COLORADO
Division of Water Resources
Department of Natural Resources

January 10, 2025

Jennifer S. Lindahl, P.E.
Bishop-Brogden Associates, Inc.
333 West Hampden Avenue, Suite 1050
Englewood, Colorado 80110

Re: Morton-Holton Lakes Pit Substitute Water Supply Plan (WDID 0202616)
Morton-Holton Lakes Mine DRMS File No. M-2008-082 (WDID 0203053)
Sections 1 and 12, T1N, R67W of the 6th P.M.
Sections 6 and 7, T1N, R66W of the 6th P.M.
Water Division 1, Water District 2, Weld County
SWSP ID: 5178

Approval Period: January 1, 2025 through December 31, 2025
Contact phone number for Jennifer S. Lindahl: (303) 806-8952 and jlindahl@bbawater.com

Dear Jennifer S. Lindahl, P.E.:

We have reviewed your letter dated October 30, 2024 requesting renewal of the substitute water supply plan ("SWSP") to cover depletions at the Morton Lakes Mine ("Morton Lakes") and Holton Lake Mine ("Holton Lakes"), operated by Brannan Sand and Gravel Company LLC ("Brannan" or Applicant"). On March 6, 2017 the Colorado Division of Reclamation Mining and Safety ("DRMS") approved the incorporation of the Holton Lakes Mine into the Morton Lakes Mine, therefore both mining permits are now operating under Morton Lakes Mine (M-2008-082). The previous SWSP for the Morton-Holton Lakes was approved on December 20, 2023 to cover operations for January 1, 2024 through December 31, 2024. The required fee of $257 for this SWSP has been submitted (receipt no. 10039180).

SWSP Operations

The Morton-Holton Lakes Mine is located in the SE ¼ of Section 1 and the NE ¼ of Section 12, all in Township 1 North, Range 67 West of the 6th P.M., and the SW ¼ of Section 6 and the NW ¼ of Section 7, all in Township 1 North, Range 66 West of the 6th P.M. The depletions that result from the mining operation over the period of this SWSP include evaporation from exposed groundwater, dewatering, water used to wash mined product, dust suppression, and reservoir construction water at Stage 5. The replacement of depletions for Morton-Holton site is fully consumable water leased from the City of Aurora.

Mining of the Morton Lakes site is presently expected/projected to last until at least 2026. The current mining plan for the site is shown in attached Figure 1. The mining status of the Stages is described below:

- Stage 1 - Mining at Stage 1 was completed in July 2016. Stage 1 currently exposes 11 acres of groundwater and is unlined. Depletions from this stage consist of evaporation only.
- Stage 2 - Mining at Stage 2 was completed in 2016. Stage 2 currently exposes 15 acres of groundwater and is unlined. Depletions from this stage consist of evaporation only.
- Stage 3 - Mining at Stage 3 was completed in early 2018. Stage 3 was completely backfilled in the spring of 2019 with overburden from other stages. There are no remaining lagged depletions associated with this Stage that need to be replaced (which includes what was previously called Stage 3B).
- Stage 4 - Mining at Stage 4 was completed in the spring of 2021. A slurry wall was constructed around Stage 4 and a 90-day leak test was provisionally approved on May 23, 2018. Brannan completed the final construction to convert Stage 4 into its intended and approved post-mining reservoir storage use in 2021, and the final leak test was approved on May 24, 2021. On July 1, 2021 the structure was transferred to United Water. Brannan is no longer responsible for Stage 4, and any lagged depletions from previous mining of this stage and new depletions associated with future use at Stage 4 are not included in this SWSP renewal request.
- Stage 5 – A slurry wall was constructed in July 2020 for Stage 5 and mining began at the end of 2020. A 90-day leak test was provisionally approved on January 5, 2021.

During heavy rains in Spring 2023, Stage 5 intercepted a substantial amount of surface water from Big Dry Creek. Brannan reported that the additional water was pumped out of this stage as quickly as possible. Mining at Stage 5 was anticipated to be completed by the end of 2024. Stage 5 will be converted to a reservoir for post-mining water storage sometime in the first half of 2025. The surface area of Stage 5 will remain at 1 acre during 2025. *For the Stage 5 structure to be approved as a reservoir capable of post-mining water storage, the operator must perform a final leak test once mining is complete, and the site is at final grade.* Depletions from this stage result from evaporation, dewatering, and gravel production.

- Stage 6A - Mining at Stage 6A was completed mid-2017. The exposed groundwater surface area of Stage 6A is 1 acre and is lined. A 90-day leak test for this stage together with Stage 6B and 6D was provisionally approved on November 4, 2019. Depletions from this stage consist of evaporation only.
- Stage 6B – Mining at Stage 6B was completed in March of 2018. The exposed groundwater surface area of Stage 6B will remain at 1 acre during 2025 and is lined. Depletions from this stage consist of evaporation only.
- Stage 6C – Mining at Stage 6C began in 2019. Stage 6C was backfilled at the end of 2022.
- Stage 6D – Mining at Stage 6D began in 2019 following the installation of the slurry wall. The exposed groundwater surface area of Stage 6D will decrease from 3.5 to 2 acres during 2025 and is lined. Depletions from this stage will consist of evaporation, dewatering, and gravel production.
- Stage 6E - Mining is not anticipated to occur in Stage 6E during 2025, and no surface area is anticipated to be exposed during that time.
- Stage 7A - Mining at Stage 7A began in 2023, following the planned completion of a slurry wall in Stage 7A. A 90-day leak test for this stage was provisionally approved on October 17, 2023. The exposed groundwater surface area of Stage 7A is currently 0.1 acres and is not expected to expose more than 1 acre. Depletions from this stage will consist of evaporation, dewatering, and gravel production.
- Stage 7B – Mining at Stage 7B began in 2023, and is planned to continue during the renewal request period. Stage 7B is lined and currently exposes 0.1 acres of ground water. The surface area exposed during 2025 is not anticipated to be more than 1

acre. Depletions from this stage will consist of evaporation, dewatering, and gravel production.

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 identified four approaches to satisfy this requirement.

In accordance with approach nos. 1 and 3, you have indicated that a bond has been obtained for the new Morton-Holton Lakes site that can cover the cost of lining, to prevent the exposure of groundwater. The current bond amount for the new Morton-Holton Lakes site is $4,150,000.00.

Depletions

The projected depletions for Stages 1, 2, 5, 6A, 6B, 6D, 7A and 7B result from evaporation, dewatering, dust control, water used to wash the mined product, water lost in the mined product, and reservoir construction at Stage 5.

Evaporation

The Applicant proposes to replace evaporation from exposed groundwater at the Morton-Holton site based upon evaporation atlases in NOAA Technical Report NWS 33 and the State Engineer's Office ("SEO") monthly distribution factors for sites below 6,500 feet, as shown in attached Table 1. Gross annual evaporation at these gravel pit locations is estimated to be 44.27 inches per year based on the NOAA NWS 33 Evaporation Atlas mapping. 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 pit. The historical consumptive use was assumed to be equal to the effective precipitation of 9.25 inches,

which was estimated based on the data from the Fort Lupton 2SE (ID 3027, record 1950-1976) and Brighton 1 NE (ID 950, record 1976-2014) NOAA weather stations. The projected maximum monthly exposed groundwater surface area at each stage is described in Table A below:

Table A – Maximum monthly exposed groundwater surface area (acres)

Stage 1	Stage 2	Stage 5	Stage 6A	Stage 6B	Stage 6D	Stage 7A	Stage 7B	Total
11.0	15.0	1.0	1.0	1.0	2.0	1.0	1.0	33.0

The net evaporation rate for the exposed water surface is estimated to be 2.92 acre-feet/acre, as shown on attached Table 1. **Total net evaporation for this plan period is 96.32 acre feet**, as shown on attached Table 2, Column 2.

Mined Product

In addition to the evaporation, water is lost with the mined product removed from the mine sites as shown in attached Table 2. Brannan projects that they will mine approximately 550,000 tons of gravel during this plan period from Stages 7A, and 7B within the lined pits which will result in a depletion of 2% by weight. The **water lost from mined product is projected to total 7.97 acre-feet** during 2025 as shown in Table 2, Column 4.

Dust Suppression

The estimated **water used for dust suppression is 10.20 acre-feet** during 2025, as shown in Table 2, Column 5. Brannan will pump water from Stage 2 for dust suppression purposes during this plan period.

Dewatering

Minimal dewatering will occur in Stages 5, 6B, 6D, 7A, and 7B from within the lined pits and such water is returned directly to the stream. Dewatering will occur at this site at a

relatively constant rate until the end of the SWSP period. All dewatering will be accurately metered so as to properly determine the lagged dewatering depletions to the stream that will result once dewatering ceases. As long as all water is pumped from within the lined pits and is returned to the stream without consumptive use, there are no new lagged depletions from dewatering that need to be replaced under this SWSP for Stages 5, 6B, 6D, 7A, and 7B.

Reservoir Construction at Stage 5

It is projected that the **final reservoir construction for Stage 5 will require 67.02 acre-feet** of water during 2025 as shown on attached Table 2, Column 6. Since water will be pumped directly from the stream for storage in Stage 5, no lagged depletions will occur from this use.

Total Consumptive Use (Unlagged Depletions)

The **total consumptive use at the site for this plan period is 181.51 acre-feet**, as shown on attached Table 2, Column 7.

Lagged Depletions

The IDS AWAS stream depletion model was used to determine the lagged depletions from dewatering, evaporation, and operational losses at the Morton-Holton Lakes site to Big Dry Creek and the South Platte River, using the following Glover parameters:

- Specific yield = 0.2
- Transmissivity = 150,000 gpd/ft based on pumping test data in Colorado Ground Water Circular No. 11
- Distance from centroid of the Stage 1 mining area to Big Dry Creek = 300 feet
- Distance from centroid of the Stage 2 mining area to Big Dry Creek = 1,150 feet
- Distance from centroid of the Stage 5 mining area to Big Dry Creek = 318 feet
- Distance from centroid of the Stage 6A mining area to the Big Dry Creek = 1,356 feet
- Distance from centroid of the Stage 6B mining area to the Big Dry Creek = 1,724 feet
- Distance from centroid of the Stage 6D mining area to South Platte River = 643 feet

- Distance from centroid of the Stage 7A mining area to the Big Dry Creek = 665 feet
- Distance from centroid of the Stage 7B mining area to Big Dry Creek = 173 feet
- Distance from alluvial boundary (based upon CDSS South Platte River alluvial aquifer boundary mapping)
    - 7,250 feet for Stage 1 and 2
    - 1,395 feet for Stage 5
    - 8,557 feet for Stage 6A
    - 8,680 feet for Stage 6B
    - 9,164 feet for Stage 6D
    - 6,978 feet for Stage 7A
    - 7,360 feet for Stage 7B

Normalized lagged factors were developed to determine the timing of lagged depletions to the stream as summarized in the attached "Depletion Lagging Factors" Table.

The total projected **lagged depletions from mining operations are 182.90 acre-feet** during 2025 as shown in Table 2, Column 8. For purposes of this SWSP, depletions are assumed to accrue to a point on the South Platte River located 1,885 feet from the West Section line and 1,600 feet from the South Section line in Section 6, Township 1 North, Range 66 West, 6th P.M.

