

Date: October 9, 2020

To: Kevin Rein, State Engineer, Director; Corey DeAngelis, Division Engineer, Division One

From: Denver Water, Parker Water and Sanitation District, and Castle Rock Water

Subject: Reservoir Operations by Denver Water, Parker Water, and Castle Rock related to Rueter-Hess and Chatfield Reservoirs

Kevin and Corey,

Thank you for your consideration of the proposed reservoir operations associated with Rueter-Hess and Chatfield Reservoirs. This correspondence is in response to your May 8, 2020 letter requesting additional information regarding how reservoir storage accounts will operate under a proposed Pilot Project where Denver Water would book over legally reusable water into Rueter-Hess Reservoir and subsequently Denver Water and Castle Rock would perform a Reservoir Trade between Rueter-Hess and Chatfield Reservoir accounts with the ultimate result being that Castle Rock has reusable water in Rueter-Hess Reservoir and Denver Water has a like amount of reusable water in Chatfield Reservoir. The May 8, 2020 letter had the following specific questions and information requests:

Question #1: Do the Denver Water and Castle Rock accounts in Chatfield allow a discrete amount of water stored in priority and, at the same time, allow the storage of other reusable water in the same accounts? If so, are Castle Rock and Denver Water limited to an amount for the two types of water in combination?

Response: The Denver Water and Castle Rock Chatfield storage accounts do allow for both water stored in priority and other reusable water. Denver Water and Castle Rock are limited to storing water in an amount equal to the physical capacity of the accounts. This pilot only uses other reusable water and no water stored in priority will be used for a Reservoir Trade.

Question #4 provides additional details.

Question #2: If the Pilot Project operations fill an account that includes native water stored in Chatfield, have the Pilot Project parties considered that the Pilot Project operations may limit the ability to store native water in such accounts?

Response: Both Denver Water and Castle Rock understand that if space within their respective Chatfield accounts are storing water associated with the Pilot Project operations it could limit the ability to store native water in the same accounts.

Question #3: It is unclear if the objective of the Pilot Project is to bookover Denver Water water into Rueter-Hess Reservoir and instantaneously perform a Reservoir Trade with Castle Rock leaving no balance of Denver Water water in Rueter-Hess, or will Denver Water and Castle Rock water accrue balances in the Rueter-Hess and Chatfield accounts for a subsequent Reservoir Trade?

Response: During the Pilot Project, both instantaneous and deferred trades may be performed. However, the deferred trades are expected to be the norm.

Question #4: To allow the Pilot Project's operation, the parties must provide a detailed description of how the Chatfield accounts operate and lend themselves to the Pilot Project operation.

Response: The following provides a short description of how the Chatfield accounts will be used in the Pilot Project operations as well as the Reservoir Trade

Parker's Rueter-Hess Account. Denver Water will deliver fully reusable water to Parker via WISE infrastructure. Parker will book an equal amount of fully reusable water into the "Denver Pilot Program" account at Rueter-Hess Reservoir. On the day of a Reservoir Trade water will be moved from the "Denver Pilot Program" account to the Castle Rock Account. See Attached Rueter-Hess Reservoir accounting page.

Castle Rock Chatfield Reservoir Account. Castle Rock will store its legally reusable water in the Castle Rock storage account which is currently limited to 590 acre feet total. The legally reusable water is indicated as "Fully Consumable Stored Water" (column "P" in attached Castle Rock accounting) and this is the only 'color' of water that Castle Rock will be using for the Reservoir Trade. No native water from Castle Rock's storage decrees will be used for this pilot. Column "AM" will show water traded to Rueter-Hess Reservoir.

Denver Water Chatfield Reservoir Account. On the day of a Reservoir Trade, water from Castle Rock's "Fully Consumable Stored Water" will be traded in a like amount to Denver Water's "Pilot Program" Chatfield storage account. A trade can only occur if there is available space in Denver Water's total Chatfield storage account.

Also, as requested by the Division Engineer, the parties will give notice to the Division Engineer prior to initiating any Reservoir Trades associated with the Pilot Project.

Please review this letter and the attached accounting forms and reach out if you have any future questions or would like to schedule a meeting to walk through the accounting process. Following review and any additional discussions, assuming the Pilot Project is acceptable, the Pilot Project parties would appreciate a letter indicating the Division Engineer's approval of the proposed Pilot Project operations described herein.

