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April 12, 2017
UPDATED: July 19, 2017

Mr. Raimere Fitzpatrick, Project Manager, Planner II
El Paso County, Planning and Community Development
2880 International Circle, Suite 110
Colorado Springs, CO 80910

RE: Academy Water & Sanitation District (AWSD)
Lift Station – 1041 Application

Dear Mr. Fitzpatrick:

As a representative of the applicant, Academy Water and Sanitation District (AWSD) ("District"), we have prepared submittal requirements for the 1041 Application for a proposed lift station for the District.

The intent of the applicant is to construct a wastewater lift station within the District located south of Baptist Road, East of the Gleneagle area, and West of Roller Coaster Road in El Paso County, Colorado. The site occupies part of the northeast quarter of Section 32, Township 13 South, Range 65 West of the 6th P.M. A vicinity map depicting the lift station is attached at Exhibit A.

The following sections of this Pre-Application Letter provide relevant information related to the Site as outlined in Chapter 2, Article 3, Paragraph 2.303 Submission Requirements for all Permit Applications.

Section 2.303 (1): <u>Information describing the applicant.</u>

2.303(1): Completed application form in the format attached as Exhibit B and approved by the Development Services Director.

See Exhibit B.

Section 2.303 (2): <u>Submission Requirements.</u>

2.303(2): Any plan, study, survey or other information, in addition to the information required by this Section, at applicants expense to be submitted at the Directors request.

Plan, study, survey or other information will be submitted in the form of maps, construction drawings and .pdf files upon request.

Section 2.303 (3): Submission Requirements.

2.303(3): Any application which requires compliance with 24-65.5-101, et seq., C.R.S., (Notification to Mineral Owners of Surface Development) shall not be considered to have been submitted as complete until the applicant has provided a certification signed by the applicant confirming that the applicant or its agent has examined the records of the El Paso County Clerk and Recorder for the existence of any mineral estate owners or lessees that own less than full fee title in the property which is the subject of the application, and stating whether or not any such mineral estate owners or lessees exist. In addition, for purposes of the County convening its initial public hearing on any application involving property which mineral estate owners or lessees owning less than full fee title in the property have been certified by the applicant to exist, the application shall not be considered to have been submitted as complete until the applicant has provided an additional signed certification confirming that the applicant has, at least 30 days prior to the initial public hearing, transmitted to the County and to the affected mineral estate owners and lessees the notices requires by C.R.S. 24-65.5-101, et seq.

There are no mineral rights holders affected by this application and by construction of the new lift station because it is located on District property.

Section 2.303 (4): Information describing the applicant.

2.303(4a): Names, addresses, including email address and fax number, organizational form, and business of the applicant and, if different, the owner of the Project.

Consultant:
GMS Inc., Consulting Engineers
611 North Weber, Suite 300
Colorado Springs, CO 80903-1074
Contact: Mr. David R. Frisch, P.L.S. or Mr. Jason D. Meyer, P.E.

Mr. David R. Frisch, P.L.S.
Telephone: (719) 475-2935
Fax: (719) 475-2938
Email: drfrisch@gmsengr.com

Mr. Jason D. Meyer, P.E.
Telephone: (719) 475-2935
Fax: (719) 475-2938
Email: jmeyer@gmsengr.com

Owner/Applicant:
Academy Water & Sanitation District
1755 Spring Valley Drive
Colorado Springs, CO 80921-2165
Contact: Mr. Anthony Pastorello, Manager/Operator
Telephone: (719) 481-0711
Fax: (719) 481-0722
Email: manager@awsd.co

2.303(4b): Names, addresses and qualifications, including those areas of expertise and experience with projects directly related or similar to that proposed in the application package, of individuals who are or will be responsible for constructing and operating the Project.

A construction contractor has not yet been selected. A contractor will be selected through a competitive public bidding process and will account for experience and expertise with similar projects. Each Contractor bidding on the project must submit a "Contractor's Qualification Statement" as part of their bid.

The Contractor will be fully bonded with a performance and bid bond. The Contractor will be required to provide warranty service and will carry insurance.

AWSD reserves the right to reject any bid if the Contractor is not qualified.

Operation of the project will be the sole responsibility of AWSD. The District Manager is a licensed operator under the requirements of the Colorado Department of Public Health and Environment (CDPHE).

The name, address, and qualifications of the construction contractor will be provided to the County if desired once the bidding process is complete in early 2018.

GMS, Inc. represents the District the "Design Professional of Record". GMS, Inc. has seven (7) professional engineers and two (2) professional land surveyors on staff. GMS, Inc. has been designing water and wastewater infrastructure throughout eastern Colorado since 1978.

2.303(4c): Written authorization of the application package by the Project owner, if different than the applicant.

Project owner is the same as applicant.

2.303(4d): Documentation of the applicant's financial and technical capability to develop and operate the Project, including a description of the applicant's experience developing and operating similar projects.

The District has engaged GMS, Inc. to design, permit, and manage the construction of the proposed lift station. GMS employs seven (7) engineers who hold Professional Engineer licenses in the State of Colorado. GMS specializes in water and wastewater projects for small communities and special districts across the State. Jason has been on staff with GMS, Inc. for 15-years and has a Master's Degree in Civil Engineering. GMS, Inc. has designed and managed the construction of similar projects.

AWSD currently operates two lift stations; both lift stations have operated well since their installation. The operation of the proposed lift station will be similar to those that are in current operation. The State of Colorado requires that all lift station operators hold a level "Collection-1 (C-1)" license. AWSD currently contracts with Anthony Pastorello to operate the existing lift stations and existing treatment facility. He will be the operator responsible in charge of the proposed lift station. Anthony has a C-1 license (Certificate No: 20293 expiring on December 31, 2017) as well as a Class D treatment license (Certificate No: 20718 expiring on May 15, 2018).

The AWSD Manager and Operator has all certifications required to operate the new Lift Station. As already stated, they presently have two lift stations in operation.

