# DS-HYDRO CONSULTANTS, INC.

#### **GUIDELINES AND REGULATIONS FOR AREAS AND ACTIVITIES OF STATE INTEREST**

#### 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.

### A Basis of Design Report was submitted to the CDPHE and approval was received on September 29. The report and approval are included in Appendix I.

- (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.

## Preliminary construction plans are included in Appendix B. The proposed tank site service area is included in maps attached in Appendix J.

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

There are no proposed domestic water or sewage treatment systems within the proposed service area of the tank site. See Appendix J for maps of the tank site service area. The District owns and operates a water and wastewater system that serves existing customers within their service area. A brief description of each system is included below.

Water for the tank site will be provided from the existing WWSD water sources. The WWSD water system has two sources of water, surface water from the Fountain Valley Authority (FVA) system and groundwater. The FVA surface water is transferred through a pipeline from Pueblo Reservoir, treated by the Authority and delivered to WWSD for consumption. The District also utilizes groundwater from the Widefield and Jimmy Camp aquifers. Groundwater from the Widefield aquifer is treated at two water treatment plants owned and operated by WWSD for disinfection and PFAS removal. Groundwater wells in the Jimmy Camp Aquifer are disinfected individually. The proposed 2MG tank will not require WWSD to bring on any new water sources.

The WWSD wastewater treatment plant is located near Highway 16 and Highway 85/87 and provides secondary treatment. The plant is currently rated for a hydraulic design capacity of 2.14 million gallons per day (MGD) and is permitted under Site Application #4417.

(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 proposed project does not include water treatment facilities or distribution systems. The proposed potable water tank will convey water through the existing distribution system and the proposed additional 1 mile of pipe to the proposed pressure zone within the WWSD existing service area. The proposed 12" and 16" water lines will become part of the future

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distribution system when and if development occurs in their vicinity. Additional distribution lines will be required to provide water service to proposed future development. The 24" portion of the proposed water line will serve only as a transmission line to/from the tank and was sized to accommodate a maximum flowrate of 5,000 gpm to serve the future buildout of the tank site.

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

No treatment systems or collection networks are proposed in the project area. The 12" and 16" portions of the proposed water line are anticipated to serve as distribution lines to serve future development. If and when future development occurs, these water lines and additional infrastructure will be required. The tank site proposed is sized to allow for the construction of additional water storage tanks and a booster pump station if needed in the future and as noted above, the 24" water line proposed was sized to serve as the transmission line to/from the tank site for the full site buildout. The Rolling Hills Booster Pump Station was designed to allow for additional pumps to be added to the station as needed to meet demand. WWSD utilizes approximately 48% of it's current water treatment capacity and therefore has 52% excess capacity available. The table below outlines WWSD's water treatment capacity. See Appendix P for the WWSD Water and Wastewater 2019 Report.

Facility	Water Treatment Capacity	Status
Fountain Valley Authority System	892 gpm	Operating
Venetucci	737 gpm	In Design
Southmoor	2,200 gpm	Operating
Fontaine	500 gpm	Operating
Widefield Mitigation Facility	3,300 gpm	Under Construction
Jimmy Camp Wells – Direct Source	750 gpm	Operating

Water Treatment Capacity of Widefield Water and Sanitation District

Currently WWSD provides water service to areas within the proposed Rolling Hills Tank site service area. These areas are shown on the tank service area map included in Appendix J1. A summary of each area is included below.

- Potable water is provided to the VA Pikes Peak National Cemetery. A small 30,000gallon interim tank and small booster pump station are utilized to bring water to the cemetery. The small interim tank would be taken out of service when the 2 MG ground storage tank is constructed in 2021. The small booster pump station will be taken out of service when and if an elevated tank and/or booster pump station is constructed on the proposed tank site. Both the small booster pump station and the small interim tank are located on the VA PPNC site and cannot be utilized to serve additional demands in the tank service area.
- Potable water is currently provided to residents in the Peaceful Valley Estates, Lorson Filing 3 and may be provided to Lorson A & B out of WWSD's pressure zone 5 that floats off of their ground storage tank located at the Goldfield Tank Site. This zone will eventually be served by the proposed tank site since it would provide higher service pressure.

WWSD cannot provide service to additional areas within the proposed tank site service area until the proposed Rolling Hills 2 MG Potable Water Tank and Inlet Pipeline is constructed. See Section 2.102 (7) Land Use (i) for a summary of projected demands that will be served by the proposed tank site.



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

No additional water or sewage service commitments are proposed as part of this project. The proposed tank and associated water transmission line will provide service for customers within WWSD's existing service area. Total existing commitments for current water services within the Rolling Hills Tank Site service area (as show in Appendix J) is included below.

