COLORADO
Division of Water Resources
Department of Natural Resources

June 29, 2023

Peter Wayland
Weiland, Inc.
PO Box 18087
Boulder, CO 80308

Re: Coulson Excavating Company Combined Substitute Water Supply Plan (WDID 0402560)
Plan IDs 3051, 3262, 3313, 4709, 5511, and 6167
Water Division 1, Water District 4, Weld and Larimer Counties

Approval Period: January 1, 2023 through December 31, 2023
Contact information for Mr. Wayland: 303-443-9521; pwayland@weilandinc.com

Dear Mr. Wayland:

We have reviewed your letter dated December 5, 2022 requesting renewal of a substitute water supply plan ("SWSP") in accordance with section 37-90-137(11), C.R.S., and the updates provided in April 2023 and May 2023, to cover depletions caused by sand and gravel mining operations at multiple mine sites operated by Coulson Excavating Company, Inc. ("Coulson" or "Applicant"). This request proposes to replace depletions to the Big Thompson River resulting from current and past mining operations at the six (6) sites specified in Table A below. Each of these sites were previously included in individual SWSPs. The required fee of $1,542 (6 sites × $257/site renewal fee) has been received (receipt nos. 10026006-10026011).

Table A - Pit Overview

Site Name	DRMS Permit No.	WDID	Current Well Permit No.	New Permit Required?	Exposed Surface Area (acres)
Brownwood Pit	M-1979-059	0403014	88260-F	No	15.2
Challenger Pit	M-1985-026	0403018	83868-F	No	22.7
Kirtright Pit	M-1986-123	0403017	76931-F	No	13.01[a]
Gardels Pit	M-2005-033	0403019	78896-F	No	8.8
Bonser Pit	M-2000-156	0403021	77571-F	No	22.18[b]
Amen Aggregate Resource Pit	M-2019-025	0405781	84303-F	No	1.74

[a]An additional 0.76 acres of groundwater were exposed to the atmosphere at the Kirtright Pit prior to January 1, 1981, and do not require replacement under this SWSP.
[b]An additional 9.93 acres of groundwater were exposed to the atmosphere at the Bonser Pit prior to January 1, 1981, and do not require replacement under this SWSP.

The general location for each of the mining sites is identified in Table B below and depicted on the attached "Figure 1—Site Locations".

Table B – Pit Locations

Site Name	Location
Brownwood Pit	Sections 19 & 20, T5N, R68W
Challenger Pit	Section 29, T5N, R67W
Kirtright Pit	Section 15, T5N, R68W
Gardels Pit	Section 19, T5N, R68W
Bonser Pit	Sections 15 & 16, T5N, R68W
Amen Aggregate Resource Pit	Section 19, T5N, R67W

A summary of the mining operations at each of the six sites included in this substitute water supply plan is provided below:

Brownwood Pit

Status: Resource extraction and reclamation activities at the Brownwood Pit are complete. There are two unlined reservoirs located on the site. There is a lined reservoir, the Brownwood South East Reservoir, located on the site. The Brownwood South East Reservoir was approved as having been lined to the designed standard referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits in a letter dated October 4, 2012. The site is anticipated to be released from the DRMS permit upon approval of an augmentation plan by the water court. Depletions covered under this SWSP are limited to evaporation from exposed groundwater surface areas.
Exposed Groundwater Surface: 15.2 acres
Active Dewatering: No

Challenger Pit

Status: Resource extraction and reclamation activities at the Challenger Pit are complete. There are three unlined ponds located at the Challenger Pit property. The site is anticipated to be released from the DRMS permit upon approval of an augmentation plan by the water court. Depletions covered under this SWSP are limited to evaporation from exposed groundwater surface areas.
Exposed Groundwater Surface: 22.7 acres
Active Dewatering: No

Kirtright Pit

Status: Resource extraction and reclamation activities at the Kirtright Pit are complete. There are three unlined ponds located at the Kirtright Pit property. The site is anticipated to be released from the DRMS permit upon approval of an augmentation plan by the water court. Depletions covered under this SWSP are limited to evaporation from exposed groundwater surface areas. The total surface area of groundwater exposed at the site is 13.77 acres, of which 0.76 acres were exposed to the atmosphere prior to January 1, 1981 (“pre-81”). According to previous information received by this office, a total of 2.99 acres of groundwater surface area was exposed within the Kirtright Pit reclamation permit boundary prior to January 1, 1981. Of those 2.99 acres, only 0.76 acres remain exposed. The 0.76-acre area exposed at the Kirtright Pit prior to 1981 is tied to the location as shown on the attached Figure 2—Exposed Groundwater Areas Kirtright Pit. The credits for the pre-81 area are tied to the location identified on that map and may not be re-allocated to other areas of groundwater exposure within the gravel pit permit boundary.
Exposed Groundwater Surface: 13.01 acres post-80, 0.76 acres pre-81
Active Dewatering: No

Gardels Pit

Status: Resource extraction and reclamation activities at the Gardels Pit are complete. There are two unlined reservoirs located on the site. There is a lined reservoir, the Gardels West Reservoir, located on the site. The Gardels West Reservoir was approved as having been lined to the designed standard referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits in a letter dated October 4, 2012. The site is anticipated to be released from the DRMS permit upon approval of an augmentation plan by the water court. Depletions covered under this SWSP are limited to evaporation from exposed groundwater surface areas.
Exposed Groundwater Surface: 8.8
Active Dewatering: No

Bonser Pit

Status: Resource extraction at the Bonser Pit is complete and reclamation activity is underway. There are seven unlined ponds and a settling pond located at the Bonser Pit property. Depletions covered under this SWSP are limited to evaporation of evaporation from exposed groundwater surface areas and lagged depletions from the cessation of dewatering and "first fill" of the ponds. The total surface area exposed at the site is 32.11 acres, of which 9.93 acres were exposed to the atmosphere prior to January 1, 1981. The 9.93-acre area exposed at the Bonser Pit prior to 1981 is tied to the location as shown on the attached Figure 2— Exposed Groundwater 2011 Bonser Pit. The credits for the pre-1981 area are tied to the location identified on that map and may not be re-allocated to other areas of groundwater exposure within the gravel pit permit boundary.
Exposed Groundwater Surface: 22.18 acres post-80, 9.93 acres pre-81
Active Dewatering: Yes

Amen Aggregate Resource Pit

Status: Applicant intends to continue to actively mine the Amen Aggregate Resource Pit during this plan period. Depletions covered by this SWSP include water lost due to evaporation from exposed groundwater surface areas, aggregate production, slurry wall construction, and dust control.
Exposed Groundwater Surface: 1.18 acres maximum anticipated during plan period
Active Dewatering: Yes

Depletions

The lagged depletions resulting from evaporation, water lost in mined product, dust control, and dewatering operations at each site are shown in Table C below:

Table C – Depletion Summary (all amounts in acre-feet)

Site Name	Evaporation	Water Lost in Mined Product	Dust Control	Total CU	Lagged Depletions	Lagged Depletions from First Fill[a]	Lagged Dewatering Depletions Impacting the River	Total Lagged Depletions
Brownwood Pit	33.64	0	0	33.64	33.64	0	0	33.64
Challenger Pit	52.77	0	0	52.77	52.77	0	0	52.77
Kirtright Pit	27.96	0	0	27.96	27.96	0	0	27.96
Gardels Pit	19.47	0	0	19.47	19.47	0	0	19.47
Bonser Pit	49.92	0	0	49.92	49.92	1.83	2.86[b]	54.61
Amen Aggregate Resource Pit	1.72	9.08	6.48	17.28	16.40	0	0[c]	16.40
Total	--	--	--	--	209.47	1.83	2.86	214.16

[a] Lagged Depletions from First Fill, as shown in the table, are depletions resulting from water removed from the stream system as water fills an unlined gravel pit and occupies the volume previously occupied by the removed sand and gravel. The first fill for any administrative period is calculated pursuant to the method outlined in State Engineer's *General Guidelines for Substitute Water Supply Plans for Sand and Gravel Pits*.
[b] Lagged Dewatering Depletions Impacting the River, as shown in the table, are depletions from past dewatering operations that have ceased but continue to impact the stream system.
[c] So long as the pit is continuously dewatered, the water returned to the stream system is considered to be adequate to offset depletions attributable to the dewatering.

Gross evaporation for each site was obtained from atlases in NOAA Technical Report NWS 33, distributed monthly according to the State Engineer's *General Guidelines for Substitute Water Supply Plans for Sand and Gravel Pits* for gravel pits at elevations below 6,500 feet. Net evaporation may be used in calculating the volume of water lost to evaporation from groundwater exposed by sand and gravel mining operations. Net evaporation is defined as gross evaporation less the consumptive use of water by vegetation that naturally occurred at the site prior to construction of the pits. The historical consumptive use credit for native vegetation was assumed to be equal to the effective precipitation, which was estimated based on the data from the Loveland NCWCD weather station (1989-2018).

Based on monthly average temperatures reported for the Loveland NCWCD weather station, ice cover was assumed for the months of December and January. The ice covered periods may be used to reduce the amount of evaporative losses that need to be replaced; however, for the purpose of this SWSP, the Applicant shall replace the net evaporation depletions from the exposed groundwater surface area that may occur during the ice covered period (December and January) for any time that a pit is not completely covered by ice. Computation of the net evaporation during any time that a pit is not completely covered by ice shall be determined as the pro-rata amount of the monthly gross evaporation rate distribution amount identified in the State Engineer's *General Guidelines for Substitute Water Supply Plans for Sand and Gravel Pits*, subtracting the pro-rata amount of the effective precipitation for that period.

The IDS AWAS stream depletion model, which uses the Glover method, was used to calculate the lagged depletions to the river. The Glover method uses four aquifer input parameters for each site as follows: 1) X - distance (ft) from centroid of exposed groundwater to river, 2) W - distance (ft) from the aquifer boundary through the centroid to the river channel, 3) T - transmissivity of the alluvial aquifer (in gallons per day per foot) between the site and the river, and 4) S - specific yield (0.2 was used for all sites). The parameters used in the model for each site are given in Table D below.

Table D – Aquifer Characteristics

Site Name	Pond Name	T (gal/day/ft)	X (ft)	W (ft)
Brownwood Pit	Pond 1	40,137	633	4,171
	Pfeif Addition	20,000	807	1,400
Challenger Pit	Pond 1	40,000	653	1,700
	Pond 2	40,000	641	1,700
	Pond 3	40,000	424	1,700
Kirtright Pit	Pond 1	20,115	1,126	3,500
	Pond 2	20,115	1,705	3,500
	Pond 3	20,115	1,440	3,500
	Pond 4	20,115	1,436	3,500
Gardels Pit	Pond 1	20,000	410.5	770
	Pond 2	20,000	254.7	770
Bonser Pit	Pond 1	25,000	971	3,000
	Pond 2	25,000	1,466	3,000
	Pond 3	25,000	2,081	3,000
	Pond 4	25,000	332	3,000
	Sediment Pond	25,000	588	3,000
Amen Aggregate Resource Pit	-	40,000	395	2,180

Depletions from each site/pond are assumed to impact the Big Thompson River at a point perpendicular to the site/pond.

Replacements

Table E – Replacement Sources

Replacement Sources	Projected Yield (acre-feet)	Comments
Hill and Brush Ditch	120.37	19 shares
Big Thompson Ditch and Manufacturing Co. Ditch	27.64	⅝ shares total; 0.318 shares to be used for replacement purposes in this SWSP
City of Loveland	100	Lease

Note: Actual 2023 yield may vary from projected yields due to the computed return flow obligations based on the previous year's actual water deliveries.

Hill & Brush Ditch

The Hill & Brush Ditch (WDID 0400522) was decreed in 1866 for 61.801 cfs, of which 34.801 cfs was abandoned in case no. 84CW204, leaving 27.0 cfs. The historical point of diversion is located in the NE ¼ of Section 24, T5N, R68W, 6th P.M. There are a total of 128 shares in the Hill & Brush Ditch.

The Applicant has proposed to rely on a historical consumptive use analysis prepared by Williams and Weiss Consulting for the pending Division 1 Water Court application, case no. 19CW3157. A study period of 1955-1986 was selected. A review of the irrigation practices at the Pfeif/Challenger Farm indicates that a total of 26 shares of the Hill & Brush Ditch were used to irrigate approximately 114.5 acres between 1955 and 1968, 115.1 acres between 1969 and 1981, and 112.1 acres between 1982 and 1986. Irrigated crops included silage corn, alfalfa, barley, and pasture grass. The historical consumptive use was estimated using the Modified Blaney-Criddle methodology in the IDS Consumptive Use Model, using the average monthly diversion from 1955 through 1986. A 15% ditch loss was determined for the Hill & Brush Ditch based on discussions with the Hill and Brush Ditch superintendent and former tenant. The corn was irrigated using a row and furrow system, and the Applicant has claimed a maximum irrigation efficiency of 65% for the row and furrow system. The pasture grass, barley, and alfalfa crops were flood irrigated with bermed borders. The Applicant has claimed a maximum irrigation efficiency of 55% for the flood irrigated crops. Temperature and precipitation data were taken from the Fort Collins weather station. For the purposes of this SWSP approval, the claimed maximum irrigation efficiencies will be accepted.

Of the irrigation water historically applied to the farm, a portion ran off the fields (surface return) and a portion seeped into the ground below the root zone of the crops (deep percolation). Return flows were assumed to consist of 55% surface return flow and 45% deep percolation. The timing of surface return flows was assumed to be instantaneous to the stream system. The timing of deep percolation return flows was estimated using the AWAS model with the alluvial aquifer boundary condition option and the following aquifer parameters: transmissivity (T) = 35,062 gallons per day per foot, specific yield (SY) = 0.2, the distance from the centroid of the farm to the stream (X) = 694 feet, and the location of the parallel impermeable boundary (W) was estimated to be 1,700 feet from the stream.

Water in excess of the crop irrigation requirement was added to the soil moisture bank, which was determined to have a water holding capacity of 1.65 inches/foot based on a weighted average of soil types. The depth to groundwater, based on monitoring wells in the vicinity, is estimated to be 6-7 feet in areas planted with corn, alfalfa, and barley and 4 feet in the areas planted with pasture grass. The crop irrigation requirement for the fields of pasture grass and alfalfa were reduced to account for the groundwater above the rooting depth of the crops. The crop irrigation requirement was reduced by 20% for pasture grass and 15% for alfalfa. Total return flow obligations from the use of the 26 shares were calculated as 182.90 acre-feet by subtracting the historical consumptive use from the pro-rata amount of diversions available at the farm headgate.

The results of the historical consumptive use ("HCU") analysis for the 26 Hill & Brush Ditch shares are summarized in Table F below.

Table F - HCU results for the 26 Hill and Brush Ditch shares (all amounts in acre-feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
River Diversion	0	0	0	0	40.24	115.30	152.48	82.54	17.04	2.52	0	0	410.12
Farm Headgate Delivery	0	0	0	0	34.20	98.01	129.61	70.16	14.48	2.15	0	0	348.60
Consumptive Use	0	0	0	0	16.19	46.62	60.77	34.89	6.24	1.01	0	0	165.70
Total Return Flows	0	0	0	0	18.02	51.39	68.84	35.26	8.25	1.13	0	0	182.90

The historical accretions/depletions for Coulson's 19 shares were prorated from the 26 shares, and the HCU for the 19 shares was determined to be 121.09 acre-feet with a total of 133.66 acre-feet of return flow obligations. The applicant has estimated that a farm headgate delivery of 142.55 acre-feet will be required for replacement purposes as part of this SWSP. The monthly and annual volumetric limits for the farm headgate deliveries are shown in Table G below. For the purposes of this SWSP, diversions are limited to the period of April through September. The monthly return flow requirement for the months of October through April must be determined by multiplying the monthly return flow factor shown below in Table H by the total delivery during the previous 12 months. Monthly results shall be divided by the number of days in that month to determine the daily return flow obligation. The daily return flow requirement for the months of May through September will be determined by multiplying the daily delivery of the 19 Hill & Brush shares by the monthly return flow factor shown in Table H. Return flow obligations from the use of these shares are owed to the river at approximately the same location as they historically accrued to the river. After accounting for return flow obligations, the total consumptive use credit for 2023 is projected to be approximately 67.86 acre-feet.