2.303(4e): Written qualifications of report preparers.

As mentioned in previous section (2.303(4d)), GMS has designed, permitted, and inspected numerous similar projects. The scope of work for these projects includes permitting (both local and state) as well as detail design. Jason D. Meyer has designed and managed similar projects as listed in 2.303(4d). Resumes of Jason D. Meyer and the design engineer for this project are included in Exhibit M.

Section 2.303 (5): <u>Information describing the Project.</u>

2.303(5a): Vicinity map showing the proposed site and the surrounding area.

See Exhibit A.

2.303(5b): Executive summary of the proposal indicating the scope and need for the Project.

Academy Water and Sanitation District undertook a Preliminary Engineering Report (PER) focusing on the District's Wastewater Treatment Facility (WWTF). The PER was prepared by GMS, Inc., Consulting Engineers dated January 2012 revised on August 2012. This report was approved and accepted by the Board of AWSD. The PER addressed the deficiencies of the WWTF to meet the future discharge limit for ammonia nitrogen. There were three options examined in order to provide a solution to meet the new discharge limit: Construction of an activated sludge wastewater treatment facility on AWSD property, connection of the AWSD wastewater collection system to the Colorado Springs Utilities wastewater system, and connection of the AWSD wastewater collection system to the DWSD wastewater system. Further discussion of each alternative is provided in Section 2.303(5d).

The proposed and selected improvements include implementation of a new lift station, a 4-inch PVC force main that will convey raw sewage to the Donala Water and Sanitation District (DWSD), decommissioning of two lift stations that will no longer be required, and decommissioning of the existing lagoon treatment system. The wastewater will be conveyed through the DWSD collection system to the Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF). The wastewater will be treated and discharged into Upper Monument Creek; the effluent from this facility meets the required discharge limits. The new force main and associated appurtenances for the proposed improvements include surface restoration of roads which in most cases consists of chip seal removal and replacement.

2.303(5c): Plans and specifications of the Project in sufficient detail to evaluate the application against the applicable Review Criteria.

The construction plans and specifications of the project have been drafted and are complete and are included in Exhibit I which were submitted to the CDPHE. The Project Specifications have also been completed and can be provided upon request.

- Site Application to CDPHE.
    - The Site Location Application (Site App) has been completed and has been submitted and approved by the CDPHE. A preliminary set of construction plans and specifications have also been submitted to the CDPHE and are being reviewed.

- The Basis of Design Report (BDR) has been submitted to the CDPHE and no comments have been indicated.

- Plans and specifications of the project have been submitted to the CDPHE. The plans are included in Exhibit I with this submittal.

- El Paso County Department of Transportation (EPCDOT) does not have any review authority over the Lift Station. We discussed the force main alignment with the EPCDOT and there was agreement. This 1041 submittal is only for the lift station.

- The plans have been approved by AWSD and Donala Water and Sanitation District (DWSD). An Intergovernmental Agreement (IGA) has been agreed upon and approved by the AWSD and the DWSD.

2.303(5d): Descriptions of alternatives to the Project considered by the applicant. If the Director determines that the nature or extent of the proposal involves the potential for significant damage and warrants examination of other specific, less damaging alternatives, the Director may require the applicant to evaluate and present information on such additional alternatives as part of the application.

There were three options examined in order to provide a solution to meet the new discharge limit: Construction of an activated sludge wastewater treatment facility on AWSD property, connection of the AWSD wastewater collection system to the Colorado Springs Utilities wastewater system, and connection of the AWSD wastewater collection system to the DWSD wastewater system.

The Construction of an activated sludge wastewater treatment facility would be the most expensive option in the long term considering both capital and operation and maintenance expenses; additionally, the operation of the facility would require a higher certification level which would require the current operator to upgrade certification. This option keeps a WWTF in place for AWSD.

The connection to the Colorado Springs Utilities system would potentially be the most environmentally detrimental as the alignment could impact Preble's Meadow Jumping Mouse (PMJM) habitat and could render this alternative infeasible. It is also the most expensive alternative due to the considerable amount of pipeline required to connect to the Colorado Springs Utilities system. The only positive component of this alternative is that the existing wastewater lagoon system is decommissioned.

Connection to DWSD is the most viable alternative. In the implementation of this alternative, two lift stations within AWSD will be taken out of service as well as the existing wastewater lagoon system decommissioned. All construction is within existing AWSD property as well as existing road rights-of-way; therefore, it has the least impact environmentally.

All alternatives include the decommissioning of the existing aerated lagoon wastewater treatment facility and provide higher quality treatment to meet the future discharge permit. Cost was the highest priority for the selected alternative for AWSD and its users; however, feasibility and environmental impacts were also considered.

The selection of this alternative for the treatment of wastewater at a regional facility has been encouraged by the Areawide Water Quality Management Planning Process (208 Plan) through the Pikes Peak Area Council of Governments.

2.303(5e): Schedules for design, permitting, constructing and operating the Project, including the estimated life of the Project.

TASK	DATE
Submit Site Application to CDPHE	April 2017
Submit Process Design and design plans/specifications to CDPHE for review	April 2017
Submit Project Needs Assessment (PNA)	May 2017
Submit Environmental Assessment (EA)	May 2017
Submit Water Pollution Control Revolving Fund Loan Application (WPCRF)	June 2017
Obtain CDPHE approval	June 2017
Advertise New Lift Station and Force Main Project	January 2018
Award New Lift Station and Force Main Project	February 2018
Initiate construction (7 months)	March 2018
Complete lift station and force main construction and decommissioning of the existing AWSD WWTF	September 2018

2.303(5f): The need for the Project, including a discussion of alternatives to the Project that were considered and rejected; existing/proposed facilities that perform the same or related function; and population projections or growth trends that form the basis of demand projections justifying the Project.