Replacements

The proposed source of replacement water for this SWSP is fully consumable water leased from the City of Aurora ("Aurora"). The Applicant provided a copy of the lease extension agreement with Aurora renewable through December 31, 2025 with the SWSP request, and a copy of the lease is attached to this letter. Water leased from Aurora would be released from the Robert W. Hite Treatment Facility (a.k.a. Metro Wastewater Treatment Plant (MWWTP)) (WDID 0200700) in the SW ¼ of the SW ¼ of Section 1, Township 3 South, Range 68 West of the 6th P.M. A transit loss of 0.5% per mile is currently assessed from April through October and a transit loss of 0.25% per mile is currently assessed during November through March for delivery of water down the South Platte River. Such transit losses are subject to modification by the Division Engineer. The MWWTP is located approximately 25

miles upstream of the confluence of the South Platte River and Big Dry Creek where the mining depletions will accrue to the river, therefore the total transit loss will be 12.5% during the irrigation season and 6.25% during the non-irrigation season. Replacement supplies from Aurora include transit loss, so all Morton Lakes and Holton Lakes depletions are fully replaced at the point of depletions through December 31, 2025.

The Applicant shall ensure that the replacement water makes it to the point of depletion or to the location of the calling water right located below the Morton and Holton Lakes point(s) of depletion. The Division Engineer, or their designated representative, will administer all such water transported in the South Platte River or its tributaries, including water for replacement of depletions, past intervening headgates to ensure that such water is not intercepted or otherwise diminished in quantity by diversion, use or other interference by intervening water rights and to assure that such water remains available and suitable for Applicant's uses under this plan, except when any intervening headgate is diverting the entire flow of ("sweeping") the river. In the event that delivery past headgates which sweep the river requires the installation of a bypass structure or the use of an existing bypass structure by agreement with a third-party, Applicant is responsible for either installing a new bypass structure with a continuous recording measuring device(s) as approved by the Water Commissioner or securing an agreement with a third-party to use an existing bypass structure and providing such information and agreement to the Division Engineer.

Conditions of Approval

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

1. This SWSP is approved with an **effective date of January 1, 2025 and shall be valid through December 31, 2025** unless otherwise revoked or superseded by a decree. If this plan will not be made absolute by a water court action by the plan's expiration date, a renewal request must be submitted to this office with the statutory fee (currently $257/DRMS permit) no later than **November 1, 2025**. If a renewal request

is received after the expiration date of this plan, it will be considered a request for a new SWSP and the $1,593 filing fee will apply.

2. Well permit no. 82252-F has been obtained for Stage 1, 2, 5, 6A, 6B, 6C/6D, 7A and 7B of the Morton-Holton Lakes site and this permit remains valid. If uses not allowed by this permit are proposed as part of any SWSP renewal, a new well permit must be obtained in accordance with section 37-90-137(2), C.R.S., and an approved SWSP prior to commencing mining of that area. Any application will be evaluated subsequent to approval of this SWSP. The provisions of section 37-90-137(2), C.R.S., prohibit the issuance of a permit for a well to be located within 600 feet of any existing well, unless the State Engineer finds that circumstances so warrant after a hearing in accordance with the procedural rules in 2 CCR 402-5. The hearing will be waived if you are able to obtain statements from the owners of all wells within 600 feet, verifying that they have no objection to your use of the proposed well.

3. The total surface area of the groundwater exposed at the Morton-Holton Lakes site must not exceed 33.0 acres as shown on Table A above resulting in an evaporation loss of 96.31 acre-feet. Should the total surface area exposed exceed those amounts, an amendment request shall be promptly filed with this office.

4. The water used for dust control at the Morton-Holton Lakes site shall not exceed 10.20 acre-feet.

5. The total product mined at the Morton-Holton Lakes associated with a 2% depletion, as described above, shall not exceed 550,000 tons, resulting in a total depletion of 7.97 acre-feet.

6. The total water used for final construction of Stage 5 shall not exceed 67.02 acre-feet.

7. The total consumptive use under this SWSP shall not exceed 181.51 acre-feet and the total lagged depletions shall not exceed 182.90 acre-feet.

8. Total consumption and lagged depletions at the Morton-Holton Lakes site must not exceed these aforementioned amounts unless an amendment is made to this SWSP.

9. Approval of this SWSP is for the purposes as stated herein. This office must first approve any additional uses for the water.

10. All pumping for dust control shall be measured in a manner acceptable to the Division Engineer.

11. All water diverted from the stream for final reservoir construction at Stage 5 shall be measured in a manner acceptable to the Division Engineer. The Applicant must obtain approval of the measurement and recording device prior to diverting water. The Applicant must also obtain approval from the Water Commissioner prior to any diversions occurring.

12. The Applicant should consider the effects of groundwater mounding and the need for interceptor drains due to construction of the liners around the pits.

13. The replacement water that is the subject of this SWSP cannot be sold or leased to any other entity. As a condition of subsequent renewals of this SWSP, the replacement water must be appurtenant to this site until a plan for augmentation is obtained. 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 entity making replacements has included the Applicant on their accounting and submitted their accounting to the division office and the Water Commissioner; for this SWSP, that entity is the City of Aurora.

15. Conveyance loss for delivery of augmentation water to the point of depletion on the South Platte River is subject to assessment and modification as determined by the Division Engineer.

16. In order to prevent injury to other water rights, the Division Engineer and Water Commissioner must be able to administer Applicant's 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 South Platte or its tributaries. Applicant shall not receive credit for replacement of depletions to the South Platte 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 South Platte below such diversion structure. 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.

17. The name, mailing address, and phone number of the contact person who will be responsible for operation and accounting of this plan must be provided on the accounting forms to the Division Engineer and Water Commissioner.

18. Dewatering at this site will produce delayed depletions to the stream system. Dewatering operations must be measured by totalizing flow meters that can accurately show the monthly volume of dewatered water that is pumped and returns to the stream. 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.

19. The Applicant must replace all depletions resulting from operations under this SWSP, including those depletions that are owed to the stream after the expiration date of this SWSP. The Applicant must maintain a valid SWSP approved under section 37-90-137(11), C.R.S. until all lagged replacement obligations resulting from the gravel pit operation have been fully replaced in time, location, and amount.

20. 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.

    In accordance with approach nos. 1 and 3, you have indicated that a bond has been obtained for $4,150,000 for the Morton-Holton Lakes site through the DRMS to assure that depletions from groundwater evaporation do not occur in the unforeseen event or events that would lead to the abandonment of the Pit.

21. All releases of replacement water must be sufficient to cover all out of priority depletions and be made under the direction and/or approval of the Water Commissioner (including the proposed aggregated replacement for winter depletions).

22. 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. If reclamation of the mine site 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.

23. 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 vested 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 the product from below the water table, and all other use of water at the pit, must cease immediately.

24. 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 the 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.

25. 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.

If you have any questions concerning this approval, please contact Mike Matz in Denver at (303) 866-3581 or Corey DeAngelis in Greeley at (970) 352-8712.

Sincerely,

for Joanna Williams, P.E.
Chief of Water Supply

Attachments: Figure 1
Tables 1-3
Depletion Lagging Factors Table
City of Aurora Lease Extension
Letter from DRMS dated April 30, 2010
Augmentation Plan Accounting Protocol

Ec: Corey DeAngelis, Division Engineer, Corey.DeAngelis@state.co.us
Liam Cummins, Water Resource Engineer, liam.cummins@state.co.us
Tarvis Tyner, Accounting Operation Lead, dnr_div1accounting@state.co.us
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Louis Flink, Tabulation / Diversions Record Coordinator Louis.Flink@state.co.us
Division of Reclamation Mining and Safety, dnr_drmsminadmin@state.co.us

JMW/idc/mbm: 2025 Morton Lakes Mine Approval.docx

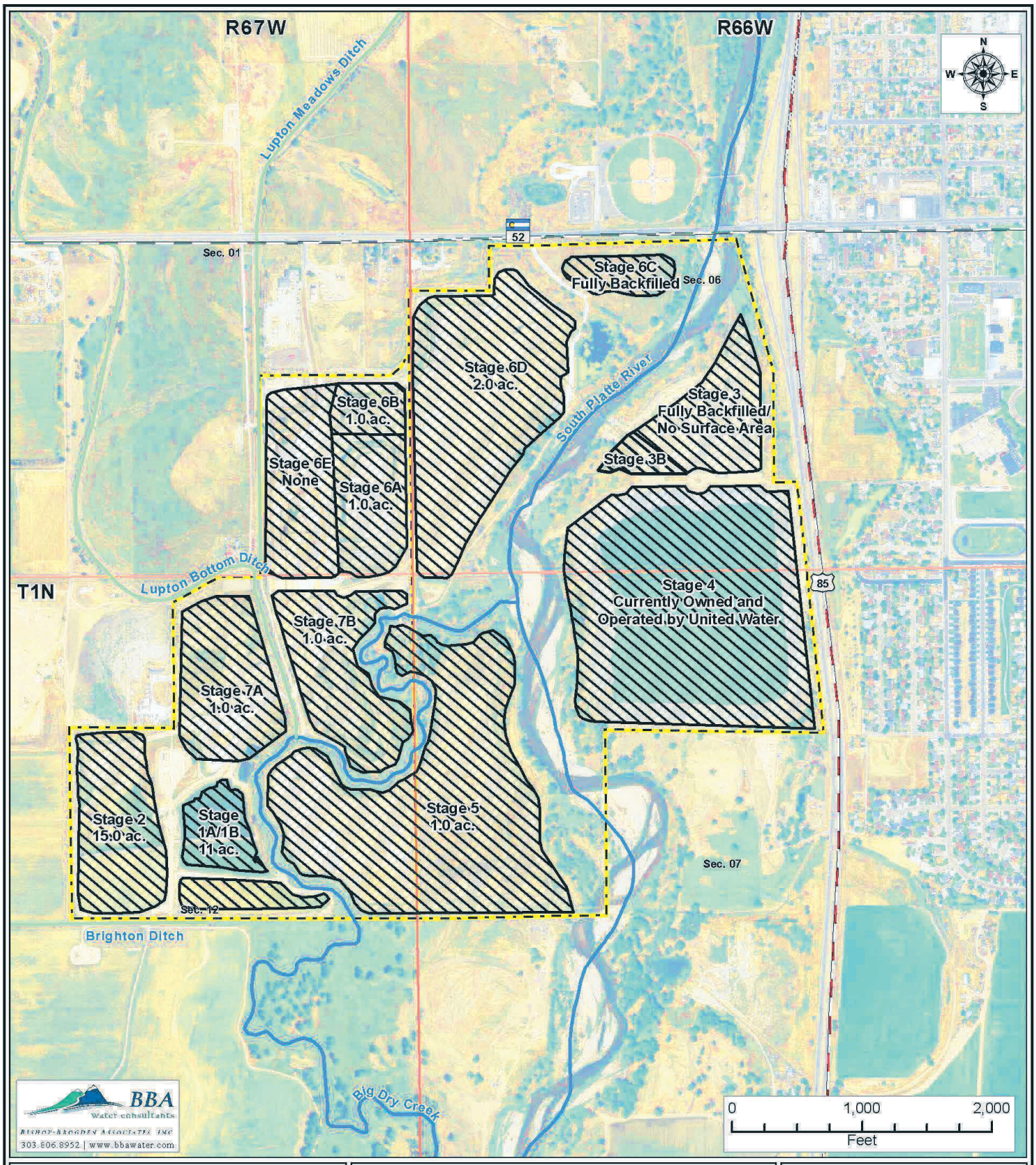

FIGURE 1
Morton Lakes Mine Property Boundaries and Exposed Ground Water Area

Date: 11/6/2023 | Job No. 0430.08

Legend

- Mining Stage (Acres of Exposed Ground Water)
- Morton Lakes Mine Boundary (Approx.)

