WATER RESOURCES REPORT

for

HAVEN VALLEY

El Paso County, Colorado

March 2021

Prepared for:

Richmond American Homes
4350 S. Monaco Street
Denver, CO 80237
Contact: Matthew Jenkins
(720) 977-3686

Prepared by:

Drexel, Barrell & Co.
3 South 7th Street
Colorado Springs, CO 80905
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(719) 260-0887

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APPENDICES

WATER RESOURCES REPORT

for

HAVEN VALLEY

El Paso County, Colorado

1.0 SUMMARY OF THE PROPOSED SUBDIVISION

Haven Valley is a 11.43 acre subdivision within the northwest quarter of Section 12, Township 15 South, Range 66 West of the 6th Principle Meridian in El Paso County, Colorado. The site is located southwest of Cable Ln and west of Hunters Run.

The site is within the Security Water and Sanitation Districts Service area. Water and wastewater services will be provided by Security Water and Sanitation Districts.

The proposed Haven Valley development includes 98 single-family residences. The project will be developed in one phase.

Reference the appendix for the preliminary plan map, and utility commitment letter.

2.0 DETERMINATION OF SUFFICIENT QUANTITY OF WATER

A. Calculation of Water Demand

The proposed development includes 98 single-family residential lots, with 0.67 acres of irrigated common space and 0.98 acres of xeriscaped common space. This results in the followings quantities:

Residential: (0.5 AC-FT/YR/household) x (98 households)= 49 AC-FT/YR

Irrigated Common Space: (1.9 AC-FT/YR/Acre) x (1.65 acres) = 3.16 AC-FT/YR

Project Total: 52.16 AC-FT/YR

The projected water consumption is based upon industry standards as well as methodology used by other utility providers in the area.

B. Calculation of Water Available

1. Haven Valley is to be served by the Security Water and Sanitation Districts water system. A Letter of Commitment from the Security Water and Sanitation Districts to serve the development is included in the appendix.

2. The preliminary utility plan for the project is included in the appendix. A map of the Security Water service area is also included in the appendix.

3. Per the Security Water and Sanitation Districts Letter of Commitment, water available has been confirmed to service this project.

4. The source of the Security Water and Sanitation Districts water is entirely surface water from Pueblo Reservoir. Reference the Security Water District Water Resources Report in the appendix for further information.

3.0 DETERMINATION OF SUFFICIENT DEPENDABILITY OF WATER SUPPLY

A. Water rights – The Security Water and Sanitation Districts will provide treatment and delivery of the water to site. Reference the Security Water District Water Resources Report in the appendix for further information.

B. Financial plan and capital improvement plan from water provider – Water delivery will be provided by the Security Water and Sanitation Districts.

C. Water delivery will be provided by the Security Water and Sanitation Districts. The proposed water system will connect to the existing water system at 2 stub locations in Cable Ln/Alturas Dr. Reference the preliminary utility plan in the appendix.

D. There are no wells proposed on this site. For a description of the wells utilized by the Security Water and Sanitation Districts, reference the Security Water District Water Resources Report in the appendix for further information.

E. Short term water supplies shall be provided by the Security Water and Sanitation Districts.

4.0 DETERMINATION OF SUFFICIENT QUALITY AND POTABILITY OF WATER

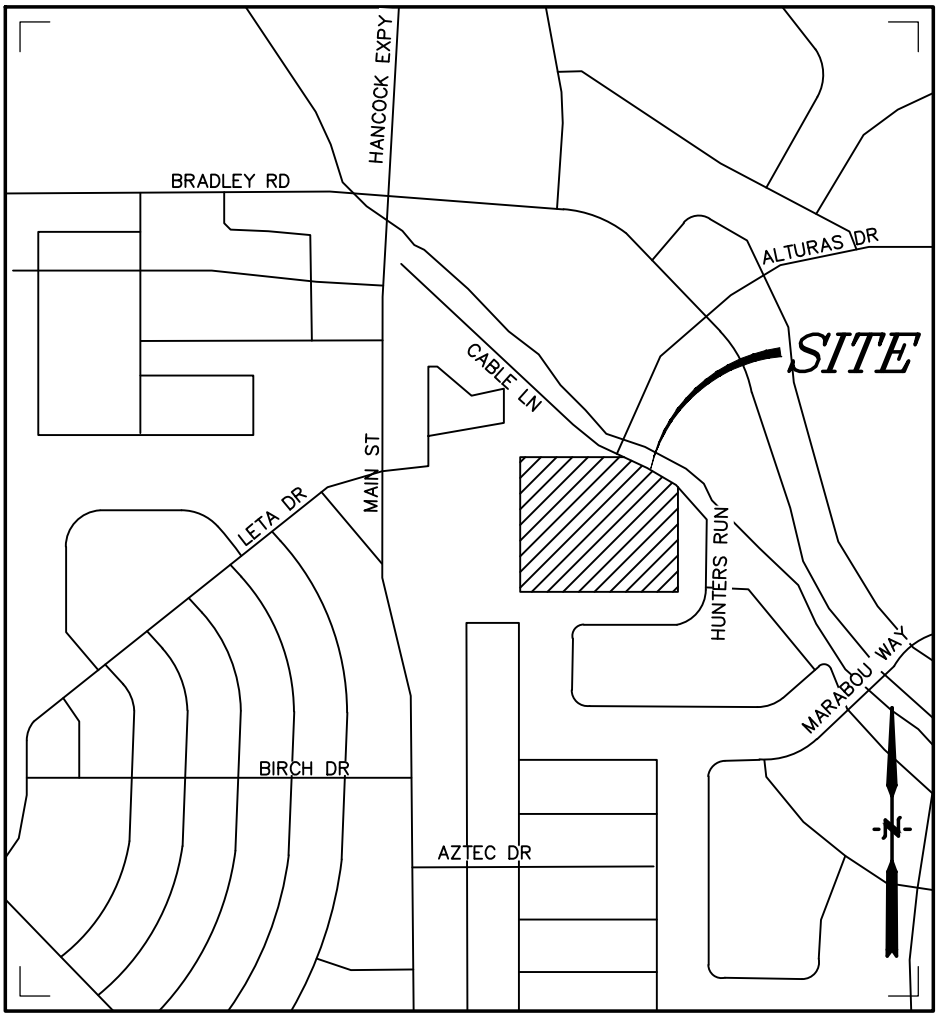
Water delivery will be provided by the Security Water and Sanitation Districts. Drexel, Barrell & Co. understands that quality and potability of the Security Water and Sanitation Districts water supply is already approved. Please also see the Security Water and Sanitation District's 2019 Water Quality Report included in the appendix.

5.0 UTILITY CONTACT INFORMATION

Security Water and Sanitation Districts
Attn: Roy E. Heald, General Manager
231 Security Blvd.
Colorado Springs, CO 80911
Phone: (719) 392-3475

Drexel, Barrell & Co.
Attn: Tim McConnell, P.E.
3 South 7th Street
Colorado Springs, CO 80905
Phone: (719) 260-0887

Appendix



Vicinity Map
Not to scale

HAVEN HILLS
COLORADO SPRINGS, CO
VICINITY MAP

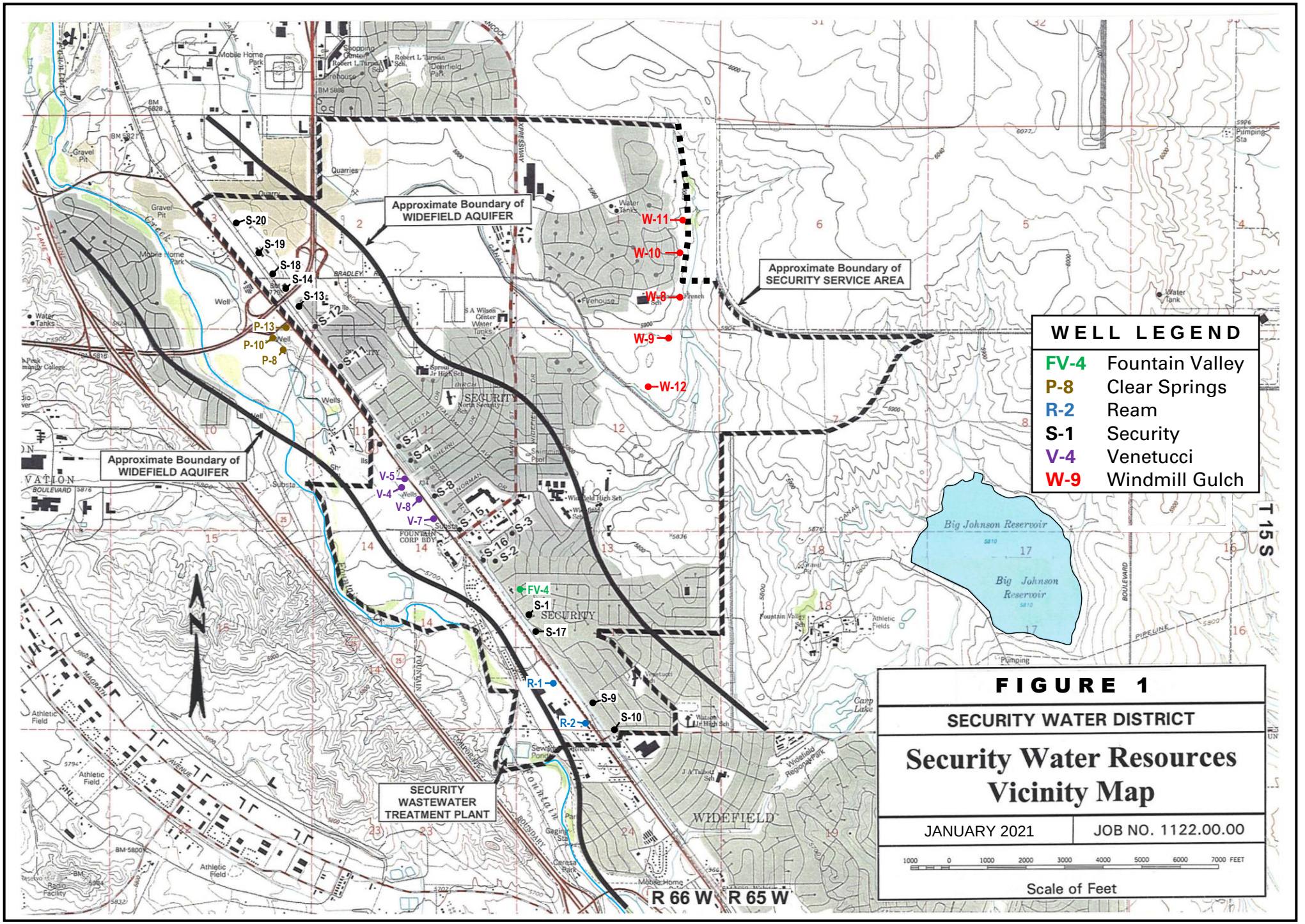
Drexel, Barrell & Co.
Engineers • Surveyors

DATE:

JOB NO: 21085-03CSCV

DWG. NO. VMAP

SHEET 1 OF 1


Approximate Boundary of WIDEFIELD AQUIFER
Approximate Boundary of SECURITY SERVICE AREA
Approximate Boundary of WIDEFIELD AQUIFER
SECURITY WASTEWATER TREATMENT PLANT
S-20
S-19
S-18
S-14
S-13
S-12
P-13
P-10
P-8
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S-7
S-4
S-8
S-15
S-3
S-16
S-2
V-5
V-4
V-8
V-7
W-11
W-10
W-8
W-9
W-12
FV-4
S-1
S-17
R-1
S-9
R-2
S-10
SECURITY
WIDEFIELD
Big Johnson Reservoir
Big Johnson Reservoir
T 15 S
R 66 W
R 65 W
WELL LEGEND
FV-4 Fountain Valley
P-8 Clear Springs
R-2 Ream
S-1 Security
V-4 Venetucci
W-9 Windmill Gulch
FIGURE 1
SECURITY WATER DISTRICT
Security Water Resources Vicinity Map
JANUARY 2021
JOB NO. 1122.00.00
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
Scale of Feet

Security Water and Sanitation Districts / Enterprises
231 SECURITY BLVD. • COLORADO SPRINGS, COLORADO 80911
TELEPHONE 719-392-3475 • FAX 719-390-7252
www.securitywsd.com

March 19, 2021

Mr. Matt Jenkins, Director, Land Acquisition
Richmond American Homes
4350 S. Monaco Street
Denver, CO 80237

Delivered via email to: Matthew.Jenkins@mdch.com

Dear Mr. Jenkins:

The 11.761 acre parcel of land currently known as Haven Valley, and previously known as Patriot Village, is within the boundaries of the Security Water District and the Security Sanitation District. It is entitled to service from each district in accordance with Colorado State law and the operating rules, regulations and conditions of each district, which are subject to change.

