

**WATER RESOURCES REPORT
FOR
WESTVIEW AT WOODMOOR FILING 1A
1384 BUCKWOOD LANE
MONUMENT, COLORADO**

APRIL, 2023

Prepared For:
Murphy's Custom Homes
13710 Struthers Road
Colorado Springs, Co 80921
(719) 233-2883

Prepared By:
TERRA NOVA ENGINEERING, INC.
721 S. 23rd Street
Colorado Springs, CO 80904
L Ducett, P.E. (719) 635-6422

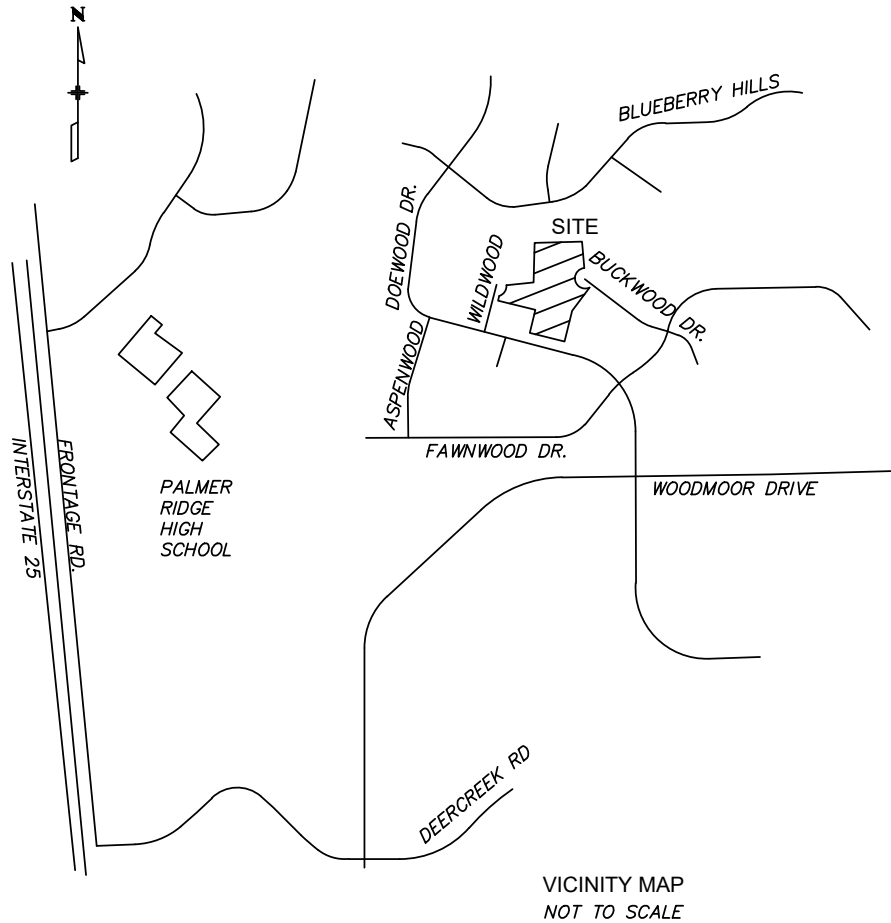
Job No. 2282.00

SUMMARY OF THE PROPOSED SUBDIVISION:

Westview at Woodmoor Filing 1A is a 3.809 acre proposed replat of Lot 1 Westview at Woodmoor located in the northeast corner of Section 11, Township 11 South, Range 67 West of the 6th Principal Meridian in El Paso County, Colorado. The site is located at the current address of 1384 Buckwood Lane.

There is an existing residence and associated drive on the east and central portion of the site which will remain. The site is intended to be subdivided into 4 rural residential lots. The minimum lot size will be 0.5 acres as required by the existing zoning.

The site is located within and will be provided with water services by the Woodmoor Water and Sanitation District No. 1 (see attached commitment letter and map of Woodmoor’s existing wet utilities in the appendix). A vicinity is provided below for reference:



DETERMINATION OF SUFFICIENT QUANTITY OF WATER:

Calculation of Water Demand: The proposed development includes 4 single-family lots, one of which is already occupied by a residence. Anticipated water demand is approximately 293 gallons per day or about 0.33 acrefeet per year per household. No water for irrigation is proposed to be allocated for this development. This results in about 1.312 acrefeet per year for all four proposed lots. The projected water consumption is based upon The Woodmoor Water and Sanitation District's "Long Range Plan Update 2017" (attached in appendix) which evaluated the water demands for the District and found that the average annual water demand decreased from the 2012 LRP Update from 305 gpd/SFE to 293 gpd/SFE likely due to water conservation. No water is allocated for irrigation in this proposed development.

Calculation of Quantity and Dependability of Water Available: Westview at Woodmoor Filing 1A is to be served by the Woodmoor Water and Sanitation District. There are no groundwater sources on this site proposed to be utilized by this development. There are no wells proposed on this site. A general intent to serve letter from the Woodmoor District is attached. Summarized in the District's LRP is a description of the existing water supply and distribution system, as well as descriptions for possible future improvements and expansions to the system. The water requirements necessary for Westview at Woodmoor Filing 1A have been shown to be available in the LRP. Summarized in section 2.3 of the LRP are the current water rights owned by the District. That section is included in the appendix. Based upon the data contained in the LRP regarding the water resources that are available to the Woodmoor District, subdivisions served by the District will be supplied with water resources meeting the requirements of El Paso County's 300-year water supply regulations for future subdivisions relying on the Denver aquifer.

Determination of Sufficient Quality and Potability of Water: The quality of the water produced by the Woodmoor Water and Sanitation District is subject to regulations prescribed by the CDPHE that limit the amount of certain contaminants in treated or untreated water. It is our understanding that the quality and potability of the Woodmoor District's water supply is already approved and is in conformance with CDPHE regulations. The District publishes an annual Drinking Water Quality Report that demonstrates compliance with State and Federal water quality standards.

