



COLORADO
Division of Water Resources
Department of Natural Resources

1313 Sherman Street, Room 821
Denver, CO 80203

MEMORANDUM

TO: Robert P. Koehler, PhD, Oil & Gas Conservation Commission
FROM: Andrew Flor, Hydrogeologist
DATE: August 16, 2018
SUBJECT: Water Injection Project - NGL South Weld SWD #1 (API: TBD)
SW NE S30 T1N R66W 6th PM, Weld County
NGL Water Solutions DJ LLC

On May 14, 2018 you sent a memo describing a proposal by NGL Water Solutions DJ LLC to drill a new well, NGL South Weld SWD #1, for injection into the DJ Injection interval from 9,202-11,193 feet measured depth (MD). This interval represents the approximate depths for the Lyons, Lower Satanka, Wolfcamp, Amazon, Council Grove, Admire, Virgil, Missouri, and Fountain Formations. The NGL South Weld SWD #1 well will be located in the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 30, Township 1 North, Range 66 West of the Sixth Principal Meridian in Weld County. The well is along the South Platte River and Highway 85, approximately 1.5 miles north of Brighton, CO and 1 mile east of Wattenberg, CO. The uppermost injection formation, the Lyons, crops out approximately 25 miles west of the well location.

The proposed well construction information for South Weld SWD #1 indicates that this well will be constructed with 16-inch conductor casing from ground surface to 80 feet MD and grouted back to surface. 10-3/4-inch surface casing will be placed from ground surface to 1,164 feet MD and grouted back to surface. 7-5/8-inch casing will extend to 9,202 feet MD and will be cemented back up to ground surface in two stages. 5-1/2 inch slotted liner will be installed between 9,150 and 11,193 feet MD.

There are 74 completed water supply wells of record within $\frac{1}{2}$ mile of the wellhead, as shown in Table 1. There are 23 water rights structures within $\frac{1}{2}$ mile of the proposed wellhead. There are three COGCC oil and gas wells within $\frac{1}{2}$ mile of the proposed wellhead. PDF outputs from AquaMap delineating a $\frac{1}{2}$ mile radius from the proposed injection wellhead is attached. Permitted water supply wells are shown with green circles, water rights structures are shown as pink squares, and COGCC wells are shown as blue squares. There are 54 dams within 10 miles of this injection well. The dams and hazard ratings are shown on an attached map.

Most of the existing water supply wells in this area produce either from the shallow quaternary sediments or the Laramie-Fox Hills aquifer (KLF). The base of the KLF aquifer is approximately 950-1000 feet below ground surface. The Pierre Shale underlies the Laramie-Fox Hills aquifer at this location. Recently, the Upper Pierre aquifer has begun to be developed as a source of fresh water in Northern Colorado. The Upper Pierre aquifer at this location extends to an approximate depth of 2,250 feet below ground surface.



Due to the depth and presumed poor water quality of the injection zone formations it is not considered to be a source of potable groundwater at this location. Based on the information provided, injection into the Lyons, Lower Satanka, Wolfcamp, Amazon, Council Grove, Admire, Virgil, Missouri, and Fountain Formations through a properly constructed well should not negatively impact existing groundwater or surface water resources in the vicinity. If you have any questions or require additional information, please feel free to contact me (303-866-3581 x8218).



