



***WASTEWATER DISPOSAL REPORT***

*for*

***FALCON HIGHLANDS SOUTH  
PUD/PRELIMINARY PLAN***

August 2022

**Prepared By:**



WOODMEN HILLS METROPOLITAN DISTRICT

FALCON HIGHLANDS SOUTH

PUD/PRELIMINARY PLAN

**WASTEWATER DISPOSAL REPORT**

August 2022

Prepared for:

**Woodmen Hills Metropolitan District  
8046 Eastonville Road  
Peyton, CO 80831**

Prepared by:

JDS-Hydro Consultants, a Division of RESPEC  
5540 Tech Center Drive, Suite 100  
Colorado Springs, CO 80919

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## **1.0 INTRODUCTION**

The purpose of this report is to provide an update to prior Wastewater Disposal Reports for the Falcon Highlands Metropolitan District (FHMD, the District) and address specific needs of the proposed Falcon Highlands Filing #3 PUD/Preliminary Plan in Falcon, CO. ***Please note that this report supersedes prior reports for this filing and should not be counted as an addition to the prior Sketch Plan Amendment for this filing.***

## **2.0 PROJECTED LAND USES**

### **2.1 Projected Land Uses**

The lands proposed for the Falcon Highlands South PUD/Preliminary Plan are included within the FHMD boundary, but wastewater services are provided by Woodmen Hills Metropolitan District (WHMD) via an inter-governmental agreement (IGA). The IGA allows for up to 750 single-family equivalents (SFEs) to be developed within the FHMD boundary, which will be exceeded by the proposed PUD/Preliminary Plan.

This will require an amendment to that IGA, and the developer has reached out to WHMD in order to initiate those discussions.

Lands within the subject area were previously planned for 157 single-family homes. The proposed PUD/Preliminary Plan calls for 378 single-family lots in four (4) phases:

- Phase 1 – 50 Lots
- Phase 2 – 193 Lots
- Phase 3 – 111 Lots
- Phase 4 – 24 Lots

Please refer to the *Land Use Exhibit* in **Appendix A**.

### **2.2 Projected Points of Tie-In**

The locations for water and wastewater tie-ins are already established and the stub-out locations are in place (see **Appendix B**).

## **3.0 WASTEWATER PROJECTIONS**

### **3.1 Projected Wastewater Loads**

Wastewater flows for WHMD are based on an established benchmark of average daily flow (ADF) of 163 gallons per day (GPD) per SFE and 172 GPD/SFE for average daily-maximum month flow (ADMMF). The 378 SFEs projected in the PUD/Preliminary Plan will result in the exceedance of the contracted 750 SFEs. The developer has initiated discussions with WHMD on possible amendments to the IGA.

There are 423 existing SFEs in Falcon Highlands currently connected to the WHMD system, leaving 327 SFEs available under the current terms of the IGA. Therefore, the proposed PUD/Preliminary Plan will result in exceedance of the contractual amount by approximately 51 SFEs.

### *3.2 Treatment Facilities*

Woodmen Hills recently constructed a new regional wastewater treatment facility which was brought online in the spring of 2019. The new plant is an advanced wastewater treatment plant with a hydraulic capacity of 1.3 million gallons per day (MGD). The facility is in compliance with its current discharge permit and has adequate capacity for the additional flows proposed in this PUD/Preliminary Plan.

### *3.3 Collection and Pumping Facilities*

This development will be required to install gravity sewer infrastructure in accordance with WHMD standards and approvals. Said infrastructure will connect to existing collection systems owned and operated by WHMD.

Most of the existing infrastructure was installed in 2005 and/or later, meaning the elements are well within their typical design lives of 50 years and longer.

In addition to amending the IGA with WHMD to treat beyond the 750 SFEs, this development will require physical upgrades to the existing lift station, as well as force main modifications.

