases. AWC is well positioned to easily accommodate new users that might come forward within the current service area in terms of new infill projects.

|                                  |  |
|----------------------------------|--|
| <b>Current Users</b>             | <b>Current Peak Summer Use (only utilizing 50% of well capacity)</b> |
| <b>1910 equivalent</b>           | <b>20 million gallons per month</b>                                  |
| <b>Future Users, Firm Supply</b> | <b>Peak Summer Use (only utilizing 50% of well capacity)</b>         |
| <b>3820 equivalent</b>           | <b>40 million gallons per month</b>                                  |

The numbers above are without any new wells drilled and keeping current supply capability. Additional water rights, well sites and infrastructure are held by AWC to augment those numbers.

If one were to employ a 20 year development horizon using these numbers, they indicate that nearly 100 users per year could be added to the system. This is not likely due to the above constraints. No historical development rate at AWC, in Hermosa, Colorado, supports such a number.

#### **v.) A map of the Company's service area**

As mentioned, the Company does not have a specific service area. Service is offered where the Company has piping infrastructure or where a developer is willing to provide it. The Animas Valley provides a natural constraint to that area and some aspects of the water rights of the Company may serve to limit where water is offered. Descriptive maps are here enclosed.

Thank you very much,

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