The existing wastewater treatment facility (WWTF) operates within the current discharge permit requirements until its expiration date on September 30, 2018. Starting October 1, 2018, new requirements on water quality of Segment 4 of Fountain Creek and all its tributaries will be brought into effect which will entail new limitations on effluent discharge into said Fountain Creek and its tributaries. AWSD's WWTF is currently discharging into Smith Creek, which is a tributary to Fountain Creek and will be required to comply with the new limitations. The treatment methods of the WWTF cannot effectively treat and discharge effluent flow to meet the limitations to be set forth in 2018. Therefore, the District must make an appropriate alteration in order to meet the promulgated standard.

As mentioned above in 5d several options were considered. Cost was the major factor in determining the best alternative. The least expensive alternative is connection to the DWSD collection system.

The purpose and need for this project is not due to growth in the District. The requirement for this project is solely to meet the new discharge limits. The District has very few lots available for development; therefore, there will be extremely limited growth.

2.303(5g): Description of relevant conservation techniques to be used in the construction and operation of the Project.

Relevant conservation techniques will be utilized for the decommissioning of the wastewater lagoons. Best Management Practices will be used throughout the construction project to reduce

sedimentation. Typical construction means will be used to reduce the amount of material waste. The lift station will be designed to have an overflow pond that will provide 48 hours of emergency storage at the future maximum month average day flow. This will prevent wastewater spills at the lift station.

Decommissioning of the existing lagoons includes drying of the existing biosolids and, once they pass the "wet-paint filter test," they will be removed and disposed of off-site. The existing lagoons will have all equipment removed, the cells graded to accommodate drainage of the remaining depressions and then seeding with native grasses. There is not sufficient soil material on-site to completely eliminate the depressions. Grading, with culverts between cells, will be accomplished to prevent any ponding of water.

2.303(5h): Description of demands that this Project expects to meet and basis for projections of that demand.

As mentioned in the previous section, the AWSD wastewater collection system will be connected to DWSD wastewater collection system. The generated wastewater will be treated at the Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF). This discharge from this facility meets the new promulgated discharge limits.

2.303(5i): List of adjacent property owner and their mailing address.

Adjacent landowners to the Lift Station Site:

Kelly Foley
1665 Spring Valley Dr.
Colorado Springs, CO 80921

Aaron D. & Paige M. Chaskelis Living Trust
1725 Spring Valley Dr.
Colorado Springs, CO 80921

George and Ruth German
14965 Sun Hills Dr.
Colorado Springs, CO 80921

Workman Family Living Trust
14950 Raton Rd.
Colorado Springs, CO 80921

Jane Fredman
1775 Spring Valley Dr.
Colorado Springs, CO 80921

David and Gina Hluska
1670 Spring Valley Dr.
Colorado Springs, CO 80921

Lance D. and Jennifer L. Howard
Physical Address: 1740 Spring Valley Dr.
Mailing Address:
PO Box 1115
Colorado Springs, CO 80901

Scott Living Trust and James Scott Trustee
Physical Address: 1790 Spring Valley Dr.
Mailing Address:
12750 Oak Cliff Way
Colorado Springs, CO 80908

Section 2.303 (6): <u>Property rights, other permits and approvals.</u>

2.303(6a): Description of property rights that are necessary for or that will be affected by the Project, including easements and property rights proposed to be acquired through negotiation or condemnation.

The lift station will be built on the existing AWSD property where the current water treatment and wastewater treatment is located. The project is within AWSD property, existing right-of-way, and existing easements.

2.303(6b): A list of all other federal, state and local permits and approvals that will be required for the Project, together with any proposal for coordinating these approvals with the County permitting process. Copies of any permits or approvals related to the Project that have been granted.

The following entities have reviewed and approved the Site Application for the proposed lift station and force main:

- Upper Monument Water Quality Management Association – ***Approved***
- Town of Monument – ***Approved***
- Site Application Review Committee (SARC) - ***Approved***
- Pikes Peak Area Council of Governments – ***Approved***
- El Paso County Health Department (waiting approval) – ***Approved***
- El Paso County Planning Commission – Pending Approval

Those entities where approvals and permits will be required prior to construction are:

- Construction Dewatering Permit from CDPHE by Contractor
- El Paso County Erosion and Stormwater Quality Control Permit (ESQCP) by Contractor
- 1041 Regulation by El Paso County Development Services- Pending Approval
- IGA between DWSD and AWSD – ***Approved***
- Augmentation Plan Amendment – ***Approved***
- Site Location Application (Site App) by CDPHE – ***Approved***
- Basis of Design Report (BDR) – Pending Final Approval
- Construction Drawings to CDPHE – Pending Approval
- Project Manual by CDPHE – Front End Contract Documents – ***Approved***
  – Technical Specifications – No Comment

- Environmental Assessment by CDPHE – ***Approved***
    - CDPHE publishing stating "Finding of No Significant Impact" (FONSI)
- Project Needs Assessment to CDPHE – ***Approved***
- WPCRF Loan Application – Pre-Qualification- ***Approved***
  – Final Loan Approval- Pending

2.303(6c): Copies of relevant official federal and state consultation correspondence prepared for the Project; a description of all mitigation required by federal, state and local authorities; and copies of any draft or final environmental assessments or impact statements required for the Project.

The Environment Assessment is completed and approved by the CDPHE and is provided in Exhibit D. The CDPHE will publish for the FONSI.

Section 2.303 (7): <u>Land Use.</u>

2.303(7a): Provide a map at a scale relevant to the Project and acceptable to the Department describing existing land uses and existing zoning of the proposed Project area and the Project service area, including peripheral lands which may be impacted. The land use map shall include but need not necessarily be limited to the following categories: residential, commercial, industrial, extractive, transportation, communication and utility, institutional, open space, outdoor recreation, agricultural, forest land and water bodies. Show all special districts (school, fire, water, sanitation, etc.) within the Project area.

There will be no changes to the zoning upon commencement and completion of construction. The zoning map from the El Paso County Assessor's Office is in Exhibit E. All property within the District is zoned residential; however, the zoning varies from RR-5, RS-5000, and RS-20000.