Table G - Maximum Farm Headgate Delivery and Consumptive Use Credit for 19 Hill & Brush Shares (acre-feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum Farm Headgate Delivery	0	0	0	0	24.99	71.62	94.71	51.27	10.58	0	0	0	253.17
Maximum Consumptive Use Credit	0	0	0	0	11.83	34.07	44.41	25.50	4.56	0	0	0	120.37

Table H - Monthly Return Flow Factors for the Hill & Brush Shares

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Return Flow Factors	0.32%	0.18%	0.09%	0.05%	37.90%	40.17%	44.63%	55.82%	121.36%	2.26%	1.11%	0.60%

For the proper administration of this SWSP, adequate measuring devices acceptable to the water commissioner must be installed. This SWSP will not allow any historical consumptive use credits from these shares to be applied to this SWSP until such time as these shares are adequately diverted, measured, recorded, and accounted for to the satisfaction of the water commissioner. If the Applicant intends to use the Hill & Brush Aug Return (WDID 0402811) located in the SW ¼ of the SW ¼ of Section 20, T5N, R67W of the 6th P.M., the Applicant must coordinate with the water commissioner to ensure this structure accurately measures and records the flow of water. **If at any time the water commissioner determines that the augmentation return structure is not accurately measuring and recording the flow of water, the water commissioner will not authorize the use of that structure.**

Big Thompson Ditch and Manufacturing Co.

The Big Thompson Ditch and Manufacturing Co. ("BTDM") Ditch (WDID 0400503) was decreed in the general adjudication decree entered in Boulder County by the District Court on May 28, 1883 four priority dates for a total of 146.25 cfs. Subsequent to the original adjudication, portions of the BTDM water rights have been transferred out of the ditch and have reduced the amount available for diversion at the headgate to 64.56 cfs. The original point of diversion was located in the SE ¼ of the

NW ¼ of the SE ¼, Section 15, T5N, R69W, 6th P.M. Following a flood in 1981, the point of diversion was changed and then subsequently corrected to a point located in the NE ¼ of the SW ¼, Section 15, T5N, R69W, 6th P.M. There are a total of 20.792 shares in the Big Thompson Ditch and Manufacturing Co. For this SWSP, Coulson has chosen to rely on the historical consumptive use analysis of the BTDM ditch conducted for water court case no. 02CW392. Case no. 02CW392 relied on a ditch-wide analysis of the 20.792 total shares in the BTDM ditch. Based on a study period of 1920 through 1979, the water court found that the average annual gross river diversion was 3,753.8 acre-feet per year, or 180.54 acre-feet per share. The ditch-wide analysis determined that the average annual historical consumptive use of the BTDM water rights was 1,908.2 acre-feet or 91.78 acre-feet per share, assuming a conveyance loss of 15% and a farm efficiency of 60%.

For Coulson's 0.318 shares dedicated to this SWSP, the total average annual consumptive use would therefore be equal to 29.19 acre-feet per year and 54.63 acre-feet of total deliveries. The monthly and annual volumetric limits of the farm headgate deliveries are shown in the table below. Paragraph 9.3.6 of the 02CW392 decree limited future farm headgate deliveries to 5,066.56 acre-feet per share in any consecutive 30-year period, which equates to an annual diversion limit of 168.885 acre-feet per share or 53.705 acre-feet for the subject 0.318 shares. In addition, Paragraph 9.3.9 of the 02CW392 decree limited diversions during May to 200.122 acre-feet for any consecutive ten-year period, which equates to a monthly diversion limit of 6.36 acre-feet for the subject 0.318 shares. Therefore deliveries of the 0.318 shares under this SWSP are limited to a 6.36 acre-feet in May and a one-year limit of 53.705 acre-feet.

Table I - Maximum Monthly and Annual Farm Headgate Diversions for 0.318 BTDM Shares

Month	Maximum Monthly Diversion (acre-feet)
May	6.36
June	12.87
July	16.84
August	12.83
September	5.61
Annual	53.705

The decree entered in case no. 02CW392 limited diversions to the historical diversion period of May 1 through September 30. The ditch-wide analysis utilized a return flow split of 50% surface and 50% subsurface return flows. The historical return flows associated with the 0.318 shares that are the subject of this SWSP shall be maintained in accordance with the return flow factors identified in case no. 02CW392 and restated below.

During the months of May through September, the Applicant will calculate the return flow obligations using the percentages shown in Table J below.

Table J - Diversion Season Return Flow Requirements

Month	May	June	July	August	September
Percentage	38.0%	32.7%	31.2%	37.9%	61.8%

During the months of October through April, the Applicant will calculate the return flow obligations by multiplying the previous irrigation season's total diversion of the 0.318 BTDM shares by the percentages shown in Table K below.

Table K - Non-Diversion Season Return Flow Requirements

Month	October	November	December	January	February	March	April
Percentage	0.1%	2.5%	2.0%	1.7%	1.4%	1.1%	0.6%

The BTDM water rights will continue to be diverted at the BTDM headgate during the historical irrigation season of May 1st through September 30th. For the proper administration of this SWSP, adequate measuring devices acceptable to the water commissioner must be installed. This SWSP will not allow any historical consumptive use credits from these shares to be applied to this SWSP until such time as these shares are adequately diverted, measured, recorded, and accounted for to the satisfaction of the water commissioner. If the Applicant intends to use the 12" Parshall flume located at the northwest corner of the Brownwood property adjacent to the river, the Applicant must coordinate with the water commissioner to ensure this structure accurately measures and records the flow of water. **If at any time the water commissioner determines that the augmentation return structure is not accurately measuring and recording the flow of water, the water commissioner will not authorize the use of that structure.**

City of Loveland Lease

Coulson has entered into a water lease agreement with the City of Loveland for 100 acre-feet of fully consumable water. A copy of the lease agreement, dated October 25, 2022, is attached. The duration of the lease is for a term of twenty-five years ending on December 31, 2047. The replacement water will be delivered to the Big Thompson River at Loveland's wastewater treatment plant (WDID 0402300), located in the NE ¼ of the SW ¼ of Section 19, T5N, R68W, 6th P.M.

Under the terms of the lease, replacements can be made using a variety of water rights owned by Loveland including, but not limited to, Windy Gap reusable effluent, Loveland Storage Reservoir water pursuant to the terms and conditions of the decrees for change of water rights for the City of Loveland entered in case nos. 03CW354 and 02CW392, and Colorado-Big Thompson ("C-BT") Project water. **In the event that Loveland plans to use C-BT Project water as a replacement source, Loveland must comply with the Interim Rule issued by the Northern Colorado Water Conservancy District ("Northern District") in May 2005, regarding the use of C-BT Project water in substitute water supply plans.** Prior to the use of C-BT Project water, Loveland is required to notify this office, the division engineer and the water commissioner of the amount of C-BT Project water dedicated to this plan and provide a copy of the Northern District's approval letter as required by paragraph I(g) of the Northern District's May, 2005 Interim Rule.

Brownwood SE Reservoir/Bonser Pit Pond/Amen Pond 2 Reservoir

Additional replacement water for the month of November 2023 will be provided by releases from Coulson's Brownwood SE Reservoir (WDID 0403398). As of June 12, 2023, there was 61.42 acre-feet of water diverted under free river conditions stored in the reservoir and available for replacement for the Coulson sites. The reservoir releases will be made at a point located in the SE ¼ of the SE ¼ of Section 19, Township 5 North, Range 68 West of the 6th P.M, at a distance of 1194 feet from the north section line and 0 feet from the west section line of said Section 19. A total of 5.96 acre-feet of replacement water from the Brownwood SE Reservoir is proposed to be used for replacement purposes in the month of November 2023.

The Bonser Pit Pond (WDID 0403730), also known as the Bonser South Reservoir, is located in Sections 15 and 16, Township 5 North, Range 68 West of the 6th P.M. The Bonser Pit Pond was lined with clay, and was approved as having been lined to the design standard referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits in a letter dated May 11, 2023. Releases from the Bonser Pit Pond are not anticipated for this plan period, however the Applicant requests the ability to provide replacement water from this structure in the event they are able to store water in the reservoir during this water year.

The Amen Pond 2 Reservoir is located in Section 19, Township 5 North, Range 67 West of the 6th P.M. The Amen Pond 2 Reservoir is currently undergoing a clay liner leak test. Pending approval of having been lined to the design standard, the Applicant requests the ability to provide replacement water from this structure. Releases from the Amen Pond 2 Reservoir for replacement purposes are not anticipated during this plan period.

Deliveries from the Brownwood SE Reservoir, Bonser Pit Pond, and Amen Pond 2 Reservoir must be measured and recorded using a Totalizing Flow Meter. **Coulson must coordinate with the water commissioner to ensure releases from the Brownwood SE Reservoir, Bonser Pit Pond, and Amen Pond 2 Reservoir are accurately measured and recorded. In addition, Coulson must obtain prior approval from the water commissioner before any releases are made from the Brownwood SE Reservoir, Bonser Pit Pond, or Amen Pond 2 Reservoir.**

Replacement Summary

The proposed depletions and replacements are shown in the attached "AV.7. Monthly Accounting Sheet". The transit loss for each stream was estimated as 0.25% per mile for the Big Thompson River. The stream miles for each source are found on the Transit Loss spreadsheet submitted as part of the Applicant's accounting. Any use of downstream replacement sources for replacement of upstream depletions can only operate when there is no intervening call for water within the impacted reach. The relative location of the replacement sources and pits is summarized in Table L below.

Table L - Replacement Source Location Summary

Replacement Source	Location of Deliveries	Relative Location
Hill and Brush Ditch	Section 20, T5N, R67W	Adjacent to Challenger Pit, downstream of all other pits
Big Thompson Ditch & Manufacturing Co.	Section 19, T5N, R68W	Downstream of Gardels Pit, adjacent to Brownwood Pit, and upstream of remaining pits
Brownwood SE Reservoir	Section 19, T5N, R68W	Downstream of Gardels Pit, within Brownwood Pit site, and upstream of remaining pits
City of Loveland	Section 19, T5N, R68W	Upstream of all pits

Coulson must obtain prior approval from the water commissioner and coordinate the deliveries of changed shares back to the river from the Hill & Brush Ditch and the BTDM Ditch as required by the water commissioner. Coulson must track and provide the amount of water available, the amount of water requested, and the amount of water delivered on a daily basis or as required by the water commissioner.

Bonser Pit Past Depletions

The most recent SWSP for the Bonser Pit expired on August 31, 2015. In the time since the SWSP expired, the Applicant continued to submit accounting and make releases to replace depletions caused by exposed groundwater at the Bonser Pit. However, the Applicant did not consider depletions caused by the "first fill" of Ponds 2, 3, and 4 at the site, nor did they consider post pumping depletions once dewatering operations stopped. The Applicant has estimated that between March 1, 2018 and January 1, 2022, there were 73.27 acre-feet of out-of-priority unreplaced depletions due to the "first fill" of the ponds and 165.44 acre-feet of out-of-priority unreplaced post pumping depletions. The Applicant has agreed to make replacement water available to offset the past depletions from their operations from the Bonser Pit. These replacements are not part of the SWSP operations, but are documented in this SWSP approval for the Applicant's benefit in recognition of their commitment to offset past depletions.

The Applicant has proposed to release water from Ponds 2 and 3 back to the Big Thompson River. Any releases of water from these ponds will be considered to reduce the amount of unreplaced past depletions; however, such releases are not approved as a replacement source for SWSP operations. Subject to prior approval by the division engineer, the Applicant may also lease or purchase additional water to reduce the amount of unreplaced past depletions. Such additional sources of replacement water may only be used in this SWSP if the Applicant complies with the attached Division One Administration Protocol "Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan". **Releases must be made with the prior approval and direction of the water commissioner. The water commissioner will determine if the method of delivery to the river is acceptable prior to authorizing a release and approve the dates and rates at which the ponds can be pumped from in order to benefit the parties that were injured by the past out-of-priority depletions.**

The Applicant proposes to continue to dewater Ponds 2 and 3 of the Bonser Pit once the releases have been made to ensure that the ponds do not fill and cause new out-of-priority depletions. Once the two ponds are fully dewatered, the Applicant will survey the ponds and develop stage-capacity tables to improve the accuracy of the Applicant's estimates of lagged depletions.

Dewatering

All sites that are actively dewatering have been equipped with a Totalizing Flow Meter to measure the dewatering discharge. Monthly dewatering volumes must be recorded monthly with the meter readings included on submitted accounting. As long as dewatering operations remain continual at approximately constant rates, the water returned to the stream system is assumed to offset the depletions attributable to the dewatering operations. Under this assumption, the Applicant is not claiming any dewatering credit. Once dewatering operations stop or are significantly reduced at specific sites, the monthly meter readings will be used to analyze post pumping depletions. The only sites that will be actively dewatered during this SWSP period are the Amen Aggregate Resource Pit and the Bonser Pit.

Long Term Depletions and Reclamation

In accordance with the letter dated April 30, 2010 (copy attached) from the Colorado Division of Reclamation, Mining, and Safety ("DRMS"), all sand and gravel mining operators must comply with the requirements of the Colorado Reclamation Act and the Mineral Rules and Regulations for the protection of water resources. The April 30, 2010 letter from DRMS requires that you provide information to DRMS to demonstrate you can replace long term injurious stream depletions that result from mining related exposure of groundwater. The DRMS letter identifies four approaches to satisfy this requirement, which are identified and described in the attached letter. A summary of the final reclamation and the approach for compliance with the DRMS letter for each site, including the current posted bond amount, is shown in Table M below.

Table M – Final Reclamation Summary

Site Name	Proposed Final Reclamation	Bond Amount	DRMS Approach No.	Comments
Brownwood Pit	Unlined Reservoirs and Augmentation Plan	$89,136	2	An augmentation plan to replace evaporative depletions is currently pending in Division 1 Water Court case no. 2019CW3157.
Challenger Pit	Unlined Reservoirs and Augmentation Plan	$218,637	2	An augmentation plan to replace evaporative depletions is currently pending in Division 1 Water Court case no. 2019CW3157.
Kirtright Pit	Lined Reservoir/Lakes	$58,400	2	An augmentation plan to replace evaporative depletions is currently pending in Division 1 Water Court case no. 2019CW3157.
Gardels Pit	Lined Reservoir	$291,800	2	An augmentation plan to replace evaporative depletions is currently pending in Division 1 Water Court case no. 2019CW3157.
Bonser Pit	Lined Reservoir	$659,234.94	2	An augmentation plan to replace evaporative depletions is currently pending in Division 1 Water Court case no. 2019CW3157.
Amen Aggregate Resource Pit	Lined Reservoir and Backfilling	$375,904	1, 3	The applicant has chosen to take a phased approach to surety bonding of reclamation costs. The applicant has posted a bond to cover the reclamation of Phase I activities, including the construction of a clay liner around Cell 2.

