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## DPG Pit / M-2019-028 / Preliminary Adequacy Review

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JC York <jcyork@j-tconsulting.com>

Thu, Jul 11, 2019 at 4:12 PM

To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>

Cc: Chris Leone <chrisleone@j2contracting.com>

Amy –

Attached is our groundwater modeling that McGrane Engineering completed for us and I have also attached the certified mail receipts we have received back for the public notice and structure owner agreements.

Regards,

J.C.

J.C. York, P.E.

J&T Consulting, Inc.

305 Denver Avenue, Suite D

Fort Lupton, CO 80621

Office: (303) 857-6222

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[Quoted text hidden]

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### 2 attachments



**DPG\_Modeling\_Report\_7\_3\_19\_w\_figs\_final.pdf**  
2439K



**Certified Return receipts.pdf**  
1315K

# McGrane Water Engineering, LLC

1669 Apple Valley Rd. • Lyons, CO 80540 • Phone: (303) 917-1247  
E-Mail: dennis@mcgranewater.com



July 3, 2019

Mr. JC York  
J&T Consulting, Inc.  
305 Denver Avenue, Suite D  
Ft. Lupton, CO 80621

Via email at: [jcyork@j-tconsulting.com](mailto:jcyork@j-tconsulting.com)

RE: DPG Pit – Hydrologic Impact Assessment

Dear Mr. York:

The proposed DPG gravel pit mine is located approximately 3 miles east of Hwy 85 in Greeley Co., in Sections 1, 11 and 12, Township 5 North, Range 65 West (6<sup>th</sup> PM). The site is located just upstream from the confluence of the S. Platte River (SPR) and Cache la Poudre (Poudre) River. Figure A1 shows the site, and approximately 206 permitted wells located within a 2-mile radius as identified in the State's well database (CDWR, 2019).

As part of the mine permit application process, the mine consultant, J&T Consulting, Inc. (JT) requested that McGrane Water Engineers, LLC. (MWE) determine the potential impacts of a slurry wall around the proposed DPG pit. Impacts typically include a rise in the water table on the up-gradient side of the slurry wall and a decline in the water table on the down gradient side. Water level increases to within 10 feet of the surface on the up-gradient side of the pit could cause: flooding of existing structures such as basements; water logging (over saturation) of crops; and encourage phreatophyte growth. A decline in water levels on the down gradient side could reduce the aquifer saturated thickness and well yields if the decline is significant compared to the saturated thickness of the aquifer at the well.

## Groundwater Investigation

To evaluate the groundwater impacts, we:

1. Conducted a literature search of existing published groundwater literature in the vicinity of Greeley, Co.;
2. Compiled well data from the State's Well database including: well name, permit number, location, well depth, depth to water, and pumping rate (Table A1);
3. Created a groundwater model to evaluate potential changes in groundwater levels resulting from a slurry wall around the mine;
4. Evaluated measured monitoring well water levels around the pit; and
5. Prepared this letter report which includes numerous figures that characterize the aquifer and support our results.

A detailed discussion of the Hydrogeologic analysis, model parameter selection and assumptions, and discussion of model sensitivity and uncertainty are included in Appendix A - Groundwater Evaluation and Modeling (attached).

## Results

We used the US Geologic Survey MODFLOW model (McDonald and Harbough, 1987) to model the site. Using reasonable boundary conditions and aquifer properties, the model predicts that water levels will rise up to 0.75 feet on the up-gradient (west and southwest) sides of the pit (Figure A9). The downstream impact is constrained between the pit and the rivers at the confluence where no wells or structures apparently exist. To account for uncertainty, we assume for this impact analysis that twice the impacts upstream and downstream could occur (Figure A10).

We identified two wells within the area of potential impact (Figure A10). Well 118187-A is a domestic well permitted to Weld County that is located within the pit boundaries. We assume that it is either mislocated, abandoned or will be abandoned as part of the pit development plan? Another well belonging to James Mathews (permit no 83280) is located approximately 650 feet west of the site. The Mathews' well is the closest up-gradient well to the pit. After doubling the model results (Figure A10), we estimate that the water level could increase between 0.5 and 1.0 feet at the well as a result of the mine slurry wall.

Table 1 includes: location, depth, perforated interval, static water level, saturated aquifer thickness and reported well yield data for the two "potentially" impacted wells.

**Table 1 – Wells that could be Impacted by Slurry Wall**

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
83280-	4611.3	MATHEWS, JAMES L.	5.0 N	65.0 W	11	SENE	Domestic	82	62	82	11	69	20
118187--A	4607.6	WELD COUNTY	5.0 N	65.0 W	12	NWNE	Domestic	40	20	40	10	--	15

The reported static water level of the Mathews well is 11 feet below ground level. If the home has a basement, it may already be vulnerable to flooding and have a sump pump. Another 1 foot rise caused by the pit could cause basement flooding. However, if the impact can be solved by simply installing a more reliable sump pump system, we recommend that the mine operators do so. **Because this potential impact is so small and involves only one well, we do not believe the overall impact of the mine on nearby wells is going to be significant.**

## Monitoring and Mitigation

We recommend that the Mine Owner should:

- Contact the owners of potentially affected wells shown on Table 1 and conduct a more detailed evaluation of the potential impacts at the home to determine mitigation options; and


- Install more monitoring wells west of the pit, to monitor around up-gradient homes in case our predictive analysis is incorrect or in case seasonal fluctuations in the water table are more than what has been recently measured.

The Mine Owner could also install a drain that intercepts mounding groundwater on the west side of the pit and transport it to the down gradient side where it could be recharge the aquifer. The depth, location, and size of a drain will depend on the timing and location of rising water and hydrologic properties of the aquifer, and can be designed using the computer model developed for this analysis.

If you have any questions, please give me a call.

Sincerely,

McGrane Water Engineers, Inc.



Dennis McGrane, P.E., C.P.G

### Professional Credentials

The technical material in this report was prepared by or under the supervision and direction of Dennis McGrane P.E, C.P.G., whose seal as a Professional Engineer in the State of Colorado and American Institute of Professional Geologists (AIPG) Certified Professional Geologist (CPG) are affixed below:



## APPENDIX A - GROUNDWATER EVALUATION AND MODELING

The proposed DPG gravel pit mine is located approximately 3 miles east of Greeley, Colorado in Sections 1, 11 and 12, Township 5 North, Range 65 West (6<sup>th</sup> PM). The site is located just upstream from the confluence of South Platte River (SPR) and Cache la Poudre (Poudre) River.

### Available Data

We compiled hydrogeologic data from:

- Existing reports from the US Geological Survey and Colorado Division of Water Resources (see Sources below);
- Well completion reports from 206 registered alluvial wells (SEO wells) from the State's Well database located within two miles of the site;
- A "Preliminary Materials Study" conducted at the DPG site (Cesare, May 2, 2019) that includes 9 borehole logs; and
- Monitoring well data from the site provided by JTC.

Figure A1 is a Google Earth image that shows: the planned pit, existing permitted wells (color coded by use), pit monitoring wells (cross shapes) and the model boundary. Most of the existing wells are used for domestic water supply and irrigation.

### Hydrogeology

The hydrogeology of the SPR alluvial aquifer is described by Lindsay and Others (1998 and 2005), CDM (2006 and 2013) and CSU (2013). Figure A2 shows the site surficial geology (Braddock and Cole, 1978). The alluvium within the model areas consists of alluvial sand and gravel (Qa) adjacent to the modern SPR and Poudre flood plains, and older terrace alluvium (Qg) outside the floodplain. The site materials study (Cesare, 2019) confirmed that the aquifer consists of primarily sand and gravel. Bedrock consist of the Laramie Formation (Kl), which is primarily a black shale that is exposed in the northeastern and southeastern corners of the model.

Table A1 includes depth, perforation top and bottom, water level, yield (gpm) and calculated saturated thicknesses (well depth – static water level) from the SEO wells. The bottom of the table includes well statics. Well depths range from 7 to 165 feet and average 61 feet. Two alluvial wells (permit numbers 13580 and 14245) were drilled deeper into bedrock and not included in the average. Well yields range from less than 15 gpm for domestic wells to 1,900 gpm for irrigation wells.

The depth to water ranges from 2 to 53 feet and averages approximately 20 feet. Water level elevations above mean sea level (msl) were calculated at each well by subtracting the depth to water listed in the well permit from the site elevation obtained from 10-meter Digital Elevation Model (DEM) data. The calculated saturated alluvial thicknesses range from 10 to 119 feet and average approximately 45 ft.

Table A2 shows the DPG borehole/monitoring well data. The average site depth to water, depth to bedrock and aquifer saturated thickness are 6.5 ft, 83 ft and 76.4 ft respectively. Figure A3 shows the distribution of well data around the DPG pit.

### *Seasonal Water Level Changes*

Table A3 shows the three water level measurements taken at each DPG monitoring well this spring. The average levels are used for aquifer water table elevation targets (see Model Runs and Results below). Between April 19<sup>th</sup> and May 29<sup>th</sup>, 2019, the water levels rose approximately 1 to 2 feet. This rise is likely in response to seasonal river stage increases that increase aquifer recharge. The seasonal increase appears to exceed the modeled increase on the up-gradient side of the pit caused by the slurry wall (See Results), which makes it difficult to distinguish between natural fluctuations and pit “impacts.”

### *Water Level Contours*

Figure A2 shows water table elevation data from wells and river elevations interpreted from US Geological Survey 10m Digital Elevation Model (DEM) data sets. We contoured the data using the US Geological Survey (Hurr and Schneider, 1972) water table map as a guide. The contours show that both rivers are gaining throughout the model area.

### *Bedrock Elevation Contours*

We also updated the Hurr and Schneider (1972) bedrock elevation contour map (aka. structure map). Figure A4 shows a deep (over 100 ft deep) paleochannel extending east-west through the pit area.

### *Saturated Thickness*

We plotted the aquifer saturated thickness on Figure A5. The map shows how the aquifer thickens within the paleochannel and thins away from the rivers.

### *Hydraulic Conductivity and Transmissivity*

The aquifer hydraulic conductivity (K) is the measure of aquifer permeability (ft/dy). The Colorado Division of Water Resources (DNR) compiled available K data for an extensive groundwater model used for the South Platte Decision Support System (CDM-Smith, April, 2013). SPDSS Task 43.3 (CDM-Smith, December 6, 2006, Figure 5c) shows contoured K's in our model area ranging from approximately 250 to 550 ft/day (397 ft/day average) which is a reasonable range for sand and gravel. The distribution was created by interpolating K's obtained from nearby pumping tests. We did not attempt to improve upon the State's distribution because aquifer data obtained from other methods is not as reliable as pumping test information.

The aquifer transmissivity (T) is product of the aquifer K multiplied by the saturated thickness. An aquifer thickness grid was created by subtracting the aquifer structure grid (Figure A4) from a water table grid (Figure A2). Then the aquifer thickness grid was multiplied by the K grid (Figure A4) to create a transmissivity grid. We compared our T values with the USGS transmissivity map



prepared by Hurr and Schneider (1972). Figure A7 shows the highest transmissivities (200,000 - 375,000 gpd/ft) are in the paleo channel that runs through the DPG site. These values are in the same range as the Hurr and Schneider contours. However, we believe our distribution is more accurate because we used the additional bedrock elevation data and the K distribution prepared by CDM-Smith (2006).

## Modeling

We used the USGS (McDonald and Harbaugh, 1988) MODFLOW modeling program to evaluate the existing and future groundwater conditions at the DPG pit. We used the Visual MODFLOW (VM) classic interface (version 4.6.0.167) to construct, run and display model results. The model area is approximately 4 miles high and 5 miles wide (west to east) centered on the pit. The model consists of 119 rows and 142 columns using 200 foot square model cells.

### *Model Boundary Conditions*

Model boundary conditions include the S. Platte and Poudre rivers, bedrock boundaries on the model bottom and most of the northern boundary, and constant head cells on all sides to allow water to freely flow in and out of the model at gradients determined by the water table contours (Figure A2).