The residential water demand for this property is estimated to be a maximum of 49 annual acre feet of diversions based upon 98 single-family equivalents (sfe). In addition, the estimated demand for common landscape irrigation within this parcel is 3.16 annual acre feet of diversions. Consequently, the total water demand for this property is estimated to be 52.16 annual acre feet of diversions. Furthermore, the wastewater collection and treatment requirements for this property are estimated to be a maximum of 7.06 million gallons per year or 19,342 gallons per day based on 98 sfe. The districts' commitments to this property are limited to the preceding amounts.

The Security Water and Sanitation Districts currently have overall capacities that exceed current commitments. Upon the recording of the final plat for the subject property, the Security Water District agrees to commit sufficient water resources and the Security Sanitation District commits sufficient wastewater capacity to serve the property. This commitment may also be subject to determinations of sufficiency and reliability of water supply by El Paso County and the Colorado Division of Water Resources. Water and sewer service will be provided subject to rules, regulations and conditions of the districts and the payment of applicable fees at the time of requested connection.

This service commitment supersedes any previous commitments that may have been provided for this property.

If you have any questions, please contact me.

Sincerely,

Roy E. Heald

Roy E. Heald, General Manager

SECURITY WATER DISTRICT

Water Resources Report

PREPARED FOR

SECURITY WATER DISTRICT

W. W. WHEELER & ASSOCIATES, INC.
Water Resources Engineers
3700 S. Inca Street | Englewood, CO 80110-3405

Updated March 17, 2021

W. W. WHEELER
& ASSOCIATES, INC.
Water Resources Engineers
WWW.WWWHEELER.COM

March 17, 2021

Mr. Roy Heald, General Manager
Security Water and Sanitation Districts
231 Security Blvd.
Colorado Springs, CO 80911

RE: #1122 – Security Water District Water Resources Report

Dear Roy:

Attached is our report entitled, *Security Water District Water Resources Report, Updated March 17, 2021.* This report includes an updated summary of the water rights and water supplies available to Security Water District, together with information concerning the current and anticipated future water demands.

Please contact us if you have any questions or comments.

Sincerely,
W. W. Wheeler & Associates, Inc.

Matthew J. Loose, P.E.

encl.

3700 S. Inca Street | Englewood, CO 80110-3405
303-761-4130 | fax 303-761-2802

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1.0 INTRODUCTION

The purpose of this report is to provide an updated summary of the water rights and water supplies available to Security Water District (hereinafter referred to as 'Security'), together with information concerning the current and anticipated future water demands. This report is updated from the previous Water Resources Report dated January 2015.

The Security water system presently provides a reliable water supply for a population of approximately 20,000 in the service area shown on Figure No. 1. Security obtains its water supply from numerous wells located in the vicinity of its service area, supplemented by Fryingpan-Arkansas (Fry-Ark) Project water stored in Pueblo Reservoir and delivered to Security through the Fountain Valley Conduit and Southern Delivery System. Security also obtains its water supply from other fully consumable water sources delivered from Pueblo Reservoir to Security through the Fountain Valley Conduit.

During 2016 through 2020, Security relied entirely on surface water supplies delivered from Pueblo Reservoir and on purchased deliveries from the new interconnection with Colorado Springs's distribution system. This exclusive use of surface water supplies occurred because Security's wells exceeded the United States Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) lifetime health advisory levels for Perfluoroalkyl substances (PFASs). The water treatment facility for Security's wells is scheduled to come online in early 2021, at which time Security plans to resume operation of its wells.

Security's water rights include a complex system of decrees, well permits, and agreements. For the purposes of this report, the water rights used by Security have been divided into four separate groups:

1. The wells drilled into the Widefield Aquifer and the Windmill Gulch Aquifer.
2. Fry-Ark Project water and return flows from this source of supply.
3. The other fully consumable water sources used for augmentation purposes to replace out-of-priority well depletions and to support deliveries from Pueblo

Reservoir through the Fountain Valley Conduit (in excess of Fry-Ark Project water deliveries).

4. Water rights being developed by Security for artificial recharge of the Widefield Aquifer.

Security's water supply system is continually expanded and improved to (1) provide additional capacity in anticipation of growth within the water service area and (2) maintain redundancy and reliability of physical deliveries to Security's distribution system. Such redundancy and reliability are necessary to protect against climate change, potential infrastructure issues with the Fountain Valley Conduit and the Southern Delivery System, and increased contamination of Security's wells. Security has embarked on numerous projects over the past several years to ensure adequate water supplies for its customers. Projects include the following:

1. Development of additional water supplies in the Widefield Aquifer, particularly including upgrading of the Clear Springs wells and implementation of a new 25-year lease, and a perpetual lease for 45 percent of the water rights and production capacity of the Venetucci Wells.

2. Purchase and change of Fountain Mutual Irrigation Company, Lock Ditch, and Chilcott Ditch senior water rights along Fountain Creek.

3. Purchase and change of the Hayden Ranch water rights in Fremont County.

4. Participation in the Super Ditch Project along the Arkansas River.

5. Completion of the Southern Delivery System in cooperation with Colorado Springs Utilities, the City of Fountain, and Pueblo West Metropolitan District.

6. Acquisition of Long-Term Excess Capacity storage contracts at Pueblo Reservoir to provide additional reliability in Security's water supply through the Fountain Valley Conduit and Southern Delivery System.

7. Participation in the planned Widefield Aquifer recharge project in cooperation with Widefield Water and Sanitation District and the City of Fountain.

2.0 WELLS IN THE WIDEFIELD AND WINDMILL GULCH AQUIFERS

Background information on Security's wells in the Widefield Aquifer and the Windmill Gulch Aquifer and the replacement sources used for operation of those wells is provided below. The attached Figure No. 1 is a map showing the locations of Security's service area and pertinent water supply facilities. A summary of the wells owned or leased by Security and the allowable pumping rates are presented in the attached Table No. 1. All of the wells have water rights decrees and well permits and are included within adjudicated augmentation plans, which evidence Security's ability to operate the wells in the future. The wells may be re-drilled, if necessary, or rehabilitated at any time in order to put the wells into service or to restore their production capacities.

The wells in the Widefield and Windmill Gulch aquifers pump water that is considered to be tributary to Fountain Creek and the Arkansas River Basin. The Colorado Division of Water Resources strictly administers Security's wells to ensure that water is pumped only in accordance with Security's decreed augmentation plans. Because of the over-appropriated nature of water rights within the Arkansas River Basin, the junior rights associated with the wells used by Security are almost never in priority. Therefore, the Security augmentation plans provide replacement water on a year-round basis to ensure that all depletions are replaced.

Security does not obtain any water supplies from bedrock wells that are classified as 'nontributary'. All of the water supply is obtained from annually renewable and perpetual sources, so the '300-year' quantity of water described in El Paso County regulations is not an applicable concept for evaluation of Security's water supply.

2.1 Widefield Aquifer General

Most of the wells used by Security are located in a geographical area known as the Widefield Aquifer. The Widefield Aquifer is an important source of water supply for municipal and agricultural water users in the southern portion of the Colorado Springs metropolitan area. The Widefield Aquifer includes an area about five miles in length and about two-thirds of a mile in width, generally located on the eastern side of Fountain

Creek. The aquifer is generally bounded by Sand Creek on the north and the El Paso County Regional Park on the south. The aquifer area includes a total of about 3.5 square miles.

The aquifer is an old buried channel of Fountain Creek, deeply eroded into the bedrock shale. The alluvial fill consists of sand, gravel, cobbles, and only minor amounts of clay. A maximum alluvial depth of about 100 feet occurs in the Security and Widefield area where the best wells are located. USGS reports transmissivity values of up to 200,000 gpd/ft. Municipal wells in the central part of the aquifer produce sustainable flows of over 600 gpm.

The Widefield Aquifer is separated from Fountain Creek by a buried shale ridge, except in a few limited locations. Although the aquifer has ideal characteristics for well operations, large capacity wells can locally deplete the aquifer, if many of them are pumped at the same time. In a 1985 inflow-outflow study by the USGS, it was estimated that the total inflow to the aquifer is roughly 12,000 acre-feet per year, with by far the largest source of inflow occurring at the upstream end of the aquifer. Outflows include groundwater pumping, outflow to Fountain Creek at the southern end of the aquifer, and limited outflows across the shale ridge during times when the aquifer is full. Outflows generally balance with inflows on an annual basis.

2.2 Widefield Aquifer Stipulation

The Widefield Aquifer stipulation was developed in 1977 to provide a framework for engineering management of the aquifer. The stipulation, also known as the "Widefield Aquifer Management Agreement," was approved by the Water Court in Water Division 2 in 1977 (Case No. W-116), and updated and re-approved in 2009.

Under the stipulation, the aquifer is managed to ensure that over-pumping does not occur and to ensure that the aquifer is adequately replenished each year, thereby maintaining appropriate water levels for all municipal water users in perpetuity. Participants in the stipulation include Security, Widefield Water and Sanitation District, Colorado Springs Utilities, Stratmoor Hills Water District, and El Paso County Parks Department. As the basis of the stipulation, a computer model was developed by

Wheeler, based on consultation with Dr. Robert Glover (former Colorado State University professor), to simulate operations of the aquifer. The model accounts for aquifer inflows and outflows, using extensive well pumping and water level data compiled by the U.S. Geological Survey and water users. The model was then calibrated with observed conditions. Under the stipulation, the participants agreed to an allocation system whereby each water user was assigned annual and seasonal pumping limitations based on the sustainable yield of the aquifer through established reaches of the aquifer. The participants also agreed to refrain from asserting well priorities against each other.

It is noted that the stipulation deals with pumping allocations among the parties to ensure that over-pumping within the aquifer does not occur. Each participant, however, must operate its wells in a way that does not cause injury to other water users in the Fountain Creek and Arkansas River basins. Wells must be operated in accordance with the Arkansas Rules and Regulations and/or in accordance with decreed augmentation plans. Accordingly, Security uses its decreed augmentation sources to replace depletions associated with operation of its wells in the Widefield Aquifer.

2.3 Security's Wells in the Widefield Aquifer

Security's wells in the Widefield Aquifer originally consisted of 15 wells that were decreed in Case No. W-112. Three additional Security wells (S-18, S-19, and S-20) were decreed in Case No. 90CW28 as alternate diversion points for the original Sproul wells. The following additional wells and water rights have been acquired by Security and changed to allow municipal use:

Ream Wells	Case No. W-4766 and 90CW28
Fountain Valley School Well No. 4	Case No. 90CW28
Camden Well No. 1	Case No. 01CW149
Bender Wells	Case No. 09CW92

Under the terms of the restated Widefield Aquifer stipulation, diversions by Security's wells are limited to specific volumetric amounts, as summarized below. These limits include the Security Wells, Ream Wells, Fountain Valley School Well, the Camden Well, and the Bender Wells water rights.

