

#### 4.201 Application Submission Requirements

In addition to the materials listed at Section 2.303, applications for a permit to locate or construct a major new domestic water or sewage treatment system and/or major extension thereof shall be accompanied by the following information, in the number required by the Director:

- (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.

*Reviews, comments, and approvals from CDPHE will be provided when received. This project has not been submitted to CDPHE for review since it is a raw water pipeline and does not fall under a CDPHE review process.*

*However, reviews, comments and approvals from CDPHE and the Division of Water Resources can be provided in relation to the wells, water quality, and proposed water treatment when those processes commence design and permitting.*

- (2) Scope of Proposal

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

*Overall plans showing some potential FAWA members are located in Appendix A.*

*As stated above, the initial three governmental members of FAWA are Sterling Ranch Metropolitan District Nos. 1, 2, & 3. Existing land use approvals for Sterling Ranch total approximately 5,817 single-family equivalents ("SFE'S") at full buildout. Sterling Ranch Metropolitan District No. 1 ("SRMD1") has also committed to provide water service to two adjacent development areas known as The Retreat and the Schmidt property. The Retreat has zoning approval for approximately 164 SFE's utilizing a public water system and the Schmidt property is expected to contain approximately 400 SFE's with public water. The ultimate number of SFE's planned for these three projects is 6,381.*

*The current available legal water supply for Sterling Ranch, The Retreat, and the Schmidt property, per the County's 300-year requirement, is 423.49 acre-feet or enough for 1,199 SFE's. SRMD1 has acquired an additional 273.89 acre-feet of Nontributary Bar X water for post-pumping replacement of on-site Sterling Ranch's and Schmidt Property's Not Nontributary supplies (no pipeline required), thereby adding 273.89 acre-feet of legal on-site supply, for an additional 775 SFE's. On-site supplies from these three projects therefor provide enough water for approximately 1,973 SFE's.*

*The water supplies from the Bar X, McCune, and Shamrock West Ranches, not including water already dedicated to augmenting the NNT water at the Sterling Ranch, Retreat, and Schmidt developments, total 1,164.27 acre-feet, or enough to serve an additional 3,295 SFE's. Finally, FAWA has identified water rights for sale underlying several other ranches in this general area of northern El Paso County containing over 1,000 acre-feet of decreed water per the County's 300-year requirement. FAWA's water transmission lines are being sized with the capacity to convey water from these potential sources, which would potentially result in water supplies for over 3,000 additional SFE's.*

**The Ranch.** *SRMDI has tentatively agreed to provide water services to The Ranch, a project immediately adjacent to Sterling Ranch. The Ranch consists of 610.47 acres and has a sketch plan and zoning approvals for a maximum of 2,144 SFE's. The Ranch is estimated to have Nontributary supplies of 135.33 acre-feet, or enough for 383 SFE's.*

**Other Falcon Area Water Providers.** *Other Falcon area metropolitan districts have experienced challenges obtaining sufficient water for final plats within their respective boundaries and have expressed an interest in the FAWA project. The potential for increased water availability for these districts from FAWA is enhanced by the proposed connection to Meridian Service metropolitan District's upper water zone by way of Rex Road (see Appendix A hereto) and Woodmen Hills Metropolitan District's new water storage tank located adjacent to FAWA's pipeline terminus on the upper portion of Sterling Ranch.*

*The declining aquifer levels in the immediate Falcon area also support the need for the FAWA project. An Arapahoe formation well in the immediate Falcon area is expected to produce less than 60 gallons per minute. The same depth and cost well on the Bar X, McCune, or Shamrock West Ranches is expected to yield 200-300 gallons per minute. At a cost of approximately \$1.25M per well, this difference in yields represents a significant potential savings to the Falcon area water customers.*

**Alternative Sources of Water.** *There are few, if any, other sources of available water located in El Paso County sufficient in quantities to meet the needs of the Falcon area water providers. The City of Colorado Springs could become a viable alternative if it changes its longstanding policies and restrictions on providing water service outside its corporate boundaries. However, even in the event that those policies are changed, the City is not expected to place County customers on an equivalent standing with its inside the City customers and taxpayers. In particular, the City is not expected to be willing to provide the binding commitments and non-interruptible supplies to County subdivisions required by State statute and County subdivision regulations.*