We assigned model river cell stage elevations every 10 feet using 10m DEM data, and then used the VM interface to interpolate the assigned values. The western-most, up-gradient elevation was 4618 ft (msl) and the eastern-most down gradient elevation was 4581 ft (msl). The water level gradient from west to east is approximately 0.0013 which is calculated by dividing the difference between river elevations on the ends of the model (37 ft) by the E-W model length (28,400 ft).

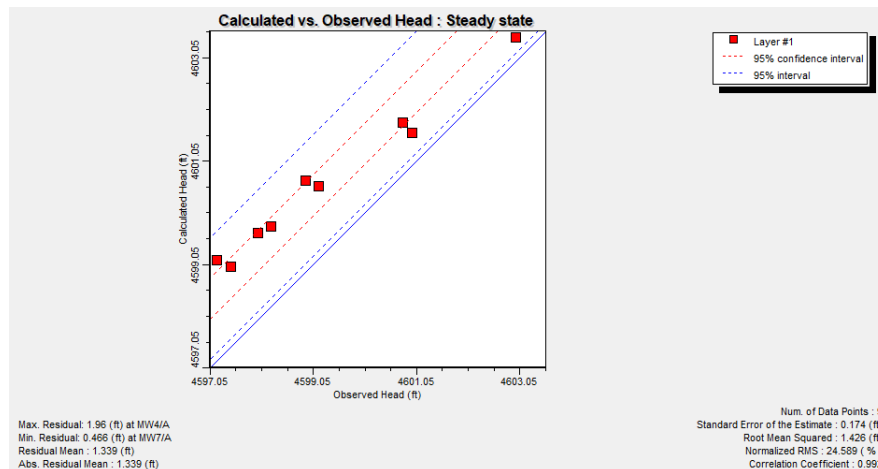
We modeled the aquifer's connection to the river using the MODFLOW "River" package which uses a streambed conductance term (COND) to calculate flow from one to the other in proportion to the hydraulic gradient of adjacent. A high level of connection mitigates impacts by allowing water to freely flow between the river and aquifer. Therefore, by using the lower end COND value that the data supports, our model creates more conservative (ie. more) modeled impacts.

COND is calculated as the product of the streambed unit conductance (Ksb/m) times the wetted river area (length \* width). Ksb is the streambed vertical permeability and m is the streambed thickness which we assume is 1 ft so that Ksb/m equals Ksb. CDM-Smith (2006, Figure 9) evaluated the streambed permeability at three sites (SC-8, SC-13, and SC-14) within 10 miles of the DPG pit, and came up with Ksb values ranging from 362 ft/day to 404 ft/day. We believe these rates are too high because they are too close to horizontal K (kh) values. Tests conducted in 2009 by Leonard Rice Engineers, Inc. (Denver, Co.) in Twn. 2N., Rng. 66W., Sec. 18, arrived at a Ksb value of 36 ft/day (Miller, 2009). We believe 36 ft/day is more accurate because it was determined through rigorous aquifer testing and is approximately 10 times less than the Kh value. A 10:1 Kh/Kv ratio is a common ratio used for alluvial aquifers. Therefore, to be conservative, we decided to reduce the connection to the river by using a Ksb of 36 ft/day. Based on average streambed widths measured from Google Earth (1/27/2017), we calculated COND values shown in the table below.

River	Stretch	Length (ft)	Width (ft)	Ksb/m (day <sup>-1</sup> )	COND (ft <sup>2</sup> /day)
S. Platte	Upstream of confluence	200	110	36	792000
S. Platte	Downstream of confluence	200	130	36	936000
Poudre	Upstream of confluence	200	55	36	396000

### *“Calibration” Results*

We conducted two model runs to evaluate the effect of installing a slurry wall around the DPG Pit. Run <DPG\_SS2> simulates the pre-mine water table. Figure A8 shows the resulting water table gradient through the model area compared to improved published elevation contours shown on Figure A2. At the project site, the modeled root mean squared error (RMSE) of the modeled heads compared to measured values is only 1.4 ft as shown in the “calibration” plot below.



The modeled vs. observed values have a correlation coefficient of 99.2% which is only 0.8% away from a perfect 1:1 relationship. We believe the modeled vs. observed heads would be closer if we lowered the 4600 ft msl SPR river elevation by 1 to 2 feet. This action would be justified based on the potential measurement error in the 4,600 ft DEM elevation. However, we feel the action would not significantly affect the “impact” results of the model, so we did not make the change.

### *Mass Balance*

Table A4 shows the model mass balance results which shows the inflow and outflow components that include constant head and river cell flows in and out of the model. The total aquifer inflow is approximately 19 cfs with only 4 cfs leaving the model. As a result, the rivers gain approximately 15 cfs with the model area.

### *Pit “Impacts”*

In run <DPG\_SS2\_wPit>, the pit model cells are turned off to simulate the effect of the slurry wall around the pit. Figure A9 is the contoured “difference” in model output heads between the post-pit run minus pre-pit run determined using GIS grid-math techniques. Positive values on the west



and southwest sides of the pit reflect mounding and negative values on the east side reflects lower water levels in the “shadow” of the pit. The maximum change in water level is less than 0.75 foot at any point around the pit. The downstream impact is constrained between the pit and the rivers at the confluence where no wells or structures exist that we are aware of.

### *Model Sensitivity*

The modeled mound and “shadow” impacts are insensitive to the hydraulic conductivity (K) of the aquifer. An increase in K causes a proportional increase in model inflows, but also increases the hydraulic connection with the creek which offsets any additional mounding or shadow effects. Therefore, not change will occur.

The model results are very sensitive to the presence of streams, but there is no realistic chance that either river will cease flowing due to strict river administration by the State. Model results are insensitive to streambed leakance. Even using a conservatively low Ksb value of 36 ft/day, the rivers are large enough and aquifer permeable enough to quickly respond to changes in groundwater levels caused by the pit.

### *Model Uncertainty*

There is uncertainty in our predictions related to measurement and modeling error. USGS 10m DEM Data was used to assign ground elevations to off-site wells. The overall accuracy of expressed as the root mean square error (RMSE) for 10m DEM data for one study in (Haneberg, 2006) is 1.87 m or approximately +/- 6 ft. The accuracy of surveyed site well elevations data is much higher, probably within a tenth of a foot, and the accuracy of hand-measured water levels can vary several inches.

Our modeled predictions (Figure A9) include three types of error: 1) conceptual error (how the model is set up and what boundary conditions are used); 2) parametric error (how aquifer properties are measured and calculated); and 3) predictive error (which includes other influences such as seasonal recharge or climate change variations). It was beyond the scope of this project to quantitatively evaluate the sum of these errors which results in considerable uncertainty. To account for uncertainty, we doubled the modeled changes shown in Figure A9, and are using Figure A10 as our more conservative “change” estimate.

### *Potentially Affected Wells*

We identified two wells that within the area of impact shown on Figure A10. Well 118187-A is a domestic well permitted to Weld County that is located within the pit boundaries. We assume that it is either mislocated, abandoned or will be abandoned as part of the pit development plan. Another well belonging to James Mathews (permit no 83280) is located approximately 650 feet west of the site and is the closest up-gradient well to the pit. After doubling the model results, we estimate that water levels could rise 0.5 to 1.0 ft at this location (Figure A10).

Table 1 provides tabulated location, depth, perforated interval, static water level, saturated aquifer thickness and reported well yield for the two potentially impacted wells.

**Table 1 – Potentially Impacted Wells**

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
83280-	4611.3	MATHEWS, JAMES L.	5.0 N	65.0 W	11	SENE	Domestic	82	62	82	11	69	20
118187--A	4607.6	WELD COUNTY	5.0 N	65.0 W	12	NWNE	Domestic	40	20	40	10	--	15

The reported static water level of the Mathews well is 11 feet below ground level. If the home has a basement, it may already be vulnerable to flooding and have a sump pump. Another 1 ft rise caused by the pit could cause basement flooding. However, if the impact can be solved by simply installing a more reliable sump pump system, we recommend that the mine operators do so. **Because only one well will likely be impacted, we do not believe the overall impact of the mine is significant.**

### Monitoring and Mitigation

We recommend that the Mine Owners should:

- Contact the owners of potentially affected wells shown on Table 1 and conduct a more detailed evaluation of the potential impacts and e mitigation options; and
- Install more monitoring wells west of the pit, to monitor and protect up-gradient homes in case our predictive analysis is incorrect or in case seasonal fluctuations in the water table cause localized basement flooding.

The Mine Owners could also install a drain on the up-gradient side of the pit that intercepts groundwater and transports it to the down gradient side where it could be recharge the aquifer. This passive mitigation system would operate whenever water levels rise into the drain on the up-gradient side of the pit. The depth, location, and size of a drain will depend on the timing and location of rising water and hydrologic properties of the aquifer and can be designed using the existing model.

### Sources

CDM-Smith, April, 2013a. South Platte Decision Support System Alluvial Groundwater Model Report.

CDM-Smith, December 6, 2006. SPDSS Phase 3, Task 34.3 South Platte Alluvium Region Aquifer Property Technical Memorandum.

CDM-Smith, June 9, 2006. SPDSS Phase 3, Task 34.3 Streambed Conductance Technical Memorandum.

Colorado Division of Water Resources (CDWR), June, 2019. Well permit websit search:  
<http://www.dwr.state.co.us/WellPermitSearch/>

Cesare, Inc., May 2, 2019. Preliminary Materials Study – DPG Mine Permitting Monitoring Well Installation Weld County, Co. Project No. 19.3016. Letter report to J.C. York, J&T Consulting, Inc.

Colorado State University (CSU), December, 31, 2013. HB12-1278 Study of the South Platte River Alluvial Aquifer. Report to the Colorado Legislature.

Haneberg, August, 2006. Effects of Digital Elevation Model Errors on Spatially Distributed Seismic Slope Stability Calculations: An Example from Seattle, Wa. Environmental & Engineering Geoscience, Vol. XII, no. 3, August, 2006, pp. 247-260.

Hurr, R. Theodore, Schneider, Paul A., and Others, 1972. Hydrogeologic Characteristics of the Valley-Fill Aquifer in the Greeley Reach of the South Platte River Valley, Colorado. USGS Open File Report 93-124. Prepared in cooperation with the Colorado Water Conservation Board.

Lindsay, D.A., Langer, W.H., and Knepper, D.H., 2005. Stratigraphy, Lithology, and Sedimentary Features of Quaternary Alluvial Deposits of the South Platte River and Some of its Tributaries East of the Front Range, Colorado. U.S. Geological Survey Professional Paper 1705.

Lindsey, D. A., Langer, W. H., and Shary, J. F., 1998, Gravel deposits of the South Platte River valley north of Denver, Colorado, Part B - Quality of gravel deposits for aggregate: U. S. Geological Survey Open-File Report 98-148-B, 24 p.

McDonald, M.G., and Harbaugh, A.W., 1988, A modular three-dimensional finite-difference ground-water flow model: Techniques of Water-Resources Investigations of the United States Geological Survey, Book 6, Chapter A1, 586 p.

Miller Groundwater Engineering, June 29, 2009. Groundwater model evaluations of the Broomfield Well Field. Letter report to Dennis McGrane, Leonard Rice Engineers, Inc.