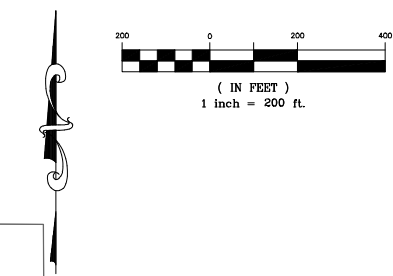
The lift station is permitted for 64,000 GPD and is currently seeing flows of about 38,000 GPD. This leaves roughly 26,000 GPD available. At 172 GPD/SFE, there is theoretically enough capacity for an additional 151 SFEs.

Summary of contractual and physical capacities available:

- Contractual – 327 SFEs
- Physical – 151 SFEs

# ***Appendix A***

## ***Land Use Exhibits***



NOTES:

1. THIS PHASING PLAN CONSISTS OF TWO INITIAL PHASES THAT ENCOMPASS A TOTAL OF 243 LOTS WHICH IS UNDERSTOOD TO BE THE NUMBER OF AVAILABLE WATER TAPS FOLLOWING CONSTRUCTION OF A PROPOSED WELL BY WOODMEN HILLS METRO DISTRICT. PHASE 1 CONSISTS OF 50 LOTS WHICH IS UNDERSTOOD TO BE THE NUMBER OF AVAILABLE WATER TAPS AT PRESENT WITH NO NEW ADDITIONAL WELL.
2. THERE ARE TWO EXISTING DETENTION PONDS OWNED AND MAINTAINED BY EL PASO COUNTY WITHIN FALCON HIGHLANDS FILING NO. 3 - POND 1 (SOUTHWEST) AND POND 2 (SOUTH-CENTRAL).
3. POND WU IS OWNED AND MAINTAINED BY EL PASO COUNTY AND IS CONSIDERED TRACT T WITHIN FALCON HIGHLANDS FILING NO. 2. THERE IS LIMITED CONSTRUCTION WITHIN POND WU FOR A FOREBAY AND TRICKLE CHANNEL FOR INFLOW FROM THE FUTURE PHASE TO THE NORTH EAST.
4. PHASE 1 IS TO CONSIST OF 50 LOTS WITH A TEMPORARY TURNAROUND AT THE TERMINATION POINT OF THE PHASE'S SOUTH PUBLIC ROADWAYS. SHOULD A TEMPORARY SECONDARY ACCESS TO ANTELOPE MEADOWS CIRCLE BE REQUIRED, A CORNER LOT MAY ACT AS A TEMPORARY ACCESS. PHASE 2 INCLUDES A SECONDARY ACCESS CONNECTION TO ANTELOPE MEADOWS CIRCLE.
5. EXISTING DETENTION POND 1 REQUIRES STORM INFRASTRUCTURE RETROFITTING AND EARTHWORK, STORM NETWORK IMPROVEMENTS THAT OUTFALL TO EXISTING DETENTION POND 1 AND RETROFITS ARE INCLUDED IN PHASE 1 AND ARE REQUIRED PRIOR TO CONSTRUCTION OF ALL OTHER PHASES TRIBUTARY TO EXISTING DETENTION POND 1 (PART OF PHASE 2).
6. EXISTING DETENTION POND 2 REQUIRES STORM INFRASTRUCTURE RETROFITTING AND EARTHWORK. STORM NETWORK IMPROVEMENTS THAT OUTFALL TO EXISTING DETENTION POND 2 AND RETROFITS ARE INCLUDED IN PHASE 2 AND ARE REQUIRED PRIOR TO CONSTRUCTION OF ALL OTHER PHASES TRIBUTARY TO EXISTING DETENTION POND 2 (PART OF PHASE 2 AND FUTURE PHASES).
7. SIGNIFICANT UTILITY INSTALLATIONS THAT ARE REQUIRED FOR CONTINUED SERVICE, DRAINAGE, AND LOOPING ARE SHOWN ON THIS PLAN. MORE DETAILED LOCATIONS OF UTILITY STUBS BETWEEN PHASES ARE SHOWN ON THE PRELIMINARY UTILITY PLANS.
8. THE EXISTING SANITARY SEWER FROM FALCON HIGHLANDS FILING NO. 2 IS TO BE MAINTAINED AND REPLACED AS SHOWN ON THIS PLAN. THE EXISTING 30" UTILITY EASEMENT THAT THE EXISTING SYSTEM IS WITHIN IS TO BE VACATED AS A PART OF PHASE 2 FOLLOWING REPLACEMENT AND REMOVAL OF THE FILING NO. 2 SYSTEM. CONSTRUCTION PHASING IS TO MAINTAIN SERVICE FROM FALCON HIGHLANDS FILING NO. 2 TO THE EXISTING LIFT STATION. ANY DEMOLITION OF THE EXISTING SANITARY SEWER SYSTEM WITHIN FALCON HIGHLANDS SOUTH THAT SERVICES FALCON HIGHLANDS FILING NO. 2 IS TO BE REROUTED FOR CONTINUED SERVICE PRIOR TO DEMO AND VACATION OF THE UTILITY EASEMENT. THE PHASING PLAN REFLECTS THIS CONSTRUCTION SEQUENCING.