Sincerely,



Rick Marsicek
Denver Water

Rebecca Tejada
Parker Water

Matt Benak
Castle Rock Water

Attachments:

- 1.) Rueter-Hess Reservoir Accounting
- 2.) Castle Rock Chatfield Accounting
- 3.) Denver Water Chatfield Accounting

Attachment 1: Rueter-Hess Reservoir Accounting

Evaporation section is where the evaporation is totaled and distributed amongst all accounts.

Reservoir Seepage is where our weekly measured seepage is accounted for and distributed amongst all accounts. Seepage is measured at 29 weir boxes that are tied to the dam drain system.

Newlin Gulch Inflows section is the main natural inflow to RHR and is ungauged, this section is used to balance all of our metered inflows and outflows as well as the know losses.

Partner Swap section is where all the Rueter-Hess partners will be able to trade any water that is in storage. I have put some numbers in this section to give an example of how it works.

Reservoir Contents section is where you will find the current days storage volumes for each partner after all losses are accounted for.

Pertinent Rows for Pilot Project:

166 - Evaporation
189 – Seepage
217 – Newlin Gulch Inflows
287 – Partner Swap Volumes
309 – Reservoir Contents

General Data For Rueter-Hess Reservoir		
Evaporation		
3	Total Evaporation Volume Lost	ac-ft.
4	Volume of Evaporation Lost - Stonegate	ac-ft.
5	Volume of Evaporation Lost - Castle Pines North	ac-ft.
6	Volume of Evaporation Lost - Castle Rock	ac-ft.
7	Volume of Evaporation Lost - CCPWA	ac-ft.
8	Volume of Evaporation Lost - Denver Pilot Program	ac-ft.
9	Volume of Evaporation Lost - UCCWA	ac-ft.
10	Volume of Evaporation Lost - PWSD	ac-ft.
11	Evaporation assigned to the Reusable Return Flow Account	ac-ft.
12	Evaporation assigned to the Single Use Account	ac-ft.
13	Evaporation assigned to the 03/20/1985 Account	ac-ft.
14	Evaporation assigned to the 06/01/1993 Account	ac-ft.
15	Evaporation assigned to the 12/31/2004 Account	ac-ft.
16	Evaporation assigned to the Lake Gulch Account	ac-ft.
17	Evaporation assigned to the Free River Cherry Creek Account	ac-ft.
18	Evaporation assigned to the In Priority Newlin Gulch (1993 Priority) Account	ac-ft.
19	Evaporation assigned to the In Priority Newlin Gulch (2004 Priority) Account	ac-ft.
20	Evaporation assigned to the LIRF Account	ac-ft.
21	Evaporation assigned to the Ditches Account	ac-ft.
22	Evaporation assigned to the Free River Newlin Gulch Account	ac-ft.
Reservoir Seepage		
24	Baseline Seepage ¹⁵⁾	ac-ft.
25	Total Measured Seepage ¹⁵⁾	ac-ft.
26	Net Seepage Volume ^{17) 18)}	ac-ft.
27	Net Seepage Volume - Stonegate	ac-ft.
28	Net Seepage Volume - Castle Pines North	ac-ft.
29	Net Seepage Volume - Castle Rock	ac-ft.
30	Net Seepage Volume - CCPWA	ac-ft.
31	Net Seepage Volume - Denver Pilot Program	ac-ft.
32	Net Seepage Volume - UCCWA	ac-ft.
33	Net Seepage Volume - PWSD	ac-ft.
34	Seepage assigned to the Reusable Return Flow Account	ac-ft.
35	Seepage assigned to the Single Use Account	ac-ft.
36	Seepage assigned to the 03/20/1985 Account	ac-ft.
37	Seepage assigned to the 06/01/1993 Account	ac-ft.
38	Seepage assigned to the 12/31/2004 Account	ac-ft.
39	Seepage assigned to the Lake Gulch Account	ac-ft.
40	Seepage assigned to the Free River Cherry Creek Account	ac-ft.
41	Seepage assigned to the In Priority Newlin Gulch (1993 Priority) Account	ac-ft.
42	Seepage assigned to the In Priority Newlin Gulch (2004 Priority) Account	ac-ft.
43	Seepage assigned to the LIRF Account	ac-ft.
44	Seepage assigned to the Ditches Account	ac-ft.
45	Seepage assigned to the Free River Newlin Gulch Account	ac-ft.
Newlin Gulch Inflows		
47	Daily Measured Change in Storage	ac-ft.
48	Calculated Newlin Gulch Inflow ⁸⁾	ac-ft.
49	Adjusted Newlin Gulch Inflow ⁹⁾	ac-ft.
50	6/1/1993 Account ¹⁰⁾	ac-ft.
51	12/31/2004 Account ¹⁰⁾	ac-ft.
52	Ungauged Losses	ac-ft.
53	Owe the River	ac-ft.