Conditions of Approval

I hereby approve this SWSP in accordance with section 37-90-137(11), C.R.S., subject to the following conditions:

1. This SWSP shall be valid for the period of January 1, 2023 through December 31, 2023, unless otherwise revoked or superseded by decree. Should a request for renewal of this SWSP be needed, such renewal request must be submitted to this office with the statutory fee (currently $257 per pit) no later than November 1, 2023. **If a renewal request is received after the expiration date of this SWSP, it may be considered a request for a new SWSP in which case the filing fee for a new SWSP will apply (currently $1,593 per pit).**

2. Well permits have been obtained for the current use and exposed groundwater surface area of each gravel pit in accordance with sections 37-90-137(2) and (11), C.R.S., as identified in Table A of this approval.
3. The total area of groundwater surface exposed after December 31, 1980 for each of the pits shall not exceed those values listed in Table A of this approval. Should the total surface area exposed exceed those amounts, an amendment will need to be filed with this office.
4. The total amount of groundwater to be consumed at each of the pits shall not exceed the values listed in Table C of this approval. Total consumption at each pit must not exceed these amounts unless an amendment is made to this SWSP.
5. Approval of this SWSP is for the purposes as stated herein. This office must first approve any additional uses for the water. Any future additional historical consumptive use credit given (e.g., agricultural water transfer) for these sites must consider all previous credits given.
6. The Applicant must replace all out-of-priority depletions resulting from operation under this SWSP, including those lagged depletions that occur to the stream after the expiration date of this SWSP. In addition, the Applicant must replace all return flows resulting from operations under this SWSP, including those return flows that are owed to the stream after the expiration date of this SWSP. Such out-of-priority depletions and return flow obligations must be included in the Applicant's accounting and projection.
7. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner(s). If approved prior, the release of replacement water may be aggregated to maximize beneficial use. The water commissioner(s) and/or the division engineer shall determine the rate and timing of an aggregated release.
8. Conveyance loss for delivery of replacement water is subject to assessment and modification as determined by the division engineer. The distance for assessment of conveyance loss will be based upon DWR stream miles or as approved by the Water Commissioner, and will be assessed from the point of release to the point of depletion/replacement.
9. All diversions shall be measured in a manner acceptable to the division engineer. The Applicant shall install and have approved by the Water Commissioner all structures prior to any credit or use in this SWSP. The Applicant shall maintain such measuring devices as required by the division engineer for operation of this SWSP.
10. **In the event that Loveland plans to use Colorado-Big Thompson ("C-BT") Project water as a replacement source, Loveland must comply with the Interim Rule issued by the Northern Colorado Water Conservancy District ("Northern District") in May 2005, regarding the use of C-BT Project water in substitute water supply plans.** Prior to the use of C-BT Project water, Loveland is required to notify this office, the division engineer and the water commissioner of the amount of C-BT Project water dedicated to this plan and provide a copy of the Northern District's approval letter as required by paragraph I(g) of the Northern District's May, 2005 Interim Rule.
11. Approval of this SWSP does not in any way eliminate the obligation of the Applicant to comply with the by-laws that restrict the use of any of the shares identified in this SWSP. The use of any changed shares in this SWSP must be consistent with any applicable ditch and/or reservoir company by-laws.

12. Diversions of the 19 Hill & Brush shares and 0.318 Big Thompson Ditch and Manufacturing Co. shares changed in this SWSP are limited to the period of May 1 through September 30.

13. The replacement water, which is the subject of this SWSP, cannot be sold or leased to any other entity unless prior approval is obtained from the state or division engineer. As a condition of subsequent renewals of this SWSP, the replacement water must be appurtenant to these sites until a plan or plans for augmentation are decreed by the water court. All replacement water must be concurrent with depletions in quantity, timing, and locations.

14. The Applicant shall provide daily accounting (including, but not limited to diversions, depletions, replacement sources, and river calls) on a monthly basis. The accounting must be uploaded to the CDSS Online Reporting Tool within 30 days of the end of the month for which the accounting applies (https://dwr.state.co.us/Tools/reporting). Instructions for using the tool are available on the Division of Water Resources website on the "Services" → "Data & Information" page under the heading of Online Data Submittal. Accounting and reporting procedures are subject to approval and modification by the division engineer. Accounting forms need to identify the WDID number for each structure operating under this SWSP. Additional information regarding accounting requirements can be found in the attached Augmentation Plan Accounting Protocol. **NOTE:** Monthly accounting, even during the winter non-irrigation season, is required.

    In addition, the applicant shall verify that the City of Loveland (WDID 0402519) includes in Loveland's monthly accounting, a report on the reusable water released to provide replacement for this SWSP. It is the Applicant's responsibility to ensure Loveland releases the leased water in the correct time, place, and amount.

15. All return structures utilized in this SWSP must have a measuring device equipped with an electronic recording device and must be approved by the water commissioner prior to use. In addition, all charts or other output data associated with each measuring device utilized in this SWSP must be provided in a timely manner acceptable to all of the water commissioners identified herein.

16. The Applicant shall be required to notify and obtain approval of the water commissioners in writing a minimum of 48 hours, or as required by each individual water commissioner, of all planned releases and exchanges, including but not limited to, location, amount, and timing (start and end dates). In addition, the Applicant will coordinate deliveries of changed shares back to the river from the Hill & Brush Ditch and the Big Thompson Ditch and Manufacturing Co. Ditch with the water commissioner. Coulson will track and provide the amount of water available, the amount of water requested, and the amount of water delivered on a daily basis or as required by the water commissioner.

17. In order to prevent injury to other water rights, the division engineer and water commissioner must be able to administer Applicants' replacement water past headgates on the river at times when those headgates would otherwise be legally entitled to divert all available flow in or "sweep" the Big Thompson River or its tributaries. Applicant shall not receive credit for replacement of depletions to the Big Thompson River below such diversion structures unless bypass and measurement structures are in place to allow the division engineer and water commissioner to confirm that Applicant's replacement water is delivered past the headgates. In the event that delivery past dry-up points requires the use of a structure for which a carriage or use agreement with a third party is required, Applicant shall be responsible for securing such agreement. Until such time as the Applicant provides a copy of the carriage or

use agreement to the division engineer and water commissioner, no credit will be allowed for replacement of depletions to the Big Thompson River below such diversion structure.

18. The Division of Water Resources will not be responsible for any enforcement or administration of third party agreements that are not included in a decree of the water court.
19. The name, address, and phone number of a contact person who will be responsible for the operation and accounting of this SWSP must be provided to the water commissioner(s) and the division engineer.
20. Subject to prior approval by the division engineer, the Applicant may lease or purchase additional replacement water as identified in this SWSP request. Such additional sources of replacement water may only be used in this SWSP if the Applicant complies with the attached Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan Protocol.
21. The Applicant shall perform an inspection of the dried up parcel, submit a Dry-Up Report - Verified Statement of that inspection, and provide a zipped GIS shapefile of the dried-up land as follows:
    - The Applicant's inspection of dry-up must be submitted on the Dry-Up Report - Verified Statement form at the beginning of the irrigation season indicating planned dry-up and then again in the fall after the irrigation season confirming the planned dry-up was accomplished. A pdf map may be attached to that report. The Dry-Up Report - Verified Statement form is available for download from the Division of Water Resources' website at: https://drive.google.com/drive/folders/1TF0alNt6f5fla0Xz_n1_iAGCg4xusRN2 (Water Administration Documents/South Platte River Basin Forms). The Dry-Up Report - Verified Statement must be signed by an individual with personal knowledge of the dry-up for the entire irrigation season for each parcel of land associated with the change of water right in this SWSP.
    - GIS shapefiles in a file format *.zip outlining the dry-up shall also be submitted at the same time as the Dry-Up Report. The GIS files must include any accompanying attribute data and the datum must be NAD83 and the UTM projection must be Zone 13N.
    - Submittals shall be made within 30 days of this approval for planned dry-up and by October 31, 2023 for dry-up confirmation. Submittals shall be made through the CDSS Online Reporting Tool (https://dwr.state.co.us/Tools/reporting). Instructions for using the tool are available under Services / Data and Information in the Online Data Submittal Section. Two new Reporting Submittal Tool elements will be created for this SWSP: (1) Dry-up shapefile and (2) Dry-up Report - Verified Statement. For additional assistance with Online Reporting Submittals, contact Dawn Ewing in the Division 1 office at dnr_div1accounting@state.co.us.
22. Dewatering at the Amen Aggregate Resources Pit and Bonser Pit will produce delayed depletions to the stream system. As long as the pit is continuously dewatered, the water returned to the stream system should be adequate to offset the depletions attributable to the dewatering operation. Once dewatering at a site ceases, the delayed depletions must be addressed. Accordingly, dewatering is required to continue at the Amen Aggregate Resources Pit and Bonser Pit during the term of this approval. At least three years prior to completion of dewatering, a plan must be submitted that specifies how the post pumping dewatering depletions (including refilling of the pit) will be replaced, in time, place and amount.

23. Prior to claiming any credit for the water returned to the stream system from dewatering in excess of lagged dewatering depletions (a net accretion), the applicant must install a totalizing flow meter that accurately measures the quantity of water being pumped and returned to the stream system via dewatering operations and account on a real time basis for the actual dewatering depletions and accretions. No net accretion credits are sought by the Applicant for this approval period.
24. If dewatering of the Amen Aggregate Resources Pit or the Bonser Pit is discontinued, the pits would fill, creating additional depletions to the stream system due to increased evaporation. To ensure that additional depletions to the river do not occur, a bond has been obtained through the DRMS for lining or backfilling of the lakes. Therefore, if the dewatering is discontinued these bonds can finance the completion of the lining of these pits or the backfilling, thus preventing depletions to the stream system.
25. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow.
26. The Applicant should consider the effects of groundwater mounding and the need for interceptor drains due to construction of the liners around the pits.
27. The approval of this SWSP does not relieve the Applicant and/or landowner of the requirement to obtain a Water Court decree approving a permanent plan for augmentation or mitigation to ensure the permanent replacement of all depletions, including long-term evaporation losses and lagged depletions after gravel mining operations have ceased.
28. If reclamation of the mine sites will produce a permanent water surface exposing groundwater to evaporation, an application for a plan for augmentation must be filed with the Division 1 Water Court at least three (3) years prior to the completion of mining to include, but not be limited to, long-term evaporation losses and lagged depletions. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow. According to the SWSP request, mining of material has ceased at the Brownwood Pit, Kirtright Pit, Challenger Pit, Gardels Pit, and Bonser Pit. Since material mining has ceased at these sites, either the lakes must be lined or backfilled, or an application for a plan of augmentation for the sites must be filed with the water court. In addition, all lagged depletions shall continue to be replaced under a SWSP until there is no longer an effect on stream flow or a court approved augmentation plan is approved by the water court. A permanent plan for augmentation to replace depletions from the Brownwood Pit, Kirtright Pit, Challenger Pit, Gardels Pit, and Bonser Pit is pending in Division 1 Water Court case no. 2019CW3157. Granting of this SWSP does not imply approval by this office of any such court application(s).
29. The state engineer may revoke this SWSP or add additional restrictions to its operation if at any time the state engineer determines that injury to other water rights has occurred or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all excavation of product from below the water table, and all other use of water at the pits under this SWSP, must cease immediately.
30. In accordance with amendments to section 25-8-202(7), C.R.S. and Senate Bill 89-181 Rules and Regulations adopted on February 4, 1992, the state engineer shall determine if this substitute supply is of a quality to meet requirements of use to which the senior appropriation receiving the substitute supply has normally been put. As such, water quality data or

analyses may be requested at any time to determine if the requirement of use of the senior appropriator is met.

31. The decision of the state engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any water court case or any other legal action that may be initiated concerning the SWSP. This decision shall not bind the State Engineer to act in a similar manner in any other applications involving other SWSPs or in any proposed renewal of this SWSP, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant.

Should you have any comments or questions, please contact Michael Hein, Lead Assistant Division Engineer, in Greeley at 970-352-8712 or Javier Vargas-Johnson in Denver at 303-866-3581 ext. 8227.

Sincerely,

for Jeff Deatherage, P.E.
Water Supply Chief

Attachments: Figure 1— Site Locations
Figure 2—Exposed Groundwater Areas Kirtright Pit (8/20/2018)
Figure 2— Exposed Groundwater 2011 Bonser Pit (12/14/2012)
AIV.1. Total Loss and Replacements Summary Worksheet
Loveland Lease
Letter from DRMS dated April 30, 2010
Augmentation Plan Accounting Protocol
Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan Protocol

Cc: Michael Hein, Lead Assistant Division Engineer, Michael.Hein@state.co.us
1809 56th Avenue, Greeley CO 80634, (970) 352-8712

Jean Lever, Water Commissioner, Water District 4, Jean.Lever@state.co.us

Dawn Ewing, Augmentation Coordinator, Dawn.Ewing@state.co.us

Louis Flink, Tabulation/Diversion Records Coordinator, Louis.Flink@state.co.us

Colorado Division of Reclamation Mining and Safety

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Weiland, Inc.
Environmental & Engineering

PO BOX 18087
BOULDER, CO. 80308
ph 303-443-9521

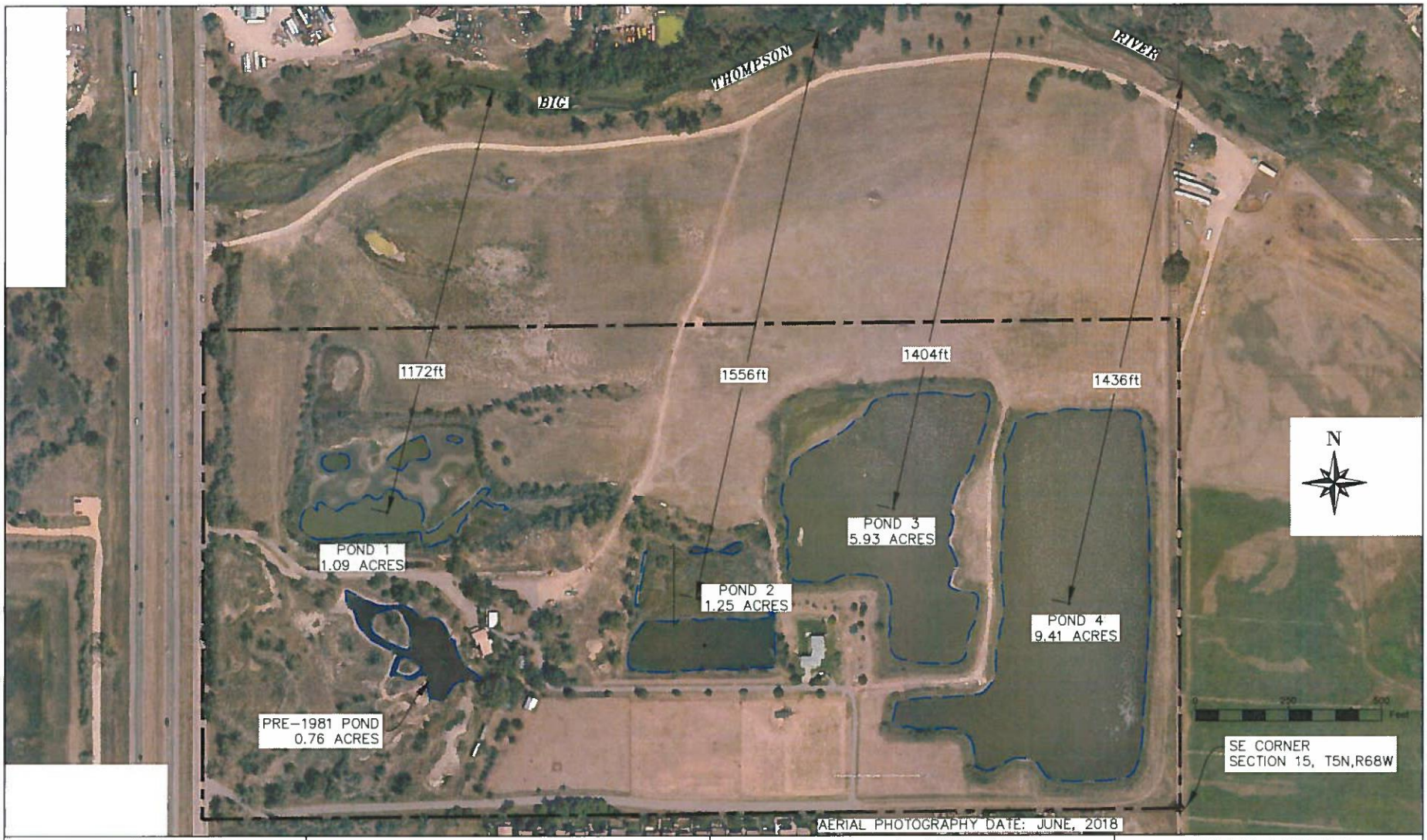
COULSON GRAVEL EXCAVATING CO.
SUBSTITUTE WATER SUPPLY PLAN

LARIMER & WELD COUNTIES

PREPARED FOR: COULSON EXCAVATING CO. ,INC.