**Annexation.** *The City of Colorado Springs has recently revised its guidelines and policies applicable to the annexation of residential properties. Where this potential change in policy might lead is uncertain at this time. State annexation law does not permit involuntary annexations except in situations such as Cimarron Hills where property has been surrounded by city for a period of three years. This situation does not apply to the service areas of any of the Falcon water providers, and is unlikely to ever occur. After declining several times to annex Sterling Ranch prior to the Sterling Ranch Metropolitan District's and the project's developers spending significant amounts of public and private funds designing, permitting, and building the initial phases of Sterling Ranch's water and wastewater systems, the City recently expressed an interest in annexing most of the ranch and requested that the Districts and major landowners submit an annexation petition. That petition was submitted but has now been withdrawn.*

**Aquifer Storage and Recovery.** *The FAWA project will provide an excellent opportunity for Aquifer Storage and Recovery ("ASR") or Managed Aquifer Recharge ("MAR") programs. Such storage programs, which require little land and result in low evaporative loss, are currently being utilized by the centennial metropolitan District in the southern Denver area and approximately 1,200 other locations in the United States and around the*

*world. The FAWA pipeline and well system will be designed and constructed so it can be utilized in wet years by the City of Colorado Springs and Falcon water providers to recharge the Arapahoe and Laramie Fox Hills Aquifers from renewable water sources, including the Arkansas River.*

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

*As noted in previous sections of this application and depicted in Appendix A, the FAWA pipeline extends over 17 miles from northern areas of Black Forest to a location west of the Falcon area (in Sterling Ranch). There are no proposed centralized sewage treatment systems within the areas of source water for the pipeline. Only existing and potential, private, on-site wastewater treatment systems (septic) are located within the areas of source water.*

*The existing water treatment facility is located on previously approved (via the 1041 process) lands within Sterling Ranch, on the same site as Sterling's existing water storage tank. This facility will be upgraded and expanded as part of this project.*

- (c) 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.

*The design capacity of the water treatment system for this project will be master-planned but built in phases as additional water sources come online. Water treatment will consist of disinfection via sodium hypochlorite (chlorine) and filtration via pressure-sand filter units.*

*Each additional phase of the project will be approved by CDPHE as more filters are added to the overall treatment plant. It is not economical to construct full build-out capacity right away, but each phase will be added when current design capacity reaches about 85%.*

*There are no wastewater treatment, distribution, or collection facilities proposed with this project.*

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

*As mentioned above, it is not economical to construct full build-out capacity right away for water treatment. However, the first phase, and each subsequent phase of water treatment, will only have capacity for the proposed areas it will serve.*

*The only excess capacity for this project will be for the project itself and will consist of safety factors in the event well pumps or portions of treatment need to be repaired or replaced.*

*There are no wastewater treatment, distribution, or collection facilities proposed with this project.*

- (e) Provide an inventory of total commitments already made for current water or sewage services

*The current available legal water supply for these projects per the County's 300-year requirement is 832.71 acre-feet or enough to supply approximately 2,357 SFE's. The additional water supplies from the Bar X, McCune, and Shamrock West Ranches total approximately 1,164.27 acre-feet per the 300-year requirement (without augmentation), or enough water for an additional 3,295 SFE's. Finally, FAWA has identified water rights underlying several other ranches in this general area of northern El Paso County, containing over 1,000 acre-feet of decreed water per the County's 300 year requirement, that are believed to be available for sale. FAWA's water transmission lines are being sized with the capacity to convey water from these two potential sources, resulting in water supplies for over 3,000 additional SFE's.*

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

*The existing water treatment facility is less than 5 years old and consists solely of disinfection.*

- (g) 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.

*There are no existing water uses (of the same type – Denver, Arapahoe, and Laramie-Fox Hills water) within the proposed areas of the source wells.*

*Currently, Sterling Ranch has an existing well in the Arapahoe formation and utilizes that water to serve around 123 platted lots with more proposed in the future.*

*Existing water use rights for Sterling Ranch include:*

- *Municipal*
- *Domestic*
- *Commercial*
- *Fire Protection*
- *Industrial*
- *Residential*
- *Recreation*
- *Irrigation*
- *Augmentation*
- *Livestock Watering*
- *Agricultural Uses*

*Proposed future wells in the Bar-X, McCune, Shamrock West, and other nearby ranches will include the same water uses as depicted above for Sterling Ranch's water rights.*

(3) Demonstration of Need

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

*Appendix O contains the Sterling Ranch Market Study.*

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

***The predominant type of development in the areas to be served by FAWA is residential.***

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

- i. Water treatment system.

