



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

June 14, 2021

Paul Weiss, P.E.  
Williams & Weiss Consulting, LLC  
5255 Ronald Reagan Boulevard, Suite 220  
Johnstown, CO 80534

**Re: DPG Gravel Pit, Substitute Water Supply Plan (WDID 0302587)  
DRMS Permit No. M-2019-028 (WDID 0307924)  
Section 12, T5N, R65W of the 6<sup>th</sup> P.M.  
Water Division 1, Water Districts 2 and 3, Weld County  
SWSP ID: 6243**

**Approval Period: June 14, 2021 through April 30, 2022**  
*Contact Information for Mr. Paul Weiss: 970-221-5159 and [pswwater@msn.com](mailto:pswwater@msn.com)*

Dear Mr. Weiss:

This letter is in response to your application of February 23, 2021 requesting a substitute water supply plan ("SWSP") for a sand and gravel pit operated by J-2 Contracting Company ("J-2" or "Applicant") in accordance with section 37-90-137(11), C.R.S., for the DPG Gravel Pit, Division of Reclamation Mining and Safety ("DRMS") Permit No. M-2019-028. The Applicant shall be responsible for compliance with this SWSP, but the State Engineer's Office may also pursue the landowner, for eventual compliance. The required fee of \$1,593 for the SWSP has been paid (receipt no. 10009817).

### **SWSP Operations**

This SWSP submittal addresses the projected depletions from the DPG Gravel Pit resulting from expected operations from May 1, 2021 through April 30, 2022. The DPG Gravel Pit is located in the SE ¼ of Section 1 and NE ¼ of Section 12, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M. The proposed sand and gravel operation is located just upstream of the confluence of the South Platte River and the Cache la Poudre River, as shown on the attached Exhibit 1. The current plan is to mine two separate cells, with Cell 1 to be mined initially, and Cell 2 to be mined in following years. The depletions that result from the mining operation over the period of this SWSP include evaporation from exposed groundwater, dust suppression, dewatering, and water lost with the mined product. The proposed replacement of depletions for this site will come from historical consumptive use ("HCU") associated with 3 shares of the Delta Irrigation Company, the owner and operator of the Patterson Ditch, which was previously used for irrigation within the mining permit boundary. The reclamation of the site will consist of two lined reservoirs through the construction of a slurry wall around the Cell 1 and Cell 2 mining areas. The surface area of the reservoirs at the completion of mining is expected to be approximately 165 acres.



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 Colorado Division of Reclamation, Mining, and Safety ("DRMS") requires that you provide information to demonstrate you can replace long term injurious stream depletions that result from mining-related exposure of groundwater. You have indicated that a bond has been obtained for \$984,566 through the DRMS for lining of this site 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.

## Depletions

The projected depletions for the period of this SWSP consist of net evaporation from exposed groundwater surface area, water removed in the mined product, dust suppression, dewatering and water used for the slurry wall construction. The SWSP anticipates that a total of 11.14 acres of water surface will be exposed at the site in settling ponds, a recharge pond, and a dewatering trench.

The Applicant proposed to replace evaporation from exposed groundwater at the site based upon evaporation atlases in NOAA Technical Report NWS 33 and the SEO monthly distribution factors for sites below 6,500 feet. Gross annual evaporation at the gravel pit location is estimated to be 46.00 inches per year. 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, which was estimated based on the data from the Kersey weather station (record 1992-2013). The net evaporation from the exposed water surface is estimated at 31.23 acre-feet for this plan period of June 2021 - April 2022, as shown in the attached Table 1.

In addition to the evaporation, water is lost with the mined product removed from the mine site. The Applicant projected that they will produce 855,000 tons of gravel during the SWSP period of June 2021 - April 2022. The sand and gravel will be mined below the groundwater table therefore the groundwater lost with the mined product is estimated at 4 percent by weight. The water lost with the mined product is projected to total 25.17 acre-feet during the SWSP period of June 2021 - April 2022, as shown in attached Table 2. The estimated amount of water to be used for dust suppression during the period of this SWSP is 16.00 acre-feet, as shown in the attached Table 2. The estimated amount of water to be used for the construction of the slurry wall at the batch plant is estimated at 19.47 acre-feet from June through August 2021 when the slurry wall is anticipated to be completed, as shown in the attached Table 2.

The total consumptive use at this site during the period of this SWSP is estimated at 91.87 acre-feet.

The IDS AWAS stream depletion model was used to determine the lagged depletions from dewatering, evaporation and operational losses to the South Platte River, using the infinite aquifer option. The aquifer characteristics used in the model are: transmissivity (T) = 180,000 gallons per day per foot, specific yield (SY) = 0.2, the distance from the centroid of the exposed surface area to the stream (X) = 1,300 feet. The distance for X was calculated using the USGS vicinity map. Values for T and S were developed using information and figures presented in the SB06-193 Underground Water Storage Study, (CWCB, 2007) and the Colorado Decision Support System

("CDSS") Map Viewer transmissivity contours. Lagged depletions resulting from operational and evaporative use at the site are estimated to total 75.27 acre-feet for this plan period.

Since the DPG Gravel Pit is located in the area just above the confluence of the South Platte River and the Cache la Poudre River, the point of depletion and location of replacement delivery will be the confluence itself. The nearest structure that could be affected by operations at the DPG Gravel Pit is the Empire Ditch, located on the South Platte River below the Kersey gaging station.

## Dewatering

The mining operation outside of the slurry wall construction will be continuously dewatered during this plan period. Dewatering water will be pumped to a recharge pond located within the mining permit boundary adjacent to the mined cell and will be assumed to return to the stream in the same timing as the dewatering depletions. Monthly dewatering volumes are expected to be around 900 acre-feet/month with a maximum of 1,300 acre-feet/month. Dewatering operations must be measured by totalizing flow meters that can accurately show the monthly volume of water delivered to recharge. Any dewatering water placed into the recharge pond cannot be used for any purpose by the operator, and must be allowed to accrete to the stream. **Should it be determined by the water commissioner or division engineer that water within the recharge pond is being diverted for any purpose by the operator and accounting is not adequate to show that recharge of dewatering water is occurring, the Applicant will need to account for any lagged dewatering depletions at the site.**

## Replacements

The Applicant proposes to provide replacement for this pit using consumptive use credits from the Patterson Ditch represented by 3 shares of the Delta Irrigation Company. The water associated with the subject shares will be delivered directly to the river for immediate credit or delivered to a recharge pond for lagged recharge accretion credits. In addition, during the winter months and months with insufficient HCU credits from the Patterson Ditch, replacement of the DPG Gravel Pit lagged depletions will come from a lease of fully consumable water supplies from Central Colorado Water Conservancy District ("CCWCD").