54	Ungauged Losses to Distribute to All Accounts		ac-ft.
55	Ungauged Losses to Distribute to Stonegate		ac-ft.
56	Ungauged Losses to Distribute to Castle Pines North		ac-ft.
57	Ungauged Losses to Distribute to Castle Rock		ac-ft.
58	Ungauged Losses to Distribute to CCPWA		ac-ft.
59	Ungauged Losses to Distribute to Denver Pilot Program		ac-ft.
60	Ungauged Losses to Distribute to UCCWA		ac-ft.
61	Ungauged Losses to Distribute to PWSD Reservoir Contents		ac-ft.
62	Check of Dist Ungauged Losses		ac-ft.
63	Newlin Gulch Out-of-Priority Account		ac-ft.
64	Free River Account		ac-ft.
Inflow Summary			
66	Total Measured PWSD Inflows		ac-ft.
67	Total Measured Partner Inflows		ac-ft.
68	Total Precipitation Inflow		ac-ft.
69	Total Measured Rueter-Hess Reservoir Inflows (w/o Newlin Gulch)		ac-ft.
70	Total Rueter-Hess Reservoir Inflows w/ Calculated Newlin Gulch Inflow		ac-ft.
Augmentation/Exchange Section			
72	Remaining LIRF Credits after Bookover		ac-ft.
73	Remaining Ditch Credits after Bookover		ac-ft.
74	Remaining Reusable Credits after Bookover		ac-ft.
75	LIRF Exchange of Cherry Creek Out-of-Priority		ac-ft.
76	LIRF Augmentation of Alluvial Depletions		ac-ft.
77	LIRF Augmentation of Newlin Gulch Out-of-Priority		ac-ft.
78	LIRF Augmentation of Denver Basin Aug/Replacement		ac-ft.
79	Ditch Exchange of Cherry Creek Out-of-Priority		ac-ft.
80	Ditch Augmentation of Alluvial Depletions		ac-ft.
81	Ditch Augmentation of Newlin Gulch Out-of-Priority		ac-ft.
82	Ditch Augmentation of Denver Basin Aug/Replacement		ac-ft.
83	Reusable Exchange of Cherry Creek Out-of-Priority		ac-ft.
84	Reusable Augmentation of Alluvial Depletions		ac-ft.
85	Reusable Augmentation of Newlin Gulch Out-of-Priority		ac-ft.
86	Reusable Augmentation of Denver Basin Aug/Replacement		ac-ft.
87			
88	LIRFs Remaining after Aug/Exch at Newlin Gulch		ac-ft.
89	Ditch Remaining after Aug/Exch at Newlin Gulch		ac-ft.
90	Reusable Remaining after Aug/Exch at Newlin Gulch		ac-ft.
91	Cherry Creek Out-of-Priority Remaining at Newlin Gulch		ac-ft.
92	Alluvial Depletions Remaining at Newlin Gulch		ac-ft.
93	Newlin Gulch Out-of-Priority Remaining at Newlin Gulch		ac-ft.
94	Denver Basin Aug/ Replacement Volume Remaining		ac-ft.
95	LIRF's Augmentation of Previous Alluvial Depletions		ac-ft.
96	LIRF's Augmentation of Previous Newlin Gulch Out-of-Priority		ac-ft.
97	Ditch Augmentation of Previous Alluvial Depletions		ac-ft.
98	Ditch Augmentation of Previous Newlin Gulch Out-of-Priority		ac-ft.
99	Reusable Augmentation of Previous Alluvial Depletions		ac-ft.
100	Reusable Augmentation of Previous Newlin Gulch Out-of-Priority		ac-ft.
Daily Exchanges of Out of Priority Accounts			
102	PWSD Reusable Return Flow Contents		ac-ft.
103	Out-of-Priority Cherry Creek Contents		ac-ft.
104	Out-of-Priority Newlin Gulch Contents		ac-ft.
105	LIRFs		ac-ft.
106	Ditches		ac-ft.