Maximum month	377 acre-feet
Maximum over four consecutive months	1,285 acre-feet
Annual maximum	2,343 acre-feet

In 1987, the parties to the Widefield Aquifer stipulation agreed to a ten percent increase in the pumping allocations, but this additional pumping allocation is subject to removal if ongoing experience with operation of the aquifer indicates that pumping is causing excessive stress to aquifer water levels. This pumping increase is considered a component of Security's present water supply, as it has been in effect for over 30 years and continues to be in effect at this time. Future experience with operation of the aquifer may indicate that the increase must be eliminated. Therefore, it is unknown whether the 10 percent allocation increase will continue to be available to Security in the long-term future. With the 10 percent increase, the allowable Widefield Aquifer pumping is equal to the following amounts:

Maximum month	415 acre-feet
Maximum over four consecutive months	1,414acre-feet
Annual maximum	2,577 acre-feet

Upon future construction of facilities by Security for artificial recharge of the Widefield Aquifer, the volumetric limits will be increased in accordance with the stipulation:

Maximum month	496 acre-feet
Maximum over four consecutive months	1,579 acre-feet
Annual maximum	3,068 acre-feet

Security also obtained a decree in Water Court Case No. 12CW99 for continued operation of the Clear Springs wells under a new 25-year lease. These wells are owned by Colorado Springs Utilities. Therefore, in addition to the pumping amounts described above, Security is also entitled to pump up to 600 acre-feet per year from the Clear Springs wells.

Maximum month	375 acre-feet
Maximum over four consecutive months	600 acre-feet
Annual maximum	600 acre-feet

2.4 Perpetual Lease of Venetucci Wells in the Widefield Aquifer

Pursuant to a perpetual lease agreement dated December 15, 2006, the Pikes Peak Community Foundation leased the Venetucci Wells and water rights to Security and to Widefield Water and Sanitation District. Security and Widefield also entered into an agreement dated December 15, 2006 with the City of Fountain to sublease a portion of the water delivered under the Venetucci Wells to the City of Fountain. The water is allocated as follows, excluding the 500 acre-feet per year retained by the Pikes Peak Community Foundation for its own onsite irrigation:

Entity	Allocation (percent)
Security	45%
Widefield	45%
Fountain	10%

Security's annual delivery of water from the Venetucci Wells is allocated as at least 596 acre-feet per year, without considering the 10 percent increase in pumping allocations. All facilities required for delivery of this water to Security have been constructed.

Under the agreements, Security may receive additional deliveries above its respective allocation, if Widefield or Fountain does not need to take its full amount. Venetucci Wells V-4, V-5, V-7, and V-8 are useable for municipal water supply by Security, Widefield, and Fountain, but these entities can also obtain supplies from Venetucci Wells V-1, V-2, and V-3, if needed, to maximize the yield of all of the wells in accordance with the provisions of the Widefield Aquifer Stipulation.

2.5 Lease of Clear Springs Ranch Wells in the Widefield Aquifer

The Clear Springs wells have been used continuously by Security for more than 50 years pursuant to leases with Colorado Springs Utilities and its predecessors. This pumping has been limited to 600 acre-feet per year, with all augmentation in the past provided by CSU. Under the current lease, dated December 12, 2012, use of the water by Security will continue for an additional term of 25 years, expiring on December 31, 2037, and with further renewals of the lease possible thereafter if agreed to by the parties at that time.

Under the current lease, however, water to replace well depletions is provided by Security. Replacement is provided under Security's augmentation plan decreed in Case No. 12CW99.

2.6 Security's Wells in the Windmill Gulch Aquifer

In the Windmill Gulch Aquifer located east of the Widefield Aquifer, Security owns five wells, W-8 through W-12, which were originally decreed in Case No. W-400. Pursuant to an agreement with Widefield Water and Sanitation District, Widefield supports annual pumping of 200 acre-feet per year under its augmentation plans. Any pumping in excess of 200 acre-feet per year is covered by Security's augmentation plan. The Water Court determined in 1989 (Case No. 81CW229) that pumping at the Windmill Gulch Wells has a minimal effect on water supplies in the Widefield Aquifer, thereby excluding the wells from the Widefield Aquifer stipulation. For planning purposes, the reliable yield of the Windmill Gulch Wells is estimated to be 240 acre-feet per year.

3.0 FRY-ARK PROJECT WATER AND RETURN FLOWS

The U.S. Bureau of Reclamation constructed the Fry-Ark Project for the purpose of providing supplemental water supplies to irrigation and municipal water users in the Arkansas River Basin in Colorado. The primary source of water for the Fry-Ark Project is water that is diverted from various headwater tributaries of the Colorado River and delivered into the Arkansas River Basin. The Fountain Valley Authority was organized as an entity to be responsible for construction and operation of pump stations, the Fountain Valley Conduit, and a water treatment plant for delivery of Fry-Ark Project water from Pueblo Reservoir on the Arkansas River to municipal water users in the Colorado Springs area. Security is entitled to take delivery of 1,646 acre-feet per year of Fry-Ark Project water through the Fountain Valley Conduit, subject to availability of that much water produced by the Project and subject to payment of annual water delivery charges, storage charges, and conveyance and water treatment losses of about five percent. Therefore, the net volume of water deliverable to Security is estimated to be a maximum of about 1,564 acre-feet per year (1,646 acre-feet per year reduced by five percent).

Because of limitations of the Fry-Ark Project yield in drought years, an average of roughly 1,042 acre-feet per year delivered through the Fountain Valley Conduit (2/3 of the 1,564 acre-feet per year net delivery) is derived from Fry-Ark Project water stored in Pueblo Reservoir. The remaining 521 acre-feet per year (1/3 of the 1,564 acre-feet per year net delivery) is supplied through the Fountain Valley Conduit from Security's other fully consumable sources stored in Pueblo Reservoir. This water is used directly in Security's water system for municipal purposes as a base-load supplemental supply.

3.1 Fry-Ark Project Return Flows

After municipal use of the Fry-Ark Project water by Security, a significant portion of the water returns to Fountain Creek in the form of treated sewage effluent and lawn irrigation return flows. Because the source of Fry-Ark Project water is almost entirely a transbasin diversion from the headwaters of the Colorado River Basin, the return flows to Fountain Creek from Fry-Ark Project deliveries constitute a new source of water to the stream

system, and the return flows are available for reuse and as a replacement source in Security's augmentation plans. More specifically, the Fry-Ark return flows are used to replace depletions associated with Security's out-of-priority pumping of wells in the Widefield Aquifer and Windmill Gulch Aquifer. Alternately, the Fry-Ark return flows are delivered to Security's Long-Term Excess Capacity Storage space in Pueblo Reservoir (discussed in Section 5.0 of this report) by exchange or by contract trade. Security was granted the right to annually purchase the return flows associated with its Fry-Ark Project water deliveries, under a perpetual contract. Security's decreed augmentation plan in Case No. 90CW28 set up a water accounting system that provided for calculation of the Fry-Ark Project wastewater return flow volumes on a daily or weekly basis. Quantification of the lawn irrigation return flow amount was decreed in Case No. 01CW149.

3.2 Fry-Ark Project Storage Capacity

The Fountain Valley Authority was granted storage space in Project facilities, notably including Pueblo Reservoir, to provide for storage of Fry-Ark Project water. Such storage is needed in order to regulate the supply to provide for year-round delivery of such Project water to the Fountain Valley Authority participants. Security's share of the Fountain Valley Authority's storage space at Pueblo Reservoir is 6,387 acre-feet, and this space can only be used for storage of Project water. This space is typically replenished each year with Project water to the extent that the Fountain Valley Authority's share of Fry-Ark Project deliveries can provide sufficient water to provide a complete refill. During drought years, when Fry-Ark diversions from the Western Slope are poor, only a relatively small amount of water is available pursuant to the Fountain Valley Authority's share of Fry-Ark Project deliveries. Replenishment of the storage accounts in such drought years can be inadequate to provide for a complete fill, resulting in year-to-year drawdowns of water within those accounts. Security's 6,387 acre-feet share of storage capacity at Pueblo Reservoir is therefore used to provide carry-over storage during years of extended drought, which is an important feature to ensure that the annual deliveries of Project water for Security's municipal use can continue during such critical periods.

4.0 SECURITY'S FULLY CONSUMABLE WATER SOURCES

A summary of the fully consumable water sources available to Security is presented in the attached Table No. 2, and each fully consumable source is described below. These sources are used for augmentation purposes to replace out-of-priority well depletions, to support deliveries through the Fountain Valley Conduit in excess of the Fry-Ark Project water deliveries, and to support deliveries through the Southern Delivery System. The augmentation sources available for use by Security total approximately 1,702 acre-feet per year. As further described below, this total excludes the available water supply attributable to Security's Fountain Creek Priority No. 4 water right and Super Ditch Project deliveries.

Fountain Creek Priority No. 4. Security's augmentation plan in Case No. W-4212 permits the annual withdrawal of 2,000 acre-feet per year from wells in the Widefield Aquifer. The replacement source used in this augmentation plan is a portion of the Fountain Creek Priority No. 4 senior water right in the Fountain Mutual Ditch, totaling 481 acre-feet per year of consumptive use credit. The winter depletions associated with operation of the augmentation plan are replaced by leaving 102 acre-feet of Fry-Ark Project return flows in Fountain Creek during January 1 through March 17. The Priority No. 4 water right is excluded from the total in Table No. 2 because the consumptive use credit is accounted for by the 2,000 acre-feet of well pumping authorized in Case No. W-4212.

Fry-Ark Project Return Flows. As described in Section 3.1 above, Security was granted the right to annually purchase the return flows associated with its Fry-Ark Project deliveries. Security's decreed augmentation plan in Case No. 90CW28 includes a credit for sewered Fry-Ark Project return flows, to the extent that Security has purchased such return flow rights. Credit for the non-sewered portion of the Fry-Ark Project return flows was approved in Case No. 01CW149. The purchased Fry-Ark return flows are available for augmentation of Security's wells or for storage in Pueblo Reservoir.

Fountain Mutual Irrigation Company Shares. Security currently owns 723 shares of stock in the Fountain Mutual Irrigation Company (FMIC). The 723 shares of FMIC water represent an interest in a number of direct flow and storage water rights that have historically been used for irrigation of lands in the vicinity of Security's service area. The underlying water rights represented by 637 FMIC shares were changed by Security for municipal and augmentation uses in Case Nos. 90CW28, 01CW149, 07CW51, or 12CW99. The consumptive use credit associated with the 637 changed FMIC shares is available for augmentation of Security's wells or for storage in Big Johnson Reservoir and Pueblo Reservoir. The consumptive use credit for these shares averages 0.7 acre-foot per share, or a total of 446 acre-feet per year for Security's 637 changed shares.

Security recently acquired the remaining 86 FMIC shares and has not yet changed these shares for municipal and augmentation uses. The Water Court has approved changes of FMIC shares in numerous other cases, so approval of these shares under similar terms and conditions is anticipated, providing an average of 0.7 acre-foot per share or a total of 60.2 acre-feet per year for these 86 shares.

Water diverted pursuant to Security's changed FMIC shares is measured and discharged back to Fountain Creek at the Spring Creek and McRae augmentation stations. Ownership of these FMIC shares also entitles Security to use of a pro-rata portion of the storage capacity in Big Johnson Reservoir. Recent improvements to Big Johnson Reservoir have restored part of the reservoir capacity that had previously silted in, making the FMIC shares an increasingly reliable augmentation supply in all years.

Chilcott Ditch. Security currently owns 11.25 shares in the Chilcott Ditch Company, consisting of Fountain Creek Priorities 27 and 39. The decree in Case No. 06CW119 changed 10.25 shares for municipal and augmentation uses by Security, representing an average of 252 acre-feet per year of consumptive use credit available for augmentation purposes or delivery for storage in Pueblo Reservoir. Upon adjudication of a change of water rights and augmentation plan incorporating the additional share, the total consumptive use credit will increase to an average of 277 acre-feet per year. Water

diverted pursuant to Security's changed Chilcott Ditch shares is measured and discharged back to Fountain Creek at the Chilcott Ditch augmentation station.