The Patterson Ditch (WDID 0200836) diverts from the South Platte River approximately five miles upstream of the confluence with the Cache la Poudre River. The decreed point of diversion for the Patterson Ditch is on the north side of the South Platte River in the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 21, Township 5 North, Range 65 West, 6<sup>th</sup> P.M., Weld County. The ditch was decreed in case no. CA6009, to divert 19.92 cfs, with an appropriation date of May 1, 1871. There are no prior Water Court approved changes of use for this water right. The Delta Irrigation Company ("Company") owns and operates the Patterson Ditch. There are a total of 48 shares in the Company. DPG Farms owns 15 out of the total 48 shares in the Company (Certificate No. 392).

The Applicant submitted a historical consumptive use ("HCU") analysis with the SWSP request. The HCU was performed for 15 shares in the Patterson Ditch. The period of analysis selected is from 1990 through 2016. For this period, diversion records for the Patterson Ditch were downloaded from Hydrobase. The DPG Farm contains several parcels of lands that have been historically irrigated by the Patterson Ditch. For the period of 1990 through 2016, based on FSA records, an average of 202.9 acres were irrigated by the DPG shares under the Patterson Ditch. The crops grown consisted of corn, alfalfa, pasture grass, small veggies, small grains, beans, and sorghum. Beginning in 2006,

portions of the DPG properties were taken out of production. The Hydrobase records for the irrigated acreage under the ditch range from 641 acres to 659 acres since 1997. DPG shares represent 31 percent of the Company's shares (15/48) and the FSA records showing 202.9 irrigated acreage are approximately 32 percent of the total irrigated acreage under the ditch. Therefore the FSA records appear to be consistent with the Hydrobase data.

The DPG Farm is the last farm on the Patterson Ditch and all water returned to the ditch will flow back to the South Platte River via the Patterson Ditch waste-way located approximately 500 feet down ditch. The HCU analysis performed for the use of the Applicant's 15 shares on the DPG Farm indicated the Patterson Ditch system was generally water long. The 15 shares owned by DPG yielded in excess of 6.5 acre-feet of water per irrigated acre. This "extra" water would have been available for other shareholders to divert, or would have been left in the ditch and turned back to the South Platte River at the end of the ditch waste-way. Due to this historical practice, a demand-based analysis was used to quantify historical consumptive use and historical return flow patterns. The modeled farm headgate delivery was determined as the lesser of the Patterson Ditch pro-rata farm headgate delivery and the calculated farm headgate delivery, based on the on-farm water demand divided by the 50 percent irrigation efficiency.

The HCU analysis conducted used the following methods and assumptions:

- Modeling using the Integrated Decision Support Group Consumptive Use Model ("IDSCU") and the Modified Blaney-Criddle method with TR21 crop coefficients with ET adjustments available in the IDSCU.
- Soil Conservation Service methodology for calculation of effective precipitation.
- Assumed ditch loss of 20 percent since Patterson Ditch is earth lined.
- Temperature and precipitation data from the Greeley UNC weather station. The Greeley UNC station was moved to the Greeley UNC campus in 1967 and subsequently has poor siting. The station is currently located on the roof of Ross Hall. Data shows a shift upwards in temperature since it has been at the new site. The Greeley 3 station 2.5 miles NE of Greeley (GLY03) and the Greeley 4 station 1.5 miles north of the Greeley airport (GLY04) are both closer to the DPG Gravel Pit and have better siting. **For any future SWSP renewal, the Applicant should use data from the Greeley 3 station (GLY03) and Greeley 4 station (GLY04) or another nearby station instead of the Greeley UNC station for the available period of record.**
- The Applicant's HCU was based on 147.51 acres of corn, 2.86 acres of alfalfa, 17.80 acres of pasture grass, 9.33 acres of small veggies, 14.51 acres of small grains, 0.37 acres of beans, and 2.02 acres of sorghum. The soil moisture water content applied in the HCU analysis is 0.14 inches of water per inch of soil.
- According to the Applicant, the mined property was flood and furrow irrigated. The Applicant proposed a 50 percent maximum irrigation efficiency for the flood irrigation (alfalfa and pasture grass) and 55 percent maximum efficiency for the furrow irrigation (corn, small grains, small veggies, small grains, beans and sorghum). According to the Applicant the efficiency was based on review of aerial photos of the farm, lengths of the irrigated land fields, field slopes, layout of the irrigated fields, the type of irrigation practice and soil type. The soils consist mostly of Aquolls and Aquents and are classified as having slopes of 0 to 3 percent.
- Irrigation return flows were distributed with 50 percent attributed to deep percolation and 50 percent to surface runoff based upon review of other studies and change cases within the

basin. The surface runoff (tailwater) return flows are assumed to return to the South Platte River during the same month of diversion and thus they were not lagged to the river. The deep percolation return flows were lagged to the river using the same AWAS software. The aquifer characteristics used in the model are: transmissivity (T) = 112,000 gallons per day per foot, specific yield (SY) = 0.2, the distance from the centroid of the exposed surface area to the stream (X) = 1,300 feet. Return flows associated with ditch loss were not included in this analysis since these losses will continue as water is conveyed through the ditch to the pit.

