

Noted.

The following sections of this Pre-Application Letter provide relevant information related to the Site as outlined in Chapter 4, Article 2, Paragraph 4.201 Application Submission Requirements for all Permit Applications.

Section 4.201: Application Submission Requirements.

Section 4.201(1): Preliminary review and comment on the proposal by the appropriate agency of the Colorado Department of Natural Resources and the Colorado Department of Public Health and Environment within sixty (60) days of the date of submittal of the proposal for review.

To be provided to the Colorado Department of Public Health and Environment (CDPHE).

Section 4.201 (2): Scope of Proposal.

4.201(2a): Provide detailed plans of the proposal, including proposed system capacity and service area plans mapped at a scale acceptable to the Department.

The design plans are submitted under Exhibit I. The Water Quality Control Division/Engineering Section; Section 22.7 of Regulation 22 has been copied from the Site Application and included as Exhibit H. Exhibit H indicates the existing and proposed treatment capacity of the receiving facility, UMCR WWTF.

The Site Application explains the design rationale and system capacity in further detail and is available in its entirety upon request. The lift station will have a 140 gpm capacity which meets the WQCC Regulation 22 requirements.

The AWSD service area is shown in Exhibit J.

4.201(2b): Provide a description of all existing or approved proposed domestic water or sewage treatment systems within the Project area.

Academy Water and Sanitation District (AWSD) provides water and wastewater services to all users in the Project area. Exhibit J shows the service area with the collection system. Currently the existing system consists of two lift stations and a lagoon wastewater treatment facility. This project will decommission both existing lift stations as well as the wastewater treatment facility. A new lift station and force main will be constructed and the wastewater flows will be directed to the DWSD collection system with treatment occurring at the UMCR WWTF.

AWSD provides water treatment and distribution to all users within its service area. AWSD treats groundwater at the water treatment facility which is located on the same property as the existing wastewater treatment facility. The treatment method is direct filtration using Microfloc Trimite Unit. The water treatment plant provides iron and manganese removal and disinfection. After treatment, the treated water is distributed through the AWSD distribution system.

4.201(2c): Describe the design capacity of each domestic water or sewage treatment system facility proposed and the distribution or collection network proposed in the Project area.

This project will decommission the existing wastewater treatment facility. The wastewater will be directed to DWSD collection system and treated at the Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF) which is outside the Project area.

The proposed lift station services the East Service area of the AWSD. The West Service area will be directed by gravity flow to the DWSD. Due to the relatively small size and residential makeup of the lift station's service area, a peak hour flow factor of 4.0 was selected. Daily, hourly, and seasonal flows fluctuate; data, past studies, and industry standard have concluded that a multiplying the average daily flow by 4.0 is sufficient for the sizing of facilities to account for peak flow conditions.

Applying this peak hour flow factor to the average daily flow results in a lift station peak hourly flow of 73 gpm under current conditions; however, the firm design capacity of the lift station is 140 gpm. Additional information on the design rationale is included in the Site Application. The design parameters for the Lift Station are shown on Exhibit H. If desired, a complete copy of the Site Application can be provided.

4.201(2d): Describe the excess capacity of each treatment system and distribution or collection network in the affected community or Project area.

As mentioned in the previous section, the lift station is designed for 140 gpm. The peak hour factor of 4.0 results in a peak hourly flow of 91 gpm for the future design condition. The lift station design accounts for the additional flow that could be directed from the Fox Run Lift Station Overflow (operated and owned by DWSD).

4.201(2e): Provide an inventory of total commitments already made for current water or sewage services.

AWSD is a Colorado Special District created in 1965 under the provisions of Title 32 of the Colorado Revised Statutes. The District is strictly residential. Currently, the District's service area is 97% built out. There are currently 298 connections to the wastewater collection system. The total potential build-out represents 322 residential customers. This accounts for a potential of additional wastewater services provided to residents adjacent to the District that are currently on Individual Septic Disposal Systems (ISDS).

4.201(2f): Describe the operational efficiency of each existing system in the Project area, including the age, state of repair and level of treatment.

The existing lagoon WWTF is unable to meet the new discharge limits that will go into effect October 1, 2018. This is the purpose of this project. The efficiency of the current facility is good with the current standards. However, the current facility is in violation with its discharge permit in regards to chlorine. Chlorine is required in the final stage of treatment for disinfection; the chlorine concentration is exceeding the allowable concentration. Addressing this problem with a dechlorination facility would cost \$35,000 and would only be used for a very limited time; therefore, AWSD has requested waivers from the State for the development of this facility.