All land use within the District is residential. Pleasant View Estates and Pleasant View Estates Filing No. 2 were platted in 1964 which are 5-acre lots with no centralized water or sewer service are located east of Sun Hills Drive. In 1965 and 1970, Pleasant View Estates Filing Nos. 3 and 4, west of Sun Hills Drive, were platted consisting of generally ½ acre residential lots. The land use today still reflects that which was originally platted. The only lot that the land use differs is the AWSD property which contains both water and wastewater treatment for the entire district and has no housing component, i.e. the Land Use of the proposed Lift Station site will be consistent with the existing Land Use. The fire station is just outside the District boundaries, it is the only other property in the vicinity with a land use that varies from the zoning.

2.303(7b): All immediately affected public land boundaries should be indicated on the map. Potential impacts of the proposed development upon public lands will be visually illustrated on the map as well as described in the text.

No public lands will be affected by the completion of the lift station, force main, and decommissioning of the existing WWTF.

2.303(7c): Specify whether and how the proposed Project conforms to the El Paso County Master Plan.

The proposed project will not affect the El Paso County Master Plan as it is not directly related to the objectives described within the Master Plan (2000 Tri-Lakes Comprehensive Plan, adopted October 19, 1999). The Master Plan does not identify Academy Water and Sanitation District as a service provider for either water or wastewater for the area. By decommissioning the existing WWTF, the wastewater will be treated at a regional facility which is a favorable option in regards to the Master Plan.

The El Paso County Policy Plan gives guidelines and policies for water and wastewater facilities and services. Specifically Policy 10.1.5 indicates "Encourage, when feasible, interconnection to regional wastewater systems". This is being completed with this project with the wastewater treatment occurring at the Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF). The District has continuously participated in the Areawide Water Quality Management Planning Process (208 Plan) through the Pikes Peak Area Council of Governments; therefore, complying with Issue 10.2., Policy 10.2.1 and Policy 10.3.1.

Goal 10.3 states "Design and operate water and wastewater treatment, distribution and collection facilities in an environmentally sensitive manner." This project is attaining this goal by eliminating a wastewater treatment facility by regionalizing treatment; thus removing a point pollution source.

Policy 10.3.3 "Reduce the adverse visual impacts of water storage tanks and other facilities through a combination of careful site selection, design, screening and use of natural colors." The adverse visual impacts will be reduced by the elimination of the treatment lagoons. There will be two additional buildings, the color selection will be aesthetically pleasing to match natural colors.

Policy 10.3.6 - "Encourage land use approaches, mitigation techniques and Best Management Practices that reduce non-point source pollution such as runoff from roads, parking lots and lawn chemicals." Best Management Practices will be in place during the construction process to reduce non-point source pollution from disturbed soils and construction equipment.

Other policies within the El Paso County Policy Plan that are specific to wastewater are either not relevant or were relevant at the time of the site selection of the existing treatment facility in 1965 but are not relevant to the existing modifications.

2.303(7d): Specify whether and how the proposed Project conforms to applicable regional and state planning policies.

The proposed project conforms to regional and state planning policies by creating an intergovernmental agreement (IGA) with DWSD and regionalizing wastewater treatment at the Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF). This project has been approved by Pikes Peak Area Council of Governments (PPACG) and is in conformance with the 208 Plan. See the Section above regarding conformance to the El Paso County Policy Plan.

Regulation No. 32 is the Classifications and Numeric Standards for Arkansas River Basin specifically Appendix 32-1 is the Stream Classifications and Water Quality Standards Table. The classification and water quality of the stream in turn determines the discharge limits for that

stream. This policy that requires a limit for ammonia discharge for Segment 4 of Fountain Creek and its tributary creeks is requiring this project to be operational by October of 2018. This project will conform to these discharge limits by achieving higher level of treatment at the UMCR WWTF.

2.303(7e): Specify whether and how the proposed Project conforms to applicable federal land management policies.

No federal lands are anticipated to be affected by the proposed project.

2.303(7f): If relevant to the Project design, describe the agricultural productivity capability of the land in the Project area, using Soils Conservation Service soils classification data.

The project is not relevant to the agricultural productivity capability of the land in the Project area.

2.303(7g): Describe the probability that the Project may be significantly affected by earthquakes, floods, fires, snow, slides, avalanches, rockslides, or landslides and any measures that will be taken to reduce the impact of such events upon the Project.

As the majority of the project contains underground pipeline, those portions of pipe will not be affected or be susceptible to natural disasters such as floods, fires, snow, slides, avalanches, rockslides, or landslides. There are no faults with seismic potential within the project vicinity, thus eliminating immediate threat of earthquake. The lift station will be within a protective building.

2.303(7h): Specify if excess service capabilities created by the proposed Project will prove likely to generate sprawl or strip development.

The likelihood of the Project to generate urban sprawl or strip development is non-existent. The District only contains residential lots and only provides service to properties within its service area.

2.303(7i): Specify whether the demand for the Project is associated with development within or contiguous to existing service areas.

The demand for the Project is not due to development. As previously mentioned, this Project is only for the purpose of meeting the new discharge limit.

Section 2.303 (8): The applicant shall supply a surface and subsurface drainage analysis.

The proposed lift station site is on the existing AWSD WWTF site. The existing lagoons will be decommissioned after the lift station is put into service and will have appropriate piping to drain the lagoons into Smith Creek. No further analysis will be completed as historic drainage patterns will not be changed as a result of this project. A detailed report and analysis was not completed due to the minimal impact.

Section 2.303 (9): Financial feasibility of the Project.

2.303(9a): Relevant bond issue, loan and other financing approvals or certifications (ex: approved bond issues; bond counsel opinion).

The District anticipates receiving grant funding from DOLA in combination with loans from WPCRF. The District will raise user fees in order to meet the debt service. The District's current sewer rate is $80 per month; the District will need to look at incrementally increasing its sewer rate up to the $95 level to cover projected expenditures. The District users have been notified of this rate increase through the use of their website and by advertising and hosting a public meeting each of the last two years, the most recent being on May 31, 2017.

