



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

March 18, 2022

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

**Re: Loloff Substitute Water Supply Plan (WDID 0302524, Plan ID 3270)**  
**Loloff Pit, DRMS Permit No. M-1985-112 (WDID 0303012)**  
**SE¼ NW¼ Section 4, T5N, R65W, 6<sup>th</sup> P.M.**  
**Water Division 1, Water District 3, Weld County**

**Approval Period: April 1, 2022 through March 31, 2023**  
*Contact information for Mr. Weiss: 970-221-5159; [pswwater@msn.com](mailto:pswwater@msn.com)*

Dear Mr. Weiss:

We have reviewed your letter dated January 25, 2022 requesting renewal of the above-referenced substitute water supply plan ("SWSP") on behalf of Loloff Construction, Inc. ("Loloff" or "Applicant"). This SWSP is requested in accordance with section 37-90-137(11), C.R.S., to cover depletions caused by an existing sand and gravel mining operation known as the Loloff Pit. The required fee of \$257.00 for the renewal of this substitute water supply plan has been submitted (receipt no. 10018480).

### **SWSP Operations**

The Loloff Pit is located in the SE¼ of the NW¼ of Section 4, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M., in Weld County. Gravel mining at the site concluded in August 2019, and no dewatering has occurred at the site since July 2019. The slurry wall liner for the Loloff Pit was approved by the State Engineer's Office as meeting the design standard for liners on April 26, 2019, and the Loloff Pit is now classified as a lined reservoir in accordance with the *August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits* (Loloff Reservoir, WDID 0303483). This SWSP will make replacements to the Cache la Poudre River to offset lagged depletions from past mining and dewatering operations at the site. There will be no consumptive use of groundwater at the Loloff Pit during this plan period. The replacement sources proposed to be utilized in this SWSP are yield from one share of the Greeley Irrigation Company, yield from Loloff Constructions Inc.'s water right decreed in case no. 1987CW0153, and water stored in the Loloff Pit under free river conditions.



## Depletions

There will be no new depletions at the Loloff Pit during this plan period, only replacement of ongoing lagged depletions associated with past mining and dewatering operations at the site.

Dewatering at the site began in April 2013 and continued at consistent rates up until the commencement of construction of a slurry wall at the site in the summer of 2017, when dewatering rates began to taper off. Dewatering at the site ceased entirely after July 2019. Water pumped from the Loloff Pit for dewatering purposes was discharged into an unnamed natural seep located just south of the property. The seep is connected to a large pond area, from which water flows southeast approximately  $\frac{1}{4}$  mile through a natural channel before reaching the Ogilvy Ditch. Approximately  $\frac{1}{2}$  mile after entering the Ogilvy Ditch, the water reaches an outlet structure which pipes the water back to the Cache la Poudre River. A diagram of the travel path is attached as Map 2. Due to the existence of the pond area and the travel distance to the river, you have estimated that 50% of the dewatering water discharged into the seep infiltrated into the ground as a subsurface flow and 50% reached the river as surface flow. Lagged accretions from the portion of dewatering water returning to the river as subsurface flow partially offset the lagged depletions from past dewatering.

In the past, lagged depletions and accretions to the Cache la Poudre River were calculated using the IDS Alluvial Water Accounting System (AWAS) analytical stream depletion model executed in Effective SDF mode, using a stream depletion factor (SDF) of 60 days for the Loloff Pit site. As recommended by this office, beginning with this plan period you have revised the modeling of lagged depletions by switching from Effective SDF to the Alluvial Aquifer option with the following aquifer parameters: a distance (X) of 2,775 feet from the exposed groundwater surface to the river; a distance (W) of 11,490 feet from the stream to the impermeable boundary; a harmonic transmissivity (T) of 76,056 gallons per day per foot; and a specific yield (S) of 0.2. This results in the depletions accruing to the river in a shorter amount of time than previously estimated, and also results in an increase in the magnitude (volume) of the depletions that are estimated to have already occurred. You have calculated the volume of depletions remaining to be replaced as of the start of this plan period to be 833.26 acre-feet using the Effective SDF option, and the amount of depletions remaining to be replaced as of the start of this plan period to be 518.91 acre-feet using the Alluvial Aquifer option. In order to ensure that this change in methodology does not result in unreplaced depletions to the river, you have scaled up the volume of depletions calculated using the Alluvial Aquifer option by a factor of 1.61 ( $833.26 \div 518.91$ ). The total amount of depletions replaced under the alluvial aquifer method will therefore be equal to the total amount of remaining depletions calculated using the SDF method.

