Kimley»Horn

November 18, 2025

Mr. Kevin Johnk
Sterling Ranch, LLC
8155 Piney River Ave, Suite 200
Littleton, CO 80125

Subject: Wildlife Habitat Assessment
Waterton Business Park
Douglas County, Colorado

Sterling Ranch, LLC retained Kimley-Horn and Associates, Inc. (Kimley-Horn) to complete an assessment of potential habitat for state and federally listed species, migratory birds, and big game and to prepare this memorandum for the Waterton Business Park project located off Waterton Road in Douglas County, Colorado (***Figure 1 – Project Location Map, Figure 2 – USGS Map***). The project consists of a mixed-use commercial and industrial development. A site plan for the proposed project is included in **Appendix A.**

Project Location

The project site is situated west and east of Waterton Road and east of North Moore Road. The project site is in Sections 32 and 33, Township 6 South, Range 68 West, and Sections 4 and 5, Township 7 South, Range 68 West in Douglas County, Colorado (***Figure 1***). The center latitude/longitude of the project site is 39.4877889N, -105.0209708W. The average elevation of the project site is approximately 5,700 feet above sea level (ASL).

Site Description

The 327.3-acre project site is made up of three (3) parcels (Parcel ID 2229-321-00-001, 2229-321-00-003, and 2229-321-00-004) and portions of three (3) parcels (Parcel ID 2229-332-00-002, 2229-333-00-005, and 2229-324-00-002) and consists of primarily disturbed shrubland. A large portion of the site, approximately 150 acres, consists of vacant land containing a former powder plant. Approximately 50 acres of the site is utilized as the storage yard for Douglas County including a soil stockpile, materials and machinery, materials for winter roadway treatment, and demolished concrete and asphalt rubble. The remainder of the site consists of vacant grassland and shrubland, a detention pond, a small area managed for EVOC Training purposes, and unimproved roads. One (1) ephemeral stream runs along the southwestern boundary and two (2) ephemeral streams run perpendicular to the eastern boundary (***Figure 3 – Habitat Characterization Map)***.

Dominant upland species in the grassland and shrubland areas consisted of kochia (*Bassia scoparia*), blue grama (*Bouteloua gracilis*), rubber rabbitbrush (*Ericameria nauseosa*), and basin wild rye (*Leymus cinereus*). The ephemeral drainages were dominated by hairy false golden aster (*Heterotheca villosa*), slimflower scurfpea (*Psoralea tenuiflora*), and western snowberry (*Symphoricarpos occidentalis*). Various noxious and nuisance weed species were observed including kochia, curly dock (*Rumex crispus*), hoary alyssum (*Berteroa incana*), quackgrass (*Elymus repens*), common mullein (*Verbascum thapsus*), cheatgrass (*Bromus tectorum*), diffuse knapweed (*Centaurea diffusa),* and field bindweed (*Convolvulus arvensis*).

The project site is bound to the north by a commercial business, to the east by county-owned vacant land (Sterling Ranch Conservation Easement), to the south by county-owned land, and to the west by county-owned land and residential lots. From the earliest aerial of 1944, the powder plant can be observed within the eastern portion of the project site. The remaining portions of the project site were primarily vacant grassland from the earliest aerial to 1971 when unimproved roads and buildings were constructed. Between 1971 and 1978, two impounded ponds were constructed in the eastern extent. Little to no change occurred within the limits from 1978 to 2015. From 2017 to present day, the Douglas County storage yard has expanded throughout the eastern portion of the site.

Within the project site, hydrology drains from higher elevations in the southwest to eventually empty into Plum Creek to the east of the site. Plum Creek is a perennial stream/wetland complex that runs north into the South Platte River within Chatfield Reservoir. Plum Creek is a National Hydrography Dataset (NHD) mapped perennial stream and a National Wetland Inventory (NWI) mapped permanently flooded, lower perennial riverine feature. The unnamed drainage along the southwestern project boundary runs northeast and is mapped as a seasonally flooded, intermittent stream. The two (2) unnamed drainages within the eastern portion of the project site are not mapped features by NHD or NWI. Representative photos of the project site can be found in **Appendix B.**

Site History

On September 26, 2023, the Douglas County Board of County Commissioners (BOCC) unanimously approved a Chemours Land Exchange between Sterling Ranch Acquisitions, LLC (separate from Sterling Ranch Development Company) and Douglas County BOCC. In this land exchange agreement, Douglas County received land to develop a fleet maintenance facility and a conservation easement, and Sterling Ranch received land to develop as part of the Sterling Ranch Development. The proposed conservation easement will permanently protect 204 acres of land as open space and as an elk migration corridor, which was at risk for general industrial development per its previously designated zoning classification. The preservation of this land also provides a connection to the Dupont Conservation Easement, established in 2002. During the land exchange, which was executed by a separate agreement, the wildlife corridor will be conserved and maintained in perpetuity as a wildlife corridor and open space buffer for the community of Louviers.

Methodology

Kimley-Horn accessed the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPAC) online system (http://ecos.fws.gov/ipac/), the Colorado Parks and Wildlife (CPW) Species Activity Mapping (SAM) Data, the Colorado Natural Heritage Program (CNHP) Colorado's Conservation Data Explorer (CODEX; https://codex.cnhp.colostate.edu/content/map), and Douglas County, Colorado's Open Data (DougCo Hub; https://dcdata-dougco.opendata.arcgis.com/pages/data) to determine if any federal or state listed species and big game species and their associated corridors could potentially occur in the vicinity of the project site (**Appendix C**). A site visit was conducted by Kimley-Horn on August 28, 2024, and November 7, 2025, to perform an assessment of potential habitat for the aforementioned species.

Results

Wildlife, or signs of wildlife, observed within the project site during field reconnaissance are included below in **Table 1**. Signs of wildlife include burrows, tracks, scat, etc.

Table 1 – Wildlife Species Observed within the Project Site		
Common Name	**Scientific Name**	**Status**
Avian		
Red-tailed hawk	*Buteo jamaicensis*	MBTA
Mammalian		
Mule deer	*Odocoileus hemionus*	NL*
Elk	*Cervis canadensis*	NL*
Legend: MBTA – Avian species protected under the Migratory Bird Treaty Act (MBTA); NL - Not Listed; *Managed by CPW		

Based on field reconnaissance and database reviews, a listing of the state and federally listed and managed species potentially occurring within the vicinity of the project site has been compiled. **Table 2** lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, signs (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species. None indicates no suitable habitat is present within the project site. A Low ranking indicates that suitable habitat for that species was documented and/or observed within the project site, but the species has not been documented within one (1) mile of the project site. A Moderate ranking indicates that suitable habitat exists, and the species has been documented within one (1) mile of the project site. A High ranking indicates that suitable habitat exists, and the species was observed during field reconnaissance.

Table 2 – State and Federally Listed and Managed Species with the Potential to Occur within the Project Site in Douglas County, Colorado						
Common Name	**Scientific Name**	**Status**	**Documented (<1 Mile)**	**Habitat Present**	**Likelihood of Occurrence**	**Action Required**
Mammals						
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	FT, ST	Yes	No	Low	No
Big Game	***Multiple***	**NL***	**Yes**	**Yes**	**High**	**Yes**
Birds						
Piping plover	*Charadrius melodis*	FT, ST, MBTA	No	No	None	No**
Whooping crane	*Grus americana*	FE, SE, MBTA	No	No	None	No
Raptors	**-**	**MBTA**	**Yes**	**Yes**	**High**	**Yes**
Passerine Songbirds	-	MBTA	Yes	Yes	High	Yes
Fishes						
Pallid sturgeon	*Scaphirhynchus albus*	FE	No	No	Low	No**
Flowering Plants						
Ute ladies'-tresses	*Spiranthes diluvialis*	FT	No	No	Low	No
Western prairie fringed orchid	*Platanthera praeclara*	FT	No	No	Low	No**
Insects						
Monarch butterfly	*Danaus plexippus*	Proposed FT	No	Yes	Low	No

Table 2 – State and Federally Listed and Managed Species with the Potential to Occur within the Project Site in Douglas County, Colorado						
Common Name	**Scientific Name**	**Status**	**Documented (<1 Mile)**	**Habitat Present**	**Likelihood of Occurrence**	**Action Required**
Suckley's Cuckoo Bumble Bee	*Bombus suckleyi*	Proposed FE	No	Yes	Low	No
Western regal fritillary	*Argynnis idalia occidentalis*	Proposed FT	No	Yes	Low	No

Legend:
FE – Federally Endangered; FT – Federally Threatened; FT(S/A) – Threatened due to Similarity of Appearance; C – Candidate for Listing
SE – State Endangered; ST – State Threatened; SC – Species of Concern
MBTA - Avian species protected under the Migratory Bird Treaty Act (MBTA)
NL – Not Listed, but have other regulatory protections
Species in **bold** were observed on-site during field reconnaissance
*Managed by Colorado Parks and Wildlife
**Unless the project plans for water depletions

The listed species described below have been determined to have suitable habitat within the site and require additional action.

Big Game

Species in this category are not listed under the Endangered Species Act; however, they are part of the respective CPW Herd Management Plans. The project site is within the species ranges of elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), and white-tailed deer (*Odocoileus virginianus;* ***Figure 4 – Species Occurrence Map***). Suitable habitat for these species is present within the project site and signs of these species (skat, tracks) were observed during field reconnaissance. No mule deer migration corridors are mapped within the project site or within a mile radius by CPW SAM Data or CNHP CODEX. No elk migration corridors are mapped within the project site by CPW SAM Data or CNHP CODEX. The nearest CPW-mapped elk migration corridor is located 0.44 miles south of the project site.

Douglas County's Wildlife Mapping shows a wildlife migration corridor intersecting the northeast corner of the project site within Plum Creek's upland buffer. The nearest Douglas County-mapped wildlife movement corridor is located within the southern terminus of the project site; however, it is almost entirely contained within the conservation easement south and southeast of the project site. An overland connection is mapped within the southern 1/4 of the project site by Douglas County. However, this data is not representative due to the impassable fences that sever movement between Plum Creek and the west. The project site is predominantly within the Douglas County Moderate Habitat Value Area. 10 acres of the project site within the northeast is within the Douglas County High Habitat Value Area. The project site is 0.29 miles south of the Low Habitat Value Area. The nearest Douglas County wildlife crossing is located 0.56 miles east of the project site. The northern portion of the project site provides suboptimal conditions for migration due to fencing and moderate levels of traffic on Waterton Rd and Moore Rd. The central portion provides suboptimal conditions for migration due to the approximately 50-acres of Douglas County storage of materials and machinery, the perimeter fencing surrounding the former powder plant, as well as fencing on both sides of Waterton Rd. The southern portion of the project site presents limited suitable conditions due to impassable fencing that begins east of the project site and continues south along Waterton Rd. Based on field reconnaissance, big game activity within the project site exhibits sporadic movement with habitat fragmentation likely forcing wildlife to use Waterton Rd. In consultation with the project proponent, it was determined that the Waterton Business Park project proposes to facilitate big game

movement to the proposed 203.9-acre conservation easement south of the project site by removing impassable fencing to allow for more suitable travel paths to and along Plum Creek. It is assumed the high presence of impassable fences within and surrounding the project site is the primary driving force of unnatural migration patterns in lands surrounding the site. Further coordination with CPW is recommended to verify migration information within and around the site.

Passerine Songbirds and Raptors

Avian species in this category are not listed under the Endangered Species Act; however, they have additional protections under the Migratory Bird Treaty Act (MBTA) of 1918. Additionally, all raptors in Colorado are protected by the MBTA. CPW has published the "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020)". This document was created to provide developers with recommended buffers to avoid impacts to raptors in Colorado. CPW buffer recommendations are included as **Appendix D**. The CPW Raptor Nest Database did not document any active raptor nests as occurring within the restricted radii for raptors. The nearest documented raptor nest is a red-tailed hawk (*Buteo jamaicensis*) nest located 1.37 miles north of the project site with an active status as of August 2024 (***Figure 4***). If construction is to occur within the nesting season of songbird or raptor species, preconstruction avian nesting surveys are recommended.

Project Design Considerations

During project design, we recommend considering options that will prioritize wildlife habitat, movement, and conservation and minimize impacts to the Moderate Habitat Value Area. Protection of the adjacent drainageway, Plum Creek, will help to further maintain the Moderate Habitat Value Area.

The following recommendations should be considered to promote wildlife conservation during zoning:

- Sensible planning of transportation infrastructure to accommodate wildlife.
- Creation of development guidelines which minimize exclusionary fencing and promote wildlife friendly fencing.
- Implement appropriate erosion control practices during land disturbance activities, including practicing avoidance of unnecessary land disturbances.
- Provide habitat restoration through stabilization of land disturbances with beneficial vegetation through wildlife friendly native seed species, provide noxious weed and pest management practices and on-going pasture management to promote residual groundcover.

Summary and Recommendations

Sterling Ranch, LLC retained Kimley-Horn and Associates, Inc. (Kimley-Horn) to complete an assessment of potential habitat for state and federally listed species, migratory birds, and big game and to prepare this memorandum for the Waterton Business Park project located off Waterton Road in Douglas County, Colorado. The 327.3-acre project site consists of primarily disturbed grassland and shrubland. A large portion of the site, approximately 150 acres, consists of vacant land containing a former powder plant. Approximately 50 acres of the site is utilized as the storage yard for Douglas County including a soil stockpile, materials and machinery, materials for winter roadway treatment, and demolished concrete and asphalt rubble. The remaining of the site consists of vacant grassland, a detention pond, and unimproved

roads. One (1) ephemeral stream runs along the southwestern boundary and two (2) ephemeral streams run perpendicular of the eastern boundary.

Kimley-Horn accessed the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPAC) online system (http://ecos.fws.gov/ipac/), the Colorado Parks and Wildlife (CPW) Species Activity Mapping (SAM) Data, the Colorado Natural Heritage Program (CNHP) Colorado's Conservation Data Explorer (CODEX), and Douglas County, Colorado's Open Data (DougCo Hub) to determine if any federal or state listed species and big game species and their associated corridors could potentially occur in the vicinity of the project site (Appendix C). A site visit was conducted by Kimley-Horn on August 28, 2024, and November 7, 2025, to perform an assessment of potential habitat for the aforementioned species. Three groups of species (big game, passerine songbirds, and raptors) were determined to have suitable habitat and require additional action.

The following items are recommended regarding wildlife habitat:

- Further coordination with CPW is recommended to verify elk migration information within and around the site.
- Further coordination with CPW and Douglas County is recommended to modify the impassable fences obstructing natural migration patterns adjacent to the site.
- If disturbance activities are planned during the avian nesting season, a preconstruction avian nesting survey is recommended.

Should you have any questions regarding this assessment, please contact me at (719) 299-5093 or Alexis.Marchando@kimley-horn.com.

Sincerely,

Alexis Marchando

Alexis Marchando
Environmental Scientist
Kimley-Horn and Associates, Inc.

References

Audubon. 2023. Guide to North American Birds. Available at: https://www.audubon.org/bird-guide

Fertig. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). Available at: https://efotg.sc.egov.usda.gov/references/public/WY/UtesRangewideStatusReview2005byFertig.pdf

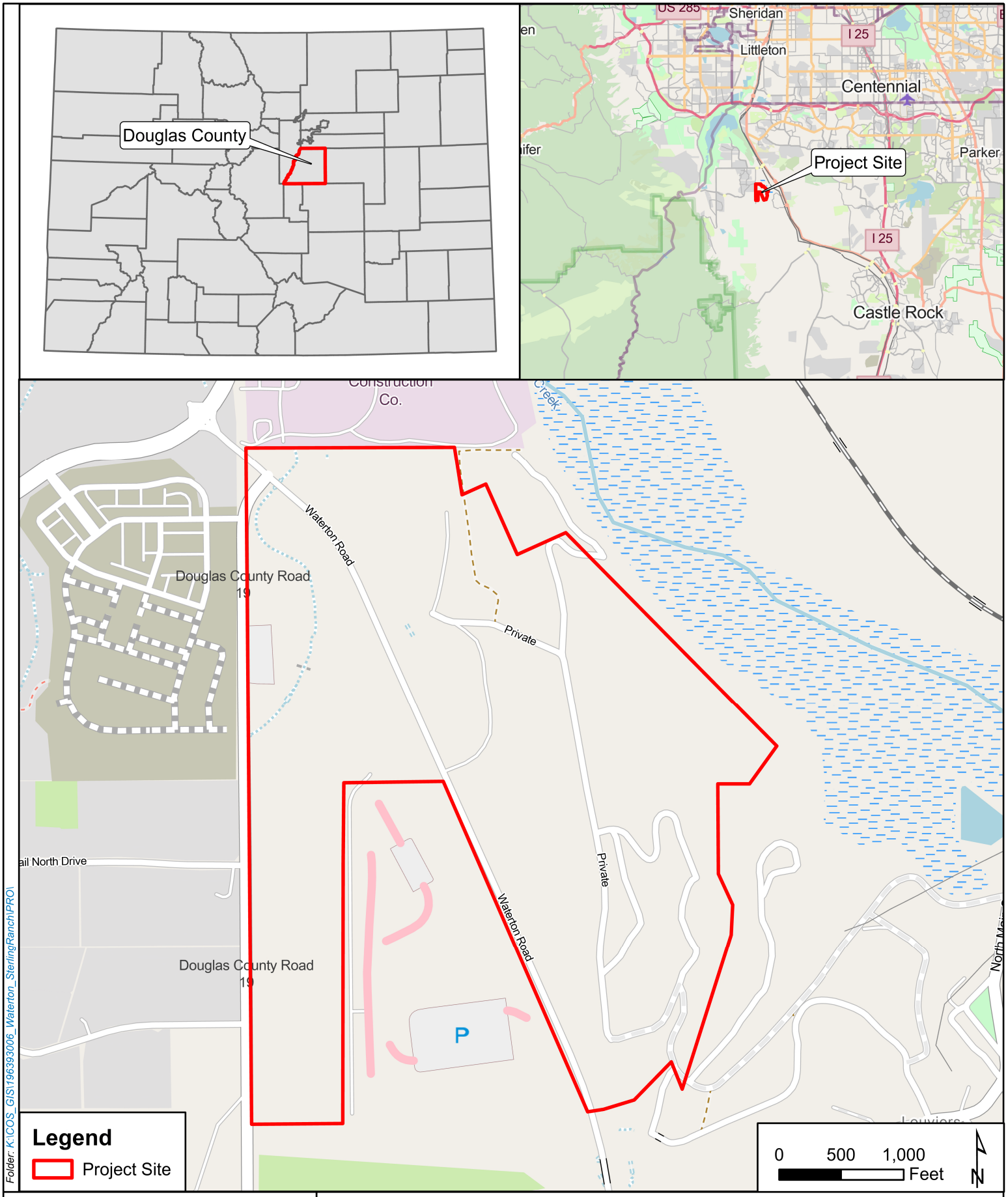
U.S. Fish and Wildlife Service (USFWS). 2018. Preble's Meadow Jumping Mouse Recovery Plan, Colorado. Region 6, Lakewood, Colorado. 148 pages. Available at: https://ecos.fws.gov/docs/recovery_plan/Final_Draftpreblesrecoveryplan_10032018_signed.pdf

USFWS. 2022. Review of Species That Are Candidates for Listing as Endangered or Threatened. Available at: https://www.govinfo.gov/link/fr/87/26152

Attachments:

Figure 1 – Location Map
Figure 2 – USGS Map
Figure 3 – Habitat Characterization Map
Figure 4 – Species Occurrence Map

Appendix A – Proposed Site Plan
Appendix B – Representative Site Photos
Appendix C – IPAC Report
Appendix D – Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors



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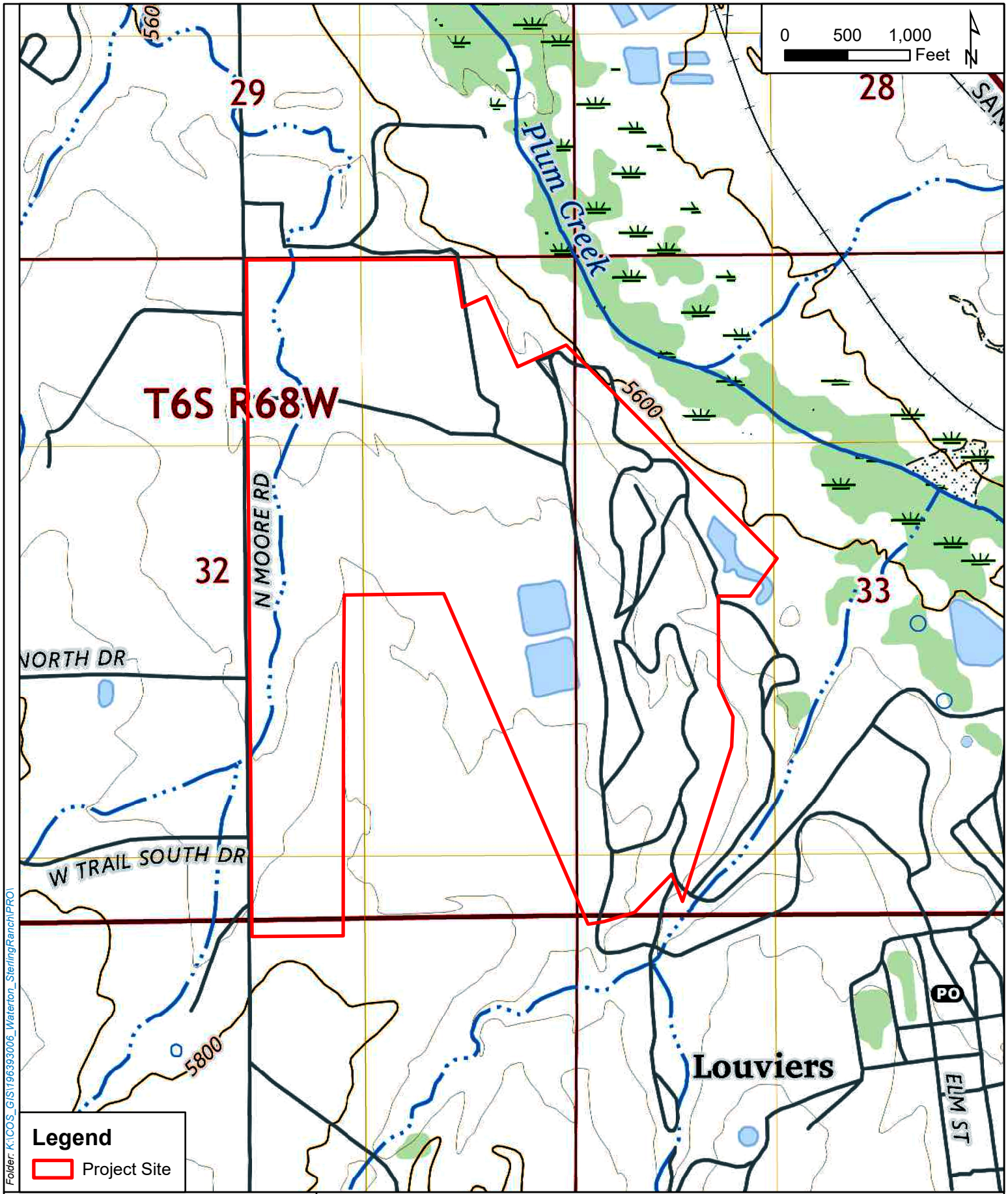
2 N Nevada Ave, Ste 900, Colorado Springs, CO
Phone (719) 453-0180
www.kimley-horn.com

Property Location Map

Waterton Business Park
Douglas County, Colorado

PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 1

1 IN = 1,000 FT



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USGS Map

Waterton Business Park
Douglas County, Colorado

PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 2

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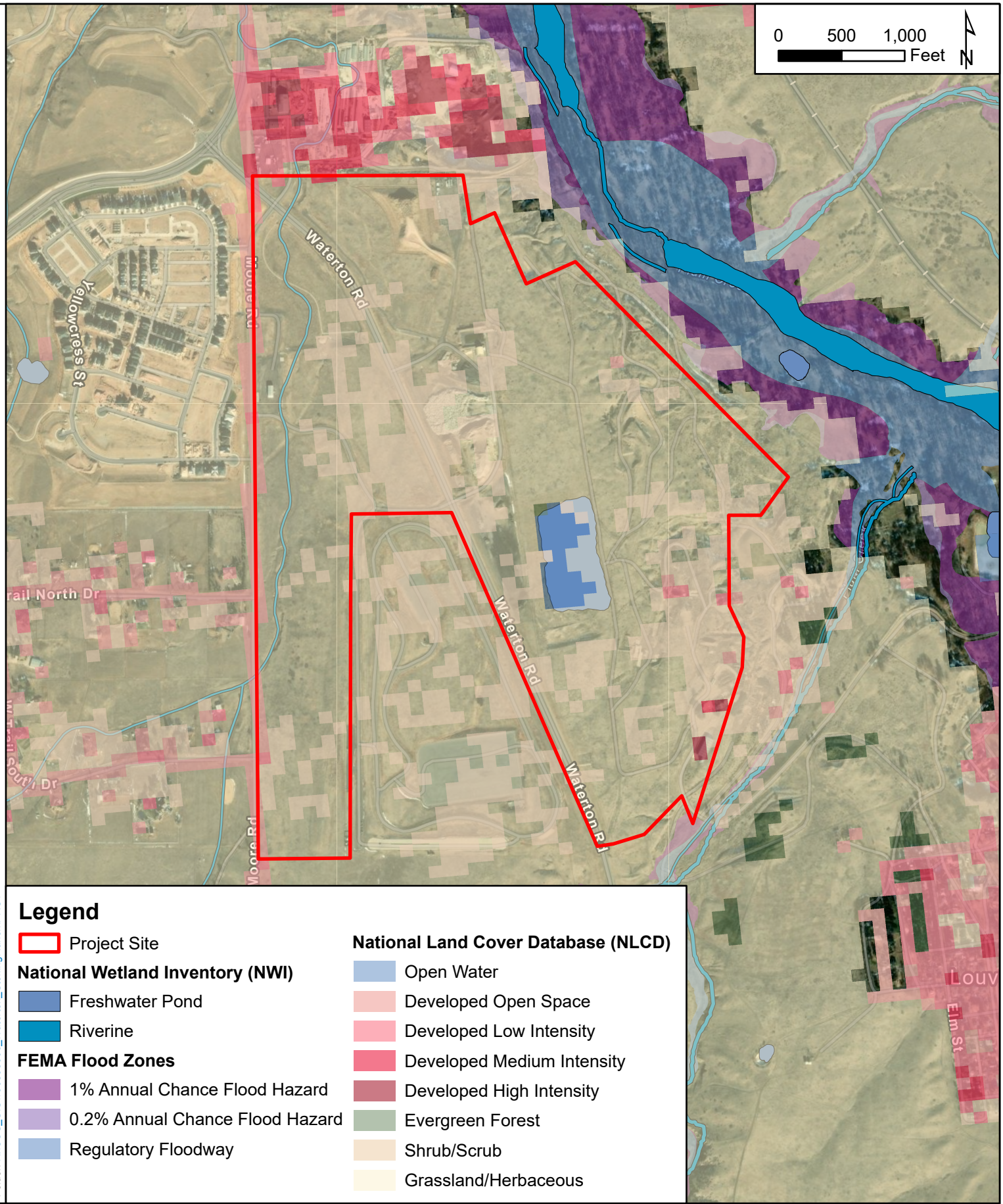
1 IN = 1,000 FT



Legend

- Project Site

National Wetland Inventory (NWI)

- Freshwater Pond
- Riverine

FEMA Flood Zones

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway

National Land Cover Database (NLCD)

- Open Water
- Developed Open Space
- Developed Low Intensity
- Developed Medium Intensity
- Developed High Intensity
- Evergreen Forest
- Shrub/Scrub
- Grassland/Herbaceous

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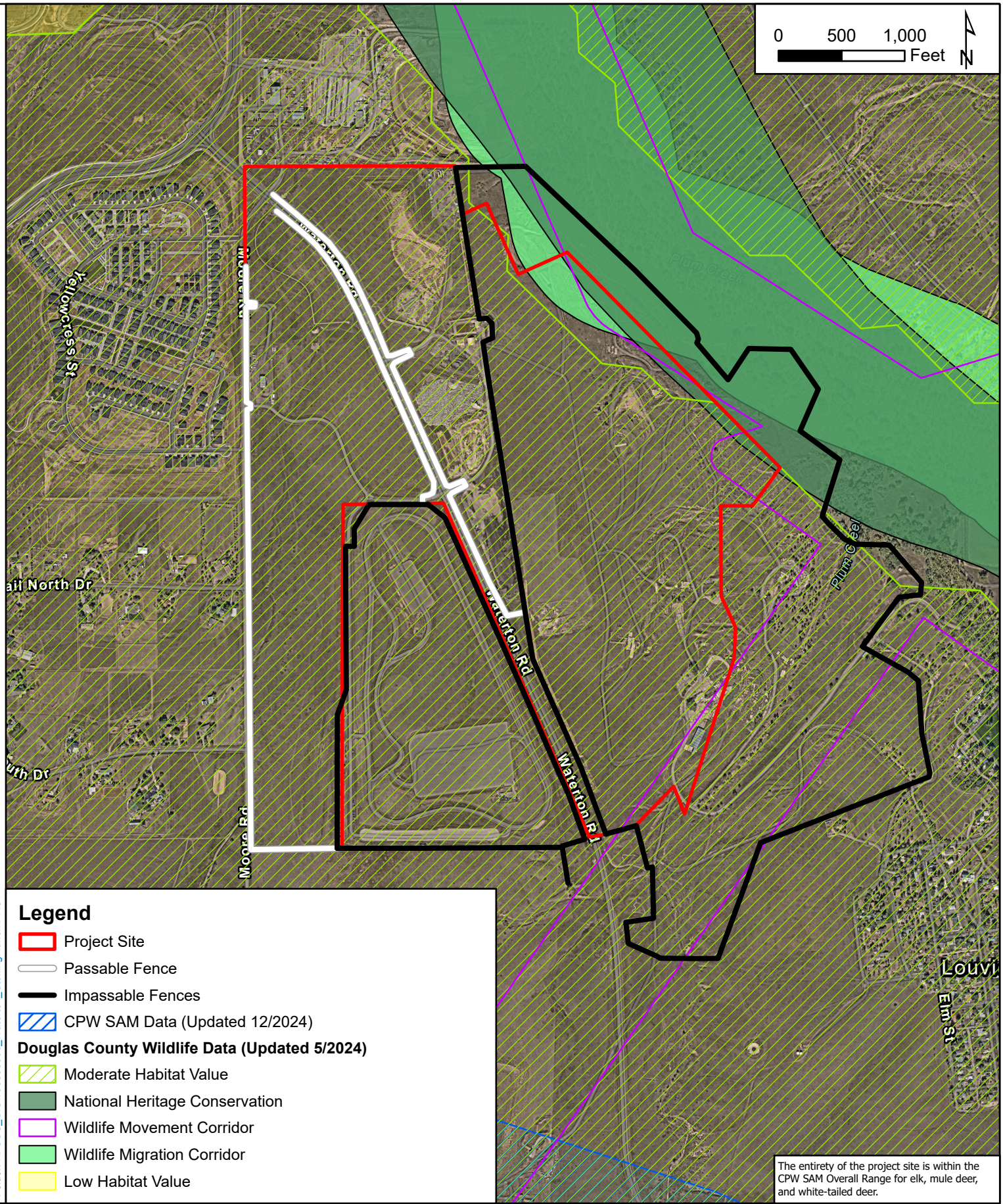
Habitat Characterization Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 3



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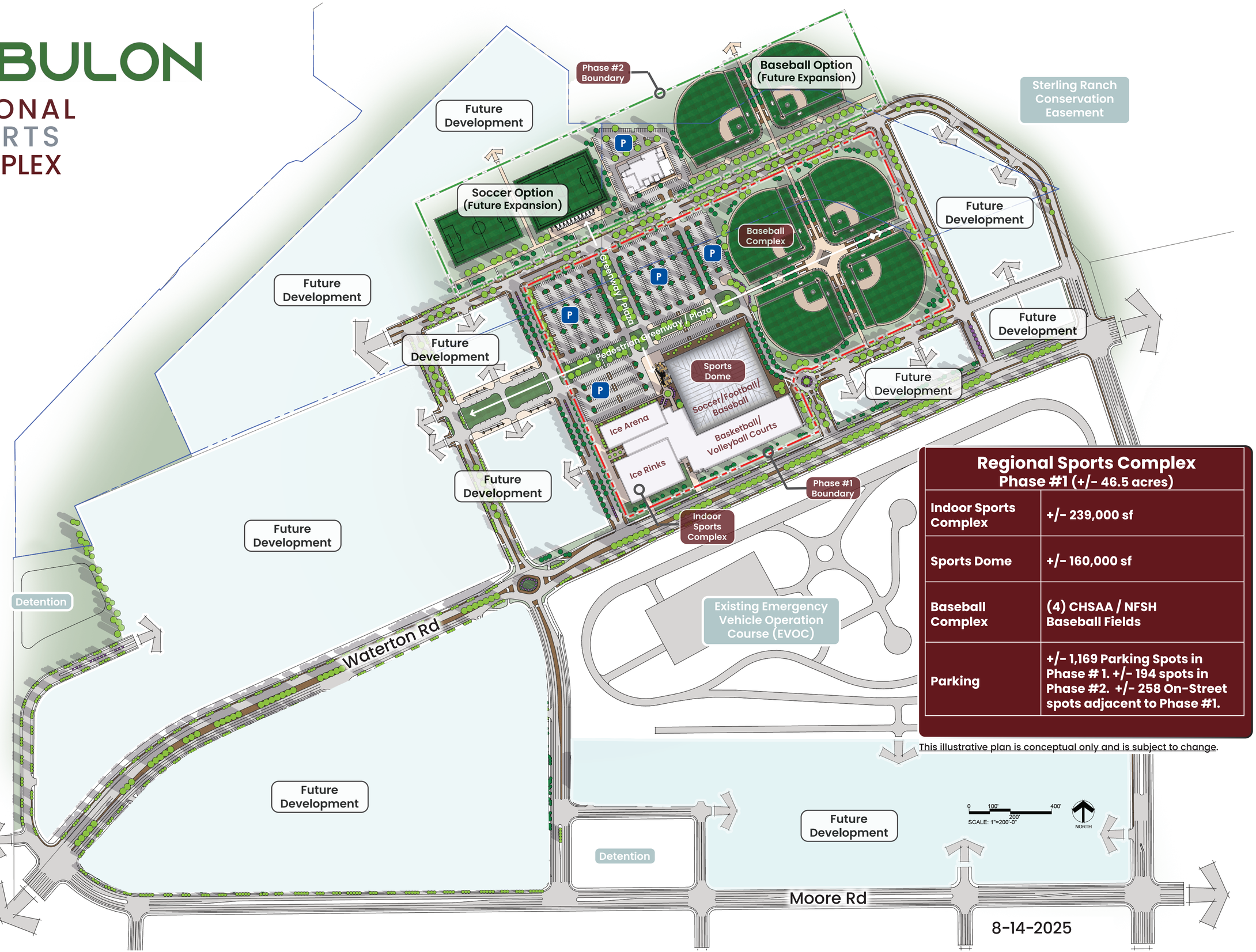
Species Occurrence Map

Waterton Business Park
Douglas County, Colorado

1 IN = 1,000 FT	PROJECT NUMBER: 196686010	NOVEMBER 2025	FIGURE 4

Appendix A
Site Plan

ZEBULON
REGIONAL SPORTS COMPLEX



Regional Sports Complex Phase #1 (+/- 46.5 acres)	
Indoor Sports Complex	+/- 239,000 sf
Sports Dome	+/- 160,000 sf
Baseball Complex	(4) CHSAA / NFSH Baseball Fields
Parking	+/- 1,169 Parking Spots in Phase # 1. +/- 194 spots in Phase #2. +/- 258 On-Street spots adjacent to Phase #1.

This illustrative plan is conceptual only and is subject to change.

Appendix B
Representative Site Photos

Site Conditions

Photo 1 – Northwest Project Extent, Facing North

Photo 2 – Northeast Project Extent, Facing South

Representative Site Photos – November 7th, 2025

Waterton Business Park
Douglas County, Colorado

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Appendix B | *November 2025* | *Scale: NTS*

Site Conditions

Photo 3 – Central Project Extent, Facing West

Photo 4 – East Project Extent, Facing East

Representative Site Photos – November 7th, 2025

Waterton Business Park
Douglas County, Colorado

Kimley»Horn

Appendix B | *November 2025* | *Scale: NTS*

Site Conditions

Photo 5 – Southwest Project Extent, Facing East

Photo 6 – Southeast Project Extent, Facing North

Representative Site Photos – November 7th, 2025

Waterton Business Park
Douglas County, Colorado

Kimley»Horn

Appendix B | *November 2025* | *Scale: NTS*

Appendix C
IPAC Report

IPaC U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Douglas County, Colorado

Local office

Colorado Ecological Services Field Office

(303) 236-4773
(303) 236-4005

MAILING ADDRESS
Denver Federal Center
P.O. Box 25486
Denver, CO 80225-0486

PHYSICAL ADDRESS
1 Denver Federal Center
Bldg 53 Room Fw100}
Denver, CO 80225-0001

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Preble's Meadow Jumping Mouse Zapus hudsonius preblei Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4090	Threatened

Birds

NAME	STATUS
Piping Plover Charadrius melodus This species only needs to be considered if the following condition applies: • Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane Grus americana There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Pallid Sturgeon Scaphirhynchus albus Wherever found This species only needs to be considered if the following condition applies: • Water use or contamination may adversely affect the species. Within the Platte River basin, depletions may adversely affect the species. These affects must be considered even outside occupied range. See local FWS office for more information. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7162	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee Bombus suckleyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered
Western Regal Fritillary Argynnis idalia occidentalis Wherever found No critical habitat has been designated for this species.	Proposed Threatened

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses Spiranthes diluvialis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2159	Threatened
Western Prairie Fringed Orchid Platanthera praeclara Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1669	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Jul 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

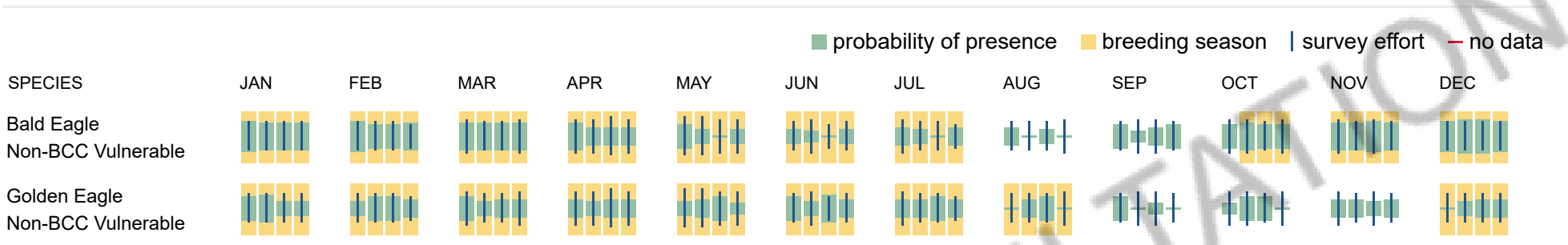
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Jul 31
Broad-tailed Hummingbird Selasphorus platycercus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 25 to Aug 21
Chestnut-collared Longspur Calcarius ornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 10
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ferruginous Hawk Buteo regalis — Breeds Mar 15 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/6038

Golden Eagle Aquila chrysaetos — Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Grasshopper Sparrow Ammodramus savannarum perpallidus — Breeds Jun 1 to Aug 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8329

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/5511

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Pectoral Sandpiper Calidris melanotos — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Sprague's Pipit Anthus spragueii — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8964

Thick-billed Longspur Rhynchophanes mccownii — Breeds May 1 to Aug 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Whimbrel Numenius phaeopus hudsonicus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

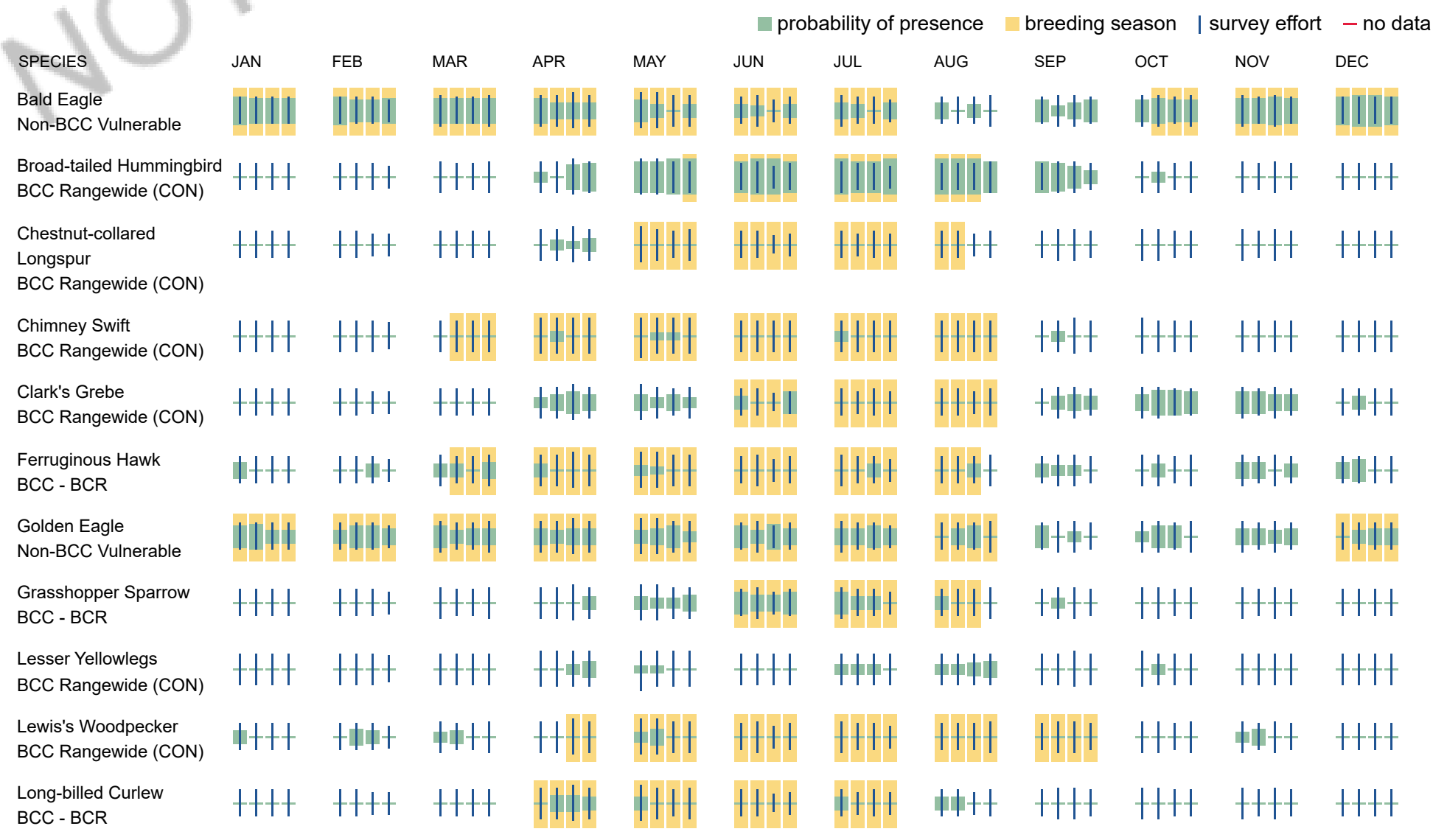
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

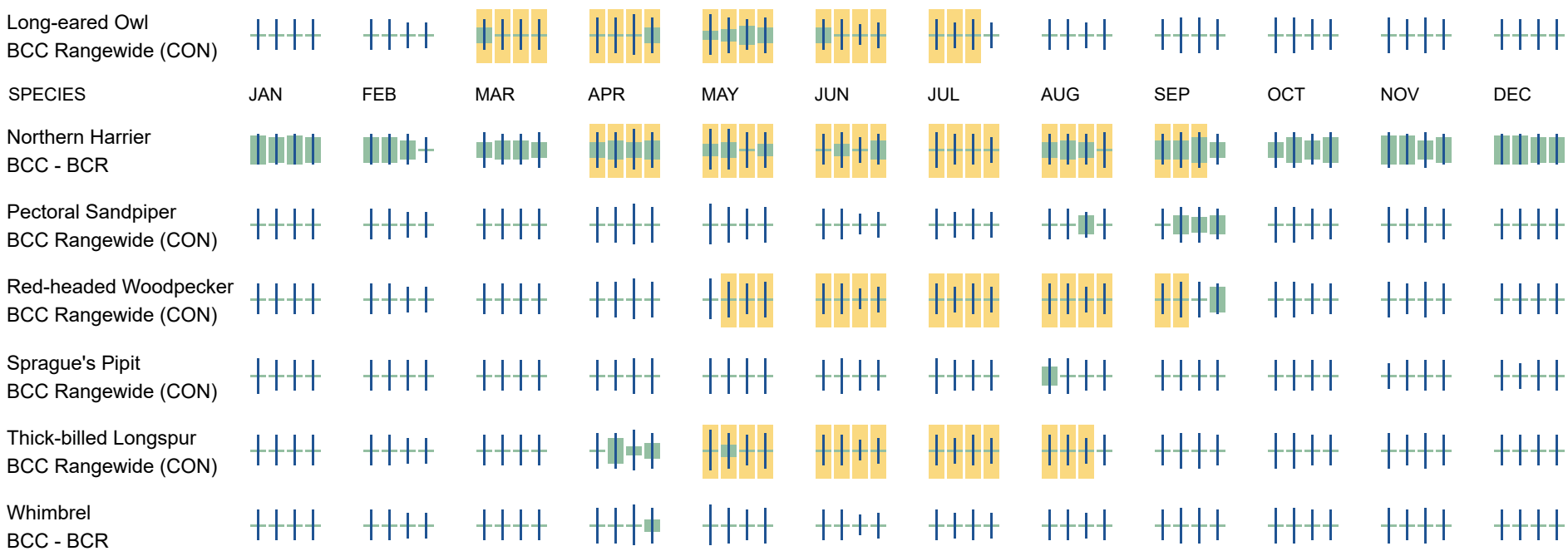
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND
PUBF

RIVERINE
R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix D
CPW Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors

COLORADO
Parks and Wildlife
Department of Natural Resources

RECOMMENDED BUFFER ZONES AND SEASONAL RESTRICTIONS FOR COLORADO RAPTORS (2020)

OVERVIEW

Colorado Parks and Wildlife (CPW) is routinely asked for recommendations on ways to avoid and minimize disturbance to nesting, wintering, and resident raptors in Colorado. These guidelines were originally developed by Colorado Division of Wildlife in 2002 and updated in 2008. We recently (2020) undertook a periodic review of our guidelines to ensure that they are the most up to date based on the best available science and professional judgement. Further revisions of this document may become necessary as additional information is published or becomes available.