## TABLES

**Table A1 – SEO Well Permit Data**

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
118194--A	4635.5	HOP, A	5.0 N	65.0 W	13	NESW	Domestic, Stock	66	26	66	15	51	40
4595-R-R	4657.4	AIKENS GEORGE & CARLY	5.0 N	65.0 W	2	NWNW	Municipal	135	71	133	39	96	1040
156434-	4616.3	BREICKLER DAVID R & BRENDA	5.0 N	65.0 W	14	NWNE	Household use only	34	14	34	4.7	28.8	15
11651-R-R	4633.5	HOSHIKO FARMS INC	5.0 N	65.0 W	13	SWSE	Irrigation	54	35	55	17.5	37.5	1100
20033-R-R	4637.5	HOP, ANDREW	5.0 N	65.0 W	13	SWSW	Irrigation	58	38	58	20.5	37.5	1000
161560-	4624.4	WICKERSHAM, WILLIAM F	5.0 N	65.0 W	12	SESE	Domestic	61	41	61	23	37	15
41257-F	4643.9	CHURCH OF JESUS CHRIST	5.0 N	65.0 W	1	NENW	Irrigation	88	36	88	25.4	60.6	900
183783-	4616.3	LANGE, LESLIE V	5.0 N	65.0 W	11	SESW	Household	37	17	37	5	32	15
192441-	4616.1	MCDONNELL, WILLIAM M.	5.0 N	65.0 W	11	SESW	Household use only	60	40	60	4	51	15
7161-R-R	4653.2	NOFFSINGER MANUFACTURING CO INC	5.0 N	65.0 W	2	NENE	Irrigation	78	48	78	27	48	700
208860-	4623.4	BANGHART SCOTT & TAMMERA	5.0 N	65.0 W	14	NESW	Domestic, Stock	40	35	40	8	27	15
221852-	4630.4	CORRALES, ANTONIO	5.0 N	65.0 W	10	SESE	Household use only	56	36	56	19	40	15
222001--A	4638.7	SINKIE COLLEEN KATERIE MARIE	5.0 N	65.0 W	10	SESE	Domestic	74	54	74	28	47	15
243278-	4643.1	MORALES, JORGE	5.0 N	65.0 W	10	SWSE	Household use only	60	40	60	28	25	15
264562-	4630.5	GRIEGO, KENNETH L	5.0 N	65.0 W	10	NESE	Household use only	95	60	89	16	71	15
63180-F	4629.8	HELENA CHEMICAL COMPANY	5.0 N	64.0 W	19	NENW	Commercial, Other	65	25	65	17	41	50
64677-F	4639.1	SINKIE COLLEEN KATERIE MARIE	5.0 N	65.0 W	10	SESE	Irrigation	76	36	76	19	56	190
6415-R-R	4636.4	AJR FARMS	5.0 N	65.0 W	13	NESW	Irrigation	24	42	62	24	33	1100
65240-F-R	4640.2	DIAMOND FEEDERS LLC	5.0 N	64.0 W	6	SENE	Commercial	74	54	74	49	23	180
208899--A	4620.4	BANGHART, ARNOLD	5.0 N	65.0 W	14	NESW	Household use only	60	32	52	9	40	15
280476-	4612.6	LOSTROH, KODY	5.0 N	64.0 W	6	NESW	Stock	111	50	111	12	99	500
76222-F	4610.6	WELD COUNTY	5.0 N	65.0 W	1	NESE	Other	43	22	43	17	20	650
11611-R-R	4631.3	SHAKLEE HOWARD IRREVOCABLE TRUST	5.0 N	64.0 W	18	SWSW	Irrigation	58	38	58	21	34	1050
291552-	4619.1	CLARK JAMES R & CYNTHIA K	5.0 N	65.0 W	14	NWSE	Domestic, Stock	40	20	40	4	32	14
292614-	4636.5	CARLETON & DEJONG LLC	5.0 N	65.0 W	14	SESE	Domestic, Stock	56	36	56	21	35	15
145-RD-R	4633.7	FARR FARMS CO	5.0 N	64.0 W	6	NWNW	Commercial	165	119	165	45	119	1200
335-RD-R	4642.9	FARR FARMS CO	5.0 N	64.0 W	6	NWNW	Irrigation	158	95	158	44	113	1679
4183-F	4623.8	KLEIN JAMES D & BETSY A	5.0 N	64.0 W	7	NWSW	Irrigation	65	41	65	26	39	1150
9628-	4606.2	BOSCH PETER & HENRIETTA	5.0 N	65.0 W	13	NENW	Stock	63	42	63	21	40	50
11347-F	4648.5	CHURCH OF JESUS CHRIST	5.0 N	65.0 W	1	NWNW	Irrigation	38	23	38	26	10	250
21961-	4605.2	MITANI, TAYEKO	5.0 N	64.0 W	6	NWSW	Domestic	47	35	47	18	28	8
26883-	4633.6	HIRD, DONALD	5.0 N	65.0 W	13	NENW	Stock	60	51	60	24	37	20
26980-	4633.6	VANTAGE BUILDERS INC	5.0 N	65.0 W	13	NENW	Domestic	61	52	61	24	37	20
37838-	4628.6	HICKLIN CLINTON BUD	5.0 N	65.0 W	13	NENE	Domestic	55	35	55	22	50	30

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
42978-	4619.2	KRIER ROLAND T & JOYC ALICE	5.0 N	65.0 W	14	NWSE	Domestic	50	25	50	6	38	60
48559-	4637.7	WALKER HAROLD & JANEL M	5.0 N	65.0 W	23	NWNW	Domestic	72	52	72	22	46	15
82267-	4629.8	KLEIN, JAMES D	5.0 N	64.0 W	19	NENW	Domestic, Stock	65	25	65	17	41	15
83280-	4611.3	MATHEWS, JAMES L	5.0 N	65.0 W	11	SENE	Domestic	82	62	82	11	69	20
86129-	4648.6	WAGNER JOE JR	6.0 N	65.0 W	36	SWSW	Domestic	41	22	41	25	13	20
95100-	4615.8	MARCY, DEWEY R	5.0 N	65.0 W	11	SWSE	Domestic	50	20	50	8	37	15
168216--A	4624.0	CARLSON CORWIN L & KATHERINE J	5.0 N	65.0 W	15	NENE	Commercial, Stock	66	46	66	25	41	25
171640--A	4662.6	CHURCH OF JESUS CHRIST/LDS	6.0 N	65.0 W	36	SWNW	Domestic	60	40	60	30	24	15
65244-F	4640.9	DIAMOND FEEDERS LLC	5.0 N	64.0 W	6	SENE	Commercial	74	54	74	47	26	480
65243-F	4639.8	DIAMOND FEEDERS LLC	5.0 N	64.0 W	6	SENE	Commercial	93	63	93	53	40	50
65242-F	4636.6	DIAMOND FEEDERS LLC	5.0 N	64.0 W	6	NWNE	Commercial	90	60	90	35	54	60
275685--A	4616.8	DUVALL FRANCIS & SHARON	5.0 N	65.0 W	11	NWSW	Domestic	60	37	57	7.5	47.5	15
289696--A	4616.6	CLARK JAMES R & CYNTHIA K	5.0 N	65.0 W	14	SWNE	Domestic, Stock	40	20	40	3.5	30.5	15
80233-F	4597.9	NEW CACHE LA Poudre IRRIGATION	5.0 N	64.0 W	6	SWSW	Industrial, Irrigation, Other	76	46	73	6	67	1900
588-WCB	4619.2	JENSEN, MARTHA	5.0 N	65.0 W	14	SWSE	Irrigation	73	52	73	20	53	1500
664-WCB	4646.7	LYSTER, CYRIL E	6.0 N	65.0 W	36	NWNW	Irrigation	62	41	62	32	27	1100
27143-F	4620.6	JOHNSON, W C	5.0 N	65.0 W	11	NWSW	Domestic	55	35	55	8	--	15
46535-DW	4604.9	CENTRAL CO WATER CONSERVATION DIST	5.0 N	65.0 W	12	NESE	Dewatering	53	26	56	7	--	1500
52960-MH	4635.9	JBS SWIFT BEEF COMPANY	6.0 N	64.0 W	31	NWSE	Monitoring/Sampling	20	9	19	12.46	--	4.5
81387--A	4628.7	RODRIGO &/OR KATHLEEN	5.0 N	65.0 W	10	NWSE	Domestic	47	28	47	10.5	--	30
118187--A	4607.6	WELD COUNTY	5.0 N	65.0 W	12	NWNE	Domestic	40	20	40	10	--	15
122362--A	4643.1	BERNHARDT, R	5.0 N	65.0 W	10	SWSE	Domestic	100	70	100	30	--	15
12017-R-R	4627.5	SHAKLEE HOWARD IRREVOCABLE TRUST	5.0 N	64.0 W	18	NWSE	Irrigation	70	50	70	22	--	600
76130--A	4641.8	DILL TERRY & SHARON	5.0 N	65.0 W	10	SESE	Stock	100	75	95	24	--	15
157469-	4611.3	GONZALEZ JESUS L & ELVIRA V	5.0 N	65.0 W	11	NWSE	Household use only	59	39	59	4	--	15
14962-R-R	4644.2	CHURCH OF JESUS CHRIST	5.0 N	65.0 W	1	NENE	Irrigation	132	99	129	42.7	--	1200
205705-	4640.8	CLIFT CLIFFORD W & SALLY J	5.0 N	65.0 W	15	NENE	Household	80	60	80	23	--	15
222813-	4604.8	MARCY, DEWEY	5.0 N	65.0 W	1	NESW	Commercial	70	50	70	30	--	15
242466-	4603.3	ROADIFER, CATHERINE	5.0 N	65.0 W	12	NWSW	Stock	46	26	46	8	--	15
241101-	4613.8	RODRIGUEZ, ARMANDO	5.0 N	65.0 W	11	NWSE	Household use only	65	45	65	4	--	15
250105-	4628.4	SHAKLEE HOWARD REVOCABLE TRUST	5.0 N	64.0 W	18	SESW	Domestic	58	40	58	15	--	15
6706-	4634.9	COLORADO STATE OF ADJUTANT	5.0 N	65.0 W	2	SWSW	Domestic	86	66	86	24	--	20
15107-	4611.2	NORDHALM ELMER & SHIRLEY	5.0 N	65.0 W	11	SWSW	Domestic	27	18	27	6	--	20
30675-	4611.2	CYPHERT, ROBERT J	5.0 N	65.0 W	11	NWSE	Domestic	46	37	46	4	--	30