Aerial Photo Date: 7/26/2021 NAIP USDA
Data Source: Boral, Ready Mixed, CDSS, CDOT, USGS, BLM

Colorado

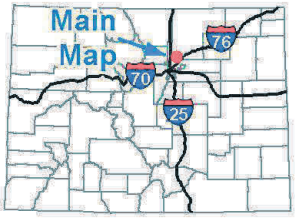

Table 1
Brannan Sand and Gravel Company - Morton Lakes Mine
Net Evaporation Rate
2025 SWSP Accounting

Month	Gross Evaporation Distribution % [1]	Gross Evaporation Rate (inches) [2]	Ft Lupton/ Brighton Precipitation (inches) [3]	Effective Precipitation Rate (inches) [4]	Net Evaporation Rate (inches) [5]	Net Evaporation Rate (feet) [6]
Jun	14.5%	6.42	1.52	1.07	5.35	0.45
Jul	15.0%	6.64	1.48	1.03	5.61	0.47
Aug	13.5%	5.98	1.46	1.02	4.96	0.41
Sep	10.0%	4.43	1.21	0.84	3.58	0.30
Oct	7.0%	3.10	0.88	0.62	2.48	0.21
Nov	4.0%	1.77	0.65	0.45	1.32	0.11
Dec	3.0%	1.33	0.42	0.29	1.03	0.09
Jan	3.0%	1.33	0.43	0.30	1.03	0.09
Feb	3.5%	1.55	0.38	0.27	1.28	0.11
Mar	5.5%	2.44	1.01	0.71	1.73	0.14
Apr	9.0%	3.98	1.53	1.07	2.91	0.24
May	12.0%	5.31	2.26	1.58	3.73	0.31
Total	100.0%	44.27	13.22	9.25	35.02	2.92

Notes:

[1] SB 89-120 Guidelines monthly distribution of gross evaporation for elevations below 6,500 feet.

[2] Gross evaporation rate equals 44.27 inches (3.69 ft) per year, based upon NOAA NWS 33 Evaporation Atlas. Monthly distribution given in column [1].

[3] 1950 to 2014 average precipitation at the Fort Lupton 2 SE (ID: 3027, record: 1950-1976) and Brighton 1 NE (ID: 950, record: 1976-2014) NOAA weather stations.

[4] Effective precipitation rate equals 70% of total precipitation given in column [3].

[5] Net evaporation rate equals [2] - [4].

[6] Net evaporation rate in feet equals [5]/12 inches.

Table 2
Brannan Sand and Gravel Company - Morton Lakes Mine
Projected Mining Operations and Depletions
2025 SWSP Accounting
(all values in acre-feet unless specified, negative values are depletions, positive values are accretions)

	Stages 1, 2, 5, 6A, 6B, 6D, 7A and 7B Operations												
	Exposed	Net	Gravel Production		Water		Reservoir	Total		Downstream River Call		Number of	Out-of-
Month	Ground Water (ac) [1]	Evaporation Volume [2]	4% Water (tons) [3a]	2% Water (tons) [3b]	in Gravel [4]	Dust Suppression [5]	Construction for Stage 5 [6]	Consumptive Use [7]	Lagged Depletion [8]	Priority [9]	Location [10]	Days Out-of-Priority [11]	Priority Depletions [12]
Jan-25	33.0	-2.83	0	75,000	-1.10	-0.20	-11.05	-15.19	-16.45			31	-16.4
Feb-25	33.0	-3.53	0	85,000	-1.25	-0.20	-13.26	-18.24	-18.94			28	-18.9
Mar-25	33.0	-4.75	0	85,000	-1.25	-0.40	-14.73	-21.13	-21.26			31	-21.3
Apr-25	33.0	-8.01	0	95,000	-1.40	-1.00	-14.73	-25.14	-23.97			30	-24.0
May-25	33.0	-10.26	0	95,000	-1.40	-1.00	-13.26	-25.92	-24.73			31	-24.7
Jun-25	33.0	-14.72	0	106,415	-1.57	-2.00	0.00	-18.29	-15.60			30	-15.6
Jul-25	33.0	-15.42	0	0	0.0	-2.00	0.00	-17.42	-15.86			31	-15.9
Aug-25	33.0	-13.63	0	0	0.0	-1.50	0.00	-15.13	-14.84			31	-14.8
Sep-25	33.0	-9.85	0	0	0.0	-1.00	0.00	-10.85	-11.94			30	-11.9
Oct-25	33.0	-6.83	0	0	0.0	-0.50	0.00	-7.33	-8.95			31	-9.0
Nov-25	33.0	-3.62	0	0	0.0	-0.20	0.00	-3.82	-5.88			30	-5.9
Dec-25	33.0	-2.85	0	0	0.0	-0.20	0.00	-3.05	-4.46			31	-4.5
2025 Total	-	-96.32	0	541,415	-7.97	-10.20	-67.02	-181.51	-182.90			365	-182.90

Shaded rows are projections.

[1] Total exposed ground water surface area in Stages 1, 2, 5, 6A, 6B, 6D, 7A and 7B. Comprised of dewatering ditches and the processing plant's wash water and settling pond.

[2] Net evaporation volume is equal to the net evaporation rate in Table 1, column 6 multiplied by the exposed ground water area in [1].

[3a] Gravel production in Stages 7A and 7B below the ground water table and in a dewatered state and subsequently washed, resulting in depletion that is 4% by weight.

[3b] Gravel production in Stages 7A and 7B that results in depletion that is 2% by weight. The gravel production may consist of the following: (1) material mined above the ground water table and washed, (2) material mined below the ground water table and unwashed, or (3) stock piled material that is washed.

[4] Water contained in the mined gravel given in [3a] and [3b].

[5] Water pumped from Stage 2 and used for dust suppression, considered 100% consumptive.

[6] Water used for reservoir construction at Stage 5 is projected to begin in January 2025 and continue through May 2025. Water will be pumped directly from the river and metered.

[7] Total consumptive use in Stages 1, 2, 5, 6A, 6B, 6D, 7A and 7B is equal to [2] + [4] + [5] + [6].

[8] Lagged depletion to Big Dry Creek of Stage 1 Consumptive Use, lagged over 5 months; Stage 2 Consumptive Use, lagged over 14 months; Stage 6A Consumptive Use, lagged over 19 months; Stage 6B Consumptive Use, lagged over 22 months; Stage 5 Consumptive Use lagged over 2 months, Stage 7A Consumptive Use, lagged over 9 months, and Stage 7B Consumptive Use, lagged over 2 month. Lagged depletions to South Platte of Stage 6D Consumptive Use is lagged over 12 months.

[9] Priority date of the predominant downstream call on the South Platte River.

[10] Location of the predominant downstream call on the South Platte River.

[11] Number of Days there was a downstream call on the South Platte River.

[12] Out-of-priority depletions is equal to the fraction of the total depletion that occurred when there was a call on the South Platte River, equal to [8] x [11] / # of days in month.

Table 3
Brannan Sand and Gravel Company - Morton Lakes Mine
Replacement Supplies and Water Balance
2025 SWSP Accounting
(all values in acre-feet, negative values are depletions, positive values are accretions)

Month	Out-of-Priority Depletions [1]	City of Aurora Lease Water Delivery [2]	Maximum Transit Loss [3]	Net River Balance [4]	Cumulative River Balance [5]
Jan-25	-16.4	20.1	-1.3	2.4	2.4
Feb-25	-18.9	23.1	-1.4	2.8	5.1
Mar-25	-21.3	26.0	-1.6	3.1	8.2
Apr-25	-24.0	31.0	-3.9	3.2	11.4
May-25	-24.7	32.0	-4.0	3.3	14.7
Jun-25	-15.6	20.2	-2.5	2.1	16.7
Jul-25	-15.9	20.5	-2.6	2.1	18.8
Aug-25	-14.8	19.2	-2.4	2.0	20.8
Sep-25	-11.9	15.4	-1.9	1.6	22.4
Oct-25	-9.0	11.6	-1.4	1.2	23.5
Nov-25	-5.9	7.2	-0.4	0.9	24.4
Dec-25	-4.5	5.4	-0.3	0.6	25.1
2025 Total	**-182.9**	**231.8**	**-23.9**	**25.1**	--

Shaded rows are projections.

[1] Out-of-priority mining depletion, from Table 2, column 12.

[2] City of Aurora lease water deliveries to the South Platte River on days with a downstream river call, as reported in the accounting for WDID 0802593.

[3] District 2 South Platte River transit loss (0.5% per mile from April through October and 0.25% per mile from November through March) on the Aurora lease delivery. City of Aurora lease water deliveries will incur a maximum of 12.5% or 6.25% transit loss over the 25 river miles from the Metro Hite WWTP to Big Dry Creek.

[4] Net river balance deficit (-) or surplus (+). Equal to [1] + [2] + [3].

[5] Cumulative river balance deficit (-) or surplus (+). Equal to previous [5] + [4].

Depletion Lagging Factors

Stage 1 Depletion Lagging Factors		Stage 2 Depletion Lagging Factors		Stage 6A Depletion Lagging Factors		Stage 6B Depletion Lagging Factors		Stage 6D Depletion Lagging Factors		Stage 5 Depletion Lagging Factors		Stage 7A Depletion Lagging Factors	
Month	Lagging Factor	Month	Lagging Factor	Month	Lagging Factor	Month	Lagging Factor	Month	Lagging Factor	Month	Lagging Factor	Month	Lagging Factor
1	0.8580	1	0.4685	1	0.4007	1	0.2986	1	0.6817	1	0.8756	1	0.8274
2	0.1040	2	0.2647	2	0.2808	2	0.2921	2	0.1912	2	0.1244	2	0.0610
3	0.0196	3	0.0712	3	0.0815	3	0.0982	3	0.0414			3	0.0318
4	0.0108	4	0.0401	4	0.0441	4	0.0542	4	0.0217			4	0.0203
5	0.0077	5	0.0292	5	0.0299	5	0.0369	5	0.0142			5	0.0165
		6	0.0238	6	0.0232	6	0.0287	6	0.0106			6	0.0132
		7	0.0202	7	0.0194	7	0.0240	7	0.0087			7	0.0117
		8	0.0174	8	0.0170	8	0.0210	8	0.0075			8	0.0100
		9	0.0150	9	0.0151	9	0.0187	9	0.0066			9	0.0082
		10	0.0130	10	0.0135	10	0.0168	10	0.0060				
		11	0.0113	11	0.0121	11	0.0151	11	0.0055				
		12	0.0097	12	0.0109	12	0.0137	12	0.0049				
		13	0.0085	13	0.0099	13	0.0124						
		14	0.0073	14	0.0089	14	0.0112						
				15	0.0080	15	0.0101						
				16	0.0072	16	0.0092						
				17	0.0065	17	0.0083						
				18	0.0059	18	0.0075						
				19	0.0053	19	0.0068						
						20	0.0061						
						21	0.0056						
						22	0.0050						
TOTAL	1.0000	TOTAL	1.0000	TOTAL	1.0000	TOTAL	1.0000	TOTAL	1.0000	TOTAL	1.0000	TOTAL	1.0000

Stage 7B Lagging factors were determined to be 93.64% in Month 1, and 6.36% in Month 2.

Agreement
For Delivery of Reusable Raw Water

This Agreement ("Agreement") is entered into on this 20 day of August, 2020, by and between the City of Aurora, Colorado, a Colorado municipal corporation of the counties of Adams, Arapahoe and Douglas, acting by and through its Utility Enterprise ("Aurora"), whose address is 15151 East Alameda Parkway, Suite 3600, Aurora, Colorado 80012, and Brannan Sand and Gravel Company, L.L.C., a Colorado limited liability company, whose address is 2500 Brannan Way, Denver, Colorado 80229 ("Brannan"). Aurora and Brannan are each referred to herein as a "Party" and together as the "Parties."