Background on Disturbance

The term "disturbance" is ambiguous and experts disagree on what actually constitutes a disturbance. Reactions may be as subtle as elevated pulse rate or as obvious as vigorous defense or abandonment of a nest site. Impacts of disturbance may not be immediately evident. A pair of raptors may respond to human intrusion by defending the nest, but well after the disturbance has passed, the male may remain in the vicinity for protection rather than forage to feed the nestlings. Golden eagles rarely defend their nests, but merely fly a half mile or more away and perch and watch. Chilling and overheating of eggs or chicks and starvation of nestlings can result from human activities that appeared not to have caused an immediate response.

Tolerance limits to disturbance vary among as well as within raptor species. As a general rule, Ferruginous Hawks and Golden Eagles respond to human activities at greater distances than do Ospreys and American Kestrels. Some individuals within a species also habituate and tolerate human activity at a proximity that would cause the majority of the group to abandon their nests. Other individuals can become sensitized to repeated encroachment and react at greater distances. The tolerance of a particular pair may change when a mate is replaced with a less tolerant individual and this may cause the pair to react to activities that were previously ignored. Responses will also vary depending upon the reproductive stage. Although the level of stress is the same, the pair may be more secretive during egg laying and incubation and more demonstrative when the chicks hatch. Recognizing that there is individual variability, the buffer areas and seasonal restrictions suggested here reflect an informed opinion that if implemented, should assure that the majority of individuals within a species will continue to occupy the area. Also, in order to allow for individual variability and renesting pairs, CPW recommends seasonal restrictions continue to be implemented until the chicks have fledged. Other factors such as intervening terrain, vegetation screens, and the existing cumulative impacts of activities should also be considered.

A ‘holistic’ approach is recommended when protecting raptor habitats. While it is important for land managers to focus on protecting nest sites, attention should also focus on defining important foraging areas that support the pair's nesting effort. Hunting habitats of many raptor species are extensive and may necessitate interagency cooperation to assure continued nest occupancy. Unfortunately, basic knowledge of habitat use for individual nesting pairs is often lacking.

RECOMMENDED BUFFER ZONES AND SEASONAL RESTRICTIONS

CPW recommends consultation with local CPW staff early in the planning phase of project proposals in order to assess and develop site-specific recommendations based on pre-existing conditions (e.g. existing development, topography, vegetation, and line-of-sight to nest). CPW maintains a leadership role with respect to raptor management in Colorado; however it is important to keep in mind that the primary authority for the regulation of take and the ultimate jurisdiction for most of these species rests with the U. S. Fish and Wildlife Service (USFWS) under the Migratory Bird Treaty Act (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). Therefore, CPW also recommends early consultation with the U.S. Fish and Wildlife Service to comply with the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and the 2016 U.S. Fish and Wildlife Service Eagle Permits Rules as applicable (USFWS 2016).

BALD EAGLE

Nest Site: No Surface Occupancy (NSO) beyond that which historically occurred, within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nest sites from December 1 through July 31. The majority of bald eagle chicks in Colorado have fledged by July 31; however, for late-nesting or potential re-nesting bald eagles, CPW recommends seasonal restrictions beyond July 31 if chicks are still present in the nest. CPW's recommended buffer is more extensive than the National Bald Eagle Management Guidelines (USFWS 2007) due to the generally open habitat used by Colorado's nesting bald eagles.

If surface occupancy cannot be avoided within ¼ mile of the nest AND the nest is located within a Highly Developed Area, then the recommended NSO extends ⅛ mile (660 feet, 200 meters) from the nest site. No permitted, authorized, or human encroachment activities within ¼ mile radius of active nests from December 1 through July 31. This buffer recommendation matches the USFWS 2007 Guidelines in the instances where eagles have demonstrated the ability to tolerate previous levels of human encroachment and surface occupancy.

Winter Night Roost and/or Communal Roost: No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius of an active night and/or communal roost from November 15 through March 15 if there is no direct line of sight between the roost and the activity. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of an active night or communal roost from November 15 through March 15 if there is a direct line of sight between the roost and the activity.

If an active winter night roost is located within a Highly Developed Area, then no permitted, authorized, or human encroachment activities within ⅛ mile (660 feet, 200 meters) radius from November 15 through March 15 if there is no direct line of sight between the roost and the activity. No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius from November 15 through March 15 if there is a direct line of sight between the roost and the activity. Note: Communal roosts are relatively rare in Colorado and have disproportionately high biological value. Therefore a reduced buffer within a Highly Developed Area does not apply to communal roosts.

If periodic visits (such as oil well maintenance work) to preexisting facilities are required within the buffer zones described above, activity should be restricted to the period between 1000 and 1400 hours from November 15 to March 15.

GOLDEN EAGLE

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from December 15 through July 15.

FERRUGINOUS HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from February 1 through July 15. This species is especially prone to nest abandonment during incubation if disturbed.

RED-TAILED HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ⅓ mile radius of active nests. No permitted, authorized, or human encroachment activities within ⅓ mile radius of active nests from February 15 through July 15. Some individuals of this species have adapted to urbanization and may exhibit a high tolerance to human habitation and activities within 100 yards of their nest. Development that encroaches on rural nest sites is more likely to cause abandonment.

SWAINSON'S HAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) radius of active nests from April 1 through July 31. Some members of this species have adapted to urbanization and may tolerate human habitation to within 100 yards of their nest.

PEREGRINE FALCON

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) mile of the nest cliff(s) from March 15 to July 31. Due to propensity to relocate nest sites, sometimes up to ½ mile (2640 feet, 800 meters) along cliff faces, it is more appropriate to designate 'Nesting Areas' that encompass the cliff system and a ½ mile (2640 feet, 800 meters) buffer around the cliff complex.

PRAIRIE FALCON

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from March 15 through July 15.

NORTHERN GOSHAWK

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of active nests from March 1 through September 15.

OSPREY

Nest Site: No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters) radius of active nests. No permitted, authorized, or human encroachment activities within ¼ mile

(1320 feet, 400 meters) radius of active nests from March 15 through August 15. Some osprey populations have habituated and are tolerant to human activity in the immediate vicinity of their nests.

MEXICAN SPOTTED OWL

No surface occupancy (beyond that which historically occurred in the area) within USFWS designated Critical Habitat and within Protected Activity Center (PAC). No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800m) buffer of Protected Activity Center from March 1 through August 31.

BURROWING OWL

Nest Site: No permitted, authorized, or human encroachment activities within ⅛ mile (660 feet, 200 meters) of the nest site during the nesting season March 15 through August 31. For large industrial disturbances (drilling rig, residential construction, etc.), no permitted, authorized, or human encroachment activities within ¼ mile (1320 feet, 400 meters) of the nest site during the nesting season March 15 through August 31. Although Burrowing Owls may not be actively nesting during this entire period, they may be present at burrows up to a month before egg laying and several months after young have fledged. Therefore, it is recommended that efforts to eradicate prairie dogs or destroy abandoned towns not occur between March 15 and October 31 when owls may be present. Because nesting Burrowing Owls may not be easily visible, it is recommended that targeted surveys be implemented to determine if burrows are occupied. More detailed recommendations are available in a document entitled "Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls," which is available from the CPW.

DEFINITIONS

Active nest – Any nest that is frequented or occupied by a raptor during the breeding season, or which has been occupied in any of the five previous breeding seasons. Many raptors use alternate nests in various years. Thus, a nest site may be active even if a particular structure is not occupied in a given year.

Winter night roost and/or communal roost – Areas where bald eagles and sometimes golden eagles perch overnight or gather to perch or forage. Individuals, pairs, and groups of eagles demonstrate site fidelity to winter night roosts and communal roosts throughout the winter season and year after year. Communal roost sites have more than 15 eagles for the majority of the roosting season and are usually in large trees (live or dead) that are relatively sheltered from wind and are generally in close proximity to foraging areas. Winter night roost and communal roosts may also serve a social purpose for pair bond formation and communication among eagles.

Permitted, authorized, or human encroachment activities- Any activity that brings humans in the area. Examples include construction activities, oil and gas development and production, driving, facilities maintenance, boating, trail access (e.g., hiking, biking), etc.

Surface Occupancy – Any physical object that is intended to remain on the landscape permanently or for a significant amount of time. Examples include houses, oil and gas wells, tanks, wind turbines, solar developments, roads, tracks, trails, etc.

Highly Developed Area – An area where existing density from the cumulative development of oil and gas facilities, home sites, subdivisions, commercial buildings, malls, apartment complexes, gravel pit operations, etc. exceed 10 or more daily occupied facilities within a ¼ mile (1320 feet, 400 meters) radius of the nest. Determination of whether or not a nest site is within a highly developed area will be done in consultation with CPW.

Mexican Spotted Owl Critical Habitat – Critical habitat is defined as areas of land and water with physical and biological features that are essential to the conservation of a threatened or endangered species, and that may require special management considerations or protection. Defined by U.S. FWS Final Rule 2004.

Mexican Spotted Owl Protected Activity Center (PAC) – An area established around an owl nest (or sometimes roost) site, for the purpose of protecting that area. Management of these areas is largely restricted to managing for forest-health objectives.

CONTACT

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COLORADO
Parks and Wildlife
Department of Natural Resources

Recommended Buffer Zones and Seasonal Restrictions Around Raptor Use Sites

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bald Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■					■
ACTIVE NEST HIGHLY DEVELOPED AREA – No Surface Occupancy	⅛ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST HIGHLY DEVELOPED AREA – No Human Encroachment	¼ Mile	■	■	■	■	■	■	■					■
ACTIVE WINTER NIGHT ROOST without a direct line of sight- No Human Encroachment	¼ Mile	■	■	■								■	■
ACTIVE WINTER NIGHT ROOST with a direct line of sight - No Human Encroachment	½ Mile	■	■	■								■	■

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Golden Eagle													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile	■	■	■	■	■	■	■					■
Osprey													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	¼ Mile			■	■	■	■	■	■				
Ferruginous Hawk													
ACTIVE NEST - No Surface Occupancy	½ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	½ Mile		■	■	■	■	■	■					
Red-tailed Hawk													
ACTIVE NEST - No Surface Occupancy	⅓ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	⅓ Mile		■	■	■	■	■	■					
Swainson's Hawk													
ACTIVE NEST - No Surface Occupancy	¼ Mile	■	■	■	■	■	■	■	■	■	■	■	■
ACTIVE NEST - No Human Encroachment	¼ Mile				■	■	■	■					

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Peregrine Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Prairie Falcon													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Northern Goshawk													
ACTIVE NEST - No Surface Occupancy	½ Mile												
ACTIVE NEST - No Human Encroachment	½ Mile												
Burrowing Owl													
ACTIVE NEST - No Human Encroachment	⅛ Mile												
ACTIVE NEST INDUSTRIAL ACTIVITIES – No Human Encroachment	¼ Mile												
Recommend against prairie-dog eradication or conduct surveys													

Species and Use	Buffer	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Mexican Spotted Owl													
Critical Habitat and Protected Activity Center (PAC) – No Surface Occupancy													
Critical Habitat and Protected Activity Center (PAC) – No Human Encroachment	½ Mile												
		= time period for which seasonal restrictions are in place.											

MEMORANDUM

To: Sterling Ranch Development Company

From: Steve Tuttle, PE, PTOE

Date: November 26, 2025

Project: Sterling Ranch Master Transportation Study

Subject: Version 5 (November 2025) Change Log

The Fox Tuttle Transportation Group, LLC has completed the 5th update to the Sterling Ranch Master Transportation Impact Study (from the December 2019 version). This memorandum summarizes the current status of the overall development as well as the changes made in the Master Transportation Study analysis from the December 2019 (4th version) to the updated November 2025 (5th version).

As of May 2025 (corresponding with most recent counts), the following development within Sterling Ranch has been completed, approved or is currently in pre-planning stages:

- **Filing No. 1 – Providence Village** (Completed, except for Elementary School). Constructed and occupied 794 single-family detached homes, approx. 30,000 SF of retail/civic uses, a 14,000 SF daycare center, and a 4,900 SF recreation center ("The Overlook Clubhouse"). An elementary school is planned to be constructed in the next two years located in the southwest corner of Titan Road and Taylor River Circle.
- **Filing No. 2 – Providence Village** (Completed). Constructed and occupied with 48 single-family detached homes, 76 duplexes, and 50 townhomes.
- **Preliminary Plan 3 – Prospect Village** (Completed, except for the park). Constructed and occupied 371 single-family homes, 120 duplexes, 127 townhomes, and 232 apartments. A 8-acre park is under construction with a pool, playground, fields/courts, and open space.
- **Preliminary Plan 4 – Ascent Village** (Completed). This is the northern portion of the planned Ascent Village and 511 single-family detached homes and 142 townhomes are completed and occupied.
- **Preliminary Plan 5 – Ascent Village** (Under Construction). This is the western portion of the planned Ascent Village. At the time of this analysis, 322 single-family homes were completed

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and occupied with the remaining 39 single-family homes under construction. The superblock on the southwest corner of the area (Lot 352), is under construction with 109 townhomes and 264 apartments.

- **Preliminary Plan 6 – Ascent Village** (Approved, Under Construction). This is the southern portion of the planned Ascent Village and at the time of this analysis, 128 single-family homes and 50 townhomes were occupied or on sale, southeast of Waterton Road. Preliminary Plan 6 Traffic Impact Study (April 2021) included a total of 522 single-family detached homes, 279 townhomes/duplexes, 232 apartments, and 66,500 square feet of commercial retail and services. The latest plans were adjusted to 394 single-family detached homes, 104 townhomes, 100 duplexes, 300 apartments, a charter school, and 66,500 square feet of commercial. The charter school is under construction and anticipated to be opened for the Fall 2026 school year.
- **Preliminary Plan 7 – Legends Village** (Approved, Under Construction). The Preliminary Plan 7 Traffic Impact Analysis (dated August 2022) assumed up to 1,087 single-family detached homes, 614 townhomes/duplexes, 330 apartments, 111,600 square feet of commercial retail/office/services, and an elementary school. Filing 7A is under construction and includes 344 single-family detached homes and 173 townhomes/duplexes. Filing 7B has been approved with 75 single-family detached homes and 72 townhomes/duplexes. Filing 7C has been approved with 104 single-family detached homes and 362 townhomes/duplexes.

The approved or planned developments above represent just under 6,900 homes. This is approximately 57% of the originally envisioned 12,050 homes and approximately 43% of the currently proposed 16,050 homes within the expanding boundary of Sterling Ranch.

Summary of Changes Made to the Updated Master Transportation Study

The following is a log of revisions that were made to this report from the previous version (v4, dated December 2019) based on the most current roadway network plan:

1. Gathered new counts in Year 2024 and Year 2025.
2. Expanded Sterling Ranch boundary with the Rush, ARS Pit, and Chemours properties.
3. Increased the total number of proposed dwelling units within the expanding boundary from 12,050 units to 16,050 units.
4. Updated overall site plan for most current version (Figure 2).
5. Updated Roadway Network Plan (Figure 3) for current planned roadway alignments and included required laneage based on traffic projections (Figure 12). This includes:

- Added intersections associated with new properties added to the boundary
- Avenue F does not extend to Waterton Road and now will intersect with Roxborough Park Road instead
- A signal at Waterton Road and Moore Road/Southern Connector
- A multilane roundabout at Waterton Road and Eagle River Street
- Options for signal or roundabout at the Waterton Road intersections at Roxborough Park Road, Middle Fork Street, Waterton Road and Moore Road/Southern Connector and new accesses for the Zebulon and Chemours area along Waterton Road (south)
- A roundabout at Roxborough Park Road and Sterling Ranch Avenue
- A roundabout at Sterling Ranch Avenue at Hooper Street (Avenue F)
- Updated intersections and accesses on Waterton Road, Southern Connector, and Roxborough Park Road
- Updated Titan Interchange to the ultimate design of a continuous flow intersection and southbound-to-westbound free-flow ramp
- Updated Airport Road at US 85 intersection to ultimate design of a grade-separated diamond interchange
- Moved the signal on Waterton Road from Mt. Ouray Road to Mt. Kataka Street for optimal arterial signalized intersection spacing (~0.50 mile).

6. Updated discussion of traffic counts trends to Section 4.3 (page 15).
7. Updated existing intersection volumes to most recently gathered data (Figure 4).
8. Updated 20-year horizon year from Year 2040 to Year 2050.
9. Updated background traffic projections, including the Zebulon Regional Sports Complex and other known developments in the area (see Section 5.3).
10. Updated site trip generation estimates to reflect completed, approved, and anticipated land uses within the full build of 16,050 DU (Table A1). All land use ITE trip rates were updated based on the current ITE *Trip Generation Manual* (12th Edition, 2025). Note that for almost all land uses, current ITE rates represent reductions in trips vs. the previously used 10th Edition data.
11. Increased number of TAZs from 9 zones to 14 zones to match the proposed Sterling Ranch Villages as illustrated in Figure 2.

12. Updated site trip assignment to reflect current Roadway Network Plan and TAZs (Figure 7 and Figure 8).
13. Updated Year 2050 Background Volumes and removed existing Sterling Ranch traffic (Figure 5).
14. Updated Year 2050 Total Volumes (Figure 9 and Figure 10).
15. Updated Level of Service analysis for all study intersections to reflect changes to background volumes, site trip assignment, and roadway network (Figure 11).
16. Updated Figure 12 with revised roadway and intersection network and laneage recommendations; changes to recommended buildout lane geometry and traffic controls from the previous version include:
    - US 85 & Titan Road Interchange: Changed to a partial continuous flow intersection (CFI); with a CFI, the west (southbound US 85) ramp intersection would need to be signalized, but the east (northbound US 85) would not need to be signalized. In comparison to the previously developed concept plans for the CFI, a second westbound lane would need to be added at the west ramp (signalized) intersection (the concept plan only showed a single westbound lane).
    - Waterton Road at Moore Road/Southern Connector: Added northbound-to-westbound second left-turn lane; added southbound Moore Rd. to eastbound Waterton Road (Southern Connector) left-turn due to added development in this area (Chemours + Zebulon).
    - Rampart Range Road at Waterton Road: Added a 2nd northbound left-turn lane based on existing and projections volumes.
17. Updated Section 6.6 corridor signal progression tables to reflect most current Waterton Access Plan and Titan Road signalization plan.
18. Updated technical appendices to reflect changes noted above.

/SGT

December 18, 2025

Douglas County Planning Services 100 Third
Street
Castle Rock, CO 80104

Re: 1506.10 Compliance for 15th PD Amendment for Sterling Ranch (Chemours and Burgess Properties)

Brett Thomas:

The following letter serves as documentation of physical and legal capability to provide sanitation supporting compliance under 1506.10 of the Douglas County Zoning Resolution.

For almost a decade, Dominion Water & Sanitation District (Dominion) has provided wholesale wastewater service to Sterling Ranch. Constructing significant wastewater infrastructure to service the community including the Titan Road and Willow Creek Lift Stations and Forcemain, and the recent completion of the Filing 7 Lift Station which convey wastewater to the existing O-line owned by Roxborough Water & Sanitation District (Roxborough) of which Dominion has permanent conveyance capacity. The O-line conveys the combined flows from Roxborough and Dominion through the Roxborough Conveyance Infrastructure for treatment at the South Platte Renew Facility. This infrastructure serves as the foundation for service to the existing community as defined in the original SR PD and future commitments as defined in PD Amendment No. 15.

In 2025, Dominion entered into the next phase in the development of its wastewater system by initiating the progressive design build of the Chatfield Basin Reclamation Facility (CBWRF). The CBWRF, the completed Filing 7 Lift Station and future lift stations to time with development improves and extends services to the existing planned community through buildout including the Chemours and Burgess properties, and the communities of The Range and Louviers. The CBWRF is anticipated to be online and fully operational by 2027 providing up to 0.9 MGD of treatment to existing communities, in the future the facility will be expanded to meet all identified sanitary service needs.

Dominion currently operates a wastewater collection system and is authorized to convey its flows to South Platte Renew by contract for treatment and discharge under Permit CO0032999. In the future, Dominion will operate its own Publicly Owned Treatment Works (POTW) and will be authorized to treat and discharge wastewater under Permit CO0041645.

The above information confirms Dominion is in compliance and is physically and legally capable of providing sanitation to the SR PD and future commitments as defined in PD Amendment No. 15.

Dominion Water & Sanitation District

Andrea Cole

By: Andrea R. Cole
General Manager

December 1, 2025

Douglas County Planning Services
100 Third Street
Castle Rock, CO 80104

Re: Water Supply Adequacy and Availability
for 15th PD Amendment for Sterling Ranch (Chemours and Burgess Properties)

Brett Thomas:

Dominion Water & Sanitation District ("Dominion" or "DWSD") is a wholesale water and wastewater provider, whose service area is located in Northwest Douglas County. Dominion was established in 2004 as an overlay district to provide services for the master planned community of Sterling Ranch and those existing communities located within its service area that are on non-renewable declining groundwater supplies.

On January 28th, 2025, the Douglas County Board of County Commissioners designated Dominion as an "Established District" for all future Douglas County Zoning and Subdivision Resolutions[1]. Noting that Dominion has:

- Demonstrated its capability to provide ongoing water service to its existing and future customers.
- The request will not be detrimental to the health, safety, or welfare of the present or future inhabitants of the County.

As part of the Established District designation process, Dominion submitted detailed information to the County, its consultants, and the Douglas County Water Commission for review, to include the DWSD "Water Supply Report" (Appendix C to MI 2024-026). The Water Supply Report noted that Dominion has 3,987 AF/yr of water supplies that are sufficient to meet demands for the existing planned build out of Sterling Ranch (12,050 units), Sedalia, The Range, Louviers and Thunderbird with an additional 1,000 AF/yr of water supply available for future customers (Table 3 Water Supply Report).

Sterling Ranch continues to meet and exceed water demand standards in the State with a blended average use of 0.20 AF/SFE. In addition to single family attached, single family detached and multifamily homes the additional 590 acres will also encompass the proposed Zebulon Regional Sports Complex and commercial, retail, hospitality, and light industrial uses. Assuming the aggregated demands for the additional 4,000 units and other uses do not exceed 0.25 AF/SFE Dominion has sufficient firm water supplies to meet these demands.

DWSD remains committed to providing wholesale service to the SR PD, to include this PD Amendment

[1] Resolution No. R-025-008

No. 15, based upon the water supply sources, upon payment of the requisite fees and charges, and compliance with DWSD's rules, regulations, and resolutions, as now or hereinafter constituted. DWSD acknowledges the feasibility of developing and funding the infrastructure necessary to provide the requisite capacity to serve development within its service area and has identified capital improvement projects to meet this projected growth. Costs of these capital improvement projects are included within Dominion's fee structure. It is physically and economically feasible for DWSD to extend service to the proposed development under DWSD's approved service plan for projected demands under the Dominion Adopted Demand Standard[2].

Dominion Water & Sanitation District

By: Andrea R. Cole
General Manager

[2] Resolution adopting demand standards – August 2024.

Attachment C

Dominion Water & Sanitation District

Water Supply Report (2024)

October 8, 2024

Douglas County Planning Services
100 Third Street
Castle Rock, CO 80104

Re: Water Supply Report (2024)

To Whom It May Concern:

Dominion Water and Sanitation District ("**Dominion**") is a wholesale water and wastewater provider created in response to Douglas County's vision to reduce the reliance on non-renewable groundwater in Northwest Douglas County. For more than a decade, Dominion has been assembling the critical supplies, infrastructure and partnerships to bring and make accessible a dependable water supply that is based primarily on renewable water to Northwest Douglas County. As presented in this letter report, Dominion is developing a flexible and robust conjunctive use system to sustainably, and responsibly, manage our portfolio of renewable and groundwater supplies.

This letter report summarizes Dominion's water supply portfolio and the current and future yield[1] available to its customers (**Table 1**), and total water supply commitments[2] (**Table 3**) Dominion has made to retail customers within Dominion's service area. Dominion will periodically update this letter report as its water supply portfolio, yield, or commitments changes.

1. Dominion's Rules and Regulations

Dominion was founded as an overlay district for the purpose of providing wholesale water and wastewater services to Sterling Ranch Community Authority Board (CAB) and those existing

[1] "Yield" refers to the water supply less system transmission and storage losses.

[2] "Commitment" refers to the Dominion's total water service commitment to retail customers.

Retail Districts, within the Dominion service area, that are reliant on declining, non-renewable groundwater supplies.

Dominion's Rules and Regulations (Section 6.03) define the requirements of water and/or wastewater service to existing and future Retail Districts. Because Dominion does not have the authority to collect funds through mill levies or other mechanisms. Service to new Retail Districts is not mandatory within the Dominion service area, nor is a new Retail District required to seek and receive service from Dominion. Should a new Retail District seek wholesale water and/or wastewater service from Dominion, the following minimum criterion shall be met:

- Water Supply Adequacy and Availability - Determination of availability and adequacy of water supplies based on Dominion's adopted water demand standards is required for all water service commitments. DWSD will evaluate requests for water service in accordance to the conditions of service defined in Section 6 of Dominion's Rules and Regulations, requiring an engineer's report detailing the potential customer's demand based on Dominion's demand standards. New retail customers are required to provide renewable water sources or pay Dominion a cash-in-lieu fee to develop them. Dominion has sole discretion in determining the availability and adequacy of the water supply.
- Adoption of a Demand Management and/or Conservation Plan – Dominion is committed to wise and efficient use of water supplies. Dominion's existing Retail District, Sterling Ranch CAB, has adopted an effective demand management plan that is proven to reduce the amount of water used by its customers. All Retail Districts are required to adopt a Dominion approved Water Conservation Plan and Retail Drought Management Response Plane that minimizes water usage and loss, provides long-term sustainable water usage, and is responsive to a Dominion drought declaration.
- Dedication of Water Rights - Dominion requires all potential Retail Customers or Retail Districts to irrevocably dedicate groundwater underlying their property to Dominion, regardless of decree or availability. This groundwater will be used as part of Dominion's conjunctive system and aquifer preservation efforts. Additionally, all rights to store water in the underlying aquifer must be dedicated to Dominion. Renewable water

supplies provided by customers must also be irrevocably dedicated, quantified through an engineering report, and integrated into Dominion's water portfolio. All water rights, easements, and return flow rights must be conveyed to Dominion without encumbrance, and no claims to these rights can be made by property owners or applicants.

- Payment of Appropriate Fees – Any Potential Retail Customer or Retail District is required to pay the appropriate fees as provided in Section 6.06.
- Proof of Retail District and PWS ID - Dominion can only provide wholesale water and wastewater services to a Retail District, defined as a Title 32 Special District or other governmental entity recognized by the State of Colorado. Any agreement must be with such a district or entity. Additionally, for wholesale water service, the Retail District must provide its CDPHE Public Water System (PWS) ID.
- Financial Guarantee - Dominion may require a new Retail District to provide a Financial Guarantee, such as a letter of credit or cash deposit, covering connection and operation fees. The amount, determined at DWSD's discretion, depends on the potential financial risks posed by the development, including its approval by Douglas County and its financial viability. The guarantee ensures protection against losses that could affect DWSD's existing Retail Districts.

Currently, Dominion's water supply portfolio is committed and reserved to serving Retail Districts located within its service area that have met or are in the process of meeting these criteria. These Retail Districts include Sterling Ranch CAB, Sedalia, The Range, Louviers, and Thunderbird. In the future, as infrastructure is developed and water supplies become available, additional anticipated commitments will be subject to Dominion's Rules and Regulations.

2. Dominion's Water Supplies

Dominion's water supplies previously approved by Douglas County total 2,457 AF/yr. This is based on the legal supplies at the source from: two existing City of Aurora contracts totaling 480 AF/yr; a contract with the Town of Castle Rock for 700 AF/yr through the Firming Service

Commitment IGA (the "FSC IGA"); 625 AF/yr of Dominion's WISE subscription; and 1,381 AF/yr of Cherokee Ranch Denver Basin groundwater (Cherokee GW) from the Denver and Arapahoe aquifers. Considering transmission and storage losses these supplies result in a current average deliverable water supply yield of 3,050.8 acre-feet per year (AF/yr) and a dependable (firm) yield of 2,457.0 AF/yr to meet the demands of its customers. In the future when the South Platte diversion and Chatfield Basin Water Reclamation Facility (CBWRF) are complete, Dominion will be able to divert additional renewable and reusable water supplies. The additional renewable supplies increase the projected average water supply yield by 708 AF/yr to 3,758.6 acre-feet per year (AF/yr). With the capture of reusable supplies the dependable (firm) yield to 3,986.8 AF/yr available to meet future customer demands. Table 1 below summarizes Dominion's current and projected future average annual water supply portfolio and dependable yields.

Table 1 – Dominion's Average Annual Water Supply Portfolio and Dependable Yields

		(A)	(B)	(C)	(D)
Renewable and Groundwater Sources	**Bedrock Aquifer**	**Available Supply (AF/yr)**	**Utilized Supply (AF/yr)**	**Current Yield (AF/yr)**	**Future Yield (AF/yr)**
Aurora 230 Contract	-	230.0	230.0	230.0	230.0
Aurora 250 Contract	-	250.0	250.0	250.0	250.0
FSC IGA[1]	-	700.0	700.0	665.0	665.0
Hock Hocking[2]	-	62.5	0.0	0.0	53.0
SP Junior Water Rights[3]	-	743.8	0.0	0.0	654.8
WISE 625[4]	-	625.0	625.0	593.8	593.8
Total Renewable Water Supply		**2,611.3**	**1,805.0**	**1,738.8**	**2,446.6**
Cherokee Ranch (98CW219/03CW117)	Arapahoe	1,074.0	1,074.0	1,020.3[2,3,4]	1,020.3[2,3,4]
	Not-Nontributary Denver	1,614.0	307[5]	291.7[2,3,4]	291.7[2,3,4]
	Laramie -Fox Hills	381.0	0.0[5]	0.0[5]	0.0[5]
Total Groundwater Supply		**3,069.0**	**1,381.0**	**1,312.0**	**1,312.0**
Total Average Supply		**5,680.3**	**3,186.0**	**3,050.8**	**3,758.6**
Total Firm Supply		**3,868.0**	**2,561.0**	**2,457.0[2,3,4]**	**2,457.0[2,3,4]**
Reusable Supply****		**1,529.8**	**0.0**	**0.0**	**1,529.8**
Total Firm Supply W/Reuse		**5,397.8**	**0.0**	**0.0**	**3,986.8[6]**

(A) "Available" means Dominion's owned/available contract supplies.

(B) "Utilized" means the portion of the Available supply that has been developed by Dominion for immediate use.

(C) "Current Yield" refers to the water supply available for current commitments through contracts and infrastructure less system transmission losses to the Larry D. Moore Water Treatment Plant.

(D) "Future Yield" refers to the projected water supply available for future commitments assuming all raw water and wastewater infrastructure are in place for deliveries less system transmission losses to the Larry D. Moore Water Treatment Plant.

1) Consists of 700 AF/yr of WISE, backed up by the Town of Castle Rock in the Firming Service Commitment (FSC IGA, 11/22/2016).

2) In the future an average of 62.5 AF/yr of Dominion's Hock Hocking will available for diversion at Dominion's South Platte diversion providing an average of 53.0 AF/yr after stream losses and requiring an average of 55.8 AF/yr of Cherokee Ranch Denver Basin Groundwater for firming.

3) 743.8 AF/yr is a conservative estimate of physical and legal availability of Dominion's direct flow junior water rights at the South Platte diversion, assuming an average of 75 days in priority (Table C-2 from the 18CW3039 Engineering Report) and a mimimum available diversion capacity of 5 cfs. 654.8 AF/yr is the remaining Cherokee Ranch Denver Basin Groundwater available to firm the SP Junior water right.

4) 593.8 AF/yr of Dominion's current yield may be delivered from Dominion's utilized supply associated with 625.0 AF/yr of WISE and/or 625 AF/yr of Cherokee Ranch Denver Basin Groundwater.

5) Dominion's acquired 73 AF/yr Cherokee Ranch Laramie-Fox Hills supplies is specifically reserved to offset post pumping augmentation requirements associated with Dominion's use of 307 AF of Not-Nontributary Denver Aquifer supplies. Cherokee Ranch Denver Aquifer post pumping augmentation requirements to be met with Laramie-Fox Hill water is equal to 23.54% of Denver Aquifer pumping. This is based upon ratio of 380 AF LFH reserved for 1,614 AF Cherokee Denver Aquifer pumping required in Case No. 03CW117. Cherokee Ranch Laramie-Fox Hills does not count toward Dominion's current yield available to meet commitments and has no conveyance loss.

6) Dominion's reusable water supply (effluent credits) are based on observed wastewater flow of 95 gal/day/EQR and a projected total of 16,550 EQRs at buildout (~2050) less 10% treatment system loss and 4% required for Denver Basin relinquishment (1,381.0 AF/yr x 4%) to the stream.

3. Dominion's Current Water Supply Portfolio

Dominion's current water supply portfolio is a robust conjunctive supply that consists of renewable water supplies as well as non-renewable groundwater supplies for drought tolerance. DWSD is committed to providing up to or exceeding 70% renewable supplies, on an average annual basis, to its Retail Districts. Specifically, Dominion's water supply portfolio consists of the following water sources. **Figure 1** (Attachment 1) is a map of Dominion's raw water delivery system showing the location of key infrastructure and providing a of Dominion's water supplies.

Town of Castle Rock – Cherokee Ranch Groundwater (Cherokee GW)

Dominion has a signed Intergovernmental Agreement for the Option to Purchase and Right of First Refusal Regarding Ground Water Rights, Easements, and Related Improvements with the Town of Castle Rock ("Cherokee Agreement") securing Dominion's purchase of up to 3,569 AF/yr of Central Basin groundwater rights associated with Cherokee Ranch (the "Cherokee GW"). Below is a summary of Dominion's Cherokee Ranch transactions to date:

- August 3, 2019, Dominion completed its first transaction, purchasing 300 AF/yr of non-tributary Arapahoe aquifer groundwater.
- October 6, 2020, Dominion completed its second transaction with the Town of Castle Rock, exchanging a portion of Dominion's excess capacity in WISE infrastructure for 620 AF/yr of Cherokee GW (400 AF/yr Nontributary Arapahoe, 200 AF/yr Not-Nontributary Denver, and 20 AF/yr Laramie-Fox Hills[3]).
- May 4, 2021, Dominion completed its third transaction with the Town of Castle Rock, exchanging a portion of Dominion's excess capacity in WISE infrastructure for 534 AF/yr of

[3] Dominion's Laramie-Fox Hills is not a supply that is used to meet the demands of its customers, it's a replacement supply to cover NNT Denver aquifer post pumping stream depletions. The amount of Cherokee Ranch Laramie-Fox Hills replacement supply required is 23.54% of Cherokee Denver Aquifer pumping based on the ratio (380 AF LFH/1,614 AF Denver) required in Case No. 03CW117.

Cherokee GW (374 AF/yr Nontributary Arapahoe, 107 AF/yr Not Nontributary Denver, and 53 AF/yr Laramie-Fox Hills).

The Special Warranty Deeds by which Castle Rock conveyed Cherokee groundwater rights are provided in Appendix C. The Cherokee GW water rights have a decreed yield of 3,569 AF/yr and include a banking provision for annual amounts not pumped since 1998. Currently, Dominion owns 1,454 AF/yr of Cherokee GW water rights with 1,307 AF/yr Not-Nontributary Denver and 308 AF/yr Laramie-Fox Hills remaining at Cherokee Ranch.

This water is fully consumable and reusable (less 2% or 4% for relinquishment back to the stream and the rights purchased are under conservation easements allowing them to be transferred and used within Douglas County. All Cherokee Ranch Not Nontributary and Nontributary groundwater will be operated subject to the terms and conditions defined in the Cherokee Ranch Decree (Case No. 03CW117), including the augmentation plan decreed therein. See Table 2 for further detail. As described further below in Sections 5 and 6, the Cherokee GW will be delivered through the Eastside Water System, with a 5% reduction to account for stream relinquishments of Nontributary groundwater and conveyance losses.

Table 2 – Summary of Dominion's NTGW Rights Associated with Cherokee Ranch, Colorado.

Water Court Case 03CW117			
		Totals	Units
Dominion Ownership	Denver (NNT)	307	AF/yr
	Arapahoe (NT)	1,074	AF/yr
	LFH (NT)	73	AF/yr
	Total	**1,454**	**AF/yr**
Dominion Use	WISE Firming	625	AF/yr
	Hock Hocking/SP Junior Water Right Firming	745	AF/yr
	Reserved NNT Augmentation Water*	84	AF
	Remaining	**0**	**AF/yr**
*73 AF (LFH) for Post-Pumping + 11 AF (Arapahoe) for augmentation while pumping the Denver aquifer			

South Metro WISE Authority (SMWA) - 2013 Formation Agreement; SMWA, Denver Water, and Aurora Water – Water Delivery Agreement (WDA)

Dominion previously utilized 700 AF/yr of its WISE subscription (the "**WISE 700**") out of its total WISE subscription of 1,325 AF/yr (the "**WISE 1,325**") as part of the FSC IGA with the Town of Castle Rock. In the coming years, Dominion will utilize the remaining 625 AF/yr of its WISE subscription (the "**WISE 625**") as Full Deliveries come online as discussed in the WDA and its related agreements. While the WISE 1,325 provides fully consumable, renewable treated water to Dominion over a 10-year block, the WISE 625 is currently being firmed with a maximum of 625 AF/yr of Cherokee GW. As described further below in Sections 5 and 6, the WISE 625 will be delivered through Dominion's Eastside Water System. Accordingly, with the current infrastructure and operation, together, the combination of up to 625 AF/yr of Cherokee Denver Basin groundwater and WISE 625 AF/yr result in a dependable delivery yield of at least 593.8 AF/yr after required relinquishments and conveyance losses (~5%). The WISE 625, as firmed with the Cherokee GW, is dependable with respect to water rights administration and the terms of the WDA.

4. Dominion's Future Supplies Portfolio

In addition to Dominion's current water supplies portfolio described above, Dominion continues to actively develop water supplies. In the future Dominion's water supplies portfolio will include water associated with the Hock Hocking Mine, South Platte Water Rights, and reusable return flows ("Reusable Supplies"). These sources are included as part of the Owned/Contract Supply shown in **Table 1** and will be incorporated into Dominion's available future yield as infrastructure and customer demands warrant.

Hock Hocking Mine (Hock Hocking)

The Hock Hocking Mine water right (the "**Hock Hocking**") was purchased by Dominion from the Hock Hocking Mineral Company in March 2017. Following a partial dedication to Aurora, Dominion has retained its ownership of the remaining 62.5 AF/yr of Hock Hocking (see Table 1) providing an estimated average annual delivery yield after stream losses of 53 AF/yr of fully

consumable, developed Nontributary renewable raw water at Dominion's proposed South Platte River diversion point near the CBWRF.

South Platte Conditional Water Rights (South Platte Water Rights)

Dominion's recent water court filing 18CW3039 was decreed on June 16, 2021, for direct diversion, storage, and appropriative exchange allowing Dominion access to physically and legally available water supplies from the South Platte, Plum Creek, Indian Creek, Willow Creek, and Sterling Gulch (the "South Platte Water Rights"). The availability and yields of these water rights is dependent on the configuration and development of facilities and infrastructure, availability of physical supplies, and administration of these water rights. Potential yield estimates for each water right are summarized in the Engineering Report (Attachment 2). Conservatively, just based on Dominion's direct flow right at the South Platte diversion the average physical and legal availability of Dominion's junior water right totals 743.8 AF/yr, assuming an average of 75 days in priority (Table C-2 from the 18CW3039 Engineering Report) and a minimum available diversion capacity of 5 cfs. Dominion continues is actively working towards the development infrastructure in support of these water rights as a future supply.

Reusable Return Flows (Reusable Supplies)

All of Dominion's water supplies are fully consumable and reusable to extinction[4]. After the first use, Reusable Supplies are quantified for re-diversion and subsequent use at the wastewater treatment plant. Dominion's available Reusable Supplies are a function of the potable system reuseable water deliveries to meet indoor demands and resulting return flows after wastewater treatment. As indoor demands increase, available Reusable Supplies increases.

Recent historical daily observations of available wastewater return flows from Sterling Ranch's Willow Creek Lift Station show an average flow of 95 gal/day/EQR (Equivalent Residential Unit). Future projections estimate a total of 16,550 EQRs will be connected to Dominion's

[4] Excludes Laramie-Fox Hill aquifer supplies. Nontributary Arapahoe aquifer supplies are subject to 2% relinquishment and Not -Nontributary Denver aquifer supplies are subject up to 4% relinquishment.

wastewater system producing an estimated 1,529.8 AF/yr of available reusable supplies after considering an estimated 10% wastewater system loss and another 4% to cover Denver Basin relinquishment requirements (1,381.0 AF/yr x 4%). In the future, when the CBWRF and South Platte diversion are in place for Dominion will capture reusable supplies as an important supply available to meet future demands.

5. Dominion's Water Delivery and Wastewater Systems

Dominion's Westside Water System utilizes the existing Aurora Water System to deliver 230 IGA and 250 IGA water supplies. Additionally, Dominion is developing an Eastside Water System including infrastructure to convey WISE 700, WISE 625, and Cherokee GW. Key elements of Dominion's Westside and Eastside Water Systems are depicted in Figure 1, Dominion Water & Sanitation District Water Delivery System and Water Supplies," provided as Attachment 1.

Aurora / Water Systems (aka Dominion's Westside Water System) – Aurora contract supplies continue to be taken through the existing Aurora Water Systems and delivered to a Master Meter at the Roxborough (a/k/a Larry D. Moore) water treatment plant (*Figure 1*). Alternative future delivery system may include a new Dominion diversion from the South Platte River or delivery through the WISE infrastructure as negotiated with Aurora per the existing or amended intergovernmental agreements.

Dominion's Eastside Water System – Dominion's Eastside Water System is complete and will be connected when water supplies become available or are needed to meet Dominion's customer demands. The pipeline will deliver Dominion's WISE 700, WISE 625, other Aurora Water's to include emergency deliveries subject to final amendment to the existing Aurora contracts, and Cherokee GW, the latter for which infrastructure, treatment, and connections to the Eastern Regional Pipeline will occur as required to meet demands. Dominion will obtain all required state well permits and local Douglas County permits required for the development of Cherokee Ranch water supplies. The delivery point for Dominion's Eastside Water System is the High Zone Tank (*Figure 1*).

6. Dominion's Renewable Water Supply Commitment

Dominion is committed to maximizing renewable and reusable resources to meet a minimum target of at least 70% at buildout and the deliberate use of Denver Basin groundwater as warranted by its customer demands. It is Dominion's intent to maximize the use of available renewable supplies and minimize the use of non-renewable supplies recognizing that Denver Basin groundwater is a finite resource that is to be used carefully and responsibly.

To date, all water supply deliveries to Dominion's Retail Customers have come from the Aurora Rampart system. Specifically, from contract deliveries of the Aurora 230 and 250 agreements, which are 100% renewable.

In the future, as Dominion's raw water infrastructure, treatment, and wastewater systems are built out, water demands within Dominion's service area will be met by a robust conjunctive use system that includes both renewable water and non-renewable Denver Basin groundwater. Dominion's renewable water supplies are from several decreed and contract sources providing both consistent (firm) and variable (average) water supplies. Requiring the use of Denver Basin groundwater during times of shortage when renewable supplies are physically, legally, or contractually unavailable. Resulting in a robust dependable water supply. With the availability of renewable and reusable supplies projected to significantly increase in the future Dominion anticipates being 90 to 100% renewable at buildout.

7. Dominion's Current and Future Water Supply Commitments

Table 3 below summarizes Dominion's current and future water supply commitments to existing and future Retail Customers located within Dominion's service boundary. Water service to these customers is subject to Dominion's Rules and Regulations. Table 3 below includes all known water commitments reflecting will serve agreements to Sterling Ranch, conditional will serve to The Range, and interim draft emergency interconnection agreements with Sedalia and Louviers. Note Dominion for water supply availability purposes, accounts for water deliveries to all the entities listed above and Thunderbird.