Lock Ditch. Security adjudicated an augmentation plan in Case No. 06CW117 that includes an average of 159 acre-feet per year of consumptive use credit in the Lock Ditch, consisting of Fountain Creek Priorities 15 and 22. The consumptive use credit associated with the Lock Ditch water rights is available for augmentation purposes or for storage in Pueblo Reservoir. Water diverted pursuant to Security's changed Lock Ditch water rights is measured and discharged back to Fountain Creek at the Chilcott Ditch augmentation station.

Hayden Ranch. Security acquired several water rights along Hayden Creek, a small tributary of the Arkansas River near the small community of Coaldale, located between Salida and Canon City. These water rights were changed to allow municipal and augmentation uses by Security in Case No. 16CW3055. The consumptive use credit for the Hayden Ranch water rights is an average of 207.2 acre-feet per year. After a transit loss of around 5.1 percent to Pueblo Reservoir, the net deliverable amount at Pueblo Reservoir for conveyance through the Fountain Valley Conduit is an average of approximately 197 acre-feet per year.

Twin Lakes Shares. Security currently owns 14 shares of the Twin Lakes Reservoir and Canal Company (Twin Lakes). The total volume of water attributable to Security's Twin Lakes shares, including both the native and transbasin components of this supply, can be conveyed to Security through the Fountain Valley Conduit. In addition, the transbasin component of Security's Twin Lakes deliveries (and the return flows from such deliveries) can be applied for augmentation purposes pursuant to Security's augmentation plan decreed in Case No. 16CW3055. The total firm yield of Twin Lakes shares (both native and transbasin components) is approximately 0.78 acre-feet per year per share, or 10.9 acre-feet per year for Security's 14 shares. The firm yield of the transbasin component is approximately 0.73 acre-feet per year per share, or approximately 10.2 acre-feet per year for Security's 14 shares. After a transit loss of around 10.0 percent from Twin Lakes Reservoir to Pueblo Reservoir, the total net yield at Pueblo Reservoir is approximately 9.8

acre-feet per year, and the net yield for the transbasin component is approximately 9.2 acre-feet per year.

Super Ditch Project. Security is a participant in the proposed Super Ditch Project, a cooperative water resources project that may include numerous irrigation ditch companies and water users in the Arkansas River Basin east of Pueblo, based on the concept of rotational fallowing of irrigated areas, and focused on the goal of providing supplemental water supplies for municipal water providers. Such water will be stored in appropriate storage space in Pueblo Reservoir after exchange into Pueblo Reservoir by Super Ditch, then delivered through the Fountain Valley Conduit to Security.

In recent years, Security has received deliveries from the Super Ditch pilot project pursuant to a temporary agreement with Super Ditch. Security is presently negotiating a long-term delivery agreement with Super Ditch, so the specific timing and quantities for future Super Ditch Project deliveries have not been identified at this time. Accordingly, Security's water supply yield from the Super Ditch Project has not been determined in this report and has been excluded from the total in Table No. 2, but the water supply attributable to this source can be incorporated into future water supply planning efforts.

5.0 SOUTHERN DELIVERY SYSTEM AND PUEBLO RESERVOIR STORAGE CAPACITY

Security participated with Colorado Springs Utilities, the City of Fountain, and Pueblo West Metropolitan District for construction of the Southern Delivery System (SDS), which is a new pipeline project that physically delivers additional water supplies from Pueblo Reservoir to these entities. The project was completed in 2016 and includes a connection to the outlet works of Pueblo Reservoir, pump stations, approximately 47 miles of 66-inch diameter pipeline, and a new water treatment plant. Security's share of capacity in SDS is 930 acre-feet per year of treated water delivered to Security's municipal water system. The primary source of water for Security's SDS supply is Security's Fry-Ark Project water and Fry-Ark Project return flows after initial use in Security's water system. These return flows are delivered to Pueblo Reservoir by exchange in cooperation with the Southeastern Colorado Water Conservancy District.

5.1 SDS Project Storage Capacity in Pueblo Reservoir

Security's participation in the SDS Project includes 1,500 acre-feet of Long-Term Excess Capacity Contract storage space in Pueblo Reservoir. The SDS Project Contract storage space is also informally known as "Long-Term" storage space. Water stored in this space is used as the actual physical source of water that is delivered through the outlet works of Pueblo Reservoir into the SDS Pipeline. This storage space for Fry-Ark Project return flows has been phased-in under a long-term contract with the Bureau of Reclamation, negotiated in 2010, pursuant to the following schedule:

2015-2016	750 ac-ft
2017-2018	1,000 ac-ft
2019-2020	1,250 ac-ft
2021 and thereafter	1,500 ac-ft

5.2 Southeastern District Master Contract Storage Capacity in Pueblo Reservoir

Security delivers water from other fully consumable sources to storage in Pueblo Reservoir, including consumptive use credits attributable to its FMIC, Chilcott Ditch Company, Lock Ditch, and Super Ditch water sources. Security entered into a Master Contract with the Southeastern Colorado Water Conservancy District and the Bureau of

Reclamation that provides Security up to 1,500 acre-feet of Excess Capacity storage space in Pueblo Reservoir. At this time, Security has 250 acre-feet of Excess Capacity storage space available under the Southeastern District Master Contract, but the agreement allows this amount to be increased up to 1,500 acre-feet. This storage space is also informally known as "If-and-When" storage space. Security's FMIC, Chilcott Ditch Company, Lock Ditch, and Super Ditch sources can be stored in this storage space.

5.3 Operation of Pueblo Reservoir Storage Capacity

A summary of Security's storage accounts in Pueblo Reservoir is provided below.

DESCRIPTION	STORAGE CAPACITY (acre-feet)
Storage capacity for Security's Fry-Ark Project water under the auspices of the Fountain Valley Authority.	6,387
Excess Capacity storage space under a 2010 contract for Security's participation in the Southern Delivery System. Currently limited to storage of Fry-Ark Project return flows.	1,500
Excess Capacity storage space under 2016 Southeastern District Master Contract, for storage of FMIC, Lock, Chilcott, and Super Ditch water rights.	1,500
Total	9,387

The SDS Project Contract storage space and Southeastern District Master Contract storage space at Pueblo Reservoir are operated to (1) provide deliveries of Fry-Ark Project water and Fry-Ark Project return flows from Pueblo Reservoir through the SDS and (2) supplement deliveries of Fry-Ark Project water (together with Security's other fully consumable stored water) through the Fountain Valley Conduit. The supplemental deliveries through the Fountain Valley Conduit ensure that a full 1,564 acre-feet can be delivered to Security from the Fountain Valley Conduit each year during a long series of drought years when Security's 6,387 acre-feet of Fry-Ark Project storage (discussed in Section 3.2 of this report) might otherwise be emptied. The SDS Project Contract and Southeastern District Master Contract storage accounts can be periodically replenished from Security's Fry-Ark return flows, FMIC, Chilcott Ditch Company, Lock Ditch, and Super Ditch sources, all to the extent that such water sources are surplus to the replacement of depletions associated with operation of Security's wells.

5.4 Deliveries through Colorado Springs Interconnection

To help address contamination of Security's groundwater supply, Security purchased deliveries from a new interconnection with Colorado Springs's distribution system during 2017 through 2020. Security and Colorado Springs are presently finalizing a short-term agreement under which Security could continue using the Colorado Springs interconnect on an interruptible basis. This proposed agreement would be effective for one year and renewable for a total term of three years (through 2023). Pursuant to this agreement, Security plans to use the Colorado Springs interconnect as an emergency delivery alternative to the Fountain Valley Conduit and Southern Delivery System. In other words, the interconnect would be available for Security to continue receiving deliveries from Pueblo Reservoir if the Fountain Valley Conduit or Southern Delivery System is not available.

6.0 WIDEFIELD AQUIFER RECHARGE PROJECT

Security is planning the long-term future development of a project for recharge of the Widefield Aquifer to enhance Security's overall water supply known as the WARA Project. It is anticipated that this project will be a joint effort by Security, Widefield Water and Sanitation District, and the City of Fountain. Water used for recharge by Security will consist of replacement water available from FMIC shares, Fry-Ark return flows, Lock Ditch, and Chilcott Ditch water rights. The water rights aspects of the exchange and recharge plan were decreed in Case No. 01CW149.

Under the first phase of this project, decreed recharge sources will be treated to improve water quality and then recharged into the Widefield Aquifer at existing converted wells or new wells to be constructed for this purpose. The locations of the recharge and recovery wells will be determined in accordance with the Widefield Aquifer computer model, which was approved in the Widefield Aquifer Stipulation and by the Water Court in Case No. W-116. In accordance with the Stipulation, Security, Widefield, and Fountain will then withdraw the recharged water from the Widefield Aquifer through their well fields for use in their respective water systems.

In order to optimize the recharge and recovery of water in the Widefield Aquifer, Widefield, Security, and Fountain are planning the joint construction of facilities, including water storage and treatment facilities, transmission pipelines, and recharge wells. A key aspect of the project includes transient storage of recharged water within the Widefield Aquifer, which will allow for recharge at a relatively constant basis throughout the year and withdrawals delayed on a time-step basis that is more directly linked to seasonal municipal demands.

Security has obtained the necessary Water Court approval for this project, and Security has completed an agreement with the Fountain Mutual Irrigation Company that includes the consent of that Company for diversion of water for this project and the delivery of such water through the Company's facilities. Therefore, the water rights required for this project are assured.

7.0 WATER SYSTEM YIELD

The water system yield available to Security was calculated by evaluating the physical availability of water at Security's delivery facilities, together with the fully consumable water sources that can be used to support such deliveries on a reliable basis.

7.1 Current and Near-Term Water System Yield

A summary of the water supply presently available to Security on a firm annual basis is presented in the attached Table No. 3. As shown on Table No. 3, the calculated current and near-term water system yield is **5,434 acre-feet per year**. These calculations assume that the water treatment facility for Security's wells comes online and Security resumes operation of its wells.

Taking into account the production of return flows from Security's municipal uses, we estimate that approximately 2.0 acre-feet of water deliveries from Security's wells can be produced from each acre-foot of fully consumable water used for augmentation of the well deliveries. We also estimate that approximately 1.5 acre-feet of water deliveries from Pueblo Reservoir can be produced from each acre-foot of fully consumable augmentation supplies. These factors were estimated by the evaluating both (1) the replacement requirements associated with the well diversions to Security's municipal system, as determined under Security's decreed augmentation plans, and (2) the volumes of fully consumable supplies that are delivered to Pueblo Reservoir, conveyed to Security's municipal system, and successively used to extinction (by delivery of the return flows attributable to these deliveries back to Pueblo Reservoir and Security's municipal system). The greater requirement for fully consumable supplies to support Pueblo Reservoir deliveries is due to evaporation losses at Pueblo Reservoir and transit losses as water rights are delivered for storage in Pueblo Reservoir by exchange or trade.

The volume of water physically available at Security's delivery facilities is approximately 6,273 acre-feet per year. This level of supply, however, would require approximately 1,859 acre-feet per year of fully consumable water, which exceeds the 1,702 acre-feet per year of fully consumable supplies identified in Table No. 2. As a result, Security's current

and near-term water system yield is limited by the available fully consumable supplies. Specifically, the 1,702 acre-feet of fully consumable supplies presently available to Security can support approximately 6,038 acre-feet per year of physical deliveries to Security. Applying a 10 percent contingency for climate change or other future reductions to Security's water supplies results in the calculated water system yield of 5,434 acre-feet per year.

