COLORADO
Division of Water Resources
Department of Natural Resources

Cleave Simpson, General Manager
Rio Grande Water Conservation District
8805 Independence Way
Alamosa, CO 81101

RE: 2022 ANNUAL REPLACEMENT PLAN APPROVAL: SPECIAL IMPROVEMENT SUBDISTRICT NO. 2 OF THE RIO GRANDE WATER CONSERVATION DISTRICT

Dear Mr. Simpson:

Thank you for your April 15, 2022 submission of the Special Improvement District No. 2's proposed Annual Replacement Plan (ARP) for the 2022 Plan Year (**May 1, 2022 through April 30, 2023**).

My staff and I have reviewed the proposed ARP and its appendices. A number of the referenced documents will not be attached to this letter but are available on the DWR website at:

https://dwr.colorado.gov/division-offices/division-3-office

All information and data related to this approved ARP are available on our website.

Enclosed, please find my approval of the 2022 ARP.

Kevin Rein, P.E.
State Engineer
Director of Division of Water Resources

cc: Division 3

Review, Findings, and Approval of Subdistrict No. 2*'s* 2022 Annual Replacement Plan

Background

Special Improvement District No. 2 ("Subdistrict"), a political subdistrict of the Rio Grande Water Conservation District ("RGWCD"), formed through Rio Grande County District Court in Case 2015CV30050, timely submitted its proposed Annual Replacement Plan ("ARP") pursuant to its Plan of Water Management ("PWM") approved by the State Engineer and noticed through Division No. 3 Water Court in Case No. 2018CW3010.

The 2022 Plan Year ARP and its appendices were available for download through a link on the RGWCD website. The ARP, its appendices, and resolutions were provided to the State and Division Engineers on April 15, 2022. Copies of the ARP were made available for viewing at the State and Division Engineers' offices. The ARP, its appendices, resolutions, the Subdistrict's Response Functions, and this letter are posted on DWR's website. My staff and I have conducted this review of the ARP in accordance with the operational timelines specified in the Rules Governing the Withdrawal of Groundwater in Water Division No. 3 (the Rio Grande Basin) and Establishing Criteria for the Beginning and End of the Irrigation Season in Water Division No. 3 for all Irrigation Water Rights ("Rules"), Case 2015CW3024. The Rules were approved as promulgated by the March 15, 2019 ruling of the Division No. 3 Water Court.

DWR Review

As set forth in the Rules, I must determine whether the ARP presents "sufficient evidence and engineering analysis to predict where and when Stream Depletions will occur and how the Subdistrict will replace or Remedy Injurious Stream Depletions to avoid injury to senior surface water rights." (Rules 11.3). Also, "the ARP will include: a list of Subdistrict Wells that will be covered by the ARP; a projection of the groundwater withdrawals from Subdistrict Wells during the current Water Administration Year; a calculation of the projected stream depletions resulting from ground water withdrawals from Subdistrict Wells; a forecast of the flows for the Rio Grande; detailed information regarding the methods that will be utilized to replace or remedy injurious stream depletions during the ARP Year, including any contractual agreements used for replacement or remedy of injurious stream depletions that will be in place; any information regarding the fallowing of Subdistrict Lands; and, documentation that sufficient funds are or will be available to carry out the operation of the ARP." (Subdistrict PWM, Section 6.1.2). Finally, I must review the ARP pursuant to the statutory mandates, constitutional requirements, rules and regulations adopted in Division No. 3, and any letters, comments, or other objections submitted by water users regarding the adequacy of the ARP.

With the foregoing in mind, I turn to a review of the ARP. It would be unwieldy to include in my review every detail of the thorough ARP, so for the purpose of this letter, I incorporate it and its supplements by reference. No letters, comments, or other objections to the 2022 ARP were received.

11.1.1 Database of All Wells to be Covered by the ARP

Structure Identification Number (WDID) (Section 1 of 11.1.1 of the ARP)

A comprehensive list of wells included in the ARP is necessary in order to allow DWR to verify which wells are authorized to operate in accordance with the ARP. To that end, the Subdistrict submitted the most current tabulation of the structure identification number (WDID) of each well included in the Subdistrict (see Appendix A of the ARP). The Subdistrict also supplied a spreadsheet to DWR of the list of Subdistrict Wells as a supplement to the 2022 ARP. Appendix A lists 265 wells which includes four contract wells for 2022.

The contract wells accepted by the Subdistrict in 2022 are listed in Appendix B. Contract wells were reviewed for the terms of the contracts, associated permits and decrees for each well, and historical meter records. Any wells that are not used within the permitted and/or decreed beneficial uses authorized for those structures cannot be covered by the 2022 ARP and the owners will be notified by separate correspondence.

Wells that have submitted an SWSP and/or started the process of changing an existing permitted/decreed use to a Non-Exempt use described in the participation contract can be conditionally accepted. These wells cannot be operated until the SWSP and/or decree is finalized and approved. Should an SWSP become invalid during the ARP Year or the change of use in a court case be denied, the well can no longer be covered by the ARP and the owners will be notified.

All wells accepted as contract wells for this ARP approval have permitted and/or decreed limits, and they will only be accepted for groundwater withdrawals up to those respective limits. If historical records indicate a pattern of exceedance of these limits in the past, owners of these wells may be notified by separate correspondence that their wells are being conditionally accepted, and that exceedance of the legal limits will not be covered under this ARP. The Subdistrict will be copied on all separate correspondence sent for these purposes.

Other Well Identification Information (Section 2 of 11.1.1 of the ARP)

The database of wells the Subdistrict has accepted as part of this ARP was satisfied under 11.1.1.1

Subdistrict Wells with Plans for Augmentation (Section 3 of 11.1.1 of the ARP)

The ARP Well List includes some wells that are either fully or partially augmented by an approved plan for augmentation which is administered separately of the Subdistrict's PWM.

These plans for augmentation associate surface rights with these Subdistrict Wells and other non-Subdistrict wells to remedy some portion or all of each well's injurious stream depletions. These wells are included in the Subdistrict's ARP Well List, and if any portion of their legally decreed groundwater withdrawals is not remedied by an individual plan for augmentation, it is subject to Subdistrict fees and the Subdistrict will remedy injurious stream depletions and post-plan injurious stream depletions attributable to the non-augmented portion of a well's total groundwater withdrawals as part of this ARP. "The Subdistrict and this Plan of Water Management or ARP cannot be used as a source of water for new or expanded plans for augmentation or other replacement plans." (PWM at 2.4.6)

San Luis Valley Water Conservancy District Augmentation Certificates

The ARP lists two wells (WDID 2010320, Augmentation Certificate 784 & WDID 2009593 Augmentation Certificate 690) as Subdistrict Wells that are partially or fully augmented for the existing uses through SLVWCD. Both wells have water rights for irrigation and the augmentation through SLVWCD covers other uses including out-of-season irrigation, commercial, and in-house.

I have reviewed Appendix A, Appendix B, and Appendix C of the ARP and consulted with staff and find it to be an accurate inventory of Subdistrict Wells that meets the requirements of Rule 11.1.1.

Total Combined Projected Annual Diversion for All Subdistrict Wells (Section 4 of 11.1.1 of the ARP)

For Subdistrict ARP Wells listed in this ARP, DWR total metered groundwater withdrawals as of April 1, 2022, for the 2021 Water Administration Year were 13,606 acre-feet. In 2021, the stream flow forecast was similar to the 2021 forecast, but the actual forecast fell short of the projection. Comparing the actual pumping of 2021, the Subdistrict ARP Well groundwater withdrawals in 2022 are projected to be slightly lower, at **13,520 acre-feet**.

Subdistrict Well Metered Pumping (acre-feet)
Entered in Table 1.1 of the ARP

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
14,952	15,742	14,705	13,296	12,522	11,176	11,213	15,866	10,787	13,518	13,606

The Subdistrict reports that the majority of metered groundwater withdrawals in the Plan Year will be used for irrigation through center pivot sprinklers, 60 percent. Approximately 10 percent of groundwater withdrawals will be applied to flood irrigation and 30 percent of groundwater withdrawals will be applied to other uses. For irrigation use, DWR review indicates sprinkler @ 85%, flood @ 5%, and other @10%.