FIGURE 1
SITE LOCATIONS

SCALE	DWG NO.		REV.
1"=2,500'	FIGURE 1.DWG		REV
DRAWN BY: CTW	CHECKED BY: PFW	DATE: 07/10/2021	SHEET 1 OF 1



REVISIONS		
REV	DATE	APPROVED

WSI Wetland, Inc.
Environmental & Engineering
PO BOX 19397
BOULDER CO 80308
ph 303-443-8521

KIRTRIGHT PIT - TEMPORARY SUBSTITUTE WATER SUPPLY PLAN

LARIMER COUNTY, CO

PREPARED FOR: COULSON EXCAVATING CO., INC.

FIGURE 2 - EXPOSED GROUNDWATER AREAS

SCALE	DWG NO.	REV
1"=250'	FIGURE 2.DWG	REV

DRAWN BY	CHECKED BY	DATE	SHEET
CTW	PFW	08/20/2018	1 OF 1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

WSI Wetland, Inc.
Environmental & Engineering
PO BOX 18087
BOULDER, CO 80308
ph 303-443-8621
fax 303-443-8636

BONSER PIT

SUBSTITUTE WATER SUPPLY PLAN

LARIMER COUNTY,CO

COULSON EXCAVATING CO., INC

FIGURE 2

EXPOSED GROUNDWATER 2011

SCALE	DWG NO	REV
1"=400'	2011.DWG	REV

DRAWN BY	CHECKED BY	DATE	SHEET
CTW	PFW	12/14/12	SHEET#

Upstream Sites

Month	(1) Average Historical BTDM **Surface Water Supply** (0.318 share)	(2) **Total** BTD & MFG HCU Credits Available	(3) **HCU factor**	(4) **Gardels** Total Net Evaporative Loss	(5) **Brownwood** Total Net Evaporative Loss	(6) **Total** Net Evaporative Loss	(7) **Total** BTDM **HCU Credits** Applied	(8) **Total BTDM Surface Water Deliveries**	(9) **Return Flow** Factor	(10) **Total BTDM Return Flow** Obligation	(11) Total **Remaining** Losses / Replacement Requirement
	[acre-ft./mo.]	[acre-ft./mo.]	[%]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[%]	[acre-ft.]	[acre-ft.]
January	0.00	0.00	0.00%	0.07	1.01	1.08	0.00	0.00	1.70%	0.89	1.08
February	0.00	0.00	0.00%	0.41	1.19	1.60	0.00	0.00	1.40%	0.73	1.60
March	0.00	0.00	0.00%	0.73	1.46	2.19	0.00	0.00	1.10%	0.57	2.19
April	0.00	0.00	0.00%	1.22	1.99	3.20	0.00	0.00	0.60%	0.31	3.20
May	6.48	3.46	53.42%	1.80	2.69	4.49	3.46	6.48	38.00%	2.46	1.02
June	12.87	6.87	53.42%	2.73	3.84	6.57	6.57	12.30	32.70%	4.02	0.00
July	16.84	9.00	53.42%	3.32	4.71	8.04	8.04	15.04	31.20%	4.69	0.00
August	12.83	6.86	53.42%	3.31	4.92	8.23	6.86	12.83	37.90%	4.86	1.38
September	5.61	3.00	53.42%	2.59	4.28	6.87	3.00	5.61	61.80%	3.47	3.87
October	0.00	0.00	0.00%	1.79	3.40	5.18	0.00	0.00	0.10%	0.05	5.18
November	0.00	0.00	0.00%	1.12	2.56	3.68	0.00	0.00	2.50%	1.31	3.68
December	0.00	0.00	0.00%	0.40	1.59	1.99	0.00	0.00	2.00%	1.05	1.99
totals	54.63	29.19		19.47	33.64	53.11	27.92	52.26		24.42	25.19

Notes:

(1) = Column (1) from **AII.1** BTD&M HCU Credit and Return Flow based on 02CW392
(2) = Column (2) from **AII.1** BTD&M HCU Credit and Return Flow based on 02CW392
(3) = Column (2)/ Column (1)
(4) = Column (10) from **AI.1. Evaporative Loss Worksheet – Gardels Pit**
(5) = Column (10) from **AI.2. Evaporative Loss Worksheet – Brownwood Pit**
(6) = Column (4) + Column (5)
(7) = IF(Column (6) > Column (2)), THEN = Column (2), IF(Column (6) < Column (2)), THEN = Column (6)
(8) = Column (7)/Column (3).
(9) = Column (3) from **AII.1** BTD&M HCU Credit and Return Flow based on 02CW392
(10) For Sept-April = Previous 12 month total Column (8) * Column (9). For or May-Sept = Column (8) * Column (9)
(11) = Column (6) - Column (7)

Downstream Sites

Month	(1) Ave Historical Hill & Brush **Farm HG Delivery 1955-1986 (19 shares)**	(2) **Total** Hill & Brush **HCU Credits** Available	(3) **HCU factor**	(4) **Bonser** Total Net Evaporative Loss	(5) **Bonser First Fill and Pump Shutdown**	(6) **Kirtright** Total Net Evaporative Loss	(7) **Amen** Total Mining & Evaporative Losses	(8) **Challenger** Total Net Evaporative Loss	(9) **Total** Net Evaporative Loss	(10) **Total** Hill & Brush **HCU Credits** Applied	(11) **Total Hill & Brush Surface Water Deliveries**	(12) **Return Flow** Factor	(13) **Total** Hill & Brush **Return Flow** Obligation	(14) Total **Remaining Losses**	(15) Total Remaining Loss + Conveyance Loss / **Replacement Requirement**
	[acre-ft.]	[acre-ft.]	[%]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[%]	[acre-ft.]	[acre-ft.]	
January	0.00	0.00	0%	3.45	0.14	1.98	0.08	0.94	6.60	0.00	0.00	0.32%	0.46	6.60	6.67
February	0.00	0.00	0%	3.19	0.05	1.75	0.06	1.30	6.34	0.00	0.00	0.18%	0.25	6.34	6.41
March	0.00	0.00	0%	3.10	0.04	1.72	0.38	1.84	7.08	0.00	0.00	0.09%	0.14	7.08	7.17
April	0.00	0.00	0%	3.23	0.04	1.75	0.92	2.92	8.85	0.00	0.00	0.05%	0.07	8.85	8.98
May	24.99	11.83	47%	3.58	0.03	1.91	1.23	4.30	11.05	11.05	23.33	37.90%	8.84	0.00	0.00
June	71.62	34.07	48%	4.28	0.03	2.20	2.12	6.47	15.09	15.09	31.73	40.17%	12.75	0.00	0.00
July	94.71	44.41	47%	4.65	0.02	2.63	2.55	8.04	17.89	17.89	38.15	44.63%	17.03	0.00	0.00
August	51.27	25.50	50%	5.24	0.02	2.96	2.64	8.41	19.27	19.27	38.75	55.82%	21.63	0.00	0.00
September	10.58	4.56	43%	5.36	0.02	3.09	2.16	7.19	17.81	4.56	10.58	121.36%	12.84	13.25	13.46
October	0.00	0.00	0%	5.12	0.02	2.94	1.97	5.52	15.55	0.00	0.00	2.26%	3.21	15.55	15.79
November	0.00	0.00	0%	4.68	0.01	2.68	1.44	3.86	12.68	0.00	0.00	1.11%	1.58	12.68	12.87
December	0.00	0.00	0%	4.05	0.01	2.35	0.86	2.01	9.29	0.00	0.00	0.60%	0.86	9.29	9.41
totals	253.17	120.37		49.92	0.43	27.96	16.40	52.79	147.50	67.86	142.55		79.66	79.64	80.77

Notes:

(1) = Column (4) Table 5 from Weiss HCU. Note Oct set to 0
(2) = Column (5) Table 5 from Weiss HCU. Note Oct set to 0
(3) = Column (2)/Column (1)
(4) = Sum of Column (9) from **AI.3 Evaporative Loss Worksheet – Bonser Pit**
(5) = Total from **AVI.5 First Fill and Pump Shutdown Summary**
(6) = Column (2) page 4 from **AI.4. Evaporative Loss Worksheet – Kirtright Pit**
(7) = Column (4) from **AI.8. Total Net Water Loss / Replacement - Amen Aggregate Resource**
(8) = Column (9) from **AI.5. Evaporative Loss Worksheet – Challenger Pit**
(9) = Column (4) + Column (5) + Column (6) + Column (7) + Column (8)
(10) = IF(Column (9) > Column (2)), THEN = Column (2), IF(Column (9) < Column (2)), THEN = Column (9)
(11) = Column (10)/Column (3)
(12) For May-Sept Monthly values of (Runoff + Retrun Flow) from Table 5 Weiss HCU / Monthly Farm Delivery value.
(13) For Sept-April = Previous 12 month total Column (11) / (Retrun Flows). For May-Sept. Monthly Farm Delivery/(Runoff + Return Flows)
(14) = Column (9) - Column (10)
(15) = Column (14) + 0.25% per mile weighted for each site where the weight is the Monthly Evap. for the Site / Monthly Total Value in Column (9)

Site	Distance [mi.]	Conveyance Loss
Bonser	3.12	0.78%
Kirtright	4.07	1.02%
Amen	8.44	2.11%
Challenger	9.41	2.35%

Replacements

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Month	**Brownwood, Gardels** Replacement Requirement	**Bonser, Kirtright, Amen, Challenger** Replacement Requirement	Total Replacement Requirement	Total **City of Loveland** Replacements	**Brownwood SE** Replacements	**BTDM Direct Return Flow** Requirement	**BTDM Return Flow** Delivered from **Storage** Requirement	**Hill & Brush Direct Return Flow** Requirement	**Hill & Brush Return Flow** Delivered from **Storage** Requirement
	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]	[acre-ft.]
January	1.08	6.67	7.75	7.75	0.00	0.00	0.89	0.00	0.46
February	1.60	6.41	8.01	8.01	0.00	0.00	0.73	0.00	0.25
March	2.19	7.17	9.36	9.36	0.00	0.00	0.57	0.00	0.14
April	3.20	8.98	12.18	12.18	0.00	0.00	0.31	0.00	0.07
May	1.02	0.00	1.02	1.02	0.00	2.46	0.00	8.84	0.00
June	0.00	0.00	0.00	0.00	0.00	4.02	0.00	12.75	0.00
July	0.00	0.00	0.00	0.00	0.00	4.69	0.00	17.03	0.00
August	1.38	0.00	1.38	1.38	0.00	4.86	0.00	21.63	0.00
September	3.87	13.46	17.33	17.33	0.00	3.47	0.00	12.84	0.00
October	5.18	15.79	20.98	20.98	0.00	0.00	0.05	1.21	3.21
November	3.68	12.87	16.55	10.59	5.96	0.00	1.31	0.00	1.58
December	1.99	9.41	11.40	11.40	0.00	0.00	1.05	0.00	0.86
totals	25.19		105.96	100.00	5.96	19.51	4.91	74.30	6.58

Notes:

(1) = Column (9) from Upstream Sites
(2) = Column (11) from Downstream sites
(3) = Column (1) + Column (2)
(4) = Total deliveries at City of Loveland's WWTP located at 920 S. Boise Ave. Loveland, CO
(5) = Deliveries from Brownwood Reservoir SE
(6) = BTDM Direct Return Flow requirement at the Brownwood Return Flow Structure
(7) = Winter BTDM Deliveries from Brownwood Reservoir SE
(8) = Hill & Brush Direct Return Flow requirement at the Brownwood Return Flow Structure
(9) = Winter Hill & Brush Deliveries from Brownwood Reservoir SE

LEASE OF FULLY CONSUMABLE WATER

THIS LEASE is made and entered into this 13th day of Jan, 1998, by and between the City of Loveland, Colorado, a Colorado home rule municipality ("City"), whose address is 500 East Third Street, Loveland, Colorado 80537, and Coulson Excavating Company, a Colorado corporation ("Lessee"), whose address is 3609 North County Road 13, Loveland, Colorado 80538.

WHEREAS, the City owns certain water which, pursuant to the water laws of the state of Colorado, may be used, re-used and successively used to extinction (the "Fully Consumable Water"); and

WHEREAS, the Lessee wishes to lease from the City the right to use a portion of the City's Fully Consumable Water; and

WHEREAS, the City is willing to lease to Lessee a portion of its Fully Consumable Water pursuant to certain terms and conditions as set forth in this Lease,

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. The City hereby leases to the Lessee the right to receive one hundred acre feet of the City's Fully Consumable Water, as defined in paragraph 4 of this Lease, on an annual basis. This Lease shall be for a term of twenty-five (25) years, ending on December 31, 2022. However, Lessee shall have the option to renew this Lease for successive terms of twenty-five years, which option shall terminate only if Lessee is in default of its payment obligations under paragraphs 6 or 7 of this Lease or if Lessee elects not to exercise its option to renew by giving notice to the City pursuant to paragraph 12 of this Lease not later than three (3) months prior to the end of any twenty-five (25) year term. In the event Lessee is not in default of its payment obligations and elects to renew the Lease for any successive twenty-five year period, Lessee shall not be required to pay any additional amounts under this Lease for the right to receive its allotted amount of the City's Fully Consumable Water as set forth above.

2. The one hundred acre feet of Fully Consumable Water which the Lessee shall be entitled to receive annually is hereinafter referred to as the "Leased Water." The parties

recognize that, simultaneously with the execution of this Lease, the City has leased the right to receive two hundred acre feet of its Fully Consumable Water to Loveland Ready Mix and that the City may, in the future, lease additional portions of its Fully Consumable Water to persons other than Lessee. The Lessee's right to receive one hundred acre feet of the City's Fully Consumable Water pursuant to this Lease shall be equal to the right of Loveland Ready Mix to receive its two hundred acre feet of Fully Consumable Water such that in the event less than three hundred acre feet of Fully Consumable Water is available in any year, Lessee and Loveland Ready Mix shall each be entitled to receive a proportionate share of the available Fully Consumable Water. The right of Lessee to receive one hundred acre feet of the City's Fully Consumable Water under this Lease shall be deemed to be a first right relative to all others, such that in the event the available Fully Consumable Water in any year is in excess of three hundred acre feet but is not sufficient to meet the needs of all persons holding leases of Fully Consumable Water, Lessee shall receive up to its entire one hundred acre feet allotment from the first three hundred acre feet of Fully Consumable Water available.

3. In consideration of the right to receive the Leased Water, Lessee shall, upon execution of this Lease, pay City the sum of Two Hundred Twenty Thousand and 00/100 ($ 220,000.00) Dollars in certified funds. By entering into this Lease with the Lessee, the City is and shall be under no obligation to file an application for a change of water rights or for a plan of augmentation concerning the use of the Leased Water by the Lessee.

The City shall not be responsible for the implementation of any temporary substitute supply plan or augmentation plan concerning the use of the Leased Water. The cost and expense of any such proceeding shall be that of the Lessee. The City agrees to furnish sufficient Leased Water so that, subject to the provisions of this Agreement, the net usable first use or subsequent use water obtained by the Lessee shall be 100 acre feet. The City shall not be obligated to deliver Leased Water to Lessee unless Lessee shall have first provided written notice to the City that Leased Water will be required in a given year by April 1 of the preceding year.