Table 1

RECEIPT	PERMIT	USE	USE	AQUIFER	DEPTH	OWNER
12653	383-AD	3	Commercial	All Unnamed Aquifers		ADAMS TRANSIT MIX CORP
0029564A	2819-FR	1	Irrigation	All Unnamed Aquifers	50	BROMLEY MINERAL HOLDINGS, LLC
0034611A	13409-FR	3	Commercial	All Unnamed Aquifers	42	GEO MANCINI FEEDLOTS INC
92906	99796-A	8	Domestic	All Unnamed Aquifers	40	MONIER 8 CO
104074		H	Household	All Unnamed Aquifers		CARROLL INVESTMENTS
202740	13410-FR	4	Industrial	All Unnamed Aquifers	37	C-M, CONCRETE
206097		4	Industrial	All Unnamed Aquifers		C-M SAND CO
228009	124369-A	8	Domestic	All Unnamed Aquifers	39	HRAPSKI, PETER
0293640A	152851	8	Domestic	All Unnamed Aquifers		SASAKI, JOE
0293640B	152851-A	8	Domestic	All Unnamed Aquifers	39	SASAKI, JOE
310606		H	Household	All Unnamed Aquifers		BRANCUCCI, STEVE
0315574A		Z	Other	All Unnamed Aquifers		ALBERT FREI and SONS
332517	163521	3	Commercial	All Unnamed Aquifers		BARRIOS, JESUS
345895	168178	3	Commercial	All Unnamed Aquifers	30	COTTONWOOD WATER SKI CLUB LTD
359177	43443-F	2	Municipal	All Unnamed Aquifers	920	NEW VISION INVESTMENTS LLC
417211	206557	3	Commercial	All Unnamed Aquifers	48	GODBY CARROLL DON and IVAN COLLINS
460833		3	Commercial	All Unnamed Aquifers		FOOTHILLS, CONCRETE
462062	55585-F	Z	Other	All Unnamed Aquifers	0	CAMAS COLORADO INC
0473477A	232950	8	Domestic	All Unnamed Aquifers		STUTZ, RICHARD A
0473477B	232950-A	8	Domestic	All Unnamed Aquifers	40	PATINO EVELIA and SERGIO PATINO GOMEZ
0486639A		Z	Other	All Unnamed Aquifers		LAFARGE NORTH AMERICA INC
490163	57300-F	3	Commercial	All Unnamed Aquifers	40	BRANCUCCI, STEPHAN
0490258A	240079	3	Commercial	All Unnamed Aquifers	30	SIPRES, MARY
0490258B	240079-A	3	Commercial	All Unnamed Aquifers	40	SIPRES, MARY
0492024A	241038	8	Domestic	All Unnamed Aquifers	40	BRANCUCCI, STEPHAN
0492024B	241038-A	8	Domestic	All Unnamed Aquifers	45	BRANCUCCI, STEPHAN
492215		8	Domestic	All Unnamed Aquifers		SASAKI, JOE
0492582A		3	Commercial	All Unnamed Aquifers	40	ARNHEIM LLC
0492582B	242969	3	Commercial	All Unnamed Aquifers	40	ARNHEIM LLC
495138	243650	8	Domestic	All Unnamed Aquifers	32	SASAKI, TOM
495139	243649	8	Domestic	All Unnamed Aquifers	35	TADEHARA GENE and DORENE
523095	243650-A	8	Domestic	All Unnamed Aquifers	46	RAILROAD VENTURES LLC
530057	261608	3	Commercial	All Unnamed Aquifers		SHANNON KENNETH T and MARGARET
531363	240079-A	3	Commercial	All Unnamed Aquifers	40	SIPRES, MARY
536149	262601	3	Commercial	All Unnamed Aquifers	45	K and S VENTURES LLC
3601724A		Z	Other	All Unnamed Aquifers		AGGREGATE INDUSTRIES WCR INC
3603211I		4	Industrial	All Unnamed Aquifers		SW VILLANEUX LLC

3614448	273019	3	Commercial	All Unnamed Aquifers	900	SCHRECKENGAST, JOHN
3624323B	67991-F	Z	Other	All Unnamed Aquifers		AGGREGATE INDUSTRIES - WCR INC
3627868	243649-A	8	Domestic	All Unnamed Aquifers	10	TADEHARA, GENE
3645395E	70139-F	4	Industrial	All Unnamed Aquifers		MARTIN MARIETTA MATERIALS INC
3649223	74992-F	Z	Other	All Unnamed Aquifers		AGGREGATE INDUSTRIES - WCR INC
3651607	286531	3	Commercial	All Unnamed Aquifers		COPART INC
3658893	290696	3	Commercial	All Unnamed Aquifers	345	SHANNON KENNETH T and MARGARET
3667235A	78626-F	Z	Other	All Unnamed Aquifers		AGGREGATE INDUSTRIES - WCR INC
3669848	79209-F	4	Industrial	All Unnamed Aquifers		BRANCUCCI, STEPHAN
3672963	261608-A	3	Commercial	All Unnamed Aquifers		SHANNON KENNETH T and MARGARET
3673456	300257	3	Commercial	All Unnamed Aquifers	300	SHANNON KENNETH T and MARGARET
3680703	81161-F	3	Commercial	All Unnamed Aquifers		BRANCUCCI, STEPHAN
3686270		3	Commercial	All Unnamed Aquifers		NGL WATER SOLUTIONS DJ LLC
3686510	309599	3	Commercial	All Unnamed Aquifers		NGL WATER SOLUTIONS DJ LLC
9058958	2819-F	1	Irrigation	All Unnamed Aquifers	50	YOKOOJI, FRANK
9059451	5889	8	Domestic	All Unnamed Aquifers	41	ODAY, DON
9059542	6292-R	1	Irrigation	All Unnamed Aquifers	39	DEBETZ, FRED
9059542A	6292-RR	1	Irrigation	All Unnamed Aquifers	37	TRIPLE G LIVESTOCK CO
9060314	10285-R	1	Irrigation	All Unnamed Aquifers	40	BRANCUCCI, STEVE
9060315	10286-R	1	Irrigation	All Unnamed Aquifers	37	BRANCUCCI, STEVE
9061579	13409-F	3	Commercial	All Unnamed Aquifers	48	GEO MANCINI FEEDLOTS INC
9061581	13410-F	1	Irrigation	All Unnamed Aquifers	38	CandM CONCRETE COMPANIES
9062474	17900	8	Domestic	All Unnamed Aquifers		BRENNING, RALPH
9062545	18769-R	1	Irrigation	All Unnamed Aquifers	40	NGL WATER SOLUTIONS DJ LLC
9062546	18769-S	1	Irrigation	All Unnamed Aquifers	40	NGL WATER SOLUTIONS DJ LLC
9062670	19805-F	A	Augmentation	All Unnamed Aquifers	36	CENTRAL CO WATER CONSERVANCY DIST
9062671	19806-F	A	Augmentation	All Unnamed Aquifers	38	CENTRAL CO WATER CONSERVANCY DIST
9062672	19807-F	A	Augmentation	All Unnamed Aquifers	35	CENTRAL CO WATER CONSERVANCY DIST
9062714	20032-F	A	Augmentation	All Unnamed Aquifers	34	CENTRAL CO WATER CONSERVANCY DIST
9062716	20033-F	A	Augmentation	All Unnamed Aquifers	36	CENTRAL COLO W CONSER DIST
9062718	20034-F	A	Augmentation	All Unnamed Aquifers	38	CENTRAL COLO W CONSER DIST
9063767	34889	8	Domestic	All Unnamed Aquifers	43	LUFT, JACK
9064527	47086	8	Domestic	All Unnamed Aquifers	58	MORELAND, BOB L
9065825	87176	8	Domestic	All Unnamed Aquifers		TADEHARA GENE and DORENE
9066103	99796	8	Domestic	All Unnamed Aquifers	50	MONIER 8 CO
9066375	124369	8	Domestic	All Unnamed Aquifers	35	HRAPSKI PETER and LAVINA M
C620530	530-WCB	9	Livestock	All Unnamed Aquifers	46	WILHELMEN and MANCINEY