The District's existing wastewater collection system is shown in Exhibit J. The original installation constructed in 1968 consisted of vitrified clay pipe (VCP). With the building of new homes in the development, the collection system was expanded using VCP and polyvinylchloride (PVC) piping. The system also includes limited segments of ABS Truss pipe

and cast iron pipe. All piping within the collection system appears to be 8-inch diameter. The collection system contains approximately 24,000 feet of piping. Manholes are in place at line intersections and typically at 400 to 500 foot, or less, intervals.

In April 2011, the District contracted with DRC Construction Services to conduct a comprehensive inspection of the collection system. A total of 49 pipe segments were inspected with closed-circuit television and the images recorded. This totaled approximately 11,000 feet of sewer. The inspection found the collection system to be in fair condition. Several segments were seen to have root intrusion, pipe fractures and breaks. There were no sections with significant invert offsets or sags. No infiltration or inflow was noted.

4.201(2g): Describe the existing water utilization, including the historic yield from rights and use by category such as agricultural, municipal and industrial supply obligations to other systems.

This project is limited to wastewater collection and treatment. This project does not include any water treatment nor distribution components. Not relevant to this project.

Section 4.201 (3): Demonstration of Need.

4.201(3a): Provide population trends for the Project area, including present population, population growth and growth rates, documenting the sources used.

This project is not due to population growth. As mentioned before, the District is nearly at full build-out (approximately at 97% build-out).

4.201(3b): Specify the predominant types of developments to be served by the proposed new water and/or sewage systems or extensions thereof.

This project will service the existing residential area of Pleasant View Estates Filing 3 and 4. There are no commercial operations in the service area. The only user in the system that is not residential in nature is the fire station.

4.201(3c): Specify at what percentage of the design capacity the current system is now operating:

3c(i): Water Treatment system.

Not relevant to this project. The service area boundary is well defined and will not expand. The District is not experiencing any issues regarding capacity for the demands in the system.

3c(ii): Wastewater treatment system.

The current wastewater treatment facility can treat the full build-out conditions of the District service area. However, it will be decommissioned as part of this project.

Flows will be directed to the UMCR WWTF. The current permitted capacity of the UMCR WWTF is for a hydraulic loading rate of 1.75 million gallons per day (mgd) and an organic loading rate of 3,553 pounds per day (ppd) of five-day biochemical oxygen demand (BOD₅). Current loadings on the UMCR WWTF based on 2015 DMR data

average 0.708 mgd and 1,473 ppd BOD₅. Maximum month average day loadings are 0.864 mgd and 2,185 ppd BOD₅.

4.201(3d): Specify whether present facilities can be upgraded to accommodate adequately the ten-year projected increase needed in treatment and/or hydraulic capacity.

The hydraulic capacity of the existing facility is sufficient since the service area is nearly at build out conditions and the WWTF was sized for this organic and hydraulic loading. However, the existing lagoon wastewater treatment facility cannot meet the future ammonia discharge permit. An upgrade to the system will not be sufficient to attain the discharge quality and a new mechanical treatment facility would need to be constructed. This inability to meet this need was the impetus for this project and the evaluation of the various alternatives. As discussed previously, the best alternative is to connect to DWSD.

The flow from AWSD will be directed to the UMCR WWTF through the DWSD collection system; therefore, the capacity of this facility was evaluated. Under current conditions, the new lift station hydraulic loadings will increase the UMCR WWTF's maximum month hydraulic loading from 0.864 mgd to 0.897 mgd. This represents 51.3% of the permitted hydraulic capacity of the UMCR WWTF. Under future 2036 conditions, the UMCR WWTF hydraulic loading from its service area (does not include the new lift station) is projected to increase by 33.9%. The 2036 maximum month hydraulic load is projected to be 1.197 mgd to the UMCR WWTF when considering the addition of the new lift station flows. This represents 68.4% of the permitted UMCR WWTF hydraulic capacity.

As a point of reference, the projected future organic loading of the new lift station is 89.9 ppd BOD₅. That represents 3.1% of the projected future loading of the UMCR WWTF alone and only 2.5% of the facility's rated capacity. Therefore, the addition of the new lift station is not a significant influence on the UMCR WWTF, nor the planning associated with its future expansion.