Expected Methods of Irrigation, the Combined Projected Number of Acres Irrigated and the Total Projected Acreage by Each Irrigation Method (Section 5 of 11.1.1 of the ARP)

The Subdistrict ARP Wells are projected to irrigate approximately 9,200 acres during the Plan Year including 8,200 acres irrigated by center pivot sprinklers and 1,000 acres irrigated by flood application. The Subdistrict made this projection based on a review of the breakdown of acres within the Rio Grande Alluvial (RGA) and the Upper Rio Grande (URG) Response Areas under each irrigation type prepared by DWR for inclusion in the RGDSS Groundwater Model.

Non-Irrigation Subdistrict Wells – Calculation of All Projected Withdrawals and Projected Net Groundwater Consumptive Use (Section 6 of 11.1.1 of the ARP)

Included in the ARP Well List are a number of wells with beneficial uses other than irrigation. The Subdistrict utilized information provided by DWR to calculate the consumptive use rates used in the RGDSS Model to calculate stream impacts and returns. Beneficial uses include potato washing, commercial, domestic (subdivision), lawn irrigation and aquaculture. A spreadsheet was prepared by the Subdistrict to calculate the composite Consumptive Use Ratio that is a necessary input in the Response Functions. A spreadsheet of the calculation prepared for use in the 2022 ARP was submitted as supplement to this ARP.

Other Data Necessary to Support the Projected Stream Depletions (Section 7 of 11.1.1 of the ARP)

No other data was provided.

Other Information Required by the State and Division Engineers and Reasonably Necessary to Evaluate the Proposed ARP (Section 8 of 11.1.1 of the ARP)

The supplemental information needed to evaluate the 2022 ARP and provided to the State Engineer included:

1. Resolution from RGWCD approving the Subdistrict 2022 ARP.
2. Resolution from RGWCD to act as a financial guarantor for the Subdistrict.
3. The list of Subdistrict Wells included in the 2022 ARP in spreadsheet format matching the list presented in Appendix A
4. Resolution from RGWCD to allow the Subdistrict to allocate Closed Basin Project water in the 2022 ARP.
5. Spreadsheet showing the Subdistrict's breakdown of "Other" wells used to calculate the composite Consumptive Use Ratio in the Response Function.
6. Spreadsheet of the Response Functions used in this ARP.
7. A Forbearance Yield Analysis. This is a description of the Subdistrict's approach to estimate the probable yield of replacement sources for the various forbearance contracts with ditches under forbearance agreements. A copy of the spreadsheet used in the analysis was provided as supplement to the ARP.
8. Operational Requests to the Division Engineer for the 2022 ARP
    - The Subdistrict requests to aggregate depletions between Stream Reaches as part of the anticipated operation in 2022.

- The Subdistrict requests to aggregate depletions with other Subdistricts during the 2022 ARP year.
- The Subdistrict requests the Division Engineer allow a portion of the Closed Basin Project (CBP) production that is generated during the irrigation season be used to offset the Subdistrict's non-irrigation season depletions, though not to exceed the allocation approved by the CBP Operating Committee. This becomes necessary when the depletions owed for all RGWCD Subdistricts combined in any one or more months during the non-irrigation season are greater than the production of the Closed Basin Project production in those months.

11.1.2 Projected Stream Depletions from the Wells Covered by the ARP based on the Applicable Response Function or Approved Alternative Method

Section 2 of the ARP presents the data utilized to project stream depletions to the Rio Grande as a result of the Plan Year's groundwater withdrawals from Subdistrict ARP Wells. The Response Function's outputs identify total projected stream depletions for the Plan Year, a breakdown of the monthly stream depletions for the Plan Year for each of the three reaches of the Rio Grande and a projection of the Post-Plan Stream Depletions calculated as a result of the Plan Year groundwater withdrawals from Subdistrict ARP Wells. The Subdistrict used the current 6P98 Response Functions to calculate projected stream depletions for this ARP.

The April through September streamflow forecasts included in the ARP are made by the Division Engineer and are based upon guidance given by forecasts from the United States Department of Agriculture's Natural Resources Conservation Service ("NRCS"), the National Weather Service NWS), and the National Center for Atmospheric Research (NCAR) (Appendix C of the ARP). The annual streamflow forecasts included in the ARP for the Rio Grande and Conejos River basins are those included in the March 31, 2022 Division Engineer's Rio Grande Compact Ten Day Report (Appendix C of the ARP).

The NRCS streamflow statistics are calculated over a 30-year period and updated each decade, in agreement with World Meteorological Organization (WMO) standards. This 30-year reference period was chosen to characterize the current hydro climatology at each station. The most recent medians and averages have been updated to include data for the water years 1991-2020. The current year streamflow projection is compared to the 30-year reference period to determine the percent of "normal" streamflow. The NRCS forecasts were reported as percent of the median in this report.

2022 Stream Flow Forecast – Rio Grande (Section 1 of 11.1.2 of the ARP)

The Subdistrict used the Division Engineer's streamflow forecast and the data collected from the Division Engineer's Rio Grande Compact Ten Day Report. This forecast was based upon

the NRCS forecast (projected 50% exceedance streamflow at the Conejos River near Mogote, Los Pinos River near Ortiz, and San Antonio River at Ortiz gaging stations for the period April-September), the NWS forecast, and the NCAR forecast. There was no difference between the NRCS and the Division Engineer's forecasts for April through September as shown in the following table. The April - September flow for the Rio Grande is **375,000 acre-feet** for use in the Response Functions for 2022.

Rio Grande Stream Flow Forecast

Rio Grande Stream Flow Analysis	Apr-Sep Forecast (acre-feet)	% of avg	Estimated Additional (acre-feet)	Jan - Dec Forecast (acre-feet)
	(1)	(2)	(3)	
NRCS, "April 1st Forecast"	375,000	78%		
Division Engineer, Ten Day, 3/31/2022	375,000	78%	75,000	450,000

(1) projected 50% exceedance streamflow at the gaging station
(2) NRCS 30-year average of 480,000 acre-ft used for this calculation (recently adjusted from 515,000 acre-ft)
(3) January through March and October through December

Projected Plan Year Stream Depletions for RGA ARP Wells (Section 2.1 of 11.1.2 of the ARP)

Subdistrict staff predicted stream depletions to the Rio Grande utilizing the Response Functions developed for the Rio Grande Alluvium (RGA) Response Area under the RGDSS Groundwater Model Phase 6P98. The Upper Rio Grande (URG) Response Function was provided to the Subdistrict in 2020 to calculate projected stream depletions for the wells in that area.

The Response Function spreadsheet was built to be used for the whole Response Area. Two instruction sheets were prepared by DWR for additional inputs to the Response Functions when there is a need to use it for individual or group of wells. The instruction sheet, "How to Use the Application Workbook for a Subset (individual/group) of Wells" (9/23/2015), describes how to adjust the spreadsheet inputs to stream reaches that have been modeled with point source returns to streams. The instruction sheet, "How to Adjust the Application Workbook for use with a Subset of Wells" (10/15/2015), describes how to use the "Ratio Method" for Response Areas where it is necessary to apply this method. The Subdistrict included these instruction sheets with their ARP.

The first step in using the current 6P98 Response Function is to input data for the whole Response Area, i.e., historical groundwater withdrawals for sprinkler irrigation, flood irrigation, "other" pumping with corresponding "other" consumptive use ratios for the years 2011 through 2021 and predicted values for 2022.

The Subdistrict has elected to use the Response Function spreadsheet for the subset of wells represented by the Subdistrict ARP Wells. The Rio Grande Alluvium Response Area requires adjustments for point source return flows, as shown below.

- Rio Grande Alluvium Response Area - Reach 1 (Rio Grande from Del Norte to Excelsior Ditch) from the Town of Del Norte and the City of Monte Vista.

Using the whole Response Area results, adjustments are made on appropriate pages of the Response Function spreadsheet. The Subdistrict removed all return flows attributable to the Town of Del Norte and the City of Monte Vista's wells from Reach 1(Rio Grande from Del Norte to Excelsior Ditch) from the appropriate sheets within the RGA Response Function spreadsheet.