Currently (2024), Dominion's primary water service commitment is to Sterling Ranch supporting commitments to serving all existing and future Filings of Sterling Ranch. Based in the Sterling Ranch CAB 2021 Water Demand Standards[5] and the cumulative unit count totals from Sterling Ranch CAB's Filing 5C application[6]. Dominion's current commitment to Sterling Ranch totals 1,596.1 AF/yr at the home or 1,699.8 AF/yr at the water treatment plant inclusive of an observed average system loss of 6.1%.

In addition to Sterling Ranch, Dominion also has current conditional will serve commitment with The Range, and intent to serve commitments with Sedalia, Louviers, and Thunderbird. Currently, Dominion's has 2,457.0 AF/yr of service commitments reserved for the communities of Sterling Ranch, Sedalia, The Range, Louviers, and Thunderbird and no uncommitted water supplies.

[5] The CAB approved Resolution No. 2021-10-02 adopting amended and restated water demand standards on October 20, 2021 ("2021 Water Demand Standards")

[6] Water and Sanitary Sewer Service for Sterling Ranch Lot 1 in Filing 5C, Table 2, March 25, 2024

Table 3 - Dominion Current and Projected Future Water Services Commitments

	(A)	(B)
Retail Customer	**Current (2024) (AF/yr)**	**Future (Projected) (AF/yr)**
Sterling Ranch[1]	**1,699.8**	**2,726.4**
Sedalia[2]	**0.0**	**23.5**
The Range[3]	**0.0**	**137.5**
Louviers[4]	**0.0**	**42.0**
Thunderbird[5]	**0.0**	**44.5**
Future Customers[6]	**0.0**	**1,000.0**
Total Commitments[7]	**2,457.0**	**3,973.9**
Total Firm Yield[8]	**2,457.0**	**3,986.8**
Total Uncommitted	**0.0**	**12.9**

1) Dominion's current water service commitment to Sterling Ranch totals 1,596.1 AF/yr supporting commitments to serve Filings 1 through 5, Preliminary Plan No. 6, and Preliminary Plan No. 7 (April 2, 2024). Dominion's future projected commitment to Sterling Ranch is estimated to total 2,560.1 based on DWSD's "Letter of Intent to Serve" the SR PD and its approved 12,050 residential dwelling units, 130 acres of commercial plus irrigated open space provided to the Douglas County Planning Department on July 15, 2013. Water service commitments to Sterling Ranch include a 6.1% observed system loss.

2) Dominion's water service commitment to Sedalia totals 23.5 AF/yr serving up to 94 residential units starting in 2026.

3) Dominion's water service commitment to The Range totals 137.5 AF/yr serving up to 550 residential units starting in 2026.

4) Dominion's water service commitment to Louviers totals 42.0 AF/yr serving upto and estimated 124 residential units starting in 2026.

5) Dominion's water service commitment Thunderbird totals 44.5 AF/yr serving up to an estimated 110 residential units.

6) Dominion's future water service demand projection includes planning an additional 1,000 AF/yr for future customers is assumed to be located within its service area and is estimated to support up to an additional 3,950 units.

7) Dominion's total commitment includes service to Sterling Ranch, Sedalia, The Range, Thunderbird, and Louviers. Currently, all of Dominion's frim yield (2,457.0 AF/yr) is reserved for these customers.

8) Dominion's current and future total firm yields are from Table 1. Note that future total firm yield includes reusable supplies.

In the future, Dominion's future projected commitment to Sterling Ranch is estimated to total 2,560.1 AF/yr based on Sterling Ranch CAB 2021 Water Demand Standards and a projected buildout scenario totaling 12,050 residential units provided by Sterling Ranch CAB. This projection is supported by Dominion's "Letter of Intent to Serve" the SR PD and its approved 12,050 residential dwelling units, 130 acres of commercial plus irrigated open space provided to the Douglas County Planning Department on July 15, 2013. Including the observed average system loss of 6.1%, Dominion's total projected future commitment to Sterling Ranch totals 2,726.4 AF/yr.

Dominion remains committed to serving the communities of Sedalia, The Range, Louviers, and Thunderbird and their growing demands. Water service will include up to 94 units in Sedalia for a total of 23.5 AF/yr, 550 units in The Range for a total of 137.5 AF/yr, 124 units in Louviers for a total of 42.0 AF/yr, and 110 units in Thunderbird for a total of 44.5 AF/yr. In the future, Dominion is also planning to serve future customers, who meet Dominion Rules and Regulations, within the Dominion service area. Providing up to 1,000 AF/yr to support up to 3,950 additional residential units.

Based on projected future total service commitments (3,973.9 AF/yr) and anticipated total firm yield (3,986.8 AF/yr) from Table 1, Dominion is projected to have approximately 12.9 AF/yr of uncommitted water supplies at buildout.

8. Dominion's Current and Future Water Supply Yield

Currently, Dominion has 2,457 AF/yr of dependable delivery yield available to its customers for entitlement purposes as shown in Table 1. Dominion's Westside Water System utilizes the existing Aurora Water System to deliver the 230 IGA and 250 IGA water supplies providing a dependable yield of 480 AF/yr at the Larry D. Moore water treatment plant. Dominion's Eastside Water System can convey up to 2,706 AF/yr of utilized WISE 700, WISE 625, and Cherokee GW supplies with a dependable supply of 2,081 AF/yr. Deliveries through the Eastside Water System incur a 5% conveyance loss resulting in dependable delivery yield of 1,977 AF/yr available at Dominion's High Zone Tank. Therefore, Dominion's current net dependable yield available to its customers from the Westside (480 AF/yr) and Eastside (1,977 AF/yr) Systems totals 2,457 AF/yr,

which is sufficient for meeting all of Dominion's current water commitments identified in Table 3 (2,457.0 AF/yr).

In the future with the South Platte diversion and CBWRF in place, Dominion will be able to physically and legally deliver the 230 IGA, 250 IGA, Hock Hocking, South Platte junior water rights, and reusable return flows on the Westside resulting in a dependable yield of 2,009.8 AF/yr. In the future, Dominion's Eastside Water System will continue to convey up to 2,706 AF/yr of utilized WISE 700, WISE 625, and Cherokee GW supplies with a dependable supply of 2,081 AF/yr. Deliveries through the Eastside Water System incur a 5% conveyance loss resulting in dependable delivery yield of 1,977 AF/yr available at Dominion's High Zone Tank. The net result is an increase in the availability of renewable supplies from the Westside and reduction of Cherokee GW, and an increase in the total available dependable yield to 3,986.8 AF/yr. Therefore, Dominion's future net dependable yield available to its customers from the Westside (2,009.8 AF/yr) and Eastside (1,977 AF/yr) Systems totals 3,986.8 AF/yr, which is sufficient for meeting all of Dominion's future water commitments identified in Table 3 (3,973.9 AF/yr).

9. Summary and Conclusions

Currently, Dominion has a dependable yield of 2,457 AF/year available to meet the water supply needs of its retail customers. All water delivered to date has come from 100% renewable sources. In the future, as Dominion's raw water infrastructure, treatment, and wastewater systems are fully developed, additional renewable and reusable water supplies will become available, resulting in a projected reliable yield of 3,986.8 AF/year. This yield is expected to be sufficient to meet all future water supply commitments, with 90 to 100% of the supply anticipated to come from renewable sources at full buildout.

Presently, the 2,457 AF/year in Dominion's water supply portfolio is committed to serving retail customers within its service area, which includes Sterling Ranch, Sedalia, The Range, Louviers, and Thunderbird. Looking ahead, Dominion is committed to meeting the demands of both existing and future customers in its service area, with the ability to provide up to an additional 1,000 AF/year to future customers who meet Dominion's Adopted Rules and Regulations.

The water supplies, as described herein, meet the requirements of Section 29-20-304(1) C.R.S. This statute describes an adequate water supply as *"a water supply that will be sufficient for build-out of the proposed development in terms of quality, quantity, dependability, and availability to provide a supply of water for the type of development proposed and may include reasonable conservation measures and water demand management measures to account for hydrologic variability."*

Sincerely,

Dominion Water & Sanitation District

By: Andrea Cole
General Manger

cc: Dominion Board of Directors

Attachment 1

Figure 1

Dominion Water & Sanitation District Water System & Water Supplies

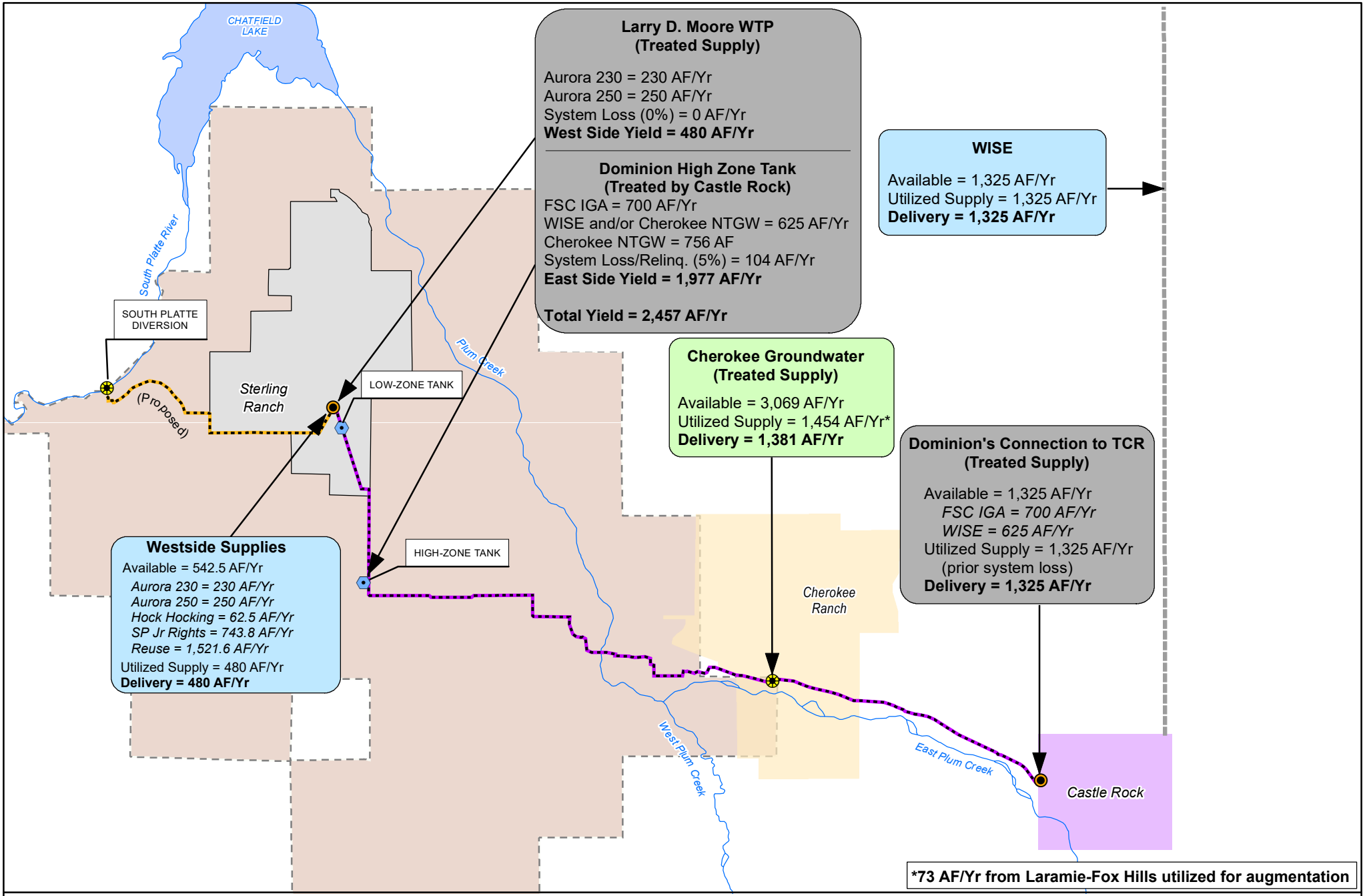

FIGURE 1
DOMINION WATER & SANITATION DISTRICT WATER DELIVERY SYSTEM & WATER SUPPLIES

SUPPLY POINT
WATER STORAGE TANK
WATER TREATMENT PLANT
WISE SYSTEM
DWSD EASTERN REGIONAL PIPELINE
DWSD WESTERN PIPELINE
DOMINION WATER & SANITATION DISTRICT
RENEWABLE
NON-RENEWABLE
DELIVERY

N

LRE WATER

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OCTOBER 2024

This product is for reference purposes only and is not to be construed as a legal document or survey instrument.

Attachment 2

Engineering Report in Support of Case No. 18CW3039

Exhibit A

CONNECTING WATER TO LIFE

ENGINEERING REPORT IN SUPPORT OF CASE NO. 18CW3039

Application for Direct Flow Rights, Water Storage Rights, and Appropriative Rights of Exchange

Prepared for:

Dominion Water & Sanitation District

October 2020

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The technical material in this report was prepared by or under the supervision and direction of the undersigned, whose seal as a Professional Engineer is affixed below.

The following members of the LRE Water staff contributed to the preparation of this report.

Principal-in-Charge	R. Gregory Roush, P.E.
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SECTION 1: INTRODUCTION

1.1 DOMINION WATER & SANITATION DISTRICT

Dominion Water & Sanitation District (Dominion or District) is a Title 32 Water District organized in 2004 to provide water supplies, wastewater and storm water services to Northwest Douglas County, Colorado. Dominion's current service area of 33,000 acres is shown on Figure 1 and was in part established to meet the Douglas County vision for residents to have access to renewable water sources. As a new District, it began with no customers in 2004 and its current customers to be served include the new Sterling Ranch Planned Development (Sterling Ranch) and existing Chatfield Valley Neighbors. Additionally, the District intends to continue to grow its customer base to meet its share of the estimated population growth of 132,000 residents from 2020 to 2040 as presented in the 2019 Douglas County Comprehensive Master Plan. Dominion staff report they have had many conversations with new potential customers, including developers and existing smaller water districts currently relying on finite groundwater supplies that are interested in water service from Dominion. In 2020, Dominion has entered into two agreements with developers to begin the negotiations for water service.

Dominion is developing a portfolio of conjunctive use water supplies consisting of renewable tributary water, nonrenewable non-tributary groundwater (NTGW), and reuse of fully consumable return flows. Water supplies are being acquired and developed to meet the projected water supply needs of Dominion's current customers (Sterling Ranch and Chatfield Valley Neighbors), projected new residents by 2050 within the Dominion service area, and existing entities that are in the Dominion service area and are seeking renewable water supplies because they are currently served only or primarily by finite nonrenewable sources. Dominion's current goal, consistent with the County's vision for residents in Northwest Douglas County, is to shift away from nonrenewable water supplies, to provide Sterling Ranch with 70% renewable water sources and the whole of its service area with 60% renewable water supplies on an average annual basis. By its application in Case No. 18CW3039, Dominion seeks junior renewable water appropriations to serve its existing customers and future residents in its district, and increase its renewable water supplies so that the non-renewable NTGW in Dominion's portfolio can be utilized as a backup and supplemental supply. The water rights claimed in Case No. 18CW3039 will also extend the life of Dominion's NTGW supplies so that they can continue to serve as a backup during future droughts.

This report supports Dominion's application in Case No. 18CW3039 to appropriate junior water rights by providing the basis for Dominion's need of the water, as well as establishing that the water is physically and legally available, and that it is financially and technically feasible to perfect the conditional rights applied for therein.

1.2 CASE HISTORY

On February 28, 2018, an application was filed by Dominion in Case No. 18CW3039. In this application, Dominion seeks conditional direct flow and storage water rights from the South Platte River, Plum Creek, and certain tributaries thereto, along with appropriative rights of exchange along the South Platte River and Plum Creek, all in Water District 8, Water Division 1. The appropriation date claimed is February 28, 2018 based on Dominion's filing for water rights by its application in Case No. 18CW3039.

1.2.1 Original Claims

Dominion's original claims in Case No. 18CW3039 as described in the water court application included the direct flow, storage, and exchange water rights shown in Tables 1 through 3, below. The locations of these original claims are depicted on Exhibits 2 and 3 of the Application in Case No. 18CW3039, included as Appendix A of this report.

Table 1: Dominion Water & Sanitation District Case No. 18CW3039
Original Conditional Direct Flow Water Right Claims

WRID	WDID	County	Structure Name	Water Source	Rate (cfs)
1	0801002	Douglas	Dominion Conduit No. 20	South Platte River	24
2	0801003	Douglas	Dominion Conduit No. 8 a.k.a. Bond Ditch Pipeline	South Platte River	24
3	0801004	Jefferson	Dominion Highline Canal	South Platte River	120
4	0801005	Jefferson	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	South Platte River	24
5	N/A	Douglas	Dominion South Platte Diversion	South Platte River	24
6	N/A	Jefferson	Dominion South Platte Pumpback	South Platte River	4
7	N/A	Douglas	Dominion Willow Creek Diversion	Willow Creek	50
8	N/A	Douglas	Dominion Sterling Gulch Diversion	Sterling Gulch	50
9	N/A	Douglas	Dominion Plum Creek Diversion	Plum Creek	40
10	N/A	Douglas	Dominion Indian Creek Diversion	Indian Creek	10

Table 2: Dominion Water & Sanitation District Case No. 18CW3039
Original Conditional Storage Water Right Claims

WRID	WDID	County	Structure Name	Water Source	Volume (AF)	Refill Amount (AF)	Fill Rate (cfs)
11	N/A	Douglas	ARS Reservoir	South Platte River, Plum Creek, Indian Creek, Willow Creek and Sterling Gulch	2,200	2,200	370[2]
12	803514	Jefferson	Chatfield Reservoir	South Platte River and Plum Creek	2,200	2,200	N/A
13	0803517	Douglas	Wakeman Reservoir	Willow Creek	450	450	N/A
14	N/A	Douglas	Willow Creek Reservoir	Willow Creek	900	900	N/A
15	N/A	Douglas	Sterling Gulch Reservoir	Sterling Gulch	600	600	N/A
16	0803035	Douglas	Castle Rock Reservoir Nos. 1 and 2[1]	Plum Creek	1,740	1,740	40
17	N/A	Douglas	East Storm Water Ponds	Unnamed tributaries to Sterling Gulch and Plum Creek	240	240	N/A
18	N/A	Douglas	West Storm Water Ponds	Unnamed tributaries to Willow Creek and the South Platte River	360	360	N/A

Notes: 1. Castle Rock Reservoir Nos. 1 and 2 was previously referred to as Sedalia Reservoir in the Application in Case No. 18CW3039.
2. Filling structures and rates include all rights claimed in Table 1.

Table 3: Dominion Water & Sanitation District Case No. 18CW3039
Original Conditional Exchange Water Right Claims

All Values in cfs

			Exchange to Points						
			Dominion Conduit No. 20	Dominion Conduit No. 8	Highline Canal	Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
		WDID	0801002	0801003	0801004	0801005	TBD	TBD	0803514
Exchange From Points	Chatfield Reservoir	0803514	24	24	120	24	24	40	-
	Bi-Cities WWTP[1]	0802300	5	5	5	5	5	5	5
	Roxborough WWTP[2]	-	5	5	5	5	-	-	-

Notes: 1. Bi-Cities WWTP is now known as the South Platte Water Renewal Partners.
2. Roxborough WWTP is now known as the Chatfield Basin Water Reclamation Facility.

1.2.2 Adjusted Claims

Since the filing of the Application in Case No. 18CW3039, some of the original claims have been adjusted due to settlement negotiations and/or revised results from the water availability analysis, which is discussed further in Section 4, below.

Dominion's water court application in Case No. 18CW3039 currently seeks the direct flow, storage, and exchange water rights as listed in Tables 4 through 6, below, which reflect the adjustments made to the original water right claims as listed above. In total, the adjusted water right claims in Tables 4 through 6 are referred to herein as the "Subject Water Rights." The locations of the Subject Water Rights are shown on Figures 2 and 3.

Table 4: Dominion Water & Sanitation District Case No. 18CW3039 Adjusted Conditional Direct Flow Water Right Claims

WRID	Structure Name	Original Claim Rate (cfs)	Adjusted Claim Rate (cfs)
1	Dominion Conduit No. 20	24	Claim Dropped
2	Dominion Conduit No. 8 a.k.a. Bond Ditch Pipeline	24	24
3	Dominion Highline Canal	120	24
4	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	24	24
5	Dominion South Platte Diversion	24	24
6	Dominion South Platte Pumpback	4	4
7	Dominion Willow Creek Diversion	50	24
8	Dominion Sterling Gulch Diversion	50	24
9	Dominion Plum Creek Diversion	40	10
10	Dominion Indian Creek Diversion	10	10

Table 5: Dominion Water & Sanitation District Case No. 18CW3039
Adjusted Conditional Storage Water Right Claims

WRID	Structure Name	Original Claims			Adjusted Claims		
		Volume (AF)	Refill Amount (AF)	Fill Rate (cfs)	Volume (AF)	Refill Amount (AF)	Fill Rate (cfs)
11	ARS Reservoir	2,200	2,200	120	2,200	2,200	264
12	Chatfield Reservoir	2,200	2,200	N/A	500	500	N/A
13	Wakeman Reservoir	450	450	N/A	Claim Dropped		
14	Willow Creek Reservoir	900	900	N/A	249	0	N/A
15	Sterling Gulch Reservoir	600	600	N/A	418	0	N/A
16	Castle Rock Reservoir Nos. 1 and 2[1]	1,740	1,740	40	240	240	10
17	East Storm Water Ponds	240	240	N/A	Claim Dropped		
18	West Storm Water Ponds	360	360	N/A	Claim Dropped		

Note: 1. Castle Rock Reservoir Nos. 1 and 2 were previously referred to as Sedalia Reservoir.
2. Filling structures and rates include Conduit No. 8 (24 cfs), Highline Canal (120 cfs), Last Chance Ditch No. 2 (24 cfs), Dominion South Platte Diversion (24 cfs), Dominion South Platte Pumpback (4 cfs), Dominion Willow Creek Diversion (24 cfs), Dominion Sterling Gulch Diversion (24 cfs), Dominion Plum Creek Diversion (10 cfs), and Dominion Indian Creek Diversion (10 cfs).

Table 6: Dominion Water & Sanitation District Case No. 18CW3039
Adjusted Conditional Exchange Water Right Claims
All Values in cfs shown as Original Claim / Adjusted Claim

		Exchange to Points						
		Dominion Conduit No. 20	Dominion Conduit No. 8	Highline Canal	Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
Exchange From Points	Chatfield Reservoir	Claim Dropped	24 / 24	120 / 120	24 / 24	24 / 24	40 / 10	-
	Bi-Cities WWTP	Claim Dropped	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5
	Roxborough WWTP	Claim Dropped	5 / 5	5 / 5	5 / 5	-	-	-

Notes: Combined rate of exchange from the Bi-Cities WWTP and Roxborough WWTP to any combination of the above exchange-to-points has changed from 7 cfs to 5 cfs

SECTION 2: PROJECT DESCRIPTION

Dominion plans to integrate the Subject Water Rights as summarized in Tables 4 through 6, above, into its current water supply framework, as further discussed in this section.

2.1 CLAIMED USES

The Subject Water Rights are claimed for all municipal uses, including but not limited to, domestic, mechanical, manufacturing, commercial, industrial, irrigation, recreational, construction, fishery, wildlife, stock watering, fire protection, substitution, and replacement, all within Dominion's present and future service area. Dominion claims the right to use, reuse, and successively use the water to extinction, directly or through storage after first use, by exchange, augmentation, recharge, sale, lease or otherwise. Dominion also claims the Subject Water Rights to be used to meet historical return flow obligations for future acquired and changed water rights owed to the South Platte River or its tributaries. Section 2.2, below, further describes Dominion's plan for reuse and successive use for the water rights claimed in this case.

Dominion is seeking to fill and refill the claimed storage rights when they are in priority. Dominion also claims the ability to use certain storage reservoirs as additional places of storage for water stored under other subject storage water rights. Table 7, below, summarizes the additional places of storage for each of the subject storage water rights. Water can be moved from a storage reservoir by being released and rediverted, pumped, or released and exchanged to the additional places of storage.

Table 7: Additional Places of Storage

Structure Name	Additional Places of Storage
ARS Reservoir	Chatfield Reservoir, Sterling Gulch Reservoir
Chatfield Reservoir	ARS Reservoir
Willow Creek Reservoir	ARS Reservoir, Chatfield Reservoir
Sterling Gulch Reservoir	ARS Reservoir, Chatfield Reservoir
Castle Rock Reservoir Nos. 1 and 2	N/A

2.2 CURRENT WATER SUPPLY FRAMEWORK

Dominion's current water supply framework is based on a conjunctive use system of renewable water, NTGW, and the reuse of fully consumable return flows. Dominion's current average annual water demands are met by various supplies, including those summarized in Table 8, below. The supplies summarized in Table 8, are further described in Section 3, below. Additional supplies to meet projected demands are to include a combination of the new renewable water right claims, additional NTGW, and reuse of fully consumable return flows.

Table 8: Dominion's Contract Water Supply Summary

Water Source	Description of Water Source	Volume Available at Source[1] (AF/yr)
Aurora IGAs	Two intergovernmental agreements (IGAs) with the City of Aurora for delivery of fully consumptive, renewable, tributary water	480
Hock Hocking Mine	Renewable and fully consumptive water supply in the upper South Platte River Basin out of Hock Hocking Mine	62.5
WISE[2] Firm Supply	IGA with Town of Castle Rock for a firm annual delivery of fully consumptive conjunctive use water supply (WISE and NTGW)	700
WISE[2] Conjunctive Use Supply	WISE water supply which will be firmed up with additional NTGW and/or tributary water sources	625
Cherokee Ranch	NTGW to firm WISE Conjunctive Use Supply (625AF) and provide additional backup for peaking supply, yield of new water rights, and drought conditions.	920
Total		2,787.5

Notes: 1. Volume available at source does not include conveyance losses.
2. Water Infrastructure and Supply Efficiency (WISE) Partnership for a sustainable water future.

Dominion's water supply framework (see Figure 4) consists of a delivery system from the west, a delivery system from the east, reuse of return flow credits, and both direct diversions and storage within or adjacent to Dominion's service area. Figure 4 shows an "example" water budget planning scenario of potential supplies, demands, and a schematic representation of the infrastructure layout without the subject water rights. The system operations are intended to capture and regulate water supplies, including the Subject Water Rights to reduce the amount of average annual NTGW pumping illustrated in Figure 4 as 3,333 AF. Current and proposed infrastructure necessary for Dominion to fully operate are shown in Figure 5 and described in further detail below.

The West Delivery System includes:

- An existing raw water pipeline from Aurora's Rampart Reservoir to the Moore Water Treatment Plant (WTP)[1] for delivery of Aurora contract raw water supplies.
- The claimed Dominion South Platte Diversion structure that will divert water supplies from the South Platte River near the Roxborough Wastewater Treatment Plant (WWTP).

[1] The Larry D. Moore Water Treatment Plant was formerly known as Roxborough Water Treatment Plant (not to be confused with the Roxborough Waste Water Treatment Plant), but will be referred to herein as "Moore WTP."

- Claimed diversion of South Platte River supplies from existing structures including Denver Conduit No. 8, Highline Canal, and the Last Chance Ditch No. 2. These structures are upstream of the Roxborough WWTP and will be used in lieu of or in conjunction with Dominion South Platte Diversion structure to capture Dominion's water supplies. Diversions will be delivered either directly to Moore WTP for treatment and potable use, directly to the non-potable water system, or to storage for later use in either potable or non-potable systems. Use of Highline Canal provides Dominion with the opportunity to deliver water by gravity to the ARS storage facility. Dominion may use capacity in existing facilities only to the extent it has acquired the right to use the structures from the appropriate entities. The South Platte River water supplies to be diverted include the Subject Water Rights, contract water from Aurora, recapture of reusable return flow credits, and other South Platte River water rights acquired by Dominion.
- The water budget planning scenario, Figure 4, shows average annual west side supplies of 539 AF/yr.

The East Delivery System includes:

- A treated Eastern Regional Pipeline (ERP) with a capacity of at least 9 million gallons per day (MGD) that is under construction from Castle Rock to the Moore WTP to deliver contract water from Castle Rock for the next phase of development in Sterling Ranch and elsewhere within Dominion's service area. Subsequently, as demands increase Dominion will also deliver additional WISE water, and Cherokee NTGW through the pipeline.
- Dominion has plans to construct and/or lease another pipeline on the East side that will divert from Plum Creek and Indian Creek, and deliver additional raw surface water to the Moore WTP for treatment, the non-potable system, or to storage for later use in the potable and non-potable systems. The water sources include the Subject Water Rights, NTGW being conveyed by the natural stream system, fully consumptive return flow credits and other water supplies diverted by exchange, and additional surface rights in this application.
- The water budget planning scenario, Figure 4, shows average annual east side supplies of 1,149 AF/yr of WISE water, and 3,333 AF/yr of NTGW.

Facilities on Sterling Ranch (on-site facilities) are anticipated to consist of both storage and direct flow facilities. On-site storage facilities include the ARS gravel pit[2], Sterling Gulch Reservoir, and Willow Creek Reservoir, where raw water supplies delivered to

[2] ARS pit is anticipated to be the main on-site storage facility to regulate water supplies for delivery to the potable and non-potable systems.

Dominion from either the West or East side can be regulated to match timing of demands. For operational efficiency, water originally stored under the subject water rights in one facility may be moved to another storage facility through pipelines as constructed. Water from these on-site reservoirs will be delivered to the Moore WTP for potable uses, or delivered directly to the non-potable water system through pipelines.

Direct flow on-site diversion facilities have been filed for:

- Dominion Willow Creek Right which will deliver water directly to water treatment plant or nonpotable irrigation system, and
- Dominion Sterling Gulch Right where water will deliver water directly to water treatment plant or nonpotable irrigation system.

Storage facilities outside of Sterling Ranch that may store yield from the Subject Water Rights include capacity in Chatfield Reservoir and Castle Rock Reservoir Nos. 1 and 2 (previously referred to as Sedalia Reservoir). Chatfield Reservoir will be used to capture future in-priority water, reusable return flow credits, and regulate yield of other water supplies (i.e. Aurora Contract water, Hock Hocking Mine water) when deliveries exceed ability to divert and store in on-site storage. Water stored in Chatfield Reservoir can be exchanged to Dominion's upstream diversion points on the South Platte River and the Plum Creek diversion point. Dominion is also considering alternatives to pump stored water directly or pumped after release from Chatfield Reservoir up to Dominion's infrastructure.

Castle Rock Reservoir Nos. 1 and 2 will be used to regulate future yield of Plum Creek raw water diversions. Storage water in Castle Rock Reservoir Nos. 1 and 2 would be pumped into Dominion's East side raw water delivery pipeline or delivered down Plum Creek to Chatfield Reservoir and exchanged back to Dominion's South Platte River diversion points, or pumped back from Chatfield Reservoir to Dominion's water supply system.

Indoor water use return flow credits from fully consumptive water supplies will be diverted directly, stored in Chatfield, or diverted by exchange either through the West or East Delivery Systems depending on river calls, stream flow conditions, and internal operations. Return flow credits currently consist of indoor use return flows from Sterling Ranch that accrue after treatment primarily to the South Platte River. Dominion's return flow credits may also exist from deliveries to Chatfield Neighbor indoor uses that will accrue to Plum Creek as septic returns. Septic system and lawn irrigation return flows are not being claimed at this time, however, but may be claimed in the future. The water

budget planning scenario, Figure 4, shows reuse effluent supply 2,472 AF/yr, which does not include lawn irrigation return flows and Chatfield Neighbors septic system return flows.

By its application in Case No. 18CW3039, Dominion seeks an exchange right from the outfall of the Bi-Cities WWTP utilizing fully reusable effluent as the substitute supply based on an indoor consumptive use of 5 percent. In the future, all of Dominion's wastewater may be treated at the Roxborough WWTP, the Bi-Cities WWTP, or some combination of the two. Dominion may continue to process wastewater at the Bi-Cities WWTP, at least intermittently, even after the Roxborough WWTP is fully operational.

SECTION 3: PURPOSE AND NEED

Dominion is committed to serving entities in Northwest Douglas County, Colorado, including the current communities of Sterling Ranch and Chatfield Valley Neighbors, and has been approached by other entities within its service area for potential service. The following describes the approach used to estimate Dominion's projected demands in 2050 to support claims for the Subject Water Rights.

Dominion's largest current customer is Sterling Ranch, which comprises approximately 3,000 acres (less than 10% of Dominion's service area) and is approved to have 12,050 residential units, plus non-residential uses including business, civic facilities, industrial users, open space and parks, and schools by the year 2050. The Chatfield Valley Water Supply Framework (The Framework) commits Dominion to reserving 10 percent of the District's acquired water supplies for possible use by other existing qualifying districts and/or homes within Dominion's service area (aka Chatfield Valley Neighbors), up to 175 acre-feet per year (AF/yr). We conservatively used these existing Dominion customers as the initial basis of the projected demand estimate for the filing of the claims in Case No. 18CW3039, which totaled 6,204 AF/yr at the water treatment plant. The summary in Table 9 represents the projected water demands for Sterling Ranch and Chatfield Valley Neighbors through 2050 at the water treatment plant, Castle Rock to Dominion pipeline meter, and metered pumped non-potable water from ARS pit. Dominion understands that additional supply is needed to account for losses between the source of water supply and delivery points above to meet demands. These include stream conveyance losses, storage evaporation losses, and contract delivery losses.

Table 9: Dominion Projected Sterling Ranch and Chatfield Valley Neighbors Annual Demands[1]

Category	Annual Demand Criteria (AF/yr)		Zoning		Annual Demand (AF/yr)
Single Family Detached (SFD)	0.400	per unit	6,058.0	units	2,423.2
Single Family Attached (SFA)	0.400	per unit	3,735.0	units	1,494.0
Multifamily (MF)	0.400	per unit	2,257.0	units	902.8
Total Residential – Sterling Ranch			12,050.0		4,820.0
Total Non-Residential (office/commercial/industrial)	0.750	per 6,695 sf	3,125,000.0	sf	350.1
School - Elementary/Middle	0.01456	per student	5,100.0	students	74.3
School - High/Multi Use Campus	0.02184	per student	6,200.0	students	135.4
Total School (indoor)			11,300.0		209.7
Irrigation - Parks	2.431	per irrigated acre	171.5	acres	416.8
Irrigation – Schools	2.431	per irrigated acre	95.4	acres	231.9
Total Irrigation			266.9		648.7
Total Single Family – Chatfield Valley Neighbors[2]	0.250	per unit	700.0	units	175.0
TOTAL					6,203.5

Notes: 1. Demands are at the water treatment plant, and do not include additional supplies to cover losses from the source to the water treatment plant.
2. Indoor Use Only

The water demands for Sterling Ranch are estimated at 6,029 AF based on the projected land uses and water supply standards approved by Douglas County in 2011. The Chatfield Neighbors water demands are estimated at 175 AF to meet indoor potable demands.

In 2020, Sterling Ranch sought approval from Douglas County to reduce its approved development water requirements below 0.4 AF/unit in order to advance its long-term goal to be a leader in water conservation communities. A decision on what, if any, reduction in Sterling Ranch's water requirements will be allowed by the County has not been made at the time of this report. Therefore, Dominion continues to plan to provide 6,204 AF/yr to Sterling Ranch. If Sterling Ranch is successful in reducing its water requirement, or if Sterling Ranch reduces its development size, any surplus supplies would be used by Dominion to serve other Northwest Douglas County customers. Based on the 2019 Douglas County 2040 Comprehensive Master Plan, described in more detail below, and Dominion's on-going discussions with entities within its service area seeking renewable water supplies, we still believe a demand of 6,204 AF/yr is a reasonable basis for Dominion's water right claims for its 33,000 acre (51.5 sq miles) service area.

The Douglas County 2040 Comprehensive Master Plan projects that the county population will increase almost 30% in the next 20 years - from 352,000 in 2020[3] to 484,000 in 2040, an increase of 132,000 residents. County policies guide growth to designated urban areas (150 mi^2) in the northern part of the county to protect rural patterns of development. Dominion's service area is mainly a designated urban area with significant portions of undeveloped area available for development to accommodate this growth. Currently, 90% of the Douglas County residents are in the designated urban areas in the northern part of Douglas County, and the comprehensive plan aims to maintain that distribution as growth occurs. Thus, it is estimated Dominion could reasonably expect to serve an additional 40,788 residents (132,000 x 90% x (51.5 mi^2/150 $mi^{2)}$ by 2040. According to the U.S. Census Bureau for the period 2014-2018 there were 2.79 persons per household or single family equivalent (SFE) in Douglas County which equates to 14,619 SFE's for the Dominion service area (40,788 residents/2.79 residents per household). Compared to our initial estimate using only the Sterling Ranch development (12,050 SFE's) this represents a 21 percent increase[4], or estimated demand of 7,470 AF/yr (7,295 +175 for Chatfield Neighbors).

The additional potential SFE's identified in the Douglas County Comprehensive Plan that are estimated in Dominion's Service area are consistent with discussions Dominion has had with new developments, other than Sterling Ranch, seeking potential water service. As the likely provider for these entities, Dominion is anticipating other new development of about 2,500 additional SFE's in its service area which, when combined with the Sterling Ranch 12,050 SFE's, equals 14,550 SFE's. Using the County's current water supply requirement per SFE of 0.75 AF/SFE the additional 2,500 SFE's would require an additional 1,875 AF of supply for a total of 8,079 AF (6204+1875).

The projected 2050 demands therefore range from 6,204 AF/yr to 8,079 AF/yr. We believe the conservative demand estimate of 6,204 AF/yr is reasonable and is used in this report to support Dominion's claims, even though estimates from County data demonstrate that it is conservatively low. Because we have used the low end of the range, which reflects current projected demands for only 10% of Dominion's service area, we

3 According to the latest data from the County, growth is already exceeding the County's projections in the Comprehensive Master Plan, so these growth estimates are conservative. Douglas County Demographic Summary (February, 2020), available at https://www.douglas.co.us/documents/douglas-county-demographics-summary.pdf/ ("The Douglas County population estimate for January 1, 2020 is 370,000 persons.")

4 Similarly, Sterling Ranch is expected to house 30,000 residents at buildout. See https://sterlingranchcolorado.com/about-us/. The projected population growth of 40,788 for Dominion's entire service area would therefore, based on population, represent an additional 36% growth beyond Sterling Ranch. Hence, the estimate of a 21% increase based on SFEs used in this report is a conservative estimate.

believe the estimate is sufficiently conservative even if Sterling Ranch succeeds in reducing its demands because the difference will likely be made up by demand in the remaining 90% of Dominion's service area.

The purpose of the Subject Water Rights is to increase Dominion's renewable water supplies and reduce its reliance on non-renewable NTGW. Dominion has a goal of meeting at least 60% of its water demands with renewable water supplies (70% for Sterling Ranch demands) on an average annual basis[5], which the surface rights applied for in this case will help meet. Table 10 below illustrates the amount of fully consumable renewable water necessary to provide a 60% renewable water supply when considering reuse of the renewable supplies (2,640 AF/yr).

Table 10: Average Annual Supplies To Meet 60% Renewable Supply Goal
(All Values in AF)

Water Source	Supplies			
	First Use	Second Use	Total	Percent
Renewable Surface Water Supplies	2640	1082	3722	60 %
Non-tributary Groundwater	1760	722	2482	40%
Total	4400	1804	6204	100 %

Dominion's current average annual renewable and non-renewable supplies vs the projected water demands for Dominion service area is shown in Figure 6. Current average annual yield of first use renewable water supplies at the point of delivery is estimated at 1,761 AF, with the second use of those supplies yielding an estimated 730 AF. Dominion's goal is to meet at a minimum, 60% of its demands with renewable surface water supplies, and with the current average annual yield of renewable water supplies of 2,491 AF, not including the Subject Water Rights, Dominion is able to meet 40% of its projected 2050 demands. The Subject direct flow and storage water rights requested in Case No. 18CW3039 will help Dominion cover the average annual gap of 1,231 AF of renewable first and second use water to meet the 60% minimum goal for Sterling Ranch and Chatfield Neighbors, plus any additional tributary water yield will minimize the average annual use of 1,760 AF of NTGW.

The storage and exchange rights applied for in this case also enable more efficient use of the surface rights and reuse of return flow credits by storing and moving water supplies

[5] Dominion service area goal is 60% renewable water supplies on an average annual basis. This means with Sterling Ranch goal of 70% renewable the remaining portion of demands can be met with less than 60% renewable such that the average annual for the entire service area is 60%.

from downstream storage or discharge points to upstream diversion points. The Subject Water Rights, along with Dominion's existing water supplies, are necessary to provide drought resilience and operational flexibility within Dominion's system.

3.1 CAN & WILL

3.1.1 Financial Feasibility

A Water Resources Planning Report from Dominion staff documents the feasibility, including financial feasibility, of the project and Dominion's continued intent to complete the appropriation. The report states that Dominion has spent in excess of $120,000,000 developing its water supply since 2004, that it has a budget for 2021 of $10,800,000 for its water system, and that it is reviewing its rate structure to ensure that it can also have adequate budget in future years to complete the appropriation of the water rights claimed in this case. Dominion anticipates over the next 10 years a capital investment of an additional $80 million, including construction of a wastewater treatment facility and development of groundwater supplies. See Dominion's letter titled *Water Resources Planning Report for the Dominion's Application for Conditional Direct Flow Water Rights, Conditional Water Storage Rights and Conditional Appropriative Rights of Substitution and Exchange (Case No. 2018CW3039) in South Platte River and its Tributaries* (Dominion's 2020 Water Resources Planning Report), included as Appendix B of this report.

It is our understanding Dominion has conducted studies and determined the project is financially feasible.

3.1.2 Technical Feasibility

The conditional Subject Water Rights will be diverted, stored and/or exchanged to diversion structures by Dominion in a manner that is typical of other entities in the South Platte River basin. It's our opinion the water supply diversions, and storage facilities in this water court application are technically feasible and can either be constructed, or for existing facilities use of capacity could be acquired. Dominion may use land for the construction and operation of such structures only to the extent it has acquired the right to use such land, and may use capacity in existing facilities only to the extent it as acquired the right to use the facilities.

It is our understanding Dominion will secure all necessary rights prior to use of any structure not wholly owned by Dominion. The proposed terms and conditions included in the draft decree will limit any use of structures associated with water rights decreed in said case to available legal and physical capacities.

As further discussed in Dominion's 2020 Water Resources Planning Report, included as Appendix B, Dominion has already obtained some, and will obtain all remaining permits necessary prior to constructing facilities associated with the Subject Water Rights.

We have established that water is physically and legally available for these claims which will be discussed further in the Case Engineering Section below.

SECTION 4: CASE ENGINEERING

Water availability analyses of the historical flows and historical administrative calls on the South Platte River, Plum Creek, and certain tributaries were conducted to determine when Dominion could have historically diverted, stored and/or exchanged water as applied for in Case No. 18CW3039. The following sections describe the water availability analyses performed for each of the Subject Water Rights.

4.1 OPERATIONAL REDUNDANCY

Analysis of water availability for the claimed Subject Water Rights was evaluated; 1) individually, and not in combination with other claims in this case, and 2) when necessary in combination with other claims to develop protective terms and conditions as discussed in Section 5. The impact of a claimed direct flow diversion at an upstream location was not factored into the availability of water at claimed downstream locations. Similarly, the impact of claimed water diverted to storage at an upstream location was not considered in determining the availability of claimed water for storage at a downstream location. The use of upstream exchange potential impacts was not considered in determining the availability of exchange potential downstream. Nevertheless, additional water availability analyses were conducted for developing proposed terms that include overall cumulative volumetric limits.

Being a municipal water provider, it is important for Dominion to obtain operational redundancy in its water system, including its water rights portfolio and infrastructure. In the event of an emergency, for example the shutdown of a diversion facility, it is necessary for Dominion to remain able to take its full water supply through another facility. Therefore, the claims by Dominion are sought to be available at individual locations with proposed cumulative annual volumetric limits for all direct flow rights, storage rights, and exchanges to ensure the total decreed amounts are proportionate to Dominion's projected demands and water availability.

4.2 STUDY PERIOD

A study period of 1996 through 2015 was chosen to include the dry year 2002 and maintain a period that is representative of the annual long term average hydrologic

conditions based on precipitation measured at the Castle Rock Climate Station COOP 05140 (Castle Rock Climate Station) and streamflow measured at the Plum Creek at Titan Road near Louviers, CO streamflow gage. The end of the study period, 2015, was chosen based on the available data at the time of LRE Water's first investigation of water availability for new Dominion water rights. The hydrologic study period of 1996 to 2015 (Study Period) was utilized in this engineering report for all diversion points, but limited to readily available data within that period for Indian Creek claims.

4.3 HISTORICAL ADMINISTRATIVE CALLS

For the purpose of these analyses, "Free River" was determined to be when there was no administered calling water right on the South Platte River or its tributaries affecting the proposed diversion points. A daily call analysis was completed for the study period using the historical administrative calls on the mainstem of the South Platte River to determine when Free River historically existed. The determination of Free River days was used to estimate the number of days during each month of the study period that Dominion would have been able to divert the Subject Water Rights in priority. The annual maximum and minimum Free River days during the Study Period are summarized in Table 11, below, as well as an average of the entire Study Period. A full summary of the historical call analysis is included as Table C1 of Appendix C.