107	Daily Total		ac-ft.
Bookover Volumes			
109	Available Cherry Creek Inflows		ac-ft.
110	Bookover in 03/20/1985 Cherry Creek Physical Contents		ac-ft.
111	Bookover in 06/01/1993 Cherry Creek Physical Contents		ac-ft.
112	Bookover in 12/31/2004 Cherry Creek Physical Contents		ac-ft.
113	Bookover in Lake Gulch Cherry Creek Physical Contents		ac-ft.
114	Bookover in Out-of-Priority Cherry Creek Contents		ac-ft.
115	Bookover in Free River Cherry Creek Contents		ac-ft.
116	Bookover in Newlin Gulch 1993 Priority Contents		ac-ft.
117	Bookover in Newlin Gulch 2004 Priority Contents		ac-ft.
118	Bookover in Out-of-Priority Newlin Gulch Contents		ac-ft.
119	Bookover in LIRF Contents		ac-ft.
120	Bookover in Ditches Contents		ac-ft.
121	Bookover in Free River Newlin Gulch Contents		ac-ft.
122	Checks for Bookovers Lines		ac-ft.
Partner Swap Volumes			
124	Total Reservoir Contents - From EAC		ac-ft.
125	Stonegate		ac-ft.
126	Castle Pines North		ac-ft.
127	Castle Rock		ac-ft.
128	CCPWA		ac-ft.
129	Denver Pilot Program		ac-ft.
130	UCCWA		ac-ft.
131	PWSD Reusable Return Flow Contents Including Denver Basin		ac-ft.
132	PWSD Single Use Account		ac-ft.
133	03/20/1985 Cherry Creek		ac-ft.
134	06/01/1993 Cherry Creek		ac-ft.
135	12/31/2004 Cherry Creek		ac-ft.
136	Lake Gulch Cherry Creek		ac-ft.
137	Free River Cherry Creek		ac-ft.
138	Newlin Gulch 1993 Priority		ac-ft.
139	Newlin Gulch 2004 Priority		ac-ft.
140	LIRF		ac-ft.
141	Ditches		ac-ft.
142	Free River Newlin Gulch		ac-ft.
143	Total Swapped Into Accounts		ac-ft.
144	Net Swap		ac-ft.
Reservoir Contents			
146	Total Reservoir Contents - From EAC		ac-ft.
147	End Of Day Stonegate - Reservoir Contents		ac-ft.
148	End Of Day Castle Pines North - Reservoir Contents		ac-ft.
149	End Of Day Castle Rock - Reservoir Contents		ac-ft.
150	End Of Day CCPWA - Reservoir Contents		ac-ft.
151	End of Day Denver Pilot Program - Reservoir Contents		ac-ft.
152	End Of Day UCCWA - Reservoir Contents		ac-ft.
153	End Of Day PWSD Reservoir Contents		ac-ft.
154	Cumulative Annual Volume Diverted to RHR under RHR 1985-1993 Priorities		ac-ft.
155	Cumulative Annual Volume Diverted to RHR under the Lake Gulch 1985 Priority		ac-ft.
156	PWSD Reusable Return Flow Contents Including Denver Basin		ac-ft.
157	PWSD Single Use Account		ac-ft.
158	03/20/1985 Cherry Creek Physical Contents		ac-ft.
159	06/01/1993 Cherry Creek Physical Contents		ac-ft.

160	12/31/2004 Cherry Creek Physical Contents		ac-ft.
161	Lake Gulch Cherry Creek Physical Contents		ac-ft.
162	Out-of-Priority Cherry Creek Contents		ac-ft.
163	Free River Cherry Creek Contents		ac-ft.
164	Newlin Gulch 1993 Priority Contents		ac-ft.
165	Newlin Gulch 2004 Priority Contents		ac-ft.
166	Out-of-Priority Newlin Gulch Contents		ac-ft.
167	LIRF Contents		ac-ft.
168	Ditches Contents		ac-ft.
169	Free River Newlin Gulch Contents		ac-ft.
170	Total of Sub Accounts		ac-ft.

Attachment 2: Castle Rock Chatfield Accounting

Castle Rock will store its legally reusable water in the Castle Rock storage account which is currently limited to 590 acre feet total. The legally reusable water is indicated as “Fully Consumable Stored Water” (column “P” in attached Castle Rock accounting) and this is the only ‘color’ of water that Castle Rock will be using for the Reservoir Trade. No native water from Castle Rock’s storage decrees will be used for this pilot. Column “AM” will show water traded to Rueter-Hess Reservoir.