The City shall deliver the Leased Water under this Lease in a total annual quantity as specified by the Lessee and at specific monthly delivery times and in specific monthly quantities according to the evaporation table, attached hereto as

Exhibit A, or as otherwise agreed by the City and the Lessee in writing. In no event shall the monthly deliveries exceed the monthly amounts shown on Exhibit A unless hereafter agreed in writing by the City and the Lessee.

The Lessee shall not have the right to carryover from month to month or from year to year any Leased Water which was deliverable, but not requested for delivery, in a prior time period. If the maximum allowable delivery under this Lease is not requested by Lessee in any month, the right of Lessee to call for the delivery of such water shall lapse and all such water shall remain the sole property of the City.

4. In supplying the Leased Water pursuant to this Lease, the City may use any water, including, but not limited to the following sources of water which may be used to extinction (the "Fully Consumable Water"):

a. Native water from the Big Thompson River basin which, when stored within the City's reservoir system, may be totally consumed pursuant to the terms and conditions of the Decree for Change of Water Rights for the City of Loveland, dated June 18, 1985, Case No. 82-CW-202A, Water Court Division One, State of Colorado or subsequent actions; and

b. Water under an Allotment Contract with the Municipal Sub-District of the Northern Colorado Water Conservancy District (the "Northern District"), commonly known as Windy Gap Water; and

c. Any water subsequently acquired by the City and determined by Water Court Decree to be totally consumable.

5. The City shall have the right to deliver the Leased Water to Lessee from any of the sources of Fully Consumable Water, at the City's sole discretion, and shall have the right to determine if any or all of the Leased Water shall be first use water or subsequent use water. The City shall never be required to deliver first use water, even if it is the only Fully Consumable Water available to meet the terms of this Lease. In the event the only water available to the City to meet the terms of this Lease is first use Windy Gap Water and the City is willing to deliver such first use water, the City shall notify the Lessee prior to delivering such water and the Lessee shall

change at least thirty days prior to the start of the new five year period. In the event the Lessee does not require the delivery of any of the Leased Water in a given year, there shall be no administrative costs charged. The City shall invoice the Lessee for the annual administrative costs in January of each year and Lessee shall pay said costs within thirty days of the invoice date. In the event the Lessee shall fail to pay its accrued administrative costs in any year, the City shall have the right, in addition to any other legal or equitable remedies it may have, to refuse to deliver the Leased Water until such time as all accrued administrative fees have been paid in full.

8. At the option of the City, delivery of the Leased Water shall be made at the City's Waste Water Treatment Plant, 700 South Boise Avenue, Loveland, CO, or at such other downstream location or locations above the Lessee's original point of need as agreed by and between the Lessee and City in writing. Lessee shall not unreasonably withhold its approval of any request by the City to move the point of delivery.

9. Subject to the provisions of paragraph 5, the City shall only be obligated to deliver the Leased Water to the Lessee if water meeting the requirements of this Lease is reasonably available to the City. In the event of a drought or other conditions, restrictions or emergency situations beyond the control of the City which limit the City's ability to receive or deliver all or a portion of the Leased Water to the Lessee, the City shall be relieved of its obligations to deliver such water under the terms of this Lease until such time as conditions permit the City's receipt and delivery of the Leased Water.

10. The Lessee shall take the Leased Water AS IS and the City makes no express or implied warranties of any kind or nature, including the warranties of merchantability or fitness for a particular purpose, concerning the water quality of the Leased Water.

11. In the event the Lessee wishes to assign, encumber or exchange its rights to receive all or any portion of the Leased Water not already used to satisfy a temporary substitute supply plan or permanent augmentation decree to a third party, the City shall have the first right of refusal to reacquire said rights. In such event, Lessee shall notify the City in writing and shall provide the City with a copy of the signed agreement between the Lessee and the third party. The City shall have the right to reacquire the water rights within ninety days from receipt of the notice, by informing Lessee of its intent to exercise its first

If to Lessee, to:
Coulson Excavating Company
3609 North County Road 13
Loveland, Colorado 80538

14. No alteration or other modification of this Lease shall be effective unless such modification shall be in writing and signed by the parties.

15. In the event any portion of this Lease should become invalid, the remainder of the Lease shall remain in full force and effect.

16. This Lease shall be governed by and construed in accordance with the laws of the State of Colorado. This Lease shall inure to the benefit of, and be binding upon, the successors in interest of the respective parties.

IN WITNESS WHEREOF, the parties have executed this Lease on the day and year first above written.

CITY OF LOVELAND

Kathleen G. Gilliland
Mayor

CITY OF LOVELAND SEAL COLORADO

ATTEST:

City Clerk

APPROVED AS TO FORM:

Jane S. Brautigam
City Attorney

LESSEE
COULSON EXCAVATING COMPANY

Coulson Excavating Company Inc.
By: Richard Coleman
Its: President

ATTEST:

Diana Montgomery
Secretary

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

COLORADO DIVISION OF RECLAMATION MINING & SAFETY

April 30, 2010

Lafarge West, Inc.
10170 Church Ranch Way, Ste. 200
Westminister, CO 800210000

RE: Mining Operations with Exposed Ground water

To Whom It May Concern:

The Division of Reclamation Mining and Safety is responsible for ensuring that Sand and Gravel mining operators comply with the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules). Among these requirements are provisions for the protection of water resources. The Act requires that reclamation plans must ensure minimization of disturbances to the prevailing hydrologic balance, including disturbances to the quantity of water in the area affected by mining and in the surrounding areas. § 34-32.5-116(4)(h). Rule 3.1.6(1)(a) requires compliance with Colorado water laws and regulations governing injury to existing water rights both during and after mining. Permits must specify how the permittee will comply with applicable Colorado water laws and regulations governing injury to existing water right rights. Rule 6.3.3(j); Rule 6.4.5(2)(c). After an extensive review, the Division determined that several operators may not have appropriate permit conditions to address certain reclamation liabilities arising from impacts to water resources.

In September 2009 the Division of Water Resources (DWR) updated its Guidelines for Sand and Gravel Pits. These guidelines provide guidance on achieving compliance with state law regarding replacement of depletions from sand and gravel mining, thus the guidelines provide a benchmark for the protection of hydrologic balance required under the Act and Rules. As noted in the Guidelines, sand and gravel operations which expose groundwater without complying with state law create a reclamation liability by impacting available groundwater.

State law requires that any person exposing ground water must obtain a well permit from the SEO pursuant to § 37-90-137(11). Because exposed groundwater results in out-of-priority water depletions, operations which expose ground water must also eventually obtain a water-court approved augmentation plan. Currently, several operators do not have either an augmentation plan or bonding to provide an alternative method to mitigate injurious stream depletions that result from mining-related exposure of ground water. The Division has a statutory duty to ensure that lands affected by mining are reclaimed in a manner that complies with state law and to ensure that operators have sufficient bonding to achieve reclamation. In order to assist operators in achieving compliance with these requirements, the Division proposes that, by April 30, 2011, operators should contact the Division and agree upon a plan for achieving compliance.

The Division has identified four approaches for operators:

1. File a financial warranty that will ensure backfilling of the pit to cover the exposed ground water to a depth of two feet above the static ground water level or,

2. Obtain a court approved augmentation plan prior to exposing ground water or,

3. File a financial warranty to cover the cost of installing a clay liner or slurry wall that meets the Division of Water Resources requirements for preventing ground water exposure or,

4. Obtain approval from the Division of Water Resources that acknowledges compliance with the SEO's requirements pursuant to § 37-90-137(11).

The Division will work with operators on an individual basis as they move to implement one of these plans. It is likely that options 1 and 3 will require the submittal of a technical revision or an amendment to the existing permit depending on the nature of the current mining and reclamation plan and the proposed changes. Increased financial warranties, as a result of these modifications, may be posted in a phased manner not to exceed three years. Amendments or revisions currently under review will be required to be approved by April 30, 2011 and may use the phased financial warranty approach described above. New applications going forward or presently under review by the Division will be required to meet the requirements of one of the options 1-4 at the time of application approval. Failure of affected operators to initiate contact with the Division and gain compliance as described above could result in an enforcement action being issued by the Division.

If you have any questions, please contact Tony Waldron at 303-866-3567, extension 8150.

cc:

M2006064	Shields at Fossil Creek Mine			M1983031	Stromquist Pit
M1994002	Andrews S & G #5 (Burlington Pit)			M1974072	Chantala Pit
M2006018	North Bank Resources			M1985218	Rich Pit
M2006073	Sundance Sand and Gravel Resource			M1985206	Boone-Martin Pit
M2009082	Parsons Mine			M1995022	Andrews #2
M1977081	Greeley West Pit			M1990144	Boone-Fillmore Pit
M2003091	Duckworth Pit			M1997087	Hartman Pit
M2000113	Mamm Creek Sand & Gravel			M2001094	Shaw Pit
M2001090	River Valley Resource			M2002009	Beeman Pit #1
M2000016	Riverbend Operation			M1981307	Fountain Pit
M1979134	Powers Pit			M1977439	Home Office Mine
M1977036	Greeley 35th Ave Pit			M1979191	Three Bells Pit
M2000034	Reichert Pit			M1982182	Port of Entry Pit
M2001051	North Taft Hill Expansion Site			M2002081	Overland Ponds
M1974015	Lyons Pit			M1981088	McCoy Pit
M1974004	Specification Aggregates Quarry			M1982034	Miller Pit
M1987176	Hamm Pit			M1996082	Blair Mesa Pit
M1988042	Cottonwood Pit			M1980136	Chambers Pit
M1990112	State Pit			M1977098	Sievers Pit
M1979002	North Delta Pit	M1983013	Latham - Burkett Pit	M1974070	Nelson Pit
M1979159	Brose Pit	M1979097	East Rigden Pit	M2000002	Tanabe Pit
M1998014	Gypsum Ranch Pit	M1991035	Bluestone Pit	M1994045	Bluestone Pit
M1999088	Kyger Pit	M1986159	Courtner Pit	M1986079	M & G Pit
M1998075	Andrews #3 (Mock Pit)				

ADMINISTRATION PROTOCOL
Use Of Replacement Sources Not Specifically Identified In An SWSP Or Augmentation Plan
Division One – South Platte River

This protocol addresses the minimum standards required for use of a source of replacement water not specifically described in an SWSP or augmentation plan.

- Request to the Division Engineer and Water Commissioner must be in writing and must include:
    - the augmentation plan or SWSP provision in the purchasers plan that allows an unnamed source to be added to the plan for credit
    - the decree provision or SWSP provision in the sellers plan that allows water to be sold for use in the purchasers plan
    - the annual and monthly amount of water available from the water right to be used for replacement
    - the location at which the water will be delivered to the stream
    - a lease agreement between the seller and purchaser of the replacement water
- Applicant shall have written approval from the Division Engineer or Water Commissioner before an unnamed source is added to an augmentation plan or SWSP.
- Applicant must comply with the Augmentation Plan Accounting Protocol and, if appropriate, the Delivery of Water Protocol.

This protocol is subordinate to any decreed language addressing specific situations.

COLORADO
Division of Water Resources
Department of Natural Resources

Augmentation Plan Accounting Protocol
June 2022

Accounting is an administrative tool to confirm water use is in accordance with a decree or other approval including that any required replacement is made to the stream system at the correct time, location, and amount. This guideline is subordinate to any decree language or Division Engineer specific accounting requirements. It describes basic augmentation plan accounting scenarios. Accounting for more complex scenarios can build on the fundamentals described herein.

Contents

1. Background and definitions

A thorough description of augmentation plans for well pumping is available in the Beginners Guide to Augmentation Plans for Wells. The following terms are used in this document:

- **Diversions** are withdrawals from a well, stream, or pond/reservoir.
- **Depletions** are the volume of reduced streamflow caused by a diversion. Lagged depletions are those that occur at a later time than when water is diverted by well pumping or groundwater pond evaporation due to the timing of water movement through the subsurface between the well/groundwater pond and the stream.
- **Hydrobase** is DWR's database of water information.
- **Colorado's Decision Support Systems ("CDSS")** is a State of Colorado website (https://cdss.colorado.gov/) providing access to water data and tools.
- **Replacement water** is a volume of water provided to the stream system to replace depletions and satisfy the unmet needs of senior water rights. Replacement water is typically provided from a reservoir release or another source that has been contracted for the purpose of replacing depletions. Replacement water may also be provided in the form of historic consumptive use ("HCU") credits derived from a change of water right where the use of a water right was changed to augmentation.
- **Transit loss** is the diminishment of the amount of water in a stream as water travels from upstream to the downstream location.
- **Priority Admin Number** indicates the seniority of a water right; equal to the number of days between a water right's priority date and the earliest decreed priority, December 31, 1849. For example, the Priority Admin Number for a water right with a priority date of May 5, 1950 is 36650.00000. The lower the Priority Admin Number, the more senior the water right. The five digits to the right of the period are used when the postponement doctrine applies to a water right due to a delay in decreeing the water right in the court (read more about this in the Administrative Call Standard, Appendix A).
- **Administrative Call** is a term that indicates there are unfulfilled downstream water rights "calling" for curtailment of upstream junior water rights to fulfill their need. In accounting, when the downstream Administrative Call is from a senior water right (with a lower Priority Admin Number), diversions/depletions are out-of-priority and replacement water must be provided.
- **Balance** is the amount of replacement water minus the depletions and obligations, not considering the Administrative Call. The balance may be negative when the diversions resulting in the depletions are in priority.
- **Net Effect** is the amount of replacement water minus the depletions and obligations, considering the Administrative Call. When the net effect is zero or positive, it shows that the Augmentation Plan prevented injury by replacing all out-of-priority diversions/depletions.

2. Methods to submit accounting

a. Accounting and Reporting Uploader (preferred)

The preferred method to submit accounting is through the use of the CDSS Accounting and Reporting Uploader tool. To set up an online account, call or email the Division contacts for the appropriate Water Division as shown in Table 1. Additional information is available on DWR's website under Data and Information/Online Data Submittal.

b. Email

Submit via email to the Water Commissioner and the Division Accounting email shown in Table 1. File names for accounting sheets should include the 7 digit Augmentation Plan WDID assigned by the Division Engineer's office.

3. Timing of accounting submittal

Accounting must be submitted as specified by your decree, DWR administrative approval (SWSP, Replacement Plan, etc.), or as requested by the Division Engineer or designated representative(s). If timing is not specified, submit accounting with the timing shown in Table 1.[1]

Table 1. Accounting Submittal Emails and Phone Number by Division

Division	Accounting Question & Submittal Email	Contact Phone Number	Standard Submittal Timing
1 - South Platte	Div1Accounting@state.co.us	970-352-8712	30 days after the end of the reporting month
2 - Arkansas	water.reporting@state.co.us	719-542-3368	10 days after the end of the reporting month*
3 - Rio Grande	kevin.boyle@state.co.us	719-589-6683	10 days after the end of the reporting month
4 - Gunnison	gregory.powers@state.co.us	970-249-6622	10 days after the end of the reporting month
5 - Colorado	dnr_div5acct@state.co.us	970-945-5665	10 days after the end of the reporting month
6 - Yampa/White	brian.romig@state.co.us	970-846-0036	Annually by November 15 or as needed upon request
7 - San Juan/ Dolores	dnr_div7acct@state.co.us	970-247-1845	10 days after the end of the reporting month**
Designated Ground Water Basins	chris.grimes@state.co.us	303-866-3851 ext. 8253	Annually by February 15 for the prior year

*for approvals deemed critical for administration; all others (including simple subdivisions) bi-annual readings before and after the irrigation season

**for approvals deemed critical for administration; annual submittals for others

[1] For proper administration, Water Commissioners may request regular and direct submission of water data in addition to accounting submittals described herein.