Table 11: Historical Call Analysis Summary of In Priority Days

Year	Annual No. of In-Priority Days	Annual No. of Out-of-Priority Days
2003 (Minimum Year)	1	364
2015 (Maximum Year)	292	73
Average (1996 to 2015)	111	254

4.3.1 Littleton Boat Chute

The City of Littleton (Littleton) and the South Suburban Park and Recreation District (South Suburban) have absolute recreational in-channel water rights for boating and fisheries on the South Platte River decreed in Case Nos. 94CW273 and 06CW203. These water rights include Boat Chute No. 4, Boat Chute No. 9, and Boat Chute No. 10. The Littleton Boat Chute No. 9, referred to herein as the "Littleton Boat Chute" began placing calls on the South Platte River in September 2016 which is after the Study Period, but a call from the Littleton Boat Chute would be senior to Dominion's Subject Water Rights.

Therefore, a conservative water availability analyses was conducted for the Subject Water Rights that considers the additional administration impacts of the Littleton Boat Chute on the South Platte River as if it would have been a calling right during the Study Period. The following approach was taken to evaluate water availability to the Subject

Water Rights considering Littleton Boat Chute calls, and a summary of the results from this approach are included in Table C2 of Appendix C:

- In our discussions with the District 8 Water Commissioner and South Suburban representatives, it is our understanding the Littleton Boat Chute calls are administered using a streamflow gage on the South Platte River owned and operated by Littleton (Littleton Gage) as shown on Figure 2.
- South Suburban provided streamflow data from the Littleton Gage for the period 11/20/2012 to 5/1/2019, and stated that the gage accurately measures flows up to 160 cfs.
- The amount of water physically available on a daily basis for the Littleton Boat Chute call was determined as follows:
    - The flow at the Littleton Gage was used for the years provided, when flows were less than 160 cfs.
    - For years without Littleton Gage data, and for times when flows were greater than 160 cfs, the flow used was a sum of flow at the South Platte River below Chatfield Reservoir streamflow gage (Chatfield Gage) and the estimated inflows from Marcy Gulch.
        - Marcy Gulch inflows were estimated as the difference in daily gage flows between the Chatfield Gage and the Littleton Gage for the overlapping years of record. The average monthly Marcy Gulch inflows used for ungaged periods are summarized in Table 12, below:

Table 12: Average Monthly Marcy Gulch Inflows (cfs)

Month	Average Monthly Marcy Gulch Inflows (cfs)
January	14
February	18
March	22
April	15
May	10
June	5
July	7
August	8
September	19
October	19
November	16
December	18

- The Littleton Boat Chute was assumed to be calling when physical flow at the Littleton Gage was less than 100 cfs during the period April 1 through October 31, and 30 cfs November 1 through March 31[6]. On these days, the subject direct flow and storage water rights were modeled to not have been able to divert water in-priority.
- On all other days of the Study Period, water available to the Subject Water Rights was limited to flow rates that would not reduce the flows at the Littleton Gage below the in-channel flow amounts stated above.

- The annual maximum and minimum Free River days considering Boat Chute calls had been happening during the Study Period are summarized in Table 13, below, as well as an average of the entire Study Period. A full summary of the historical call analysis is included as Table C2 of Appendix C.

Table 13: Call Analysis Summary of In Priority Days with Boat Chute Call

Year	Annual No. of In-Priority Days	Annual No. of Out-of-Priority Days
Historical w/Boat Chute		
2004 (Minimum Year)	1	365
2015 (Maximum Year)	214	151
Average (1996 to 2015)	75	290

4.4 WATER AVAILABILITY ANALYSIS METHODOLOGY

The amount of water physically and legally available at each point of diversion for the Subject Water Rights was estimated by using readily available historical stream flow data, diversion data, climate data, and call data for the study period. Table 14 lists the streamflow gages, diversion structures, and climate data used in the analysis, and their locations are shown on Figure 2. A summary of this data is included as Appendix D. A schematic illustrating the relative locations of the streamflow gages in the study area, the minimum flow and buffer flows used to estimate flows available, dry-up points analyzed, as well as the diversion points in the study area is included as Figure 7.

[6] Recreational flows of 100 cfs in summer are administered for the boat chutes, and 30 cfs in winter months for fishery habitat.

Table 14: Structures used in Water Availability Analysis

Point	Structure ID	Point Type	Data Source	Period of Record
Littleton South Platte River Stream Gage (Littleton Gage)	N/A	Streamflow Gage	SSPRD	11/20/2012 – 5/1/2019
South Platte River Below Chatfield Reservoir, PLACHACO (Chatfield Gage)	PLACHACO	Streamflow Gage	DWR	1/1/1996 – 12/31/2015
South Platte River at Waterton, CO, PLAWATCO (Waterton Gage)	06708000	Streamflow Gage	DWR	1/1/1996 – 12/31/2015
Plum Creek at Titan Road near Louviers, CO, PLUTIRCO (Titan Road Gage)	06709530	Streamflow Gage	USGS	1/1/1996 – 12/31/2015
Plum Creek near Sedalia, CO, PLUSEDCO (Sedalia Gage)	06709000	Streamflow Gage	USGS	1/1/1996 – 12/31/2015
West Plum Creek near Perry Park, CO, WESPERCO (West Plum Creek Gage)	06708600	Streamflow Gage	USGS	9/1/2009 – 12/31/2015
Sterling Ranch Climate Station	N/A	Climate	Dominion	4/22/2010 – 12/31/2015
Castle Rock Climate Station	COOP:051401	Climate	NOAA	1/1/1996 – 4/21/2010

Note: Data sources include South Suburban Park and Recreation District (SSPRD), the Division of Water Resources (DWR), the United States Geological Survey (USGS), Dominion Water and Sanitation District (Dominion), and the National Oceanic and Atmospheric Administration (NOAA).

4.4.1 Conditional Direct Flow Water Rights Methodology

Dominion seeks direct flow water rights from the South Platte River, Plum Creek, and certain tributaries as summarized in Table 4 above. The following sections discuss the methodology used to estimate the water available for Dominion's direct flow claims in Case No. 18CW3039.

4.4.1.1 South Platte Diversions Upstream of Chatfield Reservoir

Dominion's claimed direct flow water rights on the South Platte River upstream of Chatfield Reservoir are along the stretch from the Denver Conduit No. 8 diversion point down to the Dominion South Platte diversion point. As shown on Figure 7, there are no other intervening surface water diversions along this stretch of the river with returns to the river, and no significant tributary inflows. Therefore, the same methodology of using downstream gages adjusted for instream flows was used to estimate physical and legal availability at Dominion's following claimed diversion points upstream of Chatfield Reservoir:

- Denver Conduit No. 8 diversion point,
- Highline Canal diversion point,
- Last Chance Ditch No. 2 diversion point, and

- Dominion proposed South Platte River diversion point.

Daily physical and legal availability at each of these points was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. Measured flow at the Waterton Gage less the following:
    - Minimum flows per terms and conditions entered in Case No. 05CW316 to ensure flows are maintained in the South Platte River above Chatfield Reservoir which are:
        - 60 cfs from May 15th to September 15th, and
        - 30 cfs from September 16th to May 14th.
    - An additional 5 cfs to account for times when only small amounts of flow would have been available for diversion that operationally, Denver Water Board would likely revise its operations to reduce the flows so as to not exceed its legal requirements.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed diversion rate of 24 cfs.

4.4.1.2 South Platte Diversion Downstream of Chatfield Reservoir

Daily physical and legal availability of water for diversion by Dominion at the Dominion South Platte Pumpback diversion point, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
2. Claimed diversion rate of 4 cfs.

4.4.1.3 Plum Creek Diversion

Daily physical and legal availability of water for diversion by Dominion at the Plum Creek diversion point, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. Measured flow at the Titan Road Gage less a modeled Plum Creek minimum flow of 10 cfs year-round.

2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed diversion rate of 10 cfs.

LRE reviewed available streamflow data at the Titan Road Gage and the Sedalia Gage, and determined that the average monthly and annual flows at the Titan Road Gage are conservatively lower than at the Sedalia Gage, therefore using the Titan Road Gage provides for a more conservative analysis. The Titan Road Gage is naturally reduced by all diversions between the Sedalia Gage and itself, therefore no further adjustments are necessary. The 10 cfs modeled minimum flow used by LRE in the water availability analysis was incorporated to account for ungaged inflows that may occur between the gage and the upstream diversion point and carriage of water in the stream.

4.4.1.4 Tributary Diversions

By application in its Case No. 18CW3039, Dominion seeks the appropriation of water rights from Indian Creek, Willow Creek, and Sterling Gulch, all of which are ungaged streams. Willow Creek is tributary to the South Platte River, and Indian Creek and Sterling Gulch are tributaries to Plum Creek.

In order to show physical and legal water availability at the claimed diversion points on these tributaries, the available flows were estimated in these streams based on reasonable hydrologic methodologies as presented in the following sections.

4.4.1.4.1 Dominion Willow Creek and Sterling Gulch Diversions

Willow Creek and Sterling Gulch are ungaged ephemeral streams, so daily runoff volumes were estimated using precipitation data from the following climate stations:

- Castle Rock Climate Station for January 1, 1996 through April 21, 2010, and
- Sterling Ranch Climate Station for April 22, 2010 through December 31, 2015.

This precipitation data, along with composite watershed area imperviousness percentages, as presented in Table 15, below, were used in a refined analysis utilizing the Water Quality Capture Optimization and Statistics Model (WQ-COSM) v3.0 developed by Urban Watersheds Research Institute, Inc., to estimate the unit precipitation runoff that would have been physically available during observed storm events for Dominion to capture. The recommended values for pervious and impervious surface depression (retention) losses are 0.35 inches and 0.1 inches, respectively. The calculated unit precipitation runoff for each storm event was applied to the watershed areas above the points of diversion and storage, to estimate the flow rate and physical volume of water

available during the observed storm events at the Willow Creek and Sterling Gulch Diversion points.

Table 15: Watershed Characteristics

Location	Watershed Area (acres)	Composite Watershed Area Imperviousness Percentage (%)
Willow Creek Reservoir, Willow Creek Diversion Point	5138	2.3%
Sterling Gulch Reservoir, Sterling Gulch Diversion Point	1566	32.0%

Daily physical and legal availability of water for diversion by Dominion at the Willow Creek and Sterling Gulch diversion points, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. The physical volume of water available during the storm events at the Willow Creek and Sterling Gulch diversions points as described previously in this section divided by the storm duration.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed diversion rate of 24 cfs.

4.4.1.4.2 Dominion Indian Creek Diversion

Using the StreamStats program from the United States Geological Survey (USGS), the precipitation-weighted total drainage area for Dominion's claimed direct flow diversion point on Indian Creek was estimated to be 46.36 percent of the precipitation-weighted drainage area contributing to the West Plum Creek Gage. Gaged flow data at the West Plum Creek Gage were available beginning in 2009, therefore the study period used for this diversion point was 2009 through 2015. Though the study period was relatively short, it still was a reasonable representation of wet (2014), dry (2012), and average years.

Daily physical and legal availability of water for diversion by Dominion at the Indian Creek diversion point, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. Daily gaged flows at the West Plum Creek gage, filled using the fill-forward method, and reduced to 46.36 percent of the flow.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

3. Claimed diversion rate of 10 cfs.

4.4.2 Conditional Storage Water Rights Methodology

Dominion seeks storage water rights from the South Platte River, Plum Creek, and their tributaries as summarized in Table 5 above. The following sections discuss the methodology used to estimate the water available for Dominion's storage claims in Case No. 18CW3039.

4.4.2.1 ARS Reservoir

The physical and legal availability of water to fill ARS Reservoir was determined using the methodology described below which ensures the availability is not double counted due to the use of multiple diversion structures.

Based on the structures involved and the local hydrology, and to maintain a conservative estimate, the analysis includes availability from the following three primary diversion locations:

- Highline Canal,
- Dominion South Platte Diversion, and
- Plum Creek Diversion.

Daily physical and legal availability of water for storage by Dominion in ARS Reservoir, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as follows:

- Physical and legally available water at Highline Canal was modeled as diverted to storage in ARS at a flow rate up to 120 cfs.
- When excess physically and legally available flows existed in the South Platte River at the Waterton Gage and Littleton Gage after the modeled diversions at the Highline Canal, water at the Dominion South Platte Diversion was modeled as diverted to storage in ARS at a flow rate up to 24 cfs.
- When excess physically and legally available flows existed in the South Platte River at the Littleton Gage after the modeled diversions at the Highline Canal and Dominion South Platte Diversion, and physically and legally available flows existed in Plum Creek, water at the Plum Creek Diversion was modeled as diverted to storage in ARS at a flow rate up to 10 cfs.

It is our opinion that this analysis provides a conservative estimate of the water available for storage in ARS Reservoir since Dominion has claimed to divert water to storage in ARS Reservoir through all of the claimed subject diversion structures.

4.4.2.2 Chatfield Reservoir

Daily physical and legal availability of water for diversion to storage by Dominion in Chatfield Reservoir, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the following:

- Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

There was no limit on the diversion rate to storage in Chatfield Reservoir since it is an on-stream reservoir.

4.4.2.3 Willow Creek Reservoir and Sterling Gulch Reservoir

Daily physical and legal availability of water for diversion to storage by Dominion in Willow Creek Reservoir and Sterling Gulch Reservoir, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. The physical volume of water available during the storm events at the Willow Creek and Sterling Gulch diversions points as previously discussed in Section 4.4.1.4 divided by the storm duration.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

There were no limits on the diversion rates to storage in Willow Creek Reservoir and Sterling Gulch Reservoir since they are on-stream reservoirs.

4.4.2.4 Castle Rock Reservoir Nos. 1 and 2

Daily physical and legal availability of water for diversion to storage by Dominion in Castle Rock Reservoir Nos. 1 and 2, per its application in Case No. 18CW3039, was estimated on days of Free River, defined above in Section 4.3, as the minimum of:

1. Measured flow at the Titan Road Gage less a modeled Plum Creek minimum flow of 10 cfs year-round.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed fill rate of 10 cfs through the Plum Creek diversion point.

As discussed further in Section 4.4.1.3, above, it is our opinion that the Titan Road Gage provides for a conservative analysis.

4.4.3 Appropriative Rights of Exchange Methodology

Dominion seeks to adjudicate conditional rights of exchange along the South Platte River and Plum Creek as summarized in Table 6 above. The following sections discuss the methodology used to estimate the water available for Dominion's exchange claims in Case No. 18CW3039.

4.4.3.1 South Platte River Exchanges from Chatfield Reservoir

As shown on Figure 7, there are not any intervening surface water diversions along the stretch of the South Platte River from the Denver Conduit No. 8 diversion point down to the Dominion South Platte diversion point, therefore, the same methodology was used to estimate physical and legal availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Chatfield Reservoir to the following points upstream of Chatfield Reservoir:

- Denver Conduit No. 8 diversion point,
- Highline Canal diversion point,
- Last Chance Ditch No. 2 diversion point, and
- Dominion South Platte diversion point.

Daily physical availability for each of these exchanges were estimated as the minimum of:

1. Measured flow at the Waterton Gage less the following:
    - Minimum flows per terms and conditions entered in Case No. 05CW316 to ensure flows are maintained in the South Platte River above Chatfield Reservoir which are:
        - 60 cfs from May 15th to September 15th, and
        - 30 cfs from September 16th to May 14th.
    - An additional 5 cfs to account for times when only small amounts of flow would have been available for diversion that operationally, Denver Water Board would likely revise its operations to reduce the flows so as to not exceed its legal requirements.
2. Claimed exchange rate of 24 cfs for exchanges to Denver Conduit No. 8, Highline Last Chance Ditch No. 2, and Dominion South Platte diversion, and 120 cfs for the exchange to Highline Canal.

The daily physical availability was considered to be also legally available for Dominion to exchange on days when there was either a downstream senior calling water right, or when the measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, was less than the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

4.4.3.2 Plum Creek Exchange from Chatfield Reservoir

Daily physical availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Chatfield Reservoir to the Plum Creek diversion point was estimated as the minimum of:

1. Measured flow at the Titan Road Gage less a modeled Plum Creek minimum flow of 10 cfs year-round.
2. Claimed exchange rate of 10 cfs.

The daily physical availability was considered to be also legally available for Dominion to exchange on days when there was either a downstream senior calling water right, or when the measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, was less than the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

4.4.3.3 South Platte River Exchanges from Bi-Cities WWTP

4.4.3.3.1 Exchange From Bi-Cities WWTP to Chatfield Reservoir

Daily physical and legal availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Bi-Cities WWTP to Chatfield Reservoir was estimated on days with a senior downstream calling water right, as the minimum of:

1. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
2. Claimed exchange rate of 5 cfs.

4.4.3.3.2 Exchanges From Bi-Cities WWTP to Diversion Points Upstream of Chatfield Reservoir

Daily physical and legal availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Bi-Cities WWTP to Denver Conduit No. 8, Last Chance Ditch No. 2, Dominion South Platte Diversion, and Highline Canal was estimated on days with a senior downstream calling water right, as the minimum of:

1. Measured flow at the Waterton Gage less the following:

a. Minimum flows per terms and conditions entered in Case No. 05CW316 to ensure flows are maintained in the South Platte River above Chatfield Reservoir which are:
    i. 60 cfs from May 15th to September 15th, and
    ii. 30 cfs from September 16th to May 14th.
b. An additional 5 cfs to account for times when only small amounts of flow would have been available for diversion that operationally, Denver Water Board would likely revise its operations to reduce the flows so as to not exceed its legal requirements.

2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed exchange rate of 5 cfs.

4.4.3.4 Plum Creek Exchange from Bi-Cities WWTP

Daily physical and legal availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Bi-Cities WWTP to Plum Creek diversion point was estimated on days with a senior downstream calling water right, as the minimum of:

1. Measured flow at the Titan Road Gage less a modeled Plum Creek minimum flow of 10 cfs year-round.
2. Measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, less the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.
3. Claimed exchange rate of 5 cfs.

4.4.3.5 South Platte River Exchanges from Roxborough WWTP

Daily physical availability of water for exchange by Dominion, per its application in Case No. 18CW3039, from Roxborough WWTP to Denver Conduit No. 8, Highline Canal, and Last Change Ditch No. 2 was estimated as the minimum of:

3. Measured flow at the Waterton Gage less the following:
    - Minimum flows per terms and conditions entered in Case No. 05CW316 to ensure flows are maintained in the South Platte River above Chatfield Reservoir which are:
        - 60 cfs from May 15th to September 15th, and
        - 30 cfs from September 16th to May 14th.
    - An additional 5 cfs to account for times when only small amounts of flow would have been available for diversion that operationally, Denver Water

Board would likely revise its operations to reduce the flows so as to not exceed its legal requirements.

4. Claimed exchange rate of 5 cfs.

The daily physical availability was considered to be also legally available for Dominion to exchange on days when there was either a downstream senior calling water right, or when the measured or estimated flow at the Littleton Gage, as discussed above in Section 4.3.1, was less than the 30 cfs or 100 cfs Littleton Boat Chute minimum flow, depending on the season.

4.5 WATER AVAILABILITY ANALYSIS RESULTS

4.5.1 Conditional Direct Flow Water Rights

Based on the methodology discussed above in Section 4.4.1, Table 16, below, summarizes the results of the water availability analyses for the conditional direct flow water right claims made by Dominion in its Case No. 18CW3039, in terms of the claimed amount compared to the maximum flow rate legally and physically available for each direct diversion limited by the diversion rates claimed. The results of the full study period for each structure are included in Appendix C.

Table 16: Direct Flow Water Right Claims Availability

WRID	Water Right Name	Water Right Claim (cfs)	Maximum Available Direct Flow Rate Limited to Claim (cfs)
2	Dominion Conduit No. 8 a.k.a. Bond Ditch Pipeline	24	24
3	Dominion Highline Canal	24	24
4	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	24	24
5	Dominion South Platte Diversion	24	24
6	Dominion South Platte Pumpback	4	4
7	Dominion Willow Creek Diversion	24	24
8	Dominion Sterling Gulch Diversion	24	24
9	Dominion Plum Creek Diversion	10	10
10	Dominion Indian Creek Diversion	10	10

LRE has calculated historical South Platte River and Plum Creek flows available to Dominion's demands from the subject direct flow water rights. These calculations were completed as follows:

- Dominion's future projected average annual demand ranged from 6,204 to 8,079 AF at the water treatment plant. Using the lowest projection of 6,204 AF, the

estimated demand was increased by 20% to account for delivery losses from the source to the water treatment plant and above average year demands. This demand was distributed to each month using a total residential demand curve, and further distributed evenly throughout each month resulting in estimated max daily demands.

- Availability at the South Platte River was calculated using daily physically and legally available flows in the South Platte River at the claimed direct flow diversions. The available flows were limited by the claimed diversion rates for the direct flow Subject Water Rights on the South Platte River, and further limited by the daily demand.

- When demands were not fully met by diversions from the South Platte River, availability at Plum Creek was used to meet those remaining demands. Availability at Plum Creek was calculated using daily physically and legally available flows in Plum Creek at the claimed direct flow diversion. The available flows were limited by the claimed diversion rate for the direct flow Subject Water Right on Plum Creek, and further limited by the remaining daily demand.

As summarized in Table C22 of Appendix C, results show annual maximum diversions available under the direct flow rights of 4,109 AF for the year 2015 using the lower range of projected 2050 annual demands.

Terms and conditions were developed for these claims based on these results, and are further discussed in Section 5.1.1., below.

4.5.2 Conditional Storage Water Rights

Based on the methodology discussed above in Sections 4.4.2, Table 17, below, summarizes the results of the water availability analyses for the conditional storage water right claims made by Dominion in its Case No. 18CW3039, in terms of maximum annual diversions legally and physically available for each storage claim limited by the filling rates claimed. The results of the full study period for each structure are included in Appendix C.

Table 17: Storage Water Right Claims Availability Results

WRID	Structure Name	Volume (AF)	Refill Amount (AF)	Fill Rate (cfs)	Max Annual Availability (AF/cfs)
11	ARS Reservoir	2,200	2,200	264	30,231
12	Chatfield Reservoir	500	500	-	330,889
14	Willow Creek Reservoir	249	-	-	249
15	Sterling Gulch Reservoir	418	-	-	418
16	Castle Rock Reservoir Nos. 1 and 2	240	240	10	3,865 Up to 10 cfs

Note: Castle Rock Reservoir Nos. 1 and 2 were formerly referred to as Sedalia Reservoir.

4.5.3 Appropriative Rights of Exchange

Based on the methodology discussed above in Sections 4.4.3, Table 18, below, summarizes the results of the water availability analyses for the exchange water right claims made by Dominion in its Case No. 18CW3039, in terms of maximum diversion rates legally and physically available for each exchange reach limited by the rates claimed. The monthly and annual diversion results of the full study period for each structure are included in Appendix C.

Table 18: Exchange Water Right Claims Maximum Rate Availability Results

(All Values in cfs)

			Exchange to Points					
			Dominion Conduit No. 8	Highline Canal	Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
		WDID	0801003	0801004	0801005	TBD	TBD	0803514
Exchange From Points	Chatfield Reservoir	0803514	24	120	24	24	10	-
	BiCities WWTP	0802300	5	5	5	5	5	5
	Roxborough WWTP	-	5	5	5	-	-	-

The annual maximum amount of water physically and legally available to Dominion for each of the claimed exchanges is summarized in Table 19, below. These amounts are based on the water availability analysis previously discussed in Section 4.4.3. The

amounts summarized in Table 19 are not the amounts being claimed by Dominion as maximum annual volume limits for the exchanges, they are used as a limiting factor to estimate the volume limits claimed, as further explained below.

Table 19: Conditional Exchange Potential based on Water Availability

(values in AF)

			Exchange to Points					
			Dominion Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
		WDID	0801003	0801004	0801005	TBD	TBD	0803514
Exchange From Points	Chatfield Reservoir	0803514	10,848	35,713	10,848	10,848	4,286	-
	Bi-Cities WWTP	0802300	1,989	1,989	1,989	1,989	1,563	2,092
	Roxborough WWTP	-	2,652	2,652	2,652	-	-	-

The sources of substitute supply claimed in Case No. 18CW3039 along with the current estimated yield of each supply are summarized in Table 20, below.

Table 20: Sources of Substitute Supplies Claimed in Case No. 18CW3039

Source of Substitute Supply	Current Estimated Yield (AF)
Fully consumable effluent from wastewater treated at the Bi-Cities WWTP and/or the Roxborough WWTP	2,422 AF*
Fully consumable water rights stored pursuant to Dominion's storage rights claimed in Case No. 18CW3039, including fills and refills when applicable at Chatfield Reservoir, Sterling Gulch Reservoir, Willow Creek Reservoir, Castle Rock Reservoir Nos. 1 and 2, and ARS Reservoir	6,547 AF
Dominion's fully consumptive water attributable to its Hock Hocking mine water rights, with an estimated average annual yield of 62.5 AF, and a maximum annual yield of 177.2 AF	177 AF
480 acre-feet of fully consumable water available to Dominion pursuant to two intergovernmental agreements with Aurora dated October 26, 2009 (amended on July 30, 2012) and dated December 11, 2013	480 AF
700 acre-feet of fully consumable water available to Dominion pursuant to Dominion's intergovernmental agreement with the Town of Castle Rock dated November 22, 2016	700 AF
Fully consumable water attributable to Dominion's interests in the WISE Partnership, with an estimated average annual yield of 1,325 AF, and a maximum annual yield of 3,313 AF	3,313 AF
Approximately 3,569 acre feet per year of not non-tributary and non-tributary Denver Basin groundwater in the Denver, Arapahoe, and Laramie Fox Hills formation originally decreed in Division 1 Case No. 98CW219, as modified by Case No. 03CW117	3,569 AF

*As shown in Figure 4 Dominion's projected lowest range of annual demands of 6,204 AF results in 2,422 AF of average annual reusable effluent from the municipal system.

Dominion is claiming maximum annual volume limits for each of the exchanges based on the minimum of; a) the annual maximum physically and legally available flows as summarized in Table 18, b) the sum of the substitute supplies available for each exchange, as summarized in Table 19, and c) severe drought maximum equal to total annual demand plus fill of storage claims plus 20% for conveyance and storage losses (11,773 AF). The resulting volumetric limits for the exchanges are summarized in Table 21 below.

4.6 EVAPORATION

Real time gross evaporation for all storage claims shall be calculated using the same evaporation calculation method outlined in the October 15, 2015 Chatfield Reservoir Management Agreement which the Colorado Division of Water Resources uses in the Chatfield Checksheet.

The method currently outlined is as follows:

- Gross evaporation will be calculated on a daily basis by multiplying the daily exposed water surface area by the daily rate of gross net reservoir evaporation.
- The daily exposed water surface area will be determined by referencing water surface elevation to the stage-area capacity survey and table for each of these storage structures, once constructed and developed.
- Gross pan evaporation will be computed by multiplying the daily standard alfalfa reference crop evapotranspiration (ETr) by the pan evaporation to ETr coefficient (Kp) of 1.2.
- Daily gross evaporation rate (the free water surface evaporation) will then be determined by multiplying the gross pan reservoir evaporation by a pan coefficientof 0.7.
- The ETr data will be obtained from the new nearby Marcy Gulch weather station, and if such data is not available the backup method described in the Chatfield Reservoir Management Agreement will be followed.

Evaporation does not need to be calculated for any part of a reservoir that is covered by ice. For purposes of C.R.S. 37-84-117(5), Dominion will receive effective precipitation credit to compute net evaporation for water stored in Chatfield Reservoir using the same net evaporation calculation method the Colorado Division of Water Resources uses in its Chatfield Checksheet.

SECTION 5: TERMS AND CONDITIONS

5.1 VOLUMETRIC LIMITS

5.1.1 Conditional Direct Flow Water Rights

Direct flow rights will be limited to 4,109 AF per year based on the maximum annual amount available to meet projected demands for the study period. All diversions of direct flow water right claims in this case will be recorded and reported with Dominion's water accounting, as further discussed in Section 5.2, below.

The direct flow claims in this case will be operated in priority, and only at times when water is physically available at each of the structures in excess of downstream senior water right demands.

5.1.2 Conditional Storage Water Rights

The total combined amount of water that can be stored under Dominion's subject conditional storage water rights under the fill and refill of those rights is 6,547 AF in any single water year. The basis for this limit is the sum of the claimed fill and refill volumes for the subject storage rights. Since Dominion is seeking junior water rights in this case, it is important the volume limits for each storage right be the full decreed limits such that Dominion can store as much water as legally available to get through multiple periods and years of little to no yield. The accounting for storage water rights claimed in this case will be administered using April 1 through March 31 as its water year.

Similar to the direct flow water right claims, all water stored pursuant to a decree entered in Case No. 18CW3039 will be accounted for as outlined in Section 5.2, below, and in the draft decree for this case. Operation of the storage water rights claimed in this case, pursuant to the terms and conditions will protect against injury to downstream vested water rights and/or decreed conditional water rights.

5.1.3 Appropriative Rights of Exchange

The maximum annual volume limits claimed for each of the exchange water rights in Case No. 18CW3039 are summarized in Table 21, below. These values have been limited by water availability, structure capacity, and substitute supplies available. Since Dominion is seeking junior water rights in this case, it is important for the volume limits on each exchange be large enough such that Dominion can keep reservoirs full to get through multiple years of little to no yield from the junior direct flow and storage water right claims in this case.

Table 21: Conditional Exchange Water Right Annual Volume Limits

(values in AF)

			Exchange to Points					
			Dominion Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
		WDID	0801003	0801004	0801005	TBD	TBD	0803514
Exchange From Points	Chatfield Reservoir	0803514	10,848	11,773	10,848	10,848	4,286	-
	Bi-Cities WWTP[1]	0802300	1,989	1,989	1,989	1,989	1,563	2,092
	Roxborough WWTP[2]	-	2,422	2,422	2,422	-	-	-

Notes: 1. Bi-Cities WWTP is now known as the South Platte Water Renewal Partners.
2. Roxborough WWTP is also known as Chatfield Basin Water Reclamation Facility.

Additional terms and conditions for operation of the exchange water rights claimed in this case include, but are not limited to:

- Operate only when there is a live stream throughout the exchange reach,
- Diversions are limited to the exchange potential available in the reach and the substitute supplies available,
- Operations will occur after receiving approval from the Division Engineer and/or the Water Commissioner,
- Transit losses will be applied to substitute supply deliveries to the downstream exchange point as assessed by the Water Commissioner, and
- Substitute supplies made available will be of a quality and quantity to meet the requirements of use to which the water of the senior appropriator has normally been put.

5.2 ACCOUNTING

Sample accounting is included with this report as Appendix E. Accounting will be recorded daily and submitted to the State on a monthly basis. The accounting will include major components including items such as, but not limited to the following:

- Accounting Year from April 1 through March 31;
- Daily measurement with monthly reporting to the DWR;
- Tracking of Out of Priority Inflows, Outflows, and storage;
- Daily evaporation assessed;
- Tracking Volumetric Limits; and
- Tracking colors of stored water by and through carryover, bookover, and paper fill, including amounts applied towards volumetric limits.

It is our opinion that the provisions in the proposed decree regarding accounting will prevent injury to vested and decreed conditional water rights, and will facilitate proper administration of the water rights.

SECTION 6: OPINIONS AND CONCLUSIONS

It is our opinion that the conditional Subject Water Rights can be and will be diverted, stored, and/or otherwise controlled and will be beneficially used to meet Dominion's projected water demands, and that Dominion's water supply projects can and will be completed with diligence and within a reasonable time to meet projected timeline of future demands.

Based on the terms and conditions proposed in the latest draft decree the water rights sought by Dominion can be operated without causing injury to vested water rights, and can be reasonably accounted for and are administrable.

We reserve the right to revise these opinions as well as offer additional opinions and adopt the opinions of other objectors as other data and information are obtained.

In addition to the opinions expressed above:

- It is our opinion that the projected growth set forth is reasonable and is based on a reasonable planning horizon.
- It is our opinion that the unit demand factors have factual basis and are reasonable for projecting Dominion's future water demands.
- It is our opinion that Dominion will need all of its water rights, including the Subject Water Rights in this case to meet its projected needs.
- It is our opinion that Dominion has shown the intent and the ability to fully develop the Subject Water Rights.
- It is our opinion that the construction of the facilities necessary for the Subject Water Rights is technically feasible.
- It is our opinion that Dominion can and will complete the appropriations of the Subject Water Rights within a reasonable period of time.
- It is our opinion that there is water available to divert and/or store under the Subject Water Rights.
- It is our opinion that the accounting provisions in the proposed decree, and the accounting forms attached to the proposed decree, will prevent injury to vested and decreed conditional water rights, and will facilitate proper administration of the water rights.

- It is our opinion that the Terms and Conditions set forth in the proposed decree in Case No. 18CW3039 are sufficient to protect vested and decreed conditional water rights from injury.

SECTION 7: REFERENCES

The following information was used in preparation of this report:

Amended and Restated Sterling Ranch Water Appeal, May 11, 2011, redline June 4, 2020

Amended and Restated WISE Partnership – Water Delivery Agreement between Denver Water, the City of Aurora, acting by and through its Utility Enterprise, and the South Metro WISE Authority, executed December 13, 2013.

Case No. 18CW3039 Water Court Application, filed for Dominion, Division 1 Water Court.

Case No. 18CW3039 latest Draft Decree.

Case No. 94CW273 Findings of Fact, Conclusions of Law, Ruling of the Referee and Decree of the Water Court, entered September 26, 2000, City of Littleton and South Suburban Park and Recreation District, Division 1 Water Court.

Case No. 05CW316 and Denver Water Board Delivery Agreement for approval of Sterling Ranch

Case No. 06CW203 Notice of Revised Referee Ruling, dated July 6, 2009, City of Littleton and South Suburban Park and Recreation District, Division 1 Water Court.

Case No. 15CW3177, for Centennial Water and Sanitation District…

Case No. 16CW3059, for Centennial Water and Sanitation District…

Case No. W-6072 Findings of Fact, Conclusions of Law, Judgment and Decree, Mission Viejo Company, September 5, 2984, Division 1 Water Court.

Castle Rock Climate Station Data, National Oceanic and Atmospheric Administration NOAA, Castle Rock, CO Station COOP:051401.

Chatfield Reservoir Accounting Checksheets, Water years 2001 through 2017.

Chatfield Reservoir Management Agreement, pages 8-10, and Exhibit A.

Chatfield Valley Water Supply Framework: Eligible Communities, Douglas County, Colorado, dated October 24, 2004.

Daily call records, State Engineers Office. Calls between January 1996 and December 2018 affecting Division 1, Districts 8, 2, 1, and 64.

Daily Diversion Records for Division 1 structures for available period of records

Redland Sterling Ranch Master Drainage Plan Sheets DR2.1 – DR2.6

Dominion Water and Sanitation District's General Manager, Mary Kay Provaznik's letter to Mr. Terence T. Quinn, AICP, Planning Services Director of Community Planning and Sustainable Development Department of the Douglas County Government, dated December 15, 2017, Re: Chatfield Valley Water Supply Framework Documentation

Dominion Water and Sanitation District's website. https://www.dominionwsd.org/

Douglas County 2040 Comprehensive Master Plan, Adopted by the Douglas County Planning Commission August 5, 2019.

Douglas County, Colorado Wastewater Collection & Treatment, US Highway 85 Corridor, dated June 30, 2009.

Douglas County Demographic Summary (February, 2020), available at https://www.douglas.co.us/documents/douglas-county-demographics-summary.pdf.

Douglas County Economic Development Profile, Updated September 2018.

Douglas County Growth and Development Profile, Updated May 2018.

Environmental Protection Agency, Manual of Individual and Non-Public Water Supply Systems, dated May 1991.

Evaporation Atlas for the Contiguous 48 United States, NOAA Technical Report NWS 33, Washington, D.C., June 1982. United States Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service.

General Administration Guidelines for Reservoirs Colorado Division of Water Resources, dated October 2011, Amended February 2016.

Intergovernmental Agreement for Water Service Between Dominion Water and Sanitation District, Acting in its Capacity as a Water Activity Enterprise and the Town of Castle Rock Acting Through the Town of Castle Rock Water Enterprise January 7, 2014.

Intergovernmental Agreement for Water Service Between Dominion Water and Sanitation District, Acting in its Capacity as a Water Activity Enterprise and the Town of Castle Rock Acting Through the Town of Castle Rock Water Enterprise, [undated], 2016.

Letter from ELEMENT Water Consulting, Inc. to Ms. Denise Hogenes, Sterling Ranch CAB General Manager, Re: Sterling Ranch 2018 through 2019 Water Use Analysis, dated June 4, 2020.

Letter from Mary Kay Provaznik, Dominion Water and Sanitation District General Manager to Mr. Marshall Brown, Aurora Water Director, Re: “Dedicated Water” for IGA regarding the Intergovernmental Agreement for Delivery of Water (“Aurora 250 IGA”) between the City of Aurora (“Aurora”) and the Dominion Water and Sanitation District (“DWSD”) dated December 11, 2013 (DWSD)., dated September 27, 2018.

Letter from Mary Kay Provaznik, Dominion Water and Sanitation District General Manager to Mr. Terence T. Quinn, AICP, Planning Services Director, Community Planning and Sustainable Development Department Re: Chatfield Valley Water Supply Framework Documentation, dated December 15, 2017.

Narrative – Section 18A Water Supply Overlay District, Appeal Concerning Water Regulations. Applicants: Sterling Ranch, LLC, Dominion Water & Sanitation District, and Sterling Ranch Community Authority Board, dated June 5, 2020.

Personal discussions with the District 8 Water Commissioners and Division of Water Resources Staff.

Personal discussions with Dominion Water and Sanitation District staff and legal counsel.

Plum Creek Wastewater Treatment Plant Monthly Summary, Water year 2010.

South Platte River Littleton Gage Records for the period 11/20/2012 to 5/1/2019 from South Suburban Park and Recreation District.

Special Warranty Deed for Water Rights, dated September 28, 2018. Grantor Dominion Water and Sanitation District, Grantee City of Aurora.

Straight line Diagrams, District 8, Water Division 1, CDSS, June 2014

Streamflow data, CDSS, from 1996 through 2018.

Sterling Ranch Water Appeal, approved by Douglas County Board of Commissioners, May 11, 2011.

Sterling Ranch climate station data.

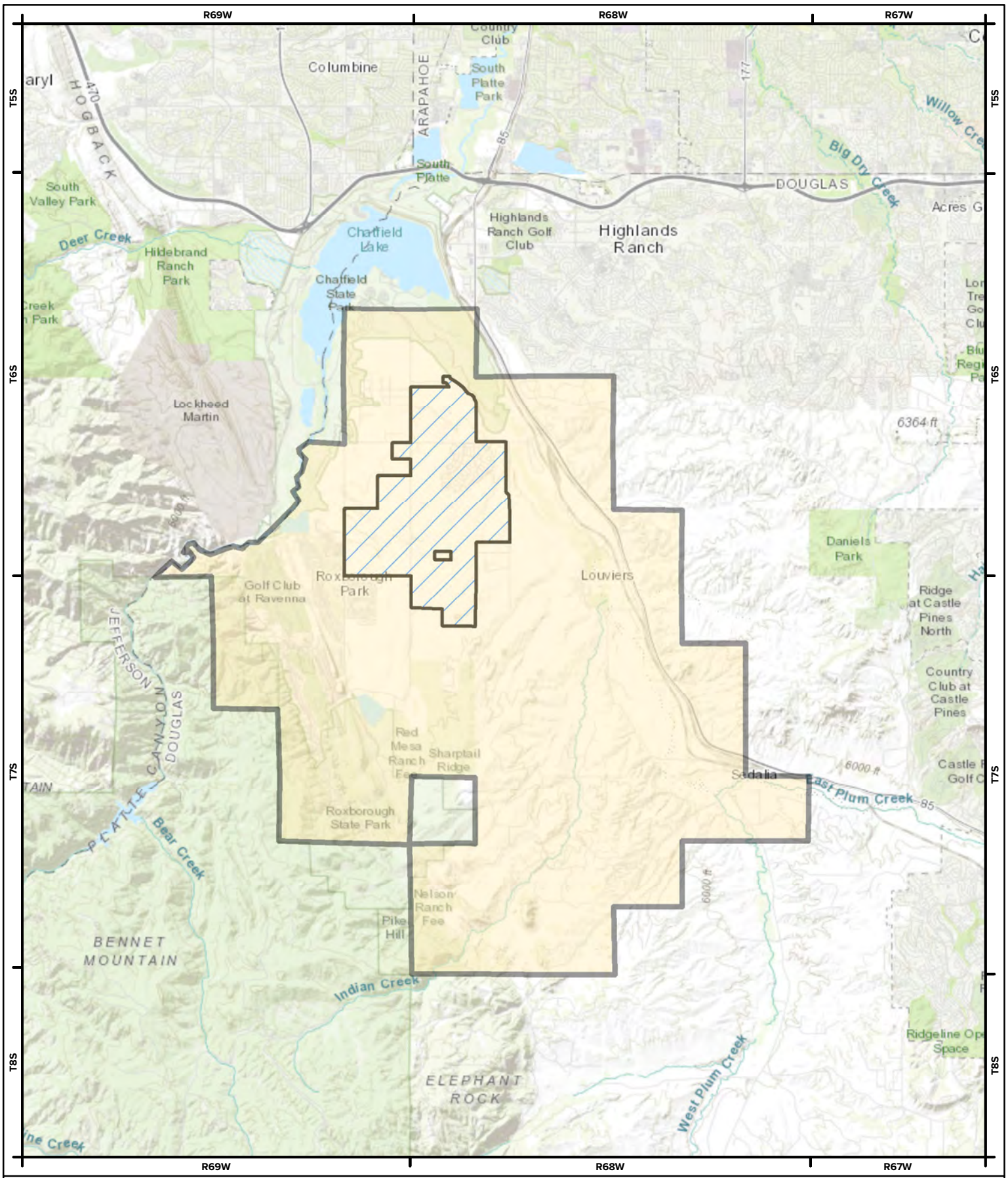
Sterling Ranch, Colorado website. https://sterlingranchcolorado.com/

Taps Service Unit Demands by Kennedy Jenks Summarized for Dominion Water and Sanitation District by LRE Water.

United States Census Bureau QuickFacts, Douglas County, Colorado, July 2019.