2.303(9b): Business plan that generally describes the financial feasibility of the Project.

The following table recaps the potential assessments that will be required to cover the total expenditures associated with Academy's provision of sanitary sewage service to its constituents upon completion of the proposed project.

PROJECTED REQUIRED MONTHLY RESIDENTIAL SEWER RATE STRUCTURE

Component	Rate w/20 Year Debt Service	Rate w/30 Year Debt Service
Academy O&M Assessment	$22.13	$22.13
DWSD User Charge Assessment	$33.00	$33.00
Debt Service	$36.39	$25.80
Debt Reserve	$3.63	$2.58
Total:	$95.15	$83.51

As noted previously, the District's current sanitary sewer rate is $80 per user per month. The District will incrementally increase the sewer rate structure during the course of the project to bring it to the required level. The final determination as to what the required level will be will be a function largely, in part, of the total amount borrowed and its corresponding amortization schedule. The District has the legal authority and is committed to undertaking the necessary rate increases to cover the expenditures, debt service and ongoing operations associated with the proposed improvements.

Section 2.303 (10): Local infrastructure and services impacts.

2.303(10): An impact analysis that addresses the manner in which the applicant will comply with the relevant Permit Application Review Criteria. The impact analysis shall include the following information: description of existing capacity of and demand for local government services including but not limited to roads, schools, water and wastewater treatment, water supply, emergency services, transportation, infrastructure, and other services necessary to accommodate the Project within El Paso County.

Roads: Upon approval of the proposed project, a design will be submitted containing the 4-inch force main pipeline route running westerly. A ROW permit will be acquired by the construction contractor and copies will be submitted to EPC DPW prior to construction. Construction will impact the travel on Spring Valley Rd., Sun Hills Rd., and Tari Dr., temporarily narrowing the road in the area being excavated. The El Paso County Public Services Department has already made a preliminary review of the alignment and are in agreement with the location proposed.

Impacts caused by construction activity on El Paso County roads are expected to be short term and minor, which will not affect the permanent functionality of the roads.

Schools: There are no schools located in or adjacent to the limits of construction. The scope of the project will not impact educational facilities, communication, or resources in the area.

Water and Wastewater Treatment: The existing wastewater treatment facility will remain in service until the lift station is operational. The customers of AWSD will not be out of service at any point throughout the project.

Treatment of potable water will not be impacted during construction or operation of the proposed project.

Water Supply: Water supply will not be affected by construction or operation of the proposed project.

Emergency Services: Emergency services will not be impacted by the construction or operation of the proposed project.

Transportation: Transportation permits will be acquired for all oversized loads on State, EPC, and City of Colorado Springs roads. Short term effects of construction will be very minimal and long term effects after operation will be minimal to none at all.

Infrastructure: Temporary electricity for construction equipment that requires it will be provided by portable generators. Existing utilities such as gas, electricity, communications, water and existing sanitary sewer lines will be located before commencing excavation to avoid disruption of service to customers. Upon completion of the project, wastewater collection system will remain unchanged and service will continue free of disruption.

Other Services: None identified.

Section 2.303 (11): Recreational Opportunities.

2.303(11): Description of the impacts and net effect of the Project on present and potential recreational opportunities.

During construction of the force main, the roadways will be impacted; therefore, impacting any recreation on the roads. The roads will be restored immediately after construction.

The WWTF site modifications will not have any effect on recreation as there is no recreation activity immediately around or in the private property owned by Academy Water and Sanitation District.

Section 2.303 (12): Areas of Paleontological, Historic or Archaeological Importance.

2.303(12): Description of the impacts and net effect of the Project on sites of paleontological, historic or archaeological interest.

The net effect of the Project will have zero significance on sites of paleontological, historic or archaeological interest. The AWSD WWTF site was excavated and modified to the existing features with no findings of paleontological, historic or archaeological importance in past construction.

Section 2.303 (13): Nuisance.

2.303(13): Descriptions of noise, glare, dust, fumes, vibration, and odor levels anticipated to be caused by the Project.

During construction of the project, there will be an expected level of noise associated with the excavating equipment such as loaders, excavators, graders etc. as well as dust caused by disrupting the materials being excavated which can also be dependent on the weather conditions. Glare will not be an issue because there are very few reflective surfaces on site and due to the dense population of trees there is shade cover for most of the daylight hours. Vibration will not be an issue during construction and won't be noticeable unless directly next to operating equipment.

Lift stations by their nature do not produce odors. The wastewater will be directed into a wet well and be pumped from the wet well via a submersible pump into the force main. The wastewater will be under pressure and will not release odors until the end of the force main in a sanitary sewer manhole.

The wet well is constructed of a precast concrete manhole. There will be a vent on the wet well it will be equipped with an odor control device. The design of the wet well is accordance with the Hydraulic Institute design for Rotodyamic Pumps for Pump Intake Design in which odor elimination is one component of the design. Additionally, all components of the lift station are completely enclosed in the proposed building.

The odor levels will only be improved by the completion of the project. With the lagoons being decommissioned and the raw sewage being contained in a closed pipe system underground, the odor from the lagoons will be eliminated.

Section 2.303 (14): Air Quality.

2.303(14): Description of the impacts and net effect that the Project would have on air quality during both construction and operation, and under both average and worst case conditions, considering particulate matter and aerosols, oxides, hydrocarbons, oxidants, and other chemicals, temperature effects and atmospheric interactions.

The air quality during construction can be expected to experience limited affects due to exhaust fumes from equipment and dust from excavation. Dependent of weather and soil conditions, dust can be controlled with use of water trucks. Neither factor is expected to cause significant effects on air quality. Operation of the project after completion is expected to improve air quality

by reducing odors caused by the lagoon treatment facility. With the above ground lagoons being removed from service the surrounding area will benefit from drastically reduced odor.