Lagged depletions for this plan period were calculated to total 244.18 acre-feet, as shown in the attached Table 2. Depletions are assumed to impact the Cache la Poudre River perpendicular to the Loloff Pit, just above the headgate of the Ogilvy Ditch (WDID 0300937).

## Replacement Sources

The replacement sources proposed to be used under this SWSP consist of the yield from one share of the Greeley Irrigation Company ("GIC") available during the irrigation season, water diverted under the 1987CW0153 right for the Loloff Section 4 Ditch, and water stored in the Loloff Pit under free river conditions.

### *Greeley Irrigation Company Share*

Loloff owns one share of the Greeley Irrigation Company, Certificate No. 3391. A share of GIC water provides the shareholder with GIC direct flow water and Fossil Creek Reservoir water. The share was historically used for the irrigation of approximately 8.3 acres of land in the SW¼ of the NE¼ of Section 15, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M., which have been removed from production as part of the share acquisition.

A portion of the Greeley Canal No. 3 (WDID 0300934) was changed in Division 1 Water Court in case no. 1996CW658 based on a ditch-wide analysis by the Poudre Prairie Mutual Reservoir and Irrigation Company. The use of the subject ditch share in this plan shall be in accordance with the terms and conditions decreed in case no. 1996CW658, including monthly and annual volumetric limits on water deliveries and monthly return flow requirements. The average annual irrigation delivery of GIC's water rights was determined to be 9,690 acre-feet in case no. 1996CW658, based on an average annual river headgate diversion of 11,400 acre-feet and an average conveyance loss of 15%, or 18.6 acre-feet per share (9,690 acre-feet/519.7 shares). The decree found that 519.7 shares were used to irrigate 3,501 acres with an average historical consumptive use of 5,358 acre-feet per year, which yields an average consumptive use credit of 10.31 acre-feet per share (5,358 acre-feet/519.7 shares).

In paragraph 6.7.4 of the decree in case no. 1996CW658, future farm headgate deliveries of the 67.75 shares were limited to 1,712 acre-feet per year (25.26 acre-feet per share) and 12,631 acre-feet (186.43 acre-feet per share) in any consecutive 10 year period. Deliveries of Loloff's share of GIC water under this plan must comply with these limits. The historical return flows shall be maintained in accordance with the return flow factors identified in case no. 1996CW658. The return flows associated with the delivery of Fossil Creek Reservoir water that is attributable to the subject GIC share shall also be maintained in accordance with the surface and subsurface factors decreed in case no. 1996CW658.

For projections of 2022 deliveries, you have used an estimated irrigation delivery attributable to GIC direct flow diversions of 17.50 acre-feet per share and an estimated irrigation delivery attributable to Fossil Creek Reservoir deliveries of 0.40 acre-foot per share. As specified in case no. 1996CW658, all deliveries of GIC water incur an immediate surface return flow obligation of 23.7% for direct deliveries and 20.1% for Fossil Creek deliveries, which corresponds to surface return flow obligations of 4.15 acre-feet and 0.08 acre-feet, respectively, for this plan period. Pursuant to paragraph 6.7.6 of case no. 1996CW658, the subsurface component of the return flow obligation shall be calculated by multiplying the 5-year running average annual farm headgate deliveries of GIC water (direct flow water and Fossil Creek Reservoir water) by the factors given in Appendix A-2 of case no. 1996CW658. The subsurface return flow obligations for the GIC direct deliveries and Fossil Creek Reservoir deliveries are 3.93 acre-feet and 0.10 acre-feet during this plan period, respectively. A calculation of the return flow obligations is shown in the attached Table 1.

Loloff has proposed to discontinue taking delivery of their GIC share and notify the ditch company should the yield cause them to exceed the historical delivery average of 18.6 acre-feet. Based on information provided on behalf of the Greeley Irrigation Company, there are a total of 251.97 shares and 1,103.87 acres remaining available for irrigation under the ditch system, resulting in an average of 4.38 acres irrigated per share. This is well below the historically irrigated acreage of 6.74 acres per share. As such, no additional terms and conditions are required to assure that this SWSP does not result in an expansion of use of the Applicant's share should the Applicant reach their

annual volumetric limit and cease diverting water or decide not to take delivery of their share. This position applies only to this SWSP and has no bearing on the position of the State and Division Engineers in any water court case involving a change of GIC shares.

The area formerly irrigated by the subject GIC share continues to contain residual pasture grass. The measured depth to groundwater in the area ranges between 6 and 7.5 feet. In order to ensure the required dry-up conditions exist during the approval period of this SWSP, and to ensure the historical consumptive use calculated for the ditch shares changed by this SWSP do not include any credit resulting from the consumption of groundwater, you have proposed to apply a 5% reduction to the monthly consumptive use credits claimed for the subject GIC share.