Once these preliminary steps are completed, the next step in calculating stream depletions using the Response Functions is updating Table 2.1 to derive the annual net groundwater consumptive use. The consumptive use ratios for sprinkler and flood irrigation used in the Model are standard factors of 83% and 60%, respectively. The consumptive use ratio for "Other" wells is specific to the uses of those wells and can vary widely. The "Other Consumptive Use Ratio" for the whole Response Area is a composite derived from the individual well withdrawals and consumptive uses.

The Subdistrict provided a spreadsheet of "Other" wells included in the Subdistrict ARP Well list as a supplement to the ARP. The spreadsheet shows the individual well groundwater withdrawals and consumptive use factors to explain how the composite ratios were determined for the subset wells represented in Table 2.1.1 and Table 2.2.1 of the ARP.

Historical ARP Well groundwater withdrawal values were entered in Table 2.1.1 for years 2011 through 2021. No adjustments were made by the Subdistrict for groundwater withdrawals of the subset wells for any years prior to 2011. Projected ARP Well groundwater withdrawal values were used for 2022. The Subdistrict has no Recharge that Offsets Groundwater for calculation of the Net Groundwater Consumptive Use. The projected Net Groundwater Consumptive Use for the Plan Year is 9,667 acre-feet.

Following determination of the Net Groundwater Consumptive Use, the data was incorporated in the ARP Table 2.1.2 to calculate stream depletions for the Plan Year and projected into the future.

The Response Functions calculated total stream depletions to the Rio Grande during the Plan Year, due to both past ARP Well groundwater withdrawals and the projected Plan Year ARP Well groundwater withdrawals, are 1,930.9 acre-feet. The locations of the stream depletions and monthly quantities are also tabulated in ARP Table 2.1.3.

Post-Plan Stream Depletions are estimated to accrue to impacted streams for approximately 7 years. Based on predictions from the Response Functions, the Post-Plan depletions in Table 2.1.4 are a total of 3,008 acre-feet.

Projected Plan Year Stream Depletions for URG ARP Wells (Section 2.2 of 11.1.2 of the ARP)

The Subdistrict prepared a separate analysis of the stream depletions for Subdistrict Wells that lie within the URG Response Area. Historical groundwater withdrawal values for URG wells included in the ARP Well List were entered in Table 2.2.1 for years 2018 through 2021. Projected groundwater withdrawal values were used for 2022. The Subdistrict has no Recharge that Offsets Groundwater for calculation of the Net Groundwater Consumptive Use.

The projected URG Net Groundwater Consumptive Use for the Plan Year is 459 acre-feet.

The URG Response Function calculation of total stream depletions to the Rio Grande during the Plan Year due to both past ARP Well groundwater withdrawals and the projected Plan Year ARP Well groundwater withdrawals is 283.2 acre-feet. Depletions are owed to the same stream as the RGA Response Function, but the depletions are occurring only to Stream Reach 1.

Post-Plan Stream Depletions are estimated to accrue to impacted streams for approximately 2 years. Based on predictions from the Response Functions, the Post-Plan depletions are a total of 111.9 acre-feet.

Combined Total Projected Plan Year Stream Depletions for Subdistrict ARP Wells (Section 2.3 of 11.1.2 of the ARP)

Table 2.3.3 of the ARP is the combined output from the RGA and URG Response Functions. Total stream depletions to the Rio Grande during the Plan Year due to both past ARP Well groundwater withdrawals and the projected Plan Year ARP Well groundwater withdrawals are 2,214.1 acre-feet. The volume of water required to replace the combined Post-Plan Stream Depletions is 3,119.9 acre-feet.

11.1.3 Description of How Injurious Stream Depletions from Groundwater Withdrawals by Wells Included in the ARP will be Replaced or Remedied

Amounts and Sources of Replacement Water for 2022 Plan Year (Section 1 of 11.1.3 of the ARP)

The Subdistrict has assembled a portfolio of water supplies for the replacement of Injurious Stream Depletions and remedies other than water. The ARP identifies the water rights, their availability and their amounts in Table 3.1 of the ARP.

The adequacy of replacement sources for the ARP Year are dependent upon contracted amounts the Subdistrict has acquired as well as the availability of the source to pay depletions in place and time. For purposes of review of adequacy of replacement sources, there are three categories defined below, with examples described for each.

In Storage: Reservoir water in storage under the control of the Subdistrict. This water is available for release at the direction of the Subdistrict.

In Season: Ditch water that will become available to the Subdistrict when in priority during the 2022 irrigation season in the amount of depletion owed to streams daily by the Subdistrict. For some sources, water not used to pay daily depletions may be stored for Subdistrict use later.

On Call: Remedies, such as forbearance, that are available in the amount of depletion owed to streams daily by the Subdistrict, limited to when the forbearance ditch is the calling water right. I note that forbearance depends on climate and actual days when a ditch is the calling water right and the exact yield per year is indeterminate. It is also noted that the amount of forbearance water usable by the Subdistrict is limited by their depletions owed daily to streams. In addition, several Subdistricts are seeking forbearance agreements with the same ditches. DWR considers these potential competing agreements when evaluating forbearance as a replacement source.

This replacement water or remedy will be available to replace Injurious Stream Depletions as directed by the Division Engineer. A summary of the portfolio items is shown in the Replacement Sources tables on the following pages. I will approve up to the full amount itemized in the Replacement Sources tables and stated in the following sections for use in the 2022 ARP.

Subdistrict No. 2 Replacement Sources
Rio Grande (acre-feet)

	Water Right Name	**Submitted in ARP**	**Approved in SWSP's**	**Remaining 5/1/2022 & Approved for 2022 ARP**
SWSP	**In Storage**			
6182	Williams Cr Squaw PassTM- Parker **Renewal request submitted 4/11/2022**	282.5	282.5	282.5
13CW3002	SMRC – Monte Vista Canal Leased 2019 (150 shares @ 1.942 af)	36.7 + 110.3	256.3	147.0
6182	SLVWCD 84CW16 & 94CW62	0.83		0.83
6182	SLVWCD 03CW41	17.18		17.18
6182	SLVWCD 05CW13/07CW63	3.3		3.3
W3754 6258	Town of Del Norte- excess augmentation credits	24.4		24.4
6094	City of Creede 94CW31 & 07CW60- excess augmentation credits	122.6		122.6
new	Williams Cr Squaw PassTM- Parker **Request submitted 4/11/2022**	153.2	pending	
new	Pine River Weminuche – Jan-Rich Grande Request pending	79.7 + 456.8		
	Total In Storage	**1287.51**		**597.81**
	In Season	**Limit**	**Expected Yield**	**Approved for 2022ARP**
SWSP	**In Season**			

9350	Rio Grande Ditch No 1 **Lease/Fallow**		781.5	**781.5**
	Total In Season		781.5	781.5
	On Call	**Limit**	**Expected Yield**	**DWR Expected Yield**
WDID	**Forbearance**			
2000566	Centennial	No limit		
2000623	Commonwealth-Empire	500		
2000627	Excelsior Ditch	No limit		
2000753	Monte Vista Canal	300		
2000812	Rio Grande Canal	400		
2000662	Rio Grande Canal- Hermanthal Ditch			
2001094	Rio Grande Canal- Scotch Ditch			
2001007	Rio Grande Canal- Bedel D			
2000624	Rio Grande Canal- Enterprise D			
2001094	Scotch Ditch (carried in Rio Grande Canal)	No limit		
2000624	Enterprise D (carried in Rio Grande Canal)	No limit		
2000816	Rio Grande Lariat Ditch	500		
2000811	Rio Grande Piedra Valley Ditch	No limit		
2000817	Rio Grande San Luis Ditch	No limit		
2000631	Farmers Union Canal	No limit		
	Total On Call- Irrigation Season		700	Up to 680*
	CBP Allocation (as of April 2022)	3,800	1,002	
	Total On Call- Non-Irrigation Season		**1,002**	**Up to 1,002**

Note: * DWR Analysis

After Acquired Sources of Remedy (Section 2 of 11.1.3 of the ARP)

DWR recognizes the Subdistrict will continue to work to acquire additional sources of remedy and may, with approval from the Division Engineer, use those sources to remedy injury under this ARP.

