

**APPLICATION FOR A PERMIT
TO CONDUCT A DESIGNATED ACTIVITY OF STATE INTEREST
OR TO ENGAGE IN DEVELOPMENT
IN A DESIGNATED AREA OF STATE INTEREST**

To: Permit Authority, El Paso County, Colorado

Re: Grandview Reserve Metropolitan District Water Wells, Water Treatment Plant, Water Storage Tank, Lift Stations and Force Mains, a matter of state interest.

From: Grandview Reserve Metropolitan District
1271 Kelly Johnson, Suite 100, Colorado Springs, CO 80920

719-499-8416

Date Submitted: 2/17/2023

Date Received: _____

1. Matter of State Interest.

The applicant requests that a permit be issued for each of the items checked below:

A permit to conduct one or more of the following areas of state interest:

- Efficient utilization of municipal and industrial water projects
- Site selection and construction of major new domestic water and sewage treatment systems and/or major extension of existing domestic water and sewage treatment systems
- Site selection and construction of major facilities of a public utility
- Development in areas containing or having a significant impact upon floodplain natural hazard areas
- Site selection and expansion of airports
- Site selection of arterial highways and interchanges and collector highways
- Site selection of rapid or mass transit facilities

2. Proposed Activity or Development.

General description of the specific activity or development proposed (attach additional sheets if necessary):

Proposed Water System:

The proposed project consists of the water infrastructure necessary to support development within the Grandview Reserve Metropolitan District (GRMD). The water infrastructure applicable to the 1041 includes source water wells, water treatment facilities, water storage tanks and the associated piping. Please reference Exhibit BB for all information regarding Grandview Reserve's water demands. The wells will be Denver Basin wells typically with 2 wells (one Arapahoe and one Laramie Fox Hills) per well site. Exhibit C contains a map of the potential proposed well sites within GRMD. The total number of well sites to be developed will be dependent on well production and the rate of development.

A total of up to 4 water treatment facilities are planned for the project. All water treatment facilities will utilize pressure sand filtration and iron and manganese precipitation to treat raw water from the wells. A flow diagram of the treatment provided is in Appendix II. The capacity of each water treatment facility will be determined by the filings that it will serve. The first water treatment facility will be sized to treat approximately 0.5 MGD with room to expand to 1.0 MGD. The total treatment capacity needed for full buildout of GRMD is approximately 3.0 MGD. Exhibit C shows the proposed locations of the water treatment facilities.

Once treated at the water treatment facilities, water will be stored in elevated or ground-level tanks. Multiple tanks constructed of steel or concrete will serve the project area. Currently, up to 4 different sites are identified in Exhibit C. The tanks will be sized to store approximately 24 hours of average daily flow and the fire flow requirement. The first tank is anticipated to be approximately 400,000 gallons. The size and number of future tanks will be determined as development progresses. All tanks are anticipated to be above ground water tanks, and if elevated, the maximize height is approximately 175-ft. Total storage capacity for the development at buildout is anticipated to be 1.5-3.0 million gallons. The total storage required will be determined by the building with the largest fire flow requirement.

The raw and potable water facilities will be connected by water lines ranging from 4"-18" diameter as depicted in Exhibit C.

Proposed Wastewater System:

The proposed project consists of the wastewater infrastructure necessary to support development within the Grandview Reserve Metropolitan District (GRMD). The wastewater infrastructure applicable to the 1041 includes one or more lift stations and associated force main(s). Treatment will be provided by an existing treatment facility. Depending on the treatment facility as outlined below.

GRMD is proposed to have approximately 3340 single family equivalents (SFE) at buildout. Please reference Exhibit BB for all information regarding Grandview Reserve's wastewater demands.

This report evaluates three alternatives for conveyance and treatment:

A. Woodmen Hills Metropolitan District (WHMD)

- Expansion of the treatment facility anticipated to involve the headworks, sludge basin and dewatering facility
- One lift station is anticipated

B. Meridian Ranch Metropolitan District (MSMD)

- Expansion is anticipated to be wet well and pump expansion within the lift station

C. Cherokee Metropolitan District (CMD)

- Expansion is not anticipated initially, but future expansion may involve aeration tanks and clarifiers
- Two lift stations are anticipated

The preferred alternative is Woodmen Hills Metropolitan District.

For all three alternatives, it is anticipated that parallel force mains will be installed as shown in Exhibit C. An 8" – 12" diameter force main will be used to convey flows during the early stages

of development. This will ensure that flushing velocities of 3.5 ft/s can be achieved with minimal water added. A second force main will be 12"-16" to convey the remainder of the wastewater flows for full build-out. The gravity lines are anticipated to be 15"-21" in diameter and the exact size will be determined once a design profile is developed, and the minimum slope is known. The force mains and gravity interceptors shall be PVC or HDPE and will vary in length depending on the alternative chosen. The typical lift station (quantified above) will consist of:

- Wet Well/Dry Well Configuration
- Flooded-suction Pumps with redundancy for the largest pump
- Emergency storage
- Electrical Equipment
- Back-up Generator
- Odor Control

Alternative A

Wastewater infrastructure will convey flows from GRMD and other surrounding parcels to the Woodmen Hills Metropolitan District (WHMD) Water Reclamation Facility (WRF) for treatment. This alignment will require one lift station that will be located at the corner of Curtis Rd. and Judge Orr Rd. The sanitary sewer alignment is approximately 5.8 miles and is depicted in Exhibit C. The service area of the lift station is defined in Exhibit II. WHMD will determine the exact capacity of the proposed lift station and force main. It is anticipated that the lift station and force main will have a 0.8 – 1.5 MGD average daily flow capacity. The WHMD WRF currently has capacity for 900 SFE from GRMD. WHMD plans to expand the WRF capacity to allow them to accept full build out flows from GRMD. The current IGA that highlights the expansion is attached in Appendix AA. The WHMD WRF expansion is anticipated to involved the headworks, sludge basin and dewatering facility.. No pretreatment or equalization storage is required for this alternative. The will-serve letter from WHMD is included in Exhibit CC.