The 5,434 acre-feet per year of annual water supply is a reasonably firm figure for current water supply planning purposes because Security has acquired the appropriate water rights to support this water supply and the scheduled completion of the water treatment facility for Security's wells is considered to be firm for water supply planning purposes. It is a complex matter to evaluate average and drought cycle yields of water supply sources, while also evaluating the carry-over storage in the Fountain Valley Authority accounts and Long-Term Excess Capacity storage at Pueblo Reservoir. Therefore, the specific estimate herein of Security's water system yield is subject to continuing analysis and revision.

7.2 Long-Term Future Water Supply

If Security acquires additional fully consumable supplies (including potential Super Ditch deliveries), extends the Clear Springs wells lease, and develops the Widefield Aquifer Recharge Project, the long-term yield of Security's water system could be increased above the current and near-term yield. The calculated long-term future water system yield is summarized below.

	Annual Yield (acre-feet)
Current and near-term physical supply (from Table 3)	6,273
Potential decrease if the Clear Springs wells lease is not extended after 2037	-600
Potential increase from Widefield Aquifer Recharge Project	+725
Total[1]	5,673 to 6,998
Total with 10 Percent Contingency	5,106 to 6,298

[1]The lower end of this range (5,673 acre-feet per year) equals the current and near-term physical supply (6,273 acre-feet per year) minus the leased supply from the Clear Springs wells (600 acre-feet per year). The upper end of this range (6,998 acre-feet per year) equals the current and near-term physical supply (6,273 acre-feet per year) plus the potential supply from the Widefield Aquifer Recharge Project (725 acre-feet per year).

As mentioned above, the long-term future supply to be provided by Security's water system is dependent on numerous factors, including the acquisition of additional fully consumable water supplies, extension of the Clear Springs wells lease after 2037, and development of the Widefield Aquifer Recharge Project. The long-term water supply developable for Security is an approximate figure that is subject to re-evaluation in the future as Security's water system matures and as planning for specific water supply projects moves forward.

8.0 WATER QUALITY

Prior to 2016, the water quality of the Widefield Aquifer and Windmill Gulch Aquifer generally met all state and federal drinking water standards after appropriate disinfection conducted at Security's wells. As an exception to this general condition, two of Security's wells, S-10 and S-14, have had concentrations of tetrachloroethene (PCE) greater than the maximum contamination level permitted by the Safe Drinking Water Act regulations. The main sources of contamination were identified, and remediation plans were implemented. Water treatment plants have been constructed for removal of PCE from these wells, bringing the system into water quality compliance with respect to PCE.

As mentioned in Section 1.0 above, Security's wells exceeded the EPA and CDPHE lifetime health advisory levels for PFASs starting in 2016. As a result, Security has relied entirely on surface water supplies delivered from Pueblo Reservoir and on purchased deliveries from Colorado Springs's distribution system during 2016 through 2020. The water treatment facility to address PFASs from Security's groundwater supply is scheduled to come online in early 2021. Operation of this treatment facility is expected to lower the PFASs from Security's wells below the lifetime health advisory levels, and Security plans to resume operation of its wells when the water treatment plant comes online. Security's operations during 2016 through 2020 highlighted the importance of maintaining redundant sources of supply to address contamination of Security's groundwater supplies.

Water quality of the Fry-Ark Project water and other supplies delivered from Pueblo Reservoir is good, meeting all state and federal drinking water regulations. Because the Fry-Ark Project and other fully consumable water from Pueblo Reservoir is derived from a surface streamflow source, treatment provided by the Fountain Valley Authority and Southern Delivery System facilities includes filtration and disinfection.

Maintenance of appropriate water quality in the Widefield Aquifer is a critically important aspect of the proposed Widefield Aquifer Recharge Project. Prior to recharge of water into the aquifer, Security will pre-treat the water to achieve consistency with chemical

standards of groundwater to be used as a drinking water source. Security will comply with all applicable state and federal regulations for recharge of water into aquifers.

9.0 SECURITY WATER DEMAND

As of late 2020, there were approximately 7,823 water service connections within Security's service area. Water use demand has been generally declining in recent years because there has been relatively minor growth in Security's service area and water conservation practices within the service area have become more established. Over the past ten years, Security's historical water demand has ranged from approximately 2,534 acre-feet per year to 3,542 acre-feet per year, as summarized in Table No. 4, with an average of 2,934 acre-feet per year. For planning purposes, Security's current water demand is considered to be the highest annual value during the past ten years, or 3,542 acre-feet per year.

Security's future anticipated water demand is summarized in Table No. 5. These calculations indicate that Security has made commitments to serve development totaling approximately 574 acre-feet per year. When added to the current water demand, the future demand commitments are equal to approximately 4,116 acre-feet per year.

Security estimates that the additional water demands to serve other specific developments within its service area could total 395 acre-feet per year within the foreseeable future. Including an additional 10 percent contingency for water supply planning purposes, the total future water demand could be approximately 5,000 acre-feet per year.

10.0 AVAILABILITY OF WATER TO SUPPORT ADDITIONAL DEMANDS

A comparison is presented below of Security's water supply and water demands.

	ANNUAL VOLUME (acre-feet)
Water Supply	
Current and near-term water supply (with 10% contingency)	5,434
Long-term future water supply (with 10% contingency)	5,106 to 6,298
Water Demand	
Current water demand	3,542
Current water demand plus commitments for future water service	4,116
Future foreseeable water demand	4,511
Future foreseeable water demand, plus 10% contingency	5,000
Surplus Water Supply	
Current and near-term water supply compared with current water demand	1,892
Current and near-term future water supply compared with future expected demand (with 10% contingency)	434

As summarized above, Security currently has approximately 1,892 acre-feet per year of surplus water supply, based on a comparison of the current water supply (including a 10 percent contingency) and the current water demand. There is a surplus of approximately 434 acre-feet per year between the current and near-term future water supply and the foreseeable future expected water demand, including a 10 percent contingency. Security plans to apply the excess supply to provide for additional drought protection, redundancy, and reliability within its water system. It is our opinion that maintaining the surplus supply

for these purposes is an appropriate, standard, and prudent water resources planning practice, particularly considering the uncertainty of climate change impacts and Security's vulnerabilities to increased groundwater contamination and to delivery infrastructure issues with the Fountain Valley Conduit and SDS. The Fountain Valley Conduit and the SDS deliveries are each made through single pipeline systems.

11.0 SUMMARY AND CONCLUSIONS

Security has developed an extensive and reliable portfolio of water supply sources and water rights. Security obtains its water supply from numerous wells, mostly located in the Widefield Aquifer near Security's service area. Such groundwater supplies are supplemented by Fry-Ark Project water and Fry-Ark Project return flows stored in Pueblo Reservoir and delivered to Security through the Fountain Valley Conduit and Southern Delivery System. Security also obtains its water supply from other fully consumable water sources delivered from Pueblo Reservoir through the Fountain Valley Conduit. Security's water rights include a complex system of decrees, well permits, and agreements.

In recent years, Security has acquired senior water rights in the Fountain Mutual Irrigation Company, Lock Ditch, Chilcott Ditch Company, and on the Hayden Ranch, which have been changed for municipal and augmentation use. Security has also acquired additional shares in the Fountain Mutual Irrigation Company and the Chilcott Ditch Company that are subject to future changes to allow municipal use and augmentation use by Security. Security also participated with Colorado Springs Utilities, the City of Fountain, and Pueblo West Metropolitan District for construction of the Southern Delivery System. Security's participation in the SDS Project includes Long-Term Excess Capacity Contract storage space in Pueblo Reservoir to support the SDS deliveries. Security also joined with the Southeastern Colorado Water Conservancy District and numerous other municipal water supply entities in a Master Contract for Long-Term Excess Capacity storage space in Pueblo Reservoir. All of these activities have enhanced Security's ability to provide augmentation for its wells in the Widefield Aquifer and the Windmill Gulch Aquifer, to provide water deliveries from Pueblo Reservoir through the Fountain Valley Conduit and the Southern Delivery System, to diversify and enhance the reliability of its water supply, and to make diversions from Fountain Creek for a planned aquifer recharge project.

Security's current water demand is 3,542 acre-feet per year, compared with a current and near-term available water supply of 5,434 acre-feet per year (including a 10 percent contingency), resulting in a current surplus supply of approximately 1,892 acre-feet per

year. Security's foreseeable future water demand, including a 10 percent contingency, is approximately 5,000 acre-feet per year. Therefore, Security's current and near-term future water supply will exceed its future foreseeable water demand by approximately 434 acre-feet per year.

In conclusion, Security has adequate water supplies and water rights to meet its current water demand, plus its commitments for future water service. Security's surplus near-term water supplies will provide greater levels of drought protection, redundancy, and reliability within its water system. The surplus is necessary to protect against climate change impacts, infrastructure issues with the Fountain Valley Conduit and Southern Delivery System, and increased contamination of Security's wells.

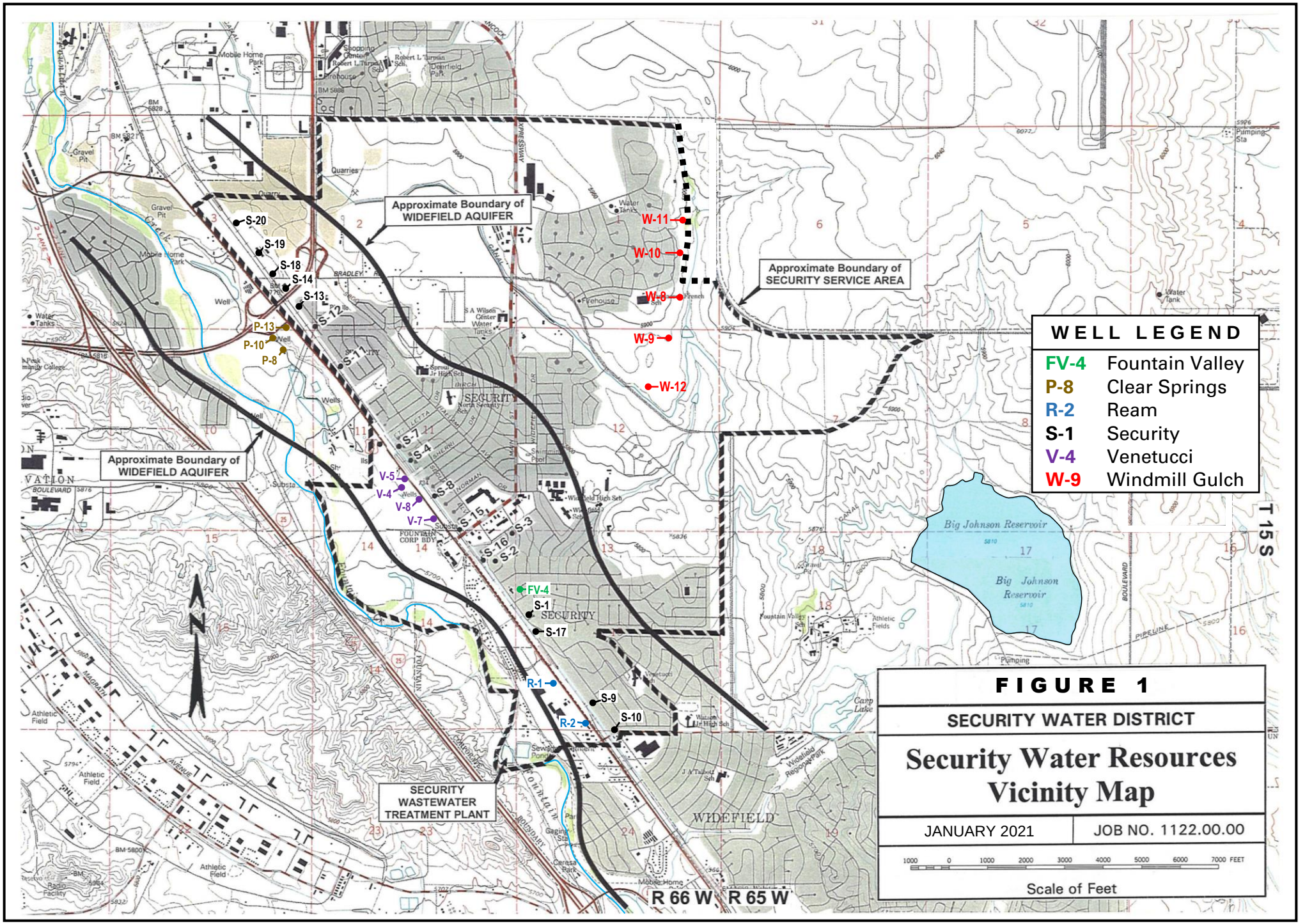

Approximate Boundary of WIDEFIELD AQUIFER
Approximate Boundary of SECURITY SERVICE AREA
Approximate Boundary of WIDEFIELD AQUIFER
SECURITY WASTEWATER TREATMENT PLANT
S-20
S-19
S-18
S-14
S-13
S-12
P-13
P-10
P-8
S-11
S-7
S-4
S-8
S-15
S-3
S-16
S-2
V-5
V-4
V-8
V-7
W-11
W-10
W-8
W-9
W-12
FV-4
S-1
S-17
R-1
S-9
R-2
S-10
SECURITY
WIDEFIELD
Big Johnson Reservoir
Big Johnson Reservoir
T 15 S
R 66 W
R 65 W
WELL LEGEND
FV-4 Fountain Valley
P-8 Clear Springs
R-2 Ream
S-1 Security
V-4 Venetucci
W-9 Windmill Gulch
FIGURE 1
SECURITY WATER DISTRICT
Security Water Resources Vicinity Map
JANUARY 2021
JOB NO. 1122.00.00
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
Scale of Feet