Urban Watersheds Research Institute, Inc., Denver, CO, Water Quality Capture Optimization and Statistics Model (WQ-COSM) v3.0, January 2017 Edition. https://udfcd.onerain.com/map/?view=3f0489de-3933-42b2-bea1-b3e00c03947e

U.S.G.S. Mapping of the subject area, streamflow data, and StreamStat Program



DOMINION SERVICE AREA (33,000 ACRES)

STERLING RANCH CAB SERVICE AREA

OCTOBER 2020

SCALE: 1 INCH = 2 MILES 1:120,000

0.5 0 0.5 1 1.5 2 Miles

DOMINION WATER & SANITATION DISTRICT
CASE NO. 18CW3039

FIGURE 1

DOMINION SERVICE AREA

LRE WATER

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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R69W R68W

T5S T6S T7S

Bi-Cities WWTP Located 7 Miles Downstream

Littleton South Platte River Stream Gage

South Platte River Below Chatfeild Reservoir (PLACHACO)

Chatfield Reservoir Outlet

6. Dominion South Platte Pumpback

McLellan Reservoir

Chatfield Reservoir

Highline Canal

Plum Creek at Titan Rd Near Louivers, CO (PLUTIRCO)

8. Dominion Sterling Gulch Diversion

South Platte River at Waterton (PLAWATCO)

7. Dominion Willow Creek Diversion

5. Dominion South Platte Diversion

4. Dominion Last Chance Ditch No. 2 aka Platte Canon Ditch

Sterling Ranch Climate Station

3. Dominion Highline Canal

Roxborough WWTP

Plum Creek

2. Dominion Conduit No. 8

10. Dominion Indian Creek Diversion

9. Dominion Plum Creek Diversion

Castle Rock Climate Station
COOP: 051401
Located Approx. 3.5 miles SW

West Plum Creek
Near Perry Park, CO
(WESPERCO)
Located 15 miles upstream

Columbine Valley
Columbine
Littleton
Highlands Ranch
Louviers
Roxborough State Park
Lockheed Martin
Golf Club at Ravenna
Redstone Community Park
Highlands Ranch Golf Club
Columbine Country Club
Deer Creek
Dutch Creek
Brush Creek
Bear Creek
Willow Creek
Indian Creek
South Platte River
Plum Creek
Rainbow Creek
Marcy Gulch
Dad Clark Gulch
Lee Gulch
Spring Gulch
Lehigh Gulch
Wildcat Mountain
Sharptail Ridge
Red Mesa Ranch
Aspen Grove
Weaver Park
Deer Creek Park
Hildebrand Ranch Park
Sledding Hill Park
Robert A. Eaton Regional Park
Robert F. Clement Park
Lily Gulch Park
Kistler Park
Ketring Park
The Meadows Golf Club
Chatfield State Park
Chatfield Lake
Fairway Estates
Highlands Ranch Golf Club
HOGBACK
PLATTE CANYON
Deer Creek Canyon
Marcy Gulch
Dad Clark Gulch
Lee Gulch
Spring Gulch
Rainbow Creek
Indian Creek
Willow Creek
Bear Creek
Brush Creek
Dutch Creek
South Platte River
Plum Creek
Highline Canal
S Wadsworth Blvd
S Kipling Pkwy
S Kipling St
S Garrison St
S Webster St
S Pierce St
JEFFERSON
ARAPAHOE
S Platte Canyon Rd
S Santa Fe Dr
S Broadway
S Clarkson St
S Franklin St
S Winnemere St
S Gallup St
S Elati St
Lucent Blvd
S Foothills Canyon Dr
W Ridge Rd
W Coal Mine Ave
W Meadows Dr
W Columbine Dr
W Ken Caryl Ave
W Chatfield Ave
W Mineral Ave
W County Line Rd
E Geddes Ave
E Dry Creek Rd
E County Line Rd
Dad Clark Dr
Plaza Dr
W Highlands Ranch Pkwy
W Wildcat Reserve Pkwy
E Wildcat Reserve Pkwy
E Gateway Dr
Sunset Ridge Rd
Ron King Trl
Aspen Leaf Dr
W Titan Rd
N Rampart Range Rd
N Horseshoe Trl
Lemay Ave
W Rio Grande Ave
Rainbow Creek Rd
W Cherokee Dr
Jarre Canyon Rd
Bears Den Dr
Village Cir W
Raphael Ln
Airport Rd
Platte Ranch
Young
Turkshead
Nelson Ranch
Aspen Leaf
Sterling Ranch Planned Development, 15th Amendment
Project File ZR2025-014, PD Rezoning and Major Amendment
Board of County Commissioners Staff Report - Page 258 of 424

NEW EXCHANGE-TO POINT
NEW EXCHANGE-FROM POINT
STREAMFLOW AND CLIMATE STATIONS
NEW DIRECT FLOW WATER RIGHT LOCATION
RAVENNA PIPELINE
PLUM CREEK/SOUTH PLATTE RIVER DRAINAGE BASIN DIVIDE
RIVERS
EXCHANGE 1 AND 2
EXCHANGE REACH 1
EXCHANGE REACH 2
STERLING RANCH BOUNDARY
SECTION LINES

OCTOBER 2020

0.25 0 0.25 0.5 0.75 1 1.25 Miles
SCALE: 1 INCH = 1 MILES 1:62,000

DOMINION WATER & SANITATION DISTRICT
CASE NO. 18CW3039

FIGURE 2

NEW DIRECT FLOW WATER RIGHT & EXCHANGE LOCATIONS

LRE WATER

R69W R68W

T5S T6S T7S

12. Chatfield Reservoir
11. ARS
15. Sterling Gulch Reservoir
14. Willow Creek Reservoir
16. Castle Rock Reservoir Nos. 1 and 2

NEW STRORAGE WATER RIGHT LOCATION
PLUM CREEK/SOUTH PLATTE RIVER DRAINAGE BASIN DIVIDE
RIVERS
STERLING RANCH BOUNDARY
SECTION LINES

OCTOBER 2020

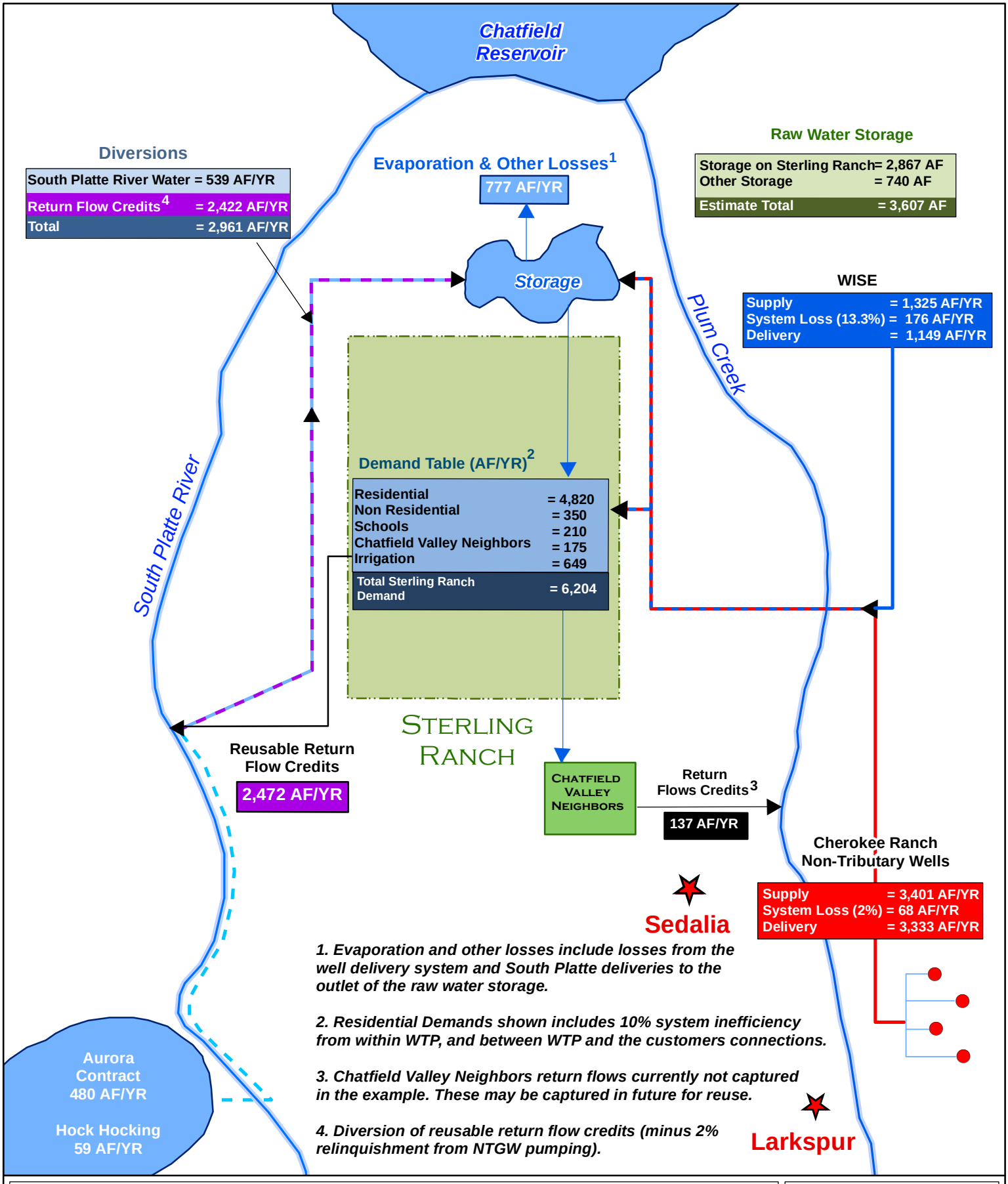
SCALE: 1 INCH =1 MILES 1:56,000

DOMINION WATER & SANITATION DISTRICT CASE NO. 18CW3039

FIGURE 3

NEW STORAGE WATER RIGHT LOCATIONS

LRE WATER



1. Evaporation and other losses include losses from the well delivery system and South Platte deliveries to the outlet of the raw water storage.

2. Residential Demands shown includes 10% system inefficiency from within WTP, and between WTP and the customers connections.

3. Chatfield Valley Neighbors return flows currently not captured in the example. These may be captured in future for reuse.

4. Diversion of reusable return flow credits (minus 2% relinquishment from NTGW pumping).

Example Water Budget Planning Scenario

12,050 Units (6,204 AF/YR Demand)
Residential Demands @ 0.4 AF/YR/Unit

Schematic Not To Scale

October 2020

DOMINION WATER & SANITATION DISTRICT
CASE NO. 18CW3039

FIGURE 4

DOMINION WATER SUPPLY FRAMEWORK SCHEMATIC

DOMINION WATER & SANITATION DISTRICT
CASE NO. 18CW3039

FIGURE 5

EXISTING AND PROPOSED WATER SUPPLY INFRASTRUCTURE

- CHEROKEE RANCH WELL FIELD (PROPOSED)
- HIGHLINE CANAL DIVERSION (EXISTING)
- HIGH ZONE TANK
- MID ZONE TANK (FUTURE)
- CASTLE ROCK DELIVERY TO DOMINION (UNDER CONSTRUCTION)
- CHATFIELD PUMP STATION (PROPOSED)
- LARRY D. MOORE WATER TREATMENT PLANT
- RAVENNA PIPELINE (EXISTING)
- DWSD RAW WATER PIPELINE (PROPOSED)
- DWSD EASTERN REGIONAL PIPELINE (UNDER CONSTRUCTION)
- DWSD WESTERN PIPELINE (PROPOSED)
- AURORA RAMPART RAW WATER LINE (EXISTING)
- DENVER CONDUIT 26 AND 27 (EXISTING)
- WISE PIPELINE (EXISTING)
- HIGHLINE CANAL (EXISTING)

RESERVOIRS

- CASTLE ROCK RESERVOIR #1 AKA SEDALIA RESERVOIR (EXISTING)
- STERLING GULCH RESERVOIR (PROPOSED)
- WILLOW CREEK RESERVOIR (PROPOSED)
- ARS RAW WATER STORAGE (PROPOSED)

SERVICE AREAS

- DOMINION WATER & SANITATION DISTRICT
- STERLING RANCH
- STERLING RANCH PHASES
- CHEROKEE RANCH
- ROXBOROUGH WATER & SANITATION DISTRICT
- TOWN OF CASTLE ROCK

OCTOBER 2020

0.5 0 0.5 1 1.5 2 2.5

MILES

1 INCH = 2 MILES

1:125,000

LRE WATER

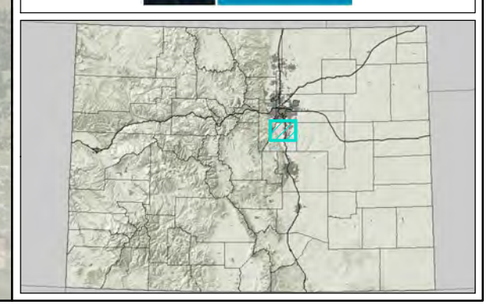
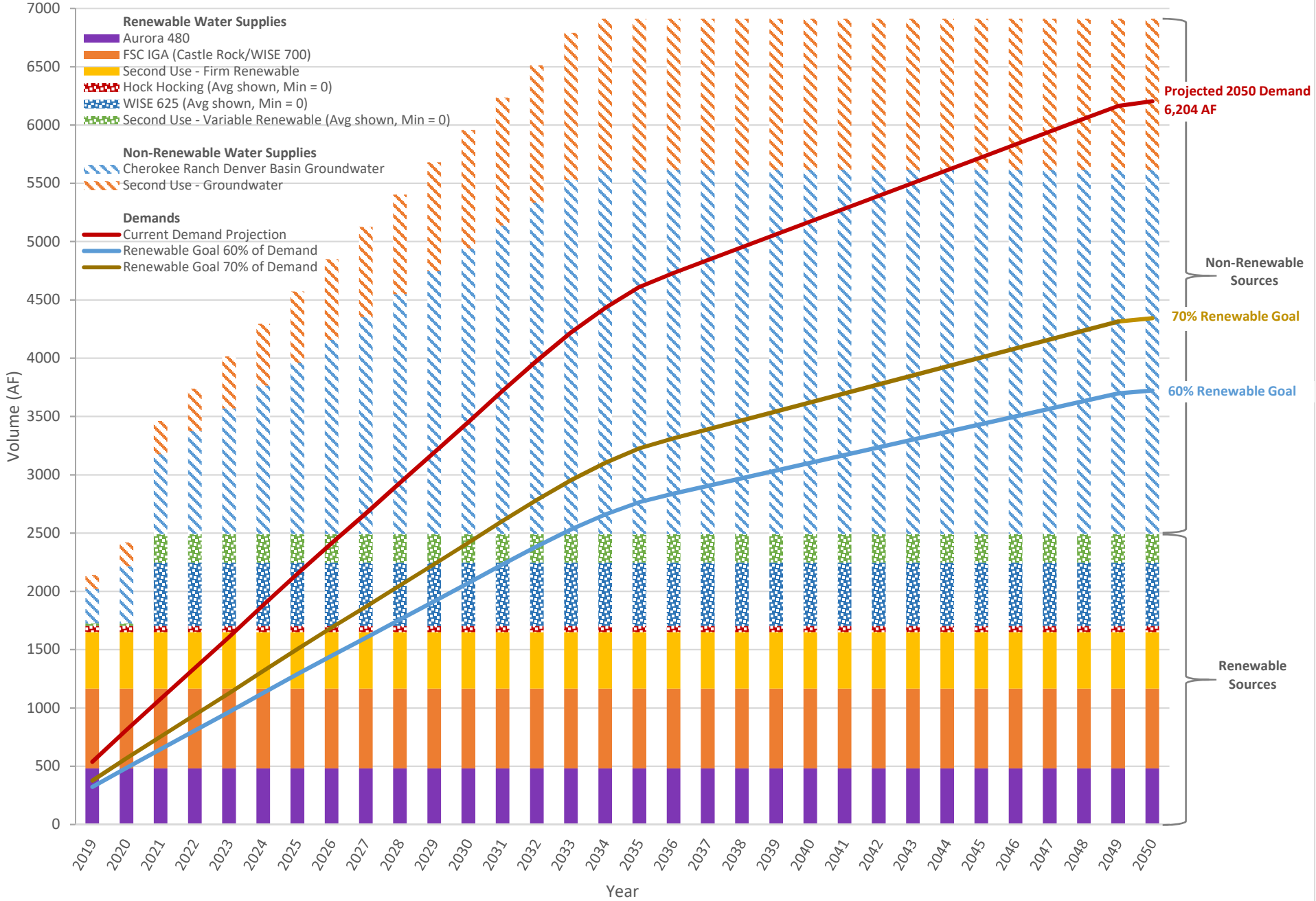
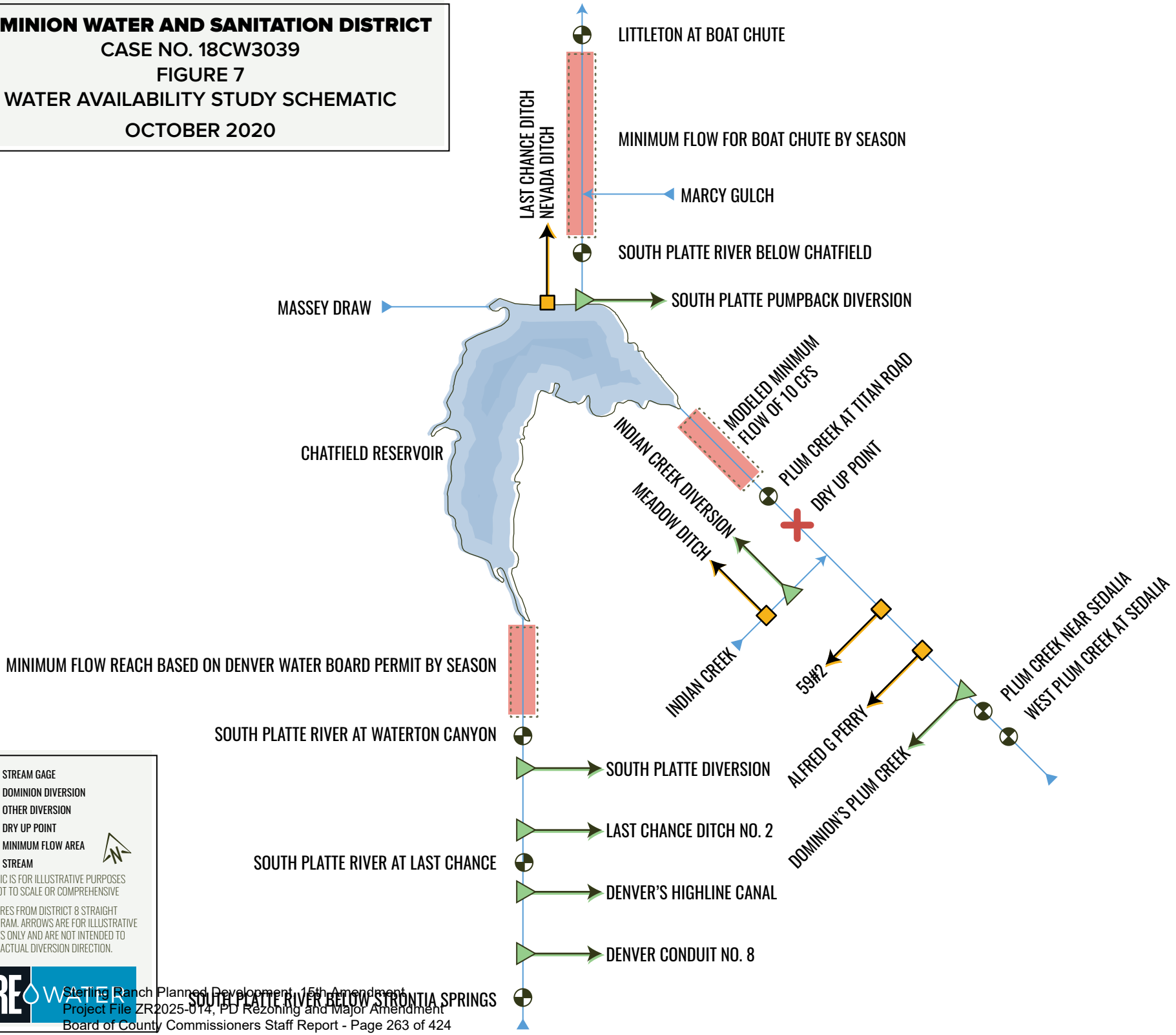


Figure 6 - Dominion Water & Sanitation District
Projected Water Demands vs Renewable and Non-Renewable Average Annual Water Supplies at Point of Delivery



DOMINION WATER AND SANITATION DISTRICT
CASE NO. 18CW3039
FIGURE 7
WATER AVAILABILITY STUDY SCHEMATIC
OCTOBER 2020



Case No. 18CW3039

Appendix A – Application in Case No. 18CW3039

DISTRICT COURT, WATER DIVISION 1, COLORADO Weld County Courthouse 901 – 9th Avenue Greeley, CO 80631 Telephone: (970) 475-2400	DATE FILED: February 28, 2018 4:39 PM FILING ID: 24A257414F521 CASE NUMBER: 2018CW3039
CONCERNING THE APPLICATION FOR WATER RIGHTS OF **DOMINION WATER & SANITATION DISTRICT** IN JEFFERSON AND DOUGLAS COUNTIES, COLORADO	**▲ COURT USE ONLY ▲**
Attorneys for Applicant: Carolyn F. Burr, #25978 James M. Noble, #36716 Jens Jensen, #47471 WELBORN SULLIVAN MECK & TOOLEY, P.C. 1125 – 17th Street, Suite 2200 Denver, CO 80202 Telephone: (303) 830-2500 E-mail: cburr@wsmtlaw.com jnoble@wsmtlaw.com jjensen@wsmtlaw.com	**Case No. 2018CW_____**
APPLICATION FOR CONDITIONAL DIRECT FLOW RIGHTS, STORAGE RIGHTS, AND APPROPRIATIVE RIGHTS OF EXCHANGE	

1. **Name, address, and telephone number of Applicant**:

   Dominion Water & Sanitation District
   8390 E. Crescent Parkway, Suite 600
   Greenwood Village, CO 80111
   Phone: 303-265-7910

   Please forward all correspondence and inquiries regarding this matter to:

Carolyn F. Burr
James M. Noble
Jens Jensen
WELBORN SULLIVAN MECK & TOOLEY, P.C.
1125 –17th Street, Suite 2200
Denver, CO 80202
Telephone: (303) 830-2500

2. **Background:** Dominion Water & Sanitation District provides wholesale water and sanitation services in northwest Douglas County ("Dominion"). The Dominion service area is depicted on Exhibit 1, attached hereto. The rights applied for herein are to be used in Dominion's integrated water supply system. Dominion will deliver raw water directly to irrigate certain areas in Dominion's Service Area as well as deliver potable, municipal water to customers within the Dominion Service Area. This Application seeks to appropriate (1) conditional direct flow water rights from the South Platte River, Plum Creek, and their tributaries, Indian Creek, Willow Creek, and Sterling Gulch, (2) conditional storage rights, and (3) conditional appropriative rights of exchange on the South Platte River and Plum Creek.

3. **Description of Conditional Direct Flow Rights:** The conditional direct flow water rights applied for herein are further described below, and the locations of the diversions are depicted on Exhibit 2.

3.1. **Dominion Conduit No. 20 Right**:

3.1.1. Point of Diversion: The point of diversion for Conduit No. 20 is located in the NE1/4 of the NW1/4 of the SE1/4 of Section 5, Township 7 South, Range 69 West at the following approximate UTM coordinates: NAD 83 UTM Zone 13N 488405.0000 mE 4368966.0000 mN, Douglas County, Colorado.

3.1.2. Source: South Platte River.

3.1.3. Rate Claimed: 24 cfs, conditional

3.1.4. Date of Appropriation: February 28, 2018

3.1.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.1.6. Date Water First Applied to Beneficial Use: Not applicable.

3.1.7. Uses: Dominion seeks to use the Dominion Conduit No. 20 Right directly or after storage for all municipal purposes, including but not limited to, domestic, mechanical, manufacturing, commercial, industrial, irrigation, lake level maintenance, recreational, construction, fishery, wildlife, stock watering, fire

protection, substitution and replacement within Dominion's present and future service area, or any extra-territorial area in which Dominion contracts to provide augmentation and/or water service. Dominion claims the right to use, reuse and successively use to extinction by exchange, augmentation, recharge, sale, lease or otherwise all water lawfully diverted under Dominion's direct flow water claimed herein.

3.1.8. Name and address of the owner of Conduit No. 20: Denver Water, 1600 W. 12th Ave., Denver, CO 80204.

3.2. **Dominion Conduit No. 8 Right**:

3.2.1. Point of Diversion: The point of diversion for Conduit No. 8 (a.k.a. Bond Ditch Pipeline) is located in the SW1/4 of the SE1/4 of the NE1/4 of Section 5, Township 7 South, Range 69 West at the following approximate UTM coordinates: NAD 83 UTM Zone 13N 488530.7000 mE 4369167.0000 mN, Douglas County, Colorado.

3.2.2. Source: South Platte River.

3.2.3. Rate Claimed: 24 cfs, conditional

3.2.4. Date of Appropriation: February 28, 2018

3.2.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.2.6. Date Water First Applied to Beneficial Use: Not applicable.

3.2.7. Uses: Dominion seeks to use the Dominion Conduit No. 8 Right for the same uses described in paragraph 3.1.7, above.

3.2.8. Name and address of the owner of Conduit No. 8: Denver Water, 1600 W. 12th Ave., Denver, CO 80204.

3.3. **Dominion High Line Canal Right**:

3.3.1. Point of Diversion: The High Line Canal headgate is located in the SW1/4 of the NW1/4 of the SE1/4 of Section 33, Township 6 South, Range 69 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 490006.0 mE 4370355.0 mN, Jefferson County, Colorado.

3.3.2. Source: South Platte River.

3.3.3. Rate claimed: 120 cfs, conditional.

3.3.4. Date of Appropriation: Feb. 28, 2018.

3.3.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.3.6. Date Water First Applied to Beneficial Use: Not applicable.

3.3.7. Uses: Dominion seeks to use the Dominion Highline Canal Right for the same uses described above in paragraph 3.1.7.

3.3.8. Name and address of the owner of the Highline Canal: Denver Water, 1600 W. 12th Ave., Denver, CO 80204.

3.4. **Dominion Last Chance Ditch No. 2 Right**:

3.4.1. Point of Diversion: The point of diversion for Last Chance Ditch No. 2 (a.k.a. Platte Canon Ditch) is located approximately 3.5 miles upstream of Chatfield Reservoir in the NW1/4 of the NE1/4 of the SW1/4 of Section 34, Township 6 South, Range 69 West at the following approximate UTM coordinates: NAD 83 UTM Zone 13N 491047.799314199 mE 4370603.705969010 mN, Jefferson County, Colorado.

3.4.2. Source: South Platte River.

3.4.3. Rate Claimed: 24 cfs, conditional

3.4.4. Date of Appropriation: February 28, 2018

3.4.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.4.6. Date Water First Applied to Beneficial Use: Not applicable.

3.4.7. Uses: Dominion seeks to use the Dominion Last Chance Ditch No. 2 Right for the same uses described in paragraph 3.1.7, above.

3.4.8. Name and address of the owner of Last Chance Ditch No. 2: Denver Water, 1600 W. 12th Ave., Denver, CO 80204.

3.5. **Dominion Plum Creek Right**:

3.5.1. Point of Diversion: The Dominion Plum Creek Right will be diverted through the existing diversion structure owned by the Town of Castle Rock located on Plum Creek in the SE1/4 of Section 15, Township 7 South, Range 68 West at the following approximate UTM Coordinates: NAD 1983 UTM Zone 13 501485 mE 4365534 mN, Douglas County, Colorado.

3.5.2. Source: Plum Creek, a tributary to the South Platte River.

3.5.3. Rate claimed: 40 cfs, conditional.

3.5.4. Date of Appropriation: Feb. 28, 2018.

3.5.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.5.6. Date Water First Applied to Beneficial Use: Not applicable.

3.5.7. Uses: Dominion seeks to use the Dominion Plum Creek Right for the same uses described in paragraph 3.1.7, above.

3.5.8. Name and address of the owner of the diversion structures listed above: Town of Castle Rock 100 N. Wilcox St., Castle Rock, CO 80104.

3.6. **Dominion Indian Creek Right**:

3.6.1. Point of Diversion: The Dominion Indian Creek Right will divert water from Indian Creek in the NW1/4 of the NE1/4 of Section 16, Township 7 South, Range 68 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 499547.053192043 mE 4366610.46276816 mN in Douglas County.

3.6.2. Source: Indian Creek, a tributary to Plum Creek.

3.6.3. Rate claimed: 10 cfs, conditional.

3.6.4. Date of Appropriation: Feb. 28, 2018.

3.6.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.6.6. Date Water First Applied to Beneficial Use: Not Applicable

3.6.7. Uses: Dominion seeks to use the Dominion Indian Creek Right for the same uses described in paragraph 3.1.7, above.

3.6.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: Lambert Ranch Association, Inc., PO Box 336, Sedalia, CO 80135.

3.7. **Dominion Willow Creek Right**:

3.7.1. Point of Diversion: The Dominion Willow Creek Right will divert water from Willow Creek in the NE1/4 of the NE1/4 of Section 35, Township 6 South,

Range 69 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 493643.424680507 mE 4371172.00933591 mN, Douglas County, Colorado.

3.7.2. Source: Willow Creek, a tributary to the South Platte River.

3.7.3. Rate claimed: 50 cfs, conditional.

3.7.4. Date of Appropriation: Feb. 28, 2018.

3.7.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.7.6. Date Water First Applied to Beneficial Use: Not Applicable

3.7.7. Uses: Dominion seeks to use the Dominion Willow Creek Right for the same uses described in paragraph 3.1.7, above.

3.7.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

3.8. **Dominion Sterling Gulch Right**:

3.8.1. Point of Diversion: The Dominion Sterling Gulch Right will divert water from Sterling Gulch in the SE1/4 of the NW1/4 of Section 29, Township 6 South, Range 68 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 497493.566060039 mE 4372396.161892 mN, Douglas County, Colorado.

3.8.2. Source: Sterling Gulch, a tributary to Plum Creek.

3.8.3. Rate claimed: 50 cfs, conditional.

3.8.4. Date of Appropriation: Feb. 28, 2018.

3.8.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.8.6. Date Water First Applied to Beneficial Use: Not Applicable

3.8.7. Uses: Dominion seeks to use the Dominion Sterling Gulch Right for the same uses described in paragraph 3.1.7, above.

3.8.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

3.9. **Dominion South Platte Pumpback**:

3.9.1. Point of Diversion: The Dominion South Platte Pumpback will divert water from the South Platte River in the SW1/4 of the NE1/4 of Section 1, Township 6 South, Range 69 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 494844.095612792 mE 4379108.71569241 mN, Jefferson County, Colorado. Water diverted through this structure will be delivered to the Dominion service area via pipeline.

3.9.2. Source: South Platte River.

3.9.3. Rate claimed: 4 cfs, conditional.

3.9.4. Date of Appropriation: Feb. 28, 2018.

3.9.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.9.6. Date Water First Applied to Beneficial Use: Not Applicable

3.9.7. Uses: Dominion seeks to use the Dominion South Platte Pumpback for the same uses described in paragraph 3.1.7, above.

3.9.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: United States Army Corps of Engineers, Omaha District, 1616 Capitol Ave., Suite 9000, Omaha, NE 68102.

3.10. **Dominion South Platte Right**:

3.10.1. Location: The Dominion South Platte Right will divert water from the South Platte River in the SW1/4 of the NE1/4 of Section 34, Township 6 South, Range 69 West at the following approximate UTM coordinates: NAD 1983 UTM Zone 13 491660.280795968 mE 4370742.09613954 mN, Douglas County, Colorado. Dominion's South Platte Right will divert at or near the location Dominion returns water to the South Platte River from its wastewater treatment plant.

3.10.2. Source: South Platte River.

3.10.3. Rate claimed: 24 cfs, conditional.

3.10.4. Date of Appropriation: Feb. 28, 2018.

3.10.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

3.10.6. Date Water First Applied to Beneficial Use: Not Applicable

3.10.7. Uses: Dominion seeks to use the Dominion South Platte Right for the same uses described in paragraph 3.1.7, above.

3.10.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: Denver Water, 1600 W. 12th Ave., Denver, CO 80204.

4. Description of Conditional Storage Rights: The conditional storage rights applied for herein are further described below and their locations are depicted on Exhibit 3.

4.1. **ARS Reservoir**: The ARS Reservoir will be an off-channel reservoir located in the Northeast quarter of Section 19, Township 6 South, Range 68 West, Douglas County, Colorado. It will be created by further excavation of an existing gravel pit and lined according to the state engineer's specifications.

4.1.1. Name and legal description of diversion structures:

4.1.1.1. Conduit No. 20: The point of diversion for Conduit No. 20 is described in paragraph 3.1.1, above.

4.1.1.2. Conduit No. 8: The point of diversion for Conduit No. 8 is described in paragraph 3.2.1, above.

4.1.1.3. Highline Canal: The location of the headgate is described in paragraph 3.3.1, above.

4.1.1.4. Last Chance Ditch No. 2: The location of the headgate of the Last Chance Ditch No. 2 is described in paragraph 3.4.1, above.

4.1.1.5. Dominion South Platte Diversion: The location of the diversion structure is described in paragraph 3.10.1, above.

4.1.1.6. Dominion South Platte Pumpback: The location of the diversion is described in paragraph 3.9.1, above.

4.1.1.7. Sterling Gulch Diversion: The location of the diversion structure on Sterling Gulch is described in paragraph 3.8.1, above.

4.1.1.8. Willow Creek Diversion: The location of the diversion structure on Willow Creek is described in paragraph 3.7.1, above.

4.1.1.9. Indian Creek Diversion: The location of the diversion structure on Indian Creek is described in paragraph 3.6.1, above.

4.1.1.10. Plum Creek Diversion: The location of the diversion structure on Plum Creek is described in paragraph 3.5.1, above.

4.1.2. Source: South Platte River and Plum Creek, Indian Creek, Willow Creek and Sterling Gulch, all tributaries to the South Platte River.

4.1.3. Amount claimed: 2,200 acre-feet, with the right to refill in the amount of 2,200 acre feet per year, both conditional.

4.1.4. Date of Appropriation: Feb. 28, 2018

4.1.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.1.6. Date Water First Applied to Beneficial Use: Not applicable.

4.1.7. Uses: Dominion seeks to use water stored in the ARS Reservoir for all municipal purposes, including but not limited to, domestic, mechanical, manufacturing, commercial, industrial, irrigation, lake level maintenance, recreational, construction, fishery, wildlife, stock watering, fire protection, substitution and replacement within Dominion's present and future service area, or any extra-territorial area in which Dominion contracts to provide augmentation and/or water service. Dominion claims the right to use, reuse and successively use to extinction by exchange, augmentation, recharge, sale, lease or otherwise all water lawfully stored under Dominion's storage rights claimed herein. Dominion also seeks to use its storage rights to meet historical return flow obligations for future acquired and changed water rights owed to the South Platte River or its tributaries. Water stored pursuant to the ARS Reservoir right may be released from ARS Reservoir and re-diverted to storage in the following structures:

4.1.7.1. Chatfield Reservoir: The location is described in paragraph 4.6, below.

4.1.7.2. Sterling Gulch Reservoir: The location is described in paragraph 4.2, below.

4.1.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: ARS Sand & Gravel Co., LLC, 8305 W. Mountain View Lane, Littleton, CO 80125.

4.2. **Sterling Gulch Reservoir**: The Sterling Gulch Reservoir will be an on-stream reservoir on Sterling Gulch. It will be located in the Northwest quarter of Section 29, Township 6 South, Range 68 West, Douglas County, Colorado.

4.2.1. Source: Sterling Gulch, tributary to Plum Creek.

4.2.2. Amount claimed: 600 acre-feet, with the right to refill in the amount of 600 acre feet per year, both conditional.

4.2.3. Date of Appropriation: Feb. 28, 2018

4.2.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.2.5. Date Water First Applied to Beneficial Use: Not applicable.

4.2.6. Uses: Dominion seeks to use the Sterling Gulch Reservoir right for the same uses described in paragraph 4.1.7, above. Water stored in pursuant to the Sterling Gulch Reservoir right may be released from Sterling Gulch Reservoir and re-diverted to storage in the following structures:

4.2.6.1. ARS Reservoir: The location is described in paragraph 4.1, above.

4.2.6.2. Chatfield Reservoir: The location is described in paragraph 4.6, below.

4.2.7. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

4.3. **Willow Creek Reservoir**: The Willow Creek Reservoir will be an on-stream reservoir on Willow Creek. It will be located in the Northwest quarter of Section 36, Township 6 South, Range 69 West, Douglas County, Colorado.

4.3.1. Source: Willow Creek, tributary to the South Platte River.

4.3.2. Amount claimed: 900 acre-feet, with the right to refill in the amount of 900 acre feet annually, both conditional.

4.3.3. Date of Appropriation: Feb. 28, 2018

4.3.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.3.5. Date Water First Applied to Beneficial Use: Not applicable.

4.3.6. Uses: Dominion seeks to use the Willow Creek Reservoir right for the same uses described in paragraph 4.1.7, above. Water stored in pursuant to the Willow Creek Reservoir right may be released from Willow Creek Reservoir and re-diverted to storage in the following structures:

4.3.6.1. ARS Reservoir: The location is described in paragraph 4.1, above.

4.3.6.2. Chatfield Reservoir: The location is described in paragraph 4.6, below.

4.3.7. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

4.4. **East Storm Water Ponds**: The East Storm Water Ponds will be a series of up to 8 small (no more than 35 acre-feet each) storm water retention ponds located generally in Section 19, the NW1/4 and the SW1/4 of Section 29, Section 30, Section 31, and the NW1/4 of Section 32, Township 6 South, Range 68 West, and the NE1/4 and the SE1/4 of Section 6, Township 7 South, Range 68 West on ephemeral drainages tributary to Plum Creek. Exhibit 1 depicts the drainage basin divide between Plum Creek and the South Platte River. The maximum combined storage capacity of the East Storm Water Ponds will not exceed 240 acre-feet. All ponds will be lined according to the State Engineer's specifications.

4.4.1. Source: Unnamed tributaries to Sterling Gulch and Plum Creek

4.4.2. Amount claimed: 240 acre-feet, cumulative among all the ponds, with the right to refill up to 240 acre-feet, cumulative per year. All claims are conditional.

4.4.3. Date of Appropriation: Feb. 28, 2018

4.4.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.4.5. Date Water First Applied to Beneficial Use: Not applicable.

4.4.6. Uses: Dominion seeks to use the East Storm Water Pond rights for the same uses described in paragraph 4.1.7, above. Water stored in pursuant to the East Storm Water Ponds right may be released from the East Storm Water ponds and re-diverted to storage in the following structures:

4.4.6.1. Sterling Gulch Reservoir: The location is described in paragraph 4.2, above.

4.4.6.2. ARS Reservoir: The location is described in paragraph 4.1, above.

4.4.6.3. Chatfield Reservoir: The location is described in paragraph 4.6, below.

4.4.7. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

4.5. **West Storm Water Ponds**: The West Storm Water Ponds will be a series of up to 12 small (no more than 35 acre-feet each) storm water retention ponds located generally in the NW1/4 and the SW1/4 of Section 19, the NW1/4 and the SW1/4 of Section 30, and the NW1/4, SW1/4 and SE1/4 of Section 31, Township 6 South, Range 68 West, the NW1/4, NE1/4 and SE1/4 of Section 6, Township 7 South, Range 68 West, the NE1/4 and SE1/4 of Section 25, and Section 36, Township 6 South, Range 69 West on ephemeral drainages tributary to the South Platte River. Exhibit 1 depicts the drainage basin divide between Plum Creek and the South Platte River. The maximum combined storage capacity of the West Storm Water Ponds will not exceed 360 acre-feet. All ponds will be lined according to the State Engineer's specifications.

4.5.1. Source: Unnamed tributaries to Willow Creek and the South Platte River

4.5.2. Amount claimed: 360 acre-feet, cumulative among all ponds, with the right to refill up to 360 acre feet, cumulative per year. All claims are conditional.

4.5.3. Date of Appropriation: Feb. 28, 2018

4.5.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.5.5. Date Water First Applied to Beneficial Use: Not applicable.

4.5.6. Uses: Dominion seeks to use the West Storm Water Pond rights for the same uses described in paragraph 4.1.7, above. Water stored in pursuant to the West Storm Water Ponds right may be released from the West Storm Water ponds and re-diverted to storage in the following structures:

4.5.6.1. Willow Creek Reservoir: The location is described in paragraph 4.3, above.

4.5.6.2. ARS Reservoir: The location is described in paragraph 4.1, above.

4.5.6.3. Chatfield Reservoir: The location is described in paragraph 4.6, below.

4.5.7. Name and address of the owner of the land upon which the proposed diversion structure will be located: Sterling Ranch, LLC, 1805 Shea Center Dr., Suite 210, Highlands Ranch, CO 80129

4.6. **Chatfield Reservoir**: Chatfield Reservoir is an on-stream storage reservoir on the South Platte River and Plum Creek created by a dam located in Sections 6 and 7, Township 6

South, Range 68 West and Section 1, Township 6 South, Range 69 West of the 6th P.M. in Jefferson County.

4.6.1. Source: South Platte River and Plum Creek.

4.6.2. Amount claimed: 2,200 acre-feet, with the right to refill in the amount of 2,200 acre feet annually, both conditional.

4.6.3. Date of Appropriation: Feb. 28, 2018

4.6.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.6.5. Date Water First Applied to Beneficial Use: Not applicable.

4.6.6. Uses: Dominion seeks to use its Chatfield Reservoir storage right for the same uses described in paragraph 4.1.7, above. Water stored in pursuant to Dominion's Chatfield right may be released from Chatfield and re-diverted via the Dominion South Platte Pumpback to storage in the following structure:

4.6.6.1. ARS Reservoir: The location is described in paragraph 4.1, above.

4.6.7. Remarks: Dominion acknowledges that its right to store water in Chatfield Reservoir is subject Dominion becoming a member of the Chatfield Reservoir Reallocation group and obtaining an allocation from the reauthorization of Chatfield Reservoir and to contracts being entered between Dominion, the Colorado Water Conservation Board and the United States Army Corps of Engineers.

4.6.8. Name and address of the owner of the land upon which the proposed diversion structure will be located: United States Army Corps of Engineers, Omaha District, 1616 Capitol Ave., Suite 9000, Omaha, NE 68102.

4.7. **Wakeman Reservoir**: Wakeman Reservoir is an on-stream reservoir on Willow Creek created by a dam located in the Southwest quarter of Section 18, Township 7 South, Range 68 West in Douglas County.

4.7.1. Source: Willow Creek, a tributary of the South Platte River.

4.7.2. Amount claimed: 450 acre-feet, with the right to refill in the amount of 450 acre feet annually, both conditional.

4.7.3. Date of Appropriation: Feb. 28, 2018

4.7.4. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.7.5. Date Water First Applied to Beneficial Use: Not applicable.

4.7.6. Uses: Dominion seeks to use its Wakeman Reservoir storage right for the same uses described in paragraph 4.1.7, above. Water stored pursuant to Dominion's Wakeman Reservoir right may be released from Wakeman Reservoir and re-diverted in the following structure:

4.7.6.1. Willow Creek Reservoir: The location is described in paragraph 4.3, above.

4.7.7. Name and address of the owner of the storage structure: Douglas County Board of County Commissioners, 100 3rd St., Castle Rock, CO 80104.

4.8. **Sedalia Reservoir**: Sedalia Reservoir is an off-stream reservoir located in the Northeast quarter of Section 15, Township 7 South, Range 68 West in Douglas County.

4.8.1. Name and legal description of diversion structure. The location of the diversion structure is described in paragraph 3.5.1, above.

4.8.2. Source: Plum Creek, a tributary to the South Platte River.

4.8.3. Amount claimed: 1,740 acre-feet, with the right to refill in the amount of 1,740 acre feet annually, both conditional.

4.8.4. Date of Appropriation: Feb. 28, 2018

4.8.5. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

4.8.6. Date Water First Applied to Beneficial Use: Not applicable.

4.8.7. Uses: Dominion seeks to use its Sedalia Reservoir storage right for the same uses described in paragraph 4.1.7, above.

4.8.8. Name and address of the owner of the storage structure: Town of Castle Rock, 100 N. Wilcox St., Castle Rock, CO 80104.

5. **Description of Conditional Appropriative Rights of Exchange**: Dominion seeks conditional appropriative rights of exchange along the South Platte River and Plum Creek as set forth below.

5.1. Exchange-from points:

5.1.1. Chatfield Reservoir Outlet: The SW1/4 of the NE1/4 of Section 1, Township 6 South, Range 69 West.

5.1.2. Bi-Cities WWTP: On the east bank of the South Platte River in the SE1/4 of the SE1/4 of Section 28, Township 4 South, Range 68 West.

5.1.3. Roxborough WWTP: On the east bank of the South Platte River in the SW1/4 of the NE1/4 of Section 34, Township 6 South, Range 69 West.

5.2. Exchange-to points:

5.2.1. Conduit No. 20: The point of diversion is described in paragraph 3.1.1, above.

5.2.2. Conduit No. 8: The point of diversion is described in paragraph 3.2.1, above.

5.2.3. Highline Canal: The point of diversion is described in paragraph 3.3.1, above.

5.2.4. Last Chance Ditch No. 2: The point of diversion is described in paragraph 3.4.1, above.

5.2.5. Dominion South Platte Diversion: The point of diversion described in paragraph 3.10.1, above.

5.2.6. Dominion Plum Creek Diversion: The point of diversion described in paragraph 3.5.1, above.

5.2.7. Chatfield Reservoir: The point of storage described in paragraph 4.6, above.

5.3. Description of Exchange Reaches: The exchange reach claimed on the South Platte River (a.k.a. Exchange Reach 1) extends from the furthest downstream terminus, the Bi-Cities WWTP as described in paragraph 5.1.2, upstream to the furthest upstream terminus, the point of diversion of Conduit No. 20 as described in paragraph 3.1.1. The exchange reach claimed on Plum Creek (a.k.a. Exchange Reach 2) extends from the Bi-Cities WWTP as described in paragraph 5.1.2, upstream to the further upstream terminus, the Dominion Plum Creek Diversion as described in paragraph 3.5.1, above. Dominion requests the right to exchange from any of the exchange-from-points identified in paragraph 5.1 to any of the exchange-to-points identified in paragraph 5.2. In addition, Dominion requests the right to exchange water between any existing or yet-to-be constructed facilities within each defined exchange reach and located in Jefferson and/or Douglas Counties. A map showing the locations of the structures and the exchanges reaches are attached as Exhibit 1.

5.4. Sources of substitute supply:

5.4.1. Dominion's reusable and fully consumable effluent from wastewater treated at the Bi-Cities WWTP and/or the Roxborough WWTP.

5.4.2. Fully consumable water diverted and/or stored pursuant to the conditional direct flow water rights described in paragraphs 3.1 through 3.10, above.

5.4.3. Fully consumable water rights stored pursuant to the conditional storage rights described in paragraphs 4.1 through 4.8, above.

5.4.4. Other fully consumable water owned or leased by Dominion, including 480 acre feet of fully consumable water pursuant to two intergovernmental agreements with Aurora; Dominion's fully consumptive water attributable to its Hock Hocking mine water rights, fully consumable water attributable to Dominion's interests in the WISE Partnership; 700 acre feet of fully consumable water pursuant to Dominion's intergovernmental agreement with the Town of Castle Rock; and not non-tributary and non-tributary ground water that Dominion may own or control.

5.5. Maximum exchange rates:

5.5.1. Exchanges from Bi-Cities WWTP to any of the above exchange-to points: 5 cfs, conditional.

5.5.2. Exchanges from Roxborough WWTP to any of the above exchange-to-points: 5 cfs, conditional.

5.5.3. Exchanges from Chatfield Reservoir to

Conduit No. 20: 24 cfs, conditional;

Conduit No. 8: 24 cfs, conditional;

Highline Canal: 120 cfs, conditional;

Last Chance Ditch No. 2: 24 cfs, conditional;

Dominion South Platte Diversion: 24 cfs, conditional;

Dominion Plum Creek Diversion: 40 cfs, conditonal.

5.6. Date of Appropriation: February 28, 2018.

5.7. How Appropriation was Initiated: The appropriation date is based upon the filing of this application.

5.8. Date Water First Applied to Beneficial Use: Not applicable.

5.9. Uses: The exchanged water will be used for all municipal purposes, including but not limited to, domestic, mechanical, manufacturing, commercial, industrial, irrigation, lake level maintenance, recreational, construction, fishery, wildlife, stock watering, and fire protection, recharge, augmentation, substitution and exchange, and replacement including both immediate application for such purposes and storage for subsequent

application for such purposes within Dominion's present and future service area, or any extra-territorial area in which Dominion contracts to provide augmentation and/or water service. Dominion intends to use, reuse, successively use and fully consume the exchanged water, and subject to any decreed terms and conditions, the exchange water will be used to extinction either directly or after diversion or re-diversion to storage.