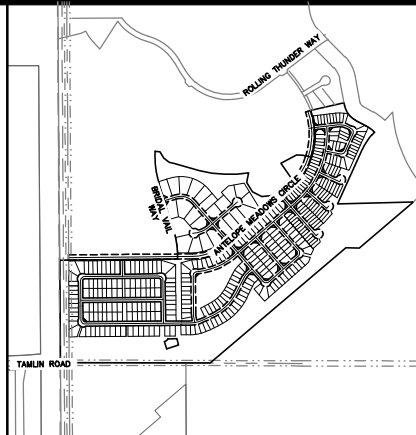
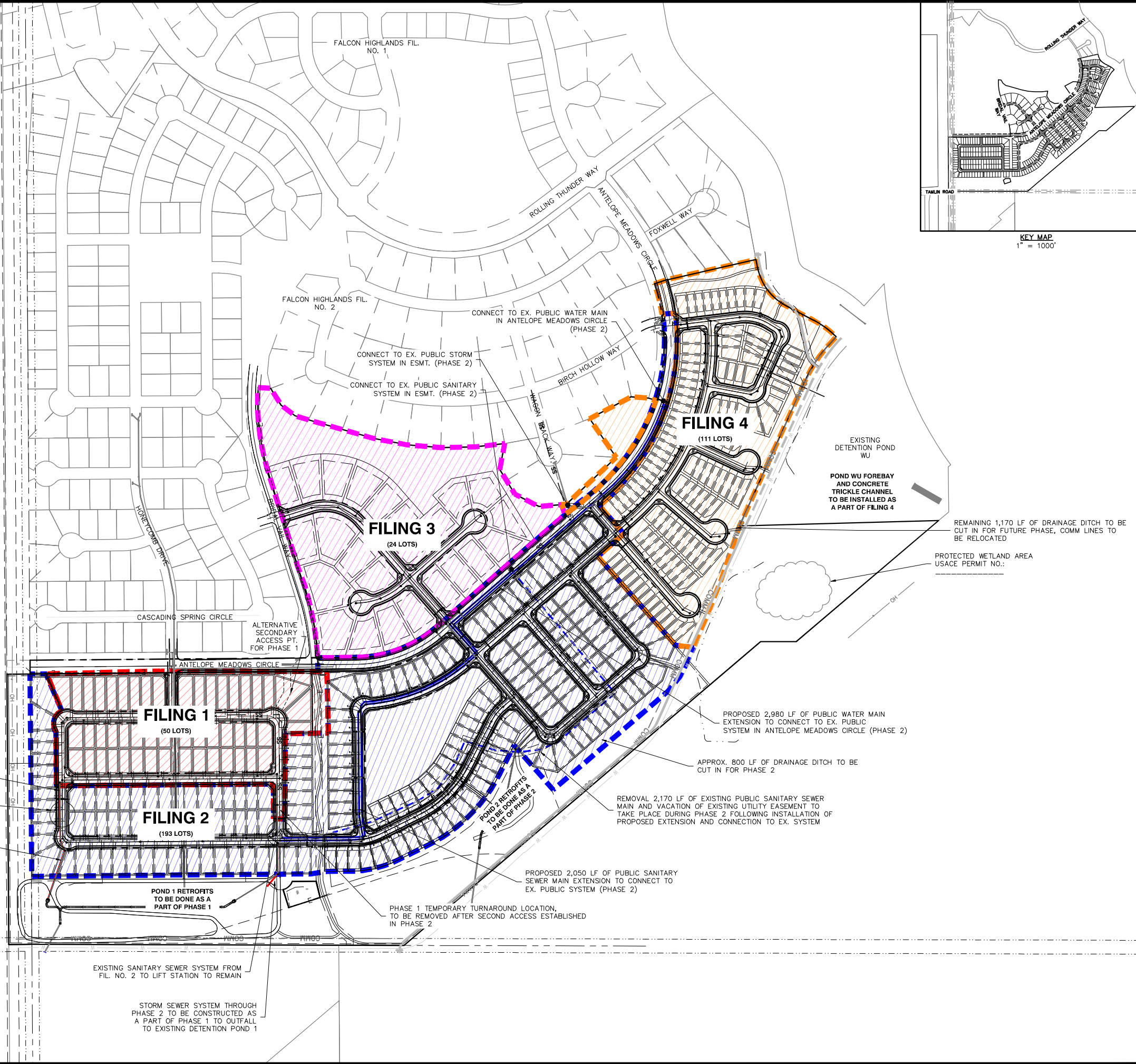
LEGEND:

- FILING 1
- FILING 2
- FILING 3
- FILING 4

STORM SEWER SYSTEM THROUGH PHASE 2 TO BE CONSTRUCTED AS A PART OF PHASE 1 TO OUTFALL TO EXISTING DETENTION POND 1

PHASE 1 TEMPORARY TURNAROUND LOCATION, TO BE REMOVED AFTER SECOND ACCESS ESTABLISHED IN PHASE 2

STORM SEWER SYSTEM THROUGH PHASE 2 TO BE CONSTRUCTED AS A PART OF PHASE 1 TO OUTFALL TO EXISTING DETENTION POND 1



KEY MAP  
1" = 1000'

Know what's below.  
Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:  
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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CONTACT: JIM BYERS

CHALLENGER HOMES

FALCON HIGHLANDS SOUTH  
EL PASO COUNTY, COLORADO

PHASING PLANS  
UTILITY PHASING PLAN

CLIENT

DATE 08/23/2022

REVISIONS

DR.	ARP	CH.	RDL
P.M.	RDL		
JOB	21005234		
SHEET NO.	13		

CAD FILE: 21005234-PHASING.DWG

## ***Appendix B***

### ***Projected Points of Tie-In***




N:\Projects\310 Falcon Highlands Metro District\310.01 General District Engineering\Drawings\Exhibits\31001\_Appendix\_B.dwg 2022/09/17 11:40 AM By: Ryan Mangino




VICINITY MAP  
N.T.S.

LEGEND




WATER CONNECTIONS



SEWER CONNECTIONS





0'300'600'

SCALE 11x17: 1" = 600'

SCALE 24x36: 1" = 300'

CONSULTANTS, INC.  
5540 TECH CENTER DR, SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

FALCON HIGHLANDS METROPOLITAN DISTRICT

APPENDIX B

VICINITY MAP & POINTS OF TIE-IN

REVISIONS			
NO.	DESCRIPTION	BY	APP. DATE
1			
2			
3			
4			
5			
6			
7			

EXHIBIT

B

Project No.: 310.01

Date: 10/26/21

Design: JPM

Drawn: SKG

Check: JPM