APPENDIX

Proposed Plat

Woodmoor Water and Sanitation District No. 1 Utility Map

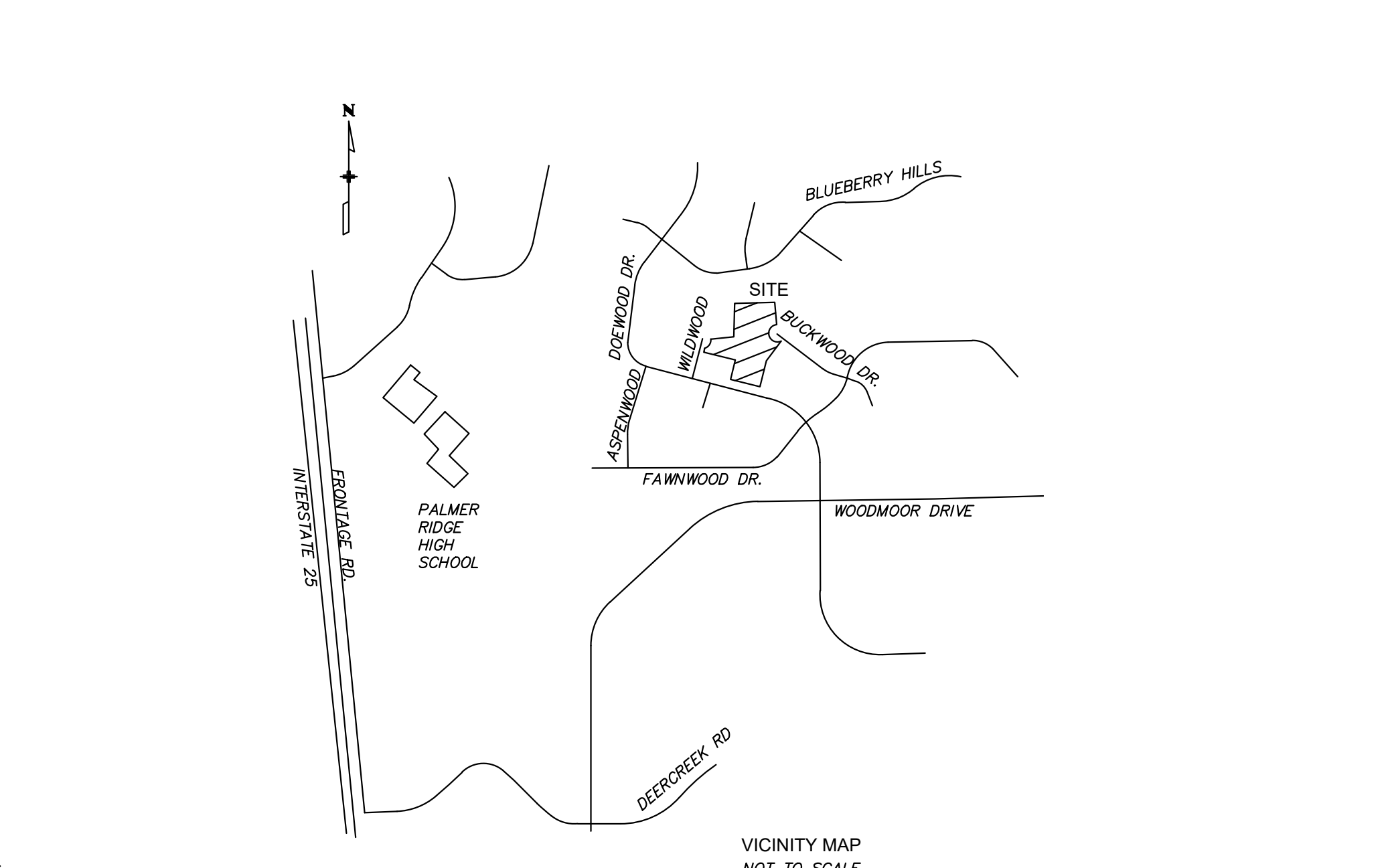
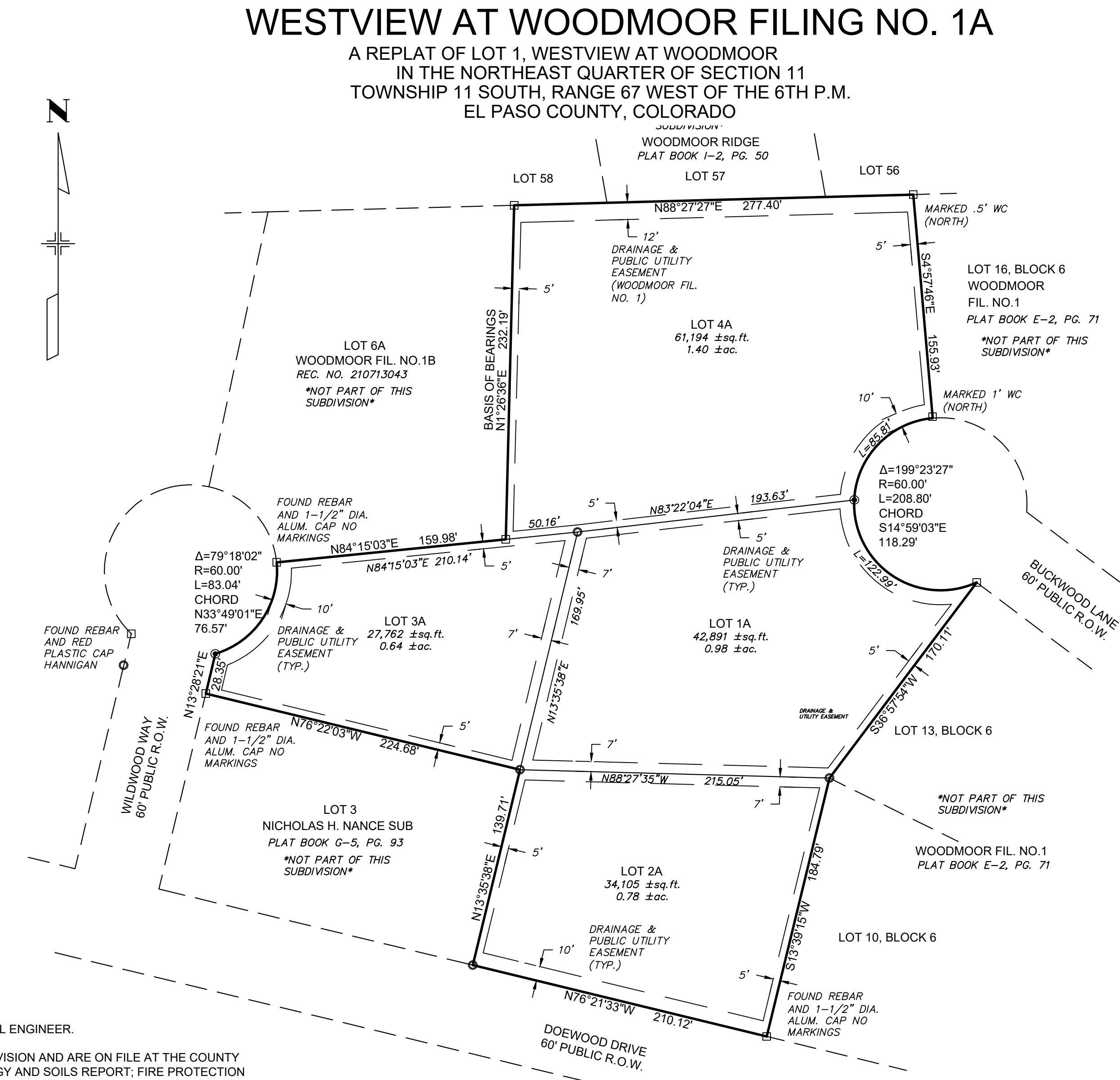
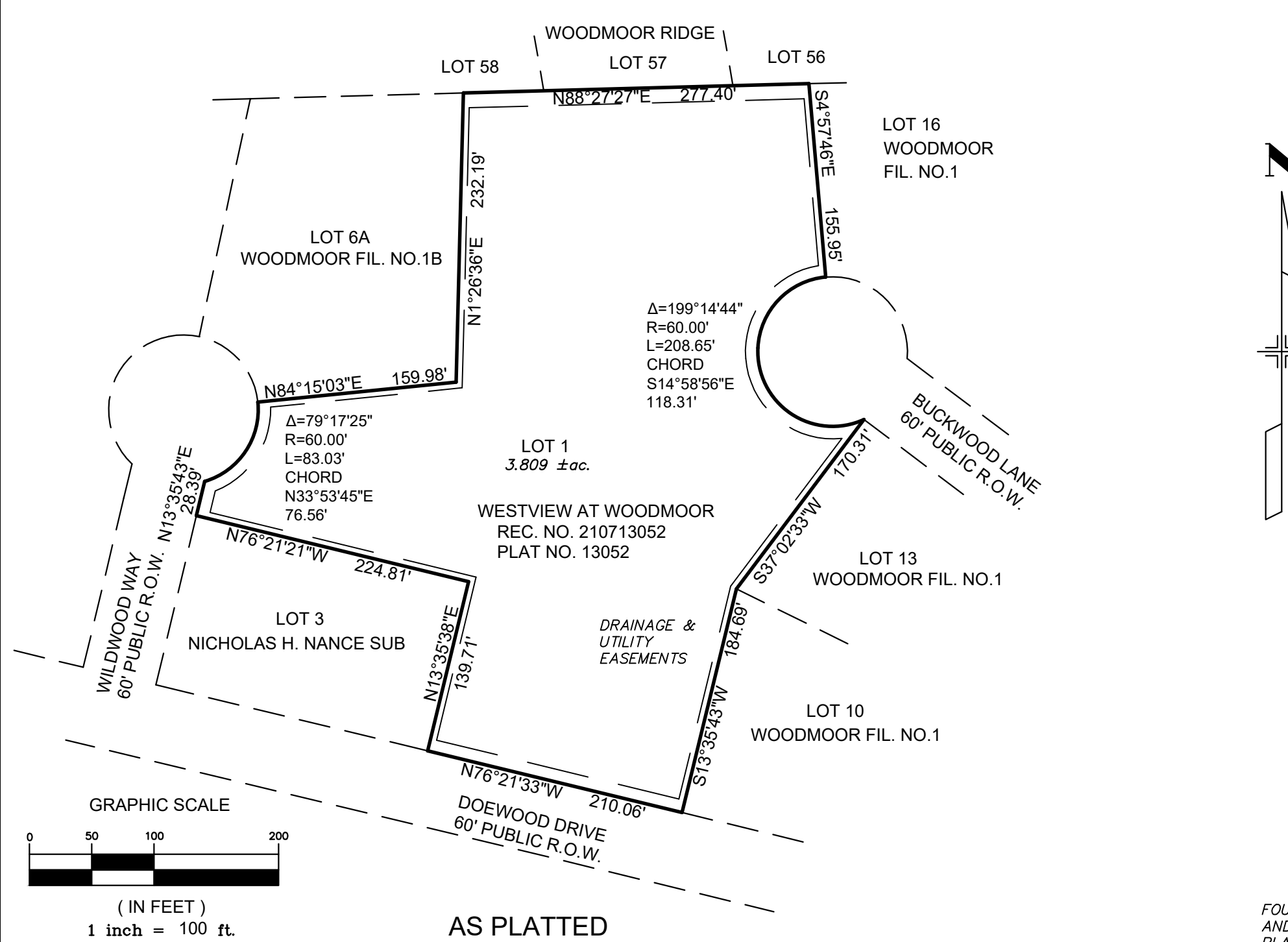
Commitment Letter

Woodmoor Water and Sanitation District Long Range Plan Update 2017

2022 Woodmoor Water and Sanitation District Long Range Plan, Section 2.3

WESTVIEW AT WOODMOOR FILING NO. 1A

A REPLAT OF LOT 1, WESTVIEW AT WOODMOOR
IN THE NORTHEAST QUARTER OF SECTION 11
TOWNSHIP 11 SOUTH, RANGE 67 WEST OF THE 6TH P.M.
EL PASO COUNTY, COLORADO



- NOTES:**
- MONUMENTS
 - FOUND A 1/2" DIAMETER REBAR
 - FOUND A REBAR AND ORANGE PLASTIC CAP PLS 37928 OR AS NOTED.
 - SET A 5/8" DIAMETER REBAR, 18" IN LENGTH WITH A 1-1/2" DIAMETER ALUMINUM CAP "LWA PLS 28658. MONUMENTS ARE FLUSH WITH THE GROUND UNLESS NOTED OTHERWISE
 - RESEARCH FOR RECORDED RIGHTS OF WAY AND EASEMENTS WAS DONE BY LAND TITLE GUARANTEE COMPANY, FILE NO. SR55103105 EFFECTIVE DATE JANUARY 27, 2022. THIS DRAWING DOES NOT CONSTITUTE A TITLE SEARCH BY KEVIN M. O'LEARY OR LWA LAND SURVEYING INC.
 - PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS AND AGREEMENTS AS STATED IN THE TITLE COMMITMENT.
 - UNITS OF MEASURE ARE U.S. SURVEY FEET.
 - THE BASIS OF BEARINGS FOR THIS SURVEY IS THE WEST LINE OF LOT 4A, N1°26'36"E - 232.19'. THE DIRECTION IS BASED ON THE WESTVIEW AT WOODMOOR PLAT AND THE LINE IS MONUMENTED BY REBAR AND ORANGE PLASTIC CAPS PLS 37928.