***The existing water treatment facility at Sterling Ranch is sized for the onsite wells at Sterling Ranch, not the off-site wells included in this project. As such, the water treatment facility will be expanded and upgraded in this project.***

- ii. Wastewater treatment system.

***There is currently no existing wastewater treatment system.***

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

***As stated above, the existing water treatment facility will be expanded and upgraded as part of this project.***

- (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 resources 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.

***Sterling Ranch/Retreat/Schmidt. As stated above, the initial three governmental members of FAWA are Sterling Ranch Metropolitan District Nos. 1, 2, & 3. Existing land use approvals for Sterling Ranch total approximately 5,817 single-family equivalents ("SFE'S") at full buildout. Sterling Ranch Metropolitan District No. 1 ("SRMD1") has also committed to provide water service to two adjacent development areas known as The Retreat and the Schmidt property. The Retreat has zoning approval for approximately 164 SFE's utilizing a public water system and the Schmidt property is expected to contain approximately 400 SFE's with public water. The ultimate number of SFE's planned for these three projects is 6,381.***

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(5) Loss of Agricultural Productivity

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

*No agricultural water rights are being converted for this Project.*

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

*No agricultural land is being taken out of production for this project.*

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

*No economic consequences due to loss of irrigated agricultural land.*

- (d) 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.

*There will be no transfer of water rights resulting in the dry-up of lands.*

- (e) Information on impacts to agricultural head gates and water delivery systems.

*There are no head gates or agricultural delivery systems that will be affected by this project.*

- (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:

- (a) 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:

- i. Service area and/or boundaries.

***The service area and boundaries of FAWA will be contiguous with those of its member entities. At the present time, those are the boundaries at service areas of Sterling Ranch Metropolitan District Nos. 1, 2, &3.***

- ii. Applicable methods of transmitting, storing, treating and delivering water and collecting, transmitting, treating and discharging sewage, including effluent and/or sludge disposal.

***Water will be first pumped (via well pumps) from aquifers in the Denver Basin and conveyed to a future water treatment facility utilizing chlorination and pressure-sand filtration. From there, water will be stored in CDPHE-approved storage tanks (including Sterling's existing tank). Once development in Sterling Ranch reaches a certain elevation, pumping will be necessary to provide adequate pressure to consumers since the elevation of the tank (and future tanks) will not be high enough.***

***Pumping will consist of electric centrifugal pumps approved for use with potable water.***

***The ability to provide adequate pressure without pumping saves capital and operating costs, and Sterling Ranch will be able to accumulate district funding through taps prior to needing pumping facilities.***

- iii. Estimated construction costs and period of construction of each new or extension facility component.

***An estimated construction cost of the pipeline is around \$12M.***

***Each set of wells (Denver, Arapahoe, and Laramie-Fox Hills) is approximately \$3.0M to drill and complete.***

***The initial phase of the water treatment package is estimated to be around \$2.0M for the building and filter package.***

***As mentioned above, the water treatment facility will be master-planned but construction will be phased. Each phase will consist of additional treatment vessels, chlorine reaction vessels, and associated appurtenances. It is anticipated that each additional phase will cost approximately \$200,000, depending on timing of needs and development.***

- iv. Assessed valuation of the property to be included within the service area boundaries.

***The assessed valuations of Sterling Ranch and the Retreat are \$3,194,000 and \$6,680 respectively.***



- 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 ongoing management and maintenance of the FAWA project will be performed by the member districts' water manager(s) and paid out of the member districts' water user fees. No property taxes are being pledged to support the construction or operational costs of the project.***

- vi. Amount and security of the proposed debt and method and estimated cost of debt service.

***Please see Appendix J.***

- 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.

***Not applicable***

I hope that the information provided above responds satisfactorily to the requirements of the applicable portions of the 1041 application.

Respectfully,  
**JDS-Hydro Consultants, Inc.**

Ryan M. Mangino, PE