Operation of the 2022 Annual Replacement Plan (Section 3 of 11.1.3 of the ARP)

The Subdistrict's replacement water will be released, including transit losses, from Rio Grande, Santa Maria or Continental Reservoirs, located in the Upper Rio Grande, at the direction of the Division 3 Division Engineer, to offset injurious stream depletions on the Rio Grande during the Plan Year. All Plan Year injurious stream depletions will be replaced in the time, location and amount that they occur, beginning May 1, 2022**.** These releases of water from storage will be performed under the provisions contained in section 37-87- 103, C.R.S.

The ARP notes that Sections 37-80-120, 37-83-104, and 37-83-106, C.R.S., allow exchanges to occur between reservoirs without a decree and if recognized by the Division Engineer. Appropriate accounting between the Division Engineer's Office and Subdistrict No. 2 will occur on a regular and routine basis if these exchanges do occur. Any reservoir exchanges done in the Plan Year will be documented and reported in the 2022 Annual Report. The

Division Engineer's Office will be notified in advance of any reservoir exchanges, and the exchanges must be documented and approved prior to them occurring.

The ARP provides documentation that the Subdistrict has implemented Forbearance Agreements with several major canals located on the Rio Grande, some of them for multiple year terms. At its sole discretion, the Subdistrict will exercise these agreements.

The ARP includes a resolution by the Centennial Ditch in Appendix N. The resolution allows replacement water to be carried through the Centennial ditch for delivery when the Rio Grande is dry below the Excelsior Ditch. The water will be measured and delivered directly to the Rio Grande at the point the Centennial Ditch can return water directly to the Rio Grande. That point is above any water right that may be injured while in priority. The Centennial Ditch must be adequate to efficiently deliver water around the dry stretch of river to the satisfaction of the Division Engineer prior to this being considered a viable option. The Centennial Ditch Company's water rights are senior enough to accomplish this carriage in any foreseeable situation (Priority Nos. 32 and 173).

The Response Functions did not predict stream depletions to streams other than the Rio Grande in amounts above the minimum threshold to reliably predict injury. Therefore, no replacements to any stream other than the Rio Grande will be made.

Further, the ARP indicates that at times when there is no requirement to deliver water to the Lobatos Gage to meet the requirements of the Rio Grande Compact, no water will be delivered to the lower reach of the Rio Grande for replacement of Injurious Stream Depletions to the Rio Grande Compact from the Subdistrict. The only instances where the Subdistrict is not required to replace these Stream Depletions are when there is an excess of 150,000 acre-feet of credit for Colorado or Elephant Butte Reservoir has spilled. In these instances, water passing the Lobatos Gage will not result in Compact credit to Colorado. In all other circumstances, the replacement of Injurious Stream Depletions to the Rio Grande Compact will result in credit being given to Colorado, either for the current year or for future years. DWR agrees that the Subdistrict may replace these Injurious Stream Depletions after the irrigation season or when Compact deliveries are being made.

The Rio Grande Water Conservation District Board of Directors has passed a resolution to act as a financial guarantor for Subdistrict No. 2 to assure that all Post-Plan Injurious Stream Depletions will be replaced or otherwise remedied if Subdistrict No. 2 were to fail or otherwise be unable to replace Post-Plan Injurious Stream Depletions.

If Subdistrict No. 2 were to fail, the individual well owners in Subdistrict No. 2 would have to obtain plans for augmentation or take other measures to comply with the Groundwater Rules. Presumably, those plans would be required to replace these Post-Plan Injurious Stream Depletions into the future. In the interim, Subdistrict No. 2 or the Rio Grande Water Conservation District will remedy those Post-Plan Injurious Stream Depletions by supplying water or through agreements of the type contemplated by Colo. Rev. Stat. § 37-92-501(4)(b)(I)(B), pursuant to which injury to water rights is remedied by means other than providing water to replace stream depletions.

Anticipated Funding for Plan Year (Section 4 of 11.1.3 of the ARP)

The Subdistrict submitted sufficient financial information to document the purchase and leases of replacement water for the 2022 Plan Year.

11.1.4 Contractual Arrangements among Water Users, Water User Associations, Water Conservancy Districts, Subdistricts, and/or the Rio Grande Water Conservation District

Lease of Historical Consumptive Use Credits – Rio Grande Ditch No 1 on the Rio Grande (Section 1 of 11.1.4 of the ARP)

Several shareholders of the Rio Grande No. 1 have agreed to forego irrigation of their lands serviced by the Rio Grande No. 1 Ditch for the purpose of providing fully consumable water for use by Subdistrict No. 2 for the 2022 Irrigation Season. Credits generated under this lease from the period May 1-December 31, 2022, will be credited to Subdistrict No. 2 for use in their 2022 Plan Year or future Plan Years if not released for use in the 2022 Plan Year. SWSP 9350 seeks to change the place and purpose of this water to include augmentation and replacement of injurious depletions caused by Subdistrict No. 2 ARP Wells. This is the first year the Subdistrict will lease these historical consumptive use credits from shareholders on the Rio Grande No. 1 Ditch. The approximate annual yield is 781.5 acre-feet. This water may be left in the river as a direct offset to depletions or may be exchanged into storage and released at a later date to replace injurious depletions.

SWSP 9350 has been approved and a copy is included with this letter as an Exhibit. All conditions and accounting requirements regarding the SWSP approval must be met.

Forbearance Agreements (Section 2 of 11.1.4 of the ARP)

Pursuant to section 37-92-501(4)(b)(I)(B), C.R.S., the Subdistrict has reached agreement with several ditches whereby they accept that, subject to the specific provisions of the forbearance agreement, injury to their water rights resulting from the use of groundwater by ARP Wells may be remedied by means other than providing water to replace stream depletions, when they are the calling right on the Rio Grande.

The projected acre-feet of forbearance was based on an analysis of the number of days each ditch was the calling right in years of similar hydrologic conditions as those predicted in 2022. The years used for the analysis for the Rio Grande were 2013, 2020 and 2021. The average number of days each ditch was estimated to be the calling right was then multiplied by the average daily acre-feet of injurious stream depletions for each month during the Plan Year, excluding months outside the irrigation season. The expected yields listed in Table 3.1 are intended to be a conservative estimate of their potential yield to show the Subdistrict's

ability to remedy injurious stream depletions. The estimate for the Rio Grande Canal did not include days that "Special Water" priorities were the calling rights even though all or a portion of those rights are included in forbearance agreements with the Subdistrict for the Plan Year and may be utilized at the discretion of the Subdistrict.

Closed Basin Project Production (Section 4 of 11.1.4 of the ARP)

According to the information provided in the ARP, the projected production of the Closed Basin Project delivered to the Rio Grande is 8,500 acre-feet during calendar year 2022. The allocation of the Closed Basin Project production in accordance with agreements is 60% to the Rio Grande and 40% to the Conejos River basin over the long term with provision for adjustments in the allocation during individual years. The 2022 allocation of the Closed Basin Project production will be 60% to the Rio Grande and 40% to the Conejos River.

Per a letter from the Rio Grande Water Users Association dated April 7, 2022, the Board of Directors passed a motion to specifically allocate 3,800 acre-feet of the Rio Grande's share of the usable yield of the Closed Basin Project to replace the stream depletions under the RGWCD Subdistricts. Similarly, the Board of Directors of the San Luis Valley Water Conservancy District agreed to the allocation as stated in their letter to the Rio Grande Water Conservation District on April 7, 2022.

A copy of each letter reporting the approval was provided in Appendix H of the ARP. The resolution from RGWCD allowing the Subdistrict to use Closed Basin Project water in the 2022 ARP was provided as a supplement to the ARP.

11.1.5 Documentation of Progress Towards Achieving and Maintaining a Sustainable Water Supply

Rule 8.4 of the Rules states that there is no Sustainable Water Supply requirement of the wells that withdraw groundwater from the alluvium of the Rio Grande within the Rio Grande Alluvium Response Area.