- NOTES:**
- STRUCTURAL FOUNDATIONS ON THE LOTS IN THIS SUBDIVISION SHALL BE DESIGNED BY A COLORADO REGISTERED PROFESSIONAL ENGINEER.
 - THE FOLLOWING REPORTS HAVE BEEN SUBMITTED IN ASSOCIATION WITH THE PRELIMINARY PLAN OR FINAL PLAT FOR THIS SUBDIVISION AND ARE ON FILE AT THE COUNTY DEVELOPMENT SERVICES DEPARTMENT: DRAINAGE REPORT; WATER RESOURCES REPORT; WASTEWATER DISPOSAL REPORT; GEOLOGY AND SOILS REPORT; FIRE PROTECTION REPORT; WILDFIRE HAZARD REPORT; NATURAL FEATURES REPORT AND NOXIOUS WEED MANAGEMENT PLAN.
 - ALL PROPERTY OWNERS ARE RESPONSIBLE FOR MAINTAINING PROPER STORM WATER DRAINAGE IN AND THROUGH THEIR PROPERTY. PUBLIC DRAINAGE EASEMENTS AS SPECIFICALLY NOTED ON THE PLAT SHALL BE MAINTAINED BY THE INDIVIDUAL LOT OWNERS UNLESS OTHERWISE INDICATED. HOMEBUILDERS ARE RESPONSIBLE TO ENSURE PROPER DRAINAGE AROUND STRUCTURES, INCLUDING ELEVATIONS OF FOUNDATIONS AND WINDOW WELLS IN RELATION TO SIDE LOT DRAINAGE EASEMENTS AND SWALES. HOMEOWNERS SHALL NOT CHANGE THE GRADE OF THE LOT OR DRAINAGE SWALES WITHIN SAID EASEMENTS, AS CONSTRUCTED BY THE BUILDER, IN A MANNER THAT WOULD CAUSE ADVERSE DRAINAGE IMPACTS TO PROPERTIES. STRUCTURES, FENCES, MATERIALS OR LANDSCAPING THAT COULD IMPEDE THE FLOW OR RUNOFF SHALL NOT BE PLACED IN DRAINAGE EASEMENTS.
 - MAILBOXES SHALL BE INSTALLED IN ACCORDANCE WITH ALL EL PASO COUNTY AND UNITED STATES POSTAL SERVICE REGULATIONS.
 - THIS PROPERTY IS SUBJECT TO THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR WOODMOOR FILING NO. 1, BY BEING A REPLAT THEREOF AS RECORDED IN BOOK 2421 AT PAGE 215 OF THE EL PASO COUNTY RECORDS.
 - THE DEVELOPER SHALL COMPLY WITH FEDERAL AND STATE LAWS, REGULATIONS, ORDINANCES, REVIEW AND PERMIT REQUIREMENTS, AND OTHER AGENCY REQUIREMENTS, IF ANY, OF APPLICABLE AGENCIES INCLUDING, BUT NOT LIMITED TO, THE COLORADO DEPARTMENT OF WILDLIFE, COLORADO DEPARTMENT OF TRANSPORTATION, U.S. ARMY CORP. OF ENGINEERS, THE U.S. FISH AND WILDLIFE SERVICE REGARDING THE ENDANGERED SPECIES ACT.
 - THE ADDRESSES EXHIBITED ON THIS PLAT ARE FOR INFORMATIONAL PURPOSES ONLY. THEY ARE NOT THE LEGAL DESCRIPTION AND ARE SUBJECT TO CHANGE.
 - INDIVIDUAL LOT PURCHASERS ARE RESPONSIBLE FOR CONSTRUCTING DRIVEWAYS, INCLUDING NECESSARY DRAINAGE CULVERTS PER LAND DEVELOPMENT CODE SECTION 6.3.3.C.2 AND 6.3.3.C.3. DUE TO THEIR LENGTH OR GRADE, SOME OF THE DRIVEWAYS WILL NEED TO BE SPECIFICALLY APPROVED BY THE FIRE DISTRICT AND ECM ADMINISTRATOR. NO DRIVEWAY SHALL BE ESTABLISHED UNLESS AN ACCESS PERMIT HAS BEEN GRANTED BY EL PASO COUNTY.
 - THE SUBDIVIDER AGREES ON BEHALF OF HIMSELF AND ANY DEVELOPER OR BUILDER SUCCESSORS AND ASSIGNEES THAT THE SUBDIVIDER AND/OR SAID SUCCESSORS AND ASSIGNEES SHALL BE REQUIRED TO PAY TRAFFIC IMPACT FEES IN ACCORDANCE WITH THE EL PASO COUNTY ROAD IMPACT FEE PROGRAM RESOLUTION (RESOLUTION 19-471) OR ANY AMENDMENTS THERETO, AT OR PRIOR TO THE TIME OF BUILDING PERMIT SUBMITTALS. THE FEE OBLIGATION, IF NOT PAID AT FINAL PLAT RECORDING, SHALL BE DOCUMENTED ON ALL SALES DOCUMENTS AND ON PLAT NOTES TO ENSURE THAT A TITLE SEARCH WOULD FIND THE FEE OBLIGATION BEFORE THE SALE OF THE PROPERTY.
 - THIS PROPERTY IS LOCATED WITHIN AND SERVICED BY THE MOUNTAIN VIEW ELECTRIC ASSOCIATION SERVICE DISTRICT, THE TRI-LAKES MONUMENT FIRE PROTECTION DISTRICT, LEWIS PLAMER SCHOOL DISTRICT NO. 38, THE BLACK HILLS ENERGY CORPORATION SERVICE DISTRICT AND WOODMOOR WATER AND SANITATION.
 - DRAINAGE EASEMENTS: NO PERMANENT DWELLING UNIT, TEMPORARY OR PERMANENT STRUCTURES, INCLUDING SHEDS AND OUT BUILDING, WATER WELL OR WASTEWATER TREATMENT SYSTEM MAY BE CONSTRUCTED IN THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. DRAINAGE CULVERTS AND FENCES THAT DO NOT BLOCK OR IMPEDE STORM WATER RUNOFF ARE ALLOWED IN AND ACROSS DRAINAGE EASEMENTS.
 - A "GEOLOGIC HAZARD EVALUATION AND SOILS AND FOUNDATION INVESTIGATION PROPOSED WESTVIEW AT WOODMOOR FILING NO. 1A, EL PASO COUNTY, COLORADO", CTL THOMPSON INC., PROJECT NO. CS19579-120, DATED SEPTEMBER 20, 2022 IS HELD UNDER THE WESTVIEW AT WOODMOOR FILING NO. 1A AT THE EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT. GEOLOGIC HAZARDS THAT WOULD PRECLUDE THE PROPOSED DEVELOPMENT WERE NOT FOUND TO BE PRESENT AT THIS SITE. GEOLOGIC CONSTRAINTS ARE POTENTIALLY PRESENT, AND INCLUDE: SPORADIC LENSES OF EXPANSIVE CLAYSTONE BEDROCK AND POTENTIAL FOR EXPANSIVE/SETTLEMENT PRONE SOILS. THESE GEOLOGIC AND ENGINEERING CONDITIONS ARE RELATIVELY COMMON TO THE AREA AND CAN BE SATISFACTORILY MITIGATED THROUGH PROPER ENGINEERING, DESIGN, AND CONSTRUCTION PRACTICES.
 - THIS PROPERTY IS LOCATED WITHIN ZONE X "AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN" AS DETERMINED BY THE FLOOD INSURANCE RATE MAP NUMBER 08041C0276G, EFFECTIVE DATE DECEMBER 7, 2018.
 - FIRE PROTECTION REPORT RECOMMENDATIONS, AS A CONDITION OF APPROVAL OF THIS PLAT BY THE BOARD OF COUNTY COMMISSIONERS, NO CONVEYANCE, SALE OR TRANSFER OF TITLE OF LOTS 1-4 IDENTIFIED HEREON, SHALL BE MADE, NOR ANY BUILDING PERMIT OR CERTIFICATE OF OCCUPANCY BE ISSUED BY EL PASO COUNTY, UNTIL SUCH TIMES AS THE FOLLOWING HAS BEEN ACCOMPLISHED BY THE PROPERTY OWNER. A LETTER OF COMPLIANCE HAS BEEN RECEIVED FROM THE COLORADO STATE FOREST SERVICE, FIRE DEPARTMENT, FIRE MARSHALL, OR OTHER QUALIFIED PROFESSIONAL STATING PRACTICES DESIGNATED TO REDUCE WILDFIRE HAZARDS HAS BEEN COMPLETED IN ACCORDANCE WITH THE WILDLAND FIRE AND HAZARD MITIGATION PLAN. SUCH WORK MAY INCLUDE, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING: *FOREST WIDE THINNINGS, *FUELBREAK THINNINGS, *PRUNINGS, *DEBRIS DISPOSAL.

EASEMENTS:
UNLESS SHOWN GREATER IN WIDTH, SIDE AND REAR LOT LINES ARE HEREBY PLATTED WITH A FIVE (5) FOOT EASEMENT FOR DRAINAGE AND PUBLIC UTILITIES ONLY; FRONT LOT LINES ARE HEREBY PLATTED WITH A TEN (10) FEET EASEMENT FOR DRAINAGE AND PUBLIC UTILITIES ONLY; THE SOLE RESPONSIBILITY FOR MAINTENANCE OF THE EASEMENT AREAS IS VESTED WITH THE PROPERTY OWNERS.

BE IT KNOWN BY THESE PRESENTS:
THAT MURPHY'S CUSTOM HOMES, INC., TIM MURPHY, PRESIDENT IS THE OWNER OF THE FOLLOWING DESCRIBED TRACT OF LAND, TO WIT:
LOT 1, WESTVIEW AT WOODMOOR, EL PASO COUNTY, COLORADO AS SHOWN ON THE SUBDIVISION PLAT THEREOF RECORDED UNDER RECEPTION NO. 210713052 OF THE EL PASO COUNTY RECORDS.
CONTAINING 3.81 ACRES, MORE OR LESS

OWNERS CERTIFICATE
THE UNDERSIGNED, BEING ALL THE OWNERS, MORTGAGEES, BENEFICIARIES OF DEEDS OF TRUST AND HOLDERS OF OTHER INTERESTS IN THE LAND DESCRIBED HEREIN, HAVE LAID OUT, SUBDIVIDED AND PLATTED SAID LANDS INTO LOTS AND EASEMENTS AS SHOWN HEREON UNDER THE NAME AND SUBDIVISION OF WESTVIEW AT WOODMOOR FILING NO. 1A. ALL PUBLIC IMPROVEMENTS REQUIRED BY THIS LAND USE ACTION ARE HEREBY DEDICATED TO PUBLIC USE AND SAID OWNER DOES HEREBY COVENANT AND AGREE THAT THESE PUBLIC IMPROVEMENTS WILL BE CONSTRUCTED TO EL PASO COUNTY STANDARDS AND THAT PROPER DRAINAGE AND EROSION CONTROL FOR THE SAME WILL BE PROVIDED AT SAID OWNER'S EXPENSE, ALL TO THE SATISFACTION OF THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO. UPON ACCEPTANCE BY RESOLUTION, ALL PUBLIC IMPROVEMENTS SO DEDICATED WILL BECOME MATTERS OF MAINTENANCE BY EL PASO COUNTY, COLORADO. THE UTILITY EASEMENTS SHOWN HEREON ARE HEREBY DEDICATED FOR PUBLIC UTILITIES, COMMUNICATION SYSTEMS AND OTHER PURPOSES AS SHOWN HEREON. THE ENTITIES RESPONSIBLE FOR PROVIDING THE SERVICES FOR WHICH THE EASEMENTS ARE ESTABLISHED ARE HEREBY GRANTED THE PERPETUAL RIGHT OF INGRESS AND EGRESS FROM AND TO ADJACENT PROPERTIES FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF UTILITY LINES AND RELATED FACILITIES.

IN WITNESS WHEREOF:
THE AFOREMENTIONED MURPHY'S CUSTOM HOMES, INC HAS EXECUTED THIS INSTRUMENT THIS _____ DAY OF _____, 2023.

MURPHY'S CUSTOM HOMES, INC.
TIM MURPHY, PRESIDENT

NOTARIAL:
STATE OF COLORADO) SS
COUNTY OF EL PASO)
THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 2023 BY TIM MURPHY, PRESIDENT MURPHY'S CUSTOM HOMES, INC.
MY COMMISSION EXPIRES: _____
NOTARY PUBLIC

BOARD OF COUNTY COMMISSIONERS APPROVAL:
THIS PLAT FOR WESTVIEW AT WOODMOOR FILING NO. 1A WAS APPROVED FOR FILING BY THE EL PASO COUNTY, COLORADO BOARD OF COUNTY COMMISSIONERS ON THIS ____ DAY OF _____, 2023, SUBJECT TO ANY NOTES SPECIFIED HEREON AND ANY CONDITIONS INCLUDED IN THE RESOLUTION OF APPROVAL. THE DEDICATIONS OF LAND TO THE PUBLIC AND EASEMENTS ARE ACCEPTED, BUT PUBLIC IMPROVEMENTS THEREON WILL NOT BECOME THE MAINTENANCE RESPONSIBILITY OF EL PASO COUNTY UNTIL PRELIMINARY ACCEPTANCE OF THE PUBLIC IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE AND ENGINEERING CRITERIA MANUAL.

CHAIR, BOARD OF COUNTY COMMISSIONERS _____ DATE _____
DIRECTOR PLANNING AND COMMUNITY DEVELOPMENT _____ DATE _____

SURVEYOR'S CERTIFICATION:
I, KEVIN M. O'LEARY, A DULY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE OF THE SURVEY, BY ME OR UNDER MY DIRECT SUPERVISION AND THAT ALL MONUMENTS EXIST AS SHOWN HEREON; THAT MATHEMATICAL CLOSURE ERRORS ARE LESS THAN 1:10,000; AND THAT SAID PLAT HAS BEEN PREPARED IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS OF THE STATE OF COLORADO DEALING WITH MONUMENTS, SUBDIVISION, OR SURVEYING OF LAND AND ALL APPLICABLE PROVISIONS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE.

I ATTEST THE ABOVE ON THIS ____ DAY OF _____, 2023.

KEVIN M. O'LEARY
COLORADO REGISTERED PLS #28658
FOR AND ON BEHALF OF
LWA LAND SURVEYING, INC.