TABLE 1
WELLS USED IN SECURITY'S WATER SYSTEM

WELL NAME	PERMIT NO.	DECREE	PERMIT RATE (gpm)	DECREED RATE (gpm)
WIDEFIELD AQUIFER WELLS				
S-1	20490F	W-112	507	507
S-2	20491F	W-112	925	925
S-3	45820F	W-112	326	326
S-4	20492F	W-112	1,100	1,100
S-7	20493F	W-112	1,010	1,010
S-8	20494F	W-112	961	961
S-9	20495F	W-112	651	651
S-10	20496F	W-112	350	350
S-11	45821F (28724RF)	W-112	925	925
S-12	45822F	W-112	709	709
S-13	2382F	W-112	550	898
S-14	2383F	W-112	800	611
S-15	45823F	W-112	830	830
S-16	20497F	W-112	552	552
S-17	4844F	W-112	850	539
S-18	41748F	90CW28	675	675
S-19	41749F	90CW28	675	675
S-20	41750F	90CW28	675	611
Ream 1	4962F	W-3174	1,000	2,272
Ream 2	5022F	W-3174	1,000	3,161
FV-4	42031F (20529S)	W-347	650	642
Camden #1	18378R	W-1551	450	800
Bender 1	18291F	W-664, 81CW225		630
Bender 2	7800F	W-664, 81CW225		1,350 927 (cond.)
45% Interest in Production from the Following Wells:				
V-4	18664R	W103-W111		1,250
V-5	17490U	W103-W111		1,250
V-7	4869F	W103-W111		1,200
V-8	4907F	W103-W111		1,150
Clear Springs Ranch Wells leased from Colorado Springs Utilities:				
P-8	77072-F	W-116, 12CW99		1,790
P-10	77073-F	W-116, 12CW99		1,800
P-13	77074-F	W-116, 12CW99		1,300
WINDMILL GULCH AQUIFER WELLS				
W-8	46011F (20663R#2)	W-400	1,000	1,000
W-9	46012F (20663R#5)	W-400	760	760
W-10	20663R#3	W-400	700	700
W-11	20663R#4	W-400	300	300
W-12	20663RR#1	W-400	300	300

Table 2
Security Fully Consumable Water Sources
(values in acre-feet per year)

	Description of Fully Consumable Water Source	Average-Annual Amount
1	1.73 cfs of Fountain Creek Priority No. 4	481
2	Sewered return flows from Security's use of Fry-Ark Project water	473
3	Non-sewered return flows from Security's use of Fry-Ark Project water	81
4	637 Fountain Mutual Irrigation Company Shares	446
5	86 Fountain Mutual Irrigation Company Shares	60
6	10.25 Chilcott Ditch Shares	252
7	1 Chilcott Ditch Share	25
8	Lock Ditch	159
9	Hayden Ranch	197
10	14 Twin Lakes Shares (tranbasin component)	9
11	Super Ditch Project deliveries	Not Included
12	Total Exclulding Priority No. 4 and Super Ditch	1,702

Notes:

1 The consumptive use credit associated with this water right is the replacement source in Security's augmentation plan decreed in Case No. W-4212.
2 Quantified in Security's augmentation plan decreed in Case No. 90CW28. The above amount is based on the average Project Water deliveries to Security (1,042 acre-feet per year).
3 Quantified in Security's augmentation plan decreed in Case No. 01CW149. The above amount is based on the average Project Water deliveries to Security (1,042 acre-feet per year).
4 Changed by Security for municipal and augmentation uses in Case Nos. 90CW28, 01CW149, 07CW51, or 12CW99.
5 These shares have not yet been changed by Security for municipal and augmentation uses.
6 Changed by Security for municipal and augmentation uses in Case No. 06CW119.
7 This share has not yet been changed by Security for municipal and augmentation uses.
8 Changed by Security for municipal and augmentation uses in Case No. 06CW117.
9 Changed by Security for municipal and augmentation uses in Case No. 16CW3055. The above amount is reduced by transit losses from the Hayden Ranch to Pueblo Reservoir.
10 Transbasin component included in Security's augmentation plan in Case No. 16CW3055. The above amount is reduced by transit losses from Twin Lakes Reservoir to Pueblo Reservoir.
11 Security is presently negotiating a long-term delivery agreement with Super Ditch. Specific timing and quantities for future Super Ditch Project deliveries have not been identified at this time.
12 The Priority No. 4 water right is excluded from the total because the consumptive use credit is accounted for by the 2,000 acre-feet of well pumping authroized in Case No. W-4212.

Table 3
Security Current and Near-Term Future Water System Yield
(values in acre-feet per year)

		A	B	C
	Water Supply Source	**Annual Physical Supply Amount**	**Security Fully Consumable Water Required**	**Cumulative Fully Consumable Water Required**
1	Fry-Ark Project Water through Fountain Valley Conduit	1,042	0	0
2	Other Fully Consumable Water through Fountain Valley Conduit	521	347	347
3	Widefield Aquifer Wells, Case No. W-4212	2,000	102	449
4	Widefield Aquifer Wells, other cases	343	172	621
5	Windmill Gulch Wells Augmented by Widefield	200	0	621
6	Windmill Gulch Wells Augmented by Security	40	20	641
7	Venetucci Wells	596	298	939
8	Leased Clear Springs Wells	600	300	1,239
9	Southern Delivery System	930	620	1,859
10	Subtotal	6,273	1,859	
11	**Water Supply Yield Limited by Available Fully-Consumable Supplies**	6,038	1,702	
12	**Water Supply Yield with 10 Percent Contingency**	5,434		

Column Notes:

A Annual supply that is physically available for delivery to Security, assuming that the water treatment facility to address PFASs from Security's wells comes online and Security resumes operation of its wells.
B Annual amount of Security's fully consumable water to support the delivery amounts in Column A. Wheeler estimates that approximately 2.0 acre-feet of water deliveries from Security's wells can be produced from each acre-foot of fully consumable water. Wheeler estimates that approximately 1.5 acre-feet of water deliveries from Pueblo Reservoir can be produced from each acre-foot of fully consumable water.
C Cumulative total for Column B.

Row Notes:

1 For the Fry-Ark Project, limitations of the yield of the Western Slope water rights cause the average annual yield to be limited to roughly two-thirds of the 1,646 acre-feet per year delivered through the Fountain Valey Conduit, for an actual yield of about 1,097 acre-feet per year. After five percent transmission and treatment loss, the net Fountain Valley Conduit delivery amount attributable to Fry-Ark Project water is approximately 1,042 acre-feet per year.
2 The remaining 549 acre-feet per year delivered through the Fountain Valley Conduit is supplied out of Security's other fully consumable sources stored at Pueblo Reservoir. After five percent loss, the net delivery amount is approximately 521 acre-feet per year.
3 Depletions from well diversions under the Case No. W-4212 augmentation plan are replaced by Security's 1.73 cfs interest in the Priority No. 4 water right, except for 102 acre-feet of depletions during the winter.
4 Diversions exceeding the 2,000 acre-feet per year under the Case No. W-4212 augmentation plan. These wells can temporarily pump an additional 10 percent from the Widefield Aquifer, but such additional pumping is conservatively excluded from this table because it is unknown if the increased pumping allowance will be permanent.
5 The initial 200 acre-feet per year of Security's diversions from the Windmill Gulch wells is augmented by Widefield Water and Sanitation District.
6 Diversions from the Windmill Gulch Aquifer exceeding the 200 acre-feet per year augmented by Widefield Water and Sanitation District.
7 Venetucci Wells diversions by long-term lease with the Pikes Peak Community Foundation. These wells can temporarily pump an additional 10 percent from the Widefield Aquifer, but such additional pumping is conservatively excluded from this table because it is unknown if the increased pumping allowance will be permanent.
8 The Clear Springs wells are leased from Colorado Springs Utilities for a term that extends through December 31, 2037.
9 Security's share of capacity in SDS is 930 acre-feet per year of treated water delivered to Security's municipal water system. The primary source of fully consumable water for Security's SDS supply is Security's Fry-Ark return flows stored in Pueblo Reservoir.
10 Sum of Row Nos. 1 through 9. The physically available supply of 6,843 acre-feet per year would require approximatley 2,239 acre-feet per year of fully cocnsumable water, which exceeds the fully consumable supplies presently available to Security.
11 Water supply deliveries that can be supported by the fully consumable supplies presently available to Secuirty (1,702 acre-feet per year identfied in Table No. 2).
12 Column No. 11 reduced by ten percent contingency for reduction in yield due to climate change or other future conditions.

TABLE 4
SECURITY TOTAL HISTORICAL WATER DEMAND
(Values in Acre-Feet)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2010	132	117	132	204	373	512	481	391	457	357	138	140	3,434
2011	138	142	161	233	383	537	450	410	336	241	151	137	3,319
2012	153	128	193	327	387	508	528	437	337	224	168	152	3,542
2013	136	124	143	201	333	462	413	312	284	211	136	133	2,888
2014	128	115	145	196	358	418	381	312	341	224	148	131	2,897
2015	130	115	158	211	174	282	312	336	332	219	139	126	2,534
2016	135	134	142	184	280	405	370	316	308	257	149	132	2,813
2017	137	127	173	197	245	419	333	258	306	164	125	128	2,612
2018	126	113	152	200	372	404	330	273	314	177	117	143	2,720
2019	148	128	136	188	246	280	369	347	326	171	119	121	2,580
Average	136	124	153	214	315	423	397	339	334	225	139	134	2,934

For planning purposes, Security's current water demand is considered to be the highest value for 2010-2019 - 3,542 acre-feet.

https://wwwheeler-my.sharepoint.com/personal/matt_loose_wwwheeler_com/Documents/1122.00-Water Resources Report/[Historical water demand-2005-19.xlsx]Sum Tble-2010-19

TABLE 5
SECURITY WATER DEMAND COMMITMENTS AND PROJECTIONS

	Acre-Feet per Year
Current Water Demand	3,542
Future Water Service Commitments	
Academy Station	*0.7
Bradley Crossroads	49.8
Patriot Village	49.0
Waterview Phase III	200.0
Parkway Commercial	64.6
Storage Time	6.3
Riverbend Residential	105.1
Riverbend Commercial	7.5
Southmoor Ridge	66.0
Beckett Development 1A	5.0
Southeast Corner of Hancock and Yucatan	20.0
Subtotal Future Commitments	574.0
Subtotal Current & Future Demand Commitments	4,116
Additional Future Expected Demand	
EPC Parcel 6500000094-Powers Grinnell	25.0
Aggregate Industries – 325 acres	260.0
Vacant Land Infill and Redevelopment	50.0
NE Corner Hancock and Bradley	60.0
Subtotal Additional Future Expected Demand	395.0
Total All Future Demand	4,511
Total, including additional 10 percent as a contingency - Round to	5,000

* Represents the remaining water demand for units that have not yet been constructed within these subdivisions.