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
30718-	4644.9	WELD COUNTY MUNICIPAL AIRPORT	5.0 N	65.0 W	2	SESW	Domestic	60	51	60	34	--	20
30719-	4644.9	WELD COUNTY MUNICIPAL AIRPORT	5.0 N	65.0 W	2	SESW	Domestic	60	51	60	32	--	30
30883-	4604.6	GOZA, CALVEN T	5.0 N	65.0 W	12	NWSW	Domestic	33	24	33	5	--	20
32613-	4599.2	PLUMB, LUCILLE	5.0 N	64.0 W	7	SENW	Domestic	40	31	40	6	--	15
32958-	4644.9	WELD COUNTY MUNICIPAL AIRPORT	5.0 N	65.0 W	2	SESW	Domestic	60	42	60	29	--	30
56099-	4611.2	OHLEMACHER, JERRY	5.0 N	65.0 W	11	SWSW	Domestic	50	30	50	18	--	15
81355-	4632.9	GREELEY CITY OF	5.0 N	65.0 W	2	SESW	Other	78	60	78	30	--	30
123793-	4658.8	NICCOLI CHARLES E & JUDY M	5.0 N	65.0 W	3	NENE	Domestic	99	79	99	40	--	30
141259-	4643.1	GERBITZ, LLOYD	5.0 N	65.0 W	10	NWSE	Household	120	90	120	26	--	16
13196--A	4659.0	MURATA, GENE	5.0 N	65.0 W	2	NWNW	Domestic	100	80	100	39	--	31
80234-F	4603.7	NEW CACHE LA POUDE IRRIGATION	5.0 N	64.0 W	6	NESW	Industrial, Irrigation, Other	83			6	--	1900
443-WCB	4637.2	BAKERINK, C F	5.0 N	65.0 W	1	NENE	Irrigation	118	78	118	36	--	1200
571-WCB	4654.7	MARTIN, DAVE	5.0 N	65.0 W	2	NWNW	Irrigation	120	99	120	38	--	350
574-WCB	4647.4	KIGHT, L A	6.0 N	65.0 W	36	NWSW	Irrigation	38	17	38	20	--	600
39900-MH	4598.6	ANACAPA LAND CO LLC	5.0 N	64.0 W	7	SWNE	Monitoring/Sampling	103	63	103	6	100	--
2932-F-R	4633.2	AIR FARMS	5.0 N	65.0 W	13	SWNE	Irrigation	61	31	61	25	35	--
34-	4652.4	HOLLOWAY, MARQUERITE	6.0 N	65.0 W	35	NESE	Domestic, Stock	60	48	60	30	27	--
1543-	4637.2	RAYBURN JOHN MRS	5.0 N	64.0 W	5	SWNW	Domestic	--	--	--	37	38	--
2591-	4634.6	BOSCH PETER & HENRIETTA	5.0 N	65.0 W	13	SENW	Domestic	60	51	60	18	42	--
4406-	4644.2	ROMBERGER FERN D MRS	6.0 N	65.0 W	36	SWSE	Domestic	--	--	--	18	19	--
13580-	4619.2	ROODEN PAUL HAROLD & BARBARA ANN	5.0 N	65.0 W	14	NENW	Domestic	252	--	--	12	24	--
14245-	4619.2	ROSS, WILLIAM	5.0 N	65.0 W	14	SESW	Domestic	363	53	363	34	17	--
18691-	4623.7	BORYS, RICHARD M	5.0 N	65.0 W	12	SESW	Domestic	45	36	45	22	19	--
39902-MH	4596.3	ANACAPA LAND CO	5.0 N	64.0 W	7	NESE	Monitoring	70	50	70	6	67	--
39903-MH	4596.3	ANACAPA LAND CO	5.0 N	64.0 W	7	SENE	Monitoring	58	38	58	6.6	67.4	--
39904-MH	4595.7	ANACAPA LAND CO	5.0 N	64.0 W	7	SESE	Monitoring	69	49	69	6.2	62.8	--
279602-	4594.1	JOURNEY VENTURES	5.0 N	64.0 W	7	SENE	Monitoring	58	38	58	2	55	--
279603-	4595.7	JOURNEY VENTURES	5.0 N	64.0 W	7	NESE	Monitoring	55	35	55	2	49	--
618-WCB	4622.2	ADAMS, HENRY	5.0 N	64.0 W	18			68	59	68	22	43	--
145-RD-R	4648.2	NOFFSINGER MFG CO	6.0 N	64.0 W	31	SWSW	Irrigation	165	119	165	45	--	1200
19090-MH	4656.7	NORTH FRONT RNG WTR QUAL PLAN	6.0 N	65.0 W	36	SWNW	Monitoring	44	29	39	39	--	--
24586-MH	4623.2	HANSON, EXCAVATING	5.0 N	65.0 W	3	SWSE	Monitoring	27	15	25	7	--	--
39697-MH	4634.9	AIR NATIONAL GUARD STATION	5.0 N	65.0 W	2	SWSW	Monitoring	46	23	46	30	--	--
45248-MH	4639.8	CERVI, MIKE	6.0 N	65.0 W	36	SESW	Monitoring	32	25	35	--	--	--



Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
45249-MH	4632.3	CERVI, MIKE	5.0 N	65.0 W	1	NESW	Monitoring	60	--	--	--	--	--
45250-MH	4634.2	CERVI, MIKE	5.0 N	65.0 W	1	SWNE	Monitoring	60	--	--	--	--	--
45661-MH	4604.9	HALL IRWIN CORP	5.0 N	65.0 W	12	NESE	Monitoring	--	--	--	--	--	--
45663-MH	4609.1	HALL IRWIN CORP	5.0 N	65.0 W	12	NWSW	Monitoring	--	--	--	--	--	--
48186-MH	4595.7	JOURNEY	5.0 N	64.0 W	7	SESE	Monitoring	--	--	--	4.2	--	--
48748-MH	4612.2	ERO RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
53371-MH	4646.3	JBS SWIFT BEEF COMPANY	6.0 N	64.0 W	31	SESE	Monitoring	30	20	30	--	--	--
58629-MH	4646.5	JBS SWIFT BEEF	6.0 N	64.0 W	31	SESE	Monitoring	50	35	50	30	--	--
86129--A	4648.6	BOHMC O LLC	6.0 N	65.0 W	36	SWSW	Domestic	41	22	41	--	--	--
97830--A	4620.8	CLARK, JAMES R	5.0 N	65.0 W	14	NWNE	Domestic, Stock	36	16	36	--	--	--
123793--A	4658.8	NICCOLI CHARLES E & JUDY M	5.0 N	65.0 W	3	NENE	Domestic	99	79	99	--	--	--
148328-	4642.5	MICHAEL, DOUG	5.0 N	65.0 W	10	NWSE	Household	85	65	85	19	--	15
159095-	4622.1	LORENZ, HERBERT	5.0 N	65.0 W	14	NWNW	Domestic, Stock	30	--	--	--	--	--
198176-	4627.2	SHARP DONOVAN J & JANEL D	5.0 N	64.0 W	18	NWSE	Domestic	60	--	--	--	--	--
223448-	4626.1	HINOJOSA RODRIGO & KATHLEEN	5.0 N	65.0 W	10	NWSE	Domestic	45	--	--	--	--	--
276114-	4619.5	M & M EXCAVATION	5.0 N	64.0 W	17	NENW	Domestic, Stock	90	--	--	--	--	--
67520-F	4645.5	LWM WASHOUT LLC	5.0 N	65.0 W	1	NENE	Commercial	118	78	118	--	--	--
68973-F	4623.3	REAM, JANET L	5.0 N	65.0 W	14	NESE	Other	7	--	--	--	--	--
285655-	4622.5	STANLEY, VICTOR E	5.0 N	65.0 W	10	SESE	Irrigation	51	--	--	--	--	--
79057-F	4595.7	JOURNEY VENTURES	5.0 N	64.0 W	7	SE	Other	--	--	--	--	--	--
307422-	4613.8	SPELLANE, MEGAN	5.0 N	65.0 W	13	NWNW	Domestic, Stock	60	--	--	--	--	--
313449-	4610.1	NORTHERN WATER	5.0 N	64.0 W	6	NWSW	Monitoring	49	--	--	--	--	--
190-RD	4652.4	NOFFSINGER MFG	6.0 N	65.0 W	35	NESE	Irrigation	--	--	--	--	--	--
226-R	4619.0	OSTER LARRY/LISA DALTON	5.0 N	65.0 W	11	SWSW	Irrigation	31	--	--	--	--	--
302-R	4612.6	TOKUYASU, S	5.0 N	64.0 W	6	NWSW	Irrigation	51	--	--	--	--	--
304-R	4612.6	TOKUYASU ROBERT & BOB MITANI	5.0 N	64.0 W	6	NWSW	Irrigation	45	22	45	--	--	--
910-	4619.8	HERRICK, C E	5.0 N	65.0 W	14	NWNW	Domestic	--	--	--	--	--	--
985-	4635.3	FLESHMAN, B A	5.0 N	65.0 W	15	NENE	Domestic	--	--	--	--	--	--
1361-R	4624.9	70 RANCH RESOURCES DEVELOPMENT LLC	5.0 N	64.0 W	18	NESW	Irrigation	61	28	61	--	--	--
3739-	4608.6	WALKER JOHN J&SON	5.0 N	65.0 W	10	NWNE	Domestic	--	--	--	--	--	--
4507-R	4616.7	GREELEY CITY OF	5.0 N	65.0 W	10	NESE	Irrigation	--	--	--	--	--	--
4561-	4616.4	SCHMUNK, JAKE	5.0 N	65.0 W	10	SWNE	Domestic	--	--	--	--	--	--
6023-R	4621.6	FANGMEIER FREDERICK V & DOTSON BE	5.0 N	65.0 W	11	NWSW	Irrigation	--	--	--	--	--	--
6081-	4612.6	COOK JAKE D & DOROTHY	5.0 N	65.0 W	11	NWSE	Domestic	--	--	--	--	--	--
6416-R	4633.8	AJR FARMS	5.0 N	65.0 W	13	SESW	Irrigation	59	--	--	--	--	--

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
8640-R	4641.1	BOSCH PETER & HENRIETTA	5.0 N	65.0 W	13	SWNE	Irrigation	28	--	--	--	--	--
8641-R	4619.2	CARLETON & DEJONG LLC	5.0 N	65.0 W	14	SWSE	Irrigation	73	--	--	--	--	--
8743-R	4653.7	WAGNER JOE A & DORA	5.0 N	65.0 W	2	NWNE	Irrigation	--	--	--	--	--	--
9230-F	4650.2	CHURCH OF JESUS CHRIST	6.0 N	65.0 W	36	NWSE	Irrigation	87	72	87	--	--	--
11182-R	4605.2	STRAUSHEIM, RUDY	5.0 N	64.0 W	6	SWNW	Irrigation	73	--	--	--	--	--
11188-R	4646.7	ZABKA DUANE D & DOROTHY	6.0 N	65.0 W	36	NWNE	Irrigation	--	--	--	--	--	--
11399-R	4622.2	GUNTHER, EUGENE	5.0 N	64.0 W	18	SWNE	Irrigation	51	22	51	--	--	--
11604-R	4599.2	DUNN, CLARENCE E	5.0 N	64.0 W	7	SWSW	Irrigation	--	--	--	--	--	--
11605-R	4627.8	LOWER LATHAM RESERVOIR COMPANY	5.0 N	64.0 W	18	NENW	Irrigation	63	--	--	--	--	--
11844-R	4622.2	PUYPE, HELEN D	5.0 N	64.0 W	18	SENE	Irrigation	85	55	85	--	--	--
11854-	4611.2	THOMPSON, JOHN	5.0 N	65.0 W	11	NWSW	Domestic	--	--	--	--	--	--
11964-R	4646.7	BENSON TERRY & SHARON	6.0 N	65.0 W	36	NWSW	Irrigation	45	--	--	--	--	--
12187-R	4648.9	BENSON, ARNOLD	6.0 N	64.0 W	31	NWSW	Irrigation	--	--	--	--	--	--
12312-R	4615.3	CHURCH OF JESUS CHRIST	5.0 N	64.0 W	6	NESE	Irrigation	62	--	--	--	--	--
12985-R	4599.2	KLEIN JAMES D & BETSY A	5.0 N	64.0 W	7	SWSE	Irrigation	72	48	72	--	--	--
13255-R	4624.7	BORYS, RICHARD M	5.0 N	65.0 W	12	SWSE	Irrigation	72	--	--	--	--	--
13256-R	4604.6	LANE, CLAUD	5.0 N	65.0 W	12	NWSE	Irrigation	--	--	--	--	--	--
13380-R	4605.2	SILVA JOE C & MARIE NANCY	5.0 N	64.0 W	6	NESW	Irrigation	50	20	50	--	--	--
14178-R	4640.9	STRAIGHT, LOWELL G	5.0 N	65.0 W	10	SESE	Irrigation	--	--	--	--	--	--
14869-R	4616.8	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Irrigation	40	25	40	--	--	--
14961-R	4604.6	DAVIS, ROBERT S	5.0 N	65.0 W	12	SWNE	Irrigation	--	--	--	--	--	--
14963-R	4643.8	FAKILAND RESERVE	5.0 N	65.0 W	1	NENE	Irrigation	118	--	--	--	--	--
18758-	4644.9	CARLISLE, DONALD	5.0 N	65.0 W	2	NESW	Domestic	--	--	--	--	--	--
21090-	4644.9	LAJAGA ENGINEERING CO	5.0 N	65.0 W	2	NWSW	Domestic	--	--	--	--	--	--
44659-	4599.2	DUNN, CLARENCE E	5.0 N	64.0 W	7	SWSW	Domestic	--	--	--	--	--	--
44660-	4625.5	GROSSNICKLE TRAVIS D & MICHELLE L	5.0 N	64.0 W	18	NENW	Domestic	40	7	36	--	--	--
81387-	4628.7	REYNOLDS, JOHN	5.0 N	65.0 W	10	NWSE	Domestic	--	--	--	--	--	--
83516-	4615.0	CONNELL RICHARD CLAYTON	5.0 N	65.0 W	11	NWSE	Domestic	--	--	--	--	--	--
102669-	4607.4	MATHEWS, W C	5.0 N	65.0 W	12	NWSW	Domestic	55	10	55	--	--	--
128731-	4605.6	HEMSTREET WILLIAM E & ROHLF E J	5.0 N	64.0 W	6	NWSE	Domestic, Stock	--	--	--	--	--	--
19163-MH	4631.2	HOSHIKO DENNIS % NO FR RNG WQPA	5.0 N	65.0 W	13	SWSE	Monitoring	30	15	25	18	--	--
39901-MH	4616.1	ANACAPA LAND CO LLC	5.0 N	64.0 W	7	NWSE	Monitoring	62	42	62	6	--	--
45247-MH	4643.2	CERVI, MIKE	6.0 N	65.0 W	36	SESE	Monitoring	60	--	--	--	--	--
160704-	4632.4	HOWARD CECIL & SHIRLEY	5.0 N	64.0 W	18	SWSW	Domestic, Stock	--	--	--	--	--	--
251500-	4623.2	JAIMES, BERTHA A	5.0 N	64.0 W	17	NWSW	Domestic	100	--	--	--	--	--
269260-	4633.1	LW MILLER	5.0 N	65.0 W	1	NWSE	Monitoring	60	--	--	--	--	--
269261-	4634.2	LW MILLER	5.0 N	65.0 W	1	SWNE	Monitoring	60	--	--	--	--	--