G5		Is 1989 water right in 89CW169 in-priority for storage?																									
		Yellow shaded boxes denote manual entries																									
		ACCO& EXCHANGES																									
		All val1Transit loss is determined by the Water Commissioner to be 7.1% Gray means Inactive																									
		Water Exchanged from Chatfield 12-18-2012 exchange priority for 2nd 1																									
		Inactive Columns Related to Future Chatfield Pump Station																									
		Is 1989 water right in 89CW169 in-priority for storage?																									
		Has first fill under 89CW169 been achieved?																									
		Is 2016 Refill Priority in-priority for diversion or refill?																									
		Town's Fully Consumable Water Released from PCWRA WWTP for Delivery to Chatfield																									
		Transit Loss from PCWRA to Chatfield Res (7.1%)																									
		Fully Consumable Water from PCWRA Diverted into Storage after Transit Loss																									
		From Douglas Park and Ball Ditch Fully Consumable Water per 09CW166 after Transit Loss																									
		From Noe Ranch Fully Consumable Water per 09CW166 after Transit Loss																									
		From High Line Fully Consumable Water per 09CW166 after Transit Loss																									
		Total Fully Consumable Water (Total of the Prior 4 Columns)																									
		89CW169 (1989 priority) Diverted into Storage																									
		16CW3178 (2016 refill priority) Diverted into Storage																									
		Total Diverted into Storage																									
		Stored Fully Consumable Water to Future Chatfield Pump Station																									
		89CW169 Stored Water to Future Chatfield Pump Station																									
		16CW3178 Refill Stored Water to Future Chatfield Pump Station																									
		16CW3178 Direct Flow Water to Future Chatfield Pump Station																									
		Total Delivery to Future Chatfield Pump Station																									
		Stored Fully Consumable Water Exchanged																									
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Castle Rock accounting [Read-Only] - Excel

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2		ACCC																						
3		All val													*									
4			ek Diversion - 31-2015 priority	Water Exchanged from Chatfield to CR-1 Diversion - 12-18-2012 exchange priority for 1st 15 cfs; 8-31-2015 priority for 2nd 15 cfs			Inactive - Fully Consumable Water Released from Chatfield Reservoir								Evaporation - Data Taken from the Joint Chatfield Reallocation Accounting Spreadsheet				Miscellaneous Seepage, Other Losses, or Inflows - Data Taken from the Joint Chatfield Reallocation Accounting Spreadsheet (positive numbers mean gain in storage)				End-of-Day Storage in Castle Numbers must Match the J	
5			Total Water Exchanged to Plum Creek Diversion	Stored Consumable Water Exchanged	89CW169 (1989 priority) Exchanged	16CW3178 Refill Priority Exchanged	Total Water Exchanged to CR-1 Diversion	For Exchange to Plum Cr Diversion for Storage in Castle Rock Res No. 2	For Exchange to CR-2	For Exchange to CR-3	For Exchange to S-1	For Exchange to S-2	Inactive Column - Water Released for ___ Purpose	Fully Consumable Water traded to Rueter-Hess Reservoir	Fully Consumable Stored Water	1989 Storage Priority	2016 Refill Priority	Total Evaporation	Fully Consumable Stored Water	1989 Storage Priority	2016 Refill Priority	Total Miscellaneous Gains or Losses	Fully Consumable Stored Water	1989 Stor Priority
6		WDID																						
7		DATE																					0.00	0.00
136	SEP	1	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
137		2	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
138		3	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
139		4	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
140		5	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
141		6	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
142		7	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
143		8	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
144		9	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
145		10	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
146		11	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
147		12	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
148		13	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
149		14	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
150		15	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
151		16	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
152		17	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
153		18	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
154		19	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
155		20	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
156		21	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
157		22	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
158		23	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00
159		24	0.00	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	206.40	0.00

Fully Consumable Water will go into Column AM

Attachment 3: Denver Water Chatfield Accounting

For this pilot program, Denver Water will use water from its Reuse Effluent SP account in Strontia Springs Reservoir (See Strontia Springs Reservoir Operations pages). When entering foothills on the Water Distribution in South Platte Canyon accounting pages, it will show up as a new account called “Pilot Plan Account” into Foothills Treatment Plant to keep it separate from other Reuse Effluent SP water. The Chatfield Reservoir Operations accounting will also have a new storage account called “Pilot Plan Account”. This is the account where water will enter when traded with Castle Rock. Once the pilot project is completed, Pilot Plan Account water will be booked back into the Reuse Effluent SP water storage account at Chatfield Reservoir and subsequently put to beneficial use by Denver Water.