- Monitoring wells were installed at nine different locations on DPG Farm and water level readings were taken for the 2019 irrigation season. Using this information, a composite depth to groundwater of 6.22 feet was determined for the property. Based upon this depth, a portion of the irrigation water requirement was met by the groundwater for the native grass and alfalfa grown on the farm. Therefore, the initial IDSCU results for HCU were reduced by applying the adjustments adapted from the *“EVAPOTRANSPIRATION AND AGRONOMIC RESPONSES IN FORMERLY IRRIGATED MOUNTAIN MEADOWS, South Park, Colorado, March 1, 1990; Revised September 1, 1991”*. For a depth of 6.22 feet, Native Grass is reduced by 5 percent and Alfalfa is reduced by 15 percent.

The HCU analysis results for DPG Farm’s 15 shares are summarized in Table A below:

**Table A - HCU Results for 15 shares**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Farm Headgate Delivery	0	0	0	7.6	41.4	112.5	194	162.6	75.4	4.5	0	0	597.9
On Farm Depletion of Surface Water*	0	0	0	3.7	20.5	55.9	98.1	81.9	37.8	2.1	0	0	300.1
Return Flows	0	0	0	3.9	20.8	56.6	95.9	80.6	37.6	2.3	0	0	297.8
Surface Return Flows	0	0	0	1.9	10.4	28.3	47.9	40.3	18.8	1.2	0	0	148.9
Ground Water Return Flows	0	0	0	1.9	10.4	28.3	47.9	40.3	18.8	1.2	0	0	148.9
Lagged Ground Water Return Flows	4.35	3.15	3	3.45	6.75	15	28.05	32.55	25.05	14.4	7.5	5.55	148.9
Average Net Depletion	-4.35	-3.15	-3	2.2	24.25	69.2	118	89.75	31.55	-11.1	-7.5	-5.55	300.1
Return Flow Factor	0.7%	0.5%	0.5%	71%	41%	38%	39%	45%	42%	2.6%	1.3%	0.9%	NA

\*CU adjusted for sub-irrigation

As previously indicated, a “demand-based” approach was utilized as opposed to a pro-rata approach to calculating the farm headgate delivery of the subject shares. Due to the presumed water-long nature of the ditch, and the lack of measurement records for the ditch waste-way, this office believes that 45% is a more reasonable value for irrigation efficiency to ensure that historical return flows are maintained, therefore an efficiency of 45% will be used for the purposes of this SWSP approval. The resulting farm headgate delivery limits and return flow obligations for the 3 shares subject of this SWSP are shown in Table B below. This approach will be accepted for this plan year, and is subject to review and reconsideration in any subsequent SWSP renewal requests. It has been conveyed to the Water Commissioner by a representative of the Patterson Ditch that



diversions recorded at the river headgate measuring structure, which may operate submerged at times, are fairly accurate and there is an acceptable amount of tail water returning to the river. These items will continue to be monitored by the Water Commissioner over the course of this irrigation season, but it appears the historical diversion records for this ditch are accurate. Should the Applicant continue to assert the Patterson Ditch is water long and typically turns back a significant portion of diversions to the South Platte River at the end of the ditch, the Applicant must measure and record the tail water flow returned, unused to the river. This amount could then be subtracted from the river headgate diversion.

**Table B - Volumetric Limits and Return Flow Obligations for 3 shares**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Farm Headgate Delivery	0	0	0	1.64	9.13	24.73	42.68	35.70	16.63	0.95	0	0	131.46
Consumptive Use	0	0	0	0.75	4.11	11.20	19.94	16.29	7.52	0.43	0	0	60.24
Surface Return Flows	0	0	0	0.45	2.51	6.76	11.37	9.70	4.56	0.26	0	0	35.61
Lagged Ground Water Return Flows	1.05	0.81	0.78	0.83	1.63	3.59	6.62	7.73	5.98	3.45	1.82	1.33	35.61
Total Return Flow Obligation	-1.05	-0.81	-0.78	-1.27	-4.14	-10.35	-18.00	-17.43	-10.54	-3.72	-1.82	-1.33	-71.22
Return Flow Factor	0.80%	0.61%	0.59%	77.7%	45.3%	41.8%	42.2%	48.8%	63.4%	2.83%	1.38%	1.01%	NA

As shown in Table B, the average annual farm headgate delivery amount associated with the 3 shares in the Patterson Ditch is 131.46 acre-feet with a consumptive use of 60.24 acre-feet and a return flow obligation of 71.22 acre-feet. The Applicant's deliveries under this SWSP are limited to the historical diversion season of April through October. In addition, the Applicant's diversions will be limited to the monthly and annual average farm headgate delivery amounts shown in Table B.

The historical return flow obligation associated with the 3 shares in the Patterson Ditch must be maintained under this SWSP. For the months of April through September, the daily return flow obligation will be determined by multiplying the applicable monthly return flow factor by the daily deliveries associated with the subject shares. For the months of October through March the daily return flow obligation will be determined by multiplying the applicable monthly return flow factor by the previous year's (April through October) total deliveries associated with the subject shares, and then divided by the number of days in the month.

Any SWSP renewal request may require additional terms and conditions to assure that an expansion of use of the Applicant's shares will not result if the Applicant reaches their volumetric limits and ceases diverting water or decides not to take delivery of their shares.

The required dry-up associated with the change of use of the subject 3 shares in the Patterson Ditch is 40.58 acres. According to the map you provided, approximately 104 acres out of the 202.9 acres historically irrigated by the Applicant's 15 shares are no longer being irrigated. The portion of the site proposed to be mined as Cell 1 consists of approximately 70 of these acres.

Deliveries under the 3 shares will be measured at a ditch turn-out, and then returned back to the Patterson Ditch. As the DPG land is the last farm on the Patterson Ditch, all water returned to the ditch will flow back to the South Platte River via the Patterson Ditch waste-way, located approximately 500 feet down ditch.

All deliveries shall be measured in a manner acceptable to the division engineer and the water commissioner. The Applicant shall install a measurement structure and recorder at the ditch turn-out for the 3 shares of the Patterson Ditch water. The measurement structure and recorder must be approved by the water commissioner before any use of the Patterson Ditch water for replacement purposes is allowed under this SWSP.