The letter of February 28, 2020 from the State Engineer regarding the Upper Rio Grande Model Domain notes that the "the aquifer in the area represented in the URG is an alluvial aquifer that has little to no storage capacity for use of the aquifer as a reservoir. The URG meets the presumption of Rule 8.5 and, therefore, a plan to achieve a Sustainable Water Supply for the wells within the URG will not be required as part of any Annual Replacement Plan(s)."

Water Levels, Pressure Levels, and/or Groundwater Withdrawals (Section 1 of 11.1.5 of the ARP)

Requirements of this Rule are satisfied per Rule 8.4.

Listing of Irrigated Acres Proposed to be Temporarily or Permanently Fallowed and Associated Water Rights (Section 2 of 11.1.5 the ARP)

No listing of fallowed irrigated acres was submitted with this ARP.

Listing of Water Rights Proposed to be Temporarily or Permanently Retired and Historical Operations of Each Water Right (Section 3 of 11.1.5 the ARP)

No listing of retired water rights was submitted with this ARP.

Other Proposed Actions to be Taken as Applicable (Section 4 of 11.1.5 the ARP)

No listing of other proposed actions was submitted with this ARP

Findings:

Based on the information provided in the ARP and discussed above, I make the following findings:

1. The projected groundwater withdrawals are based upon the inventoried Subdistrict Wells, their historical pumping, and projected stream flows. The inventory of wells is consistent with the information in DWR's databases. The historical pumping associated with the Wells is based on diversion records on file with the DWR. The method implemented by the Subdistrict to project groundwater withdrawals for the ARP Wells for 2022 is consistent with historical pumping information and streamflow forecast from the Division Engineer's projection and the NRCS Forecast.

2. Overall, the Subdistrict inputs to the Response Functions produced a calculation of depletions that DWR considers conservative such that the depletions are covered and no injury will occur.

3. Projected stream depletions are calculated based on Response Functions generated from RGDSS Groundwater Model runs. The Response Functions are based on the RGDSS Model version 6P98, which was approved by the PRT. The Subdistrict used the 6P98 Response Functions in determining stream depletions for the Subdistrict. The ARP Year depletion schedule is included as an Exhibit to this letter.

4. The Upper Rio Grande Response Function was used to calculate the projected stream depletions for wells in that Response Area.

5. The comparison of CBP projected deliveries with all Subdistricts operating under 2022 ARPs indicates the CBP production, at least on an annual basis, is adequate to cover the Non-Irrigation season depletions for all the Subdistricts.

6. The ARP identifies the sources, availability, and amounts of replacement water and remedies that the Subdistrict will use to remedy Injurious Stream Depletions during

the coming year and demonstrates the sufficiency of such water to remedy such Injurious Stream Depletions:

Rio Grande

The Subdistrict depletions on the Rio Grande are 1,213 acre-feet during the irrigation season and 1,002 acre-feet during the non-irrigation season for a total of 2,214 acre-feet.

- Irrigation Season: The Subdistrict has 598 acre-feet in storage in Beaver, Rio Grande, Continental and Santa Maria Reservoirs, estimates a yield of ±781 acre-feet from their "in season" Rio Grande Ditch No. 1 Lease/Fallow, and indicates a yield of ±700 acre-feet from forbearance agreements during the 2022 irrigation season and in April 2023, totaling ±2,079 acre-feet.

  The portfolio of water from storage and in season sources in the 2022 ARP Year totals 1,379 acre-feet and indicates sufficient firm water to cover Injurious Stream Depletions in the unlikely event that no forbearance is available.

- Non-Irrigation Season: The Subdistrict has 1,002 acre-feet of Closed Basin Project water available to pay non-irrigation season depletions.

7. The Rio Grande Water Conservation District Board of Directors has passed a resolution to act as a financial guarantor for Subdistrict No. 2 to assure that all Post-Plan Injurious Stream Depletions will be replaced or otherwise remedied if Subdistrict No. 2 were to fail or otherwise be unable to replace Post-Plan Injurious Stream Depletions.

8. Rule 8.4 of the Rules states that there is no Sustainable Water Supply requirement of the wells that withdraw groundwater from the alluvium of the Rio Grande within the Rio Grande Alluvium Response Area.

9. The URG meets the presumption of Rule 8.5 and, therefore, a plan to achieve a Sustainable Water Supply for the wells within the URG will not be required as part of any Annual Replacement Plan

The Subdistrict has presented sufficient evidence and engineering analysis to predict where and when Injurious Stream Depletions will occur and how they will replace those Injurious Stream Depletions to avoid injury to senior surface water rights under the following Terms and Conditions.

This ARP is hereby approved pursuant to the following Terms and Conditions:

1. This ARP shall be valid for the period of **May 1, 2022 through April 30, 2023**, unless otherwise revoked, modified, or superseded by me, a decree, or order of the court.

2. The Subdistrict must replace or remedy the Injurious Stream Depletions resulting from Subdistrict ARP Well groundwater withdrawals.

3. Contract wells will be covered to the extent of their permitted/decreed uses.

4. Deliveries (including transit losses) of stored water made available for the replacement of Injurious Stream Depletions shall be determined by the Division Engineer pursuant to this ARP and associated decrees, policies and statutes. An MOU describing any exchange must be submitted and signed by all parties prior to operating the exchange.

5. If the limit is reached for any particular forbearance agreement, then the Subdistrict will need to remedy Injurious Stream Depletions to that particular ditch or canal with another remedy. General Forbearance Protocols for the Rio Grande River System for 2022 were prepared by the Division Engineer. A copy of the protocols is included with this letter.

6. The Division Engineer shall determine on an ongoing basis whether he can administer the operations under each forbearance agreement. If the Division Engineer cannot, then that operation shall cease.

7. The Subdistrict shall provide daily replacement water accounting (including, but not limited to diversions, depletions, replacement sources, and river calls) on a monthly basis. The accounting must be emailed to the Division Engineer (Craig.Cotten@state.co.us), the Water Commissioners (sam.riggenbach@state.co.us), and the Subdistrict Coordinator (deborah.sarason@state.co.us), within 10 days after the end of the month for which the accounting applies. Accounting and reporting procedures are subject to approval and modification by the Division Engineer.

8. The Subdistrict must adhere to the terms and conditions of the SWSP(s) incorporated as part of the ARP. The use and inclusion of any new replacement water within the ARP is subject to SWSP approval or approved by the Water Division No. 3 Water Court for a change of water right. Prior to the use of any new replacement water, the State Engineer will evaluate for use as an amendment under this ARP.

9. Regarding the Subdistrict's request to aggregate depletions owed between stream reaches on the Rio Grande, as long as there is a curtailment in effect on the Rio Grande to satisfy Compact obligations and the daily curtailment amount is in excess of the daily negative depletions in Stream Reach 3, the depletions owed to all reaches may be aggregated, or summed, on a daily basis through the irrigation season. The depletion remedy can be made for the aggregate and if the release is made from reservoir, transit losses will be added. It is acceptable for depletions between stream reaches to be aggregated during the non-irrigation season. Should conditions change such that aggregation is not allowed, the Subdistrict will be notified and full depletion amounts owed must be remedied.

10. Regarding the Subdistrict's request to aggregate depletions with other subdistricts, the Subdistrict may make requests for these types of changes formally to the Division Engineer, providing details of the request and documentation supporting the need to

make a change to the approved ARP depletion schedule. The Division Engineer will consider such a request when it is made, under the protocol of DWR and in light of the conditions on the particular stream at the time and, if deemed appropriate, approve the request. The Subdistrict will not adopt any change until after approval by the Division Engineer.

11. In the event the CBP deliveries during the non-irrigation season months are not enough to remedy the total of the RGWCD Subdistricts non-irrigation season depletions, it is acceptable for the CBP deliveries during the irrigation season months be used to remedy the additional amount of non-irrigation season depletions. However, CBP deliveries may only be credited against non-irrigation season depletions that occur during the same calendar year and during the same ARP Year. In general, January through April CBP deliveries may be used to remedy January through March of the ARP Year depletions and May through December CBP deliveries may be used to remedy November and December ARP Year depletions.