Entity	Schedule #	WWSD Water Service Commitment
Lorson (A)	5500000403	90 Dwelling Units
Lorson (B)	3300000403	100 Dwelling Units
Love in Action (Lorson C, E and G)	5500000371	373 Dwelling Units
Lorson Filing 3 (Eastern Portion)	5500000431	81 Dwelling Units
Peaceful Lakes Estates	Multiple	78 SFEs
VA PPNC Irrigation	550000384	200 gpm
VA PPNC – Domestic	550000384	78 SFEs

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

The proposed 2 MG Rolling Hills ground storage tank will be filled utilizing the Rolling Hills Booster Pump Station and water distribution system both constructed as part of the WWSD Veteran Affairs Pikes Peak National Cemetery Water Delivery System project that was completed in 2018. The system is in good repair and the water conveyed by the system is treated to meet all existing CDPHE standards.

(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.

WWSD's existing water supply includes imported surface water from the Fountain Valley Authority (FVA) system and alluvial groundwater wells that pump within the Widefield and Jimmy Camp aquifers.

Water from these sources is treated, disinfected, stored, and delivered to residential units and commercial taps within the existing WWSD service area. Water rights stipulate that water can be used for the following purposes:

- Domestic
- Livestock watering
- Lawn irrigation
- Commercial
- Industrial
- Replacement supply

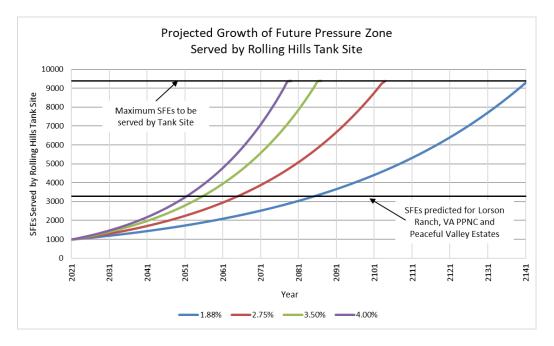
Currently, there are no obligations to supply water to other systems. WWSD does, at times, sell water to other systems but the transactions are one-time purchases and are



not continuing obligations. See Appendix P for the District's 2019 Water and Wastewater Report.

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

Note that the proposed tank site and associated water transmission line will serve property within the existing WWSD service area. No new service areas are proposed as part of this project. That being said, projected growth of the future pressure zone that will be served by the Rolling Hills Tank Site was considered for historic growth rates within the WWSD service area and El Paso County growth factors for low (2.75%), medium (3.5%), and high (4%) as shown in the chart below. Initial demands will include the domestic and irrigation demands for the VA Pikes Peak National Cemetery and 100-200 homes on the parcels in Lorson Ranch on the western side of the power lines that will be initially served by the existing Pressure Zone 5. The chart presented is based on an initial gross assumption of 1000 SFEs in the year 2021 which is likely conservative, but the initial years of growth may be understated.



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

## The land within the WWSD service area that the tank will serve is zoned PUD so residential is the predominant type of development that will be served.

- (c) Specify at what percentage of the design capacity the current system is now operating:
  - i. Water treatment system.
  - ii. Wastewater treatment system.



WWSD utilizes approximately 48% of its existing available physical water supply and therefore has 52% excess capacity available. The table included in 4.201 (2) (d) outlines WWSD's water treatment capacity.

The WWSD wastewater treatment plant is currently rated for a hydraulic design capacity of 2.14 million gallons per day (MGD) and organic capacity of 5,416 lb/day Biochemical Oxygen Demand BOD. The plant is currently operating at 69% of hydraulic loading capacity and 78% organic loading capacity.

See Appendix P for the WWSD's 2019 Water and Wastewater Report.

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

Note that the proposed tank does not increase the WWSD service area and therefore does not in itself increase hydraulic capacity or require additional water treatment. The proposed 2 MG tank will be filled by the existing Rolling Hills Booster Pump Station and the water line installed as part of the VA Pikes Peak National Cemetery Water Delivery System constructed in 2018. The booster pump station was designed to accommodate pumps that can meet the ten-year projected increase in hydraulic capacity and will only require two new, larger pumps to be purchased and installed. The existing 12-inch water line that will convey water to the tank is projected to accommodate the ten-year projected increase in hydraulic capacity. The transmission water line proposed as part of this project is sized to accommodate full build out of the future tank service area.

(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.

The proposed tank and associated water transmission line will not change the water rights utilized or held by WWSD. WWSD has substantial water rights which are more than adequate to provide water for the service area of the proposed tank site. The project will serve property within the existing WWSD service area boundaries and the water stored and conveyed by the proposed tank and associated water transmission line will be from existing, approved water sources that the District has all necessary water rights for. See Appendix P for WWSD's Water and Wastewater Report Annual Update that outlines the District's legal and physical supply of water.

- (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.

Conversion of agricultural water rights are not proposed for this project.



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

No irrigated agricultural lands will be taken out of production for the implementations of the proposed project.

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

No irrigated agricultural lands will be taken out of production for the implementation of the proposed project.