Strontia Springs Reservoir Operations

evaporation rate (ft/month):

Effective precip. factor: 0.70

Denver Water

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[illegible]

Strontia Springs Reservoir Operations

evaporation rate (ft/month):

Effective precip. factor:

0.70

Denver Water

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November 2019	S/D	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	29	30	31	total	AF
Centennial Englewood																																	0.00	0.00
Wellington/Duck Lake																																	0.00	0.00
Aurora:UpstreamRts		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Roberts Tunnel to Aurora [9]																																	0.00	0.00
Thornton:UpstreamRts		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Denver TOTAL		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily TOTAL		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
Authorized Outflow, (CFS):		(from Water Distribution in South Platte Canyon sheet)																																
Strontia Springs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Strontia05		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antero1907		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antero1929		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
So.Park Transfer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Eleven Mile		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cheesman		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Roberts Tunnel		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fraser/Jones		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chatfield		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reuse Effluent CR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reuse Effluent SP		2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20
LIRF CR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LIRF SP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bear Creek Transfer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S Complex		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Surcharge		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Denver TOTAL		2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20
Centennial Englewood		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Wellington/Duck Lake		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Aurora:UpstreamRts		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Thornton:UpstreamRts		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Non-Denver TOTAL		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Daily TOTAL		2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20

Strontia Springs Reservoir Operations

evaporation rate (ft/month):

Effective precip. factor: 0.70

Denver Water

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[illegible]

Strontia Springs Reservoir Operations

evaporation rate (ft/month):

Effective precip. factor: 0.70

Denver Water

November 2019	S/D	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	29	30	31	total	AF
<u>Administrative Account, (AF):</u>		[(+) Reservoir "owes" river, (-) River "owes" reservoir]																																
	Today	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
	Cumulative	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	*																																	
November 2019	S/D	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	29	30	31	total	AF

Call Changes

Change Date	Time	Call Date	Structure	Placed By	Comments
Carryover					

DATE LAST SAVED:
10/8/2020

- NOTES:
- 1. S/D specifies SOURCE or DESTINATION of water. Abbreviations: AN=ANTERO, EM=ELEVEN MILE, CM=CHEESMAN, CF=CHATFIELD, SS=STRONTIA, RT=ROBERTS TUNNEL, RE=REUSABLE EFFLUENT R=RIVER, SP=S.PARK TRANSFER, M=METRO SEWER, SU=SURCHARGE, SL=SODA LAKES, BC=BI-CITY WASTEWATER TREATMENT PLANT, RL=RALSTON, JP=JONES PASS, BR=Bear Creek, SN=SUNCOR
 - 2. All calculations and listings, with the exception of Aurora's authorized inflow, are based upon a 24 hour period from 8:00 a.m. on shown day to 8:00 a.m. on the following day, including weather data. The figures shown for Aurora's authorized inflow are on a midnight-to-midnight basis.
 - 3. All figures in CFS unless otherwise indicated.
 - 4. If precipitation occurs on a day when an evaporation release is required, a "precipitation credit" is claimed. This credit cannot exceed the physical evaporation and it reduces the required evaporation release.
 - 5. If there is a DW Intake call on, and free-river below Intake, SS is shown in-priority. Storage rights at SS are only claimed if there is water in excess of senior rights. Intake call is removed if satisfied.
 - 6. Discontinued rounding calculated figures to integers on 1/1/2008.
 - 7. After extensive discussions, SEO and DW: Starting August 1, 2009, Division on began assessing carriage losses of .25 percent per mile on DW deliveries from Strontia to Conduit 20, the High Line Canal and Chatfield. Also on August 1, 2009 the method for adjusting negative Chatfield gains was modified based on discussions between DW and Division 1 personnel. The new method focuses on adjusting the Strontia outflow downward when the gain is negative and the computed inflow at Waterton exceeds the actual flow at the Waterton Gage.
 - 8. Denver Water began performing its "East Slope" accounting to 2 decimal place accuracy in July, 2008 as requested by Division 1. However, in some cases, streamflow data from the State's website may be reported using fewer than 2 decimal places. Denver uses the streamflow data as it is reported by the State.
 - [9] Occasionally, Aurora water destined for Strontia is stored in DW's pool in Eleven Mile or Cheesman Reservoir. When this happens, DW delivers Roberts Tunnel water to Aurora to compensate. This row shows the amount of that compensation.
 - 10. Reuter-Hess Pilot Plan water deliverd from South Platte Reusable Effluent stored in Strontia Springs Reservoir to ECCV Pipeline via Foothills WTP.