Water Quality Report for Calendar Year 2019

Security Water District

PWSID # CO0121775

Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

SECURITY WATER DISTRICT is pleased to present to you this year's Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Security's water comes from the Fountain Valley Authority (FVA) and the Southern Delivery System (SDS), and we also purchase water from Colorado Springs Utilities (CSU) during the summer months. Of our total water supply in 2019, 49 percent was treated surface water from the FVA, 48 percent was treated surface water from SDS, and 3 percent came from CSU. FVA water comes from a system of pipes and tunnels that collect water in the Hunter-Fryingpan wilderness area near Aspen, CO. Water collected from the system is diverted to the Arkansas River, near Buena Vista, and then flows approximately 150 miles downstream to Pueblo Reservoir. From Pueblo Reservoir, the water travels through a pipeline to the FVA water treatment plant, and then through a pipeline to our storage tanks. SDS is also water from Pueblo Reservoir, transported to Security Water District though the Southern Delivery System. CSU water comes from a blend of sources including surface water and purchased water, all of which is treated in one of CSU's water treatment plants. **Since September 10, 2016, none of the Security Water District's wells have been used as part of the potable water supply.**

GENERAL INFORMATION ABOUT DRINKING WATER

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting http://water.epa.gov/drink/contaminants or epa.gov/ground-water-and-drinking-water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit https://www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 121775, SECURITY WSD, or by contacting RICHARD DAVIS at 719-392-3475. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that ***could*** occur. It ***does not*** mean that the contamination ***has or will*** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area which could potentially impact all our water sources, are EPA Super Fund Sites, EPA Abandoned Contaminated Sites, EPA Hazardous Waste Generators, EPA Chemical Inventory/Storage Sites, EPA Toxic Release Inventory Sites, Permitted Wastewater Discharge Sites, Aboveground/Underground and Leaking Storage Tank Sites, Solid Waste Sites, Existing/Abandoned Mines sites, Other Facilities, Commercial/Industrial Transportation, High and Low Intensity Residential, Urban Recreational Grasses, Quarries/Strip Mines/Gravel Pits, Agricultural Land, Forest, Septic Systems, Oil/Gas Wells, and Road miles. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled board meetings located at 231 Security Blvd. in Security, which are normally held on the third Wednesday of each month at 5: 30 p.m. If you have any questions concerning this report or regarding your water utility, please contact Richard Davis or James L. Jones at Security Water District's office (719-392-3475).

Please contact us to learn more about what you can do to help protect your drinking water sources, to ask any questions you might have about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings, visit our website at Securitywsd.com. We want you, our valued customers, to be informed. about the services we provide and the quality water we deliver to you every day.

TABLE OF DETECTED CONTAMINANTS

Security Water District routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show all detections found in the period of January 1 to December 31, 2019 unless otherwise noted**.** The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of contaminants are not expected to vary significantly from year to year or the system is not considered vulnerable to this type of contamination. Therefore some of our data, though representative, may be more than one year old. The "Range" column in the tables below show a single value for those contaminants that were sampled only once. **Note:** Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring. All Tables include all detections found in the Fryingpan-Arkansas project (Fry-Ark {surface water}) the Southern Delivery System (SDS {surface water}) and Colorado Springs Utilities (CSU {surface water}).

Contaminant Name (collected in distribution system)	Year	Running Annual Average	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL Running Annual Average	MCL Violation?	Typical Sources
TOTAL HALOACETIC ACIDS(HAA5) (SWD)	2019	24.98	10.8 to 38.2	22	ppb	60	No	By-product of drinking water disinfection.
TTHMS (SWD)	2019	51.69	23.5 to 79.9	22	ppb	80	No	Byproduct of drinking water disinfection.
TOTAL HALOACETIC ACIDS(HAA5) (SDS)(CSU)	2019	36.0	9.1-59.0	NA	ppb	60	No	By-product of drinking water disinfection.
TTHMS (SDS) (CSU)	2019	43.4	19.4-87.6	NA	ppb	80	No	Byproduct of drinking water disinfection.

Contaminant Name (collected at entry points) Inorganic	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
ARSENIC (FVA)	2016	1	1-1	1	ppb	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
BARIUM (SWD)	2016	0.13	0.13– 0.13	1	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
BARIUM (FVA)	2019	0.06	1-1	1	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
BARIUM) (SDS)(CSU)	2019	0.03	0.01-0.06	5	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
CHROMIUM (SWD)	2016	.29	0 – 1	7	ppb	100	100	No	Discharge from steel and pulp mills; Erosion of natural deposits.
CHROMIUM (FVA)	2019	1.3	1-1	1	ppb	100	100	No	Discharge from steel and pulp mills; Erosion of natural deposits.
CHROMIUM (SDS)(CSU)	2019	.48	0 – 1.6	7	ppb	100	100	No	Discharge from steel and pulp mills; Erosion of natural deposits.
FLUORIDE (SWD)	2016	1	1-1	1	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
FLUORIDE (FVA)	2019	0.49	1-1	1	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
FLUORIDE) (SDS)(CSU)	2019	0.41	0.14-1.21	5	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
NITRATE (SWD)	2017	6.02	5.3– 7.1	13	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
NITRATE) (SDS)(CSU)	2019	0.118	0-0.37	5	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
NITRATE-NITRITE (FVA)	2019	0.34	1-1	1	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
NICKEL (FVA)	2019	1.8	1-1	1	ppb	N/A	N/A	No	Erosion of natural deposits; Discharge from industries, and steel mills.
NICKEL (SDS)(CSU)	2019	0.003	0-0.0018	5	ppm	N/A	N/A	No	Erosion of natural deposits; Discharge from industries, and steel mills..
SELENIUM (SWD)	2016	3.2	3.2-3.2	1	ppb	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
SELENIUM (SDS)(CSU)	2019	0.0014	0 – 0068	5	ppb	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
SELENIUM(FVA)	2019	6.6	1	1	ppb	50	50	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
TETRACHLOROETHYLENE (SWD)	2017	0.43	0 - 1.7	15	ppb	5	0	No	Discharge from factories and dry cleaners.
TRICHLOROETHYLENE (SWD)	2016	0.013	0 – 0.5	37	ppb	5	0	No	Discharge from metal degreasing sites and other factories.
NITRATE	Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.								

Contaminant Name (collected at entry points)	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
GROSS ALPHA (SWD)	2016	2.1	2.1-2.1	1	pCi/L	30	0	No	Erosion of natural deposits.
COMBINED RADIUM (-226 & -228) (SWD)	2016	1.03	0-74 to 1.39	4	ppb	5	0	No	Erosion of natural deposits.
COMBINED URANIUM (SWD)	2016	7.6	7.6-7.6	1	pCi/L	30	0	No	Erosion of natural deposits.
COMBINED RADIUM (-226 & -228)) (SDS)(CSU)	2017	.03	0.03-0.3	5	ppb	5	0	No	Erosion of natural deposits.
COMBINED URANIUM (SDS)(CSU)	2017	3.6	3.6-3.6	5	pCi/L	30	0	No	Erosion of natural deposits.

Secondary Contaminant **

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name (collected at entry points)	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	Secondary Standard
SODIUM (SWD)	2016	53	53-53	1	ppm	N/A
SODIUM (FVA)	2019	21.2	1-1	1	ppm	N/A
SODIUM (SDS)(CSU)	2019	12.59	5.39-24.60	5	ppm	N/A
DIBROMOACETIC ACID (SWD)	2015	1.72	0-4.1	12	ppm	
DICHLOROACETIC ACID (SWD)	2015	13.13	0-30	12	ppm	
TIRCHLOROACETIC ACID (SWD)	2015	20	0-46	12	ppm	

Disinfectants Sampled in the Distribution System
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm OR
If sample size is less than 40 no more than 1 sample is below 0.2 ppm
Typical Sources: Water additive used to control microbes

Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL	Typical Sources
CHLORINE (SWD) (collected in distribution system)	Dec. 2019	Lowest period percentage of samples meeting TT requirement: 100%	0	20	No	4.0 ppm	Water additive used to control microbes
CHLORINE (FVA)	2019	TT= No more than 4 hours with sample below 0.2 MG/L	0	N/A	No	4.0 ppm	Water additive used to control microbes
CHLORINE (SDS)(CSU)	2019	Lowest period percentage of samples meeting TT requirement: 99.16% Nov	2	N/A	No	MRDL=4ppm TT= @ least 95% of samples per month must be at least 0.2ppm	Water additive used to control microbes
CHLORINE /CHLORAMINE (SDS)(CSU)	2019	TT= No more than 4 hours with sample below 0.2 MG/L	0	N/A	No	4.0 ppm	Water additive used to control microbes

Contaminant Name	SMCL	Average Level Detected(Range)	Units	Sample Dates	Typical Sources
ALUMINUM) (SDS)(CSU)	0.05-0.2	0.037(0-0.068)	ppm	2018	Erosion of natural deposits. Water treatment chemical
CHLORIDE) (SDS)(CSU)	250	5.8(1.4-10.8)	ppm	2018	Erosion of natural deposits.
IRON) (SDS)(CSU)	0.3	0.003(0-0.062)	ppm	2018	Erosion of natural deposits. Leaching from plumbing materials
SULFATE) (SDS)(CSU)	250	40(12.3-125)	ppm	2018	Erosion of natural deposits.
ZINC) (SDS)(CSU)	5000	3.7 (0-3.7)	ppb	2017	Erosion of natural deposits.

Secondary MCL (SMCL) is not an enforceable but intended as guidelines. These contaminants in drinking water may affect aesthetic qualities.

Unregulated Contaminants***

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR3 sampling and the corresponding analytical results are provided below

Contaminant Name (collected at entry points)	Year	Avg. of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure
MOLYBDENUM (SDS)	2017	0.42	0-1.4	N/A	µg/L=PPB
STRONTIUM(SDS)	2017	79.4	46-110	N/A	µg/L=PPB
VANADIUM (SDS)	2017	0.02	0-0.31	N/A	µg/L=PPB
CHROMIUM-6 (SDS)	2017	0.001	0-0.041	N/A	µg/L=PPB
PERFLUOROBUTANESULFONIC ACID (PFBS) (UCMR3) (SWD)	2016	39	0-150	52	ng/L=PPT
PERFLUOROHEPTANOIC ACID (PFHPA) (UCMR3) (SWD)	2016	27	0-60	52	ng/L=PPT
PERFLUOROHEXANESULFONIC ACID (PFHXS) (UCMR3) (SWD)	2016	301	0-640	52	ng/L=PPT
PERFLUOROOCTANE SULFONATE (PFOS) (UCMR3) (SWD)	2016	141	0-560	52	ng/L=PPT
PERFLUOROOCTANOIC ACID (PFOA) (UCMR3) (SWD)	2016	58	0-96	52	ng/L=PPT
MANGANESE(UCMR4) (SWD)	2018	1.383	0-5.76	8	µg/L=PPB
1-BUTANOL(UCMR4) (SWD)	2018	0.548	0-4.380	8	µg/L=PPB
BROMOCHLORACETIC ACID (UCMR4) (SWD)	2018	2.563	1.140-4.6	16	µg/L=PPB
BROMODIHLORACETIC ACID (UCMR4) (SWD)	2018	2.985	0.981-4.050	16	µg/L=PPB
CHLORODIBIBROMOACRTIC ACID (UCMR4) (SWD)	2018	0.646	0.321-0.706	16	µg/L=PPB
DIBROMOACETIC ACID (UCMR4) (SWD)	2018	0.584	0-0.922	16	µg/L=PPB
DICHLOROACETIC ACID (UCMR4) (SWD)	2018	7.515	0.957-15.5	16	µg/L=PPB
TRICHLOROACETIC ACID (UCMR4) (SWD)	2018	10.975	6.51-14.5	16	µg/L=PPB
MANGANESE(UCMR4) (SDS)(CSU)	2018	1.2	0-11	N/A	µg/L=PPB
1-BUTANOL(UCMR4) (SDS)(CSU)	2018	1.07	0-13	N/A	µg/L=PPB
HALOACETIC ACIDS 5(HAA5)(UCMR4) (SDS)(CSU)	2018	33.9	10.2-55	N/A	µg/L=PPB
BROMINATED HALOACETIC ACIDS 6 (HAABr6) (UCMR4) (SDS)(CSU)	2018	3.18	0.79-9.1	N/A	µg/L=PPB
HALOACETIC ACIDS 9 (HAA9) (SDS) (UCMR4) (SDS)(CSU)	2018	36.4	14.5-57	N/A	µg/L=PPB

***More information about the contaminants that were included in UCMR monitoring can be found at: http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule-UCMR Learn more about the EPA UCMR at: http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule or contact the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/contact.cfm.