6. **Additional Information**

6.1. Dominion will not seek to use any property or point of diversion that Dominion does not own until it has obtained the legal right to do so.

6.2. Each of the water rights claimed herein is intended to be part of Dominion's integrated water supply system.

6.3. Dominion recognizes that there are times when all of the flow at the Waterton gage is comprised of Denver's water being used to support a minimum flow requirement. Dominion will not divert Denver's water or operate exchanges in any reach that would negatively impact such minimum flows.

Respectfully submitted this 28th day of February, 2018.

WELBORN SULLIVAN MECK & TOOLEY, P.C.:

By: *s/ Carolyn F. Burr*
Carolyn F. Burr, #25978
James M. Noble, #36716
Jens Jensen, #47471

ATTORNEYS FOR APPLICANT,
DOMINION WATER & SANITATION DISTRICT

VERIFICATION

I, Greg Roush, being first duly sworn, hereby state that I am a water consulting engineer for Dominion Water & Sanitation District. I have read this **APPLICATION FOR CONDITIONAL DIRECT FLOW RIGHTS, STORAGE RIGHTS, AND APPROPRIATIVE RIGHTS OF EXCHANGE**; I have personal knowledge of the facts stated, and I verify its contents to the best of my knowledge, information, and belief.

Greg Roush

STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

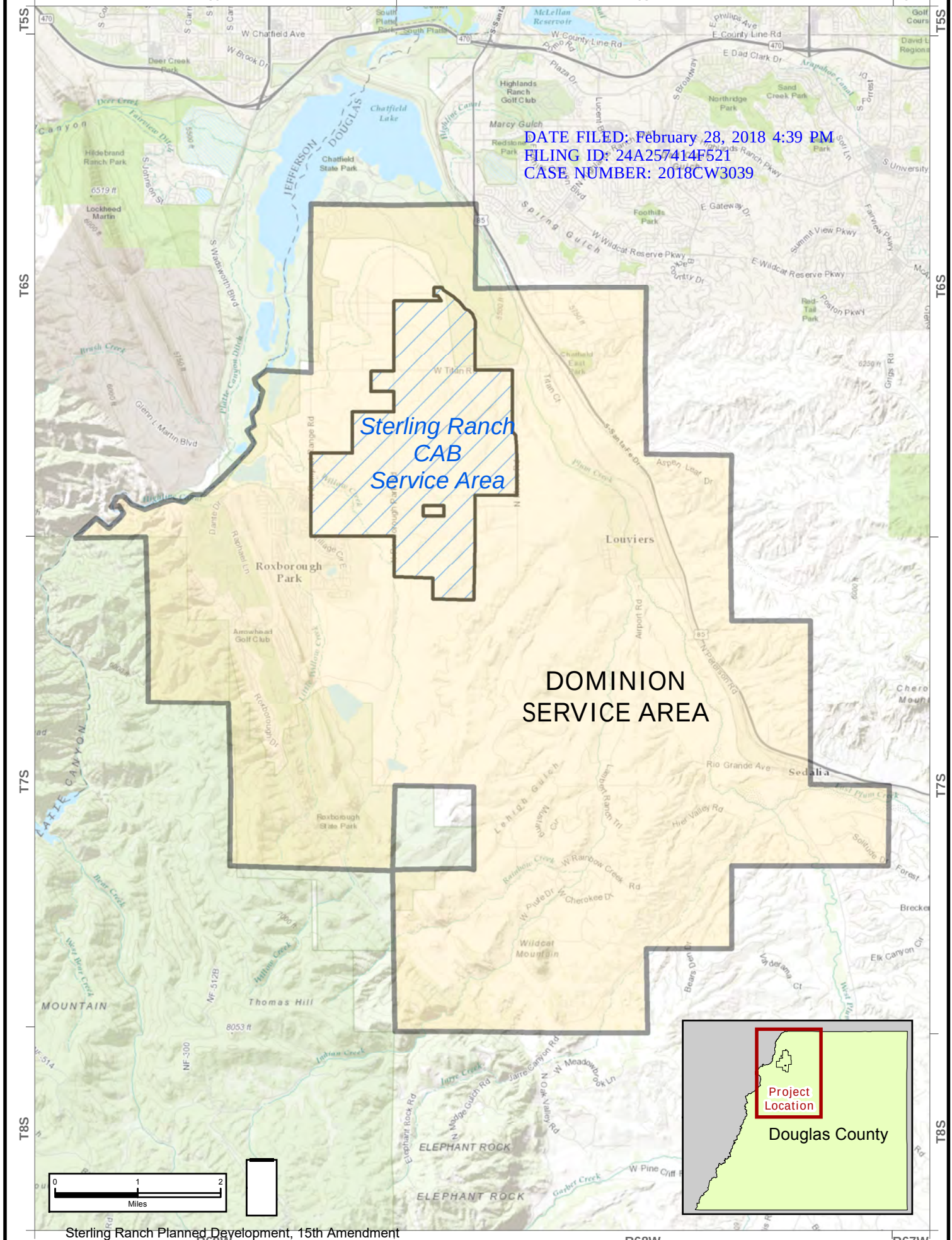
Subscribed, sworn to and acknowledged before me by Greg Roush this 28th day of February, 2018.

Witness my hand and official seal.

CHRISTINE CLIPPINGER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20014001874
MY COMMISSION EXPIRES 05/04/2021

Christine Clippinger
Notary Public

My commission expires: 5/4/2021


R69W
R68W
R67W
T5S
T6S
T7S
T8S
DATE FILED: February 28, 2018 4:39 PM
FILING ID: 24A257414F521
CASE NUMBER: 2018CW3039
Sterling Ranch
CAB
Service Area
DOMINION
SERVICE AREA
Louviers
Roxborough
Park
Sedalia
Rio Grande Ave
Hier Valley Rd
W Rainbow Creek Rd
W Cherokee Dr
Wildcat
Mountain
Thomas Hill
8053 ft
ELEPHANT ROCK
ELEPHANT ROCK
Chatfield
Lake
Chatfield
State Park
Roxborough
State Park
Highlands
Ranch
Golf Club
Arrowhead
Golf Club
Lockheed
Martin
Project
Location
Douglas County
0
1
2
Miles

R69W R68W

T5S T6S T7S

Bi-City WWTP located 7 miles downstream

DATE FILED: February 28, 2018 4:39 PM
FILING ID: 24A257414F521
CASE NUMBER: 2018CW3039

Chatfield Reservoir Outlet

6. Dominion South Platte Pumpback

McLellan Reservoir

Chatfield Lake

5. Dominion South Platte Diversion

7. Dominion Willow Creek Diversion

8. Dominion Sterling Gulch Diversion

3. Highline Canal

Roxborough WWTP

4. Last Chance Ditch No. 2 aka Platte Canon Ditch

2. Denver Conduit No. 8

1. Denver Conduit No. 20

10. Dominion Indian Creek Diversion

9. Dominion Plum Creek Diversion

Miles 0 0.5 1

Project Location

New Exchange-to Point
New Exchange-from Point
New Direct Flow Water Right Location
Plum Creek/South Platte River Drainage Basin Divide
Exchange Reach 1
Exchange Reach 2
Section Lines

This product is for reference purposes only and is not to be construed as a legal document or survey instrument.

DOMINION WATER & SANITATION DISTRICT

EXHIBIT 2
NEW DIRECT FLOW WATER RIGHT & EXCHANGE LOCATIONS

LeonardRice ENGINEERS, INC.

1207DOM01
February 2018

R69W R68W

T5S T5S

T6S T6S

T7S T7S

Bi-City WWTP located 7 miles downstream

DATE FILED: February 28, 2018 4:39 PM
FILING ID: 24A257414F521
CASE NUMBER: 2018CW3039

12. Chatfield Reservoir

11. ARS

15. Sterling Gulch Reservoir

14. Willow Creek Reservoir

13. Wakeman Reservoir

16. Sedalia Reservoir

McLellan Reservoir

Chatfield Lake

Dutch Creek
Deer Creek
Brush Creek
South Platte River
Plum Creek
Indian Creek

Columbine
Valley
Roxborough Park
Louviers
Chatfield East
Lockheed Martin
Highlands Ranch Golf Club
Golf Club at Ravenna
Columbine Country Club

Miles
0 0.5 1

Project Location

New Strorage Water Right Location

Plum Creek/South Platte River Drainage Basin Divide

Section Lines

This product is for reference purposes only and is not to be construed as a legal document or survey instrument.

DOMINION WATER & SANITATION DISTRICT

EXHIBIT 3
NEW STORAGE WATER RIGHT LOCATIONS

LeonardRice ENGINEERS, INC.

1207DOM01
February 2018

Case No. 18CW3039

Appendix B – Dominion's 2020 Water Resources Planning Report

Dominion Water & Sanitation District
9250 E. Costilla Avenue, Suite 210
Greenwood Village, CO 80112

October 16, 2020

To: Ms. Carolyn Burr

RE: Water Resources Planning Report for the Dominion's Application for Conditional Direct Flow Water Rights, Conditional Water Storage Rights and Conditional Appropriative Rights of Substitution and Exchange (Case No. 2018CW3039) in South Platte River and its Tributaries

Dear Ms. Burr:

This letter documents the Dominion Water and Sanitation District's purpose and need for water rights associated with the Division 1 Water Court Case No. 2018CW3039. The letter also demonstrates that the Dominion Water & Sanitation District (Dominion) has the financial means to complete the projects and that Dominion can and will fully develop the water rights to meet the needs of its service area in Northwestern Douglas County.

Dominion was created in 2004 by Douglas County to be the water and wastewater provider capable of bringing renewable water to Northwest Douglas County. The service area for Dominion is 33,000 acres within Northwest Douglas County. The Sterling Ranch Community Authority Board (CAB) is Dominion's first customer and was the key driver for Dominion's initial investment in water supply and infrastructure leading up to service to the first homes in Sterling Ranch starting in July 2017. Sterling Ranch is rapidly growing at an estimated 450 homes per year, and Dominion has been in conversations with the existing districts in the Chatfield Valley and with new developments interested in water service. Dominion is actively and responsibly building a sustainable water system to serve this region and requires additional supplies to support the long-term demand projections provided herein.

Purpose and Need: The purpose of the water application in Case No. 18CW3039 is to provide diversions and storage of additional renewable supplies and exchanges to help firm Dominion's water supply in meeting its future demands with at least a minimum of 60% renewable water supplies for its service area, and a 70% renewable target for its current customer, Sterling Ranch.

Dominion has estimated demand of at least 6,204 acre-feet/year based on the potential buildout of the entirety of the 33,000 acres within its service area including Sterling Ranch, projected demands from the existing retail districts in Dominion's service area and the re-development of the Santa Fe Corridor. While Dominion's current customer, the Sterling Ranch Community Authority Board has instituted water demand management, the Santa Fe Corridor continues to

have existing districts and new users evaluate future growth along the corridor. As estimated in the 2019 Douglas County Comprehensive Master Plan, the anticipated population growth in this region is 132,000 residents through 2040. In 2020, Dominion has had conversations with numerous developers about potential water service and has signed agreements with two new developers to begin negotiations for water service.

The attached Figure 1 shows a conservative estimate of Dominion's projected demands and average annual water supplies. On an average annual basis Dominion needs to acquire or develop additional renewable water supplies to meet its renewable water supply targets as a percent of total water supplies. Water rights claimed in Case No. 18CW3039 will provide a portion of that supply and relieve some of the reliance on non-renewable Denver Basin groundwater.

Because available surface water supplies are limited in the South Platte River seasonally and during drought conditions, storage is needed to increase the yield of Dominion's renewable water supplies and meet peak demands.

In our opinion, the subject water rights are reasonable and necessary for meeting the water demands projected for the Dominion needs through and beyond the year 2050 and extend the availability of nonrenewable Denver Basin aquifer supplies.

Existing Water System: The current water delivery system for Dominion consists of a shared capacity at the Larry D. Moore potable water treatment plant (WTP) with a current Dominion capacity of 2 mgd (expandable to 4 mgd), one potable water tank, and one pressure zone. Water supply for the WTP currently comes from Aurora's South Platte River raw water delivery system (Aurora Rampart Reservoir) west of the WTP. Dominion currently serves Sterling Ranch development which is generally located south of Chatfield Reservoir between Rampart Range Road and Moore Road.

Future Water System: The existing water system for delivering water from the west side of the Dominion service area is to be expanded with capabilities to divert raw water from the South Platte River near the Chatfield Basin Water Reclamation Facility (CBWRF) and deliver raw water to the WTP for direct potable use, direct non-potable use, or to storage for subsequent uses.

Dominion is currently constructing a portion of its eastern water delivery system known as the Eastern Regional Pipeline (ERP) which consists of a pipeline from Castle Rock to a 2 MG potable water tank also under construction. The ERP is a potable pipeline designed with a 9 MGD capacity to deliver Dominion's water supplies including those from Water Infrastructure and Supply Efficiency (WISE), Castle Rock's delivery system pursuant to Dominion IGAs with the Town of Castle Rock, as well as groundwater sources along the pipeline. Dominion also

has plans to convey raw water from Plum Creek supplies for direct non-potable uses, storage and subsequent potable and non-potable uses.

Dominion has plans to construct numerous future storage facilities; including ARS gravel pit site, Sterling Gulch Reservoir, and Willow Creek Reservoir. Dominion purchased 500 AF of storage in Chatfield Reservoir in 2020. Dominion is planning, as a part of the West water delivery system, infrastructure to convey water from Chatfield to the WTP and future onsite storage facilities.

Permitting: Dominion recognizes certain permits may be required before constructing diversions, conveyance and water treatment facilities, and on-stream raw water storage facilities. Dominion has acquired permits or worked with partners for expansion of Roxborough Water Treatment Plant, construction of its sewer lift station, and construction of the Eastern Regional Pipeline Project. Dominion is aware of the permits required and will pursue all permits necessary prior to constructing facilities associated with the water rights.

Water Supplies: Dominion's raw water supply includes renewable water sources from contracts it holds with Aurora, ownership in the Hock Hocking mine water right, WISE water, and a Castle Rock contract. Dominion also owns and has options for purchasing non-renewable water in the Denver Basin aquifers (Cherokee Ranch) that are used to firm up the renewable water sources. The water rights filed in Case No. 18CW3039 provide additional renewable water supplies needed to meet Dominion's goal to serve customers with a majority of renewable water supplies (60% or more) and extend the life of its Denver Basin aquifer supplies. Another key component of the water supply is the capture and reuse of fully consumptive water supplies that are discharged as reclaimed wastewater credits, which will be captured from Dominion's future wastewater treatment facility and/or from the South Platte Renewal Partners wastewater facility.

Financial Feasibility: Since 2004, Dominion has spent well in excess of $120,000,000 developing its water supply. This includes capital infrastructure projects to convey water through the WISE core infrastructure and partners, the ERP delivery system, and the treatment and storage system components listed in the Existing System section. Dominion has also purchased water pursuant to IGA's with partners in return for perpetual renewable water delivery, and groundwater supply to back up Dominion's WISE supply. Dominion continues to budget each year for the development of its water system. The proposed total budget for water in 2021 is $10,800,000. This includes $1,230,000 for administration and $9,600,000 for operations and capital expansion for service to Sterling Ranch CAB. When approved by the Dominion Board of Directors, the 2021 budget will be posted on the Colorado Department of Local Affairs website under Local Government Filings. Dominion's budgets for previous years can also be viewed here. Dominion continues to invest in capital infrastructure to develop its water supply portfolio as demands in Sterling Ranch and the rest of the region grow. Dominion anticipates capital investment of another $80 million over the next 10 years, including construction of a wastewater

treatment facility and development of groundwater supplies, and infrastructure listed in the Future Water System section.

Dominion's water rate structure was adjusted in 2020 with annual increases anticipated to the tap fees and service rates to meet the financial requirements to not only operate, but also to expand our water system. Dominion increased service rates and tap fees in 2020 as a result of a 2019 rate study. Dominion is again updating the rate study and expects to make adjustments to the tap fees and service rates accordingly for 2021. The primary purpose of these adjustments is to secure sufficient funds to develop Dominion's water infrastructure, including for the rights applied for in Case No. 18CW3039.

It is our opinion that development of the subject water rights and the associated infrastructure are financially feasible for Dominion.

Can and Will: Dominion's capital improvement plan includes the required funding for engineering and analysis to provide for the completion of the subject appropriations and infrastructure, which will provide water for the future demands of customers in Dominion's service area.

We have employed reasonable assumptions in our demand forecast, including review of the Douglas County Comprehensive Plan. Therefore, in our opinion, Dominion can and will develop the water rights it seeks in Case No. 18CW3039 within a reasonable time to meet its future needs.

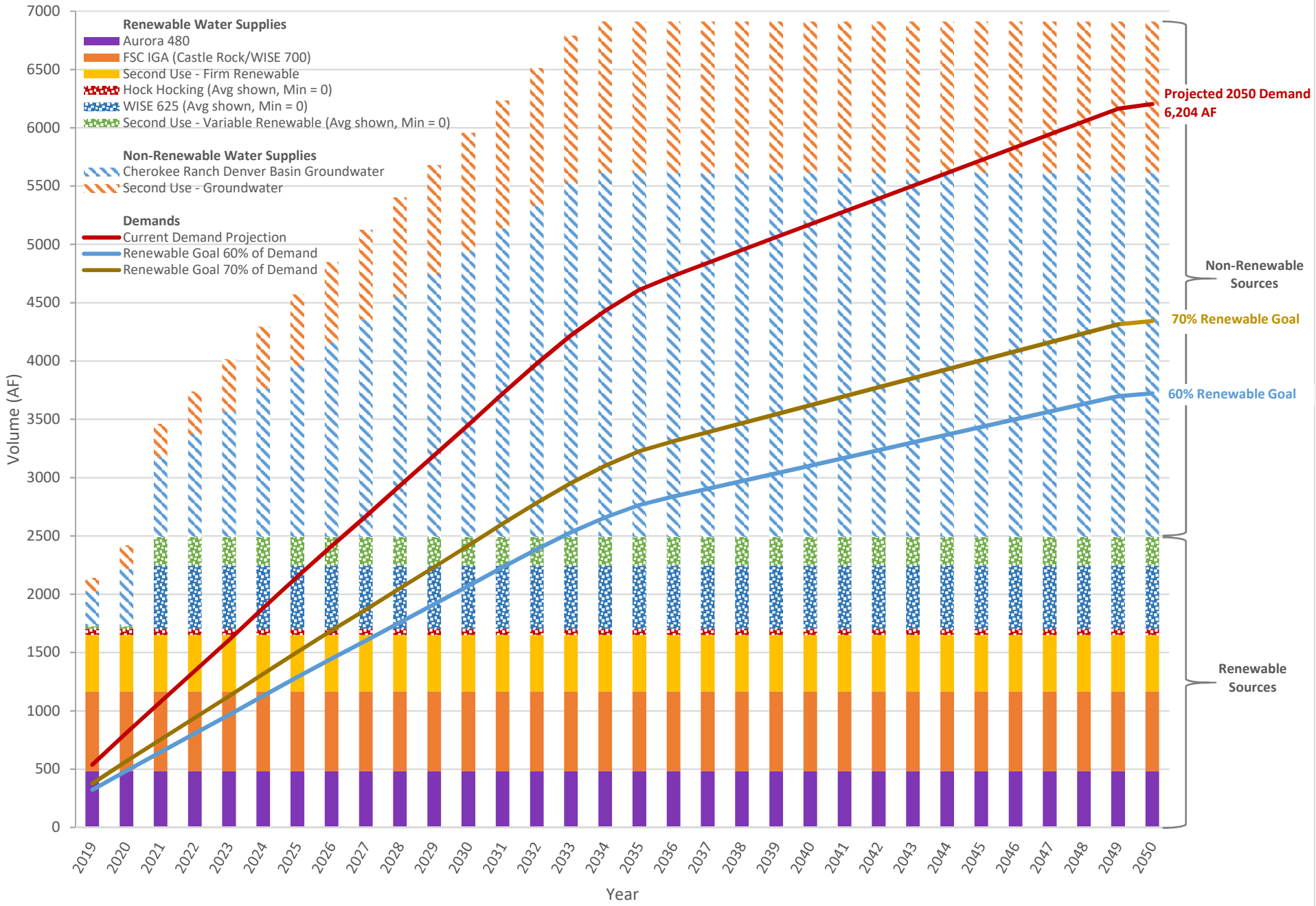
Conclusions and Opinions Dominion has been diligent in its efforts to develop a water supply for customers within its service area. The purpose of the subject water rights in Case No. 18CW3039 is to provide additional water supplies for a sustainable water supply based upon on an average of at least 60% renewable water supplies. Dominion has the need for these rights to minimize reliance on nonrenewable groundwater supplies in the Denver Basin aquifers. Dominion's planning horizon of 2050 is reasonable and justified based on projected growth of its major customer the Sterling Ranch Development and other potential customers in its service area. Dominion has had a number of recent conversations with new potential customers, including developers and existing smaller water districts currently relying on groundwater, that are interested in water supply from Dominion. In 2020, Dominion has entered into two agreements with potential customers to begin the negotiations for water service. Dominion has made the financial commitment to fund the water infrastructure and to secure sufficient water rights to meet demands in its service area. Dominion can and will perfect these water rights to provide a reliable water supply based on the majority of its supply coming from renewable water sources for its customers.

Sincerely,

DocuSigned by:
Mary Kay Provaznik
822B830658744D8...

Mary Kay Provaznik
General Manager, Dominion Water & Sanitation District

Figure 1 - Dominion Water & Sanitation District
Projected Water Demands vs Renewable and Non-Renewable Average Annual Water Supplies at Point of Delivery



Case No. 18CW3039

Appendix C – Water Availability Study Results

Table C1 - Historical Number of Days Each Month For the Study Period of 1996 - 2015 Dominion's Subject Direct Flow and Storage Claims in Case No. 18CW3039 Would be In-Priority													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	24	22	29	1	1	1	0	0	0	0	0	22	100
1997	0	19	31	20	0	21	2	31	30	31	30	27	242
1998	31	28	31	14	31	12	6	7	0	0	0	0	160
1999	11	28	15	9	31	30	8	31	30	31	30	31	285
2000	31	29	19	23	3	0	0	0	0	0	0	19	124
2001	31	28	31	30	20	2	0	0	0	0	0	0	142
2002	0	17	31	3	0	0	0	0	0	0	0	0	51
2003	0	0	0	0	1	0	0	0	0	0	0	0	1
2004	0	0	0	0	0	0	0	0	1	0	0	0	1
2005	0	0	0	0	0	13	0	0	0	1	0	0	14
2006	0	2	0	0	0	0	0	0	0	0	0	2	4
2007	1	0	0	6	31	15	0	0	0	0	0	14	67
2008	21	0	0	0	0	0	0	1	0	0	0	10	32
2009	0	0	0	7	5	29	9	0	0	5	30	31	116
2010	31	10	28	27	31	15	0	0	0	0	0	0	142
2011	2	0	1	0	3	1	16	0	0	19	30	31	103
2012	3	20	22	0	0	0	0	0	0	0	0	0	45
2013	0	0	0	0	0	0	0	0	18	22	6	0	46
2014	24	9	31	22	18	22	2	15	30	31	24	31	259
2015	31	28	31	20	31	30	28	0	1	31	30	31	292
Average	12	12	15	9	10	10	4	4	6	9	9	12	111
Max (2015)	31	28	31	20	31	30	28	0	1	31	30	31	292
Min (2003)	0	0	0	0	1	0	0	0	0	0	0	0	1

Table C2 - Historical Number of Days Each Month For the Study Period of 1996 - 2015 Dominion's Subject Direct Flow and Storage Claims in Case No. 18CW3039 Would be In-Priority and the Flow at Littleton South Platte River Stream Gage* was greater than 100 cfs (Apr-Oct) and 30 cfs (Nov-Mar)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	1	10	0	0	1	0	0	0	0	0	1	13
1997	0	19	31	0	0	21	2	25	6	3	30	27	164
1998	31	28	31	14	31	12	6	7	0	0	0	0	160
1999	4	3	15	9	31	30	8	25	2	0	27	31	185
2000	31	29	19	18	3	0	0	0	0	0	0	17	117
2001	26	24	31	2	17	0	0	0	0	0	0	0	100
2002	0	14	31	0	0	0	0	0	0	0	0	0	45
2003	0	0	0	0	1	0	0	0	0	0	0	0	1
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	12	0	0	0	0	0	0	12
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	6	31	15	0	0	0	0	0	0	52
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	7	3	29	9	0	0	1	0	29	78
2010	29	6	28	25	31	15	0	0	0	0	0	0	134
2011	2	0	0	0	0	0	16	0	0	0	0	0	18
2012	0	19	22	0	0	0	0	0	0	0	0	0	41
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	15	9	29	10	12	22	0	7	0	5	24	31	164
2015	28	28	31	13	31	30	28	0	0	0	0	25	214
Average	8	9	14	5	10	9	3	3	0	0	4	8	75
Max (2015)	28	28	31	13	31	30	28	0	0	0	0	25	214
Min (2004)	0	0	0	0	0	0	0	0	0	0	0	0	0

*Used to represent the Littleton Boat Chute No. 9 calling water right which started being administered in 2016.

Table C3 - Estimated Yield for Each of Dominion's Claimed Water Rights at the Dominion Conduit No. 8, Dominion Highline Canal, Dominion Last Chance Ditch No. 2, and Dominion South Platte Diversion Points Using the South Platte River at Waterton, CO Streamgage (Values in AF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	13	0	0	48	0	0	0	0	0	2	63
1997	0	28	115	0	0	1,000	95	913	208	0	42	175	2,575
1998	87	38	184	599	1,476	571	286	333	0	0	0	0	3,574
1999	0	6	119	218	1,180	1,428	381	1,154	95	0	8	0	4,590
2000	0	0	6	80	61	0	0	0	0	0	0	0	148
2001	0	2	115	19	218	0	0	0	0	0	0	0	354
2002	0	91	220	0	0	0	0	0	0	0	0	0	311
2003	0	0	0	0	48	0	0	0	0	0	0	0	48
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	571	0	0	0	0	0	0	571
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	286	1,476	714	0	0	0	0	0	0	2,475
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	238	143	1,381	428	0	0	6	0	149	2,344
2010	0	0	12	517	1,359	714	0	0	0	0	0	0	2,602
2011	10	0	0	0	0	0	762	0	0	0	0	0	772
2012	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	2	6	8	476	361	1,047	0	333	0	196	109	95	2,634
2015	28	42	44	405	1,476	1,428	1,333	0	0	0	0	0	4,754
Average	6	11	42	142	390	445	164	137	15	10	8	21	1391
Max Daily Rate (cfs)	5	12	24	24	24	24	24	24	24	24	15	24	

Table C4 - Estimated Yield for Dominion's Claimed Water Right at the Dominion South Platte Pumpback Diversion Point Using the South Platte River Below Chatfield Reservoir Streamgage (Values in AF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	8	72	0	0	8	0	0	0	0	0	8	96
1997	0	151	246	0	0	167	16	191	48	24	238	214	1,294
1998	246	222	246	111	246	95	48	56	0	0	0	0	1,269
1999	32	24	119	71	246	238	63	198	16	0	214	246	1,468
2000	246	230	151	139	24	0	0	0	0	0	0	135	925
2001	206	190	246	16	135	0	0	0	0	0	0	0	793
2002	0	107	246	0	0	0	0	0	0	0	0	0	353
2003	0	0	0	0	8	0	0	0	0	0	0	0	8
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	95	0	0	0	0	0	0	95
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	48	246	119	0	0	0	0	0	0	413
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	56	24	230	71	0	0	8	0	230	619
2010	230	48	222	198	246	119	0	0	0	0	0	0	1,063
2011	16	0	0	0	0	0	127	0	0	0	0	0	143
2012	0	151	175	0	0	0	0	0	0	0	0	0	325
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	119	69	223	79	95	175	0	56	0	40	190	246	1,291
2015	222	222	246	97	246	238	222	0	0	0	0	198	1,692
Average	66	71	110	41	76	74	27	25	3	4	32	64	592
Max Daily Rate (cfs)	4	4	4	4	4	4	4	4	4	4	4	4	

Table C5 - Estimated Yield for Dominion's Claimed Water Right at the Dominion Willow Creek Diversion Point (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	3	0	0	0	0	0	0	0	0	0	3
1997	0	2	3	0	0	5	2	19	0	0	3	0	35
1998	1	1	10	11	2	4	5	5	0	0	0	0	40
1999	0	0	0	47	15	7	4	5	0	0	4	9	89
2000	4	2	8	0	0	0	0	0	0	0	0	0	13
2001	0	1	4	0	9	0	0	0	0	0	0	0	14
2002	0	2	0	0	0	0	0	0	0	0	0	0	2
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	4	0	0	0	0	0	0	4
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	8	0	0	0	0	0	0	0	8
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	5	4	10	0	0	0	4	0	0	22
2010	0	0	12	12	2	9	0	0	0	0	0	0	35
2011	0	0	0	0	0	0	22	0	0	0	0	0	22
2012	0	4	0	0	0	0	0	0	0	0	0	0	4
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	6	1	5	6	0	1	0	5	2	3	29
2015	2	11	7	1	43	25	8	0	0	0	0	0	98
Average	0	1	3	4	4	4	2	2	0	0	0	1	21
Max Flow Rate* (cfs)	12	24	24	24	24	24	24	24	0	15	24	8	

*Max flow rate calculated as the maximum of the average flow rates for the duration of each storm.

Table C6 - Estimated Yield for Dominion's Claimed Water Right at the Dominion Sterling Gulch Diversion Point (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	8	0	0	0	0	0	0	0	0	0	8
1997	0	4	3	0	0	11	5	19	0	0	3	0	46
1998	2	1	16	12	4	14	9	7	0	0	0	0	66
1999	0	0	0	60	22	12	5	14	0	0	6	27	147
2000	12	7	19	0	0	0	0	0	0	0	0	0	38
2001	0	4	15	0	19	0	0	0	0	0	0	0	38
2002	0	7	0	0	0	0	0	0	0	0	0	0	7
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	5	0	0	0	0	0	0	5
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	24	0	0	0	0	0	0	0	24
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	5	4	13	0	0	0	6	0	0	28
2010	0	0	16	20	6	17	0	0	0	0	0	0	59
2011	0	0	0	0	0	0	45	0	0	0	0	0	45
2012	0	10	0	0	0	0	0	0	0	0	0	0	10
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	20	6	7	24	0	5	0	13	10	11	96
2015	6	46	31	2	129	46	26	0	0	0	0	2	288
Average	1	4	6	5	11	7	5	2	0	1	1	2	45
Max Flow Rate* (cfs)	24	24	24	24	24	24	24	24	0	24	24	24	

*Max flow rate calculated as the maximum of the average flow rates for the duration of each storm.

Table C7 - Estimated Yield for Dominion's Claimed Water Right at the Dominion Plum Creek Diversion Point Using the Plum Creek at Titan Road Near Louviers, CO Streamgage (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	53	0	0	0	0	0	0	0	0	0	53
1997	0	0	280	0	0	331	0	294	54	60	589	536	2,143
1998	615	555	603	278	615	238	61	139	0	0	0	0	3,104
1999	26	45	196	179	615	595	159	495	24	0	462	549	3,345
2000	600	543	347	315	60	0	0	0	0	0	0	46	1,911
2001	50	60	405	31	336	0	0	0	0	0	0	0	880
2002	0	125	276	0	0	0	0	0	0	0	0	0	401
2003	0	0	0	0	20	0	0	0	0	0	0	0	20
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	238	0	0	0	0	0	0	238
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	119	615	298	0	0	0	0	0	0	1,031
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	121	60	575	179	0	0	20	0	575	1,529
2010	565	107	555	496	607	298	0	0	0	0	0	0	2,628
2011	16	0	0	0	0	0	85	0	0	0	0	0	101
2012	0	238	264	0	0	0	0	0	0	0	0	0	501
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	79	66	391	198	238	354	0	96	0	56	54	144	1,677
2015	339	460	572	232	615	595	555	0	0	0	0	496	3,865
Average	114	110	197	98	189	176	52	51	4	7	55	117	1171
Max Daily Rate (cfs)	10	10	10	10	10	10	10	10	10	10	10	10	

Table C8 - Estimated Yield for Dominion's Claimed Water Right at the Dominion Indian Creek Diversion Point Using the West Plum Creek near Perry Park, CO Streamgage (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2009	-	-	-	-	-	-	-	-	0	1	0	25	26
2010	25	5	24	393	578	123	0	0	0	0	0	0	1,148
2011	1	0	0	0	0	0	8	0	0	0	0	0	9
2012	0	6	7	0	0	0	0	0	0	0	0	0	13
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	15	9	29	78	146	112	0	9	0	3	14	18	432
2015	16	16	18	156	615	348	126	0	0	0	0	21	1,317
Average	10	6	13	104	223	97	22	1	0	1	2	9	421
Max Daily Rate (cfs)	1	1	1	10	10	10	4	1	0	0	0	0	

Table C9 - Estimated Annual Available Deliveries into ARS Reservoir (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	65	0	0	286	0	0	0	0	0	2	352
1997	0	28	395	0	0	6,329	571	4,942	534	60	631	692	14,180
1998	702	593	809	1,940	9,469	3,210	1,775	2,138	0	0	0	0	20,637
1999	26	49	315	854	6,370	9,164	2,444	6,747	446	0	470	549	27,433
2000	600	543	353	378	311	0	0	0	0	0	0	46	2,232
2001	50	61	520	38	538	0	0	0	0	0	0	0	1,207
2002	0	216	496	0	0	0	0	0	0	0	0	0	712
2003	0	0	0	0	305	0	0	0	0	0	0	0	305
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	3,078	0	0	0	0	0	0	3,078
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	1,833	9,469	4,582	0	0	0	0	0	0	15,884
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	886	893	8,858	2,749	0	0	26	0	735	14,147
2010	565	107	567	2,882	6,858	3,983	0	0	0	0	0	0	14,962
2011	26	0	0	0	0	0	4,637	0	0	0	0	0	4,663
2012	0	238	264	0	0	0	0	0	0	0	0	0	501
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	81	72	399	1,589	1,900	6,638	0	1,488	0	408	163	239	12,977
2015	367	502	616	1,186	9,348	9,164	8,553	0	0	0	0	496	30,231
Average	121	120	240	579	2273	2765	1036	766	49	25	63	138	8175
Max Daily Rate (cfs)	14	17	45	154	154	154	154	154	148	79	17	37	

Table C10 - Estimated Yield for Dominion's Claimed Water Right at Chatfield Reservoir (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	16	524	0	0	898	0	0	0	0	0	23	1,461
1997	0	1,472	1,969	0	0	21,763	1,505	16,600	635	242	2,329	2,431	48,946
1998	2,748	2,736	5,599	9,157	46,198	7,529	3,602	9,003	0	0	0	0	86,573
1999	388	107	1,044	2,596	42,055	75,721	7,838	24,738	461	0	1,638	1,710	158,296
2000	2,185	1,705	1,305	709	955	0	0	0	0	0	0	1,187	8,045
2001	1,430	2,671	2,411	140	3,005	0	0	0	0	0	0	0	9,659
2002	0	833	2,382	0	0	0	0	0	0	0	0	0	3,214
2003	0	0	0	0	449	0	0	0	0	0	0	0	449
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	5,593	0	0	0	0	0	0	5,593
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	13,604	100,856	22,415	0	0	0	0	0	0	136,875
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	1,646	2,121	43,615	9,195	0	0	303	0	1,971	58,852
2010	1,231	197	2,631	14,020	20,520	10,768	0	0	0	0	0	0	49,367
2011	53	0	0	0	0	0	15,587	0	0	0	0	0	15,640
2012	0	1,210	1,276	0	0	0	0	0	0	0	0	0	2,486
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	278	555	2,587	2,091	5,125	28,078	0	1,752	0	468	1,994	2,106	45,034
2015	2,038	2,736	3,795	2,832	88,736	144,081	84,465	0	0	0	0	2,206	330,889
Average	518	712	1276	2340	15501	18023	6110	2605	55	51	298	582	48069

Table C11 - Estimated Yield for Dominion's Claimed Water Right at Willow Creek Reservoir (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	3	0	0	0	0	0	0	0	0	0	3
1997	0	2	3	0	0	8	2	172	0	0	3	0	191
1998	1	2	11	13	2	4	5	5	0	0	0	0	44
1999	0	0	0	204	15	9	4	5	0	0	5	9	249
2000	4	2	8	0	0	0	0	0	0	0	0	0	13
2001	0	1	4	0	9	0	0	0	0	0	0	0	14
2002	0	2	0	0	0	0	0	0	0	0	0	0	2
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	5	0	0	0	0	0	0	5
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	8	0	0	0	0	0	0	0	8
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	5	8	13	0	0	0	4	0	0	30
2010	0	0	12	12	2	9	0	0	0	0	0	0	36
2011	0	0	0	0	0	0	23	0	0	0	0	0	23
2012	0	4	0	0	0	0	0	0	0	0	0	0	4
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	6	1	5	6	0	1	0	5	2	3	30
2015	2	11	7	1	43	26	9	0	0	0	0	0	99
Average	0	1	3	12	5	4	2	9	0	0	1	1	37

Table C12 - Estimated Yield for Dominion's Claimed Water Right at the Sterling Gulch Reservoir (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	8	0	0	0	0	0	0	0	0	0	8
1997	0	6	4	0	0	42	25	130	0	0	5	0	212
1998	4	2	44	12	4	23	22	22	0	0	0	0	135
1999	0	0	0	152	64	40	15	20	0	0	7	31	328
2000	15	8	27	0	0	0	0	0	0	0	0	0	50
2001	0	4	16	0	37	0	0	0	0	0	0	0	58
2002	0	7	0	0	0	0	0	0	0	0	0	0	7
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	17	0	0	0	0	0	0	17
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	33	0	0	0	0	0	0	0	33
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	5	23	56	0	0	0	17	0	0	101
2010	0	0	32	52	7	40	0	0	0	0	0	0	131
2011	0	0	0	0	0	0	97	0	0	0	0	0	97
2012	0	16	0	0	0	0	0	0	0	0	0	0	16
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	0	0	21	6	7	26	0	5	0	19	10	11	106
2015	6	46	31	2	182	109	40	0	0	0	0	2	418
Average	1	4	9	11	18	18	10	9	0	2	1	2	86

Table C13 - Estimated Yield for Dominion's Claimed Water Right at Castle Rock Reservoir Nos. 1 and 2* (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	53	0	0	0	0	0	0	0	0	0	53
1997	0	0	280	0	0	331	0	294	54	60	589	536	2,143
1998	615	555	603	278	615	238	61	139	0	0	0	0	3,104
1999	26	45	196	179	615	595	159	495	24	0	462	549	3,345
2000	600	543	347	315	60	0	0	0	0	0	0	46	1,911
2001	50	60	405	31	336	0	0	0	0	0	0	0	880
2002	0	125	276	0	0	0	0	0	0	0	0	0	401
2003	0	0	0	0	20	0	0	0	0	0	0	0	20
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	238	0	0	0	0	0	0	238
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	119	615	298	0	0	0	0	0	0	1,031
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	121	60	575	179	0	0	20	0	575	1,529
2010	565	107	555	496	607	298	0	0	0	0	0	0	2,628
2011	16	0	0	0	0	0	85	0	0	0	0	0	101
2012	0	238	264	0	0	0	0	0	0	0	0	0	501
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	79	66	391	198	238	354	0	96	0	56	54	144	1,677
2015	339	460	572	232	615	595	555	0	0	0	0	496	3,865
Average	114	110	197	98	189	176	52	51	4	7	55	117	1171
Max Daily Rate (cfs)	10	10	10	10	10	10	10	10	10	10	10	10	

*Castle Rock Reservoir Nos. 1 and 2 were previously referred to as Sedalia Reservoir.