WITNESSETH

WHEREAS, Aurora has the right to use, sell, or provide for use certain of its fully reusable municipal water return flows to the South Platte River ("Reusable Raw Water"); and

WHEREAS, such Reusable Raw Water is derived from trans-mountain or other reusable sources; and

WHEREAS, Brannan has a use for a certain portion of this Reusable Raw Water; and

WHEREAS, Aurora and Brannan desire to enter into this Agreement whereby Aurora shall deliver a portion of such Reusable Raw Water to Brannan; and

WHEREAS, this Agreement will be of mutual benefit and convenience to Aurora and Brannan; and

WHEREAS, the Aurora Utility Enterprise staff has determined, as a precondition to entering this Agreement, that Aurora is able to fulfill all exchange and operational obligations that require Reusable Raw Water, that it is able to fulfill all existing long-term agreements that require Reusable Raw Water (including this Agreement), and that all other needs of Aurora that may be fulfilled by these sources are met; and

NOW, THEREFORE, for and in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the adequacy and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

Agreement

1. **Term**.

(a) This Agreement shall commence on the Effective Date, as defined in Paragraph 21 below, and continue until the last date for delivery of water as provided for on the water delivery schedule attached hereto as Exhibit A ("Delivery Schedule"), such date being December 31, 2023, unless extended pursuant to (b) of this Paragraph 1 (the "Term").

(b) At Aurora's discretion and upon Brannan's request and submittal of a new Delivery Schedule prior to December 31, 2023, and prior to December 31 for subsequent years, the Term of this Agreement may be extended for additional full or partial calendar years. But in no event shall the Term extend beyond December 31, 2025. Said extensions shall be subject to all the terms and conditions of this Agreement unless amended pursuant to Paragraph 16, below.

2. **Delivery Schedule**. Delivery of the Reusable Raw Water will be made in accordance with the Delivery Schedule. Brannan may submit to Aurora a proposed modified Delivery Schedule that will be approved in Aurora's sole discretion and effective only upon Aurora's written consent. As long as Aurora is capable of delivering the Reusable Raw Water to the Delivery Points (defined in Paragraph 3, below) according to the Delivery Schedule, Brannan will be obligated to pay the per-acre foot charge (Unit Rate) set forth in Paragraph 8, below, regardless of whether or not Brannan requests or uses the Reusable Raw Water.

3. **Delivery Location**.

(a) Delivery Points. Brannan agrees that Aurora shall initially make its delivery of the Reusable Raw Water at the outfall of the Metro Wastewater Reclamation District's Robert W. Hite treatment facility ("Hite"). Brannan further agrees that Aurora may, in its sole discretion, satisfy its delivery obligations under this Agreement by delivering the Reusable Raw Water at any other delivery point or delivery points on the South Platte River (each of Hite and such other delivery points, hereinafter, a "Delivery Point", and collectively the "Delivery Points"), provided that such alternative Delivery Points are located within a reach of the South Platte River beginning at or below Hite, and continuing downstream to a point at or above the location on the South Platte River that is generally described as being above the confluence of the South Platte River and Big Dry Creek at a point in the NW1/4 of the NW1/4 of Section 7, Township 7 North, Range 66 West of the 6th P.M. ("Point of Use"). Brannan acknowledges and agrees that the alternate Delivery Points may include, but are not limited to, other wastewater treatment plants that may be constructed in the future that discharge Reusable Raw Water owned by Aurora, the Brighton Ditch Augmentation Stations, the outfall of Walker Reservoir, and the confluence of Sand Creek and the South Platte River. Aurora will bear the responsibility for delivery of the Reusable Raw Water to these Delivery Points, and in its sole discretion may determine which of the Delivery Points it will use at any given time. Once Aurora has completed its delivery of the Reusable Raw Water hereunder, Brannan shall assume sole liability for any loss, damage, or injury that may occur to persons or property as the direct or indirect result of the control and/or use of said Reusable Raw Water by Brannan. The amount of Reusable Raw Water reflected in the Delivery Schedule was calculated by Brannan to include any transportation losses, or "shrinkage," from Hite to the Point

of Use downstream. Brannan also acknowledges the travel time between the alternate Delivery Points and the Point of Use varies, but that the timing for Aurora's delivery obligations as provided for under the Delivery Schedule shall remain the same regardless of Aurora's use of alternative Delivery Points.

(b) Credit for Avoided Transit Loss. Aurora's obligations with respect to the volume of Reusable Raw Water to be delivered under this Agreement are deemed to be satisfied if Aurora makes deliveries in such amounts as if delivered at Hite. Thus, if Aurora elects, in its sole discretion, to make its delivery of any Reusable Raw Water under this Agreement at a Delivery Point other than Hite, and if delivery at such alternative Delivery Point(s) results in reduced transit loss, Aurora shall be entitled to retain such avoided transit loss with no credit to Brannan in water, money or otherwise. Aurora shall maintain and provide to Brannan a monthly accounting and report of daily deliveries at the Delivery Point(s). If Aurora elects to deliver some or all of the Reusable Raw Water at alternative Delivery Point(s), then the foregoing reports shall include the calculated amount of avoided transit loss, and the amount of water physically delivered at such alternative Delivery Point(s). For purposes of calculating any such avoided transit loss, the Parties hereby agree that the volume of Reusable Raw Water required to be delivered by Aurora in accordance with the Delivery Schedule shall be discounted by an amount equal to one-half of one percent (0.5%) of such volume during the April through September irrigation season, or one-fourth of one percent (0.25%) of such volume during the October through March non-irrigation season, for each river mile in distance between Hite and such alternative Delivery Point(s) (such distance calculated to the nearest one-tenth of a mile), or by such other amount as determined by the Division Engineer for Water Division 1 (such office or its replacement the "Division Engineer") or as specified in an applicable statute or decree from a court of applicable jurisdiction. The product of this calculation shall represent the amount of avoided transit loss in acre-feet, which Aurora shall be entitled to retain.

4. **Source and Quality of Reusable Raw Water**. The Reusable Raw Water to be provided by Aurora under this Agreement shall, at Aurora's discretion, consist of Aurora's reusable municipal return flows to the South Platte River, any fully consumable portion of changed irrigation water rights owned by, or available to Aurora, fully consumable water diverted pursuant to decrees entered in 03CW414, 03CW415, and 06CW104, Water Division 1, and any other legal source of Reusable Raw Water available to Aurora. Under no circumstances shall this Agreement be interpreted to mean that Aurora must supply potable water should the sources set forth in this paragraph be unavailable. Aurora does not warrant or guaranty any water quality standards with respect to the Reusable Raw Water to be delivered as provided for under this Agreement, and Brannan hereby waives any such warranty or guaranty.

5. **Use of Reusable Raw Water**.

(a) Brannan shall have the right to use and reuse to extinction the Reusable Raw Water delivered under this Agreement for water supply purposes, including without limitation replacement and exchange purposes in connection with any substitute water supply plan approved by the Colorado State Engineer's Office, augmentation and exchange purposes in accordance with any augmentation plan or appropriative right of exchange decreed by the

Colorado Water Court, and any other lawful exchanges; provided that such use is consistent with the terms of this Agreement and all applicable laws, rules and regulations.

(b) Aurora does not allow the use of, and Brannan will not use, the Reusable Raw Water by direct use, augmentation, replacement, or exchange within or upstream of a decreed instream flow reach if such use will deprive the decreed instream flow of water it is entitled to by priority unless waived by the Colorado Water Conservation Board ("CWCB") consistent with the CWCB Board procedures and law allowing such action. Any such use will be deemed a violation of the terms of this Agreement.

6. **Water Rights Accounting**. Brannan will be solely responsible for any and all reporting and accounting required by the Colorado State Engineer, the Division Engineer for Water Division 1, the Water Commissioner for Water Commissioner District 2, or any other lawful authority after Aurora makes its delivery of the Reusable Raw Water as provided for under this Agreement. This responsibility includes, but is not limited to, Brannan's withdrawal of the Reusable Raw Water from the South Platte River (if any) and Brannan's use of the Reusable Raw Water. In addition to the reporting requirements set forth in Paragraph 3(b) above, Aurora will provide any and all reporting and accounting required by the Colorado State Engineer, the Division 1 Engineer, or any other lawful authority concerning proof of the reusability of the Reusable Raw Water, and conveyance of the Reusable Raw Water to the Delivery Point(s).

7. **Subordination Clause**. This Agreement shall be made expressly subordinate to any present or future use of Reusable Raw Water by Aurora for the purposes of augmentation, exchange, or any other use which is or will be of greater direct benefit to Aurora and the users of its water delivery system, as well as to the water supply obligations which Aurora has incurred or will incur through any of any and all obligations resulting from any firm delivery annual lease or delivery contract of Reusable Raw Water executed prior to the date of this Agreement. The foregoing subordination does not, in and of itself, create an excuse for Aurora's failure to deliver the Reusable Raw Water under this Agreement. However, the Parties agree that the purpose and obligations under this Agreement and Aurora's other obligations with respect to its Reusable Raw Water in the event of a *force majeure* event may cause delay or interruption in Aurora's delivery of the Reusable Raw Water.

8. **Consideration**. In 2021, Brannan agrees to pay to Aurora the then-current Unit Rate for all Reusable Raw Water to be delivered in Year 2021 under this Agreement. The current Unit Rate for Reusable Raw Water in 2020 is Five Hundred and Fifty Dollars ($550.00) per acre-foot ("Unit Rate"). The Unit Rate shall escalate on January 1 of each year subsequent to Year 2020 by the same percentage as any increase in Aurora's residential potable water rates.

9. **Payment**.

(a) Aurora shall bill for all Reusable Raw Water it will deliver to Brannan under the Delivery Agreement for Year 2021 no later than December 1, 2020.

(b) On or about December 1 of each of the calendar years of this Agreement following 2020, Aurora shall bill for all Reusable Raw Water to be delivered under the Delivery Schedule for that calendar year.

(c) All billing shall be done on such forms as designated by Aurora for that purpose. Payment by Brannan shall be due no later than forty-five (45) days after such bill has been issued. If Brannan does not make the required payment by the due date, Aurora may give Brannan a notice of default. If Brannan does not cure the default by making full payment within thirty (30) days of receipt of any notice of default, then Aurora, in addition to pursuing any other remedies available to it, may declare this Agreement terminated. Any delay in Aurora's invoicing for payments under this Agreement shall not constitute a breach of Aurora's obligations and shall not relieve Brannan of its obligations to pay all consideration due hereunder.

10. **Non-Assignability and No Subleases**. Neither Party may assign its rights or delegate its duties hereunder without the prior written consent of the other Party. Brannan may not sublease or give others the right to use the Reusable Raw Water to which it is entitled pursuant to this Agreement without the permission of Aurora, which permission Aurora may grant or withhold at its discretion.

11. **Successors and Assigns**. This Agreement and the rights and obligations created hereby shall be binding upon and inure to the benefit of the Parties, respective successors and assigns, if any are allowed. The Parties intend that Aurora shall not incur any liability other than those liabilities directly running directly to Aurora or its assigns permitted under this Agreement, if any. Brannan therefore covenants and agrees, to the extent permitted by law, to indemnify, save and hold harmless Aurora from all liability, cost or expense of any kind, including Aurora's costs of defense to any other party arising in connection with or relating in any way to the execution, delivery or performance of any allowed assignment or any related document by the parties thereto or to the consummation of any transaction in connection with such documents.

12. **No Rights Conferred**. Except as otherwise provided in this Agreement, the Parties acknowledge that all Reusable Raw Water provided hereunder is intended for the present and future use of Aurora. It is further understood and agreed to by the Parties that this Agreement shall confer no rights in such Reusable Raw Water upon Brannan, nor shall any future needs of Brannan for water enable Brannan to make claim against Aurora for any of Aurora's Reusable Raw Water, other water or water rights. Brannan further acknowledges the statutory prohibition against vesting of a right for a continued lease expressed in CRS § 31-35-201 applies in these circumstances.