Delivery of the yield from the subject share is expected to continue to occur at the 23<sup>rd</sup> Avenue augmentation station (WDID 0302318). Water is returned to the river in the SW $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 31, Township 6 North, Range 65 West of the 6<sup>th</sup> P.M., approximately 2.5 miles upstream of the point of depletions and upstream of the Ogilvy Ditch headgate, which is the first senior water right that could be injured by depletions from the Loloff Pit. Based on conversations the Applicant has had with the GIC, the Applicant can also request delivery of the yield from the subject share at either the 16<sup>th</sup> Street or F Street augmentation stations. The 16<sup>th</sup> Street augmentation return (WDID 0302319) is located approximately 1.8 miles downstream of the point of depletions and downstream of the Ogilvy Ditch headgate. The F Street return (WDID 0302320) is located approximately 7.9 miles upstream of the point of depletions and upstream of the Ogilvy Ditch headgate. At times when the Ogilvy Ditch is calling, the Applicant must make replacements at or above the Ogilvy Ditch headgate. A transit loss may be assessed by the water commissioner for the delivery of such replacement water.

#### *Loloff Section 4 Ditch*

Loloff obtained a conditional water right in Division 1 Water Court case no. 1987CW153 for the diversion of 4 cfs through the Loloff Section 4 Ditch (WDID 0300754), with an appropriation date of March 15, 1987. The decreed point of diversion is in the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 4, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M., approximately 700 feet South and 50 feet West of the north quarter corner of said Section 4. The decreed use of the water is the irrigation of 55 acres in the NW $\frac{1}{4}$  of Section 4 and augmentation water. When in priority, the water is proposed to be diverted from the Loloff Section 4 Ditch into the Loloff Pit, and pumped back to the Cache la Poudre River for replacement purposes. It is the understanding of this office that the measurement structure for the Loloff Section 4 Ditch is in disrepair and easily submerged. **The measurement structure must be repaired to the satisfaction of the water commissioner and approved by the water commissioner prior to the use of the Loloff Section 4 Ditch to divert water, or no credit will be given for replacement water from this source.**

#### *Loloff Reservoir*

As of the date of the SWSP request, Loloff had approximately 760 acre-feet of water stored in the lined Loloff Pit (WDID 0303483) that was diverted under free river conditions with the knowledge and approval of the water commissioner. A stage-area-storage capacity table has been provided to this office, and a staff gauge has been installed in the reservoir to measure the amount of water in storage. The Applicant has been submitting reservoir accounting for the Loloff Reservoir and must continue to do so on a monthly basis in order to continue to be able to use water stored in this structure as a replacement source in this SWSP. Water was diverted into storage by diverting from the river at the Ogilvy Ditch, conveying the water down the ditch, and pumping the water from the



ditch into the pit. A copy of an agreement between the Ogilvy Irrigating and Land Company and Mill Iron Mining LLC, which is associated with Loloff Construction, Inc., allowing for the use of the Ogilvy Ditch for this purpose was provided with the SWSP request and is attached to this approval. Under the agreement, Mill Iron Mining is entitled to use the first 200 acre-feet of free river water stored in the Loloff Pit annually for augmentation purposes. Metered pumping from Loloff Pit will be discharged into the unnamed natural seep located south of the property, from where it will work its way back to the Cache la Poudre River. As quantified in the past, 50% of the releases will be deemed to enter the river system as surface water, while the other 50% will be lagged back to the river system using the AWAS parameters previously described. For this plan period, you have projected that a total of 311 acre-feet of previously stored free river water will be pumped from the Loloff Pit, of which 50% (155.50 acre-feet) will return to the river as surface flows, and 50% will return to the river as subsurface return flows. Lagged subsurface return flows from past and projected deliveries of stored water will result in 91.93 acre-feet of accretions at the river during this plan period, in addition to the 155.50 acre-feet of water anticipated to enter the river as surface flow.

#### *Water Balance*

A water balance showing the lagged depletions and projected replacements for this plan period is provided in the attached Table 2.

#### **Long Term Augmentation**

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.