Permit Number	DEM Elev (ft)	Contact Name	Township	Rng	Sec	Qtr-Qtr	Use(s)	Well Depth (ft)	Perf. Top Depth (ft)	Bot. Perf. Depth (ft)	Static Water Level (ft)	Sat. Thick. (ft)	Yield (gpm)
269262-	4643.2	LW MILLER	6.0 N	65.0 W	36	SESE	Monitoring	60	--	--	--	--	--
269263-	4639.8	LW MILLER	6.0 N	65.0 W	36	SESW	Monitoring	32	25	35	--	--	--
65247-F	4618.4	DIAMOND FEEDERS	5.0 N	64.0 W	6	NWNW	Commercial	--	--	--	--	--	--
65241-F	4607.6	DIAMOND FEEDERS	5.0 N	64.0 W	6	SWNE	Commercial	--	--	--	--	--	--
276391-	4616.9	MERIT, ENERGY	5.0 N	65.0 W	11	SESW	Monitoring	8	4	8	--	--	--
276392-	4617.0	MERIT, ENERGY	5.0 N	65.0 W	11	SESW	Monitoring	8	4	8	--	--	--
276393-	4616.9	MERIT, ENERGY	5.0 N	65.0 W	11	SESW	Monitoring	8	4	8	--	--	--
276394-	4617.6	MERIT, ENERGY	5.0 N	65.0 W	11	SESW	Monitoring	8	4	8	--	--	--
276395-	4620.7	MERIT, ENERGY	5.0 N	65.0 W	11	SESW	Monitoring	8	4	8	--	--	--
279599-	4598.0	JOURNEY VENTURES	5.0 N	64.0 W	7	SESE	Monitoring	48	28	48	6	--	--
279600-	4601.2	JOURNEY VENTURES	5.0 N	64.0 W	7	NWSE	Monitoring	65	45	65	--	--	--
279601-	4598.1	JOURNEY VENTURES	5.0 N	64.0 W	7	SWNE	Monitoring	--	--	--	--	--	--
283738-	4611.2	ERO, RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
283739-	4611.7	ERO, RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
283740-	4613.1	ERO, RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
283741-	4614.1	ERO, RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
283742-	4613.0	ERO, RESOURCES	5.0 N	65.0 W	11	NENW	Monitoring	--	--	--	--	--	--
289696-	4616.9	CLARK JAMES R & CYNTHIA K	5.0 N	65.0 W	14	SWNE	Domestic, Stock	35	--	--	--	--	--
293701-	4621.8	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Monitoring	40	5	40	--	--	--
293702-	4618.4	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Monitoring	37	5	37	--	--	--
293703-	4615.5	VARRA COMPANIES	5.0 N	65.0 W	10	NENE	Monitoring	37	5	37	--	--	--
293704-	4617.3	VARRA COMPANIES	5.0 N	65.0 W	10	NWNE	Monitoring	44	5	44	--	--	--
293705-	4610.4	VARRA COMPANIES	5.0 N	65.0 W	10	NWNE	Monitoring	40	5	40	--	--	--
293706-	4626.8	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Monitoring	46	5	46	--	--	--
293707-	4622.0	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Monitoring	45	5	45	--	--	--
293708-	4620.2	VARRA COMPANIES	5.0 N	65.0 W	10	SWNE	Monitoring	40	5	40	--	--	--
293709-	4616.5	VARRA COMPANIES	5.0 N	65.0 W	10	SENE	Monitoring	36	6	36	--	--	--
293710-	4616.5	VARRA COMPANIES	5.0 N	65.0 W	10	SENE	Monitoring	36	5	36	--	--	--
293711-	4615.7	VARRA COMPANIES	5.0 N	65.0 W	10	SENE	Monitoring	36	5	36	--	--	--
293712-	4617.3	VARRA COMPANIES	5.0 N	65.0 W	10	SENE	Monitoring	46	5	46	--	--	--
293713-	4615.0	VARRA COMPANIES	5.0 N	65.0 W	10	NENE	Monitoring	44	5	44	--	--	--
557-WCB	4648.1	KIGHT, L A	6.0 N	65.0 W	36	SWSW	Domestic	38	29	38	21	--	--
900-WCB	4625.3	ARMITAGE B A & ETHEL	5.0 N	64.0 W	18	SENE	Irrigation	61	--	--	--	--	--
							Minimum	7			2	10	4.5
							Maximum	165			53	119	1900
							Average	61			20	45	327

**Table A2 – DPG Pit Exploration Borehole Data**

Well ID	COSPN_X	COSPE_Y	Elev (ft_msl)	Depth to Bedrock (ft)	Bedrock Elev. (ft)	Depth to Water (ft)	Water Elev. (ft_msl)	Sat. Thickness (ft)
MW-1	3246739	1397275	4607.50	105.0	4712.5	6.9	4601	98.1
MW-2	3247792	1397095	4604.82	102.0	4706.8	5.8	4599	96.2
MW-3	3245445	1396721	4603.55	98.0	4701.6	5.7	4598	92.3
MW-4	3247580	1396453	4599.50	75.0	4674.5	2.5	4597	72.5
MW-5	3245671	1396090	4604.64	60.0	4664.6	6.6	4598	53.4
MW-6	3246754	1396130	4607.08	80.0	4687.1	6.3	4601	73.7
MW-7	3248935	1395392	4610.66	57.0	4667.7	7.8	4603	49.2
MW-8	3247309	1395090	4608.93	86.0	4694.9	10.2	4599	75.8
MW-9	3245035	1394654	4603.72	83.0	4686.7	6.4	4597	76.6

**Table A3 – DPG Pit Monitoring Well Levels (Spring, 2019)**

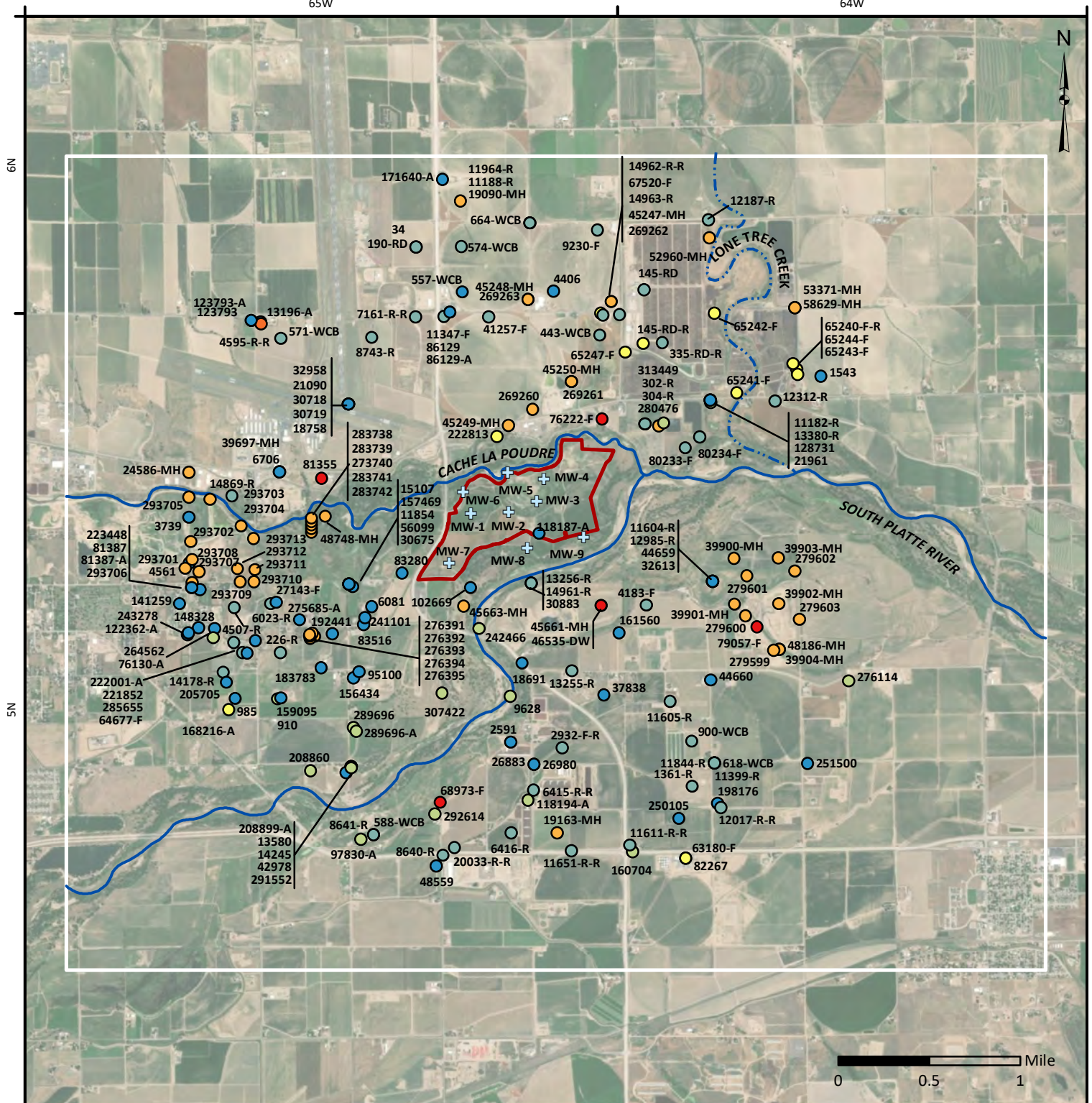
Well Designation	DPG MW-4			DPG MW-5			DPG MW-6		
Description	East Side of Phase 1 North			Northeast Side of Phase 1			Northwest Side of Phase 2		
Top of Casing El. (ft)	4602.39			4607.94			4610.32		
Ground El.(ft)	4599.50			4604.64			4607.08		
Date	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)
April 19, 2019	5.69	2.80	4596.70	10.10	6.80	4597.84	9.92	6.68	4600.40
May 8, 2019	5.83	2.94	4596.56	10.38	7.08	4597.57	9.90	6.66	4600.42
May 29, 2019	4.60	1.71	4597.79	9.08	5.78	4598.86	8.79	5.55	4601.53
June 13, 2019	4.71	1.82	4597.68	9.29	5.99	4598.65	8.81	5.57	4601.51
<b>Average:</b>	5.21	2.32	4597.18	9.71	6.41	4598.23	9.35	6.11	4600.97
<b>Max. Change to Date:</b>	0.98			1.29			1.13		
Well Designation	DPG MW-7			DPG MW-8			DPG MW-9		
Description	Southeast Side of Phase 3			South Side of Phase 3 and 4			Southeast Side of Phase 4		
Top of Casing El. (ft)	4613.43			4611.63			4606.71		
Ground El.(ft)	4610.66			4608.93			4603.72		
Date	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)	Depth to Water [TOC] (ft)	Depth to Water {TOG} (ft)	Water El. (ft)
April 19, 2019	10.81	8.04	4602.62	13.19	10.49	4598.44	9.71	6.72	4597.00
May 8, 2019	10.92	8.15	4602.51	13.33	10.63	4598.30	10.31	7.32	4596.40
May 29, 2019	10.04	7.27	4603.39	12.10	9.40	4599.53	8.17	5.18	4598.54
June 13, 2019	10.04	7.27	4603.39	12.31	9.61	4599.32	8.85	5.86	4597.86
<b>Average:</b>	10.45	7.68	4602.98	12.73	10.03	4598.90	9.26	6.27	4597.45
<b>Max. Change to Date:</b>	0.77			1.23			2.15		