13. **No Opposition to Aurora Water Court Matters**. From the date of execution of this Agreement and for the Term, Brannan agrees that neither it nor any of its successors, if any are allowed, will oppose Aurora in any Colorado Water Court applications filed by Aurora except to assert injury to a vested or conditional water right.

14. **Aurora Right to Request Reuse**. The Parties hereto acknowledge that hydrologic and other conditions may exist wherein Brannan may not need all or a portion of the Reusable Raw Water flow available to it under this Agreement. Aurora may contact Brannan, not more frequently than

once per day, to determine if any of the Reusable Raw Water to be provided hereunder will not be needed.

15. **Entire Agreement of the Parties**. This Agreement represents the entire agreement of the Parties, and neither Party has relied upon any fact or representation not expressly set forth herein. All prior and contemporaneous conversations, negotiations, possible alleged agreements, representations, covenants and warranties concerning the subject matter hereof, are merged in this Agreement.

16. **Amendment**. By mutual agreement of the Parties, the Delivery Schedule with regard to delivery amounts and timing, and extension of the Term may be amended by letter from Aurora to Brannan. Otherwise, this Agreement may be amended, modified, changed, or terminated in whole or in part only by written agreement duly authorized and executed by the Parties hereto.

17. **Enforcement**. The Parties agree that this Agreement may be enforced in law or in equity for specific performance, injunctive, or other appropriate relief, including damages, as may be available according to the laws of the State of Colorado. It is specifically understood that, by executing this Agreement, each Party commits itself to perform pursuant to the terms hereof, and that any breach hereof resulting in any recoverable damages shall not thereby cause the termination of any obligations created by this Agreement unless such termination is requested by the Party not in breach hereof.

18. **Failure to Perform Due to Force Majeure**. Subject to the terms and conditions in this Paragraph, no Party to this Agreement shall be liable for any delay or failure to perform under this Agreement due solely to conditions or events of *force majeure*, as that term is specifically defined herein; provided that: (a) the non-performing Party gives the other Party prompt written notice describing the particulars of the occurrence of the *force majeure*; (b) the suspension of performance is of no greater scope and of no longer duration than is required by the *force majeure* event or condition; and (c) the non-performing Party proceeds with reasonable diligence to remedy its inability to perform and provides weekly progress reports to the other Party describing the actions taken to remedy the consequences of the *force majeure* event or condition. As used herein *force majeure* shall mean any delay or failure of a Party to perform its obligations under this Agreement caused by events beyond the Party's reasonable control, and without the fault or negligence of the Party, including, without limitation A) changes in state or federal law or administrative practice concerning, water rights administration, water quality or stream flow requirements, B) changes in state water rights administrative practice concerning the reuse of reusable raw water through leases or other agreements to others for use at locations other than Aurora, Colorado, including, but not limited to, challenges to retained dominion and control, C) acts of God, D) sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes, E) sabotage, F) vandalism beyond that which can be reasonably prevented by the Party, G) terrorism, H) war, I) riots, J) fire, K) explosion, L) severe cold or hot weather, M) snow, N) drought [a condition more severe than that which occurred in 2002 in the South Platte River Basin or any basin from which the Reusable Raw Water originates] O) other extreme weather conditions, P) blockades, Q) insurrection, R) strike, slow down or labor disruptions (even if such difficulties could be resolved by conceding to the demands of a labor group); S) actions by federal, state, municipal, or any other government or agency (including but not limited to, the adoption or change in any rule or regulation or

environmental constraint imposed by federal, state or local government bodies) but only if such requirements, actions, or failures to act prevent or delay performance, T) inability, despite due diligence, to obtain required licenses, permits or approvals, and, U) changes of law relating to financial obligations, revenues and budgetary matters concerning Colorado local governments and their enterprises. In the event a *force majeure* event or condition prevents Aurora from delivering all or part of the agreed upon amounts of Reusable Raw Water to Brannan, Aurora shall refund all advance payments made for that water not delivered within sixty (60) days of the conclusion of the *force majeure* event or the cancellation of the Agreement pursuant to the remaining provisions of this Paragraph. In no event will any delay or failure of performance caused by any conditions or events of *force majeure* extend this Agreement beyond its stated term. In the event any delay or failure of performance on the part of the Party claiming *force majeure* continues for an uninterrupted period of more than one hundred twenty (120) days from its occurrence or inception as noticed pursuant to this Paragraph, the Party not claiming *force majeure* may, at any time following the end of such one hundred twenty (120) day period, may terminate this Agreement upon written notice to the Party claiming *force majeure*, without further obligation except as to costs and balances incurred prior to the effective date of such termination.

19. **Sole Obligation of Utility Enterprise**.

(a) This Agreement shall never constitute a general obligation or other indebtedness of the City of Aurora ("City"), or a multiple fiscal year direct or indirect debt or other financial obligation whatsoever of the City within the meaning of the Constitution and laws of the State of Colorado or of the Charter and ordinances of the City.

(b) In the event of a default by Aurora's Utility Enterprise of any of its obligations under this Agreement, Brannan shall have no recourse for any amounts owed to it against any funds or revenues of the City except for those revenues derived from rates, fees or charges for the services furnished by, or the direct or indirect use of, the Water System and deposited in the Water Enterprise Fund, as the terms "Water System" and "Water Enterprise Fund" as defined in Aurora's City Ordinance No. 2003-18, and then only after the payment of all operation and maintenance expenses of the Water System and all debt service and reserve requirements of any bonds, notes, or other financial obligations of the Utility Enterprise secured by a pledge of the net revenues of the Water Enterprise Fund. Notwithstanding any language herein to the contrary, nothing in this Agreement shall be construed as creating a lien upon any revenues of the Utility Enterprise or the City.

20. **Miscellaneous.**

(a) **Intent of Agreement**. This Agreement is intended to describe the rights and responsibilities of and between the named Parties, and is not intended to, and shall not be deemed to confer rights upon any persons or entities not named as Parties, nor to limit in any way the powers and responsibilities of Aurora, Brannan, or any other entity not a party hereto.

(b) **Effect of Invalidity**. If any portion of this Agreement is held invalid or unenforceable for any reason by a court of competent jurisdiction as to either Party or as to both Parties, the entire Agreement will terminate.

(c) **Waiver of Breach**. Waiver of breach of any of the provisions of this Agreement by either Party shall not constitute a continuing waiver of any subsequent breach by said Party of either the same or any other provision of this Agreement.

(d) **Multiple Originals**. This Agreement may be simultaneously executed in any number of counterparts, each one of which shall be deemed an original, but all of which constitute one and the same Agreement.

(e) **Headings for Convenience**. Headings and titles contained herein are intended for the convenience and reference of the Parties only, and are not intended to confine, limit, or describe the scope of intent of any provision of this Agreement.

(f) **Recordation**. Following the execution of this Agreement, the Parties may cause this Agreement to be recorded with the Clerk and Recorder's Office of such county or counties in Colorado as they may desire.

(g) **Notice**.

(1) All notices, requests, demands, or other communications ("Notice", and collectively, "Notices") hereunder shall be in writing and given by (i) established express delivery service which maintains delivery records requiring a signed receipt, (ii) hand delivery, or (iii) certified or registered mail, postage prepaid, return receipt requested to the Parties at the following address, or at such other address as the Parties may designate by Notice in the above manner.

To Aurora:	City of Aurora 15151 East Alameda Parkway, Suite 3600 Aurora, CO 80012-1555 Attn: Deputy Director, Aurora Water
with copy to	City of Aurora 15151 East Alameda Parkway, Suite 5300 Aurora, CO 80012-1555 Attn: City Attorney

To Brannan: Brannan Sand and Gravel Company, L.L.C.
2500 Brannan Way
Denver, CO 80229
Attn: Tim Szczepanski, Controller (RMCC)

with copy to Carver Schwarz McNab Kamper & Forbes, LLC
1600 Stout Street, Suite 1700
Denver, CO 80202
Attn: Jeffrey W. Schwarz, Esq.

Notices shall be effective (iv) the next day following the date sent by an established express delivery service which maintains delivery records requiring a signed receipt, (v) upon receipt by the addressee of a hand delivery, or (vi) three (3) days following the date of mailing via certified or registered mail, postage prepaid, return receipt requested.

(2) Notwithstanding the foregoing, the Parties may communicate with respect to extensions of the Term and modifications of the Delivery Schedule pursuant to Paragraphs 1. and 2, above, by e-mail or regular postal delivery service as follows: (i) to Aurora to John Murphy at jmurphy@auroragov.org or 15151 East Alameda Parkway, Suite 3600, Aurora, CO 80012-1555; and (ii) to Brannan to Jeff Schwarz at jschwarz@csmkf.com, or to such address as may be designated by Notice in the manner provided for under (1) of this Paragraph 20(g), above.

(h) **Non-Business Days**. If any date for any action under this Agreement falls on a Saturday, Sunday or a day that is a "holiday" as such term is defined in Rule 6 of the Colorado Rules of Civil Procedure, then the relevant date shall be extended automatically until the next business day.

(i) **Commissions and Fees**. Each Party shall be solely responsible for the payment of any and all real estate commissions or other commissions or fees that it incurs with respect to this Agreement.

(j) **Governing Law and Venue**. This Agreement and its application shall be construed in accordance with the law of the State of Colorado. Should it be necessary to initiate court proceedings concerning this Agreement, the Parties agree that venue shall be in the District Court for Arapahoe County, Colorado.

(k) **No Attorneys' Fees**. In the event of any litigation, mediation, arbitration or other dispute resolution process arising out of or related to this Agreement each Party agrees to be responsible for its own attorneys' and other professional fees, costs and expenses associated with any such proceedings.

(l) **No Construction Against Drafter**. This Agreement was drafted by Aurora with review and comment from the attorney for Brannan. Accordingly, the Parties agree the legal doctrine of construction against the drafter will not be applied should any dispute arise concerning this Agreement.

21. **Effective Date**. The "Effective Date" of this Agreement shall be the date it is signed by the General Manager of Aurora Water.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement as of the Effective Date.

(signatures on following pages)

CITY OF AURORA, COLORADO,
ACTING BY AND THROUGH ITS
UTILITY ENTERPRISE (AURORA)

Marshall P. Brown, General Manager

8/20/2020
Date

APPROVED AS TO FORM FOR AURORA:

Stephanie Neitzel, Assistant City Attorney

8/18/2020
Date

21008138
ACS #

STATE OF COLORADO)
) ss
COUNTY OF ARAPAHOE)

The foregoing instrument was acknowledged before me this 20 day of August, 2020, by Marshall P. Brown, General Manager, acting on behalf of the Utility Enterprise of the City of Aurora, Colorado.

Witness my hand and official seal. Casey Lee Rossman
Notary Public

My commission expires: 05/20/2024

(SEAL)

CASEY LEE ROSSMAN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20204017584
MY COMMISSION EXPIRES 05/20/2024

BRANNAN SAND AND GRAVEL COMPANY, L.L.C. (BRANNAN)

By: Ann K Van Portfliet Date 8-6-2020

Ann K. Van Portfliet, Chief Financial Officer

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing Agreement was acknowledged before me this 6th day of August, 2020, by _____, _____ by Ann K. Van Portfliet, Chief Financial Officer, of Brannan Sand and Gravel Company, L.L.C., a Colorado limited liability company.