As previously mentioned, during the winter months and months with insufficient credits from Patterson Ditch water, replacement of the DPG Gravel Pit lagged depletions will come from a lease of up to 48.30 acre-feet of wholly consumable water supplies from Central Colorado Water Conservancy District ("Central"). The lease agreement with Central to provide the required augmentation water supplies was provided with this SWSP request and is attached to this letter as Exhibit 5. Central confirmed via email that they would provide an additional 0.16 acre-feet of replacement water in the month of October 2021. Water will be released from the Nissen Reservoir, located on the lower South Platte River across from the DPG site. Alternatively, Central will release water from the Geisert Pit, located along the Cache la Poudre River near Greeley approximately 6.3 miles upstream from the DPG Gravel Pit. The only intervening ditch between Central's wholly consumable water source on the Cache la Poudre River and the confluence of the South Platte River and the Cache la Poudre River is the Ogilvy Ditch. Central has a by-pass structure at the Ogilvy Ditch headgate to pass augmentation flows by the Ogilvy at times when the Ogilvy is diverting the entire flow of the Cache la Poudre River. The Applicant must coordinate the by-pass of water with Central and also notify the District 3 Water Commissioner. Central must include in their accounting the amount of water delivered through Central's by-pass structure for use in this SWSP.

Table C below lists the total lagged depletions and replacements to the South Platte River associated with the DPG Gravel Pit. The table incorporates a transit loss of 0.25 percent per mile for a distance of 6.3 miles on the conservative assumption that all replacement water provided by Central will be released from the Geisert Pit.

**Table C - Water Balance**

Month	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022
Lagged Operational & Evaporative Depletions	-7.26	-12.00	-13.08	-10.01	-7.85	-6.05	-4.31	-3.03	-2.66	-3.83	-5.19
Farm Headgate Deliveries (3 shares)	24.73	42.68	35.70	16.63	0.95	0	0	0	0	0	1.64
Return Flow Obligations	-10.35	-18.00	-17.43	-10.54	-3.72	-1.82	-1.33	-1.05	-0.81	-0.78	-1.27
CCWCD lease	0	0	0	4.3	10.96*	8.20	5.95	4.30	3.70	4.90	5.15
Transit Loss	0	0	0	-0.14	-0.35	-0.26	-0.19	-0.14	-0.12	-0.15	-0.16
River Balance	7.12	12.69	5.19	0.25	0.00	0.08	0.12	0.08	0.12	0.14	1.18

\*Includes 10.80 acre-feet from lease and additional 0.16 acre-feet committed via email.

## Conditions of Approval

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

1. This SWSP is approved with the effective date of **June 14, 2021 and shall be valid through April 30, 2022** unless otherwise revoked. If this plan is not decreed in the water court by the SWSP expiration date, a renewal request must be submitted to this office with the statutory fee of \$257 no later than **March 15, 2022**.
2. A well permit must be issued for the gravel pit in accordance with sections 37-90-137(2) and (11), C.R.S. prior to the exposure or use of groundwater. A well permit application has been submitted to this office (receipt no. 10009818) and is pending evaluation. Until a gravel pit well permit is approved, consumptive use and exposure of groundwater on this site is prohibited. 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 held in accordance with the procedural rules in 2CCR402-5. This hearing may 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. Should a new well permit be denied for reasons of 600 foot spacing, or any other legitimate reason, approval of this SWSP will be cancelled.
3. The total surface area of the groundwater exposed at the DPG Gravel Pit site must not exceed 11.14 acres, which results in a maximum evaporative loss of 31.23 acre-feet for this plan period.
4. The amount of water used for operational purposes at the DPG Gravel Pit site during this plan period shall not exceed 60.64 acre-feet, estimated as 25.17 acre-feet lost with the production of 855,000 tons of mined aggregate, 16.00 acre-feet for dust control purposes, and 19.47 acre-feet for slurry wall construction.
5. Total consumption at the DPG Gravel Pit site must not exceed these aforementioned amounts unless an amendment is made to this SWSP.
6. Approval of this SWSP is for the purposes as stated herein. This office must first approve any additional uses for the water. Any future historical consumptive use credit given (e.g., agricultural water transfer) for this site must consider all previous credits given.
7. All pumping for dust control shall be measured in a manner acceptable to the division engineer.
8. 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.
9. Adequate accounting of depletions and replacements must be provided to the division engineer in Greeley ([DNR\\_Div1Accounting@state.co.us](mailto:DNR_Div1Accounting@state.co.us)) and the water commissioners (Jorge Vidal at [Jorge.Vidal@state.co.us](mailto:Jorge.Vidal@state.co.us) and Mark Simpson at [Mark.Simpson@state.co.us](mailto:Mark.Simpson@state.co.us)) on a monthly basis. All amounts shall be in acre-feet. All submitted accounting must conform to the Administration Protocol "*Augmentation Plan Accounting - Division One, South Platte River*" (attached).



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 Central Colorado Water Conservancy District.

10. 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.
11. The division engineer, or his designated representative, will administer all such water transported in the South Platte River or its tributaries under this SWSP, 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 SWSP, 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.
12. 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.
13. 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.
14. The Applicant shall perform an inspection and provide verification that 40.58 acres of land associated with the 3 shares to be used for replacement purposes in this SWSP has been removed from irrigation during the term of this SWSP. Verification of dry-up must be submitted on the Dry-Up Certification Form, available for download at [https://drive.google.com/drive/folders/1TF0alNt6f5fla0Xz\\_n1\\_iAGCg4xusRN2](https://drive.google.com/drive/folders/1TF0alNt6f5fla0Xz_n1_iAGCg4xusRN2), for the entire irrigation season for the parcel of land associated with the change of water rights in this SWSP. In accordance with the attached *Administrative Protocol - Dry-Up of Irrigated Land*, the Applicants shall provide an affidavit to the water commissioner and division engineer that confirms dry-up during the **2021** irrigation season by **October 31, 2021**. A GIS shapefile outlining the dry-up must accompany the affidavit and must be emailed to [DNR\\_Div1Accounting@state.co.us](mailto:DNR_Div1Accounting@state.co.us). The shapefile shall include the WDID of the plan, a delineation of the dried-up land, the acreage of dry-up, and any accompanying metadata. In addition, the datum must be NAD83 and the UTM projection must be Zone 13 North.