**Table A4 – Mass Balance – Steady State (no pit)**

<b>MODEL INFLOW</b>	<b>(cfs)</b>	<b>MODEL OUTFLOW</b>	<b>(cfs)</b>	<b>IN-OUT</b>
Storage	0	Storage	0	0.00
Constant Head	18.94	Constant Head	4.10	14.84
River Leakage	5.17	River Leakage	20.01	-14.84
<b>Total</b>	<b>24.11</b>	<b>Total</b>	<b>24.11</b>	<b>0.00</b>

## FIGURES



**Figure A1****Study Area with Well Permits**

DPG  
Weld County, Colorado

**Map Legend**

- ▭ DPG Permit Boundary
- Model Extent
- + DPG Monitoring Well\*
- MW-1**

*DWR Constructed Well Use\**

- Domestic
- Irrigation
- Stock
- Commercial
- Monitoring/Sampling
- Municipal
- Other

\* Permit/Well ID shown  
adjacent to well

Sources:  
CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N

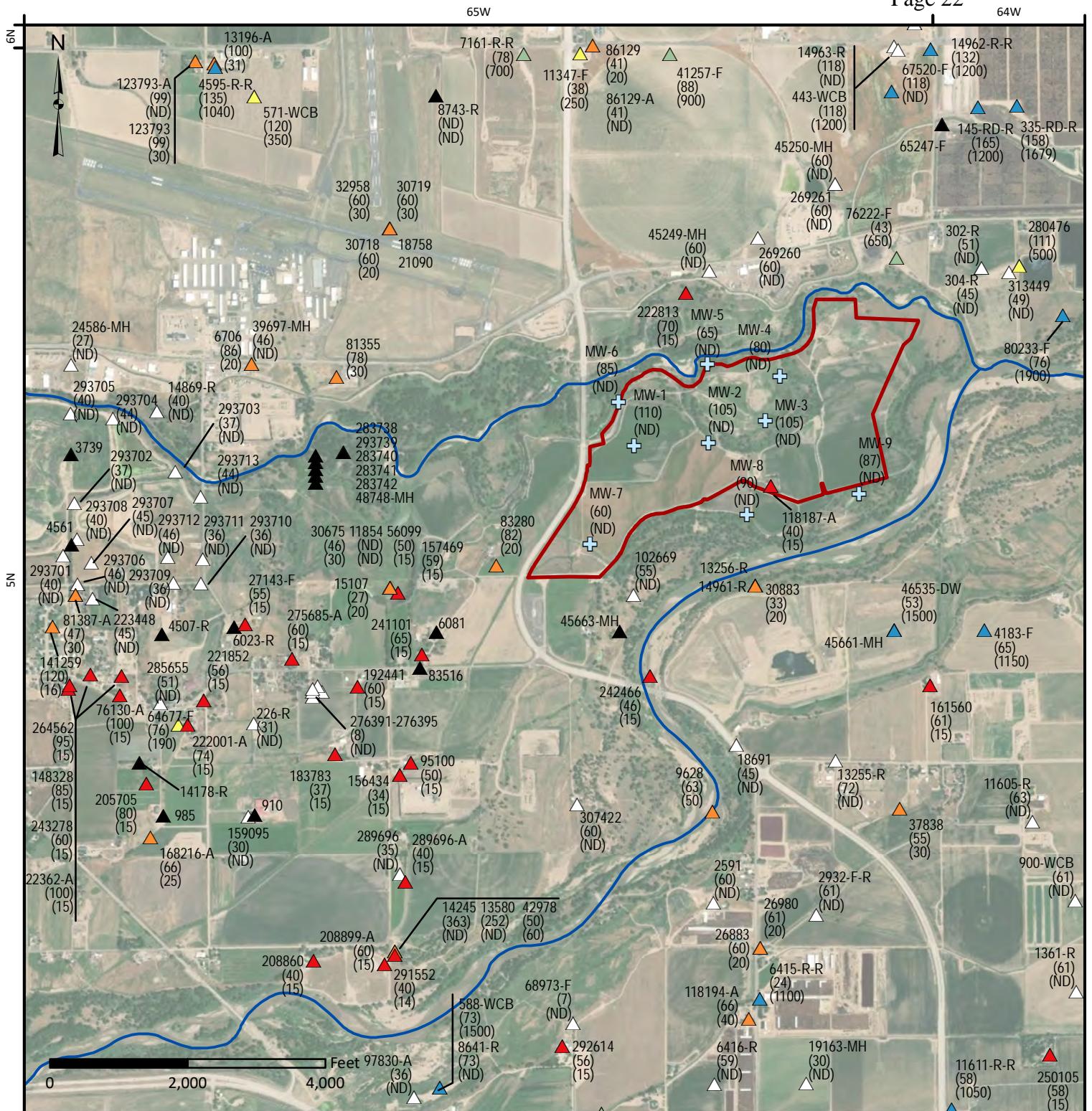


**McGrane Water**  
Engineering, LLC







**Figure A3****Well Depth and Yield  
in Pit Vicinity**

DPG  
Weld County, Colorado

**Map Legend**

- ▭ DPG Permit Boundary
- Model Extent
- + DPG Monitoring Well\*
- ▲ DWR Well with No Well Depth/Well Yield (Labeled with permit # only)

- Well Yield (gpm)\***
- ▲ 4 - 15
  - ▲ 16 - 100
  - ▲ 101 - 500
  - ▲ 501 - 1000
  - ▲ 1001 - 1900
  - ▲ No Well Yield

\*Points labeled with:  
Well Permit #  
(well depth - ft)  
(yield - gpm)

**Sources:**

CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019

Datum/Projection:  
NAD83/UTM Zone 13N

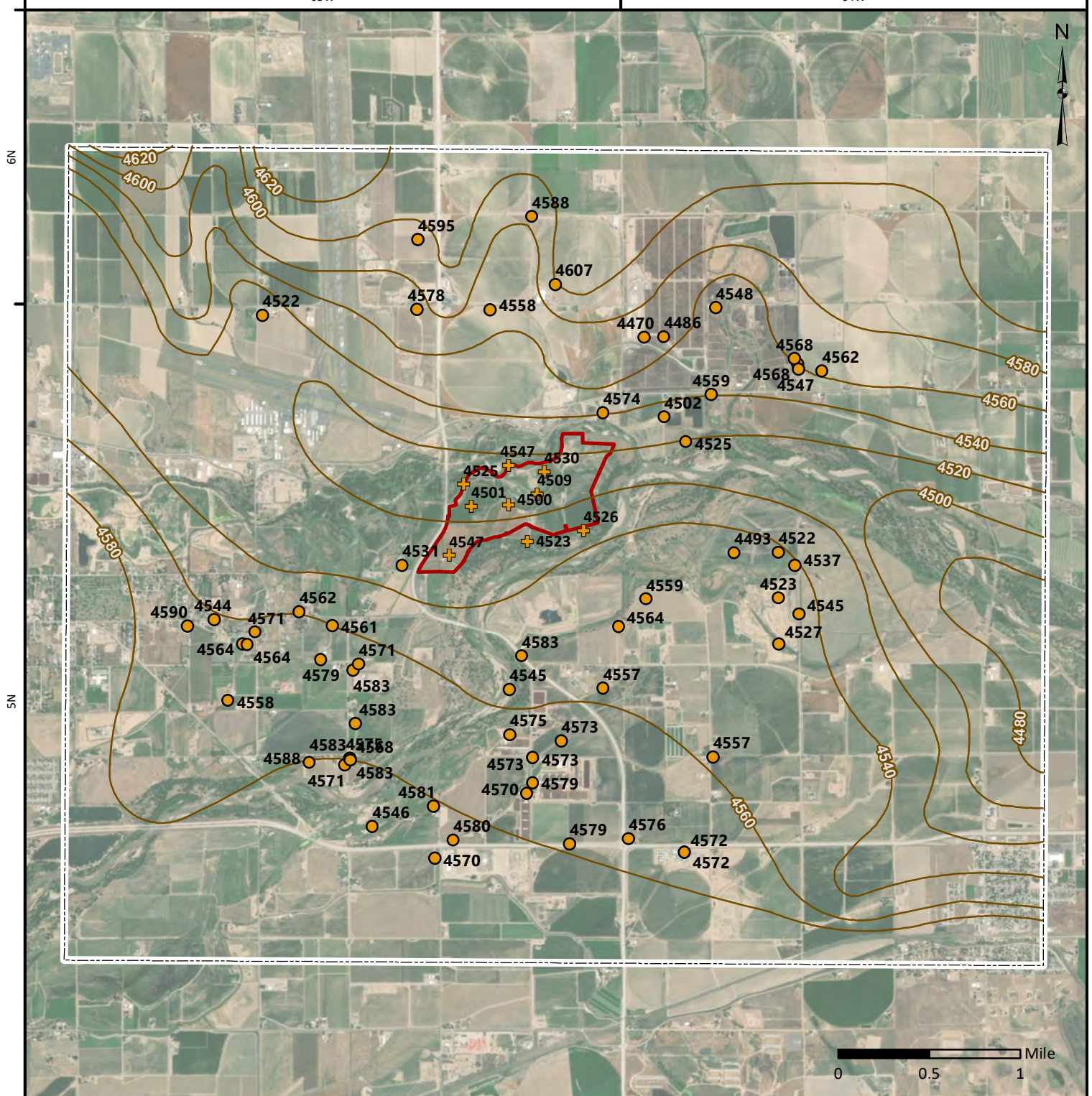


**McGrane Water**  
Engineering, LLC



65W

64W

**Figure A4****Bedrock Elevation**

DPG  
Weld County, Colorado

**Map Legend**

- 4561 Well with Bedrock Elevation (elevation shown adjacent to well)
- + 4561 DPG Monitoring Well (elevation shown adjacent to well)
- ▭ DPG Permit Boundary
- Model Extent
- Bedrock Elevation Contour\* (Interval = 10 ft)

\*Revised from  
Hurr & Schneider

Sources:  
CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N



**McGrane Water**  
Engineering, LLC



65W

64W

6N

5N



0 0.5 1 Mile

## Figure A5

### Well Saturated Thickness

DPG  
Weld County, Colorado

### Map Legend

- 32.5  
● DWR Well with Saturated Thickness Data\*
- 42.1  
+ DPG Monitoring Well\*
- DPG Permit Boundary
- Model Extent

\*Saturated thickness calculated by subtracting revised bedrock from modeled water table.