The approved reclamation plan for this site is reclamation to a lined reservoir with a surface area of approximately 46.94 acres. As previously indicated, the liner at the Loloff Pit has been approved by the State Engineer’s office, and the pit is now classified as a lined reservoir; however, ongoing depletions from past operations at the site are still impacting the river. In accordance with approach no. 4, you have provided an affidavit dated May 30, 2014 that dedicates the Applicant’s one share of the Greeley Irrigation Company (certificate no. 3391) and one share of the New Cache La Poudre Irrigation Company (certificate no. 4635) as replacement water solely for this SWSP for as long as there are depletions at this gravel pit site or until such time as another replacement source is obtained. A copy of the affidavit is attached to this letter. For the purposes of this SWSP, this affidavit will be accepted for the dedication of the shares; however, if the State Engineer determines that a different affidavit or dedication process is necessary to assure proper dedication of the shares, additional information may be required prior to future SWSP approvals.

## Conditions of Approval

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

1. This SWSP shall be valid for the period of April 1, 2022 through March 31, 2023, unless otherwise revoked or superseded by decree. Any renewal request must be submitted to this office with the statutory fee (currently \$257) no later than February 1, 2023. If a renewal request is received after the expiration date of this plan, it may be considered a request for a new SWSP, in which case a \$1,593 filing fee will apply.
2. This SWSP does not authorize the exposure of any groundwater or any consumptive use of groundwater at the site. Any use of groundwater at the Loloff Pit must first be approved by this office through an amendment to this SWSP.
3. Replacement of lagged depletions shall continue until there is no longer an effect on stream flow. The Applicant must renew and maintain a valid SWSP until all lagged depletions resulting from operation under this SWSP have been fully replaced in time, location, and amount. After the end of this plan period, a total of 589.08 acre-feet of depletions will remain to be replaced.
4. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner. Notice must be provided and approval made by the water commissioner at least 48 hours prior to the release of replacement water, or as required by the water commissioner. The Applicant is required to coordinate with the water commissioner the delivery location of replacement water to ensure out-of-priority depletions are adequately replaced to prevent injury to other water rights.
5. The release of replacement water may be aggregated to maximize beneficial use. The water commissioner and/or the division engineer shall determine the rate and timing of an aggregated release.
6. The replacement water that is the subject of this plan cannot be sold or leased to any other entity. As a condition of subsequent renewals of this substitute water supply plan, the replacement water must be appurtenant to this site unless a plan for augmentation is obtained.
7. All deliveries of water to storage and deliveries of replacement water shall be measured in a manner acceptable to the division engineer. The Applicant shall install and maintain measuring devices as required by the division engineer for operation of this SWSP. Reservoir accounting must continue to be submitted for the Loloff Reservoir (WDID 0303483). **No credit will be given for replacement water diverted through the Loloff Section 4 Ditch unless the measurement structure is first repaired and approved by the water commissioner.**
8. Conveyance loss for delivery of augmentation water is subject to assessment and modification as determined by the division engineer.
9. The name, address, and phone number of the contact person who will be responsible for the operation and accounting of this plan must be provided on the accounting forms submitted to the division engineer and the water commissioner.

10. 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 Administration Protocol for Division One. **NOTE:** Monthly accounting, even during the winter non-irrigation season, is required.
11. The Applicant shall perform an inspection of the 8.3 acres of dry-up area, submit a certification of that inspection, and provide a zipped GIS shapefile of the dried-up land as follows:
  - The Applicant’s inspection of dry-up must be submitted on the *Dry-Up Report - Verified Statement to Division Engineer* form at the beginning of the irrigation season indicating planned dry-up and then again in the fall after the irrigation season confirming the planned dry-up was accomplished. A pdf map may be attached to that report. The Dry-Up Report form is available for download from the Division of Water Resources’ website at: [https://drive.google.com/drive/folders/1TF0a1Nt6f5fla0Xz\\_n1\\_iAGCg4xusRN2](https://drive.google.com/drive/folders/1TF0a1Nt6f5fla0Xz_n1_iAGCg4xusRN2) (Water Administration → eForms Dashboard → South Platte: Dry up Certification). The Dry-Up Report must be signed by an individual with personal knowledge of the dry-up for the entire irrigation season for each parcel of land associated with the change of water right in this SWSP.
  - GIS shapefiles in a file format \*.zip outlining the dry-up shall also be submitted at the same time as the Dry-Up Report. The GIS files must include any accompanying attribute data and the datum must be NAD83 and the UTM projection must be Zone 13N.
  - Submittals shall be made **by May 31, 2022** for planned dry-up and **by October 31, 2022** for dry-up confirmation. Submittals shall be made through the CDSS Online Reporting Tool (<https://dwr.state.co.us/Tools/reporting>). Two new Reporting Submittal Tool elements will be created for this SWSP: (1) Dry-up shapefile and (2) Dry-Up Report - Verified Statement. For additional assistance with Online Reporting Submittals, contact Dawn Ewing in the Division 1 office at [dnr\\_div1accounting@state.co.us](mailto:dnr_div1accounting@state.co.us).
12. The historical consumptive use attributed to Loloff’s GIC share shall not include groundwater contributions. As a result, the historical consumptive use (“HCU”) credit calculated for the GIC share proposed to be used for replacement purposes under this SWSP shall be reduced by any ongoing sub-irrigation from groundwater. For this plan period, you have proposed to use a constant reduction of 5% for the 2022 irrigation season, based on the historical depth to groundwater. For the purposes of this SWSP, the proposed reduction is acceptable, although a different method may be required in future SWSP approvals or if there is significant fluctuation in groundwater levels from one month or one year to the next.
13. 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 or be revoked prior to replacement of all remaining lagged depletions, the Applicant will be subject to enforcement.