Section 2.303 (15): Visual Quality.

2.303(15): Description of the impacts and net effect that the Project would have on visual quality, considering view sheds, scenic vistas, unique landscapes or land formations within view of the Project area.

As an underground utility, the completion of that portion of work would not impair the visual quality of the scenery in the least. One area of drastic improvement will be the wastewater treatment site which will be decommissioned. The lagoons will be emptied and reseeded. With the exception of a new, lined overflow lagoon installed on site, it will look completely natural and be more aesthetically pleasing to the eye, enhancing the scenery of the area.

A new lift station (dry pit access) building and storage building will be constructed on the AWSD property. The buildings will be located adjacent to one another and adjacent to the existing wastewater lagoons. The dry pit access building will be 6'-2" by 24'-0". The storage building will be 24'-0" by 30'-0". Both buildings will be clad with metal exterior siding. The color will be selected by the Owner (AWSD) and will match the existing water treatment building and will be aesthetically pleasing.

Section 2.303 (16): Surface Water Quality.

2.303(16a): Map and/or description of all surface waters relevant to the Project, including description of provisions of the applicable regional water quality management plan, and NPDES Phase II Permit and necessary El Paso County Erosion and Storm water Quality Control Permit ("ESQCP"), Section 404 Federal Clean Water Act Permit that applies to the Project and assessment of whether the Project would comply with those provisions.

All surface waters are directed to Smith Creek. The drainage pattern is not changing as a result of this project. The existing detention ponds will be decommissioned and seeded with native grass; stormwater will be directed through them to Smith Creek. The project will comply with all applicable regulations and standards regarding water quality. An ESQCP is required due to the disturbed acreage and will be obtained by the Contractor.

There are no other permits that will be required in regards to Surface Water Quality. The U.S. Army Corps of Engineers (Corps) was notified of the project with a request for comment. The response backs from the Corps indicated that no permit is required from the Department of the Army.

2.303(16b): Existing data monitoring sources.

The existing WWTF monitors the effluent; however, it will be decommissioned. The effluent will no longer be discharged into Smith Creek, therefore, data will not be collected in the future.

2.303(16c): Descriptions of the immediate and long-term impact and net effects that the Project would have on the quantity and quality of surface water under both average and worst case conditions.

The new lift station and storage building, to be built on the existing WWTF, will add 1296 SF of impermeable surface area to the site; however, two blower buildings will be removed therefore the total net additional square footage is 1154 SF. There is additional gravel surfacing of 5241 SF which provides access to the lift station and storage building. The existing lagoons will be dewatered and seeded with native grasses. The existing drainage patterns and characteristics will not be changed as a result of this project. Erosion control measures will be implemented to maintain water quality during construction. Additionally, during construction, the Contractor may encounter groundwater requiring de-watering.

The quality of the surface water will increase as all surface wastewater lagoons will be decommissioned. The surface water discharge will only be regular storm water instead of effluent.

Section 2.303 (17): <u>Groundwater Quality.</u>

The AWSD source water is from wells located upstream from the wastewater treatment facility. The source is classified as groundwater and located approximately 1600-feet to the northeast from the existing wastewater lagoons. The removal of wastewater treatment facility; specifically, the removal of the lagoons eliminates the potential groundwater contamination that could occur in the future from seeping lagoons for users downstream as the existing lagoons are lined with a bentonite liner only. This project has no negative effect on the groundwater quality and has potential to enhance the groundwater quality.

2.303(17a): Map and/or description of all groundwater, including any and all aquifers relevant to the Project. At a minimum, the description should include:

17a(i): Seasonal water levels in each portion of the aquifer affected by the Project.

The aquifers are not affected by the Project.

17a(ii): Artesian pressure in said aquifers.

N/A

17a(iii): Groundwater flow directions and levels.

N/A

17a(iv): Existing aquifer recharge rates and methodology used to calculate recharge to the aquifer from any recharge sources.

N/A

17a(v): For aquifers to be used as part of a water storage system, methodology and results of tests used to determine the ability of the aquifer to impound ground water and aquifer storage capacity.

N/A

17a(vi): Seepage losses expected at any subsurface dam and at stream-aquifer interfaces and methodology used to calculate seepage losses in the affected streams, including description and location of measuring devices.

N/A

17a(vii): Existing groundwater quality and classification.

N/A

17a(viii): Location of all water wells potentials affected by the Project and their uses.

Existing water wells, located on the WWTF site, are outside the areas to be disturbed during construction.

2.303(17b): Description of the impacts and net effect of the Project on groundwater.

The AWSD source water is from wells located upstream from the wastewater treatment facility. The source is classified as groundwater and located approximately 1600-feet to the northeast from the existing wastewater lagoons. The removal of wastewater treatment facility; specifically, the removal of the lagoons eliminates the potential groundwater contamination that could occur in the future from seeping lagoons for users downstream. This project has no negative effect on the groundwater quality, in fact, it will improve the quality due to the removal of the lagoons as a potential contamination source.

Section 2.303 (18): <u>Water Quantity.</u>

2.303(18a): Map and/or description of existing stream flows and reservoir levels relevant to the Project.

The effluent flow from the existing wastewater treatment facility is discharged into Smith Creek. Smith Creek is an ephemeral stream flowing only after major precipitation and snowmelt events. Presently, the wastewater treatment facility discharges an average daily flow of 39,400 gallons per day (0.061 cfs).

No reservoirs are relevant to the project.

2.303(18b): Map and/or description of existing minimum stream flows held by the Colorado Water Conservation Board.

Smith Creek is a zero flow creek and is an ephemeral tributary of Monument Creek.

2.303(18c): Descriptions of the impacts and net effect that the Project would have on water quantity.

Currently the existing wastewater treatment facility has an average daily discharge of 39,400 gallons per day (0.061 cfs). The effluent flow is discharged into Smith Creek which is an ephemeral tributary that joins Monument Creek. Monument Creek joins Fountain Creek in Colorado Springs and then continues south to the Arkansas River in the City of Pueblo, CO.