Table C14 - Historical Number of Days Each Month For the Study Period of 1996 - 2015 Dominion's Subject Exchange Claims in Case No. 18CW3039 Would be In-Priority													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	7	7	2	29	30	29	31	31	30	31	30	9	266
1997	31	9	0	10	31	9	29	0	0	0	0	4	123
1998	0	0	0	16	0	18	25	24	30	31	30	31	205
1999	20	0	16	21	0	0	23	0	0	0	0	0	80
2000	0	0	12	7	28	30	31	31	30	31	30	12	242
2001	0	0	0	0	11	28	31	31	30	31	30	31	223
2002	31	11	0	27	31	30	31	31	30	31	30	31	314
2003	31	28	31	30	30	30	31	31	30	31	30	31	364
2004	31	29	31	30	31	30	31	31	29	31	30	31	365
2005	31	28	31	30	31	17	31	31	30	30	30	31	351
2006	31	26	31	30	31	30	31	31	30	31	30	29	361
2007	30	28	31	24	0	15	31	31	30	31	30	17	298
2008	10	29	31	30	31	30	31	30	30	31	30	21	334
2009	31	28	31	23	26	1	22	31	30	26	0	0	249
2010	0	18	3	3	0	15	31	31	30	31	30	31	223
2011	29	28	30	30	28	29	15	31	30	12	0	0	262
2012	28	9	9	30	31	30	31	31	30	31	30	31	321
2013	31	28	31	30	31	30	31	31	12	9	24	31	319
2014	7	19	0	8	13	8	29	16	0	0	6	0	106
2015	0	0	0	10	0	0	3	31	29	0	0	0	73
Average	19	16	16	21	21	20	27	27	25	22	21	19	254

Table C15 - Estimated Yield of an Exchange from Chatfield Reservoir to Dominion Conduit No. 8, Dominion Last Chance Ditch No. 2, and Dominion South Platte Diversion Points (Values in AF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	10	8	36	117	916	1,381	1,069	883	575	311	155	36	5,496
1997	0	0	0	95	559	428	1,200	143	478	407	0	28	3,338
1998	0	0	0	581	0	446	1,190	950	633	778	28	0	4,606
1999	0	8	12	32	0	0	1,095	151	359	48	0	0	1,704
2000	0	0	54	38	924	1,428	976	321	323	0	58	0	4,122
2001	0	0	0	77	266	1,014	1,305	403	46	0	262	67	3,439
2002	69	34	0	2	230	0	143	50	0	0	0	0	528
2003	34	0	119	857	615	914	202	151	813	303	18	40	4,066
2004	395	0	28	20	65	474	742	899	58	0	0	0	2,680
2005	0	0	8	549	1,428	619	1,018	617	40	52	30	0	4,360
2006	0	18	2	0	464	1,428	1,428	1,109	230	1,190	893	0	6,762
2007	0	0	863	1,121	0	714	1,476	1,476	462	194	500	954	7,759
2008	1,371	1,174	867	1,081	1,476	1,428	1,476	1,262	428	280	6	0	10,848
2009	75	12	0	270	986	48	942	635	111	119	0	2	3,199
2010	0	20	0	48	0	603	780	1,135	121	230	581	1,321	4,838
2011	56	0	16	109	194	728	692	861	436	569	0	36	3,697
2012	0	0	0	81	0	0	165	0	2	6	10	0	264
2013	10	0	0	0	50	14	260	841	1,226	444	44	149	3,037
2014	8	8	0	563	268	381	1,357	1,097	605	180	119	0	4,586
2015	0	0	0	99	0	0	141	1,176	567	252	69	0	2,305
Average	101	64	100	287	422	602	883	708	376	268	139	132	4082
Max Daily Rate (cfs)	24	24	24	24	24	24	24	24	24	24	24	24	

Table C16 - Estimated Yield of an Exchange from Chatfield Reservoir to the Dominion Highline Canal Diversion Point (Values in AF)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	10	8	36	117	4,108	6,446	3,753	2,898	1,807	815	155	36	20,188
1997	0	0	0	95	990	1,999	4,663	595	791	843	0	28	10,005
1998	0	0	0	599	0	1,182	5,951	3,221	1,307	2,436	28	0	14,724
1999	0	8	12	32	0	0	5,474	345	359	48	0	0	6,278
2000	0	0	54	38	3,906	6,722	4,433	778	730	0	58	0	16,717
2001	0	0	0	77	744	3,322	5,262	815	46	0	262	67	10,596
2002	69	34	0	2	230	0	252	123	0	0	0	0	710
2003	34	0	248	1,390	1,585	3,180	708	367	3,100	726	18	40	11,395
2004	1,388	0	28	20	65	1,206	2,815	3,416	58	0	0	0	8,995
2005	0	0	8	1,398	6,897	2,531	3,917	2,376	40	52	30	0	17,249
2006	0	18	2	0	1,642	7,095	6,792	4,296	541	4,483	2,991	0	27,860
2007	0	0	4,030	3,650	0	3,570	7,379	7,188	780	472	908	1,686	29,663
2008	2,485	1,611	2,662	2,495	7,154	7,125	7,379	3,626	458	712	6	0	35,713
2009	75	12	0	440	3,525	238	3,074	1,896	111	131	0	2	9,505
2010	0	20	0	56	0	1,952	2,188	4,397	143	581	897	2,156	12,389
2011	117	0	16	109	258	1,964	2,920	3,580	920	1,331	0	36	11,250
2012	0	0	0	85	0	0	341	0	2	6	10	0	444
2013	10	0	0	0	50	14	292	2,156	5,098	494	44	149	8,305
2014	8	8	0	1,801	268	1,904	5,873	4,132	756	180	119	0	15,049
2015	0	0	0	99	0	0	298	4,407	1,537	405	69	0	6,815
Average	210	86	355	625	1571	2523	3688	2531	929	686	280	210	13692
Max Daily Rate (cfs)	120	53	120	120	120	120	120	120	120	120	120	71	

Table C17 - Estimated Yield of an Exchange from Chatfield Reservoir to the Dominion Plum Creek Diversion Point (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	61	452	353	137	0	0	0	0	2	0	1,006
1997	16	6	0	472	615	161	6	83	38	282	0	79	1,757
1998	0	0	0	317	0	244	135	397	6	44	246	123	1,511
1999	182	305	159	403	0	0	452	119	167	264	38	0	2,089
2000	0	0	238	238	555	157	14	89	202	56	331	56	1,936
2001	0	18	0	555	278	353	2	0	0	0	184	91	1,482
2002	119	111	0	44	85	46	2	0	8	0	0	0	415
2003	0	2	230	567	595	264	0	0	0	0	0	0	1,658
2004	10	292	97	230	547	218	551	246	0	184	290	494	3,160
2005	591	490	512	595	615	313	6	77	0	198	309	260	3,967
2006	387	264	282	284	75	0	256	42	6	109	593	583	2,880
2007	615	553	615	476	0	298	282	163	14	258	419	595	4,286
2008	605	565	615	595	615	151	0	157	28	28	186	555	4,100
2009	415	428	317	444	555	20	391	129	131	385	595	40	3,850
2010	40	422	60	99	0	298	452	167	0	42	254	391	2,224
2011	395	361	317	407	397	26	0	0	2	8	22	216	2,150
2012	444	135	123	591	321	60	24	12	20	4	0	0	1,734
2013	119	48	260	321	512	0	0	8	167	2	0	147	1,584
2014	48	114	8	345	377	0	210	67	54	70	15	0	1,309
2015	36	0	0	330	0	0	60	494	9	153	553	119	1,753
Average	201	206	195	388	325	137	142	112	43	104	202	187	2242
Max Daily Rate (cfs)	10	10	10	10	10	10	10	10	10	10	10	10	

Table C18 - Estimated Yield of an Exchange from Bi-Cities WWTP to Dominion Conduit No. 8, Dominion Highline Canal, Dominion Last Chance Ditch No. 2, and Dominion South Platte Diversion Points (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
1996	0	8	0	16	175	209	246	81	45	0	105	32	916
1997	0	0	0	12	180	69	283	0	0	0	0	28	573
1998	0	0	0	159	0	125	247	212	73	71	10	0	898
1999	0	0	12	12	0	0	228	0	0	0	0	0	252
2000	0	0	42	22	214	288	208	37	0	0	18	0	828
2001	0	0	0	0	79	169	214	95	0	0	0	0	557
2002	0	0	0	0	10	0	0	0	0	0	0	0	10
2003	0	0	0	218	194	173	50	30	149	0	0	0	813
2004	11	0	10	2	0	59	177	171	10	0	0	0	439
2005	0	0	8	104	298	119	79	131	0	0	30	0	768
2006	0	10	0	0	111	149	258	242	30	179	198	0	1,176
2007	0	0	184	218	0	149	307	288	99	0	69	115	1,430
2008	69	240	284	188	288	298	288	256	79	0	0	0	1,989
2009	0	0	0	60	220	10	160	72	0	28	0	0	550
2010	0	10	0	0	0	135	137	232	0	0	123	179	815
2011	18	0	16	16	10	89	129	169	0	0	0	0	446
2012	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	24	4	30	42	56	0	4	79	238
2014	8	8	0	60	26	79	248	159	0	0	60	0	647
2015	0	0	0	44	0	0	30	268	30	0	0	0	371
Average	5	14	28	56	91	106	166	124	29	14	31	22	686
Max Daily Rate (cfs)	5	5	5	5	5	5	5	5	5	5	5	5	

Table C19 - Estimated Yield of an Exchange from Bi-Cities WWTP to the Dominion Plum Creek Diversion Point (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	16	129	113	61	0	0	0	0	2	0	321
1997	0	0	0	60	288	69	6	0	0	0	0	40	462
1998	0	0	0	159	0	125	73	214	6	16	35	0	628
1999	0	0	157	20	0	0	228	0	0	0	0	0	405
2000	0	0	119	60	258	105	14	22	4	0	55	8	644
2001	0	0	0	0	99	119	2	0	0	0	0	0	220
2002	0	0	0	0	10	0	0	0	0	0	0	0	10
2003	0	0	79	220	278	137	0	0	0	0	0	0	714
2004	8	232	65	79	123	63	230	125	0	0	145	129	1,199
2005	0	0	65	188	307	145	2	30	0	10	164	17	928
2006	6	60	141	0	0	0	117	22	4	58	277	0	683
2007	0	159	288	218	0	149	202	149	14	8	218	159	1,563
2008	69	240	307	188	288	89	0	76	18	0	0	31	1,307
2009	119	99	180	60	258	10	156	58	0	105	0	0	1,044
2010	0	179	10	30	0	149	152	105	0	0	112	181	917
2011	161	196	220	28	14	0	0	0	0	0	0	0	619
2012	185	40	87	0	0	0	0	2	0	0	0	0	314
2013	0	8	78	4	128	0	0	0	0	0	0	132	350
2014	41	100	0	69	52	0	102	21	0	0	15	0	400
2015	0	0	0	89	0	0	30	251	0	0	0	0	370
Average	29	66	91	80	111	61	66	54	2	10	51	35	655
Max Daily Rate (cfs)	5	5	5	5	5	5	5	5	4	5	5	5	

Table C20 - Estimated Yield of an Exchange from Bi-Cities WWTP to Chatfield Reservoir (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	69	16	129	198	209	297	136	67	0	159	89	1,370
1997	0	0	0	60	288	69	285	0	0	0	0	40	742
1998	0	0	0	159	0	159	247	218	79	164	35	0	1,061
1999	0	0	159	20	0	0	228	0	0	0	0	0	407
2000	0	0	119	60	258	288	228	76	10	0	64	8	1,110
2001	0	0	0	0	99	169	220	148	20	0	0	0	655
2002	0	0	0	0	10	97	0	0	0	0	0	79	186
2003	18	0	79	228	278	218	182	122	149	0	0	23	1,296
2004	75	288	79	130	123	118	234	198	10	0	180	129	1,565
2005	0	0	65	188	307	159	79	188	0	20	221	23	1,250
2006	6	99	157	20	129	149	268	288	169	179	277	0	1,739
2007	0	159	288	218	0	149	307	288	218	89	218	159	2,092
2008	69	240	307	188	288	298	288	256	79	0	0	31	2,044
2009	119	99	244	60	258	10	160	72	0	129	0	0	1,150
2010	0	179	10	30	0	149	154	248	0	0	172	183	1,123
2011	179	248	258	30	20	89	129	188	0	0	0	0	1,141
2012	191	40	89	0	0	10	0	20	0	0	0	0	350
2013	0	41	104	40	130	78	60	50	60	0	87	268	915
2014	69	157	0	69	52	79	248	159	0	0	60	0	893
2015	0	0	0	89	0	0	30	278	30	0	0	0	426
Average	36	81	99	86	122	125	182	147	44	29	74	52	1076
Max Daily Rate (cfs)	5	5	5	5	5	5	5	5	5	5	5	5	

Table C21 - Estimated Yield of an Exchange from Roxborough WWTP the Dominion Conduit No. 8, Dominion Highline Canal, and Dominion Last Chance Ditch No. 2 Diversion Points (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	10	8	34	63	212	288	256	212	139	79	145	36	1,482
1997	0	0	0	56	180	89	286	30	177	153	0	28	998
1998	0	0	0	159	0	145	248	232	192	179	10	0	1,164
1999	0	8	12	32	0	0	228	56	186	12	0	0	534
2000	0	0	42	34	234	298	216	99	97	0	54	0	1,073
2001	0	0	0	69	109	274	284	173	22	0	198	58	1,186
2002	69	34	0	2	113	0	30	12	0	0	0	0	260
2003	10	0	30	242	214	246	50	40	188	77	18	40	1,154
2004	109	0	24	20	38	101	210	190	30	0	0	0	722
2005	0	0	8	147	298	129	222	161	34	48	30	0	1,075
2006	0	18	2	0	153	298	298	242	61	248	198	0	1,517
2007	0	0	184	238	0	149	307	307	147	44	129	234	1,740
2008	307	288	284	298	307	298	307	307	159	91	6	0	2,652
2009	67	12	0	60	240	10	218	214	54	58	0	2	934
2010	0	10	0	10	0	135	242	272	60	79	210	303	1,321
2011	18	0	16	83	99	210	149	230	171	192	0	36	1,204
2012	0	0	0	20	0	0	40	0	2	6	10	0	77
2013	10	0	0	0	24	14	65	230	282	141	44	89	899
2014	8	8	0	167	133	79	307	238	250	179	60	0	1,428
2015	0	0	0	83	0	0	30	290	179	63	58	0	702
Average	30	19	32	89	118	138	200	177	121	82	58	41	1106
Max Daily Rate (cfs)	5	5	5	5	5	5	5	5	5	5	5	5	

Table C22 - Estimated South Platte River and Plum Creek Flows Available to Dominion's Demands from Direct Flow Water Rights in Case No. 18CW3039 (Values in AF)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0	0	54	0	0	36	0	0	0	0	0	2	92
1997	0	28	219	0	0	753	87	784	149	50	276	211	2557
1998	242	242	272	200	753	430	262	262	0	0	0	0	2663
1999	26	26	131	129	726	1076	349	918	58	0	248	240	3928
2000	242	242	166	235	70	0	0	0	0	0	0	37	993
2001	43	58	250	25	390	0	0	0	0	0	0	0	765
2002	0	115	206	0	0	0	0	0	0	0	0	0	320
2003	0	0	0	0	24	0	0	0	0	0	0	0	24
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	430	0	0	0	0	0	0	430
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	86	753	538	0	0	0	0	0	0	1377
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	93	73	1040	393	0	0	17	0	226	1842
2010	226	52	245	358	741	538	0	0	0	0	0	0	2160
2011	16	0	0	0	0	0	699	0	0	0	0	0	714
2012	0	158	190	0	0	0	0	0	0	0	0	0	349
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
2014	66	61	215	143	277	789	0	262	0	73	79	150	2116
2015	183	240	268	171	753	1076	1223	0	0	0	0	195	4109
Max (2015)	183	240	268	171	753	1076	1223	0	0	0	0	195	4109

Case No. 18CW3039

Appendix D – Summary of Data Relied Upon in Water Availability Study

Table D1
Summary of South Platte River Below Chatfield Reservoir (PLACHACO) Streamflow Gage Data (Jan 1996 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	196	924	839	6,062	8,725	12,016	13,611	5,699	2,487	120	2,631	536	53,846
1997	53	1,957	2,471	3,181	11,010	30,278	15,882	21,542	2,855	1,879	3,134	3,382	97,624
1998	3,741	3,408	6,101	19,502	51,722	16,201	22,757	23,239	4,327	5,871	365	28	157,262
1999	667	338	2,688	5,602	47,578	81,391	35,269	29,870	2,470	1,144	2,432	2,467	211,915
2000	3,178	2,400	3,197	7,099	13,587	13,164	8,477	4,189	830	874	742	1,702	59,440
2001	2,372	3,330	2,914	2,698	9,209	8,503	10,324	4,966	1,838	14	61	10	46,239
2002	118	1,218	2,884	522	1,014	2,853	151	32	40	186	66	338	9,421
2003	260	108	2,779	13,877	12,786	9,773	6,206	4,668	5,729	205	131	190	56,710
2004	808	1,799	947	5,799	6,088	4,989	15,122	9,255	1,923	1,407	2,046	588	50,773
2005	14	292	681	13,050	31,127	18,581	4,616	8,017	1,835	1,499	3,224	405	83,342
2006	72	776	1,336	1,796	8,115	7,836	18,948	13,750	5,498	8,213	1,997	69	68,408
2007	55	2,336	21,803	29,312	106,379	51,962	26,024	20,716	9,759	3,039	3,699	2,728	277,813
2008	995	3,151	7,127	10,244	13,472	18,147	21,279	9,857	3,221	654	56	209	88,411
2009	2,301	717	1,438	6,568	20,470	50,494	19,038	5,264	1,803	4,847	8	2,697	115,644
2010	2,220	1,928	3,142	19,839	26,043	20,293	6,594	17,986	608	503	2,082	1,819	103,056
2011	2,531	2,462	2,093	2,119	1,256	6,972	28,890	10,447	1,285	114	0	0	58,167
2012	2,304	2,095	2,291	1,592	1,071	915	1,793	1,163	510	562	32	1	14,327
2013	143	590	916	1,690	5,352	3,884	3,272	2,726	1,703	142	682	2,467	23,568
2014	1,648	2,198	2,977	9,140	9,470	37,944	16,460	9,445	1,064	3,498	3,031	2,594	99,470
2015	3,031	3,090	3,985	7,781	94,885	150,032	92,056	14,279	1,731	99	0	2,557	373,526

Note: Raw data summarized in this table can be made available upon request.

Table D2
Summary of South Platte River at Waterton, CO (PLAWATCO) Streamflow Gage Data (Jan 1996 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	1,993	1,791	2,057	2,091	11,897	15,087	10,396	7,633	6,409	2,944	2,192	2,190	66,677
1997	2,071	1,936	2,233	1,942	4,017	36,171	19,539	19,295	4,352	3,055	1,609	2,293	98,513
1998	2,239	1,926	2,269	6,157	30,955	12,938	27,727	15,848	4,407	4,784	1,874	1,944	113,069
1999	1,948	1,799	2,210	3,336	27,696	72,517	33,222	30,962	4,096	1,968	1,978	2,033	183,763
2000	1,954	1,835	2,148	2,200	9,927	19,988	10,376	4,981	3,535	2,013	2,087	2,097	63,139
2001	2,091	1,894	2,202	2,172	4,124	8,164	10,167	4,804	2,920	1,964	2,285	2,208	44,994
2002	2,222	2,069	2,323	1,966	3,299	2,739	3,231	2,269	1,989	1,740	1,307	1,454	26,607
2003	1,198	916	1,523	3,469	5,582	9,822	4,481	4,274	7,012	2,795	1,888	1,364	44,324
2004	3,374	918	1,692	1,559	2,077	4,421	10,854	9,882	2,910	1,944	1,928	1,283	42,842
2005	1,807	1,624	1,498	4,332	21,227	15,138	10,062	7,357	2,509	2,073	1,732	1,617	70,976
2006	1,811	1,863	1,232	1,333	5,258	17,159	19,791	9,997	3,273	7,857	6,167	1,349	77,089
2007	1,164	1,206	16,056	19,571	83,367	52,969	29,832	24,316	3,273	1,910	2,797	3,824	240,285
2008	4,637	3,624	4,858	5,201	16,138	23,707	26,984	11,534	3,390	2,805	1,682	1,133	105,691
2009	1,525	1,492	1,254	2,735	16,019	44,333	19,601	6,548	2,842	2,241	2,009	2,257	102,856
2010	1,908	1,563	1,478	5,516	13,783	19,904	7,039	15,941	2,882	2,319	2,965	4,308	79,608
2011	1,732	1,658	2,071	2,140	3,362	6,258	33,942	8,144	3,971	3,471	1,406	1,769	69,924
2012	1,307	850	1,081	1,428	2,208	3,076	3,838	3,146	2,158	1,551	1,212	1,121	22,976
2013	1,345	1,369	952	982	2,350	2,618	3,588	6,202	11,480	2,646	2,112	2,297	37,942
2014	2,114	1,934	2,114	7,281	7,954	41,150	15,753	13,599	3,731	3,193	2,301	2,162	103,287
2015	2,089	1,896	2,073	3,229	85,505	143,030	71,874	9,977	4,542	2,519	2,077	2,150	330,961

Note: Raw data summarized in this table can be made available upon request.

Table D3
Summary of Littleton South Platte River Streamflow Gage Data (November 20, 2012 - May 1, 2019)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2012	-	-	-	-	-	-	-	-	-	-	239	655	894
2013	774	1,248	1,830	2,767	3,487	2,733	3,537	940	3,010	1,110	1,539	3,257	26,233
2014	2,091	3,011	4,424	2,180	2,703	0	714	2,259	2,422	4,015	4,308	3,871	31,997
2015	2,560	3,898	5,229	4,391	0	0	0	1,191	2,265	1,145	1,084	3,901	25,664
2016	331	3,716	4,584	0	0	0	2,570	3,703	1,366	1,290	1,973	2,831	22,364
2017	4,169	4,272	5,579	3,651	2,139	1,200	1,512	1,153	2,672	4,498	1,825	4,893	37,563
2018	4,161	713	885	1,286	3,569	2,257	2,464	1,975	3,234	1,014	1,572	1,639	24,769
2019	2,073	1,745	4,226	4,326	0	-	-	-	-	-	-	-	12,370

Note: Raw data summarized in this table can be made available upon request.

Table D4
Summary of Adjusted Littleton South Platte River Streamflow Gage Data (Jan 1996 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	1,048	1,955	2,181	6,978	9,351	12,297	14,032	6,218	3,599	1,286	3,611	1,623	64,179
1997	905	2,952	3,814	4,097	11,636	30,559	16,303	22,061	3,967	3,045	4,114	4,469	107,922
1998	4,593	4,402	7,444	20,418	52,347	16,482	23,178	23,758	5,439	7,037	1,346	1,116	167,559
1999	1,519	1,332	4,030	6,519	48,204	81,672	35,689	30,389	3,581	2,309	3,412	3,555	222,212
2000	4,029	3,430	4,540	8,016	14,212	13,445	8,898	4,708	1,941	2,040	1,723	2,790	69,773
2001	3,224	4,325	4,256	3,614	9,835	8,784	10,745	5,485	2,950	1,180	1,042	1,097	56,536
2002	970	2,212	4,226	1,439	1,639	3,134	572	551	1,151	1,352	1,046	1,425	19,718
2003	1,112	1,103	4,121	14,793	13,411	10,054	6,626	5,187	6,841	1,371	1,112	1,277	67,007
2004	1,660	2,829	2,290	6,716	6,713	5,270	15,543	9,774	3,035	2,572	3,026	1,676	61,105
2005	865	1,287	2,024	13,967	31,752	18,862	5,037	8,536	2,947	2,665	4,204	1,492	93,639
2006	923	1,771	2,679	2,713	8,740	8,117	19,369	14,269	6,610	9,379	2,978	1,157	78,705
2007	907	3,331	23,146	30,229	107,004	52,243	26,444	21,235	10,871	4,205	4,680	3,816	288,110
2008	1,847	4,181	8,469	11,160	14,097	18,428	21,700	10,376	4,333	1,819	1,036	1,296	98,744
2009	3,152	1,712	2,780	7,484	21,096	50,775	19,458	5,783	2,915	6,013	988	3,784	125,941
2010	3,071	2,923	4,484	20,756	26,669	20,574	7,015	18,505	1,720	1,668	3,062	2,906	113,353
2011	3,383	3,456	3,435	3,036	1,881	7,253	29,311	10,966	2,396	1,279	981	1,087	68,464
2012	3,155	3,125	3,633	2,508	1,697	1,196	2,214	1,682	1,622	1,727	891	655	24,106
2013	774	1,248	1,830	2,767	6,345	4,622	4,118	3,125	3,010	1,110	1,539	3,527	34,015
2014	2,466	3,197	4,424	9,816	10,395	37,944	16,735	9,953	2,537	4,945	4,308	3,950	110,670
2015	3,877	4,402	5,639	9,007	94,885	150,032	92,056	14,574	2,904	1,145	1,084	3,901	383,505

Note: Raw data summarized in this table can be made available upon request.

Table D5
Summary of Plum Creek at Titan Road near Louviers, CO (PLUTIRCO) Streamflow Gage Data (Jan 1996 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	426	425	696	1,127	930	608	3	0	0	0	255	283	4,752
1997	328	365	984	1,661	2,949	2,145	33	1,266	482	1,380	1,813	2,251	15,657
1998	1,976	1,686	2,325	10,943	20,232	3,095	2,228	3,768	265	485	912	734	48,649
1999	823	908	970	9,372	25,329	7,438	2,255	3,281	748	891	1,127	1,250	54,392
2000	1,363	1,170	1,690	3,981	3,683	695	142	347	838	596	944	684	16,133
2001	590	607	1,077	2,235	4,931	1,508	114	1	0	153	762	647	12,627
2002	671	790	896	521	501	223	48	0	41	48	166	368	4,273
2003	311	346	1,342	8,848	4,951	944	207	43	25	79	311	516	17,924
2004	588	867	648	1,174	4,106	942	1,551	1,669	134	804	885	1,121	14,488
2005	1,267	1,065	1,315	13,718	11,596	5,679	252	1,324	62	900	1,137	875	39,189
2006	1,002	819	928	1,029	535	28	1,966	522	355	761	2,523	1,402	11,871
2007	1,438	1,757	6,532	13,500	16,824	3,900	912	778	512	879	1,014	1,410	49,455
2008	1,515	1,704	2,029	2,481	2,753	637	46	1,124	358	532	781	1,262	15,222
2009	1,033	1,014	1,014	4,687	5,619	5,695	2,420	702	541	1,120	2,301	1,833	27,978
2010	1,482	1,309	2,436	14,372	14,295	3,420	1,454	729	188	542	849	1,006	42,080
2011	1,027	998	932	1,002	1,204	469	460	98	182	329	534	885	8,121
2012	1,071	952	1,002	1,757	902	682	200	113	189	342	351	327	7,889
2013	651	573	878	948	1,805	192	3	93	1,330	504	404	716	8,097
2014	716	732	1,081	1,945	2,822	1,300	1,268	722	557	700	600	738	13,182
2015	1,011	1,071	2,006	3,602	18,399	9,986	3,676	1,175	494	754	1,367	1,551	45,093

Note: Raw data summarized in this table can be made available upon request.

Table D6
Summary of Plum Creek Near Sedalia, CO (PLUSEDCO) Streamflow Gage Data (Jan 1996 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	730	684	1,055	1,513	1,320	764	98	1	72	248	438	311	7,235
1997	252	317	490	1,578	2,450	1,831	325	1,705	682	777	1,539	1,517	13,462
1998	1,349	976	2,366	9,213	14,958	2,144	1,003	1,480	440	507	883	615	35,934
1999	733	740	811	2,700	13,452	6,561	2,511	3,086	1,091	1,432	1,416	1,442	35,976
2000	1,432	867	1,993	3,729	3,475	861	436	754	1,455	1,174	1,166	841	18,185
2001	663	659	915	1,795	4,774	1,204	382	267	356	385	485	530	12,416
2002	564	692	856	738	651	447	439	133	366	369	372	349	5,976
2003	363	244	1,171	6,379	3,331	1,840	463	552	308	393	818	756	16,617
2004	810	1,046	824	1,488	4,546	1,553	1,777	2,323	710	958	1,256	1,176	18,466
2005	865	974	1,206	11,413	10,102	2,286	586	1,100	516	994	1,158	1,162	32,361
2006	1,268	1,057	1,479	1,164	911	475	1,432	627	1,062	1,462	2,133	1,694	14,765
2007	1,555	1,993	5,421	9,890	15,219	3,692	1,286	1,707	1,018	1,163	1,142	880	44,968
2008	1,189	2,049	2,347	2,117	2,753	857	435	1,101	655	888	940	1,182	16,513
2009	1,285	1,093	904	6,308	6,578	5,213	2,121	1,023	734	1,235	2,598	1,957	31,049
2010	1,519	1,306	2,609	11,865	12,167	3,221	1,870	1,397	492	721	1,022	1,287	39,476
2011	1,325	982	1,242	994	1,118	623	543	376	644	617	576	682	9,721
2012	1,009	1,203	1,282	2,057	1,228	971	777	515	854	810	668	769	12,143
2013	477	519	1,003	938	2,037	460	354	636	1,828	1,061	715	965	10,994
2014	1,508	1,032	1,190	2,525	2,523	1,138	1,431	1,461	994	857	943	1,065	16,666
2015	854	1,021	1,917	4,569	16,590	8,892	2,812	1,449	830	1,219	1,938	2,407	44,498

Note: Raw data summarized in this table can be made available upon request.

Table D7
Summary of West Plum Creek near Perry Park, CO (WESPERCO) Streamflow Gage Data (Sep 2009 - Dec 2015)
Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2009	-	-	-	-	-	-	-	-	58	58	56	58	230
2010	58	52	58	1,644	2,003	472	197	87	49	44	43	44	4,751
2011	44	40	44	88	92	60	33	20	19	21	20	21	503
2012	21	20	21	263	135	31	26	20	18	20	19	20	613
2013	20	18	20	27	252	75	23	17	32	68	65	68	684
2014	68	61	68	490	768	284	102	73	44	39	37	39	2,073
2015	39	35	39	603	2,646	763	288	88	50	57	55	57	4,720

Note: Raw data summarized in this table can be made available upon request.

Table D8
Summary of West Plum Creek near Perry Park, CO (WESPERCO) Streamflow Gage Data Reduced to 46.36%
(Sep 2009 - Dec 2015)
46.36% of Total Monthly Streamflow in Acre-Feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2009	-	-	-	-	-	-	-	-	27	27	26	27	106
2010	27	24	27	762	929	219	91	40	23	21	20	21	2,202
2011	21	19	21	41	43	28	15	9	9	10	9	10	233
2012	10	9	10	122	63	14	12	9	9	9	9	9	284
2013	9	8	9	13	117	35	11	8	15	31	30	31	317
2014	31	28	31	227	356	132	47	34	20	18	17	18	961
2015	18	16	18	280	1,227	354	133	41	23	27	26	27	2,188

Note: Raw data summarized in this table can be made available upon request.

Table D9
Summary of Castle Rock Climate Station Data (January 1, 1996 - April 21, 2010)
Total Monthly Precipitation in Inches

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1996	0.00	0.00	0.50	0.70	2.10	1.30	0.50	1.30	1.80	0.60	0.20	0.00	9.00
1997	0.00	0.40	0.40	1.80	0.80	1.70	0.80	2.90	0.00	1.70	0.50	0.00	11.00
1998	0.20	0.30	1.40	3.00	0.30	0.70	3.40	1.70	0.00	0.00	0.00	0.00	11.00
1999	0.40	0.40	0.00	7.40	1.80	1.10	1.40	1.10	0.20	0.70	0.70	1.00	16.20
2000	0.50	0.40	1.80	1.50	0.50	0.00	0.00	0.00	0.80	0.20	0.00	0.50	6.20
2001	0.20	0.20	0.50	2.20	3.40	0.80	0.90	0.00	0.00	0.00	0.00	0.00	8.20
2002	0.00	0.40	0.00	0.00	1.20	0.00	0.00	2.10	2.10	0.60	0.00	0.00	6.40
2003	0.30	0.40	5.20	2.50	0.60	1.90	0.70	3.10	0.20	0.00	0.00	0.00	14.90
2004	0.30	0.00	0.40	3.90	0.70	2.40	0.00	4.80	1.10	1.60	0.20	0.20	15.60
2005	0.00	0.00	1.90	1.00	0.40	0.90	1.20	1.50	0.20	1.60	0.00	0.00	8.70
2006	0.00	0.00	0.00	0.60	0.00	0.80	5.10	0.00	0.00	1.40	0.00	2.00	9.90
2007	0.70	0.00	1.10	3.20	1.20	0.90	1.10	1.50	0.00	0.90	0.00	0.20	10.80
2008	0.20	0.00	0.40	0.40	1.40	0.20	0.40	3.80	0.80	0.20	0.40	0.20	8.40
2009	0.40	0.00	0.30	2.70	2.20	2.20	1.90	1.10	1.10	1.50	0.50	0.00	13.90
2010	0.00	0.20	1.70	0.20	-	-	-	-	-	-	-	-	2.10

Note: Raw data summarized in this table can be made available upon request.

Table D10
Summary of Sterling Ranch Climate Station Data (April 22, 2010 - December 31, 2015)
Total Monthly Precipitation in Inches

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2010	-	-	-	1.37	0.28	1.39	1.66	0.78	0.00	0.45	0.76	0.00	6.69
2011	0.00	0.00	0.29	1.00	3.29	1.77	3.24	1.46	1.08	1.28	0.42	0.53	14.36
2012	0.16	1.05	0.00	1.20	2.21	0.71	1.29	0.13	2.44	0.31	0.00	0.24	9.74
2013	0.21	1.02	0.56	1.08	1.97	0.43	0.11	2.56	4.97	0.88	0.12	0.40	14.31
2014	0.60	0.00	0.79	0.65	2.56	0.90	6.44	0.68	4.18	1.31	0.55	0.61	19.27
2015	0.37	1.58	0.97	2.35	5.07	3.04	1.27	2.55	0.00	2.43	1.13	0.15	20.91

Note: Raw data summarized in this table can be made available upon request.

Case No. 18CW3039

Appendix E – Sample Accounting

Contact Information
Dominion Water and Sanitation District
Sample Case No. 18CW3039 Water Rights Accounting
DRAFT 10/21/2020

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DRAFT 10/21/2020

Assumptions	Water Year:	2020		Month	Month No.	Days per Month	Offset		
Case No. 18CW3039	Accounting summary from November 1, 2019 to October 31, 2020		1	January	1	31	31	366	
			2	February	2	29			
			3	March	3	31			
			4	April	4	30			
Monthly Summary:	10		5	May	5	31			
	10	October	6	June	6	30			
			7	July	7	31			
			8	August	8	31			
			9	September	9	30			
			10	October	10	31			
			11	November	11	30			
			12	December	12	31			

Direct Flow Rights

	WDIDs	Admin No.	Rate (cfs)	Direct Flow Rate	Source
Dominion Conduit No. 8		61420.000000	24	24	South Platte River
Dominion Highline Canal		61420.000000	120	24	South Platte River
Dominion Last Chance Ditch No. 2		61420.000000	24	24	South Platte River
Dominion South Platte Pumpback		61420.000000	4	4	South Platte River
Dominion South Platte Diversion		61420.000000	24	24	South Platte River
Dominion's Plum Creek Diversion		61420.000000	10	10	Plum Creek
Dominion Indian Creek		61420.000000	10	10	Indian Creek
Dominion Willow Creek		61420.000000	50	24	Willow Creek
Dominion Sterling Gulch		61420.000000	50	24	Sterling Gulch

Storage Rights

*** Inlet Capacities listed for demonstrative purposes, not actual capacities*

	WDIDs	Admin No.	Volume (AF)*	Refill (AF)	Source	Existing Inlet Capacity** (cfs)
ARS Reservoir		61420.000000	2200	2200	All	999999
Sterling Gulch Reservoir		61420.000000	418	0	Sterling Gulch	999999
Willow Creek Reservoir		61420.000000	249	0	Willow Creek	999999
East Storm Water Ponds		61420.000000	0	0	Unnamed	999999
West Storm Water Ponds		61420.000000	0	0	Unnamed	999999
Chatfield Reservoir		61420.000000	500	500	South Platte River and Plum Creek	999999
Castle Rock Reservoir Nos. 1&2		61420.000000	240	240	Plum Creek	999999

*Assumed Capacity avail to Dominion for Sample Accounting

Exchange Rights

Volume Limits (AF)

Admin No. 61420.000000

			Exchange to Points						Proposed Exchange Limits					
			Dominion Denver Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir	Dominion Denver Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir
		WDID	0801003	0801004	0801005	TBD	TBD	0803514	0801003	0801004	0801005	TBD	TBD	0803514
Exchange From Points	Chatfield Reservoir	0803514	24	120	24	24	10	-	10,848	11,773	10,848	10,848	4,286	-
	Bi-Cities WWTP	0802300	5	5	5	5	5	5	1,989	1,989	1,989	1,989	1,563	2,092
	Roxborough WWTP	-	5	5	5	-	-	-	2,422	2,422	2,422	-	-	-
	Note:	Max exchange rate when operating both WWTP exchanges:				5	cfs							

Exchange Index

Exchange From Points

1 Chatfield Reservoir
2 Bi-Cities WWTP1
3 Roxborough WWTP

Exchange to Points

1 Chatfield Reservoir
2 Dominion Denver Conduit No. 8
3 Dominion Highline Canal
4 Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch
5 Dominion Plum Creek Diversion
6 Dominion South Platte Diversion

Substitute Supplies

1 ARS Reservoir
2 Aurora IGA
3 Bi-Cities Effluent
4 Castle Rock delivered at Chatfiled
5 Chatfield Reservoir
6 Hock Hocking
7 Cherokee Ranch
8 Roxborough Effluent
9 Castle Rock Reservoir Nos. 1&2
10 Sterling Gulch Reservoir
11 Willow Creek Reservoir
12 WISE Water at Chatfield

Exhange Transit Losses for Replacement Supplies to Exchange From Point

	Replacement Source Location	Distance to Chatfield Reservoir	Transit Loss	Transfer loss to Chatfield Reservoir
		Miles	%/ mile	%
1	ARS to PC to Chatfield	2.1	0.50%	1.05%
2	Aurora IGA River Deliveries	0		0.0%
6	Hock Hocking	62.8	0.25%	15.7%
7	Cherokee Ranch	8	0.50%	4.00%
8	Roxborough WWTP	3	0.25%	0.75%
9	Castle Rock Reservoir Nos. 1&	8	0.50%	4.00%
10	Sterling Gulch Res	3	0.50%	1.50%
11	Willow Creek Res	3.25	0.25%	0.81%
12	WISE Water at Chatfield	0		0.0%

	River Administration							Demands and Effluent							
	Date	South Platte Senior Call			Boat Chute Call	Plum Creek Senior Call			Dominion Daily Water Delivery at WTP	Dominion Delivery of Single Use Supply	Dominion Delivery of Reusable Supplies	Dominion Reusable WWTP Flows	Dominion's Available Effluent at Bi-Cities WWTP	Dominion's Available Effluent at Bi-Cities WWTP limited to 95% of yesterday's deliveries	Dominion's Available Effluent at Roxborough WWTP	Dominion's Available Effluent at Roxborough WWTP limited to 95% of yesterday's deliveries
		Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Calc		Input
		Name	Location	Priority		Name	Location	Priority	(cfs)	(cfs)	(cfs)	(cfs)		(cfs)		(cfs)
	(1)	(2)		(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)		(11)		(12)
###	10/1/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/2/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/3/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/4/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/5/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/6/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/7/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/8/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/9/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/10/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/11/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/12/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/13/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/14/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/15/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/16/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/17/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/18/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/19/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/20/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/21/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/22/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/23/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/24/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/25/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/26/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/27/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/28/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/29/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/30/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79
###	10/31/2020			13108.00000	52595.5171			7669.00000	8.57	1.00	7.57	7.19	4.40	4.40	3.17	2.79

DRAFT 10/21/2020
Diversion Accounting
Case No. 18CW3039

	River Administration							Demands and Effluent							
Date	South Platte Senior Call			Boat Chute Call	Plum Creek Senior Call			Dominion Daily Water Delivery at WTP	Dominion Delivery of Single Use Supply	Dominion Delivery of Reusable Supplies	Dominion Reusable WWTP Flows	Dominion's Available Effluent at Bi-Cities WWTP	Dominion's Available Effluent at Bi-Cities WWTP limited to 95% of yesterday's deliveries	Dominion's Available Effluent at Roxborough WWTP	Dominion's Available Effluent at Roxborough WWTP limited to 95% of yesterday's deliveries
	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Calc		Input
	Name	Location	Priority		Name	Location	Priority	(cfs)	(cfs)	(cfs)	(cfs)		(cfs)		(cfs)
(1)	(2)		(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)		(11)		(12)

Notes:
(1) Date
(3) South Platte Senior Calling Right
(4) Boat Chute Calling Right
(6) Plum Creek Senior Calling Right
(7) Input of Daily Dominion Water Demand
(8) Input of Daily Dominion Water Demand met by delivery of Single Use Water Supplies
(9) Estimated Daily Raw Water Demand met by Dominion's Reusable Water Supplies
(10) Input of Dominion's Reusable WWTP Flows, limited to 95% yesterday's resuable supplies delivered to its system
(11) Input of Available Effluent at Bi-Cities WWTP
(12) Input of Available Effluent at Roxborough WWTP
(13) Input of South Platte at Waterton Gage Daily Average Flow
(14) Calculated Minimum Flow Requirement at Waterton Gage
(15) Input of Structure Allocation to Dominion
(16) Minimum of Available flow at shared structure based on Dominion's allocation, and flow above minimum requirements at Waterton Gage
(17) Input of Actual Structure Diversions for Dominion
(18) Input of Structure Allocation to Dominion
(19) Minimum of Available flow at shared structure based on Dominion's allocation, and flow above minimum requirements at Waterton Gage
(20) Input of Actual Structure Diversions for Dominion
(21) Input of Structure Allocation to Dominion
(22) Minimum of Available flow at shared structure based on Dominion's allocation, and flow above minimum requirements at Waterton Gage
(23) Input of Actual Structure Diversions for Dominion
(24) Input of Structure Allocation to Dominion
(25) Minimum of Available flow at shared structure based on Dominion's allocation, and flow above minimum requirements at Waterton Gage
(26) Input of Actual Structure Diversions for Dominion
(27) Input of Structure Allocation to Dominion
(28) Minimum of Available flow at shared structure based on Dominion's allocation, and flow above minimum requirements in Plum Creek
(29) Input of Actual Structure Diversions for Dominion
(27) Input of Actual Structure Diversions for Dominion
(31) Input of Actual Structure Diversions for Dominion
(32) Input of Actual Structure Diversions for Dominion
(33) Input of Actual Structure Diversions for Dominion
(34) Input of Actual Structure Diversions for Dominion

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Diversion Accc
Case No. 18CW

		Gage Data		Diversion Data																			
				Conduit 8			Highline Canal			Last Chance Ditch No.2			Dominion So. Platte Pumpback			Dominion Plum Creek			Dominion Only Structures				
	Date	South Platte Waterton Gage Flow	Denver Min Flow at Waterton Gage	Total Allotted Capacity at Dominion Conduit No. 8	Total Dominion Conduit No. 8 Available	Total Dominion Conduit No. 8 Diversion	Total Highline Canal Divs	Dominion Highline Canal Available	Total Dominion Highline Canal Diversions	Total Last Chance Ditch No. 2 Divs	Dominion Last Chance Ditch No. 2 Available	Total Dominion Last Chance Ditch No. 2 Diversion	Total South Platte Pumpback Divs	Dominion South Platte Pumpback Available	Dominion South Platte Pumpback Diversion Available	Total Allotted Capacity at Dominion's Plum Creek Diversion	Total Dominion's Plum Creek Diversion Available	Total Dominion Plum Creek Diversion	Dominion South Platte Diversions	Dominion Indian Creek	Dominion Willow Creek	Dominion Sterling Gulch	Dominion Chatfield Reservoir
		Input	Fixed	Input	Calc	(Input)	Input	Calc	Input	Input	Calc	Input	Input	Calc	Input	Input	Calc	Input	Input	Input	Input	Input	Input
		(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
	(1)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
###	10/1/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/2/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/3/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/4/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/5/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/6/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/7/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/8/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/9/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/10/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/11/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/12/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/13/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/14/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/15/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/16/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/17/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/18/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/19/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/20/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/21/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/22/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/23/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/24/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/25/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/26/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/27/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/28/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/29/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/30/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00
###	10/31/2020	1,000.00	30.00	12.00	12.00		200.00	120.00		8.00	8.00		4.00	-	4.00		10.00		6.00	3.00	3.00	1.00	8.00

DRAFT 10/21/2020
Dominion's Conduit No. 8 Accounting
Case No. 18CW3039

		River Administration			Diversions					Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Allotted Capacity at Dominion Conduit No. 8	Total Dominion Conduit No. 8 Available	Total Dominion Conduit No. 8 Available by In-Priority Exchange	Total Dominion Conduit No. 8 Diversion In-Priority	Total Dominion Conduit No. 8 Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	12.00	12.00	-	-	-	-	-	-
Total (in AF)					737.86	737.86	0.00	0.00	0.00	0.00	0.00	0.00

DRAFT 10/21/2020
Dominion's Conduit No. 8 Accounting
Case No. 18CW3039

	River Administration			Diversions					Deliveries		
Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Allotted Capacity at Dominion Conduit No. 8	Total Dominion Conduit No. 8 Available	Total Dominion Conduit No. 8 Available by In-Priority Exchange	Total Dominion Conduit No. 8 Diversion In-Priority	Total Dominion Conduit No. 8 Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
	Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
				(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11
November-19					676.37	676.37	9.92	23.80	33.72	24.93	8.79	-
December-19					737.86	737.86	-	-	-	-	-	-
January-20					737.86	737.86	-	-	-	-	-	-
February-20					690.26	690.26	-	-	-	-	-	-
March-20					737.86	737.86	-	-	-	-	-	-
April-20					714.06	714.06	-	-	-	-	-	-
May-20					737.86	737.86	-	-	-	-	-	-
June-20					714.06	714.06	-	-	-	-	-	-
July-20					737.86	737.86	-	-	-	-	-	-
August-20					737.86	737.86	-	-	-	-	-	-
September-20					714.06	714.06	-	-	-	-	-	-
October-20					737.86	737.86	-	-	-	-	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Allotted Capacity at Dominion Conduit No. 8
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available by Exchange
(7) Total Structure Diversions Available In-Priority
(8) Actual Total Sturcutre Diversions made by Dominion
(9) Deliveries of water from structure to Raw Water Tank for Direct Use
(10) Deliveries of water from structure to storage at ARS
(11) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Highline Canal Accounting
Case No. 18CW3039

		River Administration			Diversions					Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Highline Canal Divs	Total Dominion Highline Canal Available	Total Dominion Highline Canal Available by Exchange	Total Dominion Highline Canal Available by In-Priority Div	Total Dominion Highline Canal Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	200.00	120.00	5.00	-	-	-	-	-
Total (in AF)					12297.70	7378.62	307.44	0.00	0.00	0.00	0.00	0.00

DRAFT 10/21/2020
Dominion's Highline Canal Accounting
Case No. 18CW3039

	River Administration			Diversions					Deliveries		
Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Highline Canal Divs	Total Dominion Highline Canal Available	Total Dominion Highline Canal Available by Exchange	Total Dominion Highline Canal Available by In-Priority Div	Total Dominion Highline Canal Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
	Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
				(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11
November-19					11,901.00	6,761.75	286.06	238.02	29.75	15.01	14.74	-
December-19					12,297.70	7,378.62	307.44	-	-	-	-	-
January-20					12,297.70	7,378.62	307.44	-	-	-	-	-
February-20					11,504.30	6,902.58	287.61	-	-	-	-	-
March-20					12,297.70	7,378.62	307.44	-	-	-	-	-
April-20					11,901.00	7,140.60	297.53	-	-	-	-	-
May-20					12,297.70	7,378.62	307.44	-	-	-	-	-
June-20					11,901.00	7,140.60	297.53	-	-	-	-	-
July-20					12,297.70	7,378.62	307.44	-	-	-	-	-
August-20					12,297.70	7,378.62	307.44	-	-	-	-	-
September-20					11,901.00	7,140.60	297.53	-	-	-	-	-
October-20					12,297.70	7,378.62	307.44	-	-	-	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Highline Canal Divs
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available by Exchange
(7) Total Structure Diversions Available In-Priority
(8) Actual Total Sturcutre Diversions made by Dominion
(9) Deliveries of water from structure to Raw Water Tank for Direct Use
(10) Deliveries of water from structure to storage at ARS
(11) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Last Chance Ditch No. 2 Accounting
Case No. 18CW3039

		River Administration			Diversions					Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Last Chance Ditch No. 2 Divs	Total Dominion Last Chance Ditch No. 2 Available	Total Dominion Last Chance Ditch No. 2 Available by Exchange	Total Dominion Last Chance Ditch No. 2 Available by In-Priority Div	Total Dominion Last Chance Ditch No. 2 Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	8.00	8.00	5.00	-	-	-	-	-
Total (in AF)					491.91	491.91	307.44	0.00	0.00	0.00	0.00	0.00

DRAFT 10/21/2020
Dominion's Last Chance Ditch No. 2 Accounting
Case No. 18CW3039

	River Administration			Diversions					Deliveries		
Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Last Chance Ditch No. 2 Divs	Total Dominion Last Chance Ditch No. 2 Available	Total Dominion Last Chance Ditch No. 2 Available by Exchange	Total Dominion Last Chance Ditch No. 2 Available by In-Priority Div	Total Dominion Last Chance Ditch No. 2 Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
	Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
				(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(values in AF)
nual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11
November-19					476.04	396.70	238.02	15.87	-	-	-	-
December-19					491.91	491.91	307.44	-	-	-	-	-
January-20					491.91	491.91	307.44	-	-	-	-	-
February-20					460.17	460.17	287.61	-	-	-	-	-
March-20					491.91	491.91	307.44	-	-	-	-	-
April-20					476.04	476.04	297.53	-	-	-	-	-
May-20					491.91	491.91	307.44	-	-	-	-	-
June-20					476.04	476.04	297.53	-	-	-	-	-
July-20					491.91	491.91	307.44	-	-	-	-	-
August-20					491.91	491.91	307.44	-	-	-	-	-
September-20					476.04	476.04	297.53	-	-	-	-	-
October-20					491.91	491.91	307.44	-	-	-	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Last Chance Ditch No. 2 Divs
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available by Exchange
(7) Total Structure Diversions Available In-Priority
(8) Actual Total Sturcutre Diversions made by Dominion
(9) Deliveries of water from structure to Raw Water Tank for Direct Use
(10) Deliveries of water from structure to storage at ARS
(11) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's South Platte Pumpback Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total South Platte Pumpback Divs	Total Dominion South Platte Pumpback Available	Total Dominion South Platte Pumpback Available by In-Priority Div	Total Dominion South Platte Pumpback Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	4.00	-	-	4.00	4.00	-	-
Total (in AF)					245.95	0.00	0.00	245.95	245.95	0.00	0.00