Under current conditions, the maximum month average day hydraulic loading from the AWSD service area is 48,600 gpd. Under future 2036 conditions, the AWSD maximum month average day loadings are projected at 56,600 gpd. Adding these values to the current and future values of the UMCR WWTF results in a maximum month average day loading of 0.910 mgd and 1.214 mgd, respectively. At future conditions, the hydraulic loading of 1.214 mgd represents 69.4% of the UMCR WWTF permitted hydraulic capacity. The current and future maximum monthly organic loadings for UMCR WWTF including the entire AWSD service area are estimated at 2,300.9 ppd BOD₅ and 3,060.7 ppd BOD₅, respectively. The future organic loading of 3,060.7 ppd BOD₅ represents 86.1% of the rated capacity.

Therefore, based on the above assessment, the UMCR WWTF has sufficient hydraulic and organic capacity to accommodate current and future 2036 loadings from the new lift station, as well as the whole of the AWSD, in addition to the projected growth of its service area. As described above, the initiation of the design and financial planning for the expansion of the UMCR WWTF as required by the 80% capacity milestone of its discharge permit may be necessitated prior to the end of the 20-year planning period regardless of the new lift station or entire AWSD loadings imposed on the facility.

Section 4.201 (4):

4.201(4): Description of the water to be used by the Project and, to the extent identified by the Director in consultation with the applicant, alternatives, including: the source, amount, the quality of such water; the applicant's right to use the water, including adjudicated decrees or determinations and any substitute water supply plans, and applications for decrees or determinations; proposed points of diversion and changes in the points of diversion; the existing uses of the water; adequate proof that adequate water resource have been or can and will be committed to and retained for the Project, and that applicant can and will supply the Project with water of adequate quality, quantity, and dependability; and approval by the respective Designated Ground Water Management District if applicable. If an augmentation or replacement plan for the Project has been decreed or determined or an application for such plan has been filed in the court or with the Ground Water Commission, the applicant must submit a copy of that plan or application.

This is not relevant to the project. The water already has been adjudicated to AWSD as part of the establishment of the District in 1965. The project does not increase water use by the District. The existing water treatment facility treats water already adjudicated for use by the District.

Section 4.201 (5): Loss of Agriculture Productivity.

4.201(5a): Information on any agricultural water rights in the region converted to provide water for the Project, now or in the future.

There are no agricultural water rights being converted for the Project.

4.201(5b): Information on the amount of irrigated agricultural lands taken out of production, and a description of revegetation plans.

There are no irrigated agricultural lands that are being taken out of production as a result of this project.

4.201(5c): Economic consequences of any loss of irrigated agriculture, including loss of tax base, in the region.

N/A, see Section 4.201(5a) and Section 4.201(5b).

4.201(5d): Information as to loss of wildlife habitat, loss of topsoil, or noxious weed invasion, as a result of the transfer of water rights and subsequent dry-up of lands.

No water rights are being transferred. The court decreed augmentation plan changes the return flow of the wastewater from Smith Creek to Upper Monument Creek. Smith Creek is an ephemeral stream and only flows during a rain event or due to snow melt. The habitat will not be impacted by eliminating the wastewater discharge into Smith Creek.

The Preble's Meadow Jumping Mouse habitat begins downstream of the AWSD treatment facility by approximately 4000 feet and will not be impacted by the project.

4.201(5e): Information on impacts to agricultural head gates and water delivery systems.

There are no agricultural lands in the area of impact nor in the vicinity of the project; therefore, there are no impacts to the agricultural head gates and water delivery systems.

Section 4.201 (6): The financial impact analysis of site selection and construction of major new water and sewage treatment facilities and/or major extension of existing domestic water and sewage treatment systems shall include but need not be limited to the following items:

4.201(6a): A review and summary of any existing engineering and/or financial feasibility studies, assessed taxable property valuations and all other matters of financial aid and resources in determining the feasibility of the proposed new facility, including:

6a(i): Service area and/or boundaries.

The service area is generally located along the southwesterly extent of the Black Forest, south of the El Paso County Fox Run Regional Park and is bounded on the west and north by the Donala Water and Sanitation District institutional boundary. The service area boundary with more detailed location information is provided in Exhibit K.

6a(ii): Applicable methods of transmitting, storing, treating and delivering water and collecting, transmitting, treating and discharging sewage, including effluent and/or sludge disposal.