14. 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 whether the substitute supply is of a quality to meet requirements of use to senior appropriators. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.
15. 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 this 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 Sarah Brucker in Denver at (303) 866-3581 or Michael Hein in Greeley at (970) 352-8712.

Sincerely,



for Jeff Deatherage, P.E.  
Chief of Water Supply

Attachments: Map 2  
Tables 1 & 2  
Ogilvy/Mill Iron Mining Agreement  
Share Dedication Affidavit  
DRMS April 30, 2010 letter  
Augmentation Plan Accounting Administration Protocol for Division One

Cc: Michael Hein, Lead Assistant Division Engineer, [Michael.Hein@state.co.us](mailto:Michael.Hein@state.co.us)  
Mark Simpson, Water Commissioner, District 3, [Mark.Simpson@state.co.us](mailto:Mark.Simpson@state.co.us)  
Louis Flink, Tabulation/Diversion Records Coordinator, [Louis.Flink@state.co.us](mailto:Louis.Flink@state.co.us)  
Dawn Ewing, Accounting Coordinator, [Dawn.Ewing@state.co.us](mailto:Dawn.Ewing@state.co.us)  
Peter S. Hays, Division of Reclamation Mining and Safety, [Peter.Hays@state.co.us](mailto:Peter.Hays@state.co.us)



## Map 2. Dewatering Seep and Pond

dewatering enters seep at this location



there is a pipe inlet right here  
discharges directly south under property to river



**Loloff Pit**

**GIC Yields and Return Flow Obligations**

**Table 1**

*Williams and Weiss Consulting LLC*



Submitted by:

Paul Weiss, P.E.

5255 Ronald Reagan Boulevard, Suite 220

Johnstown, CO 80534

	Direct Flow portion			Fossil Creek portion			Net
	diversion	c.u.	surf	sub	balance	Balance	
JAN	0.00	0.00	0.00	0.29	-0.29	0.00	-0.30
FEB	0.00	0.00	0.00	0.28	-0.28	0.00	-0.29
MAR	0.00	0.00	0.00	0.26	-0.26	0.00	-0.27
APR	1.00	0.52	0.24	0.25	0.52	0.00	0.51
MAY	2.00	1.04	0.47	0.29	1.23	0.00	1.23
JUN	3.00	1.57	0.71	0.34	1.95	0.00	1.94
JUL	4.00	2.09	0.95	0.38	2.68	0.00	2.67
AUG	3.50	1.83	0.83	0.39	2.28	0.00	2.27
SEP	3.00	1.57	0.71	0.39	1.90	0.30	2.12
OCT	1.00	0.52	0.24	0.38	0.39	0.06	0.46
NOV	0.00	0.00	0.00	0.34	-0.34	0.00	-0.35
DEC	0.00	0.00	0.00	0.33	-0.33	0.00	-0.34
TOTAL	17.50	9.14	4.15	3.93	9.42	0.40	9.65

- 1) historical consumptive use on direct flow component of GIC share is 52.2%
- 2) historical consumptive use on Fossil Creek component of GIC share is 59.0%
- 3) monthly GIC return flows calculated using Appendix A-2 of 96-CW-658
- 4) subsurface return flows based upon 5-Year average delivery (2017-2021)

18.05	Fossil Crk	0.46
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SINGLE YEAR				from Appendix A-2 of Poudre Prairie Decree			
				RETURN FLOW OBLIGATION Factors			
	volumetric on direct flow	1712.00		DIRECT FLOW WATER		FOSSIL CREEK WATER	
	for 67.75 shares						
	diversion per share	25.27		surface	sub	surface	sub
	c.u. per share	13.19		JAN	0.237	0.018	0.201
				FEB	0.237	0.017	0.201
				MAR	0.237	0.016	0.201
				APR	0.237	0.015	0.201
				MAY	0.237	0.018	0.201
				JUN	0.237	0.021	0.201
				JUL	0.237	0.023	0.201
				AUG	0.237	0.024	0.201
				SEP	0.237	0.024	0.201
				OCT	0.237	0.023	0.201
				NOV	0.237	0.021	0.201
				DEC	0.237	0.02	0.201

**ROLLING 10-YEAR AVG**  
volumetric on direct flow 12631 per year 1263.1  
for 67.75 shares  
diversion per share 186.4 18.6  
c.u. per share 97.3 9.7



# 2022 Dewatering Impacts: Loloff Pit Substitute Water Supply Plan

Table 2

Wilsons and Weiss Consulting LLC



Submitted by:

Paul Weiss, P.E.