LOT SUMMARY TABLE:

TOTAL GROSS ACREAGE	3.81 ACRES	100%
4 RESIDENTIAL LOTS	3.81 ACRES	100%
GROSS DENSITY	1.05 DU/AC	
NET DENSITY	1.05 DU/AC	
TOTAL NET ACREAGE:	3.81 ACRES	100%

RECORDING:
STATE OF COLORADO) SS
COUNTY OF EL PASO)
I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD AT MY OFFICE AT ____ O'CLOCK ____ M., THIS ____ DAY OF _____, 2023, AND IS DULY RECORDED AT RECEPTION NO. _____ OF THE RECORDS OF EL PASO COUNTY, COLORADO.
CHUCK BROERMAN
BY: _____
COUNTY CLERK AND RECORDER
FEE: _____
SURCHARGE: _____
FEES:
DRAINAGE FEES: _____
BRIDGE FEES: _____
SCHOOL FEES: _____
PARK FEES: _____

PREPARED BY
LWA LAND SURVEYING, INC.
953 E. FILLMORE STREET
COLORADO SPRINGS, COLORADO 80907
Phone (719) 636-5179
FILE NO. VR-22-13
REVISED 1/20/23
JUNE 30, 2022
PROJECT 2201B
BUCKWOOD.DWG SHEET 1 OF 1

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

WWSD MAP BOOK



THIS MAP IS ONLY A ROUGH DEPICTION OF THE ESTIMATED LOCATION OF WATER AND WASTEWATER INFRASTRUCTURE. ANYONE VIEWING THIS MAP IS HEREBY WARNED THAT THE DISTRICT DOES NOT WARRANT THE ACCURACY OF THIS MAP OR THE LOCATION OF WATER AND SEWER INFRASTRUCTURE.
© WOODMOOR WATER & SANITATION DISTRICT

WWSD MAP BOOK
LEGEND, CONTACTS, AND IMPORTANT INFORMATION



0 50 100
SCALE: 1" = 200'

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PANEL NO.
i

MAP LEGEND

WOODMOOR WOODMOOR DRIVE 321 TRACT "A"	SUBDIVISION NAME STREET NAME LOT INFORMATION DISTRICT BOUNDARY SECTION LINE SUBDIVISION BOUNDARY LOT LINE SURFACE WATER DETAIL BOUNDARY SEWER R&R BOUNDARY SEWER BASIN BOUNDARY SEWER LINE (PVC) SEWER LINE (STL) SEWER LINE (VCP) SEWER LINED W/ FOLD'N'FORM SEWER LINED W/ INSITUFORM SEWER LINED W/ HDPE SEWER FORCE MAIN (PVC) WATER PRESSURE ZONE BNDY. POTABLE WATER PIPE (PVC) POTABLE WATER PIPE (CIP) POTABLE WATER PIPE (HDPE) NON-POTABLE WATER PIPE (PVC) TRANSMISSION LINE (PVC) TRANSMISSION LINE (DIP) PRIVATE SYSTEM NOT FINAL ACCEPTED SYSTEM	1 SECTION NUMBER 2 SEWER RENEWAL & REPLACEMENT ZONE NUMBER 3 MAP PANEL NUMBER 4 WATER PRESSURE ZONE NUMBER 5 SEWER BASIN NUMBER
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● 5592	SANITARY SEWER MANHOLE	🔦 3K000	FIRE HYDRANT
○	SANITARY SEWER CLEAN-OUT	⬡	AIR/VAC RELEASE VAULT
○	SANITARY SEWER LIFT STATION	⊗	GATE VALVE LEFT HAND
●	WELL HEAD	⊗	GATE VALVE RIGHT HAND
△ 15	WELL TAG AND NUMBER	⚙️	PRESSURE SUSTAINING VALVE
⊙	BOOSTER STATION	⚙️	PRESSURE RELIEF VALVE
□	FACILITY / STRUCTURE	⌵	CHECK VALVE
②	BLOCK NUMBER	⬇️	BLOW OFF
		■	ACCOUNT TAP

NOTES:
-SOME OBJECTS IN THIS LEGEND MAY NOT BE USED ON THIS PLAN.
-ALL WATER MAINS ARE 6" Ø UNLESS NOTED OTHERWISE.
-ALL SEWER MAINS ARE 8" Ø UNLESS NOTED OTHERWISE.

IMPORTANT INFORMATION

Specific Operating Procedure for Sanitary Sewer Spill

Report all sewage release and incidents to the Denver On-Call Center within 24 hours of the incident.

1-877-518-5608

Leave a message to satisfy the reporting requirements unless an active release is entering a waterway and/or assistance is needed, then contact the

Off Duty Pager 1-866-536-4927

Within 5 days of reporting the incident, a written report must be sent to the Colorado Department of Public Health & Environment.

Specific Operating Procedure for Gas Main Break

Turn off all equipment and eliminate any sources of an ignition spark. Evacuate the location of the rupture to a distance of at least 250 foot radius. Do not operate any gas valves or attempt to repair the rupture. Block or stop traffic, pedestrians, etc. from entering the area of the rupture.

Dial 911 Immediately After Evacuating Area

The Emergency Dispatch will Contact the Woodmoor Fire Department.

Then Contact Black Hills Energy (Gas Emergency): 800-694-8989

Specific Operating Procedure for Damaged Electric Line

Turn off all equipment and evacuate excavation work area. Do not attempt repairs or enter excavation area until electric company has deemed it safe for entry.

Call in Damage Report to UNCC: 811

Contact Mountain View Electric: 719-495-2283

CONTACT INFORMATION

WOODMOOR WATER & SANITATION
1845 WOODMOOR DRIVE
P.O. BOX 1407
MONUMENT, CO 80132
OFFICE HOURS: M-TH, 7 AM-5:30 PM

AFTER HOURS EMERGENCY 719-488-2525 X3
ON CALL PHONE 719-331-1761
OFFICE MAIN 719-488-2525
OFFICE FAX 719-488-2530

EMERGENCY
EMERGENCY 911
EL PASO COUNTY SHERIFF 719-390-5555
EMERGENCY LOCATES (U.N.C.C.) 811
MONUMENT POLICE DEPARTMENT 719-481-3253
WOODMOOR FIRE DEPARTMENT 719-488-3303
WOODMOOR PUBLIC SAFETY 719-488-3600

GOVERNMENT AGENCIES
EL PASO COUNTY (ROAD CUT PERMIT) 719-520-6460
SCHOOL DISTRICT 38 MAINTENANCE 719-488-4710
TOWN OF MONUMENT 719-481-2954
WOODMOOR IMPROVEMENT ASSOCIATION 719-488-2693

UTILITIES COMPANIES
BLACK HILLS ENERGY (OFFICE) 888-890-5554
BLACK HILLS ENERGY (GAS EMERGENCY) 800-694-8989
XFINITY 800-934-6489
DONALA WATER & SANITATION DISTRICT 719-488-3603
MONUMENT WATER 719-487-9291
MONUMENT SANITATION DISTRICT 719-481-4886
MOUNTAIN VIEW ELECTRIC 719-495-2283
PALMER LAKE SANITATION DISTRICT (PAGER) 719-481-2732
719-443-0500
TRI-LAKES WASTE TREATMENT PLANT 719-481-4053
TRIVIEW METROPOLITAN DISTRICT 719-488-6868
CENTURY LINK 800-777-9594

WASTE MANAGEMENT COMPANIES
TRI-LAKES DISPOSAL 719-495-8652
WASTE MANAGEMENT 719-632-8877

CONTRACTORS
A&E CONSTRUCTION 719-210-8488
ANYTIME SEWER & DRAIN 719-491-3190
BROOKS PLUMBING & HEATING 719-488-3101
CLEAR WATER CLEANING 719-271-7638
J&K EXCAVATING 719-481-2417
JOHN WESTFALL 719-331-4321
NORDIC EXCAVATING 719-347-2701
BILL 719-243-0446
JUSTIN 719-491-0284
PATRIOT DRAINS 877-814-1297
I & C DESIGN JOE 303-999-7717

DISCLAIMER

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© WOODMOOR WATER & SANITATION DISTRICT

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v	OVERVIEW MAP (SOUTH)
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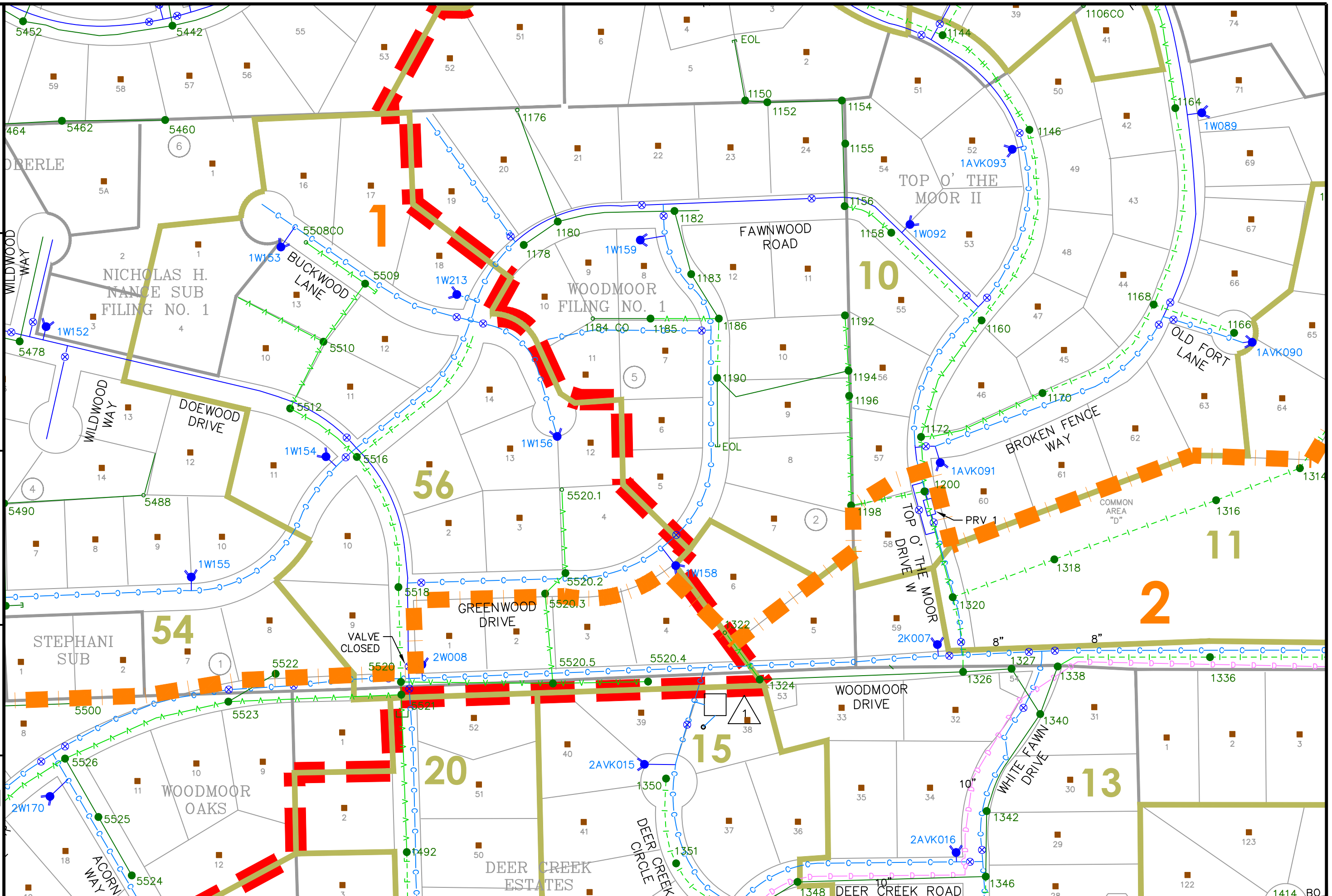
WWSD MAP BOOK
WATER & SEWER INFRASTRUCTURE



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40	41	42
43	44	45

PANEL NO.
13





P. O. Box 1407 • Monument, Colorado 80132
Phone (719) 488-2525 • Fax (719) 488-2530

September 26, 2022

To: Murphy's Custom Homes
Attn: Sarah Martin
13710 Struthers Rd
Ste 105B
Colorado Springs CO 80921

RE: Water & Wastewater Service Commitment – 1384 Buckwood Lane Re-Plat
El Paso County Parcel Number: 7111101042

Dear Ms. Martin:

The above referenced development, as depicted in the attached sketch, is located within the service boundaries of Woodmoor Water and Sanitation District No. 1 (the District).