4. Overall organization of accounting spreadsheet and required information per tab

a. Overall organization

The following are typical spreadsheet tab names in accounting. See the example and screenshots section for an overview of what this might look like:

i. Contact/Plan Information tab
ii. Input tab(s)
iii. Depletions & Obligations tab
iv. Replacement tab
v. Summary tab
vi. DWR tab
vii. DWR Meters tab
viii. Version/Notes tab

Fewer or additional tabs as necessary for more simple or complex accounting, subject to approval by the Division Engineer

b. Contact/Plan Information Tab

The accounting must provide the contact information including name and email address for:

i. The party(s) responsible for submitting the accounting
ii. The plan administrator and/or the plan attorney
iii. Water court case number (format of YYCWXXXX), SWSP name and 4-digit Plan ID, or Ground Water Commission Order represented in the accounting.
iv. The 7-digit overall WDID(s) associated with the augmentation plan (not the individual structure WDIDs).[2]

c. Input Tab(s)

When possible, all cells showing diversion of water (well pumping and stream diversions) should be located on one or multiple input tabs as shown below. Cells with regular input, such as meter readings and reservoir releases, should be shaded a specifically identified color to distinguish them from cells that use formulas to convert or summarize the input.

Depending on the specific operation, the following may be included on Input tabs:

i. Estimated water use or evaporation:

When meters or measurement structures are not required, water consumption is estimated based on counts (number of homes, number of domestic animals, acreage of pond surface area, etc.) multiplied by a factor. Include a column or row for each of the following that are relevant to the augmentation plan:

1. Type of use: single family dwellings, domestic animals, area of lawn and garden (include units - square feet or acres), area of pond evaporation (include units - square feet or acres), etc.
2. Count or area input value for each type: the number of homes or domestic animals or the area (square footage or acres of home lawn and garden irrigation or pond surface evaporation). [this is the "Input" that could change regularly]

[2] Colorado Decision Support System Tools (https://dwr.state.co.us/Tools) can be used to find WDIDs (see Structures), court case numbers (see Water Rights), and other supporting information.

3. Factor to convert input to consumption in acre-feet.
4. Acre-feet of consumption.

ii. Well diversion data using flow meters:

Enter raw readings or measurements (e.g., from totalizing flow meters) and how those raw readings or measurements are converted to volumes of water. There should be one row or column for each well with a meter as described below. Once the spreadsheet formulas have been established, generally only the meter reading is entered with every submittal. The well and meter information may be located in a separate well & meter information tab (see example and screenshots section).

1. Well WDID
2. Well Permit Number
3. Priority Admin Number
4. Flow Meter Serial Number
5. Reading Date
6. Reading[3] [this is the "Input" that will change regularly]
   Enter reading exactly as shown on the face of the meter as a non-negative integer.
7. Comment
   a. When a meter rolls over (such as from 999 to 000), is replaced or reset[4] , add a comment stating the old meter serial number, the maximum number before the rollover or replacement and then enter the number on the face of the meter at the end of the reporting period. Update the meter information section with the new meter's serial number.
8. Meter information:
   a. Make
   b. Model
   c. The units represented by the digits on the meter (such as gallons or acre-feet)
   d. Multiplier for meter reading (if applicable)
      i. Residential well meters typically have a multiplier of 1.0 with units of gallons. Readings should generally report all numbers on the face of the meter (including non-rotating digits) with a multiplier of 1.0.
      ii. Larger agricultural or commercial wells typically read in acre-feet and typically have a decimal multiplier. For instance, with a multiplier of 0.001, a meter reading of 123456 represents 123.456 acre-feet.
   e. Correction factor
      i. This is a multiplier used when a meter test shows a need to correct the installed meter to an accurate reading. This will be 1.0 when there is not a test showing a need for correction.
9. Acre-feet pumped
   Use a formula to convert from the meter reading to acre-feet using the multiplier and correction factor. To convert meter readings in gallons to acre-feet, divide by 325,851.

iii. Well diversion data using Electricity Consumption

For wells approved to use power records and a Power Conversion Coefficient (PCC) to estimate water pumped, the accounting information is similar to well diversion data using flow meters (section 4.c.ii) above with the following replacements (instead of 6. "Reading" and 8. "Meter information):

[3] A comment on the Meter Reading cell is used to note "Actual, Estimated, Corrected, or Calculated" for all wells subject to measurement rules when the entry is not based on a reading taken on the actual date specified.
[4] Resetting a meter may be prohibited by local well measurement rules.

6. Power meter reading [this is the “Input” that will change regularly]
8. Power Meter Information
    a. PCC

iv. Surface diversion data

Include a column or row for each surface diversion with the following information:

1. Diversion structure name or a.k.a.
2. Structure WDID
3. Measured flow through the measurement structure and units
    a. If more than one water right is diverted through the structure, there should be adjacent columns for each. Each source should have a designated column or row and labeling should include the measuring structure WDID and the source of the water (e.g. case number).
    b. If there is a multiplier that adjusts the standard measurement-flow relationship to reflect the actual measurement-flow relationship of the specific structure (“shift”), the adjusted value should be reflected in a separate column.
4. Priority Admin Number
5. Storage and release

If the diversion is to storage, which will be followed by a release of water, follow the instructions in the Reservoir Accounting Guideline.

v. Administrative Call (are diversions in-priority?)

In portions of Colorado, there may be times when depletions are in-priority, and do not require replacement. Depletions are in-priority when water rights on the stream system that are senior to the diversion have enough water and are not “calling” for more water.

1. **Simplified (percent of month administrative call)**
   For certain basic accounting, such as subdivision well depletions, the Division Engineer may allow or apply an estimate of the days of expected administrative call each month. Typically, replacement water is provided based on projected call days, which is later compared to actual administrative call data to ensure that adequate replacement was provided. In this case, the accounting should have an input field either for the number of call days or the percentage of days in the month with a call.
2. **Daily record of administrative call**
   Provide a column that shows whether depletions are either “IN” or “OUT” of priority each day.
    - Locations with minimal call variation: In areas with minimal variation in the call, the Division Office may not require a formula comparing Priority Admin Numbers, but will accept manual entries of “IN” or “OUT” of priority each day.
    - All other locations: “IN” or “OUT” of priority is determined daily using formulas comparing the Priority Admin Number of depletions to the Priority Admin Number of the calling water right in each depleted stream reach. Include a column for each of the following:
        - The Priority Admin Number of the calling water right. Calling structure information can be obtained programmatically from:
            - CDSS REST services - insert a link that pulls the required information directly from DWR’s database.
            - CDSS Administrative Calls tool.

          DWR accounting staff can provide guidance on incorporating this information within an accounting spreadsheet.

- The Name of the calling water right
- "In" or "Out"-of-priority either for all structures covered by the accounting or for each structure in its own column. Use a formula to compare the Priority Admin Number of the calling structure to the Priority Admin Number of the structure(s) in the accounting.

d. Depletion & Obligation tab

Used to (1) convert well pumping (and groundwater pond evaporation) to lagged depletions impacting the stream and (2) show lagged depletions that are out-of-priority, and (3) include any additional water obligations of the plan for augmentation.

i. Calculate lagged depletions - Although well pumping and modeling may use a monthly step function to determine the depletions from pumping, the monthly result may, if requested by the Division Office or required by decree, then be divided by the number of days in the month in order to calculate a daily impact for daily water administration.
   1. Well Pumping (or groundwater pond evaporation) - Reference back to the Input tab for the acre-feet of water pumped or evaporated.
   2. Consumption factor (%) - If the decree or approval describes that a percentage of the water pumped is consumed and only the consumed amount is replaced.
   3. Acre-feet consumed - Multiply the acre-feet pumped by the consumption factor.
   4. Delay Factors - show factors that convert pumping in one month to depletions in future months. These may be percentages per month, that total 100 percent over an extended period of time.
   5. Depletions - a formula that combines previous months and present month pumping with the delay factors to determine depletions impacting the stream this month and in future months.

ii. Out-of-priority depletions are combined into one column for each reach considering the administrative call information included on the Input tab.

iii. Return flow obligations (if applicable): Replacement water sources changed from a historical irrigation use usually have a return flow obligation that must also be tracked in accounting. Return flow obligations are similar to depletions because they must be replaced in time, place, and amount. Depending on decree language and preference, return flow obligations may be included under the replacement tab in section 4.e. below. For each replacement source with return flow obligations, include the following:
   - the basis and volume of the return flow obligation,
   - the location of the return flow obligation,
   - replacement of the return flow obligation.

e. Replacement tab

List each structure providing replacement water, transit loss information, and volumes released:

i. Structure providing replacement water: name of reservoir, ditch, well, leased or other replacement water, its WDID, and the water court decree allowing its use for augmentation or replacement. For instructions on accounting for replacement using recharge accretions, refer to specific recharge guidance.

ii. Replacement water travel distance (miles)
the distance from the point of release to the location of the out-of-priority depletion where replacement is owed

iii. Transit loss percent per mile (%)

iv. Total transit loss (%)
v. Volume released (acre-feet)
vi. Transit loss volume (acre-feet)
vii. Volume delivered (acre-feet) - equal to volume released minus transit loss volume
viii. Return flow obligations (acre-feet): Depending on decree language as described above, these may be included here instead of in the depletion tab. See description under section 4.d. above.

f. Summary Tab

The Summary Tab is used to calculate the Net Effect of the Plan on each impacted stream reach. The summary should reference back to information and formulas in the other spreadsheet tabs. The summary tab compares obligations, replacements and that replacements equal or exceed obligations in time, place, and amount. The Summary tab should only summarize data and calculations located in other tabs of the accounting. It should not contain manual entries, input data, or make calculations that are used in other tabs.

The Summary Tab should contain the following for each impacted stream reach (typically on a daily basis or as required by the division office):

i. Total depletions and obligations
ii. Total replacement
iii. Balance - Total replacement minus total depletions and obligations, which may be negative when the diversions resulting in the depletions are in priority.
iv. Net Effect - Total replacement minus out-of-priority depletions and obligations. If the net effect is negative, the Plan resulted in injury.

g. DWR tab for Diversion Record Data Import

A tab titled **"DWR"** can be used to convert data input or numbers calculated in other tabs into rows that represent diversion record water classes, which DWR staff can upload to create official diversion records. When appropriate, DWR staff will develop this tab or work with plan owners to develop this tab, ensure it follows DWR's standard format and utilizes water classes according to the Diversion Records Standard. This format is necessary to allow the records to be imported directly into Hydrobase.

h. DWR Meters tab for Meter Reading Data Import

A tab titled **"DWR Meters"** can be included for use in bulk uploading meter readings. This calculates pumping totals in compliance with well rules or to meet other Division-specific requirements. In order for this tab to be bulk uploaded into Hydrobase, the columns in this tab must be formatted as shown in the "User Guide - How to Bulk Upload Meter Readings".

i. Version/Notes tab

A tab to document changes in accounting formulas and the date of those changes.

5. Requirements and recommendations for all tabs

a. Accounting should show how raw input data is manipulated using formulas to determine the resulting impact on the river. Accounting must therefore include a functional spreadsheet (ie no pdfs) showing all operations, formulas, etc. to clearly show calculations.

b. The use of a water year of November 1 through October 31 is required unless specifically decreed otherwise. When a different water year is required by decree, DWR may request additional months of data in the accounting to include the November 1 through October 31

time period, resulting in more than 12 months of data being reported.

c. For all tabs other than the Summary tab, include running accounting for the entire water year without monthly subtotals. Monthly subtotals commonly result in errors in the spreadsheet. The Summary tab can be used as a place to show monthly totals.

d. Date fields should be complete dates (month, day, and year, recognized as a date value by the spreadsheet software) but may be formatted to display as desired.

e. Use consistent cell color shading to clearly identify the different types of information, such as manual input cells and formula cells (provide a legend for data types, see example below)

f. Enter "0" in cells to document no diversion or use, rather than blanks, hyphens, or another character.

g. When a formula is overwritten with a manual entry, the cell should be highlighted and a comment added for the reasoning.

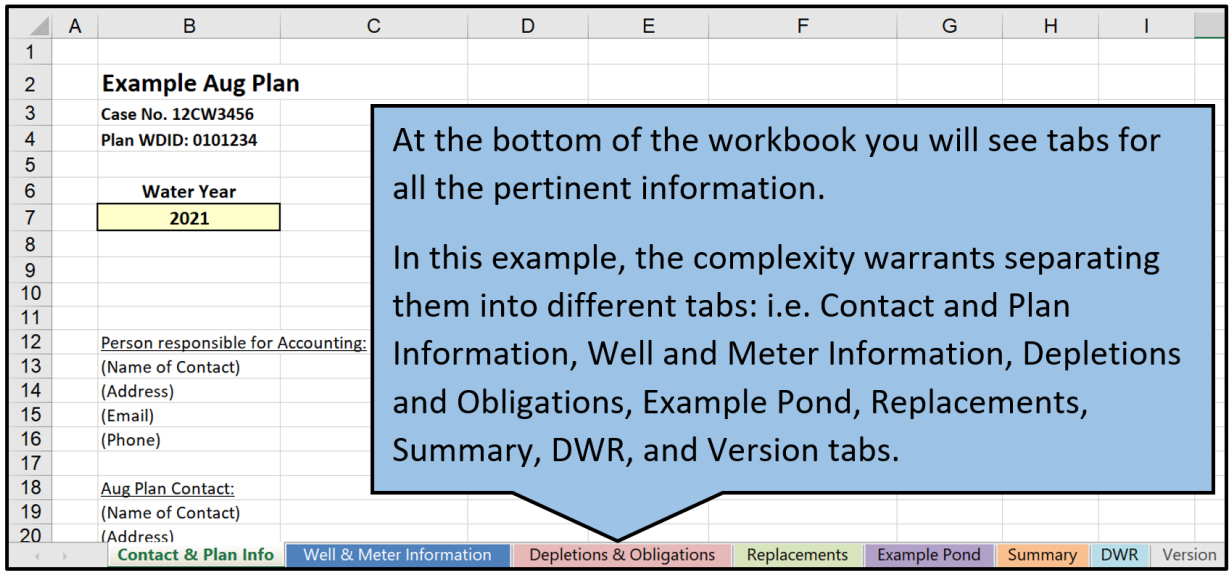
h. When there are multiple stream reaches involved, organize accounting from upstream to downstream.

i. Footnotes should be utilized, as necessary, to describe the basis for formulas, calculations imposed on the raw input data, and column descriptions.