5255 Ronald Reagan Boulevard, Suite 220

Johnstown, CO 80534

	Monthly Dewatering Depletions (ac-ft)	% of Month under Call	Depletions Requiring Augmenting (ac-ft)	Monthly Loloff Pit Release (ac-ft)	Surface Returns to River (ac-ft)	Lagged Returns to River (ac-ft)	GIC No.3 Credits (ac-ft)	Supplemental Credits (ac-ft)	Total Replacements (ac-ft)	Water Balance (ac-ft)
Month	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
Apr-22	23.73	100%	23.73	40.00	20.00	3.47	0.51	0.00	23.98	0.25
May-22	23.06	100%	23.06	35.00	17.50	6.00	1.23	0.00	24.73	1.67
Jun-22	22.40	100%	22.40	30.00	15.00	7.53	1.94	0.00	24.47	2.07
Jul-22	21.76	100%	21.76	30.00	15.00	8.20	2.67	0.00	25.87	4.11
Aug-22	21.15	100%	21.15	25.00	12.50	8.57	2.27	0.00	23.34	2.19
Sep-22	20.54	100%	20.54	22.00	11.00	8.52	2.12	0.00	21.64	1.11
Oct-22	19.96	100%	19.96	23.00	11.50	8.33	0.46	0.00	20.29	0.33
Nov-22	19.38	100%	19.38	23.00	11.50	8.32	-0.35	0.00	19.47	0.09
Dec-22	18.84	100%	18.84	22.00	11.00	8.34	-0.34	0.00	19.00	0.17
Jan-23	18.31	100%	18.31	21.00	10.50	8.31	-0.30	0.00	18.51	0.20
Feb-23	17.78	100%	17.78	20.00	10.00	8.22	-0.29	0.00	17.93	0.16
Mar-23	17.28	100%	17.28	20.00	10.00	8.12	-0.27	0.00	17.85	0.57
TOTAL	244.18		244.18	311.00	155.50	91.93	9.65	0.00	257.08	12.90

Notes:

(A) Lagged depletions from historical dewatering operations

(B) % of month under call

(C) colB x colC

(D) Measured pumping from Loloff Pit

(E) 50% of colD

(F) 50% of colD lagged using AWAS

(G) GIC no. 3 Credits

(H) Supplemental water supply if needed

(I) E + F + G + H

(J) Water Balance I - C

## Exhibit 2. Loloff / Ogilvy Term Sheet

March 23, 2020  
Kelly Hodge  
Mill Iron Mining LLC

RE: Loloff Pit Term Sheet

The following sets forth the basic terms of understanding ("Term Sheet") between Ogilvy Irrigating and Land Company (herein after "Ogilvy") and Mill Iron Mining LLC (herein after "MIM") concerning the immediate use and eventual purchase, by Ogilvy, of the Loloff Pit ("Pit"). The Term Sheet is intended to set forth the parties' understanding and will be used as the basis for the development of a legally binding agreement between the parties ("Agreement"). ~~however,~~ this Term Sheet does not bind either party to enter into the Agreement, but shall govern the delivery and use free river water to Pit upon execution while the Agreement is being negotiated and executed.

### **Purposes:**

- Allow MIM to start pumping free river water to the Pit as soon as possible while free river exists to help MIM with its immediate augmentation needs.
- Allow Ogilvy to store free river in the Pit for water sales and augmentation needs.
- Set forth general terms by which Ogilvy will purchase the Pit in 2022.

### **Free River Storage Prior to Agreement:**

- The parties will coordinate and cooperate to pump free river water, when it is available, from the Ogilvy Ditch.
- To the extent necessary, Ogilvy grants a carrying right in the Ogilvy Ditch for this purpose. The carrying right is for free river water to be delivered by Ogilvy in the Ditch at times when it will not be injurious to the Company or its shareholders. However, to the extent possible the parties will maximize the delivery and use of free river water for storage in the Pit.
- The parties will coordinate on the location and set-up for the pump that will allow water to be pumped from the Ditch to the Pit, but such pump shall be a minimum 8" pump.
- This understanding is intended to govern free water deliveries prior to Ogilvy acquiring the Pit.