It is the District's understanding that Murphy's Custom Homes intends to construct four (4) additional single family homes on the 3.81 acres of land within what is currently Lot 1 of the Westview at Woodmoor subdivision, with a projected total water demand of approximately 1.434 Acre-Feet per year.

The District is committed to providing water and sewer services to the development once the following terms and conditions are met:

1. The Developer must apply for, be subsequently allocated, and enter into an agreement with the District for Supplemental Water Service. Supplemental Water Service is allocated by the District's Board (in its sole and absolute discretion) and therefore is not guaranteed. The District makes no representation herein (expressed or implied) as to whether Developer will or won't be successful in obtaining Supplemental Water Service for the Development.
2. The Development must comply with all District rules, regulations, specifications, and policies regarding water and wastewater service, including the District's System Specifications regarding installation of Water and Sewer utilities, granting of water and sewer utility easements, and construction of offsite improvements if required.

If you should have any questions or need further assistance, please contact me.

Sincerely,

Jessie J. Shaffer
District Manager

Cc: Ariel Hacker – District Engineer
Dan LaFontaine – Operations Superintendent

EXECUTIVE SUMMARY

A summary of the recommendations in the Long Range Plan (LRP) Update for 2017 are presented in this section. The LRP Update evaluates water supply, operations, treatment, water distribution, and wastewater collection. Growth projections used throughout the LRP Update were determined with input from District and Bishop Brogden and Associates (BBA) staff. The LRP update confirms and updates use-rate values for water demand and wastewater production throughout the District. Based on the growth projections and use-rate data, future water demands were determined and water supply alternatives were evaluated to determine what supplies will be used to meet future water demands. Based on the recommended water supply alternative, a Capital Improvements Plan (CIP) was developed that outlines the projects required to meet the District's future water demands. For the District to determine the costs associated with the CIP and continuing maintenance for the District, a cash flow model was developed for use in the District's rate model.

In the LRP Update, growth projections for the District were determined with input from the District staff to project future growth and to determine when the District will meet build-out of its existing boundary. The District currently has 4,192 SFEs and an average annual water demand of 1,376 af/yr. Between 2012 and 2017, the District has experienced an average growth rate of approximately 3.5 percent per year for the short term. Assuming the 3% long-term growth rate for the current and ultimate build-out scenario, the current buildout will occur in 2030 with 6337 SFEs and 2,080 af/yr, and the ultimate buildout will occur in 2038 with 7,801 SFEs and 2,560 af/yr. It is possible the District may expand its boundaries to serve surrounding developments that may petition for inclusion within the District and lead to an ultimate build out of the District. For planning purposes, the Wissler Trust and Home Place Ranch will be included into the District.

Water Projects

Average annual water demand and maximum monthly water demands were evaluated for the District. The average annual water demand decreased from the 2012 LRP Update from 305 gpd/SFE to 293 gpd/SFE likely due to water conservation. Since the last LRP Update, all SCADA systems have been updated to enable the District to monitor water demand on a daily basis. Based on the daily demands, the peak day to average annual peaking factor was updated from 2.2 to 2.1.

This LRP has two areas of focus for the water system which are the short term and long term water supply plan. Since the last LRP Update, a decree was entered in Case No. 12CW01 (Division 2) that changed the use of the Ranch water rights from irrigation to municipal and other uses included in the decree. The change of use will allow the Ranch water rights to be diverted from Fountain Creek at their current point of diversion, stored in a reservoir and ultimately delivered to the District via pipeline to meet municipal demands. A series of infrastructure improvements are needed to treat and convey the water from the Ranch to the District. Before the Ranch water is available as a long-term water supply, the existing groundwater supply must be maintained. The main goal of the short-term water supply projects is to maintain construction of new groundwater wells while implementing IPR at the District to sustain water supply. In the future, other long-term water supply projects will need to be considered, as well as resumed drilling of wells to maintain supply through buildout as well yield decreases. In order to supplement demand, Tetra Tech recommends the district begin construction of Indirect Potable reuse in the District starting in 2019 with a pilot project.

The long-term water supply plan is to construct storage and treatment facilities at the Ranch. The existing Callahan Reservoir at the Ranch should be expanded to 2,200 acre-ft to have enough operational capacity to store and deliver water to the District from the Ranch. The water from the reservoir will be treated at the new Water Treatment Plant before being pumped approximately 44 miles to the District. It is estimated that the earliest that the Ranch water supply can be delivered to the District is 2033 due to obtaining financing and constructing facilities.

The water level in the Denver Basin aquifers is declining which results in decreased production rates. To make up for the declining water supply without drilling additional wells, the Tri-Lakes Water Reclamation Plant will be constructed to enhance the supply in Monument Creek. The supply will be enhanced by providing advanced treatment of the effluent from the Tri-Lake Wastewater Plant so that the treated water can be discharged above the Monument Creek Exchange Pump Station. The exchanged and reclaimed water will be pumped to Lake Woodmoor which will provide natural attenuation before the water will be treated at the South Water Treatment Plant before being sent to the distribution system.

The capital improvements for the TL-WWTF were arranged in phases based on the Nutrient Engineering Report provided by Tetra Tech. Phase 1 focused on constructing processes that met Regulation 85 limits and was completed in 2017. Phase 2 and 3 are future phases that will meet upcoming regulations. Phase 2 primarily targets towards improving solids handling at the TL-WWTF. Phase 3 will address capital improvements required for Regulation 31 compliance. Miscellaneous projects are included to upgrade existing equipment and provide emergency power. Below is a summary description of the work for each phase.

TL-WWTF Phase 2 Improvements

- Decommission of the existing headworks and solids lagoon
- Construction of a new solids handling system including: gravity thickener, aerobic digester, dewatering equipment, solids handling building, solids loading station, and other ancillary equipment
- Construction of a new odor control system
- Construction of a new headworks facility including: fine mechanical bar screen, screenings handle equipment, and a vortex grit removal system in a new building

TL-WWTF Phase 3 Improvements

- Construction of a mixed liquor pump station
- Construction of new post-anoxic denitrification and reaeration basins
- Construction of chemical storage and feed pumps
- Construction of a tertiary filters

Miscellaneous Projects

- Upgrade blower system from multi-stage blowers to more efficient high speed turbo blowers
- Install an emergency generator for the activated sludge system

Based on the future well production projections and the exchange system yield, capital improvement projects are recommended in order to continue to meet the diminishing capacity and growing water demand. A list of the projects is presented in the table below.

Classification		Project Description	Opinion of Probable Cost in 2017 Dollars	Year of Start	Year of Completion
Water CIP	Water Treatment	South Filter Plant	\$791,820	2018	2020
Water CIP	Groundwater Supply	Well AR-21	\$2,700,000	2018	2019
Water CIP	Water Treatment	Pilot WTP for TL WTP and JV WTP	\$191,232	2019	2020
Wastewater CIP	Wastewater Treatment	Tri-Lakes Wastewater Treatment Misc. Projects	\$538,796	2020	2021
Water CIP	Surface Water Supply	Lake Woodmoor Pump Station Improvements	\$532,000	2020	2021

Classification		Project Description	Opinion of Probable Cost in 2017 Dollars	Year of Start	Year of Completion
Water CIP	Groundwater Supply	Well AR-22	\$2,700,000	2020	2020
Water CIP	Water Treatment	IPR at Tri-Lakes	\$28,496,058	2020	2024
Water CIP	Water Treatment	CWTP Improvements and Surface Water Pipeline	\$862,300	2021	2023
Water CIP	Groundwater Supply	Well DA-21	\$450,000	2021	2021
Water CIP	Groundwater Supply	Well DE21	\$1,100,000	2021	2021
Water CIP	Groundwater Supply	Well DA-22	\$450,000	2021	2021
Water CIP	Groundwater Supply	Well DE-22	\$1,100,000	2021	2021
Wastewater CIP	Wastewater Treatment	Tri-Lakes Wastewater Treatment Plant Phase 2 Improvement	\$14,323,801	2022	2025
Water CIP	Groundwater Supply	Well AR-8R	\$1,260,000	2022	2022
Wastewater CIP	Wastewater Treatment	Tri-Lakes Wastewater Treatment Phase 3	\$7,503,637	2027	2032
Water CIP	Storage and Distribution	Ranch Transmission & Conveyance	\$65,827,804	2027	2033
Water CIP	Water Treatment	Ranch WTP Design and Construction FAT Option	\$45,000,000	2030	2033
Water CIP	Storage and Distribution	Calahan Reservoir Expansion	\$20,286,000	2032	2035
Water CIP	Water Treatment	One MG Finished Water Storage Tank	\$1,825,740	2033	2033
Water CIP	Groundwater Supply	Well DA-16	\$450,000	2035	2035
Water CIP	Groundwater Supply	Well DE-16	\$1,100,000	2035	2035
Water CIP	Groundwater Supply	Well DA-18	\$450,000	2035	2035
Water CIP	Groundwater Supply	Well DE-18	\$1,100,000	2035	2035
Water CIP	Groundwater Supply	Well DA-20	\$450,000	2035	2035
Water CIP	Groundwater Supply	Well DE-20	\$1,100,000	2035	2035
Water CIP	Groundwater Supply	Well DA-11	\$450,000	2036	2036
Water CIP	Groundwater Supply	Well DA-1R	\$450,000	2036	2036
Water CIP	Groundwater Supply	Well AR-23	\$2,700,000	2036	2036

Wastewater Collection System

The WWSD sanitary sewer collection system was modeled under existing and future build out conditions to evaluate capacity of the gravity sewers, lift stations and force mains. The modeling was performed using a model maintained by the District with flows assumed to be applied in each scenario in a manner representative of existing and build-out planning. The modeling indicated that the system is able to accommodate the existing and planned taps at build out. Some gravity mains in the system approached design capacity at build out and bear further analysis as the system matures.

No capital improvements are recommended other than to continue the District's current annual manhole rehabilitation projects to further mitigate inflow and infiltration (I&I).