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Dominion's South Platte Pumpback Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total South Platte Pumpback Divs	Total Dominion South Platte Pumpback Available	Total Dominion South Platte Pumpback Available by In-Priority Div	Total Dominion South Platte Pumpback Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10
November-19					238.02	7.93	7.93	198.35	190.42	7.93	-
December-19					245.95	-	-	245.95	245.95	-	-
January-20					245.95	-	-	245.95	245.95	-	-
February-20					230.09	-	-	230.09	230.09	-	-
March-20					245.95	-	-	245.95	245.95	-	-
April-20					238.02	-	-	238.02	238.02	-	-
May-20					245.95	-	-	245.95	245.95	-	-
June-20					238.02	-	-	238.02	238.02	-	-
July-20					245.95	-	-	245.95	245.95	-	-
August-20					245.95	-	-	245.95	245.95	-	-
September-20					238.02	-	-	238.02	238.02	-	-
October-20					245.95	-	-	245.95	245.95	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total South Platte Pumpback Divs
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available In-Priority
(7) Total Structure Diversions Available In-Priority
(8) Deliveries of water from structure to Raw Water Tank for Direct Use
(9) Deliveries of water from structure to storage at ARS
(10) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's South Platte Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion South Platte Diversion Available	Total Dominion South Platte Diversion Available by Exchange	Total Dominion South Platte Diversion Available by In-Priority Div	Total Dominion South Platte Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	6.00	5.00	-	6.00	3.57	-	-
Total (in AF)					368.93	307.44	0.00	368.93	219.43	0.00	0.00

DRAFT 10/21/2020
Dominion's South Platte Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion South Platte Diversion Available	Total Dominion South Platte Diversion Available by Exchange	Total Dominion South Platte Diversion Available by In-Priority Div	Total Dominion South Platte Diversions	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10
November-19					357.03	267.80	11.90	357.03	210.68	45.08	13.05
December-19					368.93	307.44	-	368.93	219.43	-	-
January-20					368.93	307.44	-	368.93	219.43	-	-
February-20					345.13	287.61	-	345.13	205.27	-	-
March-20					368.93	307.44	-	368.93	219.43	-	-
April-20					357.03	297.53	-	357.03	212.35	-	-
May-20					368.93	307.44	-	368.93	219.43	-	-
June-20					357.03	297.53	-	357.03	212.35	-	-
July-20					368.93	307.44	-	368.93	219.43	-	-
August-20					368.93	307.44	-	368.93	219.43	-	-
September-20					357.03	297.53	-	357.03	212.35	-	-
October-20					368.93	307.44	-	368.93	219.43	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Dominion South Platte Diversion Available
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available In-Priority
(7) Total Structure Diversions Available In-Priority
(8) Deliveries of water from structure to Raw Water Tank for Direct Use
(9) Deliveries of water from structure to storage at ARS
(10) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Plum Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries			
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Plum Creek Diversion Available	Total Dominion Plum Creek Diversion Available by Exchange	Total Dominion Plum Creek Diversion Available by In-Priority Div	Total Dominion Plum Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	to Storage at Castle Rock Reservoir No. 1	Volume to Storage at ARS based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	10.00	-	-	-	-	-	-	-
Total (in AF)					614.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DRAFT 10/21/2020
Dominion's Plum Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions				Deliveries			
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Plum Creek Diversion Available	Total Dominion Plum Creek Diversion Available by Exchange	Total Dominion Plum Creek Diversion Available by In-Priority Div	Total Dominion Plum Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	to Storage at Castle Rock Reservoir No. 1	Volume to Storage at ARS based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11
November-19					595.05	-	19.84	-	-	-	-	-
December-19					614.89	-	-	-	-	-	-	-
January-20					614.89	-	-	-	-	-	-	-
February-20					575.22	-	-	-	-	-	-	-
March-20					614.89	-	-	-	-	-	-	-
April-20					595.05	-	-	-	-	-	-	-
May-20					614.89	-	-	-	-	-	-	-
June-20					595.05	-	-	-	-	-	-	-
July-20					614.89	-	-	-	-	-	-	-
August-20					614.89	-	-	-	-	-	-	-
September-20					595.05	-	-	-	-	-	-	-
October-20					614.89	-	-	-	-	-	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Dominion Plum Creek Diversion Available
(5) Total Structure Diversions Available by Exchange
(6) Total Structure Diversions Available In-Priority
(7) Total Structure Diversions Available In-Priority
(8) Deliveries of water from structure to Raw Water Tank for Direct Use
(9) Deliveries of water from structure to storage at ARS
(10) Deliveries of water from structure to storage at Castle Rock Reservoir No. 1
(11) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Indian Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions			Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Indian Creek Diversion Available	Total Dominion Indian Creek Diversion Available by In-Priority Div	Total Dominion Indian Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
Total (in AF)					184.47	0.00	184.47	0.00	184.47	0.00

DRAFT 10/21/2020
Dominion's Indian Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions			Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Indian Creek Diversion Available	Total Dominion Indian Creek Diversion Available by In-Priority Div	Total Dominion Indian Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

(values in AF)

Annual Summary

November-19					178.52	5.95	178.52	9.33	163.48	16.76
December-19					184.47	-	184.47	-	184.47	-
January-20					184.47	-	184.47	-	184.47	-
February-20					172.56	-	172.56	-	172.56	-
March-20					184.47	-	184.47	-	184.47	-
April-20					178.52	-	178.52	-	178.52	-
May-20					184.47	-	184.47	-	184.47	-
June-20					178.52	-	178.52	-	178.52	-
July-20					184.47	-	184.47	-	184.47	-
August-20					184.47	-	184.47	-	184.47	-
September-20					178.52	-	178.52	-	178.52	-
October-20					184.47	-	184.47	-	184.47	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Dominion Indian Creek Diversion Available
(5) Total Structure Diversions Available In-Priority
(6) Total Structure Diversions Available In-Priority
(7) Deliveries of water from structure to Raw Water Tank for Direct Use
(8) Deliveries of water from structure to storage at ARS
(9) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Willow Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions			Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Willow Creek Diversion Available	Total Dominion Willow Creek Diversion Available by In-Priority Div	Total Dominion Willow Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	3.00	-	3.00	-	3.00	-
Total (in AF)					184.47	0.00	184.47	0.00	184.47	0.00

DRAFT 10/21/2020
Dominion's Willow Creek Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions			Deliveries		
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Willow Creek Diversion Available	Total Dominion Willow Creek Diversion Available by In-Priority Div	Total Dominion Willow Creek Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	Volume to Storage based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

(values in AF)

Annual Summary

November-19					178.52	5.95	178.52	-	166.86	22.63
December-19					184.47	-	184.47	-	184.47	-
January-20					184.47	-	184.47	-	184.47	-
February-20					172.56	-	172.56	-	172.56	-
March-20					184.47	-	184.47	-	184.47	-
April-20					178.52	-	178.52	-	178.52	-
May-20					184.47	-	184.47	-	184.47	-
June-20					178.52	-	178.52	-	178.52	-
July-20					184.47	-	184.47	-	184.47	-
August-20					184.47	-	184.47	-	184.47	-
September-20					178.52	-	178.52	-	178.52	-
October-20					184.47	-	184.47	-	184.47	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Dominion Willow Creek Diversion Available
(5) Total Structure Diversions Available In-Priority
(6) Total Structure Diversions
(7) Deliveries of water from structure to Raw Water Tank for Direct Use
(8) Deliveries of water from structure to storage at ARS
(9) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
Dominion's Sterling Gulch Diversion Accounting
Case No. 18CW3039

		River Administration			Diversions			Deliveries			
	Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Sterling Gulch Diversion Available	Total Dominion Sterling Gulch Diversion Available by In-Priority Div	Total Dominion Sterling Gulch Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	to Storage at Sterling Gulch Reservoir	Volume to Storage at ARS based on Master Meter
		Input	Input	Input	Calc	Calc	Calc	Input	Calc	Calc	Calc
					(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
10/1/2020	10/1/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/2/2020	10/2/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/3/2020	10/3/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/4/2020	10/4/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/5/2020	10/5/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/6/2020	10/6/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/7/2020	10/7/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/8/2020	10/8/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/9/2020	10/9/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/10/2020	10/10/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/11/2020	10/11/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/12/2020	10/12/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/13/2020	10/13/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/14/2020	10/14/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/15/2020	10/15/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/16/2020	10/16/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/17/2020	10/17/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/18/2020	10/18/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/19/2020	10/19/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/20/2020	10/20/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/21/2020	10/21/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/22/2020	10/22/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/23/2020	10/23/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/24/2020	10/24/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/25/2020	10/25/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/26/2020	10/26/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/27/2020	10/27/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/28/2020	10/28/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/29/2020	10/29/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/30/2020	10/30/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
10/31/2020	10/31/2020	13108.00	52595.52	7669.00	1.00	-	1.00	-	1.00	-	-
Total (in AF)					61.49	0.00	61.49	0.00	61.49	0.00	0.00

DRAFT 10/21/2020
Dominion's Sterling Gulch Diversion Accounting
Case No. 18CW3039

	River Administration			Diversions			Deliveries			
Date	South Platte Senior Call	Boat Chute Call	Plum Creek Senior Call	Total Dominion Sterling Gulch Diversion Available	Total Dominion Sterling Gulch Diversion Available by In-Priority Div	Total Dominion Sterling Gulch Diversion	to Raw Water Tank (Direct Use)	to Storage at ARS	to Storage at Sterling Gulch Reservoir	Volume to Storage at ARS based on Master Meter
	Input	Input	Input	Calc	Calc	Calc	Input	Calc	Calc	Calc
				(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(values in AF)

Annual Summary

November-19					59.51	1.98	59.51	-	55.54	3.97	7.54
December-19					61.49	-	61.49	-	61.49	-	-
January-20					61.49	-	61.49	-	61.49	-	-
February-20					57.52	-	57.52	-	57.52	-	-
March-20					61.49	-	61.49	-	61.49	-	-
April-20					59.51	-	59.51	-	59.51	-	-
May-20					61.49	-	61.49	-	61.49	-	-
June-20					59.51	-	59.51	-	59.51	-	-
July-20					61.49	-	61.49	-	61.49	-	-
August-20					61.49	-	61.49	-	61.49	-	-
September-20					59.51	-	59.51	-	59.51	-	-
October-20					61.49	-	61.49	-	61.49	-	-

Notes:

(1) South Platte Senior Calling Right
(2) Boat Chute Calling Right
(3) Plum Creek Senior Calling Right
(4) Total Dominion Sterling Gulch Diversion Available
(5) Total Structure Diversions Available to Dominion
(6) Total Structure Diversions Available In-Priority
(7) Total Structure Diversions Available In-Priority
(8) Deliveries of water from structure to storage at ARS
(9) Deliveries of water from structure to storage at Sterling Gulch
(10) Total volume of water delivered to ARS based on the meter reading at ARS

DRAFT 10/21/2020
ARS Reservoir Accounting
Case No. 18CW3039

		ARS Reservoir																					
	Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows	Out of Priority Inflows	Local Inflows In-Priority Storage	Delivered Inflows												
											DC8	DHL	DLC2	DSPPB	DSP	DPC	DIC	DWC	DSG	SGR	WCR	DCR	Master Meter (Input)
		(AF)	(AF)	(ft)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
10/1/2020	10/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/2/2020	10/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/3/2020	10/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/4/2020	10/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/5/2020	10/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/6/2020	10/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/2020	10/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/8/2020	10/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/9/2020	10/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/10/2020	10/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/11/2020	10/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/12/2020	10/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/13/2020	10/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/14/2020	10/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/15/2020	10/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/16/2020	10/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/17/2020	10/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/18/2020	10/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/19/2020	10/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/20/2020	10/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/21/2020	10/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/22/2020	10/22/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/23/2020	10/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/24/2020	10/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/25/2020	10/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/26/2020	10/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/27/2020	10/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/28/2020	10/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/29/2020	10/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/30/2020	10/30/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/31/2020	10/31/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (in AF)		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
November-19							220.00	235.00	150.00	50.00	-	-	-	-	6.58	-	8.45	11.41	3.80	4.75	-	-	35.00
December-19							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
January-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
February-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
March-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
April-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
May-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
June-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
July-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
August-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
September-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
October-20							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DRAFT 10/21/2020
ARS Reservoir Accounting
Case No. 18CW3039

	ARS Reservoir																						
Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows	Out of Priority Inflows	Local Inflows In-Priority Storage	Delivered Inflows													
										DC8	DHL	DLC2	DSPPB	DSP	DPC	DIC	DWC	DSG	SGR	WCR	DCR	Master Meter (Input)
	(AF)	(AF)	(ft)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)

Notes:

(1) Beginning of Day Calculated as End of Day Yesterday Volume
(2) Input Measured Volume at Beginning of Day
(3) Associated BOD Water Surface Elevation Based on Elevation-Area-Capacity Curve Developed Post-Construction
(4) Associated BOD Water Area Based on Elevation-Area-Capacity Curve Developed Post-Construction
(5) Percentage Surface Area Ice Covered
(6) BOD Tomorrow Measured - BOD Today Measured Volume
(7) Actual Total Sturcutre Inflows
(8) Col (7) - (9) - (24)
(9) Col (7) - (24), if in priority
(10) Col (24) prorated by Structure Deliveries
(11) Col (24) prorated by Structure Deliveries
(12) Col (24) prorated by Structure Deliveries
(13) Col (24) prorated by Structure Deliveries
(14) Col (24) prorated by Structure Deliveries
(15) Col (24) prorated by Structure Deliveries
(16) Col (24) prorated by Structure Deliveries
(17) Col (24) prorated by Structure Deliveries
(18) Col (24) prorated by Structure Deliveries
(19) Col (24) prorated by Structure Deliveries
(20) Col (24) prorated by Structure Deliveries
(21) Col (24) prorated by Structure Deliveries
(22) Input Total Deliveres from all Structures
(23) Daily Evaporation Assessed based on Terms and Conditions: Exposed Surface Area*Area not covered by Ice * Daily Evap AF/ac, from Climate Tab, used for water balance
(24) Input Total Deliveries to Raw Water Tank
(25) Input Total Deliveries to stream as Sub. Supply
(26) Input Total Deliveries to Storage at Sterling Gulch
(27) Input Total Deliveries to Storage at Chatfield
(28) Input Release of Out of Priority Storage
(29) Sum Cols (25) to (30)
(30) Col (1) + (7) - (31), limited to physical capacity
(31) Yesterday's EOD Storage Volume, plus Col (8) - Col (30)
(32) Yesterday's EOD Storage Volume, plus Col (24) - Sum Cols (9 thru 18) - Prorata share of Col (31)
(33) Yesterday's EOD Storage Volume, plus Col (19) - Prorata share of Col (31)
(34) Yesterday's EOD Storage Volume, plus Col (20) - Prorata share of Col (31)
(35) Yesterday's EOD Storage Volume, plus Col (23) - Prorata share of Col (31)
(36) MIN(Decreed Capacity - Col (33),Decreed Capacity -Remaining Volumetric Limits on Fill - Col 7,Remaining Refill-Remaining Volumetric Limits on Refill-Total Outflows)
(37) Check that Inflow Meter Matches Total daily Inflows

									Storage Allocation						
	Misc. Losses (Seep and Evap)	to Raw Water Tank	to stream as Sub. Supply	to Storage at Sterling Gulch	to Storage at Chatfield	Release of Out of Priority Storage	Total Outflows	End of Day Volume	End of Day Volume in Storage					Available Capacity for Tomorrow's Ops	Meter Matches Inflows? Y/N
									OOPS	ARS	SGR	WCR	DCR		
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	
	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
10/1/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/2/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/3/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/4/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/5/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/6/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/7/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/8/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/9/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/10/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/11/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/12/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/13/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/14/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/15/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/16/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/17/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/18/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/19/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/20/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/21/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/22/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/23/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/24/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/25/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/26/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/27/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/28/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/29/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/30/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
10/31/2020	-150.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	150.00	0.00	0.00	0.00	0.00	2200.00	
Total (in AF)	-4650.00	0.00	0.00	0.00	0.00	0.00	4650.00	0.00							

(values in AF)

Annual Summary

0	23	24	25	26	27	28	29	30	31	32	33	34	35	36
November-19	(3,452.95)	0.77	8.46	-	-	-	3,462.18							
December-19	(4,650.00)	-	-	-	-	-	4,650.00							
January-20	(4,650.00)	-	-	-	-	-	4,650.00							
February-20	(4,350.00)	-	-	-	-	-	4,350.00							
March-20	(4,650.00)	-	-	-	-	-	4,650.00							
April-20	(4,500.00)	-	-	-	-	-	4,500.00							
May-20	(4,650.00)	-	-	-	-	-	4,650.00							
June-20	(4,500.00)	-	-	-	-	-	4,500.00							
July-20	(4,650.00)	-	-	-	-	-	4,650.00							
August-20	(4,650.00)	-	-	-	-	-	4,650.00							
September-20	(4,500.00)	-	-	-	-	-	4,500.00							
October-20	(4,650.00)	-	-	-	-	-	4,650.00							

DRAFT 10/21/2020
Sterling Gulch Reservoir Accounting
Case No. 18CW3039

		Sterling Gulch Reservoir																			
	Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows to Storage	Out of Priority Inflows	In-Priority Storage	Delivered Inflows		Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS	to Storage at Chatfield	Release of Out of Priority Storage	Total Outflows	EOD Out of Priority Storage	End of Day Volume
											ARS	Total									
		(AF)	(AF)	(ft)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
10/1/2020	10/1/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/2/2020	10/2/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/3/2020	10/3/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/4/2020	10/4/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/5/2020	10/5/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/6/2020	10/6/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/7/2020	10/7/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/8/2020	10/8/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/9/2020	10/9/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/10/2020	10/10/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/11/2020	10/11/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/12/2020	10/12/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/13/2020	10/13/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/14/2020	10/14/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/15/2020	10/15/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/16/2020	10/16/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/17/2020	10/17/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/18/2020	10/18/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/19/2020	10/19/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/20/2020	10/20/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/21/2020	10/21/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/22/2020	10/22/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/23/2020	10/23/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/24/2020	10/24/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/25/2020	10/25/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/26/2020	10/26/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/27/2020	10/27/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/28/2020	10/28/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/29/2020	10/29/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/30/2020	10/30/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
10/31/2020	10/31/2020	(0.16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)
Total (in AF)		(0.16)	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	(0.16)

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
November-19							-	-	-	-	-	-	(25.76)	-	-	5.00	-	-	30.76		
December-19							-	-	-	-	-	-	(23.87)	-	-	-	-	-	23.87		
January-20							-	-	-	-	-	-	(23.87)	-	-	-	-	-	23.87		
February-20							-	-	-	-	-	-	(22.33)	-	-	-	-	-	22.33		
March-20							-	-	-	-	-	-	(23.87)	-	-	-	-	-	23.87		
April-20							-	-	-	-	-	-	(23.10)	-	-	-	-	-	23.10		
May-20							-	-	-	-	-	-	(23.87)	-	-	-	-	-	23.87		
June-20							-	-	-	-	-	-	(23.10)	-	-	-	-	-	23.10		
July-20							-	-	-	-	-	-	(5.39)	-	-	-	-	-	5.39		
August-20							-	-	-	-	-	-	-	-	-	-	-	-	-		
September-20							-	-	-	-	-	-	-	-	-	-	-	-	-		
October-20							-	-	-	-	-	-	-	-	-	-	-	-	-		

DRAFT 10/21/2020
Sterling Gulch Reservoir Accounting
Case No. 18CW3039

Sterling Gulch Reservoir																				
Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows to Storage	Out of Priority Inflows	In-Priority Storage	Delivered Inflows		Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS	to Storage at Chatfield	Release of Out of Priority Storage	Total Outflows	EOD Out of Priority Storage	End of Day Volume
										ARS	Total									
	(AF)	(AF)	(ft)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)

Notes:

(1) Beginning of Day Calculated as End of Day Yesterday Volume
(2) Input Measured Volume at Beginning of Day
(3) Associated BOD Water Surface Elevation Based on Elevation-Area-Capacity Curve Developed Post-Construction
(4) Associated BOD Water Area Based on Elevation-Area-Capacity Curve Developed Post-Construction
(5) Percentage Surface Area Ice Covered
(6) BOD Tomorrow Measured - BOD Today Measured Volume
(7) Actual Total Sturcutre Diversions made by Dominion
(8) Col (7) - (9) - (12)
(9) Col (7) - (12), if in priority
(10) ARS Col (28)
(11) Col (10) + (11)
(12) Daily Evaporation Assessed based on Terms and Conditions: Exposed Surface Area*Area not covered by Ice * Daily Evap AF/ac, from Climate Tab
(13) Input Total Deliveries to Raw Water Tank
(14) Input Total Deliveries to stream as Sub. Supply
(15) Input Total Deliveries to Storage at ARS
(16) Input Total Deliveries to Storage at Chatfield
(17) Input Total Deliveries Release of Out of Priority Storage
(18) Sum Cols (13) to (18)
(19) Yesterday's EOD Storage Volume, plus Col (8) - Col (18)
(20) Col (1) + (7) - (19), limited to physical capacity

DRAFT 10/21/2020
Willow Creek Reservoir Accounting
Case No. 18CW3039

		Willow Creek Reservoir																	
	Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows to Storage	Out of Priority Inflows	In-Priority Storage	Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS	to Storage at Chatfield	Out of Priority Storage Release	Total Outflows	EOD Out of Priority Storage	End of Day Volume	Available Capacity for Tomorrow's Ops
		(AF)	(ft)	(AF)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
10/1/2020	10/1/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/2/2020	10/2/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/3/2020	10/3/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/4/2020	10/4/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/5/2020	10/5/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/6/2020	10/6/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/7/2020	10/7/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/8/2020	10/8/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/9/2020	10/9/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/10/2020	10/10/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/11/2020	10/11/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/12/2020	10/12/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/13/2020	10/13/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/14/2020	10/14/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/15/2020	10/15/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/16/2020	10/16/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/17/2020	10/17/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/18/2020	10/18/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/19/2020	10/19/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/20/2020	10/20/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/21/2020	10/21/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/22/2020	10/22/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/23/2020	10/23/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/24/2020	10/24/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/25/2020	10/25/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/26/2020	10/26/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/27/2020	10/27/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/28/2020	10/28/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/29/2020	10/29/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/30/2020	10/30/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
10/31/2020	10/31/2020	0.80	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	
Total (in AF)		0.80	0.00	0.00	1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
November-19							(5.00)	-	-	-	4.20	-	-	-	-	-	4.20		
December-19							-	-	-	-	-	-	-	-	-	-	-		
January-20							-	-	-	-	-	-	-	-	-	-	-		
February-20							-	-	-	-	-	-	-	-	-	-	-		
March-20							-	-	-	-	-	-	-	-	-	-	-		
April-20							-	-	-	-	-	-	-	-	-	-	-		
May-20							-	-	-	-	-	-	-	-	-	-	-		
June-20							-	-	-	-	-	-	-	-	-	-	-		
July-20							-	-	-	-	-	-	-	-	-	-	-		
August-20							-	-	-	-	-	-	-	-	-	-	-		
September-20							-	-	-	-	-	-	-	-	-	-	-		
October-20							-	-	-	-	-	-	-	-	-	-	-		

DRAFT 10/21/2020
Willow Creek Reservoir Accounting
Case No. 18CW3039

Willow Creek Reservoir																			
Date	Calculated Beginning of Day Volume	Measured BOD Volume	BOD Water Surface Elevation	BOD Water Surface Area	Percentage Surface Area Ice Covered	Change in Storage	Total Inflows to Storage	Out of Priority Inflows	In-Priority Storage	Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS	to Storage at Chatfield	Out of Priority Storage Release	Total Outflows	EOD Out of Priority Storage	End of Day Volume	Available Capacity for Tomorrow's Ops
	(AF)	(ft)	(AF)	(ac)	(%)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)

Notes:

(1) Beginning of Day Calculated as End of Day Yesterday Volume
(2) Input Measured Volume at Beginning of Day
(3) Associated BOD Water Surface Elevation Based on Elevation-Area-Capacity Curve Developed Post-Construction
(4) Associated BOD Water Area Based on Elevation-Area-Capacity Curve Developed Post-Construction
(5) Percentage Surface Area Ice Covered
(6) BOD Tomorrow Measured - BOD Today Measured Volume
(7) Actual Total Sturcutre Diversions made by Dominion
(8) Col (7) - (9) - (11)
(9) Col (7) - (11), if in priority
(10) Daily Evaporation Assessed based on Terms and Conditions: Exposed Surface Area*Area not covered by Ice * Daily Evap AF/ac, from Climate Tab
(11) Input Total Deliveries to Raw Water Tank
(12) Input Total Deliveries to stream as Sub. Supply
(13) Input Total Deliveries to Storage at ARS
(14) Input Total Deliveries to Storage at Chatfield
(15) Input Total Deliveries Out of Priority Storage Release
(16) Input Total Deliveries Total Outflows
(17) Yesterday's EOD Storage Volume, plus Col (8) - Col (17)
(18) Col (1) + (7) - (18), limited to physical capacity

DRAFT 10/21/2020
Dominion's Storage Accounts in Castle Rock Reservoir No. 1 Accounting
Case No. 18CW3039

		Storage Accounting for Dominion's Water Stored in Castle Rock Reservoir Nos. 1&2													
	Date	Beginning of Day Volume	Total Inflows	Total Out of Priority Inflows	In-Priority Storage	Delivered Inflows		Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	Out of Priority Storage Release	Total Outflows	EOD Out of Priority Storage	End of Day Volume	Available Capacity for Tomorrow's Ops
						DPC	Total								
		(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)		(AF)		(AF)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
10/1/2020	10/1/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/2/2020	10/2/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/3/2020	10/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/4/2020	10/4/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/5/2020	10/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/6/2020	10/6/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/7/2020	10/7/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/8/2020	10/8/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/9/2020	10/9/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/10/2020	10/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/11/2020	10/11/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/12/2020	10/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/13/2020	10/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/14/2020	10/14/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/15/2020	10/15/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/16/2020	10/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/17/2020	10/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/18/2020	10/18/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/19/2020	10/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/20/2020	10/20/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/21/2020	10/21/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/22/2020	10/22/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/23/2020	10/23/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/24/2020	10/24/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/25/2020	10/25/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/26/2020	10/26/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/27/2020	10/27/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/28/2020	10/28/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/29/2020	10/29/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/30/2020	10/30/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
10/31/2020	10/31/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total (in AF)		-	-	-	-		-	-	-	-	-	-	-	-	

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11	12	13
November-19			-	-	-	-	-	-	-	-	-	-		
December-19			-	-	-	-	-	-	-	-	-	-		
January-20			-	-	-	-	-	-	-	-	-	-		
February-20			-	-	-	-	-	-	-	-	-	-		
March-20			-	-	-	-	-	-	-	-	-	-		
April-20			-	-	-	-	-	-	-	-	-	-		
May-20			-	-	-	-	-	-	-	-	-	-		
June-20			-	-	-	-	-	-	-	-	-	-		
July-20			-	-	-	-	-	-	-	-	-	-		
August-20			-	-	-	-	-	-	-	-	-	-		
September-20			-	-	-	-	-	-	-	-	-	-		
October-20			-	-	-	-	-	-	-	-	-	-		

DRAFT 10/21/2020
Dominion's Storage Accounts in Castle Rock Reservoir No. 1 Accounting
Case No. 18CW3039

	Storage Accounting for Dominion's Water Stored in Castle Rock Reservoir Nos. 1&2													
Date	Beginning of Day Volume	Total Inflows	Total Out of Priority Inflows	In-Priority Storage	Delivered Inflows		Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	Out of Priority Storage Release	Total Outflows	EOD Out of Priority Storage	End of Day Volume	Available Capacity for Tomorrow's Ops
					DPC	Total								
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)		(AF)		(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

Notes:

(1) Beginning of Day Calculated as End of Day Yesterday Volume
(2) Actual Total Sturcutre Diversions made by Dominion
(3) Col (2) - (4)
(4) Col (2), if in priority
(5) DPC Col (10)
(6) Sum Col (10)
(7) Daily Evaporation Assessed based on Terms and Conditions: Exposed Surface Area*Area not covered by Ice * Daily Evap AF/ac, from Climate Tab
(8) Input Total Deliveries to Raw Water Tank
(9) Input Total Deliveries to stream as Sub. Supply
(10) Input Total Deliveries Out of Priority Storage Release
(11) Sum Cols (8) - (10)
(12) Yesterday's EOD Storage Volume, plus Col (3) - Col (10)
(13) Col (1) + (2) - (11), limited to physical capacity

DRAFT 10/21/2020
Dominion's Storage Accounts in Chatfield Reservoir Accounting
Case No. 18CW3039

		Storage Accounting for Dominion's Water Stored in Chatfield Reservoir																
	Date	Beginning of Day Volume	Total Inflows	Out of Priority Inflows	In-Priority Storage	Delivered Inflows				Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS Reservoir	to Dominion South Platte River Divs	Release of Out of Priority Storage	Total Outflows	EOD Out of Priority Storage	End of Day Volume
						ARS	SGR	WCR	Total									
		(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
10/1/2020	10/1/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/2/2020	10/2/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/3/2020	10/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/4/2020	10/4/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/5/2020	10/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/6/2020	10/6/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/7/2020	10/7/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/8/2020	10/8/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/9/2020	10/9/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/10/2020	10/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/11/2020	10/11/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/12/2020	10/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/13/2020	10/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/14/2020	10/14/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/15/2020	10/15/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/16/2020	10/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/17/2020	10/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/18/2020	10/18/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/19/2020	10/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/20/2020	10/20/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/21/2020	10/21/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/22/2020	10/22/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/23/2020	10/23/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/24/2020	10/24/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/25/2020	10/25/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/26/2020	10/26/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/27/2020	10/27/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/28/2020	10/28/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/29/2020	10/29/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/30/2020	10/30/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/31/2020	10/31/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (in AF)		-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
November-19							-	-	-	-	-	-	-	-	-	-	-	-
December-19							-	-	-	-	-	-	-	-	-	-	-	-
January-20							-	-	-	-	-	-	-	-	-	-	-	-
February-20							-	-	-	-	-	-	-	-	-	-	-	-
March-20							-	-	-	-	-	-	-	-	-	-	-	-
April-20							-	-	-	-	-	-	-	-	-	-	-	-
May-20							-	-	-	-	-	-	-	-	-	-	-	-
June-20							-	-	-	-	-	-	-	-	-	-	-	-
July-20							-	-	-	-	-	-	-	-	-	-	-	-
August-20							-	-	-	-	-	-	-	-	-	-	-	-
September-20							-	-	-	-	-	-	-	-	-	-	-	-
October-20							-	-	-	-	-	-	-	-	-	-	-	-
November-20																		

DRAFT 10/21/2020
Dominion's Storage Accounts in Chatfield Reservoir Accounting
Case No. 18CW3039

Storage Accounting for Dominion's Water Stored in Chatfield Reservoir																
Date	Beginning of Day Volume	Total Inflows	Out of Priority Inflows	In-Priority Storage	Delivered Inflows				Daily Evap Assessed	to Raw Water Tank	to stream as Sub. Supply	to Storage at ARS Reservoir	to Dominion South Platte River Divs	Release of Out of Priority Storage	Total Outflows	EOD Out of Priority Storage	End of Day Volume
					ARS	SGR	WCR	Total									
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

Notes:

(1) Beginning of Day Calculated as End of Day Yesterday Volume
(2) Actual Total Sturcutre Diversions made by Dominion
(3) Col (2) - (4)
(4) Col (2), if in priority
(5) DPC Col (10)
(6) Sum Col (10)
(7) Daily Evaporation Assessed based on Terms and Conditions: Exposed Surface Area*Area not covered by Ice * Daily Evap AF/ac, from Climate Tab
(8) Input Total Deliveries
(9) Sum Cols (8) - (10)
(10) Input Total Deliveries to Raw Water Tank
(11) Input Total Deliveries to stream as Sub. Supply
(12) Input Total Deliveries to Storage at ARS Reservoir
(13) Input Total Deliveries to Dominion South Platte River Divs
(14) Input Total Deliveries Release of Out of Priority Storage
(15) Sum Cols (11) - (16)
(16) Yesterday's EOD Storage Volume, plus Col (3) - Col (16)
(17) Col (1) + (2) - (17), limited to physical capacity

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***April 1 Carry-over date for water in storage

		ARS					Sterling Gulch Reservoir				Willow Creek Reservoir				Castle Rock Reservoir Nos. 1&2					Chatfield Reservoir					Total Direct Flow Diversions	
	Date	In-Priority Delivery to Storage	Paperfill	Total Volume Against Limits	Cumulative Volume against First Fill	Cumulative Volume Against Refill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	Cumulative Volume Against Refill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	Cumulative Volume Against Refill	Daily Diversions to Direct Use	Total Annual Diversions to Direct Use
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
10/1/2020	10/1/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,059.18
10/2/2020	10/2/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,074.19
10/3/2020	10/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,089.20
10/4/2020	10/4/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,104.21
10/5/2020	10/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,119.23
10/6/2020	10/6/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,134.24
10/7/2020	10/7/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,149.25
10/8/2020	10/8/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,164.26
10/9/2020	10/9/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,179.27
10/10/2020	10/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,194.29
10/11/2020	10/11/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,209.30
10/12/2020	10/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,224.31
10/13/2020	10/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,239.32
10/14/2020	10/14/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,254.34
10/15/2020	10/15/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,269.35
10/16/2020	10/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,284.36
10/17/2020	10/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,299.37
10/18/2020	10/18/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,314.39
10/19/2020	10/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,329.40
10/20/2020	10/20/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,344.41
10/21/2020	10/21/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,359.42
10/22/2020	10/22/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,374.44
10/23/2020	10/23/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,389.45
10/24/2020	10/24/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,404.46
10/25/2020	10/25/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,419.47
10/26/2020	10/26/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,434.49
10/27/2020	10/27/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,449.50
10/28/2020	10/28/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,464.51
10/29/2020	10/29/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,479.52
10/30/2020	10/30/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.01	5,494.53
10/31/2020	10/31/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,494.53
Total (in AF)					0.00	0.00				0.00				0.00				0.00	0.00				0.00	0.00	450.37	5,494.53

(values in AF)

Annual Summary

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
November-19		85.00	-	85.00	285.00	0.00	-	1.00	1.00	201.00	-	-	-	200.00	-	-	-	200.00	0.00	-	-	-	200.00	0.00	450.37	465.38
December-19		-	-	-	285.00	0.00	-	-	-	201.00	-	-	-	200.00	-	-	-	200.00	0.00	-	-	-	200.00	0.00	15.01	930.77
January-20		-	-	-	285.00	0.00	-	-	-	201.00	-	-	-	200.00	-	-	-	200.00	0.00	-	-	-	200.00	0.00	15.01	1396.15
February-20		-	-	-	285.00	0.00	-	-	-	201.00	-	-	-	200.00	-	-	-	200.00	0.00	-	-	-	200.00	0.00	15.01	1831.51
March-20		-	-	-	285.00	0.00	-	-	-	201.00	-	-	-	200.00	-	-	-	200.00	0.00	-	-	-	200.00	0.00	15.01	2296.90
April-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	2747.27
May-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	3212.65
June-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	3663.02
July-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	4128.41
August-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	4593.79
September-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	15.01	5044.16
October-20		-	-	-	0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00	-	-	-	0.00	0.00	0.00	5494.53
November-20																										

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Volumetric Limits
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(values in AF unless otherwise noted)
***April 1 Carry-over date for water in storage

Date	ARS					Sterling Gulch Reservoir				Willow Creek Reservoir				Castle Rock Reservoir Nos. 1&2					Chatfield Reservoir					Total Direct Flow Diversions	
	In-Priority Delivery to Storage	Paperfill	Total Volume Against Limits	Cumulative Volume against First Fill	Cumulative Volume Against Refill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	Cumulative Volume Against Refill	In-Priority Divs	Paperfill	Total Inflows	Cumulative Volume against First Fill	Cumulative Volume Against Refill	Daily Diversions to Direct Use	Total Annual Diversions to Direct Use
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)

Notes:

(1) Date
(2) Total In-Priority Deliveries to Storage
(3) Volume of water available for diversion, and storage, that was not put to storage ("Paperfill")
(4) Total Inflows plus Paperfilled Inflows
(5) Cumulative Volume stored against First Fill
(6) Cumulative Volume stored against Refill
(7) Total In-Priority Deliveries to Storage
(8) Volume of water available for diversion, and storage, that was not put to storage ("Paperfill")
(9) Total Inflows plus Paperfilled Inflows
(10) Cumulative Volume stored against First Fill
(11) Total In-Priority Deliveries to Storage
(12) Volume of water available for diversion, and storage, that was not put to storage ("Paperfill")
(13) Total Inflows plus Paperfilled Inflows
(14) Cumulative Volume stored against First Fill
(15) Total In-Priority Deliveries to Storage
(16) Volume of water available for diversion, and storage, that was not put to storage ("Paperfill")
(17) Total Inflows plus Paperfilled Inflows
(18) Cumulative Volume stored against First Fill
(19) Cumulative Volume stored against Refill
(20) Total In-Priority Deliveries to Storage
(21) Volume of water available for diversion, and storage, that was not put to storage ("Paperfill")
(22) Total Inflows plus Paperfilled Inflows
(23) Cumulative Volume stored against First Fill
(24) Cumulative Volume stored against Refill
(25) Total Direct Flow Diversions to Raw Tank
(26) Total Cumulative direct flow diversions to Raw Tank

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Exchange Accounting
Case No. 18CW3039

		Total Diversions by Exchange																												
		Exchange-To Diversions						Exchange-From Points			Substitute Supplies														T&Cs Check				
	Date	Dominion Denver Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir	Chatfield Reservoir	Bi-Cities WWTP	Roxborough WWTP	Bi-Cities WWTP Effluent	Roxborough WWTP Effluent	ARS to PC to Chatfield	Sterling Gulch Res to Chatfield	Willow Creek Res to Chatfield	Castle Rock Reservoir Nos. 1&2 to Chatfield	Storage Accounting for Dominion's Water Stored in Chatfield Reservoir	Aurora IGA River Deliveries	Hock Hocking to Chatfield	WISE Water at Chatfield	Castle Rock delivered at Chatfiled	Cherokee Ranch to Chatfield (after relinquishment paid)	Other (Comments)	Total Available Sub Supplies	South Platte Max Exchange Potential	Plum Creek Max Exchange Potential	Volumetric Limit Not Yet Exceeded?	Plum Creek Live Stream?	Water Commish Approval
		(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(Y/N)	(Y/N)	(Y/N)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
10/1/2020	10/1/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/2/2020	10/2/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/3/2020	10/3/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/4/2020	10/4/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/5/2020	10/5/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/6/2020	10/6/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/7/2020	10/7/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/8/2020	10/8/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/9/2020	10/9/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/10/2020	10/10/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/11/2020	10/11/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/12/2020	10/12/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/13/2020	10/13/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/14/2020	10/14/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/15/2020	10/15/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/16/2020	10/16/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/17/2020	10/17/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/18/2020	10/18/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/19/2020	10/19/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/20/2020	10/20/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/21/2020	10/21/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/22/2020	10/22/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/23/2020	10/23/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/24/2020	10/24/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/25/2020	10/25/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/26/2020	10/26/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/27/2020	10/27/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/28/2020	10/28/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/29/2020	10/29/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/30/2020	10/30/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
10/31/2020	10/31/2020	0.00	0.00	0.00	5.00	0.00	0.00	0.00	4.40	0.60	4.40	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00		Y	Y
Total (in AF)		0.00	0.00	0.00	307.44	0.00	0.00	0.00	270.55	36.89	270.55	171.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	307.44	307.44	307.44			

(values in AF)

Annual Summary

0	0	1	2	3	4	5	6	7	8	9	10																	
November-19		-	18.26	-	267.80	-	-	8.37	244.37	33.32	253.09	160.50	8.37	-	-	-	-	-	-	-	-	-	-	295.98	286.06	286.06		-	-
December-19		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
January-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
February-20		-	-	-	287.61	-	-	-	253.09	34.51	253.09	160.50	-	-	-	-	-	-	-	-	-	-	-	287.61	287.61	287.61		-	-
March-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
April-20		-	-	-	297.53	-	-	-	261.82	35.70	261.82	166.03	-	-	-	-	-	-	-	-	-	-	-	297.53	297.53	297.53		-	-
May-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
June-20		-	-	-	297.53	-	-	-	261.82	35.70	261.82	166.03	-	-	-	-	-	-	-	-	-	-	-	297.53	297.53	297.53		-	-
July-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
August-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-
September-20		-	-	-	297.53	-	-	-	261.82	35.70	261.82	166.03	-	-	-	-	-	-	-	-	-	-	-	297.53	297.53	297.53		-	-
October-20		-	-	-	307.44	-	-	-	270.55	36.89	270.55	171.57	-	-	-	-	-	-	-	-	-	-	-	307.44	307.44	307.44		-	-

DRAFT 10/21/2020
Exchange Accounting
Case No. 18CW3039

	Total Diversions by Exchange																												
	Exchange-To Diversions						Exchange-From Points			Substitute Supplies															T&Cs Check				
Date	Dominion Denver Conduit No. 8	Dominion Highline Canal	Dominion Last Chance Ditch No. 2 a.k.a. Platte Canon Ditch	Dominion South Platte Diversion	Dominion Plum Creek Diversion	Chatfield Reservoir	Chatfield Reservoir	Bi-Cities WWTP	Roxborough WWTP	Bi-Cities WWTP Effluent	Roxborough WWTP Effluent	ARS to PC to Chatfield	Sterling Gulch Res to Chatfield	Willow Creek Res to Chatfield	Castle Rock Reservoir Nos. 1&2 to Chatfield	Storage Accounting for Dominion's Water Stored in Chatfield Reservoir	Aurora IGA River Deliveries	Hock Hocking to Chatfield	WISE Water at Chatfield	Castle Rock delivered at Chatfiled	Cherokee Ranch to Chatfield (after relinquishment paid)	Other (Comments)	Total Available Sub Supplies	South Platte Max Exchange Potential	Plum Creek Max Exchange Potential	Volumetric Limit Not Yet Exceeded?	Plum Creek Live Stream?	Water Commish Approval
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(Y/N)	(Y/N)	(Y/N)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)			

Notes:

(1) Min (SPR Exchange Potential Col (26), DC8 Col (6), DC8 Col (8) - (7))
(2) Min (SPR Exchange Potential Col (26)-(1), DHC Col (6), DHC Col (8) - (7))
(3) Min (SPR Exchange Potential Col (26) - Col (1) - Col (2), Max(0, DLC2 Col (8) - (7))
(4) Min (SPR Exchange Potential Col (26) - Sum(Col (1) thru Col (3)), Max(0, DSP Col (8) - (7))
(5) Min (SPR Exchange Potential Col (26) - Sum(Col (1) thru Col (4)), Max(0, DPC Col (8) - (7))
(6) Input
(7) Min (Col (25)-SUM Cols (8)+(9),Col (26) + Col (27),SUM Cols (1) thru (6))
(8) Min (Col (10),Col (26), SUM Cols (1) thru (6))
(9) Min (Col (11),Col (26)-Col(8),SUM Col (1) thru (6)- Col (8),Effluent Exchange Rate Limitation-Col (8))
(10) Min (Fully Consumable Effluent Available at WWTP, Exchange Rate Limit)
(11) Min (Fully Consumable Effluent Available at WWTP, Exchange Rate Limit)
(12) ARS to PC to Chatfield after transit losses assessed
(13) Sterling Gulch Res to Chatfield after transit losses assessed
(14) Willow Creek Res to Chatfield after transit losses assessed
(15) Castle Rock Reservoir Nos. 1&2 to Chatfield after transit losses assessed
(16) Storage Accounting for Dominion's Water Stored in Chatfield Reservoir
(17) Input of Aurora IGA River Deliveries after transit losses
(18) Input of Hock Hocking to Chatfield
(19) Input of WISE Water at Chatfield
(20) Input of Castle Rock delivered at Chatfiled
(21) Input of Cherokee Ranch to Chatfield (after relinquishment paid)
(22) Input of Other (Comments)
(23) Sum Cols (12) thru (24) + min(Col (10) + Col (11), WWTP Exchange Rate Limit)
(24) IF(AND(Col (29)="Y",South Platte Call<Exchange Admin No.),MIN(Col (25),SUM(DailyInput Cols (13), (16), (19), (22), (27)),0)
(25) IF(AND(Col (29)="Y",Col (28)="Y",Plum Creek Call<Exchange Admin No.),MIN(Col (25),SUM(Cols (25), (28), (29), (30)),0)
(26) Input of if Volumetric Limits are Not Exceeded? (Y/N)
(27) Input of Plum Creek Live Stream?
(28) Input of Water Commish Approval
(29) Cumulative Exchanged Volume
(30) Cumulative Exchanged Volume
(31) Cumulative Exchanged Volume
(32) Cumulative Exchanged Volume
(33) Cumulative Exchanged Volume
(34) Cumulative Exchanged Volume
(35) Cumulative Exchanged Volume
(36) Cumulative Exchanged Volume
(37) Cumulative Exchanged Volume
(38) Cumulative Exchanged Volume
(39) Cumulative Exchanged Volume
(40) Cumulative Exchanged Volume
(41) Cumulative Exchanged Volume
(42) Cumulative Exchanged Volume