Water Distribution in South Platte Canyon

Denver Water

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November 2019		S/D	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	29	30	31	total	AF	
Waterton Gage,cfs																																	0	0		
Misc Computed Streamflows																																				
Between Cond20 and HL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Between High Line and LC			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Computed Waterton			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Direct Rights, (CFS)																																				
Denver Intake																																				
SS Natural Inflow			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Denver Direct Rt																																	0.00	0.00		
Strontia05																																	0.00	0.00		
Denver Water Distribution, (CFS)																																				
To Foothills:																																				
Intake Direct Rt																																	0	0		
Antero1907																																	0	0		
Antero1929																																	0	0		
So.Park Transfer																																	0	0		
Eleven Mile																																	0	0		
Cheesman																																	0	0		
Roberts Tunnel																																	0	0		
Fraser/Jones																																	0	0		
Strontia																																	0	0		
Chatfield																																	0	0		
Reuse Effluent CR																																	0	0		
Reuse Effluent SP																																				
LIRF CR																																				
LIRF SP																																				
Bear Creek Transfer																																	0	0		
S Complex																																				
Surcharge																																	0	0		
Pilot Plan Account			2.00	2.00	2.00	2.00	2.00	0.00																												
Other																																	0	0		
Total		*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0		
			2.00	2.00	2.00	2.00	2.00																													
To Conduit 20:																																				
C20 to Marston (excl CF water)																																	0.00	0.00		
To C20 from Div Dam			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
To C20 from LC Pump																																	0.00	0.00		
To C20 from PC																																	0.00	0.00		
To Platte Canyon																																	0.00	0.00		
To PC from Div Dam																																	0.00	0.00		
To PC from LC Pump																																	0.00	0.00		
Total River to Marston/PC			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
			Don't forget Brown Ditch rights (May - Aug)																														Don't forget Brown Ditch rights (May - Aug)			

Water Distribution in South Platte Canyon
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Denver Water

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[illegible]

Water Distribution in South Platte Canyon
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Denver Water

November 2019	S/D	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	29	30	31	total	AF
To Chatfield:																																		
Intake Direct Rt																																0	0	
Antero1907																																0	0	
Antero1929																																0	0	
So.Park Transfer																																0	0	
Eleven Mile																																0	0	
Cheesman																																0	0	
Roberts Tunnel																																0	0	
Fraser/Jones																																0	0	
Strontia																																0	0	
Chatfield																																0	0	
Reuse Effluent CR																																0	0	
Reuse Effluent SP																																		
LIRF CR																																		
LIRF SP																																		
Bear Creek Transfer																																0	0	
S Complex																																		
Surcharge																																0	0	
Other																																0	0	
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Evaporation		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Precip. Credit		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evaporation Release		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
To Aurora for WISE Blend Water:																																0	0	
So.Park Transfer																																0	0	
Roberts Tunnel																																0	0	
Reuse Effluent CR																																0	0	
Reuse Effluent SP																																0	0	
LIRF CR																																0	0	
LIRF SP																																0	0	
Bear Creek Transfer																																0	0	
S Complex																																0	0	
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Denver Deliveries:																																		
High Line Rights		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Intake Direct Rt		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Marston		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antero1907		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antero1929		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
So.Park Transfer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Eleven Mile		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cheesman		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Roberts Tunnel		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fraser/Jones		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Strontia		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chatfield		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reuse Effluent CR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reuse Effluent SP		2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20
LIRF CR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LIRF SP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bear Creek Transfer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S Complex		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Surcharge		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Distribution in South Platte Canyon

Denver Water

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[illegible]

Water Distribution in South Platte Canyon

Denver Water

November 2019	S/D	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	29	30	31	total	AF	
<u>Aurora Water Distribution:</u>																																			
To Rampart Reservoir Augmentation Release		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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																																			
Source of Aurora Water:																																			
Direct Rights + Exchange From Storage		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November 2019	S/D	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	29	30	31	total	AF	

Call Changes

Change Date	Time	Call Date	Structure	Placed By	Comments
Carryover					

DATE LAST SAVED:
10/8/2020
Conduit 20 caretaker
Conduit 20 trickle

NOTES:

1. S/D specifies SOURCE or DESTINATION of water. Abbreviations: AN=ANTERO, EM=ELEVEN MILE, CM=CHEESMAN, CF=CHATFIELD, SS=STRONTIA, RT=ROBERTS TUNNEL, RE=REUSABLE EFFLUENT, SP= SOUTH PARK TRANSFER, R=RIVER, M=METRO SEWER, SU=SURCHARGE, SL=SODA LAKES, CT=CENTENNIAL,EW=ENGLEWOOD, BP=BOREAS PASS, SN=SUNCOR
2. All calculations and listings, with the exception of Aurora's authorized inflow, are based upon a 24 hour period from 8:00 a.m. on shown day to 8:00 a.m. on the following day, including weather data. The figures shown for Aurora's authorized inflow are on a midnight-to-midnight basis.
3. NR denotes "No Reading"
4. All figures in CFS unless otherwise indicated.
10. Reuter-Hess Pilot Plan water deliverd from South Platte Reusable Effluent stored in Strontia Springs Reservoir
6. "Denver Direct Rt" shows Denver's direct rights at Intake at 8 a.m. on the indicated day assuming sufficient natural flow and demand. This row does not include Brown Ditch rights.
7. Discontinued rounding calculated figures to integers on 1/1/2008.
8. Reuter-Hess Pilot Plan water deliverd from South Platte Reusable Effluent stored in Strontia Springs Reservoir