Witness my hand and official seal. _____

Notary Public

My commission expires: 12/10/2022

(SEAL)

CHERYL CHENEY
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19984033878
MY COMMISSION EXPIRES 12/10/2022

Exhibit A

Ready Mixed Concrete Company - Morton Lakes Mine and Holton Lakes Mine
Proposed Aurora Lease Delivery Schedule (2021-23)
Replacement Supplies and Water Balance
January 2021 - December 2023 SWSP Water Balance
(all values in acre-feet, negative values are depletions, positive values are accretions)

Month	Out-of-Priority Depletions [1]	Additional City of Aurora Lease Water Delivery [2]	Maximum Transit Loss [3]	Net River Balance [4]	Cumulative River Balance [5]
Jan-21	-39.8	47.3	-3.0	4.6	4.6
Feb-21	-24.8	29.6	-1.8	2.9	7.5
Mar-21	-11.6	13.8	-0.9	1.3	8.8
Apr-21	-11.1	14.0	-1.8	1.1	10.0
May-21	-11.9	15.0	-1.9	1.2	11.2
Jun-21	-14.2	17.9	-2.2	1.5	12.6
Jul-21	-14.9	18.8	-2.3	1.5	14.2
Aug-21	-14.2	17.9	-2.2	1.5	15.6
Sep-21	-12.0	15.1	-1.9	1.2	16.8
Oct-21	-10.0	12.0	-0.7	1.2	18.0
Nov-21	-7.5	8.9	-0.6	0.9	18.9
Dec-21	-6.6	7.8	-0.5	0.8	19.6
Jan-22	-6.1	7.2	-0.5	0.7	20.3
Feb-22	-6.4	7.6	-0.5	0.7	21.1
Mar-22	-7.5	8.9	-0.6	0.9	21.9
Apr-22	-9.1	11.5	-1.4	0.9	22.9
May-22	-10.0	12.6	-1.6	1.0	23.9
Jun-22	-16.7	21.1	-2.6	1.7	25.6
Jul-22	-17.6	22.2	-2.8	1.8	27.4
Aug-22	-17.1	21.5	-2.7	1.7	29.2
Sep-22	-15.1	19.0	-2.4	1.5	30.7
Oct-22	-9.0	10.7	-0.7	1.0	31.7
Nov-22	-6.5	7.7	-0.5	0.7	32.5
Dec-22	-5.2	6.1	-0.4	0.6	33.1
Jan-23	-4.6	5.5	-0.3	0.5	33.6
Feb-23	-4.8	5.8	-0.4	0.6	34.2
Mar-23	-6.1	7.2	-0.5	0.7	34.9
Apr-23	-7.9	9.9	-1.2	0.8	35.7
May-23	-9.5	12.0	-1.5	1.0	36.7
Jun-23	-16.2	20.5	-2.6	1.7	38.3
Jul-23	-17.2	21.7	-2.7	1.8	40.1
Aug-23	-16.9	21.2	-2.7	1.7	41.8
Sep-23	-15.0	18.9	-2.4	1.5	43.4
Oct-23	-8.9	10.6	-0.7	1.0	44.4
Nov-23	-6.4	7.6	-0.5	0.7	45.1
Dec-23	-5.2	6.1	-0.4	0.6	45.7
2020 Total	-189.8	212.5	-18.9	223.8	
2021 Total	-178.6	218.0	-19.8	19.6	
2022 Total	-126.2	156.2	-16.5	13.5	
2023 Total	-118.6	146.9	-15.7	12.6	

AURORA WATER

City of Aurora

Water Administration
15151 E. Alameda Parkway, Suite 3600
Aurora, Colorado 80012
303.739.7370

Worth Discovering • auroragov.org

November 12, 2024

Mr. Alex Schatz
Brannan Sand and Gravel Company, LLC
2500 Brannan Way
Denver, CO 80229

Re: Agreement for Delivery of Reusable Raw Water

Dear Mr. Schatz:

This letter provides the City of Aurora's consent to continue the above-referenced agreement between the City of Aurora and Brannan Sand and Gravel Company, dated August 20, 2020 ("Agreement") for an additional Lease Year (January 1, 2025, through December 31, 2025) for delivery of water pursuant to the Delivery Schedule attached to this letter. This consent is in response to the request from Mr. Steve Kelton, representing Brannan Sand and Gravel Company, requesting said continuance pursuant to the attached Delivery Schedule that modifies the original Delivery Schedule.

Extension of the Agreement for additional Lease Years is permitted under Paragraph 1 of the Agreement. Further, the Delivery Schedule for water under the Agreement may be modified and replaced pursuant to Paragraph 2 of the Agreement. The modified Delivery Schedule attached to this letter replaces the Delivery Schedule attached as Exhibit A to the Agreement. The Effective Date of the Agreement for the purposes of this additional Lease Year is the date of this letter. All other terms of the Agreement remain unchanged, and in full force and effect.

If you have any questions concerning this letter, please do not hesitate to contact John Murphy at the above telephone number.

Sincerely,

Dawn M. Jewell
South Platte Basin Water Resources Supervisor
City of Aurora, Colorado

Cc: Steve Kelton
John Murphy

Exhibit A
Delivery Schedule

Table 3
Brannan Sand and Gravel Company - Morton Lakes Mine
Replacement Supplies and Water Balance
2025 SWSP Accounting
(all values in acre-feet, negative values are depletions, positive values are accretions)

Month	Out-of-Priority Depletions [1]	City of Aurora Lease Water Delivery [2]	Maximum Transit Loss [3]	Net River Balance [4]	Cumulative River Balance [5]
Jan-25	-16.4	20.1	-1.3	2.4	2.4
Feb-25	-18.9	23.1	-1.4	2.8	5.1
Mar-25	-21.3	26.0	-1.6	3.1	8.2
Apr-25	-24.0	31.0	-3.9	3.2	11.4
May-25	-24.7	32.0	-4.0	3.3	14.7
Jun-25	-15.6	20.2	-2.5	2.1	16.7
Jul-25	-15.9	20.5	-2.6	2.1	18.8
Aug-25	-14.8	19.2	-2.4	2.0	20.8
Sep-25	-11.9	15.4	-1.9	1.6	22.4
Oct-25	-9.0	11.6	-1.4	1.2	23.5
Nov-25	-5.9	7.2	-0.4	0.9	24.4
Dec-25	-4.5	5.4	-0.3	0.6	25.1
2025 Total	**-182.9**	**231.8**	**-23.9**	**25.1**	--

Shaded rows are projections.

[1] Out-of-priority mining depletion, from Table 2, column 12.

[2] City of Aurora lease water deliveries to the South Platte River on days with a downstream river call, as reported in the accounting for WDID 0802593.

[3] District 2 South Platte River transit loss (0.5% per mile from April through October and 0.25% per mile from November through March) on the Aurora lease delivery. City of Aurora lease water deliveries will incur a maximum of 12.5% or 6.25% transit loss over the 25 river miles from the Metro Hite WWTP to Big Dry Creek.

[4] Net river balance deficit (-) or surplus (+). Equal to [1] + [2] + [3].

[5] Cumulative river balance deficit (-) or surplus (+). Equal to previous [5] + [4].

April 30, 2010

Permittee Address

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: Permit Id Site Name

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.

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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	greg.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, and ensure it follows the format shown in the "Diversion Record Spreadsheet User Guide" 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.

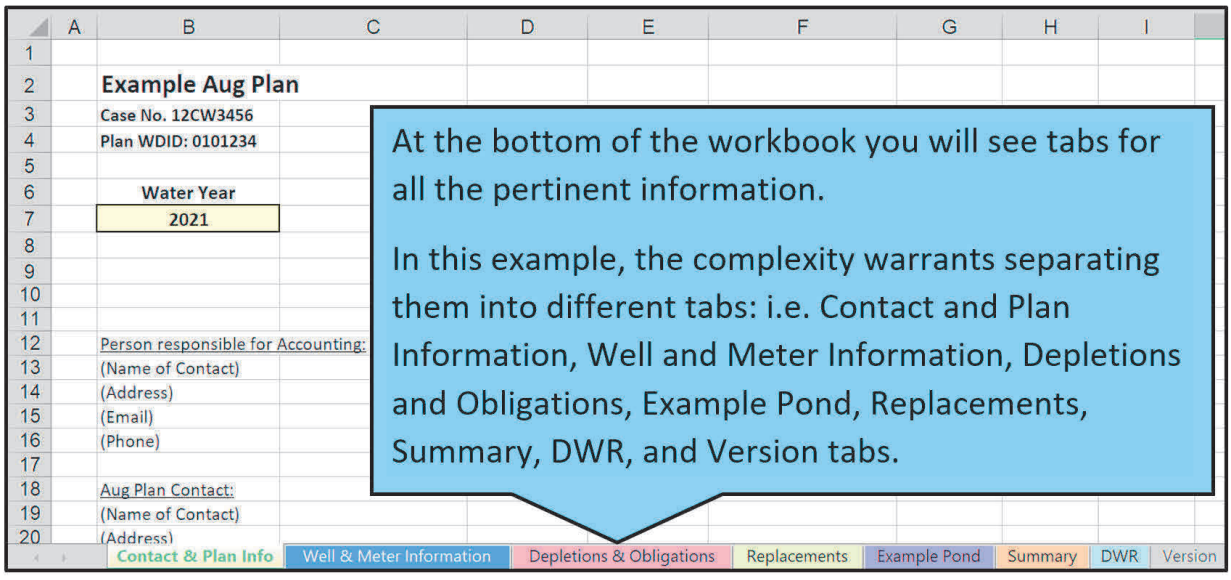
h. When there are multiple stream reaches involved, organize accounting from upstream to downstream.

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

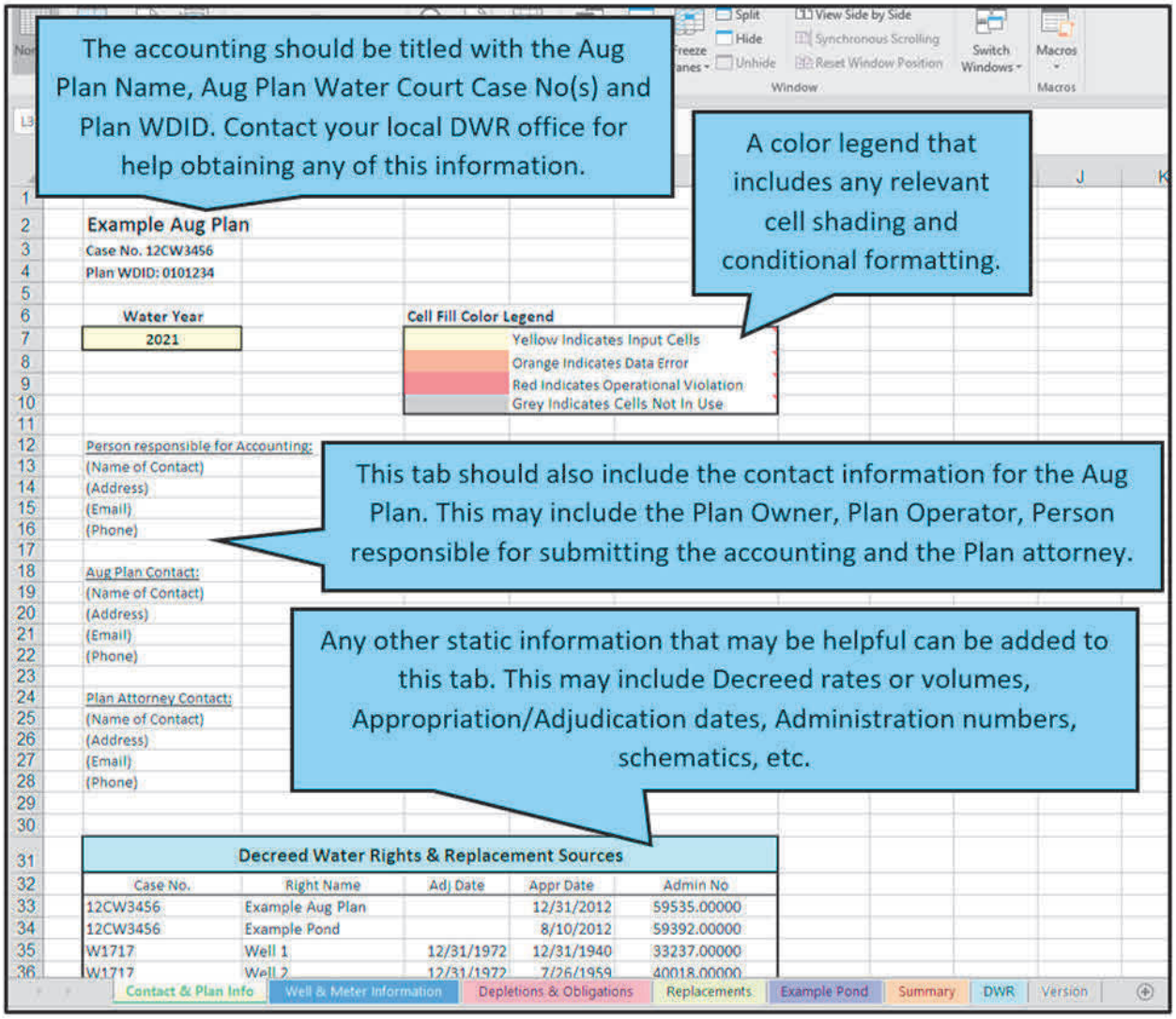
6. Example, Screenshots, and Spreadsheet Templates

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.