The following collection system studies are recommended as interim projects and/or as part of future LRP updates:

- Flow monitoring study targeting Inflow and Infiltration
- Sewer model calibration based upon periodic flow monitoring
- Lift station capacity analysis

Table 2-16 – Summary of 2017-2020 Average Monthly Exchange Yield

Year	Golf Course, High School, and HOA Use (af)	Total Water Exchanged (af)
Jan	0.2	37.0
Feb	0.0	31.6
Mar	0.3	47.0
Apr	2.3	59.5
May	14.2	53.9
Jun	27.6	34.8
Jul	26.8	11.0
Aug	21.9	7.0
Sep	23.1	3.4
Oct	8.5	7.7
Nov	1.8	23.1
Dec	0.5	30.6
Total	127.1	346.7

- 2021 data excluded from averages due to operational constraints preventing the District from maximizing exchange yield.
- Golf course, high school irrigation, and Village Center Metro District non-potable water uses are a subset of the monthly average exchange.

2.2.3. SUPPLEMENTAL WATER SERVICE

Supplemental water service is additional commitment above the District’s 0.5 af/ac/yr allocation policy. The total theoretical quantity of supplemental water available is derived from the difference in the District’s decreed water rights and its base water service commitments while maintaining compliance with both State of Colorado’s 100-year rule and El Paso County’s 300-year rule.

The quantity of supplemental water projected for undeveloped land is less than the underlying Denver Basin water rights entitlements due to practical development densities and economic considerations in the development and delivery of supplemental water service as well as Board policy regarding the sale and pricing structure of supplemental water.

2.3. WATER RIGHTS

The District owns groundwater rights, exchange water rights, storage rights, a plan for augmentation, and senior surface water rights.

The District’s ground water rights include tributary, nontributary, and not-nontributary Denver Basin water rights. The District’s exchange rights allow diversion by exchange of reusable wastewater effluent and LIRFs on Monument Creek and DWC. A plan for augmentation is decreed to replace evaporation from ponds within the District.

The District owns senior direct diversion and storage surface water rights on Fountain Creek that were changed for storage and municipal use in Case No. 12CW01 (Division 2) known as the “Ranch Water Rights”. These senior Fountain Creek surface water rights include 58.0 shares (55

percent) of the Chilcote Ditch, 75 percent of the Liston and Love Ditch, 75 percent of the Lock Ditch, 75 percent of the Lock Ditch No. 2, and the Callahan Reservoir storage right. The Fountain Creek water rights are not yet used at the District northern El Paso County service area.

2.3.1. DENVER BASIN WATER RIGHTS

The District owns all of the Denver Basin water rights beneath the District's boundaries, except for limited reservations that account for historical wells owned by others. All of the District's Denver Basin water rights have been quantified by Water Court decree except for the water beneath the 11-acre Mills Timber inclusion.

The District's Denver Basin water rights include three statutory classifications of ground water: tributary, nontributary, and not-nontributary. The District's tributary ground water is from the Dawson aquifer and is replaced at 25 percent of pumping pursuant to a historical water rights decree. Nontributary groundwater is presently defined as groundwater that when withdrawn will not deplete the flow of a natural stream within one hundred years of continuous withdrawal "at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal." The District's nontributary ground water is from the Denver, Arapahoe, and Laramie-Fox Hills aquifers. Not-nontributary groundwater is groundwater located within the Denver Basin that does not meet the statutory definition of nontributary ground water. Decreed augmentation plans are required prior to pumping not-nontributary water in order to replace depletions both during pumping and after pumping has ceased. The District has not-nontributary ground water in the Dawson, Denver, and Arapahoe aquifers. Prior to the statutory creation of not-nontributary water, some of the District's Denver Basin water rights were decreed as tributary.

Summarized in Table 2-17 below, the District's Denver Basin water rights total approximately 7,390.5 acre-feet per year. Some of the District's decreed Denver Basin water rights are not available for use, including: item [5] not-nontributary water rights not yet included in a decreed augmentation plan and item [6] nontributary water rights reserved for not-nontributary water rights post-pumping augmentation (POPA). The POPA reserve is set aside for the District's future augmentation obligation as a result of current not-nontributary ground water pumping pursuant to Augmentation Plan II decreed in Consolidated Case Nos. 87CW067 (Division 2), 88CW100 (Division 2), and 88CW218 (Division 1) and is owed to Monument Creek and West Cherry Creek for a period of 200 years after pumping has ceased. A granular summary of the District's Denver Basin water rights is included in Appendix B.

Approximately 6,322.4 acre-feet per year of Denver Basin water is available to the District for use, shown in item [7]. However, not all this water can be consumed. Pursuant to the District's existing decrees, a percentage of pumped Denver Basin groundwater must be relinquished to the stream system, including 25 percent of pumped tributary water, 4 percent of pumped not-nontributary water, and 2 percent of certain pumped nontributary water, depending on the various water rights decrees. These relinquishments are typically achieved through assignment of TLWWTF return flows.

Table 2-17 – The District's Decreed Denver Basin Water Rights

Item	Description	Annual Entitlement (af/yr)
[1]	Tributary Water Rights	730.0
[2]	Not-Nontributary Water Rights	3,475.1
[3]	Nontributary Water Rights	3,185.4
[4]	Total Denver Basin Water Rights	7,390.5
[5]	Not-Nontributary Water Rights w/o Decreed Augmentation Plan	(625.1)
[6]	Nontributary Water Reserved for Post-Pumping Augmentation (POPA)	(443.0)
[7]	Total Denver Basin Water Rights Available for Use	6,322.4

- Excludes undecreed Mills Timber water, which is estimated to overly 18.1 af/yr of not-nontributary water and 3.2 af/yr of nontributary water.

[1] Total tributary water rights decreed in Case No. W-2647 (Division 2). The tributary water rights operate under an augmentation plan decreed in Case No. 80CW170 (Division 2).

[2] Total not-nontributary water rights decreed in Case No. 81CW230 (Division 2), Case No. 81CW231 (Division 2), Case No. 02CW025 (Division 2), and Consolidated Case Nos. 07CW104 (Division 2) and 08CW263 (Division 1). The not-nontributary water rights decreed in Case No. 81CW230 (Division 2) and Case No. 81CW231 (Division 2) total 2,850.0 af/yr (based upon a 100-year statutory aquifer life) and operate under an augmentation plan decreed in Consolidated Case Nos. 87CW067 (Division 2), 88CW100 (Division 2), and 88CW218 (Division 1). The District's other not-nontributary water rights are not included in a decreed augmentation plan and are not available for use.

[3] Total nontributary water rights are decreed in Case No. W-2647 (Division 2), Case No. W-4544 (Division 2), Case No. 80CW169 (Division 2), Case No. 81CW231 (Division 2), Case No. 02CW025 (Division 2), and Consolidated Case Nos. 07CW104 (Division 2) and 08CW263 (Division 1).

[4] Total Denver Basin water rights equals [1] + [2] + [3].

[5] Not-nontributary water rights decreed in Case No. 02CW025 (Division 2) and Consolidated Case Nos. 07CW104 (Division 2) and 08CW263 (Division 1) total 625.1 af/yr (based upon a 100-year statutory aquifer life) and are not currently included in a decreed augmentation plan. Therefore, these water rights are not currently available for use.

[6] Nontributary water rights totaling 443.0 af/yr (based upon a 100-year statutory aquifer life) are reserved for not-nontributary post pumping augmentation (POPA) requirements in Consolidated Case Nos. 87CW067 (Division 2), 88CW100 (Division 2), and 88CW218 (Division 1). The POPA reserve is set aside for the District's future augmentation obligation as a result of current not-nontributary ground water pumping pursuant to Augmentation Plan II and is owed to Monument Creek and West Cherry Creek for a period of 200 years after pumping has ceased.

[7] Total Denver Basin water rights available to the District for use equal [4] - [5] - [6].

During the 2017-2021 period, the District pumped an average of 1,010 acre-feet of Denver Basin ground water adjudicated in its modern water rights decrees, or approximately 16 percent of the total annual entitlement available for use. Special provisions in the District's modern Denver Basin water rights decrees allow unused portions of the District's annual entitlement to be carried over for use in subsequent years, referred to as "banking" or "banked water"; however, the banking provision is not included in the District's older decrees. The banking provision takes effect once the Denver Basin water rights decree is entered by the water judge. After that time, any portion of the annual entitlement that is not pumped during a year is added to the "bank" of water available for pumping in any subsequent year. This banked water can be withdrawn in addition to the District's Denver Basin water rights annual entitlements discussed above. For example, through 2021 more than 32,900 acre-feet of Arapahoe aquifer water has been banked pursuant to Case Nos. 81CW231, 02CW025, and 07CW104 (Division 2), and 08CW263 (Division 1).

Despite declines in well yield, the Arapahoe aquifer is the most productive aquifer beneath the District. If all future demands are met solely with the District's decreed Arapahoe aquifer water rights (an unlikely and very conservative scenario) the decreed Arapahoe aquifer annual entitlement would be exceeded before reaching buildout. Currently, Arapahoe aquifer pumping meets less than 65 percent of the District's demand and there is no actual exceedance. Furthermore, banked Arapahoe aquifer water rights could meet projected District demand through at least 2050. Many new Arapahoe aquifer wells would need to be drilled to supply all of the District's demand through 2050 at considerable expense. Therefore, although the District has ample Denver Basin water rights entitlements to meet future demand, it is not cost effective to rely exclusively on this non-renewable resource as a permanent supply.

The District's future water supply planning includes construction of new Dawson aquifer wells in relatively new inclusion areas that are in the western and northern portions of the District. Some of these areas are outside of the geography included in the plan for augmentation decreed in Consolidated Case Nos. 87CW67 (Division 2), 88CW100 (Division 2), and 08CW263 (Division 1). In 2023, the District should file an application for approval of a plan for augmentation for this not-nontributary groundwater.

2.3.1.1. County Water Supply Planning Requirements

El Paso County requires a 300-year water supply for subdivisions relying on Denver Basin ground water (300-year rule) that did not have preliminary plan approval prior to November 20, 1986. The 300-year rule differs from the 100-year aquifer life period used by the State for Denver Basin water rights administration (100-year rule). Since 2017, the District has added two parcel inclusions that fall under the 300-year rule, Lot 1 Mills Timber Subdivision (5.32 acres) and Lot 2 Mills Timber Subdivision (5.65 acres). Including these additions, there are approximately 778 acres of the District's lands subject to the County's 300-year rule. The remaining 2,816 acres of the District's lands were zoned prior to the effective date of El Paso County's 300-year rule and are subject to the State's 100-year rule.

The District relies upon a planning value of 0.5 af/ac/yr for average in-district water demand. By applying a demand of 1.5 af/ac/yr to lands subject to El Paso County's 300-year rule and 0.5 af/ac/yr to lands subject to the State's 100-year rule, the estimated Denver Basin water rights annual entitlement needed to meet planning requirements totals 2,575 af/yr. These amounts are summarized in Table 2-18. Currently, the District's decreed Denver Basin water rights annual entitlement available for use totals 6,322.4 af/yr; therefore, even before considering banked water and undecreed Denver Basin groundwater beneath the Mills Timber subdivision, the District has an excess of 3,747.4 af/yr of Denver Basin water rights annual entitlement available for future water commitments.