- MIM shall be entitled to use the first 200 acre feet of free river water stored in the Pit annually for augmentation of the Pit. Any additional amount, up to 500 acre feet, from any source (other than free river), may be stored each year and available for Ogilvy.
- MIM may pump possible excess water from the Dust & Dirt property into the Loloff Pit and take back to Dust & Dirt when needed. This shall not be in deemed a conflict or detrimental to this Agreement.
- MIM shall pay the cost and expense of pumping the first 200 acre feet. Ogilvy shall pay the costs of any additional amount pumped. The parties shall share the cost of pump set up and break down in relation to the amount of water pumped by each, if any. The parties shall share metering data, but shall otherwise be responsible for their own accounting. MIM shall be responsible for accounting for the Pit. The parties shall share evaporation/seepage in proportion to the amount of water each has stored in the Pit.
- The parties shall individually bear the cost and responsibility for delivering their water from the Pit to the ditch or the river. MIM shall be entitled to discharge to the river via the Ogilvy Ditch, provided that such discharge doesn't displace Ogilvy water from the Ditch. Ogilvy shall have the right to access and use the Pit and MIM property to the extent necessary to remove its water and deliver it to the Ditch. The parties shall work to cooperate to the extent possible to make joint deliveries to and releases from the Pit. Any additional metering or measuring devices needed by MIM as the operation of its plan for augmentation (e.g. for measuring returns to the river) shall be borne by MIM.

These terms of use shall govern until the Agreement is executed or until the parties determine no such Agreement will be executed. In the later event, Ogilvy shall have until the following storage season (commencing November 1) to remove any water it has stored in the Pit.

The parties hereto agree as of the date first written above.

**Ogilvy Irrigating and Land Company**

By: Donald G. Wacker  
Donald G. Wacker, President

**Mill Iron Mining, LLC**

By: Kelly Hodge  
Kelly Hodge, Manager

Dedication Of Water Rights to the  
Loloff Pit Permanent Water Supply Plan

I Don Loloff President of Loloff Construction Inc. which owns 1 share of the Greeley Irrigation Company evidenced by Certificate No 3391 one share of the New Cache La Poudre Irrigation Company evidenced by Certificate No 4635, hereby affirm that the two shares will be dedicated solely to the Loloff Pit Permanent Water Supply Plan for as long as there are depletion's at this gravel pit or until such time as another replacement source is obtained. The 2 shares will not be sold or traded to others during the term of this dedication.

Signed

*Don Loloff*

Date

May 30, 2014

State of Colorado

County of Weld

The foregoing instrument was acknowledged before me this 30 day of may 2014  
By Don Loloff and \_\_\_\_\_

My commission expires: 6/10/2017

Witness my hand and official seal:

*Elin Darter*

Notary Public



## DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215

Denver, Colorado 80203

Phone: (303) 866-3567

FAX: (303) 832-8106



Bill Ritter, Jr.  
Governor

James B. Martin  
Executive Director

Loretta E. Piñeda  
Director

April 30, 2010

Loloff Construction, Inc.  
P.O. Box 518  
206 Hill St.  
Kersey, CO 806440000

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: M1985112 Loloff Mine



## **ADMINISTRATION PROTOCOL Augmentation Plan Accounting Division One - South Platte River Revised October, 2021**

This protocol establishes the accounting and reporting process required to enable the division engineer's office to determine if depletions from all out-of-priority diversions are being replaced so as to prevent injury to vested water rights. The accounting must follow "cradle to grave" accounting practices that track exactly how the data are manipulated from raw data input (e.g., meter readings) 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 shown as a negative value and an accretion or other replacement source is shown as a positive value. The difference of depletions and replacements will then result in either a negative or positive impact on the stream.

1. Accounting must be submitted electronically to the division engineer and water commissioner through the online data submittal portal at the following link on our website: <https://dwr.state.co.us/Tools/reporting>. If not already registered, you will need to create a new account through that link.

Typically, submittals are due within 30 days of the end of the month for which the accounting is being submitted, unless decreed otherwise. Additional data or more frequent submittals may be required by the water commissioner if required for administration. Accounting submittals not submitted through the online data submittal portal or questions regarding accounting submittals may be emailed to [dnr\\_Div1Accounting@state.co.us](mailto:dnr_Div1Accounting@state.co.us).