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Unit of Measure	TT Minimum Ratio	MCLG	TT Violation?	Typical Sources
Total Organic Carbon Ratio (FVA)	Monthly -RAA	1.22	1-1.50	Ratio	1.00	0	No	Naturally present in the environment
Total Organic Carbon Ratio (SDS)(CSU)	Monthly -RAA	1.25	1-1.81	Ratio	1.00	0	No	Naturally present in the environment

Contaminant Name (collected in distribution system)	Monitoring Period	90th Percentile	Number of samples	Unit of Measure	90th Percentile AL	Sites Above Action Level	90^{th} Percentile AL Exceedance	Typical Sources
COPPER(SWD)	03/20/19 to 04/17/19	0.47	60	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD(SWD)	03/20/19 to 04/17/19	2	60	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
COPPER(SWD)	07/13/19 to 09/09/19	0.36	60	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD(SWD)	07/13/19 to 09/09/19	2.1	60	ppb	15	1	No	Corrosion of household plumbing systems; Erosion of natural deposits.
COPPER(CSU)	July-Sept 2019	0.20	60	ppm	1.9	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD(CSU	July-Sept 2019	5.0	60	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Microorganism Contaminants Sampled in the Distribution System							
Contaminant Name	Time Period	Results	Sample Size	MCL	MCLG	MCL Violation	Typical Sources
Coliform (TCR) (CSU)	Nov 2016	1.39	216	More than 5.0% positive samples per period (If sample size is greater than or equal to 40) *OR* More than 1 positive sample per period (If sample size is less than 40)	0	No	Naturally present in the environment

Summary of Turbidity Sampled at Entry Point of the Distribution System					
Contaminant Name	Time Period	Results	TT requirement	TT Violation	Typical Sources
Turbidity (FVA)	Jan-Dec 2019	Highest single measurement 0.35NTU July	Maximum 1 NTU for any single Measurement	No	Soil Runoff
Turbidity(FVA)	Jan-Dec 2019	Lowest monthly Percentage of samples meeting TT requirement for our (FVA) technology: 99% July	In any month, at least 95% of samples must be less than 0.3 NTU	No	Soil Runoff
Turbidity (SDS)	Jan-Dec 2019	Highest single measurement 0.70 NTU July	Maximum 1 NTU for any single Measurement	No	Soil Runoff
Turbidity(SDS)	Jan-Dec 2019	Lowest monthly Percentage of samples meeting TT requirement for our (SDS) technology: 99% July	In any month, at least 95% of samples must be less than 0.3 NTU	No	Soil Runoff

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
Hexachlorcyclopentadiene (FVA)	2018	0.03	0-0.06	ppb	50	50	No	Discharge from chemical factories
Hexachlorcyclopentadiene (SDS)	2019	0.004	0-0.048	ppb	50	50	No	Discharge from chemical factories
Di(2-ethylhexyl) phthalate (SDS)	2018	2.82	0-13	ppb	6	0	No	Discharge from rubber and chemical factories
Picloram (SDS)	2016	0.01	0-0.1	ppb	500	500	No	Herbicide runoff
Ethylbenzene(SDS)	2018	0.15	0-0.79	ppb	700	700	No	Discharge from petroleum factories;
Xylenes (SDS)	2019	1.24	0-4.6	ppb	10,000	10,000	No	Discharge from petroleum factories; Discharge from chemical factories

Cryptosporidium, E. coli and Raw Source Water (SDS) (FVA)					
Contaminant Name	**Year**	**Range Detected**	**Units**	**MCL**	Typical Sources
Cryptosporidium (SDS)	2018	0	oocysts	0	Naturally present in the environment
E. Coli (SDS)	2018	0-2	MPN	N/A	Naturally present in the environment
Cryptosporidium (FVA)	2017	0	oocysts	0	Naturally present in the environment
E. Coli (FVA)	2017	0-10	MPN	N/A	Naturally present in the environment
Bromide (SDS)	2018	0-79.4	ppm	N/A	Naturally present in the environment
Organic Carbon, Total (SDS)	2018	1.31-2.17	ppm	N/A	Naturally present in the environment

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Definitions

Action Level (AL): *The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.*

Maximum Contaminant Level (MCL): *The highest level of a contaminant that is in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.*

Maximum Contaminant Level Goal (MCLG): *The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.*

Maximum Contaminant Residual Disinfectant Level Goal (MRDLG): *The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.*

Health-Based*: A violation of either a MCL or TT*

Non-Health-Based*: A violation that is not a MCL or TT.*

Maximum Residual Disinfectant Level (MRDL) *: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.*

Compliance Value**:** *Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).*

Range (R): *Lowest value to the highest value.*

Sample Size : *Number or count of values (i.e. number of water samples collected).*

Average (x-bar)*: Typical value*

Formal Enforcement Action (No Abbreviation) *– Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.*

Variance and Exemptions (V/E) *– Department permission not to meet a MCL or treatment technique under certain conditions*

Gross Alpha (No Abbreviation) *– Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium*

Not Applicable (N/A): *Not applicable or NT: Not Tested*

ND: *Not detectable; a testing limit or below detection level (BDL).*

NTU (or Nephelometric Turbidity Units): *A measure of clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.*

pCi/L (picocuries per liter): *a measure of radioactivity in water.*

ppm (parts per million): milligrams per liter (mg/l). – *One part per million corresponds to one minute in two years or a single penny in $10,000.*

ppb (parts per billion): *micrograms per liter (ug/l). -One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.*

ppt (parts per trillion): *nomogram per liter (ng/l). – One part per trillion corresponds to one second in nearly 3200 years or a single penny in $10,000,000,000.*

RAA (Running Annual Average): *An average of monitoring results for the previous 12 calendar months.*

TT (Treatment Technique): *A required process intended to reduce the level of a contaminant in drinking water.*

Waiver: *State permission not to test for a specific contaminant.*

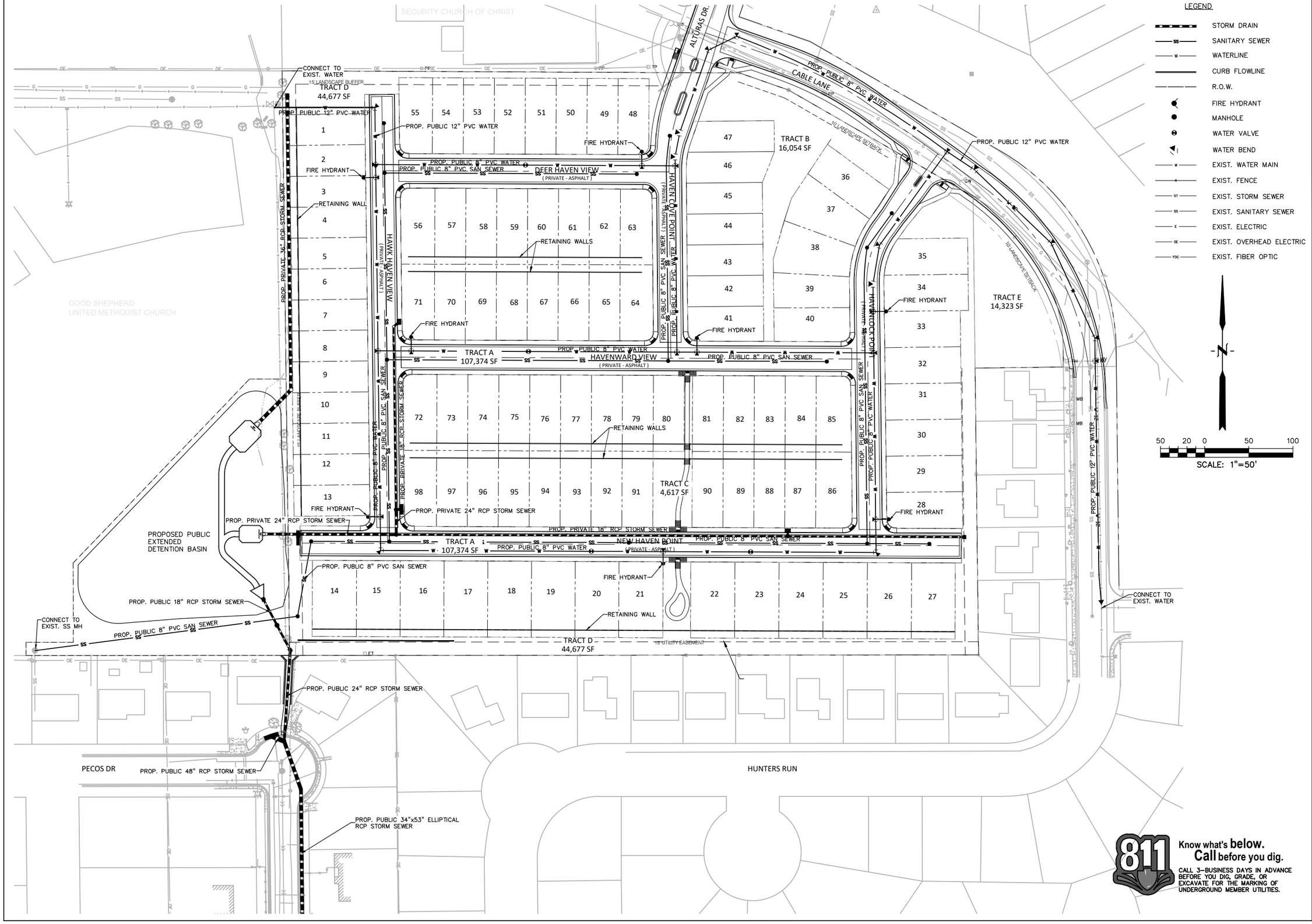
90th Percentile*: 90% of samples are equal to or less than the number in the chart.*

Violation : *Failure to meet a Colorado Primary Drinking Water Regulation.*

Level 1 Assessment*: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.*

Level 2 Assessment: *A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.*

LT2: *Long Term 2 Enhanced Surface Water Treatment Rule*



Know what's **below.** **Call** before you dig.

CALL 3–BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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CONSTRUCTION PLANS FOR:

HAVEN VALLEY

(LETA DR.) BRADLEY RD/ALTURAS DR.
SECURITY, EL PASO COUNTY, COLORADO

ISSUE	DATE
INITIAL ISSUE	4/29/21

DESIGNED BY:	TDM
DRAWN BY:	SBN
CHECKED BY:	TDM
FILE NAME:	21085-03UT01

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: N/A

PRELIMINARY UTILITY & FACILITIES PLAN

PROJECT NO. 21085-03CSCV

DRAWING NO.

UT01