With the implementation of a new wastewater treatment system which pumps the sewage to DWSD, the effluent flow is discharging into Smith Creek will no longer be discharging in that location. Once the wastewater is directed to DWSD, the effluent flow from Upper Monument Creek Regional Wastewater Treatment Facility (UMCR WWTF) will discharge directly into Monument Creek. This augmentation plan has been approved by the water court and is attached in Exhibit C.

2.303(18d): Statement of methods for efficient utilization of water, including recycling and reuse.

The efficient utilization of water is of most importance in the proposed Project. The entire purpose of this project is to improve the effluent water quality from AWSD. The wastewater will be treated at the UMCR WWTF to meet the promulgated discharge limits for ammonia. The wastewater is being treated and discharged into Monument Creek; essentially recycling the wastewater for future reuse. The court decree of the augmentation plan is included in Exhibit C.

Section 2.303 (19): <u>Floodplains, Wetlands and Riparian Areas; Terrestrial and Aquatic Animals; Plant Life and Habitat.</u>

2.303(19): Applicant shall only provide description of foregoing natural conditions, animal and plant life at, but not to exceed, the level of detail required by other federal or state Permits or reviews which are applicable to the Project.

The area of proposed construction does not impact any areas of a floodplain or wetlands. No permits are expected to be required. Government agencies have been contacted and will inform if any permits will be necessary.

The AWSD service area has an abundance of varying species of wildlife. The area provides excellent habitat for mule deer, occasional elk, mountain lion, bobcat, porcupine, coyotes and fox, rabbits, as well as a significant number of bird species, utilizing the vegetation as well as the coniferous Rampart Range area for habitat. There is an abundance of bird species such as wild turkeys, ravens, magpies, mountain bluebirds, chickadees, nuthatches, jays and flickers in the area. Raptors are also present in the AWSD service area. There are no threatened or endangered species recognized with the exception of the Preble's Meadow Jumping Mouse (PMJM). The riparian environment along Smith Creek has been identified as critical habitat for the PMJM which has been listed as a threatened species. However, the critical habitat is approximately 4000 feet downstream of the project. An exhibit of areas identified as critical habitat for the PMJM can be found in Exhibit F.

Section 2.303 (20): <u>Soils, Geologic Conditions and Natural Hazards.</u>

2.303(20a): Map and/or description of soils, geologic conditions, and natural hazards including but not limited to soil types, drainage areas, slopes, avalanche areas, debris fans, mud flows, rock slide areas, faults and fissures, seismic history, and wildfire hazard areas, all as relevant to the Project area.

The NRCS soils map is included in Exhibit G. There are no noted natural hazards for the project area. The wildfire hazard susceptibility index is moderate to very high. Smith Creek is adjacent to the AWSD property which flows into Monument Creek near I-25 and Northgate Road. The drainage basin for Smith Creek extends north of Baptist Road, east of Roller Coaster Road, west to the AWSD service boundary and south to Northgate Road. There are no

avalanche areas, debris fans, mud flows, rock slide areas, faults and fissures in the Project area. There are no seismic events recorded in the Project area.

2.303(20b): Descriptions of the risks to the Project from natural hazards.

There are no significant threats and risks associated with natural hazards related to this project. The project is located outside of the Special Flood Hazard Area (SFHA) so there are no serious risks of mud flows or flooding. The area is prone to snow in the winter months and rain in the summer months but there is no threat of avalanche or mud flows due to the topography and vegetation of the area. Rock slides are not an area of concern as there are no real rock formations in the area. The site is not located on or in the near vicinity of any known faults or fissures reducing seismic potential to minimal to none. The greatest hazard of the area would be the rare instance of a wildfire. The area is heavily forested with coniferous trees and vegetation. The site of the WWTF has very few trees on the actual site but the surrounding area is densely vegetated.

The project itself will not be impacted by any natural disasters other than a wildfire due to the fact that the piping will be buried underground. Only in the event of an extremely hot wildfire would the buried piping be affected. The lift station would possibly lose power due to any wind storm or electrical storm which would then rely on the backup lagoon until power is restored.

2.303(20c): Descriptions of the impacts and net effect of the Project on soil and geologic conditions in the area.

During the construction phase of the proposed project there will be minimal effect on the soil due to construction equipment leaking fluids throughout the project. The amounts of fluids will not be great enough to cause contamination of soil and geologic conditions. The maximum amount of spillage will occur when equipment is parked after work is stopped for the day and over weekends. Puddles will occur in staging area of project. Mitigation techniques will be used to limit the exposure of petroleum based materials such as motor oil, hydraulic oil, grease and gasoline to the soil. Best Management Practices (BMPs) will be in place and be implemented by the Contractor (not yet selected) similar to other projects completed in El Paso County.

Section 2.303 (21): <u>Hazardous Materials.</u>

2.303(21a): Description of all solid waste, hazardous waste, petroleum products, hazardous, toxic, and explosive substances to be used, stored, transported, disturbed or produced in connection with Project, including the type and amount of such substances, their location, and the practices and procedures to be implemented to avoid accidental release and exposure.

The project includes the decommissioning of the existing wastewater lagoon treatment facility. After the lift station is in service and the connection to DWSD is complete, the decommissioning will begin. The lagoons will be dewatered; following dewatering the solid waste will be spread inside the defined lagoon area for drying. After the solids are dried per the required permit, the solids will then be disposed of in a landfill. All permitting for the disposal will be completed by the contractor.

Any residual waste material in the lift stations that will be decommissioned will be pumped in the same manner and equipment as used to pump septic tanks. The waste will then be disposed of by the subcontractor per regulations.

There are not any hazardous materials expected to be encountered during or after construction on the proposed site. If any hazardous materials are discovered, an environmental inspector will be contacted to come and inspect the site and develop a plan of action for containment.