The historical consumptive use attributed to the changed surface water rights under this SWSP shall not include groundwater contributions. The Applicant has reduced the historical consumptive use ("HCU") credit calculated for the subject water rights changed by this SWSP to account for sub-irrigation of grass and alfalfa on the historically irrigated lands from groundwater. Therefore, ongoing monitoring of the depth to groundwater is not required under this SWSP.

15. Should it be determined by the water commissioner or division engineer that water within the recharge pond is being diverted for any purpose by the operator and accounting is not

**adequate to show the recharge of dewatering is occurring the Applicant will need to account for any lagged dewatering depletions at the site.**

16. To assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, which would lead to the abandonment of the pit, the Applicant has obtained a bond in the amount of \$984,566 through the DRMS for lining of this site.
17. 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).
18. 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.
19. 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.
20. In accordance with amendments to section 25-8-202(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the state engineer shall determine if this substitute supply of replacement water 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.
21. 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 plans or in any proposed renewal of this plan, 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 Sarah Brucker in Denver at (303) 866-3581 or Michael Hein in Greeley at (970) 352-8712.

Sincerely,



Jeff Deatherage, P.E.  
Chief of Water Supply

Attachment: Exhibit 1 - Vicinity Map  
Tables 1 & 2  
Exhibit 5 - CCWCD Lease  
Accounting Protocol  
Dry-up Protocol

Ec: Michael Hein, Assistant Division Engineer, [Michael.Hein@state.co.us](mailto:Michael.Hein@state.co.us)

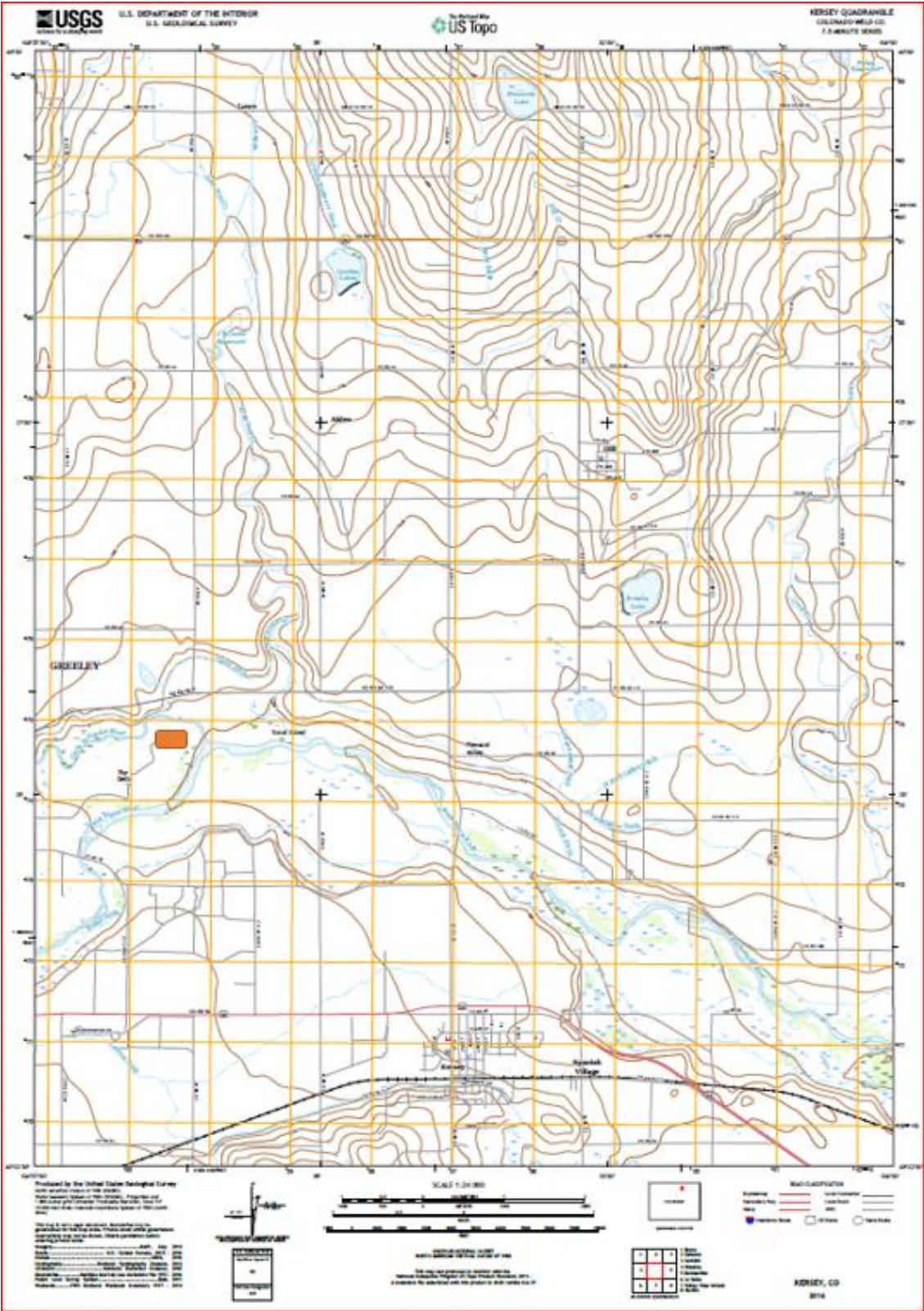
Jorge Vidal, Water Commissioner, District 2, [Jorge.Vidal@state.co.us](mailto:Jorge.Vidal@state.co.us)

Mark Simpson, Water Commissioner, District 3, [Mark.Simpson@state.co.us](mailto:Mark.Simpson@state.co.us)

Brent Schantz, River Operations & Compact Coordinator, [Brent.Schantz@state.co.us](mailto:Brent.Schantz@state.co.us)