12. The Subdistrict relies upon forbearance agreements to meet some of the requirements for mitigation of injurious stream depletions. The Subdistrict is strongly encouraged to actively pursue permanent replacement sources to cover depletions in the event that the forbearance agreements are not sufficient. In the unlikely event that the excess augmentation credits or forbearance agreements do not yield the amounts needed to cover depletions as expected during the 2022 ARP Year, the Subdistrict will invoke its "After Acquired Sources of Remedy" clause in the ARP and will acquire sufficient additional sources to satisfy the depletion schedule approved under this ARP. If the Subdistrict is unable to acquire sufficient additional sources, the Subdistrict will not be able to continue operation under this ARP.

13. All deliveries of replacement water shall be measured in a manner acceptable to the Division Engineer. The Subdistrict shall install and maintain measuring devices as required by the Division Engineer for operation of this approved ARP.

14. The Subdistrict must submit a Preliminary Water Report and a Final Review of its ARP pursuant to Rule 12.

15. The Subdistrict must replace or remedy all Injurious Stream Depletions caused by non-augmented pumping associated with Subdistrict ARP Wells.

16. The Subdistrict must comply with the Rules, the Subdistrict PWM, and this ARP.

Approval of this ARP does not authorize any change, increase, or expanded use of any water right or permit. Any change, increase, or expansion of a water right or permit will need to comply with existing decrees and or permits, the Confined Aquifer New Use Rules, the Measurement Rules, the Rio Grande Basin Groundwater Use Rules, and may require approval of the Water Court.

The approval of this ARP is made with the understanding that if the ARP proves insufficient to remedy Injurious Stream Depletions, the State Engineer has the authority to invoke the retained jurisdiction of the Division No. 3 Water Court.

I want to thank you for your cooperation and compliance with this approved ARP and for your continued cooperation and compliance in the future. Your efforts are greatly appreciated. If you have any questions do not hesitate to contact any of my staff in Denver or Alamosa.

Sincerely,

Kevin G. Rein, P.E.
State Engineer
Director of the Division of Water Resources

Exhibits:

A: SWSP 9350 Rio Grande Ditch No 1 Lease/Fallow
B: Subdistrict No. 2 2022 ARP Response Function Table 2.6
B: General Forbearance Protocols for the San Luis Valley River Systems for 2022

ec: Craig Cotten, Division Engineer
Chad Wallace, Assistant Attorney General
David W. Robbins, Hill & Robbins
Peter Ampe, Hill & Robbins
Clinton Phillips, Davis Engineering Service, Inc.
DWR electronic notification lists
Division 3 Water Court

Exhibit A

COLORADO
Division of Water Resources
Department of Natural Resources

April 15, 2022

Ms. Rachel Kullman, P.E.
Kullman Water Engineering, LLC
PO Box 5464
Santa Fe, NM 87502

Re: Rio Grande Ditch No. 1 Substitute Water Supply Plan
Secs.33, 34, Twp. 40N, Rng. 6E, N.M.P.M.
Secs.1, 2, 3 Twp. 39N, Rng. 6E, N.M.P.M. Rio Grande County
Water Division 3, Water District 20
SWSP Plan ID 9350

Approval Period: April 15, 2022 through March 31, 2023
Contact information for Ms.Kullman: (505) 690-1432; Rachel@kullmanwater.com

Dear Ms. Kullman:

We have reviewed your letter of February 14, 2022 requesting a substitute water supply plan ("SWSP") on the behalf of the Rio Grande Ditch No. 1/Rio Grande Water Conservation District's Special Improvement District No. 21 ("Applicant") pursuant to §37-92-308(5), C.R.S. Notice was sent on February 24, 2022 to all subscribers to the Division 3 SWSP Notification List. Timely comments were received from David and Gayana Carr during the statutory 35-day comment period. The statutory $300 filing fee has been received and given receipt no. 10019304.

An application for approval of a change of water right or plan for augmentation has not been filed with the water court and the depletions associated with the proposed water uses will not exceed five years, therefore this request has been submitted pursuant to §37-92-308(5), C.R.S. In accordance with §37-92-308(5), C.R.S., SWSPs may be approved for new water use plans involving out-of-priority diversions or a change of water right, if no application for approval of a plan for augmentation or a change of water right has been filed with the water court and the depletions associated with such water use plan or change will be for a limited duration not to exceed five years. **This is the first year of approval of this SWSP.**

SUBDISTRICT OPERATION

Case No. 15CW3024 established the Rules Governing the Withdrawal of Groundwater in Water Division No. 3 by order of the court. The Rules described the formation of Subdistricts in the area defined by the Rio Grande Decision Support System Groundwater Model in District Court, Water Division No. 3. Members of Subdistricts are landowners within the RGWCD who rely on groundwater for all or part of their commercial, municipal, industrial and/or irrigated agricultural practices. The principal goals of Subdistricts are to protect senior surface water

rights, to support a sustainable water supply in the confined or unconfined aquifer underlying the Subdistricts' boundaries and to avoid unreasonable interference with the state's ability to fulfill its obligations under the Rio Grande Compact.

This SWSP is being sought in order to provide a part of the water supplies to be used by one or more Subdistricts of the RGWCD to meet the requirements of the Subdistricts' Plans of Water Management ("Plans") as approved by the State Engineer. Subdistrict No 1 (2006CV64 & 2007CW52), Subdistrict No 2 (2015CV30050), Subdistrict No 3 (2016CV30021), Subdistrict No 4 (2017CV30005), and Subdistrict No 6 (2018CV30014) have formed and are operating under their respective Plans. Subdistrict No 5 (2017CV30015) has formed and has a Plan approved by the State Engineer, but is not yet operating under their Plan.

The overall objective of each Subdistrict Plan is to provide a water management alternative to individual plans for augmentation or state-imposed regulations that limit the use of wells within the Subdistrict; that is a system of self-regulation using economic-based incentives that promote responsible groundwater use and management and ensures protection of senior surface water rights. As part of each Plan, Subdistricts must submit an Annual Replacement Plan ("ARP") for the State Engineer's review and approval, showing the portfolio of water rights and other actions the Subdistricts will take to replace injurious depletions to senior water rights caused by groundwater withdrawal by Subdistrict Wells during the plan year. This SWSP application is intended to provide a part of the water supplies to be used in the Subdistricts' ARPs or by separate contract with other entities for use within Division 3, only after prior approval by the Division Engineer.

SWSP OPERATION

The Rio Grande Ditch No. 1 ("Ditch") diverts from the south bank of the Rio Grande east of the Town of Del Norte. The Ditch carries multiple priorities; Priority No. 8, the subject of this SWSP, and 3 more junior water rights transferred from the Rio Grande Ditch No. 4.

A group of shareholders in the Ditch intend to forego irrigation of their lands under the Ditch in order to make available historical consumptive use ("HCU") credit water for use by Subdistrict No. 2 for replacement of depletions. This SWSP is being requested to change the place and purpose of use of the water allocations to include augmentation and replacement of depletions by storage or direct use. The HCU analysis calculated 781.5 acre-feet of HCU water which would be available from the dry-up of 365.58 acres on four farms.

A HCU analysis was performed using State CU version 13.10. The study period used was from 1998 through 2019, and the irrigated acreage was measured from aerial photos from 1998, 2009 and 2017. Crop types included pasture grass and alfalfa. Lands under the Ditch are flood irrigated, and an efficiency of 60% was used. The canal efficiency was 85%. Deep percolation return flows were assumed to return to the river within one month, and were therefore not separated from surface return flows. Since the Ditch carries several water rights, the Priority No. 8 water was calculated by attributing daily flows first to the most senior right (Priority #8) up to the decreed rate. Flows in excess of that decreed rate were subtracted from the total, as they are not part of this SWSP request.