Equipment fuel and lubricants are the only anticipated hazardous materials expected to be present during the construction phase of the proposed project. Fuel will be stored off site or in a designated staging area. If stored in the staging area, a contingency plan will be enacted according to applicable limitations, including a secondary containment vessel capable of holding 110% of the volume capacity of the primary storage tank. Lubricants will also be stored off site or in the designated staging area confined to applicable regulations.

After construction is complete, there will be no solid waste generated by the project. There will no other waste byproducts as a result of the operation of the project other than waste generated with the service of the pumps. All waste will be disposed of per health standard, if required.

2.303(21b): Location of the storage areas designated for equipment, fuel, lubricants, and chemical waste storage with an explanation of spill containment plans and structures.

Location of the storage areas designated for equipment, fuel and lubricants during construction is expected to be confined to a small staging area located within the property owned by Academy Water and Sanitation District. The exact location and size of the staging area is subject to change throughout the design and construction phases. Spill containment plans and structures will comply with state and federal law, including any use of storage tanks in the staging area having a secondary vessel capable of holding 110% of the primary storage tanks volume in case of spill or overflow. When fueling and lubricating equipment, the contractor shall take special care not to overflow or spill petroleum products onto the ground and when doing so being sure to stay at a minimum 100 feet away from any streams, rivers or wetlands. Contractor shall also keep a consistent track record of maintenance and repair to equipment to minimize leakage of petroleum products onto the ground.

Chemical waste will not be expected to be present in any phase of the proposed project.

After the project is complete and the lift station is operational, all spare equipment, records, electrical cabinets, meters, etc. will be in the storage building adjacent to the lift station. No hazardous or chemical waste will be located in the storage building. In the event of the lift station going out of service, the overflow pond is adjacent to the lift station. This pond will be constructed as part of this project and will have a synthetic liner.

Section 2.303 (22): <u>Monitoring and Mitigation Plan.</u>

2.303(22a): Description of all mitigation that is proposed to avoid, minimize or compensate for adverse impacts of the Project and to maximize positive impacts of the Project.

The design of the proposed lift station has accounted for any adverse impact. The only adverse impact is a potential wastewater overflow from the lift station. An overflow would occur only when the lift station is out of service for an extended period of time. In the event of an overflow, the supervisory control and data acquisition (SCADA) system will communicate the alarm condition to a preselected list of telephone contact numbers. The estimated response time is 20 minutes or less. The wastewater will spill into a lined overflow pond adjacent to the lift station.

The overflow pond can accommodate a total of two days of storage. Once the lift station is back in operation, the wastewater collected in the overflow pond will be redirected to the wet well and pumped to the force main. In the event that this condition arises and odor is detectable, the operator will add lime to wastewater in the overflow pond which limits the growth of pathogens. The overflow pond will only have waste in it for a maximum of 2 days and likely this will only occur every few years. Presently, there are two ponds with wastewater for 365 days a year; therefore, it is a positive impact to the surrounding area to remove these ponds.

A positive component of the project is the decommissioning of the existing wastewater lagoon system which eliminates the adverse impact of a wastewater treatment facility.

22a(i): Describe how and when mitigation will be implemented and financed.

The construction of the overflow ponds is included in the cost of the project. As identified above, lime can be added to the wastewater in the overflow pond to reduce odors.

22a(ii): Describe impacts that are unavoidable that cannot be mitigated.

There is an increase of impervious area due to the construction of the storage building and lift station. The total net additional square footage of impervious area is 1154 SF (0.026 ac) or 0.40% increase of impervious area on the site. This very small increase of impervious area to the site; therefore, the impact will be minimal in regards to runoff. Due to this small increase, additional measures will not be required.

2.303(22b): Description of methodology used to measure impacts of the Project and effectiveness of proposed mitigation measures.

Any spill will be reported to CDPHE. The pond will provide two days of maximum month average day wastewater flow storage for a combination of the AWSD lift station's service area as well as the DWSD's Fox Run lift station's emergency overflow. This provides sufficient emergency storage in case there is a problem with the lift station or force main facilities. The overflow pipe will be used to return wastewater from the overflow pond back to the wet well after the lift station is back in service. Overflow into the emergency overflow pond is an approved condition for this facility by the CDPHE.

Key components of the emergency operations plan are as follows:

- Alarm/SCADA System with multiple alarm/status settings
- Response time of typically 20 minutes
- Manual override on control panel for pump operation
- Lined overflow pond adjacent to lift station that provides two days of storage
- Gravity piping to transfer overflow pond contents to wet well

2.303(22c): Description, location and intervals of proposed monitoring to ensure that mitigation will be effective.

As mentioned above, the lift station will have a SCADA system that will communicate with key personnel in the event of any emergency. Routine operations and maintenance would typically include daily visits to the facility to observe equipment operations. Pumping equipment will be

maintained in accordance with the manufacturer's standard service schedule. Spare parts will be maintained on site. A detailed O&M Manual will be prepared for the project prior to completion of construction.

The odor levels will only be improved by the completion of the project. With the lagoons being decommissioned and the raw sewage being contained in a closed pipe system underground, the odor from the lagoons will be eliminated. Any odor seepage from the Lift Station will be through the vent which has a carbon filter, thus the odor will minimal.

Section 2.303 (23): Additional Information.

2.303(23a): The Director may request that the applicant supply additional information related to the Project if the Director and/or the Permit Authority will not be able to make a determination on any one of the applicable Review Criteria without the additional information. Such additional information may include applicant's written responses to comments by a referral agency.

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 rational 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 Statues. 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): <u>Demonstration of Need.</u>

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 (BOD_5). Current loadings on the UMCR WWTF based on 2015 DMR data average 0.708 mgd and 1,473 ppd BOD_5. Maximum month average day loadings are 0.864 mgd and 2,185 ppd BOD_5.

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 BOD_5. 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 BOD_5 and 3,060.7 ppd BOD_5, respectively. The future organic loading of 3,060.7 ppd BOD_5 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): <u>Loss of Agriculture Productivity.</u>

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.