Division of Reclamation Mining and Safety

Exhibit 1. Vicinity Map



**DPG Pit**

**Evaporative Losses**

**Table 1**



Submitted by:  
Paul Weiss  
5255 Ronald Reagan Boulevard, Ste. 220  
Johnstown, CO 80534 Ph: 970-221-5159

Total Exposed Water Surface Area<sup>1</sup> = 11.14 acres

		May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Totals
Distribution of Annual Evaporation <sup>2</sup>		0.12	0.15	0.15	0.14	0.10	0.07	0.04	0.03	0.03	0.04	0.06	0.09	1.00
Pond Evaporation <sup>3</sup>	inches	5.52	6.67	6.90	6.21	4.60	3.22	1.84	1.38	1.38	1.61	2.53	4.14	46.0
Effective Precipitation <sup>4</sup>	inches	0.71	0.58	0.20	0.07	0.07	0.10	0.29	1.00	1.35	1.18	1.03	0.99	7.6
Net Pond Evap	af/acre	0.40	0.51	0.56	0.51	0.38	0.26	0.13	0.03	0.00	0.04	0.12	0.26	3.20
<b>Net Evaporation</b>	<b>acre-feet</b>	<b>4.46</b>	<b>5.66</b>	<b>6.22</b>	<b>5.70</b>	<b>4.21</b>	<b>2.90</b>	<b>1.44</b>	<b>0.35</b>	<b>0.03</b>	<b>0.40</b>	<b>1.39</b>	<b>2.92</b>	<b>35.69</b>

**Notes:**

<sup>1</sup>Summation of recharge pond, settling pond, and dewatering trenches

<sup>2</sup>Distribution of Annual Evaporation per DWR Guidelines for gravel pits at elevations below 6,500 feet.

<sup>3</sup>Annual evaporation rate are taken from NOAA Technical Report NWS 33.

<sup>4</sup>Effective Precipitation = 0.7 \* Avg. Precip.. Monthly Precip. (Kersey Weather Station (1992 - 2013) from CoAgMet)



**DPG Pit**  
**Operational Losses**  
**Table 2**

Williams and Weiss Consulting, LLC



Submitted by:  
Paul Weiss  
5255 Ronald Reagan Boulevard, Ste. 220  
Johnstown, CO 80534 Ph: 970-221-5159

Month	Washed Aggregate Production (tons)	Not Washed Aggregate Production (tons)	Water Retained in Product (ac-ft)	Water Used for Dust Control (ac-ft)	Water Pumped for Batch Plant (ac-ft)	Total Operational Consumptive Use (ac-ft)
May-21	0.00	10,000.00	0.29	0.50	7.67	8.47
Jun-21	0.00	50,000.00	1.47	2.00	7.67	11.14
Jul-21	0.00	95,000.00	2.80	2.50	5.90	11.19
Aug-21	0.00	100,000.00	2.94	2.50	5.90	11.34
Sep-21	0.00	100,000.00	2.94	2.00	0.00	4.94
Oct-21	0.00	100,000.00	2.94	1.50	0.00	4.44
Nov-21	0.00	80,000.00	2.35	1.50	0.00	3.85
Dec-21	0.00	60,000.00	1.77	0.50	0.00	2.27
Jan-22	0.00	45,000.00	1.32	0.50	0.00	1.82
Feb-22	0.00	55,000.00	1.62	0.50	0.00	2.12
Mar-22	0.00	80,000.00	2.35	1.00	0.00	3.35
Apr-22	0.00	90,000.00	2.65	1.50	0.00	4.15
Year 1 Total	0.00	865,000.00	25.46	16.50	27.14	69.10

Exhibit 5. Lease Agreement for Replacement Supply

**WATER LEASE  
AGREEMENT**

THIS WATER LEASE AGREEMENT ("Agreement") is entered into on this 12<sup>th</sup> day of April, 2021 ("Effective Date") by and between the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District, whose address is 3209 W. 28th Street, Greeley, Colorado 80634 ("Lessor") and Journey Ventures LLC, a Colorado Limited Liability Company whose address is at 105 Coronado Ct. Unit A-101 Fort Collins, CO 80525 (Journey Ventures) and J-2 Contracting Company, a Colorado Corporation whose address is 105 Coronado Ct. Unit A- 101, Fort Collins CO 80525 (J-2) (Journey Venture and J-2 shall be collectively referred to as

"Lessee"). Lessor and Lessee may individually be referred to as a "Party" or collectively as "Parties."

**RECITALS**

WHEREAS, Lessor has storage and direct flow water rights in the Cache la Poudre basin and South Platte basin. Lessee has a Substitute Water Supply Plan (SWSP) filed with the State Engineer pursuant to 37-92-308(4) C.R.S.

WHEREAS, Lessee has a need for augmentation water for the DPG Pit at the confluence of the South Platte River and Cache LaPoudre River; and

WHEREAS, Lessor agrees to lease to Lessee such augmentation water upon the terms and conditions in this Lease Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties hereby agree as follows:

1. AUGMENTATION WATER LEASE. Lessor hereby agrees, during the Term of this Agreement, to lease to Lessee, up to 48.30 acre-feet of water ("Augmentation Water"), pursuant to the monthly delivery schedule attached hereto as **Exhibit 1**.

2. TERM OF LEASE. The term of this lease is from the Effective Date through April 30, 2022.

3. CONSIDERATION. Lessee agrees to pay Lessor Six Hundred Fifty and 00/00 Dollars (\$650.00) per acre-foot of Augmentation Water (\$31,395.00 total) delivered pursuant to **Exhibit 1**, to be paid by Lessee by May 1, 2021. Payment to be provided at the Lessor address in paragraph 5 below.

4. FURTHER APPROVAL. Lessee shall be responsible for obtaining such approvals as are necessary for Lessee to use the Augmentation Water in its or substitute water supply plans and shall be responsible for accounting for its use of the Augmentation Water to

the appropriate State water administration officials, water court and/or other parties who may be entitled to that information. Lessee shall provide Lessor with copies of its accounting which illustrate Lessee's use of the Excess Augmentation Credits as reasonably requested by Lessor.