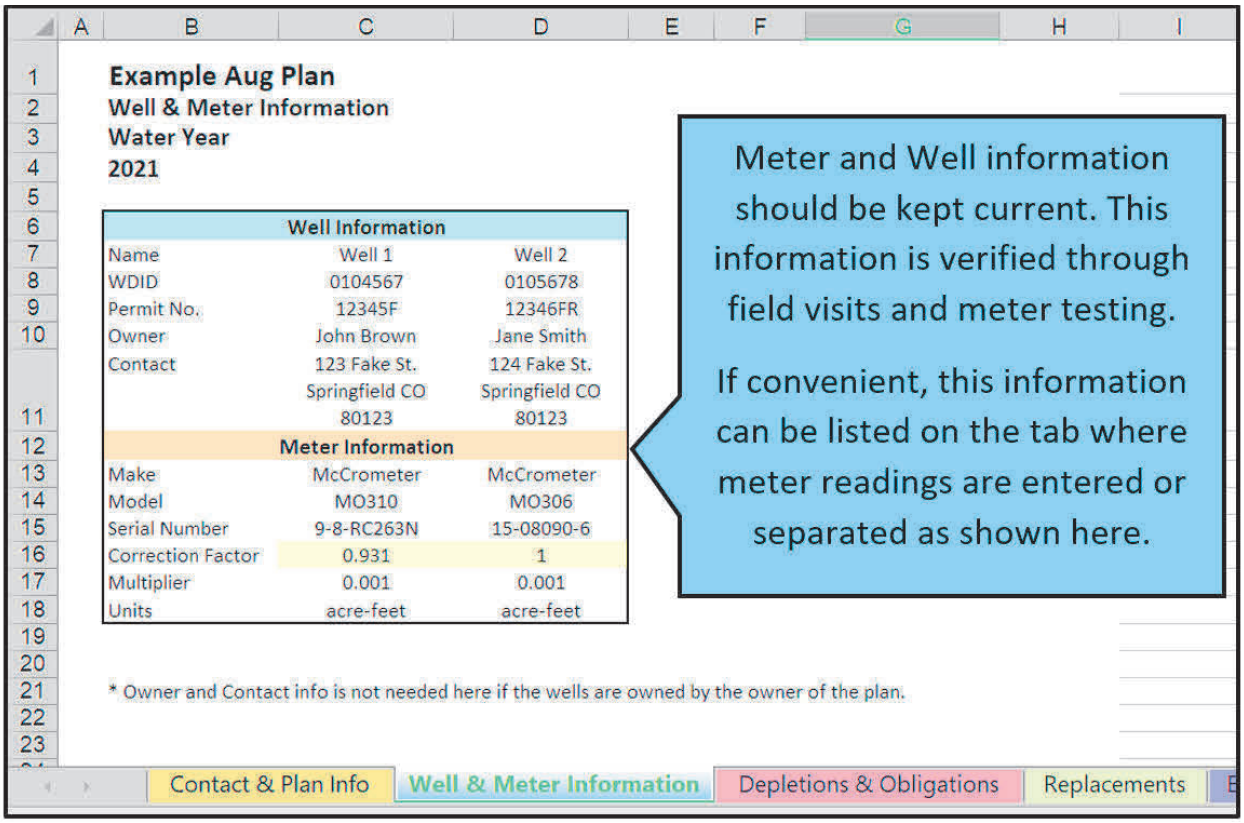
a. (List of relevant tabs)



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

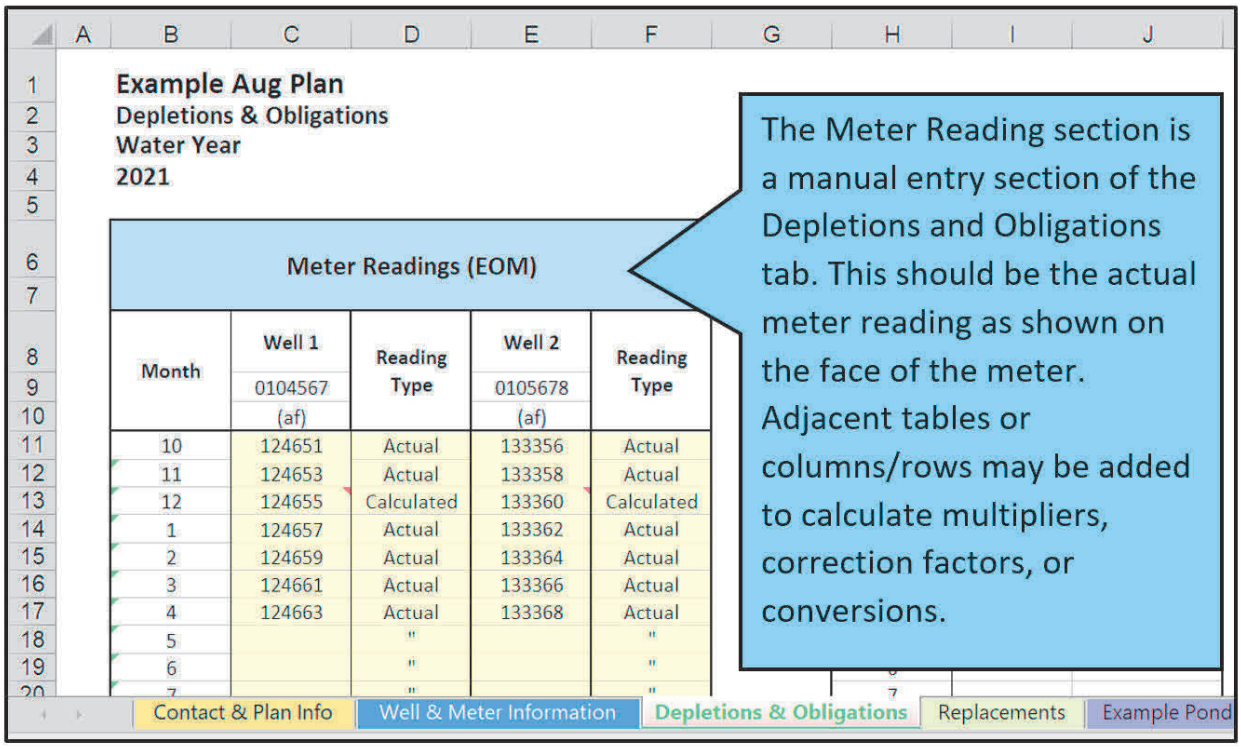
Meter and Well information should be kept current. This information is verified through field visits and meter testing.

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

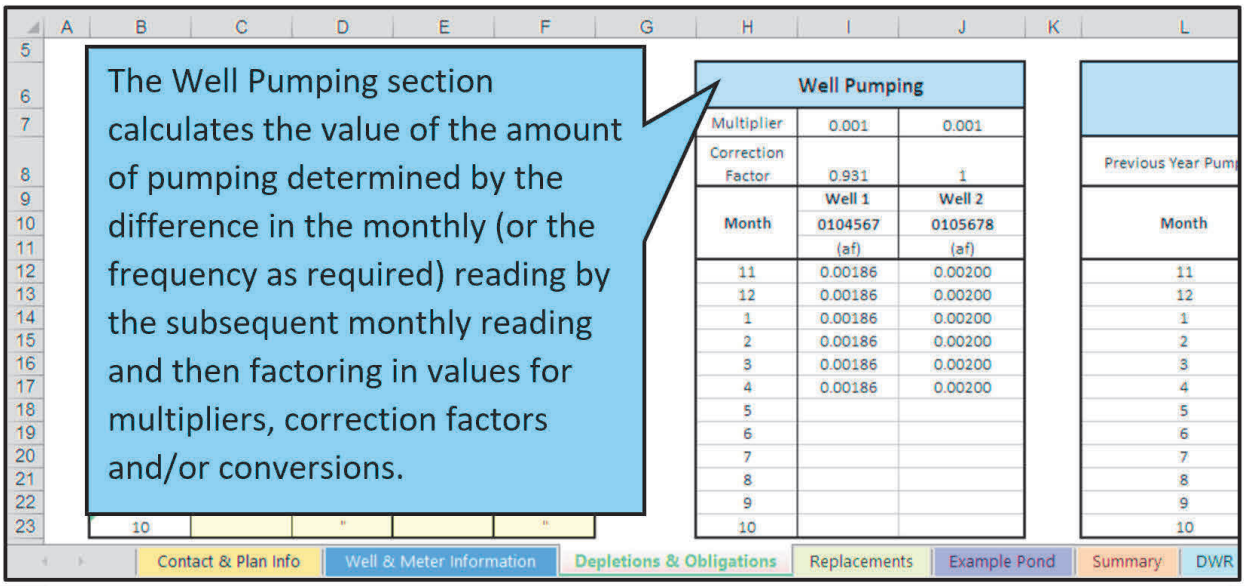
d. (Depletions & Obligations) - in this example, the Depletions & Obligations tab includes cells for entering meter readings, calculating well pumping over the period, and converting that to lagged depetions.