Alternative B

Wastewater infrastructure will convey flows from GRMD to the MSMD Falcon Lift Station, where MSMD will facilitate conveyance to and treatment at the CMD WRF. Currently, MSMD has an inter-governmental agreement (IGA) with CMD and owns nearly half the capacity of the plant. This alternative requires one lift station located along Highway 24 at the southeast border of the project site. The proposed lift station would have a capacity of 0.5-0.75 MGD since it would only serve GRMD and not be intended as a regional facility.

The force main alignment will be from GRMD to the intersection of Highway 24 and Judge Orr Rd and will be approximately 4.3 miles. There are two potential routes for the gravity interceptors to flow:

B1) Judge Orr Rd. to Fort Smith Rd to MSMD 12" gravity main.

B2) Highway 24 to a MSMD 12" gravity main.

Both gravity mains will need to be paralleled in the future to handle full build-out flows from GRMD. The size of the future parallel mains are anticipated to be 12-18" and will be determined by MSMD and GRMD as built-out progresses.

The sanitary sewer alignment alternatives can be found in Exhibit C. Equalization storage will be included at this lift station and no pretreatment is required for this option. There will be no

open lagoons or sludge basins required. All storage will be provided in underground tanks.

Alternative C

Wastewater infrastructure will convey flows from GRMD to the Cherokee Metropolitan District (CMD) Water Reclamation Facility (WRF) for treatment as depicted in Exhibit C.

This alternative will require two lift stations. The north lift station will be located at the intersection of Curtis Rd. and Judge Orr Rd and will include equalization storage. There will be no open lagoons or sludge basins required. All storage will be provided in underground tanks. The south lift station will be located north of the intersection of Davis Rd. and Curtis Rd. The second lift station will include pre-treatment as required by CMD to include a bar screen and grit removal equipment. Both lift stations will include odor control. The lift stations and force mains would have a capacity of 0.8 – 1.5 MGD and could provide service to GRMD and potentially to the areas identified in Exhibit II.

The conveyance infrastructure described above will be approximately 10 miles and will deliver the wastewater to the connection point as defined in the CMD IGA. That connection point is on CMD's existing force main running parallel to Hwy 94, approximately at Curtis Road.

3. Location of Development.

A general, non-legal description and the popular name, if any, of the tract of land upon which the activity or development is to be conducted:

Proposed development is Grandview Reserve, located between Eastonville Rd and Highway 24, east of Falcon, CO. The proposed water system to be located on-site. The proposed wastewater infrastructure to extend from GRMD down Curtis Road to Hwy 94.

4. Legal Description.

The legal description, including the acreage, of the tract of land upon which the development or the activity is to be conducted, by metes and bounds or by government survey description: (attach additional sheets if necessary):

Grandview Site:

Sections 21, 22, 27, and 28, all in Township 12 South, Range 64 West of the 6th Principal Meridian. Refer to the attached legal description in Exhibit F

Lift Station Location 1 (Alternative A and C):

A Parcel of land located in the northwest quarter of Section 3, Township 13 South, Range 64 West of the 6th Principal Meridian.

Lift Station Location 2 (Alternative C):

S2S2SE4SE4 Section 28-13-64, Address known as 3530 N. Curtis Road, Peyton, CO 80831

5. Owners and Interests.

Set out below the names of those persons holding recorded legal, equitable, contractual and option interests and any other person known to the applicant having an interest in the property described in paragraph 4, above, as well as the nature and extent of those interests for each person, provided that such recorded interests shall be limited to those which are recorded in the County Recorder's Office of this jurisdiction, the land office of the Bureau of Land Management for this State, the Office of the State Board of Land Commissioners of the Department of Natural Resources, or the Secretary of State's Office of this State. (Attach additional sheets if necessary):

**Paul Howard, 4 Site Investments, LLC
Bill Carlisle, Melody Homes
Grandview Reserve Metropolitan District
Cherokee Metropolitan District
4-Way Ranch Metropolitan District**

6. Submission Requirements.

Submission requirements described in the regulations, which have been adopted by this jurisdiction for each of the activities or areas checked in paragraph 1 above, are attached to this application. Those attachments are identified, by letter or number, and described by title below:

Documents Related to 2.303 [Submission Requirements]

Documents Related to 3.201 [Source Water]

Documents Related to 4.201 [Major New Domestic Water/Wastewater]

Refer to the attached Table of Contents for a full summary of Documents and Exhibits

7. Additional Information.

The attached analyses show that each of the design and performance standards set forth in the regulations for each of the activities or areas checked in paragraph 1 above, will be met. The Table of Contents contains a full list of all documents and analyses included in this submittal.

8. Duration of Permit.

The applicant requests a permit for an indefinite period.

9. Application Fee.

An application fee of \$3837.00, accompanies this application.

APPLICANT:

By Paul Howard
(Name)

Manager
(Title)