The Applicant is proposing to pump the consumptive use credit at a point downstream of the flume and measure it back to the river. The calculated ditch loss portion will be left in the ditch, to simulate the historical ditch loss, and the return flow portion will be diverted and left in the ditch for delivery to the Rio Grande through a return channel/pipeline as shown in Figure 1 (attached). Comments received from David and Gayane Carr expressed concern as to the reduced flow in the canal possibly injuring their water rights. The Applicant has proposed several solutions, including the installation of check dams to raise the canal water level, should the McClure and Carr properties not receive their full entitlement. The return flow measuring structure is towards the end of the ditch system and at this location there should be equal to or greater flow than historically available throughout the ditch system.

Average irrigated areas and estimated HCU figures are presented in Table 2, below:

Table 2
Summary of SWSP Participants and Properties

		Water Rights		Crop Acreage									
Property Name	Ref. Figure Nos.	Prorata Ownership of RGD No. 1 (Priority No. 8) (cfs)	RGD1 as %	1998 Irrigated Area (acres)	Pasture Grass (acres)	Alfalfa (acres)	2009 Irrigated Area (acres)	Pasture Grass (acres)	Alfalfa (acres)	2017 Irrigated Area (acres)	Pasture Grass (acres)	Alfalfa (acres)	Average Irrigated Area (acres)
Mortensen	2-4	3.22	29.68%	220.62	113.86	106.74	213.15	213.15	0	215.51	194.62	20.89	216.43
Seger	5	0.51	4.70%	34.12	18.32	15.8	34.12	34.12	0	34.12	34.12	0	34.12
Ramsey & Lusero	6	1.10	10.14%	64.6	64.6	0	64.6	64.6	0	64.6	58.61	5.99	64.60
Montoya & Velasquez	7	0.91	8.39%	51.5	51.5	0	49.9	49.9	0	49.9	49.9	0	50.43
Total		5.74	-	370.84	248.28	122.54	361.77	361.77	0	364.13	337.25	26.88	365.58

Notes:
(1) Irrigated areas determined from aerial photos in 1998, 2009 and 2017.
(2) Crop types by acreage were determined from Colorado's Decision Support System (CDSS) irrigated area GIS shapefiles for 1998, 2009, and 2015 (2017 was not available).

The volumetric delivery targets for the combined subject parcels as well as the reduction in flow rates should the HCU water be left in the Rio Grande are presented in Table 8.

Table 8
Volumetric Delivery Targets

	For All Properties												
Volumetric Targets:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Consumptive Use Credit, af	0.0	0.0	0.0	45.2	102.5	162.7	152.5	131.1	108.8	77.1	1.7	0.0	781.5
Return Flows, af	0.0	0.0	0.0	86.2	181.2	115.8	110.5	106.4	96.3	102.6	7.0	0.0	806.0
	For All Properties												
Flow Rate Reduction Targets*:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Consumptive Use Credit, cfs	0.00	0.00	0.00	0.76	1.67	2.73	2.48	2.13	1.83	1.25	0.03	0.00	

Notes:
*These flow rate reduction targets are only applicable if the RGD1 Priority No. 8 water right is diverted each day during the respective month.
> For the beginning of the season (if partial month), the flow rate reduction targets should be increased proportional to the number of diversion days remaining in that month.
> For the end of the season (if partial month), the flow rate reduction targets should be increased proportional to the number of estimated diversion days remaining in that month.

The subject parcels will not be irrigated during the 2022 irrigation season. Should the anticipated dry-up result in growth due to subirrigation or seepage, the Applicant must notify the Division Engineer, and the Division Engineer will determine if any required adjustments to the HCU credits are necessary, or if other actions are required.

CONDITIONS OF APPROVAL

This SWSP is hereby approved pursuant to §37-92-308(5), C.R.S., subject to the conditions stated below:

1. This SWSP shall be valid for the period of April 15, 2022 through March 31, 2023 unless otherwise revoked. Any request for an additional SWSP is subject to the provisions of §37-92-308(5) (b), C.R.S., and the statutory fee of $300 will be required pursuant to §37-92-308(8), C.R.S. Any request for an additional SWSP must be submitted to this office no later than **January 1, 2023**.

2. In accordance with § 37-92-308(5), C.R.S., this SWSP cannot be renewed or approved for more than five years and the depletions associated with the proposed water uses must not exceed five years. **This is the first year of approval of this SWSP.**

3. Changes to water rights will be limited to the Rio Grande Ditch No. 1 and the shares/parcels identified in this approval. Changes to include additional parcels/shares for the ditch, or changes to include additional ditches will be allowed only if a new SWSP is approved for those additional shares/ditches. Should a new SWSP be requested, the provisions of C.R.S. § 37-92-308(5)(b) shall apply. The statutory fee of $300 will be required pursuant to C.R.S. § 37-92-308(8).

4. For the purposes of this SWSP, the Applicant's methodology, claimed historical consumptive use, and StateCU parameters are being accepted. However, as Division 3 staff continue to assess the uses and operations, these values may be subject to modification.

5. The subject parcels will not be irrigated during the 2022 irrigation season. Should the anticipated dry-up result in growth due to subirrigation or seepage, the Applicant must notify the Division Engineer, and the Division Engineer will determine if any required adjustments to the HCU credits are necessary, or if other actions are required.

6. In order to prevent injury to other water rights, the Division Engineer and Water Commissioner must be able to ensure the delivery of the Rio Grande Ditch No. 1 water to non-participating users on the ditch. In the event that delivery past dry-up points is not being achieved, for which a carriage or use agreement with a third party is required, the applicant shall be responsible for securing such agreement. If such a situation arises, until the Applicant provides a copy of the carriage or use agreement to the Division Engineer and Water Commissioner, no credit will be allowed for replacement of depletions to the Rio Grande.

7. All diversions shall be measured in a manner acceptable to the Division Engineer. The Applicant shall install and maintain such measuring devices as required by the Division Engineer for operation of this SWSP.

8. The Applicant shall provide accounting of the metered water delivered to the river and flume readings for the return flow obligations on a **monthly** basis. The accounting must show the daily diversions, balance of consumptive use credits that the Applicant has used and has remaining, and the return flow obligations. Frequent, if not daily, contact with the water commissioner is required to ensure daily administration and to prevent injury

to 3rd parties. The accounting must be e-mailed to the following DWR employees, Staff Researcher (Kevin.Boyle@state.co.us), Staff Engineer (Pat.Mcdermott@state.co.us) Water Commissioner, and (Sam.Riggenbach@state.co.us) within 10 days after the end of the month for which the accounting applies. Accounting and reporting procedures are subject to approval and modification by the Division Engineer. An initial reading on any meter must be provided with the accounting.

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

10. 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 use of water under this SWSP must cease immediately.

11. 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 pending water court case or any other legal action that may be initiated concerning the SWSP. This decision shall not bind the State Engineer to act in a similar manner in any other applications involving other SWSPs or in any proposed renewal of this SWSP, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant. Any appeal of a decision made by the State Engineer concerning an SWSP pursuant to § 37-92-308(5), C.R.S., shall be to the Division 3 Water Judge within thirty days of the date of this decision.