5. NOTICES. Any notices, demands or other communications required or desired to be given under provision of this Agreement shall be given in writing, delivered personally, or sent by certified or registered mail, return receipt requested, postage prepaid, address as follows:

To Lessor: Ground Water Management Subdistrict of the Central Colorado  
Water Conservancy District  
3209 W. 28th  
Street Greeley,  
CO 80634

To Lessee: J-2 Contracting Co.  
105 Coronado Ct. Unit A-  
101 Fort Collins, CO  
80525

6. AMENDMENT. This Agreement may be modified, amended, changed or terminated in whole or in any part only by an agreement in writing duly authorized and executed by all the Parties with the same formality as this Agreement.

7. WAIVER. The waiver of any breach or any of the provisions of this Agreement by any Party shall not constitute a continuing waiver of any subsequent breach by said Party, by either of the same or any other provision of this Agreement.

8. HEADINGS FOR CONVENIENCE ONLY. Paragraph headings and titles contained herein are intended for convenience and reference only and are not intended to define or limit the scope or intent of any provision of this Agreement.

9. NON-SEVERABILITY. Each paragraph of this Agreement is related with the other and is not severable unless by mutual consent of the Parties hereto.

10. BINDING EFFECT. This Agreement and rights and obligations created hereby shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and assigns; however, this Agreement shall not be assigned except with the prior written approval of the non-assigning party which approval shall not be unreasonably withheld.

11. GOVERNING LAW. This Agreement and its application shall be construed in accordance with the laws of the State of Colorado. Venue for the trial of any action under this Lease shall be in Weld County District Court.

12. MULTIPLE ORIGINALS. This Agreement may be simultaneously executed in any number of counterparts, each of which shall be deemed original but all of which constitute one and the same agreement. Signatures may be evidenced by facsimile. Documents with original signature shall be provided to the other Party upon request by the other Party.

13. NO ATTORNEY'S 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.

14. ENTIRE AGREEMENT. This Agreement constitutes the entire Agreement between the Parties relating to the subject hereof and any prior agreements pertaining thereto whether oral or written have been merged or integrated into this Agreement.

**Lessor:**

**Ground Water Management Subdistrict of the Central Colorado Water Conservancy District**

By: 

William Alhelich, District Engineer

**Lessee:**

**J-2 Contracting**

By: 

CHRIS LEONE, PRESIDENT

## EXHIBIT 1

Month	Monthly Release <sup>1</sup> (ac-ft)
May-21	1.00
Jun-21	0.00
Jul-21	0.00
Aug-21	0.00
Sep-21	4.30
Oct-21	10.80
Nov-21	8.20
Dec-21	5.95
Jan-22	4.30
Feb-22	3.70
Mar-22	4.90
Apr-22	5.15
Total	48.30



# ADMINISTRATION PROTOCOL

## Augmentation Plan Accounting

### Division One – South Platte River

This protocol establishes the accounting and reporting process required to enable the division engineer's office to confirm that depletions from all out-of-priority diversions are being replaced so as to prevent injury to vested water rights. The accounting must comport with established "cradle to grave" accounting standards, which allow an audit of the information to track exactly how the data is manipulated as it is translated from raw input data to the resultant impact on the river. While this protocol is subordinate to any decreed language addressing specific accounting requirements, it generally addresses the minimum requirements of such accounting.

The accounting must use the standard convention where a depletion is "negative" and an accretion or other replacement source is "positive". The sum of the impacts will then result in either a "negative" or "positive" impact on the stream.

Wells in plans that have a negative stream impact must provide additional replacement water, curtail pumping or both until the impact is no longer negative. Plans with a negative stream impact that fail to curtail pumping will be ordered to stop pumping until such time as the projected impact of the wells is no longer negative.

1. Accounting must be submitted electronically to the water commissioner (call 970-352-8712 to obtain email address) and division engineer at Div1Accounting@state.co.us within 30 days of the end of the month for which the accounting is being submitted.
2. The accounting must provide the **contact information** including name and address for:
  - a. the owner(s) of each well
  - b. the person responsible for submitting the accounting
  - c. the plan administrator and/or the plan attorney.
3. All **input data** must be in one location, such as an "Input" worksheet, etc. The accounting must show all pumping. Input data includes the information listed below.
  - a. The required input data for each **well** is:
    - i. the monthly meter reading for wells that use a **presumptive depletion factor** (PDF) to determine the associated consumptive use (CU); or
    - ii. the monthly CU in acre-feet (AF) for wells that have a decree or approved SWSP that allows the wells to use a **water balance methodology** to determine the CU of the well. The analysis used to determine the CU must be included with the accounting.
    - iii. Wells that are decreed as an **alternate point of diversion** (APOD) to a surface water right must report pumping on a daily basis if any of the diversion during the month is claimed as being "in priority". (See *Administration Protocol – APOD Wells* for more details.)

- iv. The well meter serial readings for each meter shall be included if there is more than one meter on a well.
- b. Each **recharge site** must comply with the *Administration Protocol - Recharge* and must report the:
  - i. daily volume in AF diverted into the site;
  - ii. monthly volume in AF released from the site;
  - iii. monthly net evaporative loss in AF;
  - iv. volume of water in AF remaining at the end of the month.
- c. The accounting must identify each source of **fully consumable replacement water** actually delivered to the location impacted by the depletions. To demonstrate the water was actually delivered to the required location will require the following information:
  - i. the originating source of the water, date released and volume of water released;
  - ii. transportation losses to point of diversion or use, if any, using stream loss factors approved by the water commissioner;
  - iii. the volume of water actually delivered on a daily basis past any surface water diversion that was sweeping the river as corroborated by the water commissioner.