Saturated thickness in parantheses adjacent to well (ft)

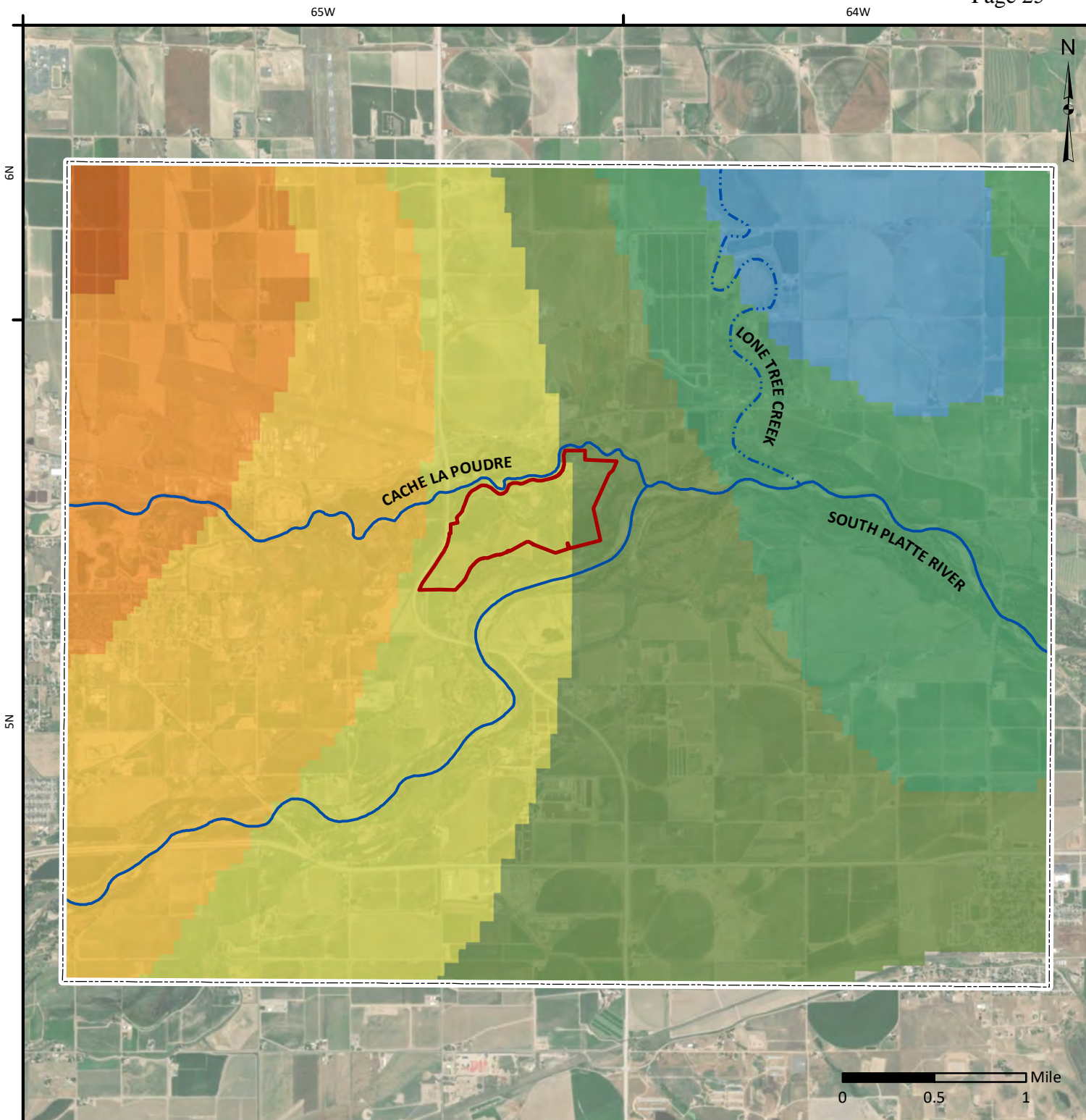
Sources:  
CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N



**McGrane Water**  
Engineering, LLC



**Figure A6****Aquifer Hydraulic Conductivity**

DPG  
Weld County, Colorado

**Map Legend**

- DPG Permit Boundary
- Model Extent

*Hydraulic Conductivity (ft/day)\**

- < 250
- 250 - 300
- 300 - 350
- 350 - 400
- 400 - 450
- 450 - 500
- 500 - 546

\*The SPDSS k grid raster was resampled to 200 ft resolution to match the model cell size.

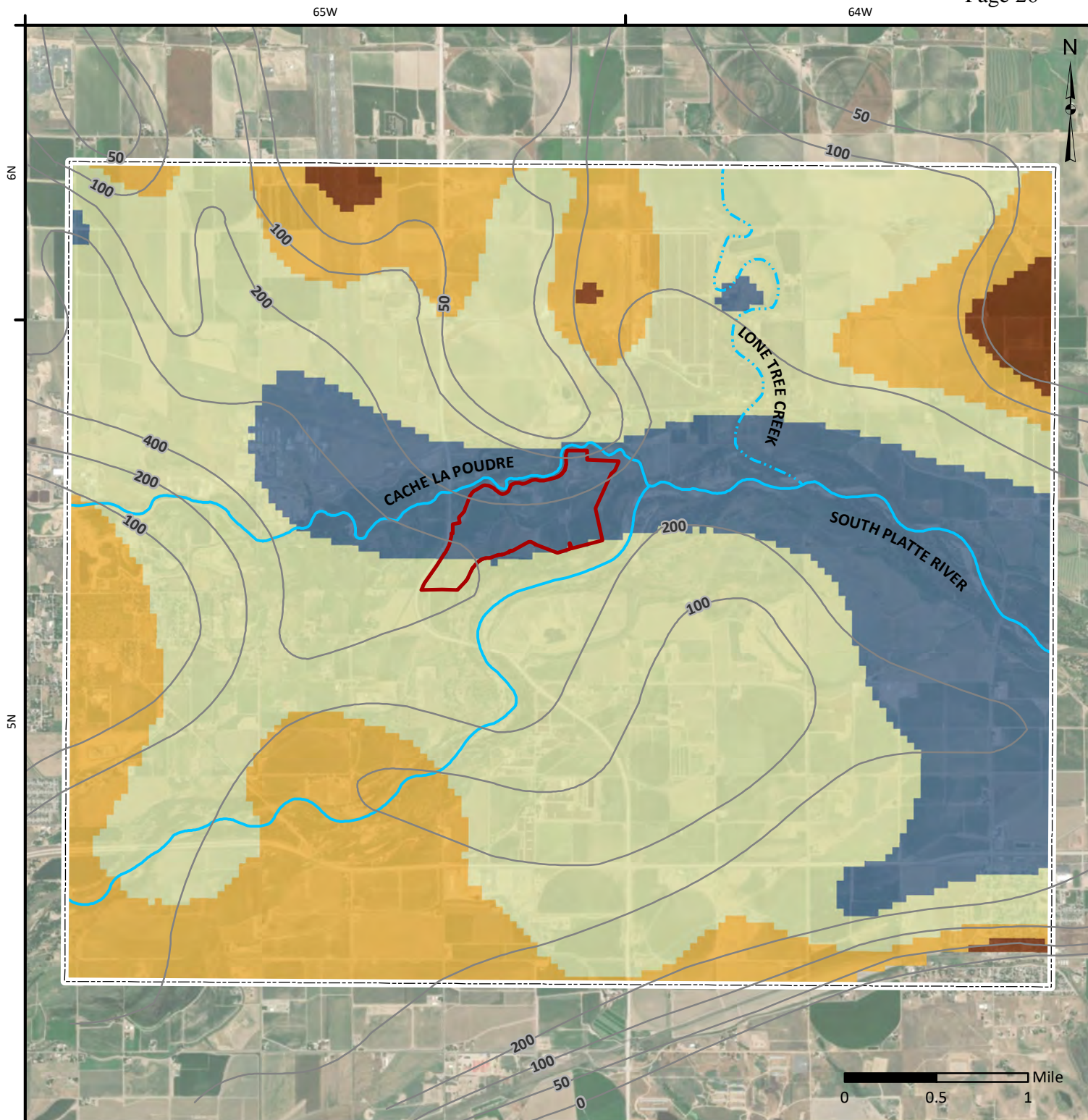
Sources:  
CDSS Well Permit Database 061019, SPDSS Raster Database, JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N



**McGrane Water**  
Engineering, LLC



**Figure A7****Transmissivity**

DPG  
Weld County, Colorado

**Map Legend**

DPG Permit Boundary

Model Extent

~ Transmissivity Contour  
from Hurr & Schneider  
Contour interval varies;  
values given in thousands  
of gallons per day per foot

*Transmissivity\**  
(1000s gpd/ft)

0 - 50  
50 - 100  
100 - 200  
200 - 374

\*Calculated by subtracting revised (from H&S) top of bedrock elevation from revised (from H&S) water table elevation and multiplying it by the SPDDS K raster grid (resampled to 200 ft).

Sources:  
CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N



**McGrane Water**  
Engineering, LLC

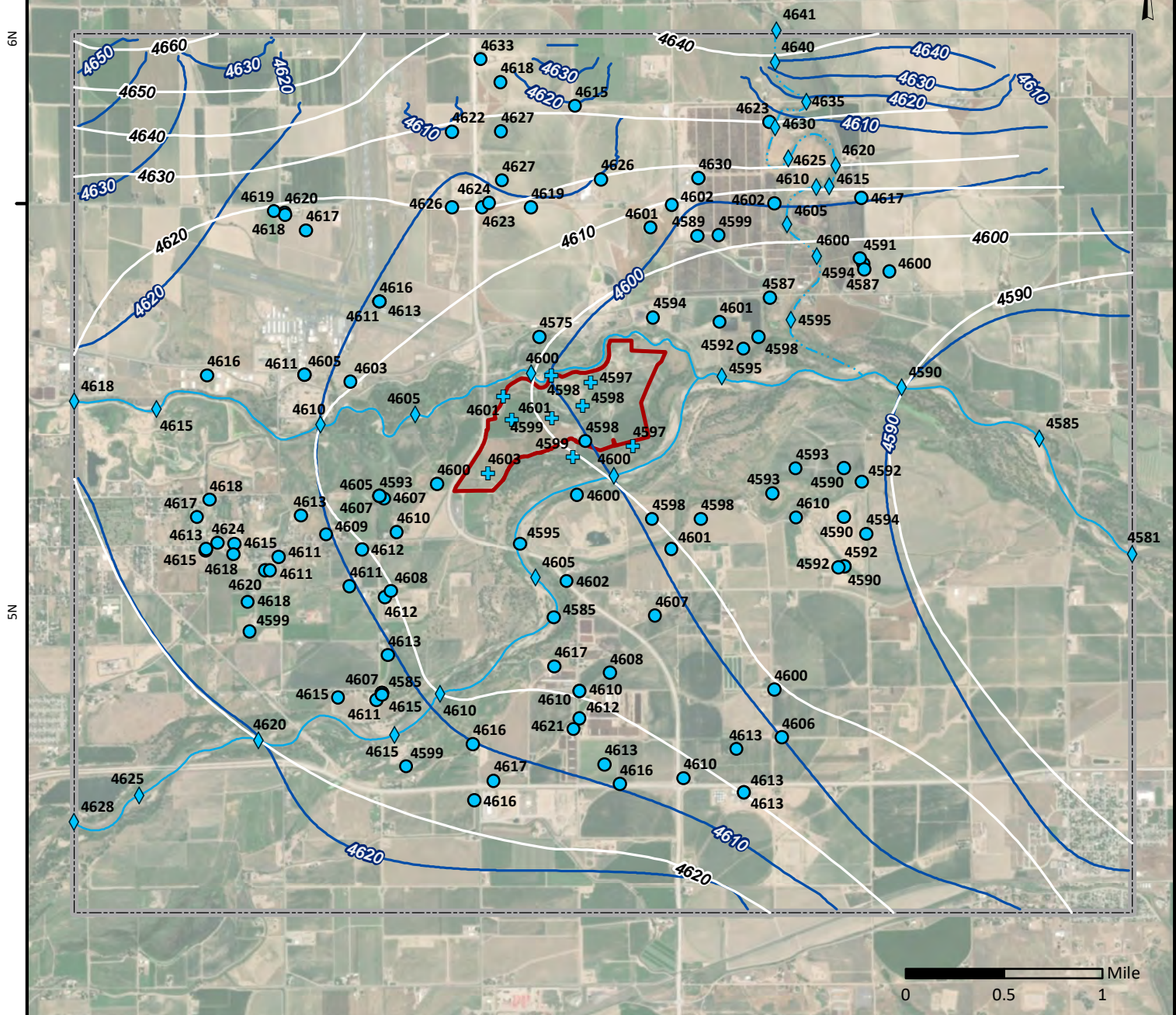


65W

64W

6N

5N

**Figure A8**

## Model Water Table Elevation Comparison

DPG  
Weld County, Colorado

### Map Legend

4561  
◆ Elevation at River\*

4561  
● Well with Static Water Ele.\*

4561  
+ DPG Monitoring Well \*

\* Water table elevation as recorded on boring log or monitoring well database shown adjacent to well.