Table 2-18 – Woodmoor Water Commitments

Commitment Type	Lands with Water Commitments (ac)	Demand (af/ac)	Annual Demand (af)
Not Subject to El Paso County's 300-Year Rule	2,816	0.5	1,408
Subject to El Paso County's 300-Year Rule	778	1.5	1,167
Total	3,594	-	2,575

2.3.2. REUSABLE CREDITS

The District may use, reuse, and successively use the portion of its pumped Denver Basin ground water that is not required to be relinquished to the stream (“reusable credits”). Reusable return flows occur as either indoor reusable wastewater effluent that is discharged to Monument Creek at the TLWWTF or LIRFs that accrue to Crystal Creek, DWC, and Teachout Creek, tributaries to Monument Creek. The District can use its reusable credits as a source of augmentation within the District, by direct re-diversion, or as substitute supply in the District’s exchange system.

Currently, the District leases its unused reusable wastewater effluent to downstream water users. In the future, this water can be rediverted downstream and reused within the District. More discussion on future plans for reuse are addressed in Sections 3.2.3, 3.3.1, and 0. A summary of the District’s reusable credits is presented in Table 2-19.

Table 2-19 – Summary of Reusable Credits

Water Year	Reusable Effluent Credit	Total LIRF Credit	Purchased Reusable Effluent Credit	Total Available Credits	Reusable Credit Used for Exchange	Reusable Credit Used for Augmentation	Remaining Reusable Credit Available for Other Uses
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2012	632	0	47.1	679	345	51	283
2013	634	0.9	21	656	370	58	229
2014	657	8.4	0	665	500	42	123
2015	654	9.1	3.3	666	347	37	282
2016	691	9.9	0	701	341	43	317
2017	703	9.4	0	712	327	59	327
2018	710	10.4	0	721	357	51	312
2019	642	10.1	89.1	741	397	56	288
2020	667	11.3	70.2	748	345	50	354
2021	737	11.2	0	749	139	49	560
'12-'16 Average	654	5.6	14.3	673	380	46	247
'17-'21 Average	692	10.5	31.9	734	313	53	368

Table 2-19 Notes:

- (1) Equal to lesser of the District's measured effluent to Monument Creek through TLWWTF and 90% of the District's average base monthly water use for the previous November through March period generally based upon "Augmentation Plan II".
- (2) Daily LIRF credit is equal to monthly LIRF credit determined in Woodmoor's LIRF accounting, distributed equally for all days of the subsequent month.
- (3) Effluent credit purchased from Donala, Monument, or Triview.
- (4) Equal to (1) + (2) + (3).
- (5) Equal to sum of (a) net volume delivered to Lake Woodmoor from either MCE Pump Station or Augusta Pit, (b) amount delivered directly to the Golf Course via Qal 4, and (c) stored by exchange in the Golf Course ponds. Amounts differ from Exchange Supply in Table 2-11 and Total Water Exchanged in Table 2-15 due to a difference in timing, where Tables 2-11 and 2-15 reflect the timing of the diversion of exchange water from the stream and values in this table represent the time at which the exchange water is used within the District
- (6) Equal to sum of augmentation requirement for (a) District wells, (b) Participating Ponds, and (c) King's Deer HOA.
- (7) Equal to (4) - (5) - (6).

2.3.2.1. Woodmoor's Reusable Effluent Credits

Methodology to determine the District's indoor reusable effluent credit is provided in the District's Augmentation Plan II decree. These credits are available as an augmentation source for (a) replacement of tributary Denver Basin water pursuant to the Augmentation Plan I decree in 80CW170 (Division 2), (b) replacement of not-nontributary Denver Basin water pursuant to the Augmentation Plan II decree, and (c) exchange pursuant to the decree in 14CW3058 (Division 2).

From Table 2-19, the District averaged 692 af/yr of reusable effluent credit during 2017-2021, an increase of about 6 percent over the 2012-2016 period. As summarized in Table 2-19, an average of 313 af/yr of that amount was exchanged by the District in the 2017-2021 period.

2.3.2.2. Supplemental Effluent Credits

In order to divert water by exchange at a higher rate than the District's own reusable effluent credit allows, the District can purchase additional reusable effluent from neighboring entities whose wastewater is treated at either TLWWTF or the Upper Monument Creek Regional Wastewater Treatment Plant. These entities include the Town of Monument (TOM), Triview Metropolitan District, and Donala Water and Sanitation District (Donala). As shown in Table 2-19, the District purchased credits from other entities during two periods over the 2017-2021 period: (1) March through July of 2019 (89.1 af) and (2) March through June of 2020 (70.2 af). Diversion by exchange of supplemental effluent credits is not part of the District's exchange decrees and is operated instead by administrative approval.

Purchased effluent credits allow the District to fill Lake Woodmoor at a faster rate than would otherwise be possible and is advised whenever there is more native flow in Monument Creek at the MCE Pump Station than the District's reusable wastewater effluent credit. By using surface water, the District extends the economic life of its Denver Basin water supplies.

2.3.2.3. Lawn Irrigation Return Flows

The District can use reusable outdoor use return flows (also known as Lawn Irrigation Return Flows or "LIRFs") as an augmentation source for (a) replacement of evaporative depletions from in-District ponds pursuant to the decree in Case No. 2010CW28 (Division 2), (b) replacement of not-nontributary Denver Basin water pursuant to the Augmentation Plan II decree, and (c) exchange pursuant to the decree in 14CW3058 (Division 2).

LIRFs result from outdoor lawn irrigation that percolates below the lawn root zone and accrues to the stream system over time. The District quantifies LIRFs using a fixed return flow percentage equal to 15 percent of outdoor water use within identified LIRF areas. LIRF areas are located within the Crystal Creek, DWC, and Teachout Creek drainage basins in the District's boundaries that overlie alluvial or colluvial deposits outside of dense tree canopy, shown in Figure 2-6. The LIRF areas comprise approximately 760 acres out of the District's 3,909 acres, or approximately 19 percent of the current District area.

Based upon the fixed return flow percentage, total unlagged LIRF credits current and buildout conditions equal 16.8 af/yr and 33.3 af/yr, respectively, summarized in Table 2-20. Those annual amounts accrue to Crystal Creek, DWC, and Teachout Creek over time and will not be available in their full amounts until some years after buildout.

Table 2-20 – Estimated Unlagged Lawn Irrigation Return Flows

LIRF Area	Current Conditions within LIRF Areas		Buildout Conditions within LIRF Areas	
	2021 Outdoor Water Use (af/yr)	2021 Unlagged LIRF (af/yr)	Annual Outdoor Water Use (af/yr)	Annual Unlagged LIRF (af/yr)
[1]	[2]	[3]	[4]	[5]
Crystal Creek	12.4	1.9	12.5	1.9
Dirty Woman Creek	48.5	7.3	105.3	15.8
Teachout Creek	50.9	7.6	103.9	15.6
Total	111.8	16.8	221.7	33.3

[1] LIRF areas include areas within the Crystal Creek, Dirty Woman Creek and Teachout Creek drainage basins in the District's boundaries that overlie alluvial or colluvial deposits outside of dense tree canopy. LIRF areas comprise approximately 760 ac out of the District's 3,909 ac, or approximately 19 percent of current District area.

[2] Current outdoor water use based upon November 2020 - October 2021 water use data for accounts located within the LIRF areas. Annual outdoor water use equals total monthly water use during the April through October period less calculated average monthly indoor water use, which equals the average monthly water use during the previous November through March period. In the LIRF areas, lawn areas tend to be much greater than other areas in the District and outdoor water use is typically 45 – 75 percent of total water use, which is a much higher outdoor water use percentage than the District-wide average percentage of outdoor water use. For this reason, in the Crystal Creek basin, current outdoor water use exceeds the projection of buildout outdoor water use.

[3] Current annual unlagged LIRF equals 15-percent of current outdoor water use. Equals [2] * 15 percent. LIRFs currently available for augmentation purposes depend on the timing of the LIRFs accretion to the stream system. LIRFs from Crystal Creek, Dirty Woman Creek and Teachout Creek accrue to the stream system over a period of years.

[4] Buildout outdoor water use calculated based on total estimated SFE units within LIRF Areas, average water use of 272 gallons per day per SFE, the District-wide current demand distribution (36 percent outdoor water use), and potable system losses of 6 percent.

[5] Annual buildout unlagged LIRF equals 15-percent of buildout outdoor water use. Equals [4] * 15 percent. LIRFs available for augmentation purposes during buildout conditions depend on the timing of the LIRFs accretion to the stream system. LIRFs from Crystal Creek, DWC, and Teachout Creek accrete to the stream system over a period of years.

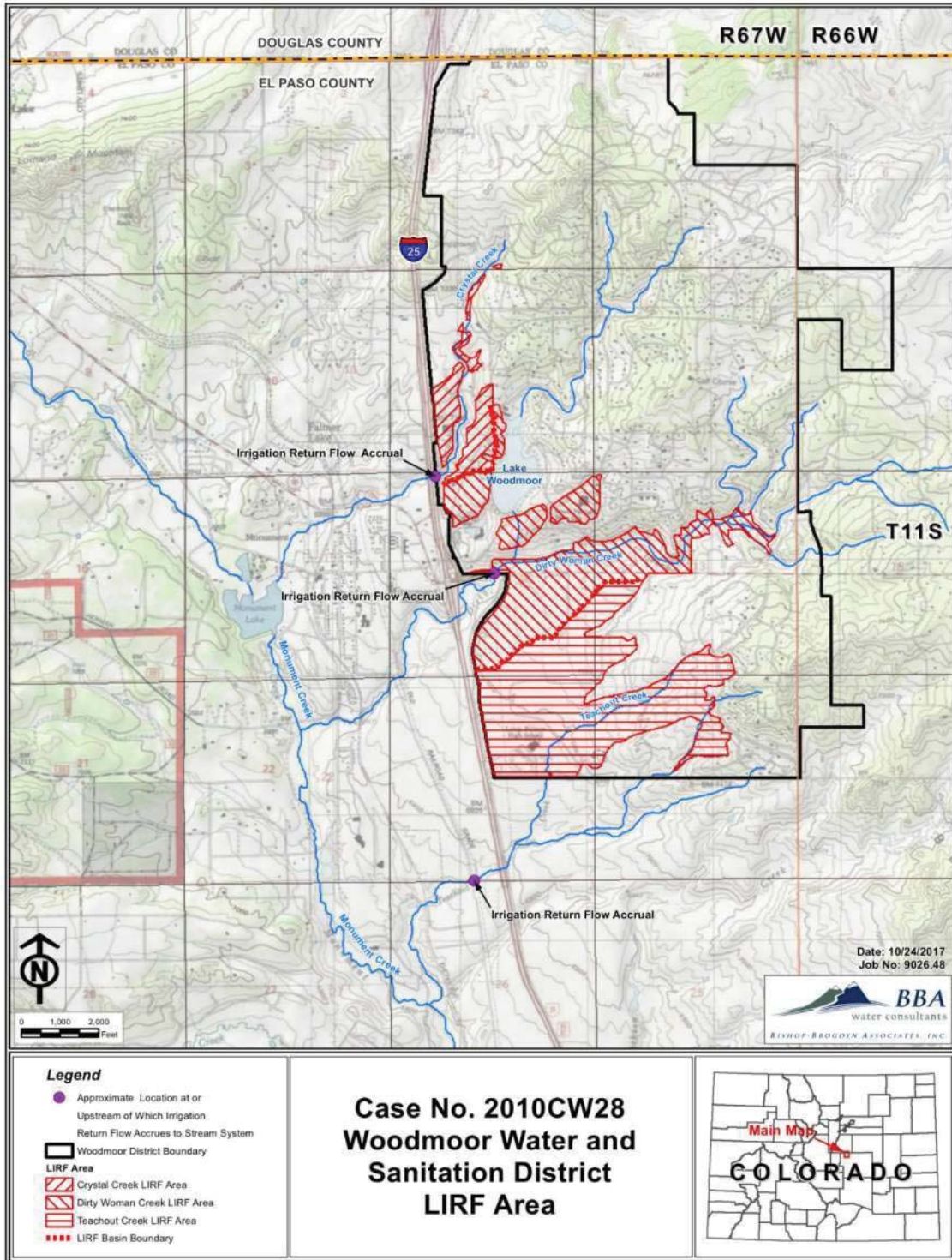


Figure 2-6 – LIRF Areas

LIRFs available to the District for augmentation purposes depend on the lagged timing of the LIRFs accretion to Crystal Creek, DWC, and Teachout Creek over a period of months and years. LIRFs are only available for the District’s use after they have accrued to the stream. During November 2020 through October 2021 total LIRF accrual was 11.28 af, summarized in Table 2-21. The rate of LIRF accrual will increase over time and ultimately reach the buildout projection.