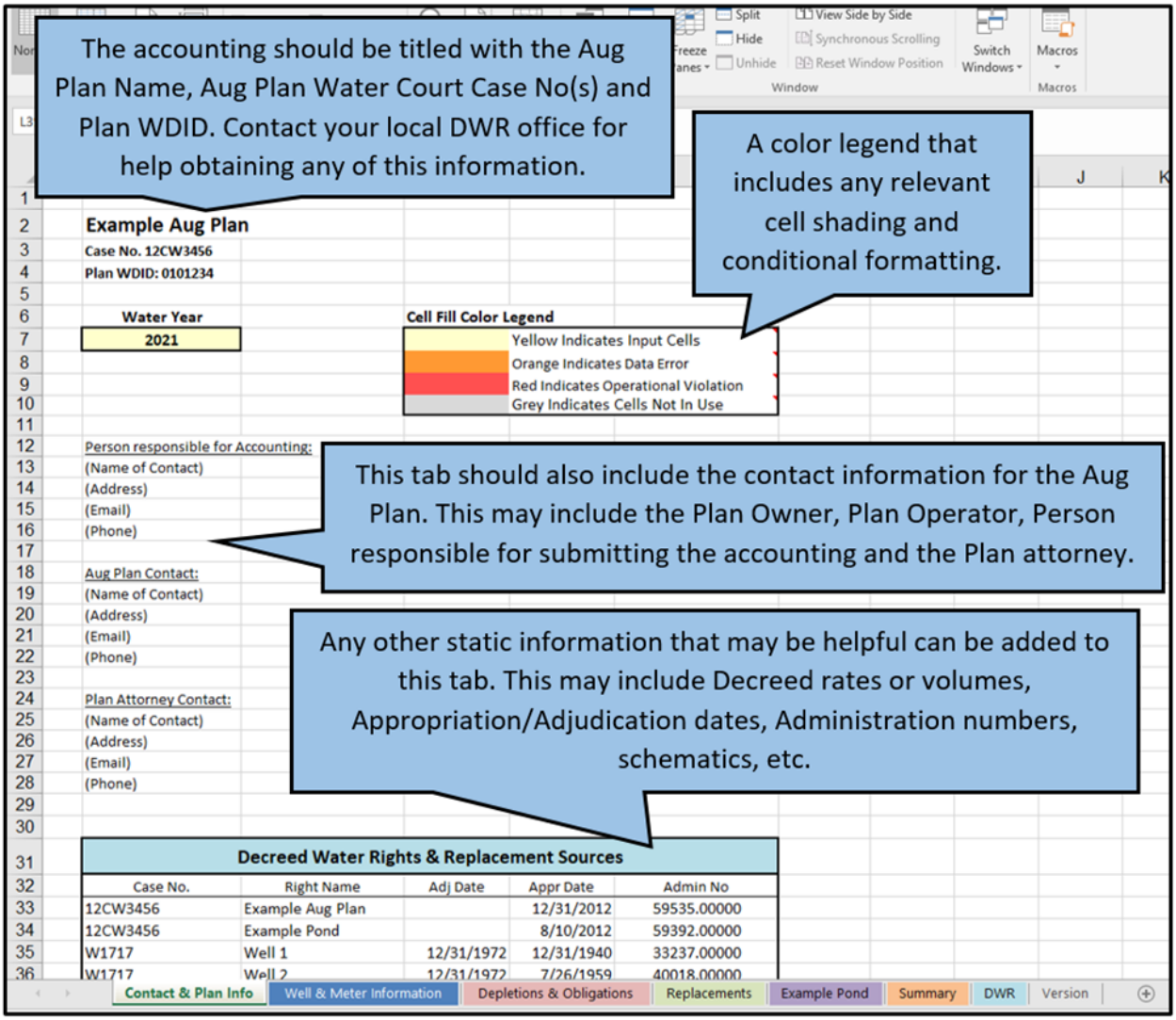
6. Example, Screenshots, and Spreadsheet Templates

Water users may request spreadsheet templates from their local division office for use as examples of how accounting may be assembled, but are responsible for developing their own functional accounting customized for their own Plan requirements. Note that example and actual accounting may have slightly different organization than what is described above.

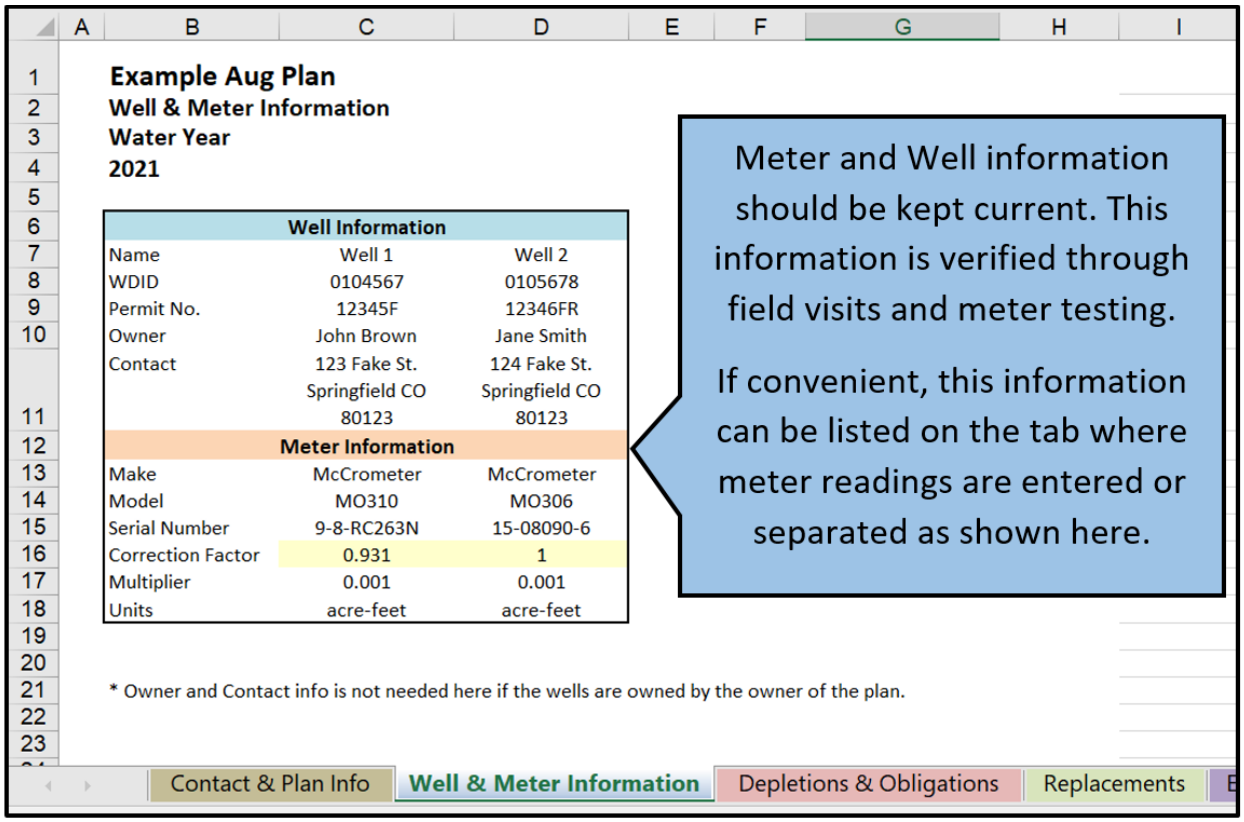
a. (List of relevant tabs)



b. (Contact & Plan Information)



c. (Well & Meter Information)



Example Aug Plan
Well & Meter Information
Water Year
2021

Well Information		
Name	Well 1	Well 2
WDID	0104567	0105678
Permit No.	12345F	12346FR
Owner	John Brown	Jane Smith
Contact	123 Fake St. Springfield CO 80123	124 Fake St. Springfield CO 80123
Meter Information		
Make	McCrometer	McCrometer
Model	MO310	MO306
Serial Number	9-8-RC263N	15-08090-6
Correction Factor	0.931	1
Multiplier	0.001	0.001
Units	acre-feet	acre-feet

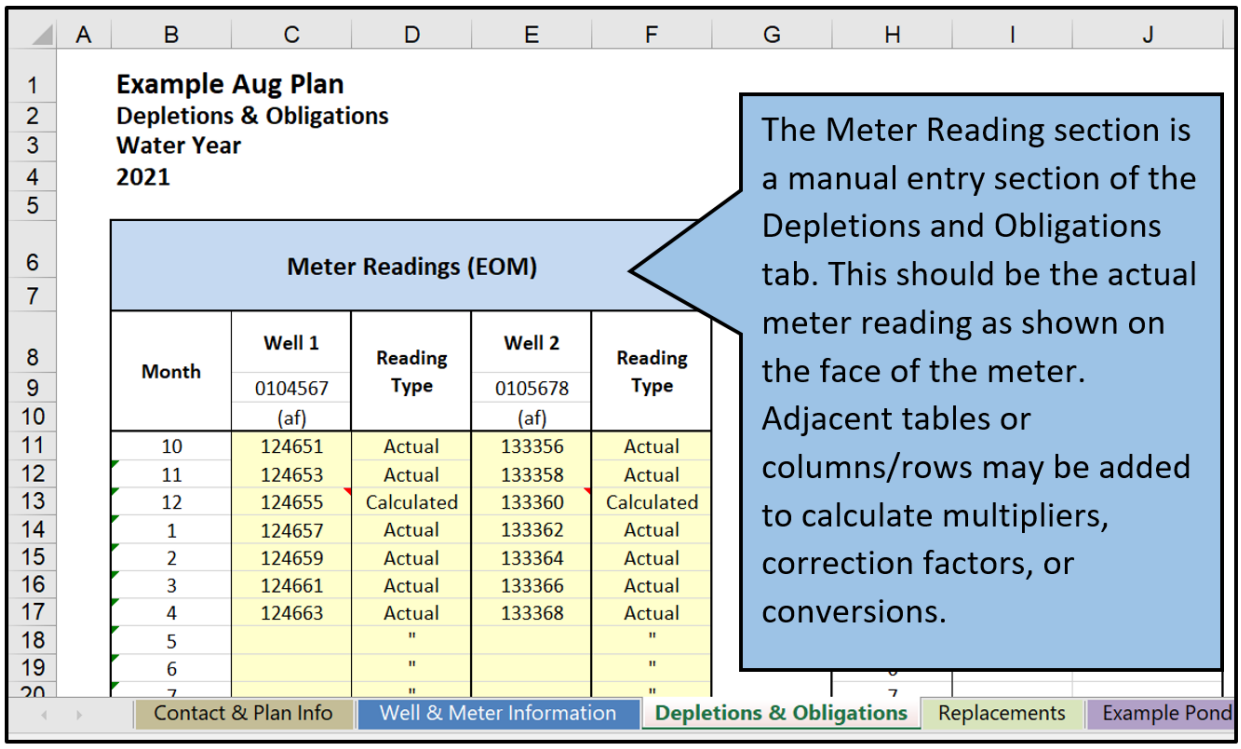
Meter and Well information should be kept current. This information is verified through field visits and meter testing.

If convenient, this information can be listed on the tab where meter readings are entered or separated as shown here.

* Owner and Contact info is not needed here if the wells are owned by the owner of the plan.

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | Replacements

d. (Depletions & Obligations) - in this example, the Depletions & Obligations tab includes cells for entering meter readings, calculating well pumping over the period, and converting that to lagged depetions.



Example Aug Plan
Depletions & Obligations
Water Year
2021

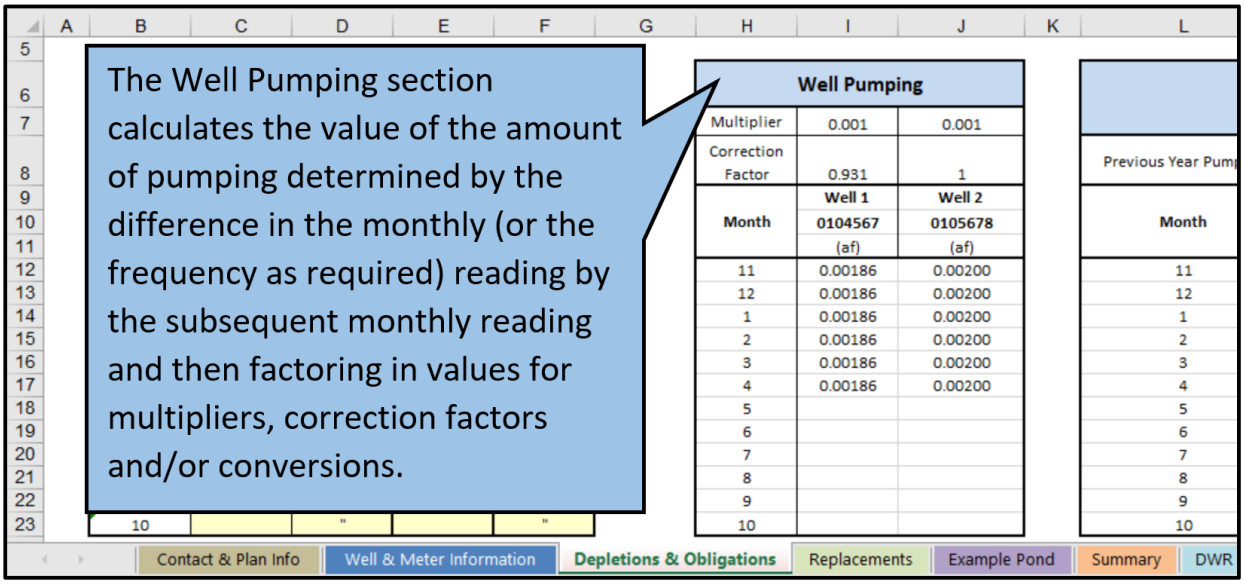
Meter Readings (EOM)

Month	Well 1 0104567 (af)	Reading Type	Well 2 0105678 (af)	Reading Type
10	124651	Actual	133356	Actual
11	124653	Actual	133358	Actual
12	124655	Calculated	133360	Calculated
1	124657	Actual	133362	Actual
2	124659	Actual	133364	Actual
3	124661	Actual	133366	Actual
4	124663	Actual	133368	Actual
5		"		"
6		"		"

The Meter Reading section is a manual entry section of the Depletions and Obligations tab. This should be the actual meter reading as shown on the face of the meter. Adjacent tables or columns/rows may be added to calculate multipliers, correction factors, or conversions.

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | Replacements | Example Pond

e. (Depletions & Obligations)



The Well Pumping section calculates the value of the amount of pumping determined by the difference in the monthly (or the frequency as required) reading by the subsequent monthly reading and then factoring in values for multipliers, correction factors and/or conversions.

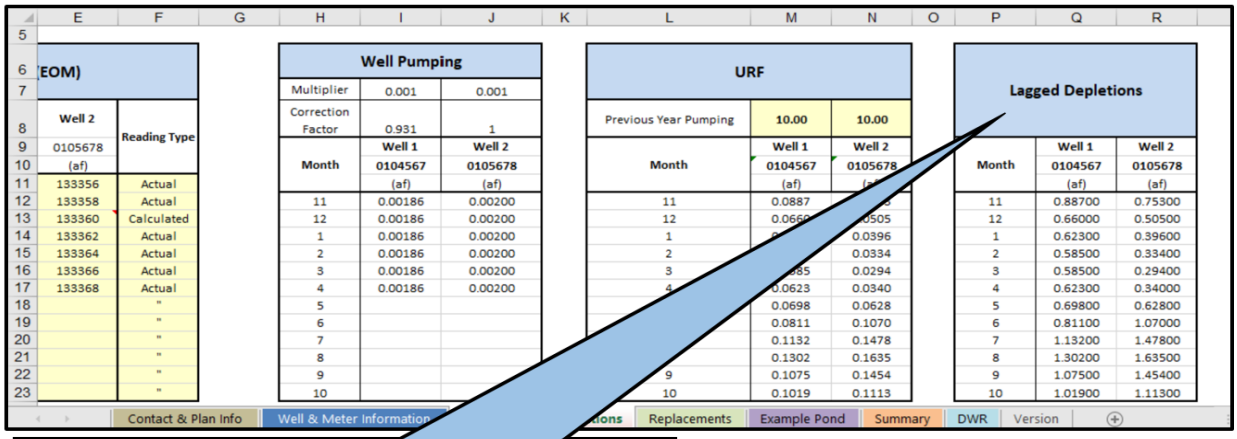
Well Pumping

Multiplier	0.001	0.001
Correction Factor	0.931	1
Month	Well 1 0104567 (af)	Well 2 0105678 (af)
11	0.00186	0.00200
12	0.00186	0.00200
1	0.00186	0.00200
2	0.00186	0.00200
3	0.00186	0.00200
4	0.00186	0.00200
5		
6		
7		
8		
9		
10		

Previous Year Pump
Month
11
12
1
2
3
4
5
6
7
8
9
10

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | Replacements | Example Pond | Summary | DWR

f. (Depletions & Obligations) - calculate lagged depletions for the month



(EOM)	
Well 2 0105678 (af)	Reading Type
133356	Actual
133358	Actual
133360	Calculated
133362	Actual
133364	Actual
133366	Actual
133368	Actual