(See *Administration Protocol – Delivery of Water* for more details on delivering water.)
- d. For each source of **replacement water that has been “changed”** for use as a source of augmentation, such as changed reservoir shares, ditch bypass credits or credits from dry-up, etc., the following input information must be reported:
  - i. the basis and volume of the return flow obligation;
  - ii. the location the changed water was historically used; this will be the location used to determine the timing of the return flow impact on the river.
- 4. The accounting must include a monthly **projection** of the plan’s operation at least through March 31 of the next calendar year.
- 5. The accounting must include all input and output files associated with **modeling the delayed impact** of diversions. The output from the modeling must report to a summary table that shows, by month, the ongoing depletions associated with pumping, return flow obligations, etc. and accretions from recharge operations.
- 6. A **net impact** summary must show the out-of-priority depletions, accretions from each recharge site, volume of replacement water actually delivered to the location of the depletions and the resultant net impact on **a daily basis**. If necessary, the net impact must be done by river reach.

While **modeling** may use a **monthly step function** to determine the depletions from pumping and accretions from recharge, the monthly result must then be **divided by the number of days in the month** in order to **simulate a daily impact**, as water rights are administered on a daily and not monthly basis.

Replacement water must be provided such that the **daily net impact** (using the simulated daily numbers from the modeling) **is not negative**. If a well is out-of-priority for 15 days during a month, replacement must be made only for the 15 days the well is out-of-priority. The replacement must be made, however, on a daily basis as opposed to, for instance, making an aggregated release equal to the volume of the out-of-priority depletions. Likewise, the simulated daily accretion will only count toward replacing the depletion on the days the well is out-of-priority. The accretions that report to the river when the well is in priority cannot be used to replace the out-of-priority depletions.

The **accretions that impact the river when the well is in priority** are not considered “excess” unless the cumulative net impact of the well is not negative for the entire irrigation year to date. (The irrigation year for this purpose is April 1 thru the following March 31.) Until such time as the cumulative net impact is not negative, the accretions must simply be released to the river and cannot be leased to other plans or recaptured. Plans that show a positive cumulative net impact are still required to make replacements on a daily basis; the cumulative analysis only effects whether or not accretions reporting to the river when the well is in priority are considered “excess” and are, therefore, able to be recaptured.

7. The basis for determining that the depletions are **out-of-priority** must be clearly established and all steps in the calculation included in the accounting. The analysis may be done, unless otherwise limited by decree, for each well or groups of wells, provided the most junior water right associated with the group of wells is used as the reference water right for the group’s out-of-priority status.
8. Accounting must include **actual information** for the irrigation year through the month for which the accounting is being submitted **AND projections** of the plan operation through March 31 of the next calendar year.
9. The following **naming convention** must be used for all files submitted pursuant to item 1:

“Plan**WDID**\_YYMMDD”

where: PlanWDID is the WDID assigned by the division engineer’s office  
YYMMDD corresponds to the date the accounting is submitted.

As an example, the assigned WDID for the former GASP plan was 0103333. If accounting using Excel® was submitted for that plan on May 15, 2004, the file name would be:

“0103333\_040515.xls”

The name of the file must be in the subject line of the email.

10. All accounting must be reported using the **WDID** for the structure, at a minimum. Other information such as well name, permit number, etc. may also be included as desired. All wells must be decreed by the water court, permitted by the state engineer or included in a decreed plan for augmentation. Unregistered and undecreed wells cannot, in the opinion of the division engineer, be effectively administered because of the need to know the location, allowable diversion rate and use of the well - information that is only available from the decree or permitting process.

11. If a well is covered in multiple SWSP's or augmentation plans, the monthly meter readings must be the same in the accounting for each plan covering the subject well. The accounting for every plan covering the well shall state the proportionate pumping amount covered by each plan to assure all out-of-priority depletions are replaced.
12. The following additional accounting is required for sources of replacement water used for more than one plan. The water right owner of the replacement water is responsible for accounting for the total replacement amount and how much each plan is using of that total amount. The accounting for portions of the replacement water by other users must match the accounting of the water right owner. The amount of replacement water used by the water right owner and other users together shall not exceed the total replacement amount available.

(See *Administration Protocol – Use Of Unnamed Sources For Replacement* for additional requirements concerning required notice and approval of sources of replacement not specifically described in a SWSP or augmentation plan)

**ADMINISTRATION PROTOCOL**  
**Dry-Up of Irrigated Land**  
**Division One – South Platte River**

As required by either a decreed change of water rights or a substitute water supply plan, a source of irrigation water may be either permanently or temporarily removed from a parcel of land in order to make the historical consumptive use portion of that water supply available for other uses, typically augmentation. This protocol addresses the documentation required to administer the effective “dry-up”. To the extent that one or more of the following directives are in direct contradiction with a decree of the court, the terms of the decree must be followed.

**Permanent Dry-up Covenant**

1. Must be decreed by the court.
2. Must be filed with clerk and recorder’s office for the county wherein the land is located.
3. Must email a GIS shapefile to [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us) that includes case number, WDID, and total acreage permanently dried-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
4. Must address the issue of noxious weeds as required by §37-92-305(4.5)(a), C.R.S. and/or other county or local ordinances. (DWR is not authorized to administer the issue of noxious weeds; this statement is, therefore, simply informational).

**Temporary Dry-up Agreement**

1. May be made for a term that is not less than one irrigation season.
2. Unless otherwise stated in the approved SWSP, a written notification, reporting land of intended dry-up, must be submitted prior to April 1 of each irrigation season to the division engineer, water commissioner and [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us). Along with the written notification, a GIS shapefile reflecting the land of intended dry-up must be submitted. The shapefile must be emailed to [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us). The shapefile shall include case number, WDID, and acreage of dry-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
3. Unless otherwise stated in the approved SWSP, a written affidavit, affirming land actually dried up, must be submitted prior to October 31 of each irrigation season to the division engineer, water commissioner and [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us). Along with the written affidavit, a GIS shapefile, reflecting the dried up acreage proclaimed in the affidavit, must be submitted. If the submitted affidavit indicates that the intended and actual dry-up acreages are identical, then no GIS shapefile is required. The shapefile must be emailed to [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us). The shapefile shall include case number, WDID, and acreage of dry-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
4. Once written notice has been made to the division engineer and/or water commissioner, the dry-up requirement is irrevocable during the current irrigation season regardless of whether or not the water associated with the historical consumptive use is actually used.