The water system will not be impacted by the project.

The wastewater treatment facility will be decommissioned. The solids in the existing lagoons will be removed as discussed previously as part of the decommissioning. There will no longer be any sludge disposal.

6a(iii): Estimated construction costs and period of construction of each new or extension facility component.

Construction is anticipated to begin in March of 2018 and be complete by September of 2018. The existing wastewater treatment facility will not be decommissioned until connection to DWSD is completed and the lift station and force main are operational. The existing lift stations will be taken off line after the connection to DWSD is made. The total estimated cost of construction for the lift station and force main is \$3,158,290. The table below provides more information.

AWSD CONNECTION TO DWSD

| Item No. | Description | Amount |
|----------|--|--------------------|
| 1. | Construct new wastewater pump station including building, controls, electrical, and emergency overflow structure | \$991,215 |
| 2. | Construction of 4-inch force main including connection to AWSD and DWSD, manholes, and metering at DWSD facility | \$356,758 |
| 3. | AWSD WWTF Site Restoration, removal of biosolids and restoration of existing lagoons to natural grade. | \$158,700 |
| | Construction contingency | \$150,667 |
| 4. | Plant investment fee to DWSD | \$889,700 |
| 5. | Total estimated construction cost | \$2,547,040 |
| 6. | Engineering planning, design, preparation of construction documents, bid administration, construction administration, resident project representation, legal, funding administration, and permitting | \$611,250 |
| 7. | Easement acquisitions | --0-- |
| 8. | Project contingency | --0-- |
| 9. | Total Estimated Project Cost | \$3,158,290 |

6a(iv): Assessed valuation of the property to be included within the service area boundaries.

The current assessed market value of the District property is \$228,016. The current assessed value of these properties within the district is \$7,767,250.

6a(v): Revenues and operating expenses of the proposed new or extension facility, including but not limited to historical and estimated property taxation, service charges and rates, assessments, connection and tap fees, standby charges and all other anticipated revenues of the proposed new facility.

The District does not utilize property taxation presently.

The Academy Water and Sanitation District's 2016 budget is broken down between government services, water enterprise and wastewater enterprise activities. The anticipation is that operation and maintenance costs for the wastewater fund would drop from approximately \$136,000 to slightly under \$80,000 annually due to the elimination of the WWTF. The corresponding amount the District would need to assess to cover operation and maintenance expenditures associated with the collection system and lift station would be approximately \$22.13 per user per month. The District must also pass along the Donala Water and Sanitation District assessment of \$33 per user per month. These fees along with the proposed debt service will require the District to charge approximately \$95 per single family user per month. The District's current sewer rate is \$80 per month thus; the District will need to look at incrementally increasing its sewer rate up to the \$95 level to cover projected expenditures.

Following is a table showing the water and sewer related fees.

WATER AND SEWER RELATED FEES

| Rate and Fee Descriptions | Rate or Fee |
|---|--|
| Base rate for sewer service per single family residence | \$80.00 per month |
| Base rate for water use per single family residence | \$20.00 per month |
| Usage charge for water per single family residence | \$8.00 per 1,000 gallons up to 12,000 gallons \$12.00 per 1,000 gallons for over 12,000 gallons |
| Sewer tap fee | \$6,000 |
| Water tap fee | \$6,000 |
| General operating mill levy | 2.937 mills |

6a(vi): Amount and security of the proposed debt and method and estimated cost of debt service.

This project will cost approximately \$3,158,290. The District anticipates receiving \$1,000,000 of DOLA grant funding. Such leaves \$2,158,290 to finance. The WPCRF program has a direct loan cap of \$2,500,000. Thus, the District may secure all remaining funds through that funding source. That funding source will assess a 2% interest rate with a 20 year amortization schedule on the funds. This District may request approval of a 30 year amortization schedule from the Water and Power Authority. On a loan value of \$2,080,505 and a 20 year amortization period, such corresponds to annual debt service of \$127,237. With 300 active users, the debt service corresponds to \$36.39 per user per month. The WPCRF program also requires a 10% reserve amount be assessed on the required debt payment. Thus, an additional \$3.63 would be required per user per month for the debt service reserve.

6a(vii): Provide the details of any substantial contract or agreement for revenues or for services to be paid, furnished or used by or with any person, association, corporation or governmental body.

The Intergovernmental Agreement between AWSD and DWSD is provided in Exhibit L.