DPG Permit Boundary

Model Extent

Modeled Water Table Elevation Contour  
(Contour Interval = 10 ft)

Water Table Elevation Contour  
(Contour Interval = 10 ft  
(revised from Hurr & Schneider)

#### Sources:

CDSS Well Permit Database 061019, Hurr & Schneider (OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019

Datum/Projection:  
NAD83/UTM Zone 13N

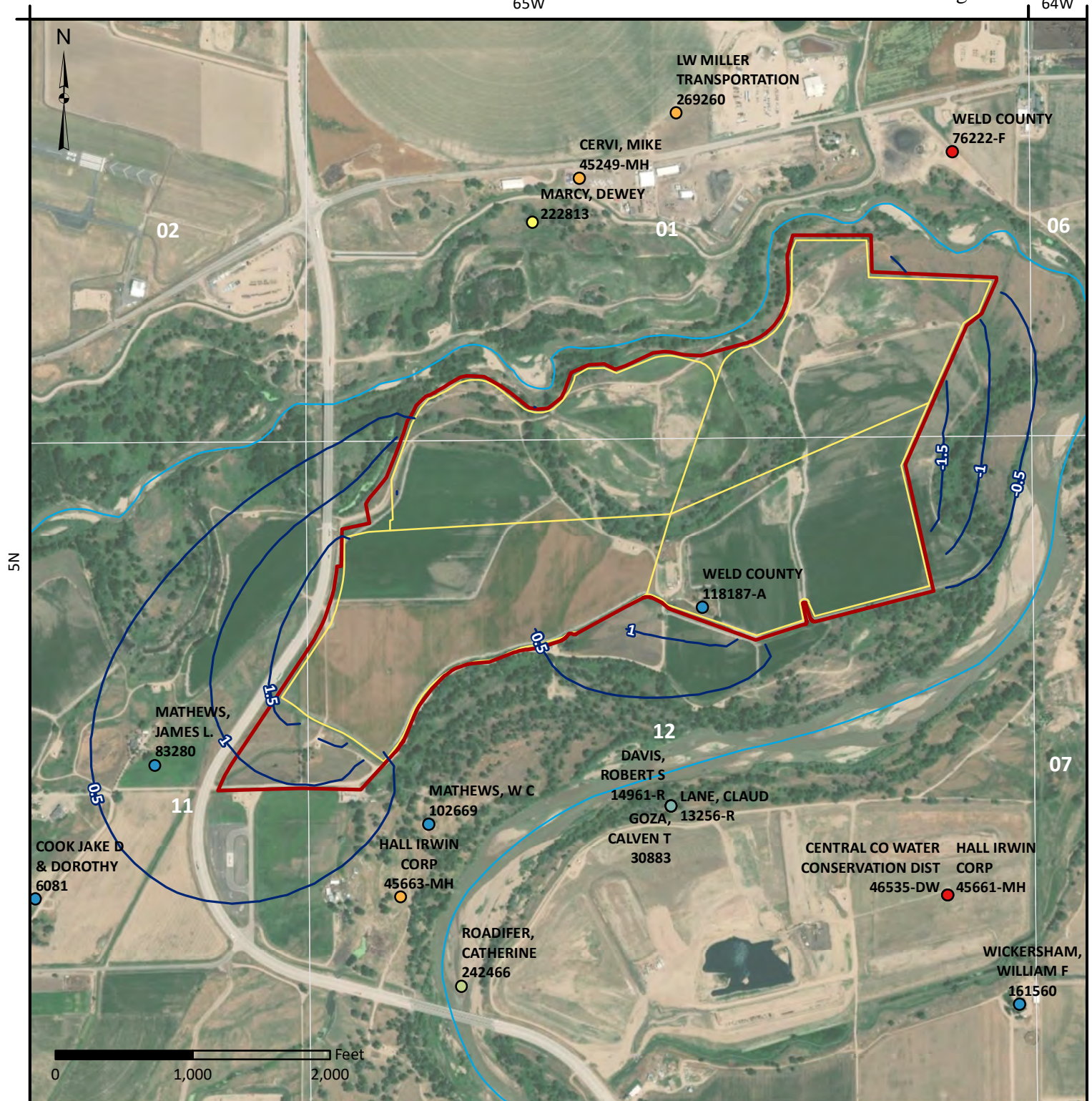


**McGrane Water**  
Engineering, LLC







**Figure A10****Uncertainty Analysis - Estimated Change in Water Levels in Pit Vicinity**

DPG  
Weld County, Colorado

**Map Legend**

- DPG Permit Boundary
- Proposed Slurry Wall
- Change in Water Level Contour (interval = 0.5 ft)

\*Well contact name and permit number shown adjacent to well

**DWR Constructed Well Use\***

- Domestic
- Irrigation
- Stock
- Commercial
- Monitoring/Sampling
- Municipal
- Other

Sources:  
CDSS Well Permit Database 061019, Hurr & Schneider  
(OF-93-124), JT Consulting, ESRI World Imagery

Date: June 27, 2019  
Datum/Projection:  
NAD83/UTM Zone 13N



**McGrane Water**  
Engineering, LLC

Structural DG Site

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1. Article Addressed to: <b>Catherine Roadifer 3791 E. 18<sup>th</sup> Street Greeley, CO 80631</b>		3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery (over \$500)	
2. Article Number (Transfer from service label) <b>7017 3380 0000 7022 8321</b>		<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery	

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1. Article Addressed to: <b>Mathews Family Enterprises 3791 E. 18<sup>th</sup> Street Greeley, CO 80631</b>		3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery (over \$500)	
2. Article Number (Transfer from service label) <b>7017 3380 0000 7022 8284</b>		<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery	

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PDC Energy, Inc.  
1775 Sherman St., Ste. 3000  
Denver, CO 80203



9590 9402 3805 8032 5744 65

2. Article Number (Transfer from service label)

7017 3380 0000 7022 8314

PS Form 3811, July 2015 PSN 7530-02-000-9053

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C. Date of Delivery

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1. Article Addressed to:

Noble Midstream  
Attn: Eric T. Vandecar  
1625 Broadway, Suite 2200  
Denver, CO 80202



9590 9402 3805 8032 5744 58

2. Article Number (Transfer from service label)

7017 3380 0000 7022 8307

PS Form 3811, July 2015 PSN 7530-02-000-9053

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SRC Energy Inc.  
Attn: Legal Dept.  
1675 Broadway, Suite 2600  
Denver, CO 80202



9590 9402 3805 8032 5744 89

2. Article Number (Transfer from service label)

7017 3380 0000 7022 8338

PS Form 3811, July 2015 PSN 7530-02-000-9053

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☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery


D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type


☐ Adult Signature☐ Adult Signature Restricted Delivery☐ Certified Mail®☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Mail Restricted Delivery☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☐ Return Receipt for Merchandise☐ Signature Confirmation™☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt




SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY		
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p style="text-align: center;"><b>Extraction Oil &amp; Gas LLC</b> 370 17<sup>th</sup> St., Ste. 5300 Denver, CO 80211</p> <div style="text-align: center;">             9590 9402 3805 8032 5743 28         </div> <p>2. Article Number (Transfer from service label)</p> <p style="text-align: center; font-size: 1.2em;">7017 3380 0000 7022 8185</p>	<p>A. Signature X <i>S. Ullrich</i> <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery <u>06-20</u></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table style="width: 100%;"> <tr> <td style="vertical-align: top;"> <input type="checkbox"/> Adult Signature  <input type="checkbox"/> Adult Signature Restricted Delivery  <input checked="" type="checkbox"/> Certified Mail®  <input type="checkbox"/> Certified Mail Restricted Delivery  <input type="checkbox"/> Collect on Delivery  <input type="checkbox"/> Collect on Delivery Restricted Delivery             </td> <td style="vertical-align: top;"> <input type="checkbox"/> Priority Mail Express®  <input type="checkbox"/> Registered Mail™  <input type="checkbox"/> Registered Mail Restricted Delivery  <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Signature Confirmation™  <input type="checkbox"/> Signature Confirmation Restricted Delivery             </td> </tr> </table>	<input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery
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PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

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<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p style="text-align: center;"><i>Deek Irrigated Water Co</i> 2600 E. 24<sup>th</sup> St.  Greeley, CO 80631</p> <div style="text-align: center;">             9590 9402 3805 8032 5745 02         </div> <p>Article Number (Transfer from service label)</p> <p style="text-align: center; font-size: 1.2em;">7017 3380 0000 7022 8352</p>	<p>A. Signature X <i>John B...</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table style="width: 100%;"> <tr> <td style="vertical-align: top;"> <input type="checkbox"/> Adult Signature  <input type="checkbox"/> Adult Signature Restricted Delivery  <input checked="" type="checkbox"/> Certified Mail®  <input type="checkbox"/> Certified Mail Restricted Delivery  <input type="checkbox"/> Collect on Delivery  <input type="checkbox"/> Collect on Delivery Restricted Delivery             </td> <td style="vertical-align: top;"> <input type="checkbox"/> Priority Mail Express®  <input type="checkbox"/> Registered Mail™  <input type="checkbox"/> Registered Mail Restricted Delivery  <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Signature Confirmation™  <input type="checkbox"/> Signature Confirmation Restricted Delivery             </td> </tr> </table>	<input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery
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## 1. Article Addressed to:

DCP Operating Company, LP  
3026 4th Ave.  
Greeley, CO 80631



9590 9402 3805 8032 5743 97

## 2. Article Number (Transfer from service label)

7017 3380 0000 7022 8246

PS Form 3811, July 2015 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

## A. Signature

X *Aurelio Isla*

- ☐ Agent  
☐ Addressee

## B. Received by (Printed Name)

Aurelio Isla

## C. Date of Delivery

6/20

- D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

## 3. Service Type

- ☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail®  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery

- ☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

Mail  
Restricted Delivery

(over \$500)

Domestic Return Receipt

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT

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- Complete items 1, 2, and 3.
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## 1. Article Addressed to:

Kerr-McGee Oil & Gas Onshore LP  
Attn: Land Manager/Wattenburg  
1099 18th St., Ste. 1500  
Denver, CO 80202



9590 9402 3805 8032 5744 27

## 2. Article Number (Transfer from service label)

7017 3380 0000 7022 8277

PS Form 3811, July 2015 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

## A. Signature

X *[Signature]*

- ☐ Agent  
☐ Addressee

## B. Received by (Printed Name)

## C. Date of Delivery

- D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

## 3. Service Type

- ☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail®  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery

- ☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

Mail  
Restricted Delivery

(over \$500)

Domestic Return Receipt

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## 1. Article Addressed to:

Calven Goza  
1620 Kelly Ave.  
Greeley, CO 80634



9590 9402 3805 8032 5744 10

## 2. Article Number (Transfer from service label)

7017 3380 0000 7022 8260

PS Form 3811, July 2015 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

## A. Signature

X *[Signature]*

- ☐ Agent  
☐ Addressee

## B. Received by (Printed Name)

Calven Goza

## C. Date of Delivery

7-2-19

- D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

## 3. Service Type

- ☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail®  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery

- ☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
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Mail  
Restricted Delivery

(over \$500)

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