Table 2-21 – 2021 Lagged LIRF Credits

Month	Crystal Creek Basin (af)	Dirty Woman Creek Basin (af)	Teachout Creek Basin (af)	Total (af)
Nov-20	0.42	0.70	0.17	1.29
Dec-20	0.33	0.64	0.17	1.14
Jan-21	0.27	0.56	0.17	1.00
Feb-21	0.22	0.50	0.17	0.90
Mar-21	0.18	0.46	0.17	0.81
Apr-21	0.15	0.42	0.17	0.75
May-21	0.13	0.39	0.18	0.69
Jun-21	0.11	0.38	0.18	0.67
Jul-21	0.17	0.45	0.18	0.80
Aug-21	0.16	0.57	0.18	0.92
Sep-21	0.24	0.69	0.18	1.11
Oct-21	0.26	0.77	0.18	1.21
Total	2.64	6.55	2.09	11.28

Notes: Monthly amounts copied from Woodmoor LIRF accounting forms. Lagging based on URFs included as Appendix 3 in 10CW28 decree.

The District currently uses a portion of the lagged LIRFs to augment evaporative depletions resulting from the operation Participating Ponds within the District. The 10CW28 decree included four ponds at Monument Hill Country Club totaling approximately 4.4 acre-feet per year (evaporation from three of the four ponds; the fourth pond is accounted for by the Country Club on a daily basis through reservoir accounting). In 2018, the District added seven Participating Ponds to the 10CW28 decree, with a total of up to 8.13 acre-feet per year of evaporative depletions. Table 2-22 summarizes the District’s LIRF credits, along with the amount used for augmentation of ponds within the District. The remaining LIRF credits are available for use in Augmentation Plan II, for exchange, or for lease to downstream entities. Shown in column (3) of Table 2-22, the District may not be using 3.6 af /yr of its LIRF credits. **The District should modify its water accounting to divert and account for this otherwise unused LIRF credit.**

Table 2-22 – Summary of LIRF Credits

Water Year	Total LIRF Credit (af)	LIRF Credit Used (af)	LIRF Credit Available for Other Uses (af)
	(1)	(2)	(3)
2012	0.0	0.0	0.0
2013	0.9	0.0	0.9
2014	8.4	4.5	3.9
2015	9.1	4.3	4.7
2016	9.9	4.7	5.2
2017	9.4	5.1	4.2
2018	10.4	7.0	3.4
2019	10.1	7.1	3.0
2020	11.3	7.8	3.5
2021	11.2	7.5	3.7
'12-'16 Average	5.6	2.7	2.9
'17-'21 Average	10.5	6.9	3.6

(1) Daily LIRF credit is equal to monthly LIRF credit determined in District’s LIRF accounting, distributed equally for all days of the subsequent month.

(2) Equal to LIRF Credits Used accounted for in District’s daily accounting workbook.

(3) Equal to (1) - (2).

2.3.3. RANCH WATER RIGHTS

The District acquired the Ranch Water Rights in 2011. The Ranch is located in El Paso County, near the City of Fountain, as shown in Figure 2-7. Approximately 2,040 acres on the Ranch were irrigated from Fountain Creek through the Chilcott Ditch using Chilcott Ditch, Liston and Love Ditch, Lock Ditch, Lock Ditch No. 2, and Callahan Reservoir water rights. The Ranch Water Right amounts and priority dates are summarized in Table 2-23.

On February 7, 2014, a decree was entered in Case No. 12CW01 (Division 2) that changed the use of the Ranch water rights from irrigation to municipal use and other uses, including the right to “reuse, successively use, and use to extinction all return flows including, but not limited to, indoor use return flows and lawn irrigation return flows.” The change of use will allow the Ranch water rights to be diverted from Fountain Creek at their current point of diversion, stored in a reservoir, and ultimately delivered to the District via pipeline to meet municipal demands.

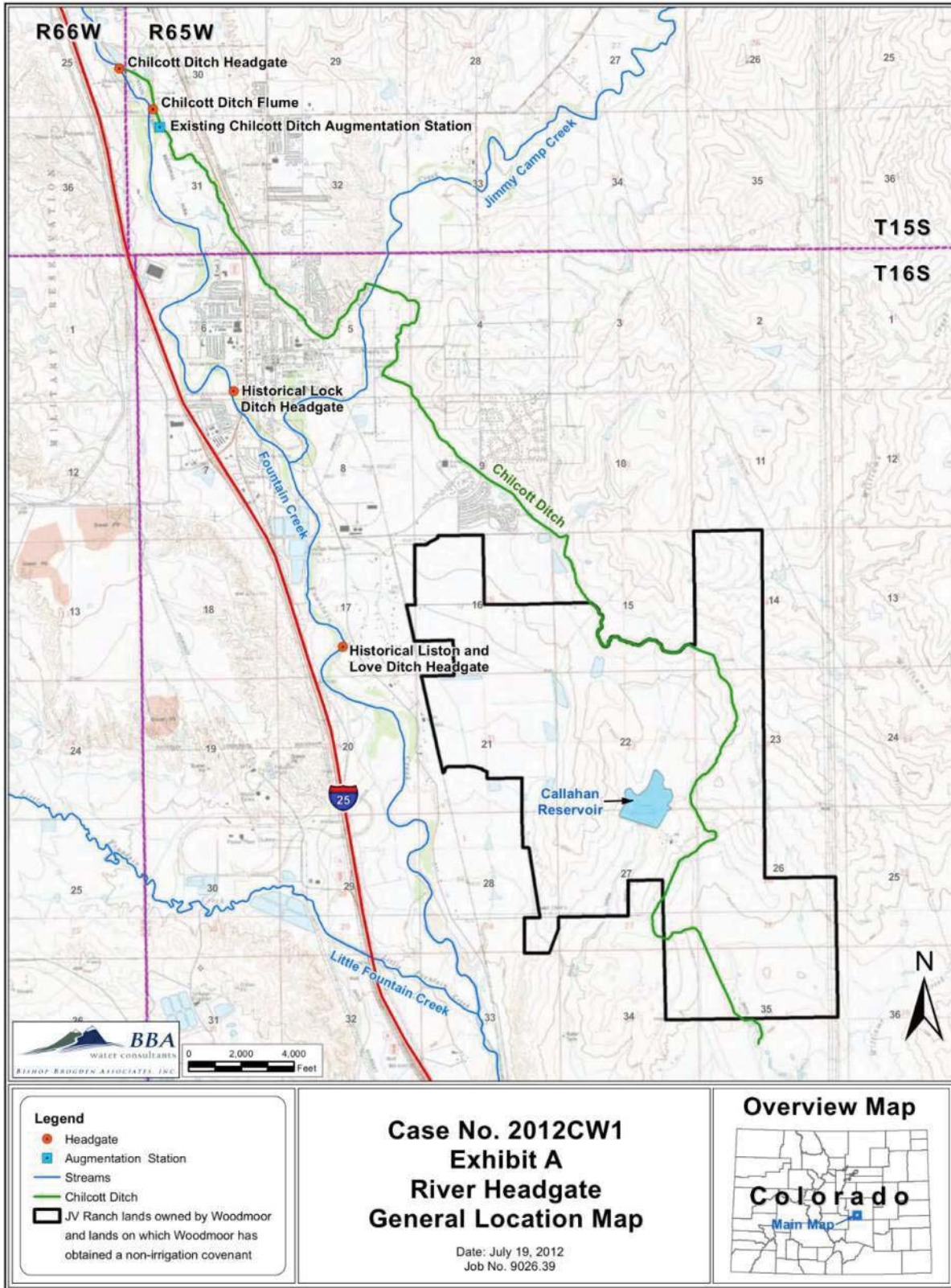


Figure 2-7 – Ranch Water Rights Map

Table 2-23 – Summary of Ranch Water Rights

Case No.	Fountain Creek Priority No.	Appropriation Date	Adjudication Date	Water Right Amount	
				Total	District
Chilcott Ditch Water Rights (Woodmoor owns 58/105 shares)					
CA 751	27	March 21, 1866	February 15, 1882	27.0 cfs	14.914 cfs
CA 751	39	March 21, 1874	February 15, 1882	20.63 cfs	11.396 cfs
CA 10146	172	December 18, 1905	June 2, 1919	30.95 cfs	Abandoned ⁽¹⁾
Liston and Love Ditch Water Rights (Woodmoor owns 75%)					
CA 751	14	March 21, 1863	February 15, 1882	8.82 cfs	6.615 cfs
CA 751	33	December 31, 1871	February 15, 1882	3.6 cfs	2.7 cfs
Lock Ditch and Lock Ditch No. 2 Water Rights (Woodmoor owns 75%)					
CA 751	15	December 31, 1863	February 15, 1882	6.3 cfs	4.725 cfs
CA 751	22	December 31, 1864	February 15, 1882	8.38 cfs	6.285 cfs
CA 751	45	December 31, 1880	February 15, 1882	5.02 cfs	3.765 cfs
Callahan Reservoir Water Right (Woodmoor owns 100%)					
CA 10146	51 ⁽²⁾	November 20, 1909	June 2, 1919	716 af	716 af

(1) District's share of Chilcott Priority No. 172 was abandoned in Case No. 12CW1.

(2) Reservoir priority.

2.3.3.1. Current Operations

Future municipal water use of the Ranch Water Rights will occur pursuant to the terms of the 12CW01 decree. Unlike the Denver Basin well supplies, the District’s system for diverting and storing the rights will vary from year-to-year with wet and dry cycles. Future operations of the Ranch and associated water rights are discussed in Section 3.2.3.

To-date, the District has not used the Ranch Water Rights for any changed uses. Irrigation continued on the Ranch through 2015. Beginning in 2016, the District began irrigation to establish new vegetation to comply with decreed revegetation requirements.

In 2014, a measurement flume was installed to measure deliveries to the Ranch, but records were not kept until 2015. The District began preparing and submitting accounting for the Ranch Water Rights to the State on a monthly basis beginning in June 2018. The accounting forms include tracking of volumetric limits pursuant to decreed terms and conditions.

During 2017 and 2018, the District had difficulty managing unmeasured inflows to the Chilcott Ditch, resulting in more delivery at the Ranch than was diverted at the river headgate, a challenge common to historical irrigation ditches. That issue has since been controlled and typical operations now consist of higher than historical ditch losses that are associated with lower than historical diversions.