Well Pumping		
Multiplier	0.001	0.001
Correction Factor	0.931	1
Month	Well 1 0104567 (af)	Well 2 0105678 (af)
11	0.00186	0.00200
12	0.00186	0.00200
1	0.00186	0.00200
2	0.00186	0.00200
3	0.00186	0.00200
4	0.00186	0.00200
5		
6		
7		
8		
9		
10		

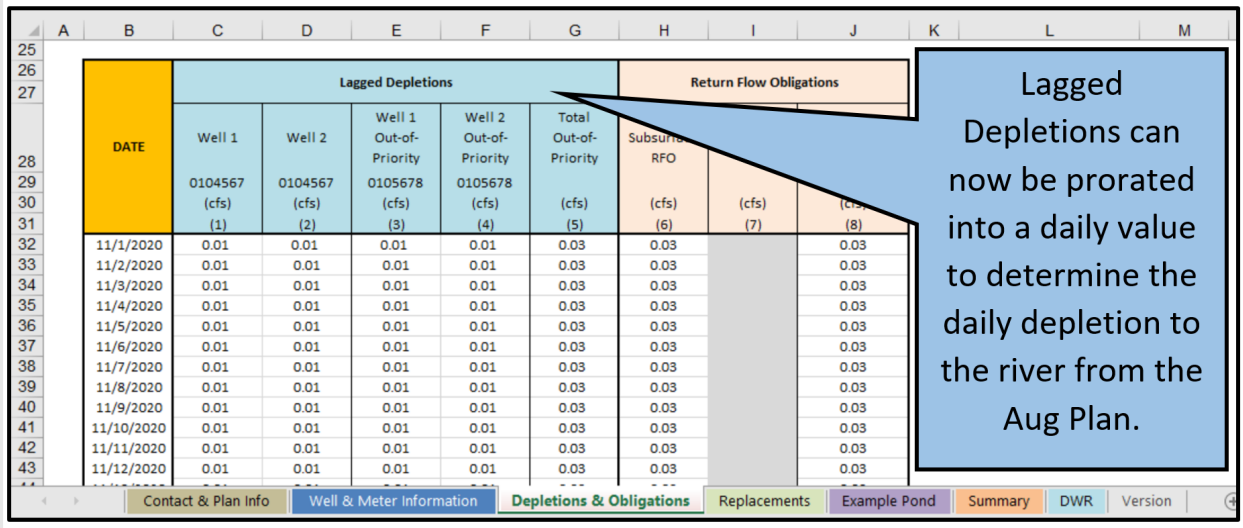
URF		
Previous Year Pumping	10.00	10.00
Month	Well 1 0104567 (af)	Well 2 0105678 (af)
11	0.0887	
12	0.0660	0505
1		0.0396
2		0.0334
3	585	0.0294
4	0.0623	0.0340
	0.0698	0.0628
	0.0811	0.1070
	0.1132	0.1478
	0.1302	0.1635
9	0.1075	0.1454
10	0.1019	0.1113

Lagged Depletions		
Month	Well 1 0104567 (af)	Well 2 0105678 (af)
11	0.88700	0.75300
12	0.66000	0.50500
1	0.62300	0.39600
2	0.58500	0.33400
3	0.58500	0.29400
4	0.62300	0.34000
5	0.69800	0.62800
6	0.81100	1.07000
7	1.13200	1.47800
8	1.30200	1.63500
9	1.07500	1.45400
10	1.01900	1.11300

Contact & Plan Info | Well & Meter Information | ...ions | Replacements | Example Pond | Summary | DWR | Version

Lagged Depletions should be calculated utilizing the Well Pumping data and the lagging method established by the relevant decree or SWSP (Stream depletion Factors or Glover Parameters).

g. (Depletions & Obligations) - convert monthly lagged depletions to daily

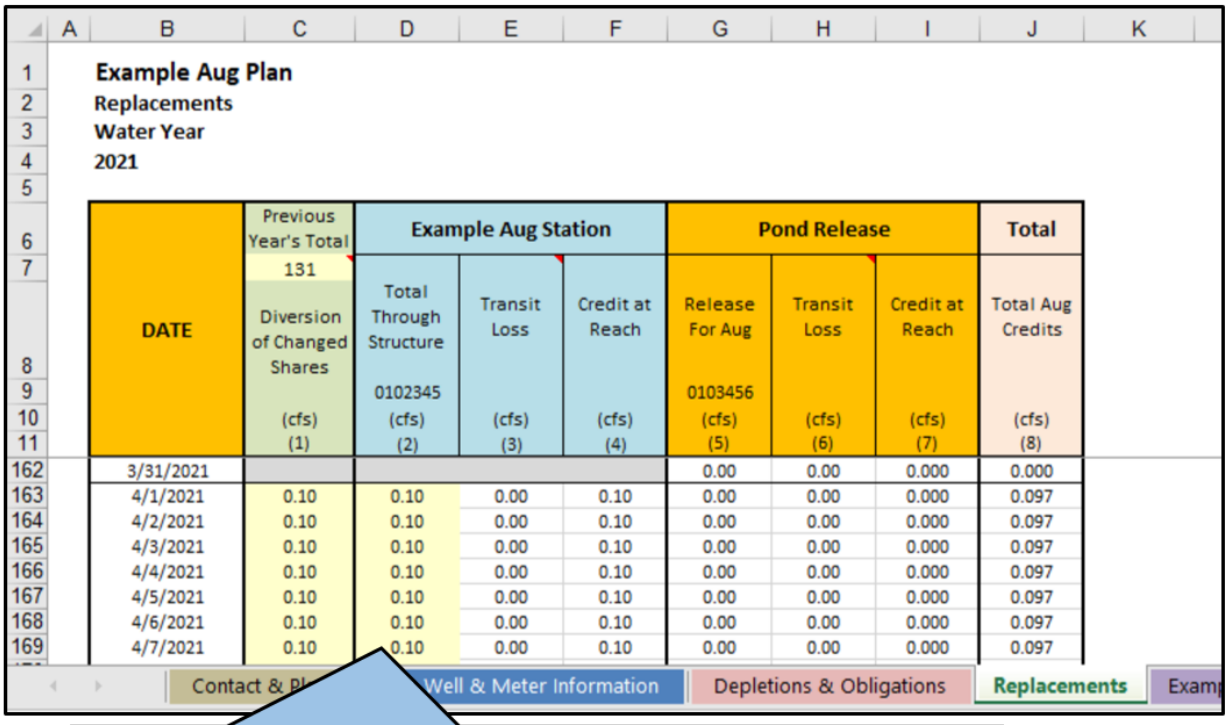


DATE	Lagged Depletions: Well 1 0104567 (cfs) (1)	Well 2 0104567 (cfs) (2)	Well 1 Out-of-Priority 0105678 (cfs) (3)	Well 2 Out-of-Priority 0105678 (cfs) (4)	Total Out-of-Priority (cfs) (5)	Return Flow Obligations: Subsurf... RFO (cfs) (6)	(cfs) (7)	(cfs) (8)
11/1/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/2/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/3/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/4/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/5/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/6/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/7/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/8/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/9/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/10/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/11/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03
11/12/2020	0.01	0.01	0.01	0.01	0.03	0.03		0.03

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | Replacements | Example Pond | Summary | DWR | Version

Lagged Depletions can now be prorated into a daily value to determine the daily depletion to the river from the Aug Plan.

h. (Replacements)



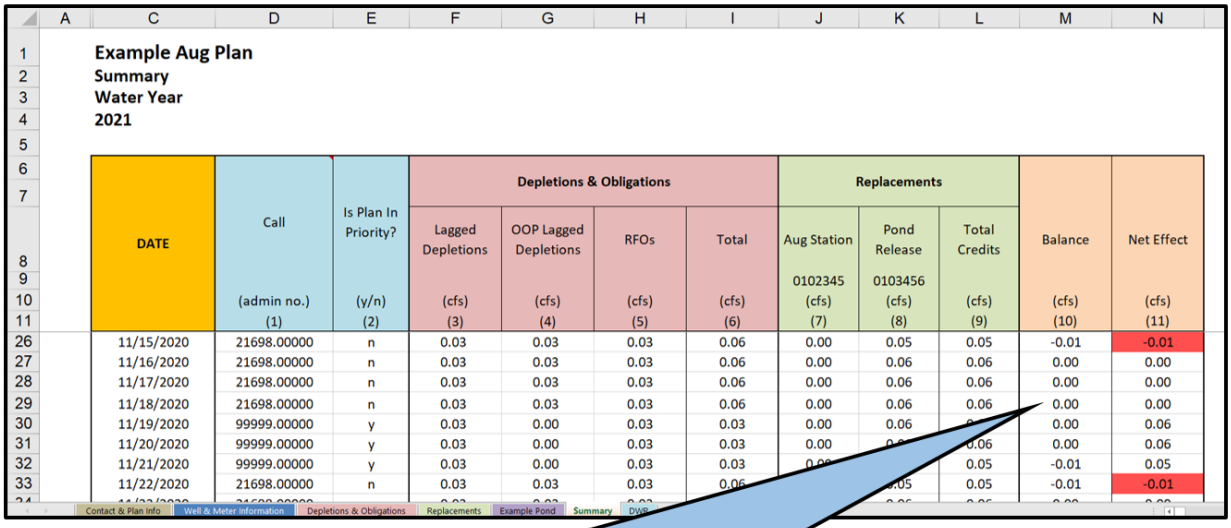
Example Aug Plan
Replacements
Water Year
2021

DATE	Previous Year's Total	Example Aug Station			Pond Release			Total
	131							
	Diversion of Changed Shares	Total Through Structure 0102345	Transit Loss	Credit at Reach	Release For Aug 0103456	Transit Loss	Credit at Reach	Total Aug Credits
	(cfs) (1)	(cfs) (2)	(cfs) (3)	(cfs) (4)	(cfs) (5)	(cfs) (6)	(cfs) (7)	(cfs) (8)
3/31/2021					0.00	0.00	0.000	0.000
4/1/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/2/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/3/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/4/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/5/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/6/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097
4/7/2021	0.10	0.10	0.00	0.10	0.00	0.00	0.000	0.097

Contact & Pl... | Well & Meter Information | Depletions & Obligations | Replacements | Exam...

Input information should be shaded differently than the calculated (cells with formulas) cells. Please provide a legend with the color/shading scheme.

i. (Summary) - daily



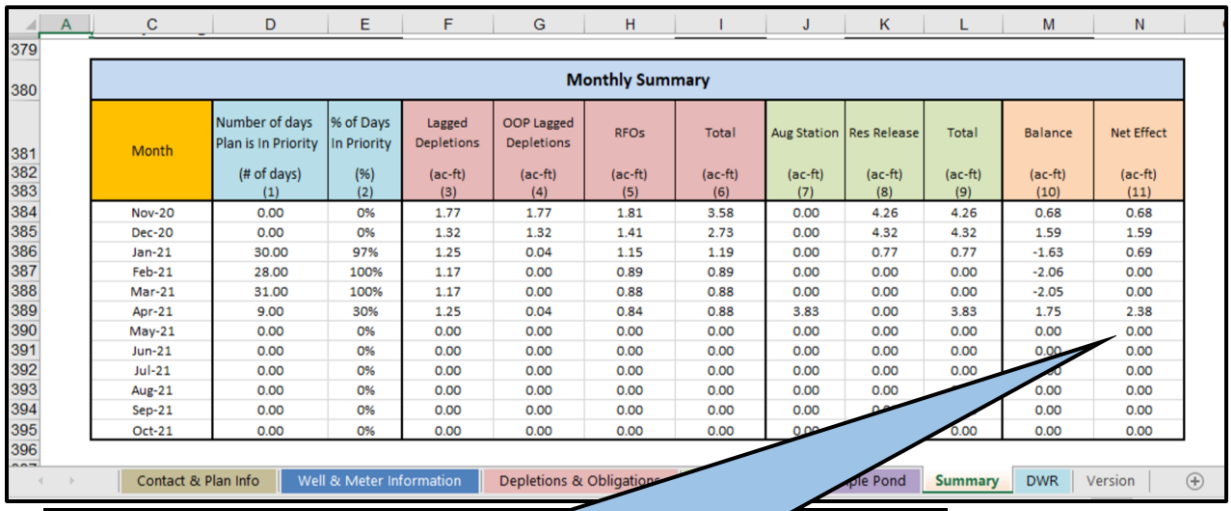
Example Aug Plan
Summary
Water Year
2021

DATE	Call (admin no.) (1)	Is Plan In Priority? (y/n) (2)	Depletions & Obligations: Lagged Depletions (cfs) (3)	Depletions & Obligations: OOP Lagged Depletions (cfs) (4)	Depletions & Obligations: RFOs (cfs) (5)	Depletions & Obligations: Total (cfs) (6)	Replacements: Aug Station 0102345 (cfs) (7)	Replacements: Pond Release 0103456 (cfs) (8)	Replacements: Total Credits (cfs) (9)	Balance (cfs) (10)	Net Effect (cfs) (11)
11/15/2020	21698.00000	n	0.03	0.03	0.03	0.06	0.00	0.05	0.05	-0.01	-0.01
11/16/2020	21698.00000	n	0.03	0.03	0.03	0.06	0.00	0.06	0.06	0.00	0.00
11/17/2020	21698.00000	n	0.03	0.03	0.03	0.06	0.00	0.06	0.06	0.00	0.00
11/18/2020	21698.00000	n	0.03	0.03	0.03	0.06	0.00	0.06	0.06	0.00	0.00
11/19/2020	99999.00000	y	0.03	0.00	0.03	0.03	0.00	0.06	[illegible]	0.00	0.06
11/20/2020	99999.00000	y	0.03	0.00	0.03	0.03	0.00	[illegible]	0.06	0.00	0.06
11/21/2020	99999.00000	y	0.03	0.00	0.03	0.03	[illegible]	[illegible]	0.05	-0.01	0.05
11/22/2020	21698.00000	n	0.03	0.03	0.03	0.06	[illegible]	[illegible]	0.05	-0.01	-0.01

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | Replacements | Example Pond | Summary | DWR

The Balance column is the balance of Replacements and actual Depletions/Obligations regardless of whether the plan is in or out of priority. It is calculated by subtracting Depletions and Obligations from Replacements.

j. (Summary) - a monthly summary table may be added at the bottom of the Summary tab below the daily summary



Monthly Summary

Month	Number of days Plan is In Priority (# of days) (1)	% of Days In Priority (%) (2)	Lagged Depletions (ac-ft) (3)	OOP Lagged Depletions (ac-ft) (4)	RFOs (ac-ft) (5)	Total (ac-ft) (6)	Aug Station (ac-ft) (7)	Res Release (ac-ft) (8)	Total (ac-ft) (9)	Balance (ac-ft) (10)	Net Effect (ac-ft) (11)
Nov-20	0.00	0%	1.77	1.77	1.81	3.58	0.00	4.26	4.26	0.68	0.68
Dec-20	0.00	0%	1.32	1.32	1.41	2.73	0.00	4.32	4.32	1.59	1.59
Jan-21	30.00	97%	1.25	0.04	1.15	1.19	0.00	0.77	0.77	-1.63	0.69
Feb-21	28.00	100%	1.17	0.00	0.89	0.89	0.00	0.00	0.00	-2.06	0.00
Mar-21	31.00	100%	1.17	0.00	0.88	0.88	0.00	0.00	0.00	-2.05	0.00
Apr-21	9.00	30%	1.25	0.04	0.84	0.88	3.83	0.00	3.83	1.75	2.38
May-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00
Aug-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
Sep-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	[illegible]	[illegible]	0.00	0.00
Oct-21	0.00	0%	0.00	0.00	0.00	0.00	[illegible]	[illegible]	0.00	0.00	0.00

Contact & Plan Info | Well & Meter Information | Depletions & Obligations | [illegible]ple Pond | Summary | DWR | Version

Net Effect is the Balance or Net Impact value with the priority of the plan included. Plans considered in priority may not be required to replace depletions. This column represents whether the Aug plan shows injury to the river or has sufficiently replaced its uses.