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		"		"

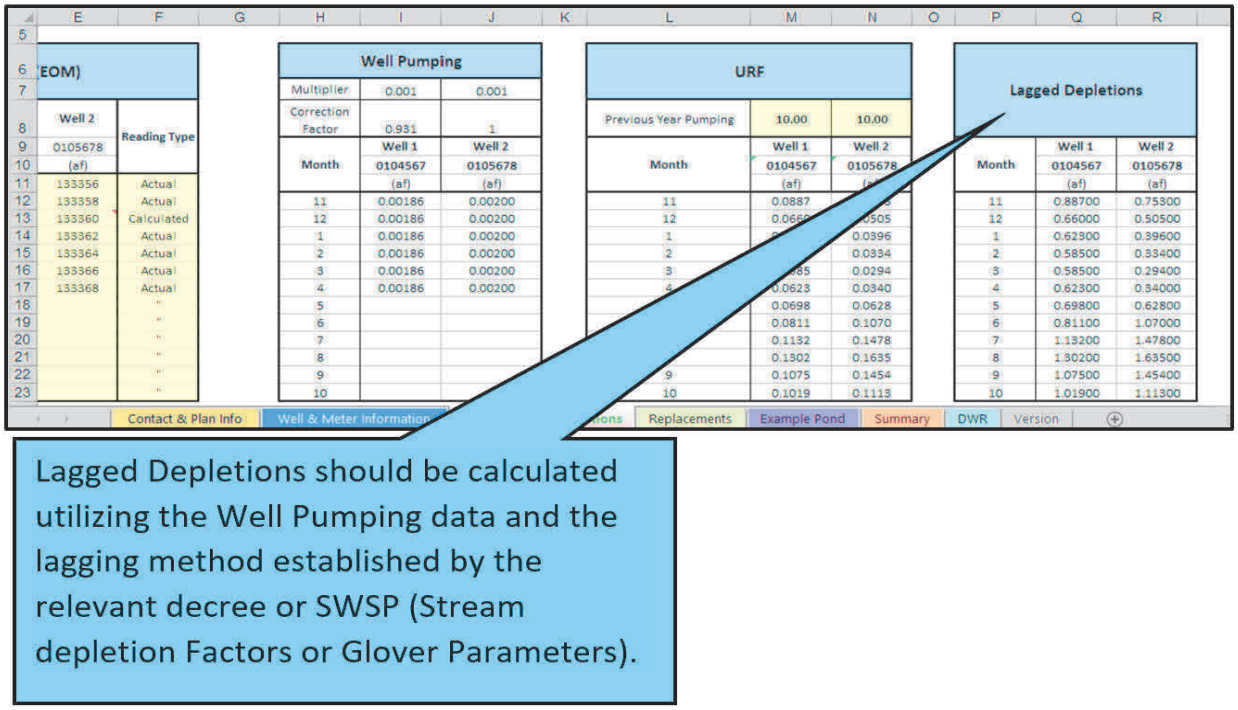
e. (Depletions & Obligations)



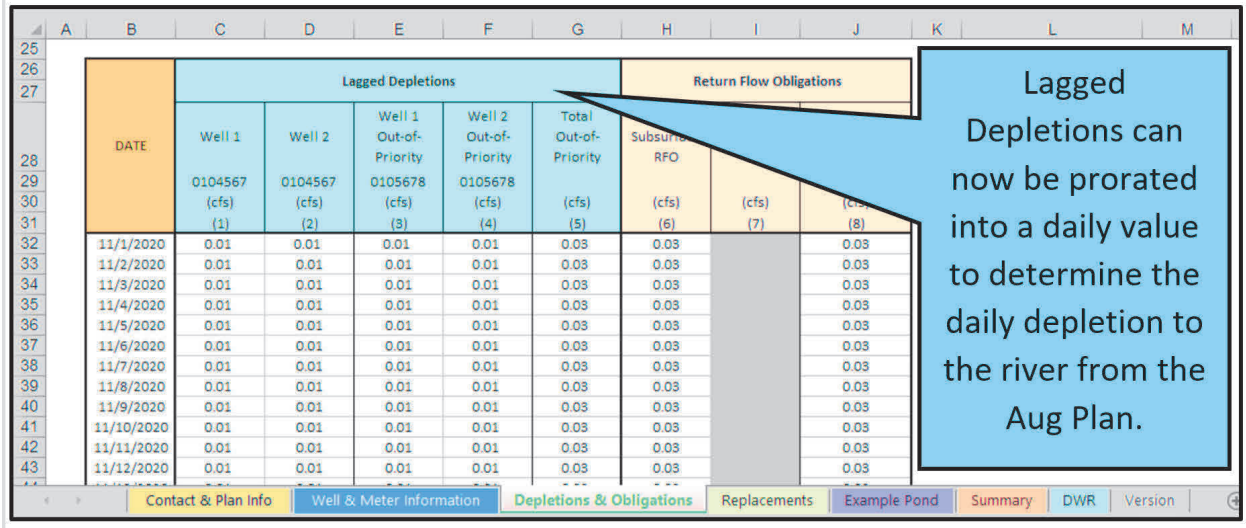
Well Pumping		
Multiplier	0.001	0.001
Correction Factor	0.931	1
Month	Well 1 0104567 (af)	Well 2 0105678 (af)
11	0.00186	0.00200
12	0.00186	0.00200
1	0.00186	0.00200
2	0.00186	0.00200
3	0.00186	0.00200
4	0.00186	0.00200
5		
6		
7		
8		
9		
10		

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

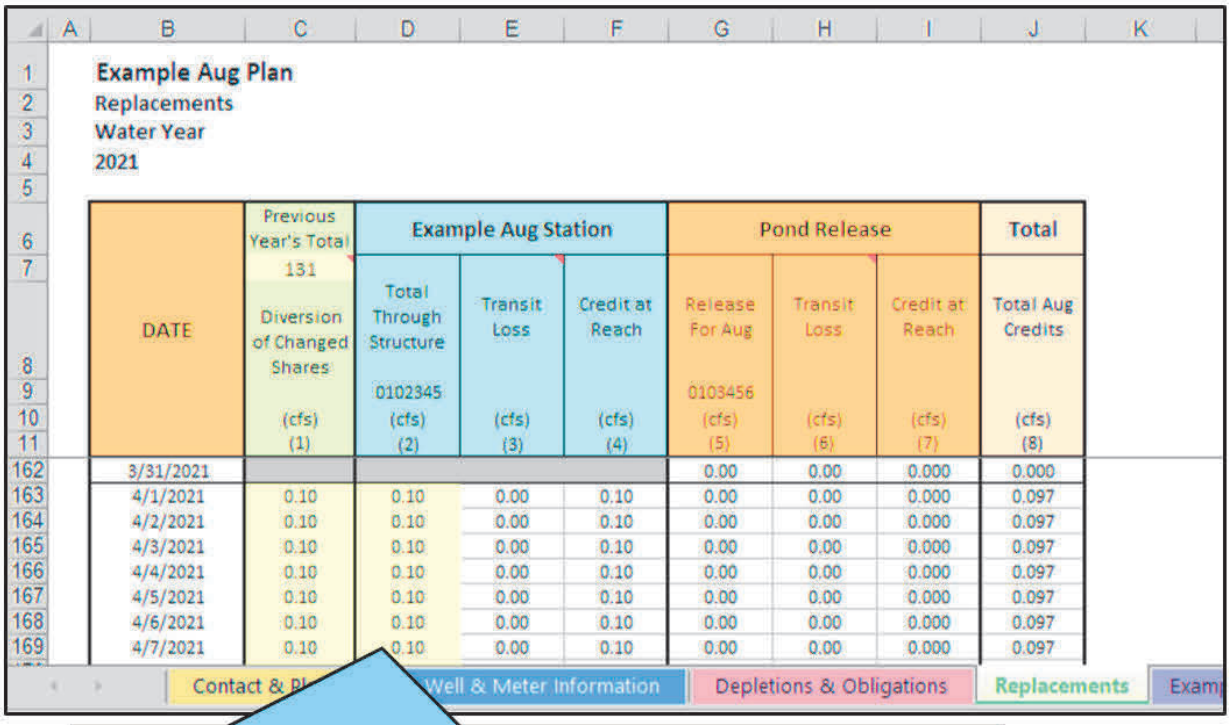
f. (Depletions & Obligations) - calculate lagged depletions for the month



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



h. (Replacements)



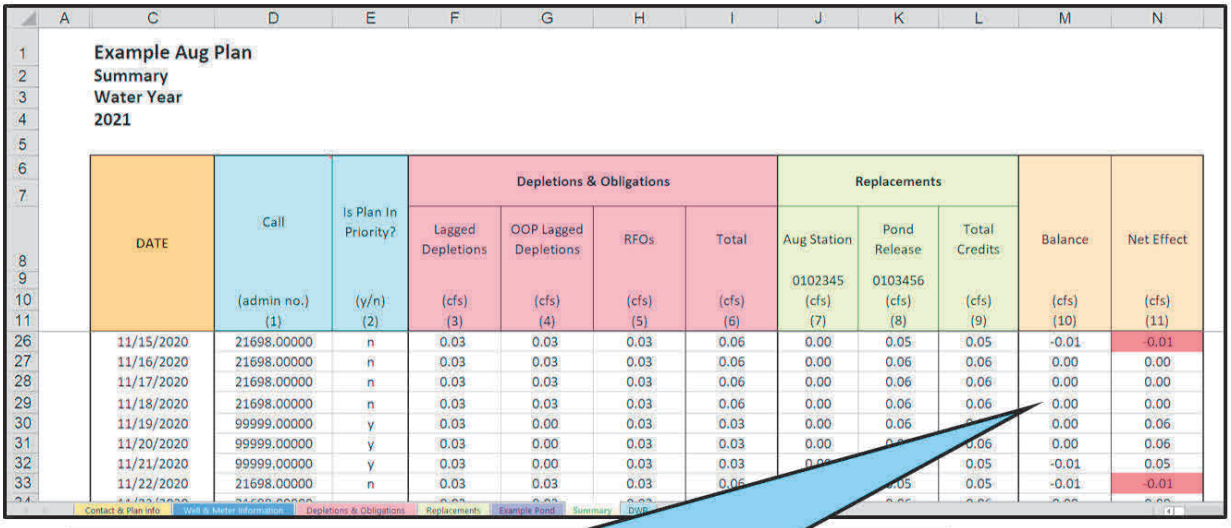
Example Aug Plan
Replacements
Water Year
2021

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

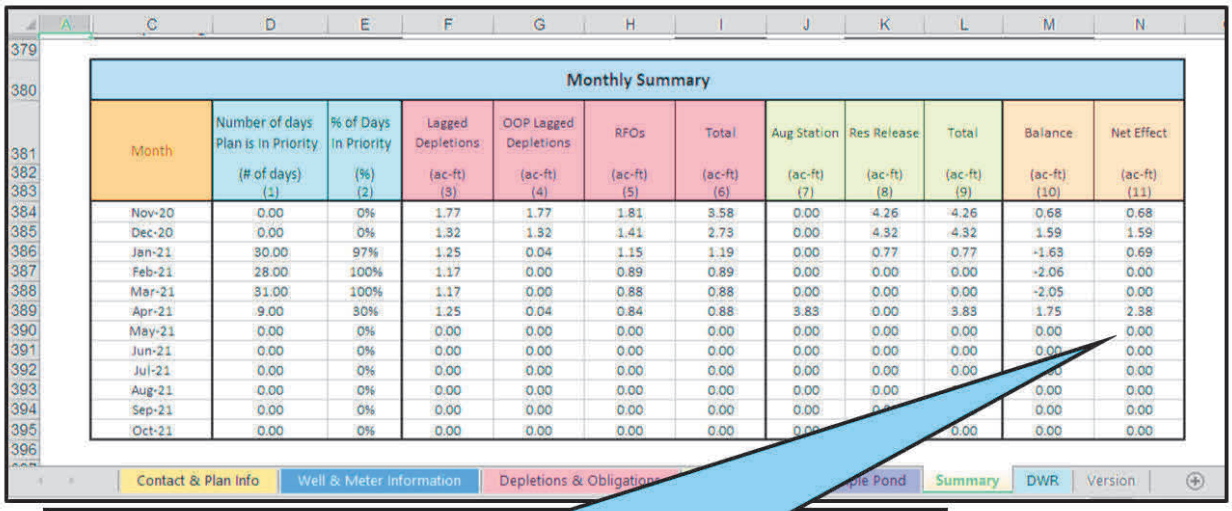


Example Aug Plan
Summary
Water Year
2021

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		0.00	0.06
11/20/2020	99999.00000	y	0.03	0.00	0.03	0.03	0.00		0.06	0.00	0.06
11/21/2020	99999.00000	y	0.03	0.00	0.03	0.03			0.05	-0.01	0.05
11/22/2020	21698.00000	n	0.03	0.03	0.03	0.06		0.05	0.05	-0.01	-0.01

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	0.00	0.00
Aug-21	0.00	0%	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Sep-21	0.00	0%	0.00	0.00	0.00	0.00	0.00			0.00	0.00
Oct-21	0.00	0%	0.00	0.00	0.00	0.00			0.00	0.00	0.00

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