(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.

No water is being transferred, converted or taken out of beneficial use that has been previously used for agricultural purposes.

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

#### This project will have no impact on agricultural head gates or water delivery systems.

- (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 proposed tank site and water line are within the boundaries of the District (see Appendix A). The service area of the proposed tank is depicted in Appendix J.
    - ii. Applicable methods of transmitting, storing, treating and delivering water and collecting, transmitting, treating and discharging sewage, including effluent and/or sludge disposal.

Treated water from existing sources and existing water treatment plants within the existing WWSD service area will be pumped by the existing Rolling Hills Booster Pump Station through the existing 12 inch water main up to the tie in point for the proposed water transmission main that will carry water to the proposed tank. When the tank reaches a predefined water level, the booster pump station will shut off and water will flow from the proposed tank and transmission line back into the distribution system to provide system pressure.

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

The estimated construction costs for the 2 MG Potable water tank and associated water line is approximately \$3,870,000. Construction is anticipated to begin



February of 2021 and be completed by January of 2022. The preliminary cost estimate is included in Appendix L.

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

The assessed value of the property within the tank site service area was estimated per the El Paso County Assessor's site and is included in the table below. See Appendix J1 for a depiction of the areas called out in the table below. See Appendix L for printouts of the assessed values of the properties from the El Paso County Assessor's site.

Entity	Schedule #	Area in Acres	Assessed Value (per County Assessor Website)
Ground Storage			
Murray Fountain (F)	550000385	220.00	\$1,815.01
Murray Fountain (D)	550000383	48.00	\$395.52
Murray Fountain (E)	550000383	50.00	\$412.00
Bull Hill (A)	550000324	564.51	\$4,660.58
Lorson (A & B)	550000403	28.67	\$240.00
Lorson Filing No 3*	Various	22.00	\$117,450.00
Love in Action	550000371	276.97	\$2,290.00
Love in Action	550000367	45.31	\$370.00
Love in Action	550000368	21.00	\$170.00
Love in Action	550000369	14.00	\$120.00
Love in Action	550000370	35.00	\$290.00
Peaceful Lakes Estates *	Various	487.00	\$629,460.00
Total		1812	\$757,673.11
Elevated Tank			
VA PPNC	550000384	380.00	\$0.00
Murray Fountain (A)	550000385	415.00	\$3,423.77
Murray Fountain (B)	550000385	167.42	\$1,381.22
Murray Fountain (C)	550000383	27.00	\$222.48
Bull Hill (B)	550000324	29.00	\$239.42
Total		1018	\$5,266.89

\* Estimated

iv. 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 proposed tank and associated water main will allow WWSD to gain revenue in the future as new taps are added to the system that are supported by the tank. The tank is proposed as concrete so little to no tank maintenance is anticipated in for 60+ years. The current WWSD 2020 Rates and Fees are noted below.



Widefield Water and Sanitation District - 2020 Rates and Fee	es
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1 Water Base Charge	
Meter	\$ Per
Size	Month
Up to 3/4"	\$19.50
1 "	\$46.57
1 1/2 "	\$91.70
2 "	\$145.87
3 "	\$290.32
4 "	\$452.81
6 "	\$904.15
8 "	\$1,445.88
2 Water Volume Charge	
	\$ per
	1,000 Gal
Residential;	
st 5,000 Gallons	\$4.35
Dues E 000 Callens	\$5.21
ver 5,000 Gallons	
Commercial;	
	\$4.81
	\$4.81

-	5 Water Tap Fees		
Tap Size			Tap Fee \$
3/4 "	=	1.0 SFE	\$5,750
1 "	=	2.5 SFE	\$14,375
1 1/2 "	=	5.0 SFE	\$28,750
2 "	=	8.0 SFE	\$46,000
3 "	=	16.0 SFE	\$92,000
4 "	=	25.0 SFE	\$143,750
6 "	=	50.0 SFE	\$287,500
8 "	=	80.0 SFE	\$460,000

Mater Acquisition Eac

Water A	cqui	sition Fee	
Tap Size			Tap Fee \$
3/4 "	=	1.0 SFE	\$7,000
1 "	=	2.5 SFE	\$17,500
1 1/2 "	=	5.0 SFE	\$35,000
2 "	=	8.0 SFE	\$56,000
3 "	=	16.0 SFE	\$112,000
4 "	=	25.0 SFE	\$175,000
6 "	=	50.0 SFE	\$350,000
8 "	=	80.0 SFE	\$560,000

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

WWSD will not take on debt to construct the proposed tank and associated water line. The project will be developer financed by the Eagle Development Company.

vi. 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 proposed tank and associated water main will allow WWSD to gain revenue in the future as new taps are added to the system that are supported by the tank but the project in itself does not provide revenue to the District. A cost allocation agreement will be developed to allow reimbursement of the tank and associated water main as future development occurs.