Chatfield Reservoir Operations

Pan Evaporation Rate (feet/month): 0.09

Effective Precip Factor: 0.70

Denver Water

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[illegible]

Chatfield Reservoir Operations

Pan Evaporation Rate (feet/month): 0.09

Effective Precip Factor: 0.70

Denver Water

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[illegible]

Chatfield Reservoir Operations

Pan Evaporation Rate (feet/month): 0.09

Effective Precip Factor: 0.70

Denver Water

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[illegible]

Chatfield Reservoir Operations

Pan Evaporation Rate (feet/month): 0.09

Effective Precip Factor: 0.70

Denver Water

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November 2019	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	29	30	31	total	AF	
Authorized Change in Storage. (AF):																																		
Chatfield75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Chatfield77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Antero1907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Antero1929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
South Park Transfer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Eleven Mile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cheesman	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22		
Roberts Tunnel	0	-10	-6	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Fraser/Jones	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Strontia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Reuse Effluent CR	-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Reuse Effluent SP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
LIRF CR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
LIRF SP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bear Creek Transfer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Platte Canyon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Reallocation	1	0	0	0																														
Pilot Plan Account	0	0	0	0	0	20																												
Daily TOTAL	-1	-10	-6	-7	0	0	0																											

Chatfield Reservoir Operations

Pan Evaporation Rate (feet/month): 0.09

Effective Precip Factor: 0.70

Denver Water

November 2019	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	29	30	31	total	AF
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Call Changes

Change Date	Time	Call Date	Structure	Placed By	Comments
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Carryover

DATE LAST SAVED:
10/8/2020

NOTES:

1. RESERVOIR ELEVATION, SURFACE AREA , STORAGE AND OUTFLOW FROM STATE SATELLITE MONITORING SYSTEM.
2. S/D specifies SOURCE or DESTINATION of water. Abbreviations: AN=ANTERO, EM=ELEVEN MILE, CM=CHEESMAN, CF=CHATFIELD, SS=STRONTIA SPRINGS, RT=ROBERTS TUNNEL, SP= SOUTH PARK TRANSFER, R=RIVER, M=METRO SEWER, OU=OTHER USES, R=RIVER, M=METRO SEWER, SU= SURCHARGE, SL=SODA LAKES, EW=ENGLEWOOD, BC=BI-CITY WWTP, LE=RAW WATER LEASES, CT=Centennial, CD=CITY DITCH, Con: NV=Nevada Ditch return flow, LC=Last Chance #2 return flow, GR=GROSS, BR=BEAR CREEK, RF= Return Flow requirement, SN=SUNCOR.
3. All calculations and listings are based upon a 24 hour period from 8:00 a.m. on shown day to 8:00 a.m. on the following day.
4. "Precipitation Credit" is the volume of precipitation that could be used to offset a required evaporation release. It is calculated even when Chatfield is in priority so the Chatfield gain and required release can be calculated on the Checksheet.
5. After extensive discussions, SEO and DW: Starting August 1, 2009, Division on began assessing carriage losses of .25 percent per mile on DW deliveries from Strontia to Conduit 20, the High Line Canal and Chatfield. Also on August 1, 2009 the method for adjusting negative Chatfield gains was modified based on discussions between DW and Division 1 personnel. The new method focuses on adjusting the Strontia outflow downward when the gain is negative and the computed inflow at Waterton exceeds the actual flow at the Waterton Gage.
6. Discontinued rounding calculated figures to integers on 1/1/2008.
7. Chatfield Area Curve Updated with data from the State on December 26, 2013. See \\denverwater.org\shares\Rwscom\CF\Chatfield AC Table 2011.xls
8. New Full acre-feet is 27,076, the elevation remains the same.
9. Reuter-Hess Pilot Plan water deliverd from South Platte Reusable Effluent stored in Castle Rock's Chatfield Reservoir Account