The following naming convention must be used for all files submitted via email:  
"PlanWDID\_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"

2. The accounting must include a Contact & Plan Information tab, that includes the 7-digit WDID for the plan for augmentation/SWSP, the 4-digit SWSP ID (if applicable), and contact information (i.e., name, phone number, email address) for the augmentation plan accounting including:
  - a. the owner(s) of each augmented structure
  - b. the person responsible for submitting the accounting
  - c. the plan administrator and/or the plan attorney.

3. All of the raw input data (i.e., meter readings, water pumped from wells, etc.) must be provided and organized in a single location, such as an “Input” worksheet, etc. The accounting must include the following input data listed below, as well as relevant WDIDs and permit numbers.
  - a. Diversion data from flumes or weirs and unit of measurement.
  - b. The required input data for each well is:
    - i. the monthly flow meter reading as shown on the flow meter; date of the meter reading; flow meter multiplier (i.e., 0.001, 10, 1); units of volume (i.e., gallons or acre-feet); the meter serial number; correction factor, if any.
    - ii. The total volume pumped, showing the calculations using the information in Item “i” above.
    - iii. factors from the decree or SWSP that provide for the well consumptive use and depletions (i.e., presumptive depletion factor (PDF), water balance methodology, lagging parameters, etc.).
    - iv. Any well permitted or decreed as an alternate point of diversion (APOD) to a surface water right must report pumping on a daily basis if any of the diversions during the month is claimed as being “in priority”. (See Administration Protocol - APOD Wells for more details.)
  - c. If applicable, data for each recharge structure must be included and comply with the appropriate decree(s) or SWSP Approval requirements and any applicable current statewide Administration Protocol. At a minimum the following should be reported in the accounting:
    - i. 7-digit WDID and name of recharge structure
    - ii. daily volume in AF diverted into the site;
    - iii. monthly volume in AF released from the site;
    - iv. monthly gross evaporative loss in AF;
    - v. volume of water in AF remaining at the end of the month.
  - d. The accounting must identify each source of replacement water actually delivered to the stream and how replacement water at that location offset the depletions. To demonstrate the water was actually delivered to the required location will require the following information:
    - i. the name (water court case, lease, etc.) and WDID of the originating source of the replacement water, date released and volume of water released;
    - ii. transit losses from point of release to point of depletion 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).

For each source of replacement water that has been “changed” for use as a source of augmentation, such as changed reservoir shares, changed rights from a ditch, or credits from dry-up, etc., the following input information must be reported:

- i. the decreed volume of return flow obligation;
    - ii. if not specified in the decree or SWSP, the location and timing of the owed return flow on the stream(s).
4. If required by the decree or SWSP, the accounting must include a monthly projection of the plan’s operation at least through March 31 of the next calendar year, or as specified in the decree or SWSP.
5. The accounting submittal must include output associated with modeling showing monthly delayed depletions (from well pumping or return flow obligations) and/or accretions (from recharge).

6. All accounting must provide a net impact summary that shows a daily balance of the out-of-priority depletions, accretions from each recharge site, volume of replacement water actually delivered and the resultant net impact. If necessary, a net impact must be shown for each applicable river and 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.

The accounting should indicate that the replacement water is equal to the depletion(s) such that the daily net impact (using the simulated daily numbers from the modeling) is not negative, unless the water commissioner approves less frequent aggregation of replacements without injury to downstream water rights.

In the instance that aggregation is allowed, replacement is needed only for days with out-of-priority depletions. For example, 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. Likewise, any simulated daily accretions will only count toward replacing the depletion on the days the well is out-of-priority. The accretions that accrue to the river when the well is in priority cannot be applied to different days with out-of-priority depletions.

7. The basis for determining that the depletions are out-of-priority should be data from the Division of Water Resources' Administrative Calls & Analysis Tool (<https://dwr.state.co.us/Tools/AdministrativeCalls/Active>) and should be included in the accounting along with the relative steps in the determination of a structure being in or out of priority. 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. The accounting shall include all the required information for the month of the submittal in addition to the information submitted from previous months such that the information and monthly submittals are a cumulative report each month throughout the 12 month reporting period.
9. If a well is covered in multiple SWSPs 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 and total pumping amount covered by each plan to assure all out-of-priority depletions are replaced.
10. The following additional accounting requirements apply when sources of replacement water are used in more than one plan.
  - a. The entity providing replacement water to the stream is responsible for accounting for the total amount of replacement water and how much of the total went to each plan.
  - b. The amount of replacement water claimed for a particular augmentation plan must match the amount in the accounting from the entity providing the replacement water to the stream.
  - c. The amount of replacement water claimed for use by one or more water users shall not exceed the amount of replacement water physically and legally 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).