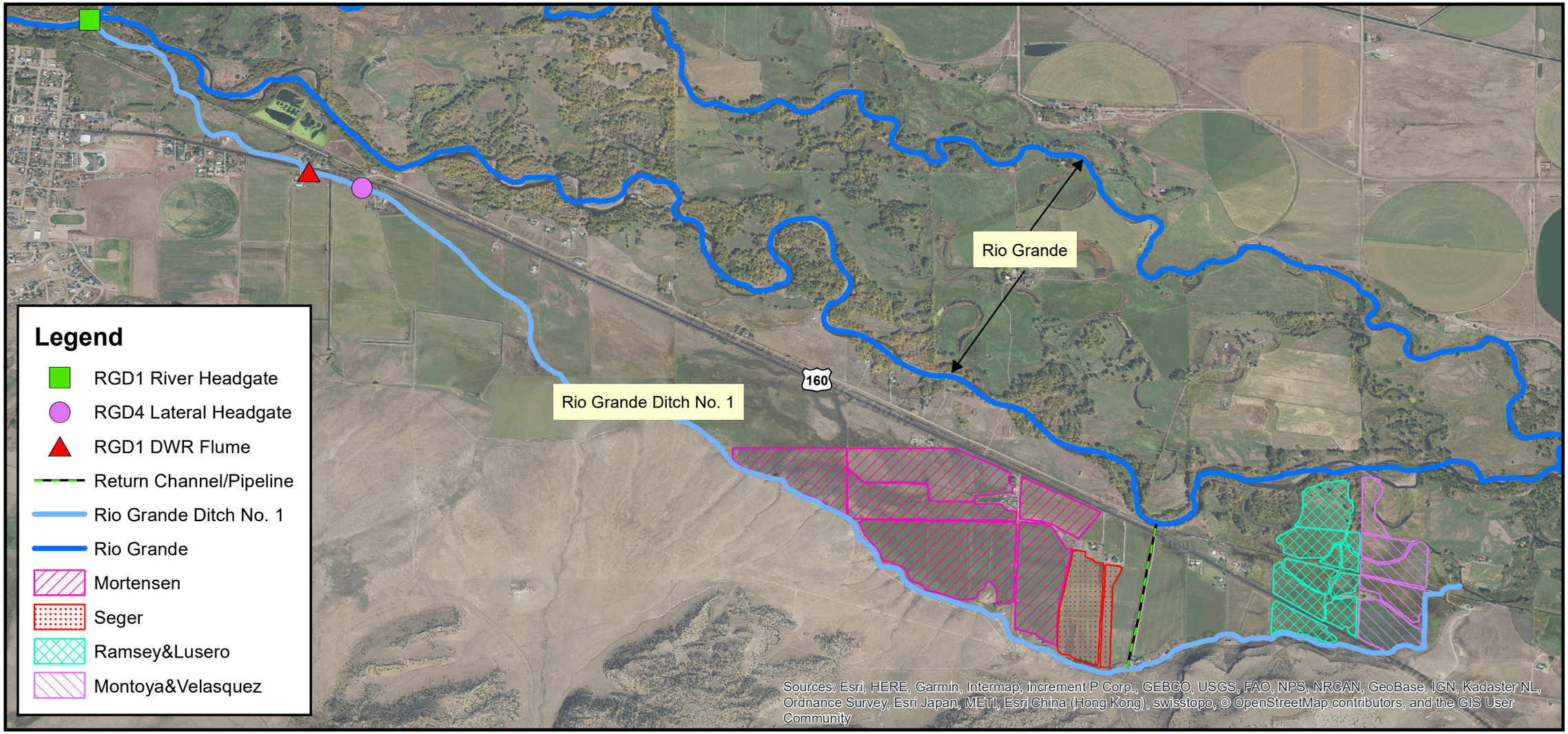
Should you have any questions, please contact Melissa van der Poel of this office or Pat McDermott, Staff Engineer, in the Division 3 office in Alamosa at (719) 589-6683.

Sincerely,

Jeff Deatherage, P.E.
Chief of Water Supply

Attachments: Figure 1

cc: Craig Cotten, Division 3 Engineer
Sam Riggenback, District 20 Lead Water Commissioner
Kevin Boyle, Division 3 Staff Researcher
Pat McDermott, Staff Engineer



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Aerial photo = 2017

FIGURE 1
RIO GRANDE DITCH NO. 1 OVERVIEW
PARTICIPATING LANDS
February 2022

KULLMAN
WATER ENGINEERING, LLC

Exhibit B

Table 2.6

Rio Grande Alluvium and URG Response Areas Monthly Stream Depletions for Plan Year

(units of ac-ft)

	Rio Grande Alluvium Response Area Total												
	2022								2023				
Stream Reach	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Rio Grande Del Norte-Excelsior	142.6	136.8	142.1	145.2	142.0	154.6	158.6	167.0	164.2	146.6	146.0	135.0	1,780.8
Rio Grande Excelsior-Chicago	48.4	40.9	36.8	24.8	27.4	34.7	40.4	47.5	48.1	45.7	52.2	44.9	491.8
Rio Grande Chicago-State Line	6.9	-1.1	-7.1	-18.8	-12.3	-7.7	-4.9	-1.4	-4.9	-3.5	0.1	-3.6	-58.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	197.9	176.7	171.8	151.2	157.1	181.6	194.0	213.1	207.4	188.7	198.3	176.2	**2,214.1**

Exhibit C

General Forbearance Protocols

For San Luis Valley River Systems

Subdistricts No. 1, No. 2 (Rio Grande Alluvium), No. 3 (Conejos), No. 4 (San Luis Creek), No. 6 (Alamosa La Jara) and Trinchera Subdistrict will be operating under ARPs and will replace depletions to their affected streams on May 1st, the beginning of the 2022 ARP year. Subdistrict No. 5 (Saguache) will also be subject to these protocols when an ARP is approved. Along with the replacement of stream depletions, the State and Division Engineer may allow the owners of the calling ditch to 'forbear', or choose to not take the water that otherwise would have been allocated to that ditch in exchange for receiving payment in some other form. This forbearance is authorized under Colorado Revised Statute 37-92-501 (4)(b)(1)(B) which states that the State Engineer shall "Recognize contractual arrangements among water users, water user associations, water conservancy districts, ground water management subdistricts, and the Rio Grande Water Conservation District, pursuant to which... injury to senior surface water rights resulting from the use of underground water is remedied by means other than providing water to replace stream depletions."

In order to assist the Subdistricts, water users, and Water Commissioners in determining whether a forbearance contract will be allowed, the following are general guidelines regarding those forbearance contracts for the 2022 ARP year:

- A water right must be the calling water right in order to forbear. In other words, the ditch must be legally and physically entitled and able to receive and divert the replacement water that would have been placed into the river or stream reach if that ditch owner would have decided to take the water available instead of forbearing.

- The owner of a ditch that cannot physically divert all of the water under its priorities due to an inadequate ditch size or other physical restrictions cannot forbear for the amount that the ditch in not able to divert. However, this ditch may be able to forbear in the amount that it is physically and legally able to divert.

- The owner of a ditch that physically is not able to divert the replacement water entitled to it at certain times of the year (for instance during low flow periods), due to an inadequate diversion dam or headgate, or other reasons, cannot forbear during that time of year unless and until the ditch or associated structures are repaired and physically able to take water.

- If it is certain that the owner(s) of a ditch would have declined to take water in their ditch on a given day that they were in priority to take water, for instance, if that owner cannot take their full priority due to a break in the ditch bank, or if the owner has not called for that water right in the ditch, etc., the ditch owner cannot forbear for that water right on that day.

- Forbearance will be allowed on water rights that are not large enough to cover the entire daily replacement amount. A ditch may be forbearing only a portion of the total daily replacement amount due to the size of the water right. In such cases, there may be several water rights in

various ditches that are forbearing at the same time in order to meet the entire replacement obligation of the Subdistrict.

- A ditch may operate under a partial forbearance contract with the understanding that the ditch company, Subdistrict or other appropriate party will manage the partial flow and partial forbearance at the heading and down ditch to the satisfaction of all water rights owner in that ditch that are in priority on that day. The manager of the ditch with partial forbearance must inform the Water Commissioner, prior to any operations, the manner and the capability in order to be in compliance, otherwise forbearance will not be allowed.

- Ditches with a forbearance contract must have accurate, reliable and operational measurement devices on the ditch.

- On a day when water could be placed into the river system for replacement of injurious depletions, and a section(s) of the stream is dry such that this replacement water would not have made it to the calling priority ditch, forbearance by that ditch(es) will not be allowed. During times of dry stretch(es) on the river system, each live stretch will be treated as its own calling system. Only the stretch(es) that includes an RGDSS modelled stream reach will have the ditch(es) eligible for forbearance. If water delivery could not make it physically to any structure in a particular RGDSS reach, then no forbearance is allowed and a water delivery will be required. The determination of the physical properties controlling these situations shall be at the sole discretion of the Water Commissioner and/or Division Engineer.

- A forbearance that results in a section of the river drying up, cannot be used to create a futile call. The river must be administered to replicate what conditions would have taken place had a continuous deliverance of water occurred.