Table 2

Structure Type	WDID	Associated Permits	Associated Case Numbers	Structure Name	More Info
PUMP	200927		04CW0310, 97CW0390	WATTENBURG RES PUMP STATION	https://dnrweb.state.co.us/CDSS/Structures/Details/0200927
WELL	203035	55585-F, 67991-F, 74992-F, 78626-F		PLATTE VALLEY PIT M-1989-120	https://dnrweb.state.co.us/CDSS/Structures/Details/0203035
RESERVOIR	203915		08CW0205, 91CW0126	PLATTE VALLEY PIT	https://dnrweb.state.co.us/CDSS/Structures/Details/0203915
WELL	205071	18769-R	W0666	SASAKI WELL 2-18769	https://dnrweb.state.co.us/CDSS/Structures/Details/0205071
WELL	205520	10286-R	W0611	BRANCUCCI WELL 4-10286	https://dnrweb.state.co.us/CDSS/Structures/Details/0205520
WELL	205674	19805-F	11CW0263, W7905	CCWCD WELL 1-019805F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205674
WELL	205676	19807-F	11CW0263, W7905	CCWCD WELL 2-019807F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205676
WELL	205677	19806-F	11CW0263, W7905	CCWCD WELL 3-019806F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205677
WELL	205680	20032-F	11CW0263, 84CW0405	CCWCD WELL 4-020032-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205680
WELL	205681	20033-F	84CW0405	CCWCD WELL 5-020033-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205681
WELL	205682	20034-F	84CW0405	CCWCD WELL 6-020034-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0205682
WELL	207073	13410-F, 13410-F-R	11CW0263, 81CW0376	MANCINI WELL 1-13410-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0207073
WELL	207074	13409-F, 13409-F-R	W1026	MANCINI WELL 2-13409-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0207074
WELL	207950	18769-S	W0666	SASAKI WELL 3-18769 B	https://dnrweb.state.co.us/CDSS/Structures/Details/0207950
WELL	207952	261608-, 570-R	W0666	SASAKI WELL 4-0570 1	https://dnrweb.state.co.us/CDSS/Structures/Details/0207952
WELL	207954	571-R	W0666	SASAKI WELL 5-0571 2	https://dnrweb.state.co.us/CDSS/Structures/Details/0207954
WELL	208393	6292-R, 6292-R-R	11CW0263, W6340	TRIPLE G WELL 4-6292	https://dnrweb.state.co.us/CDSS/Structures/Details/0208393
WELL	208394	5889-	W6340	TRIPLE G WELL 5-5889	https://dnrweb.state.co.us/CDSS/Structures/Details/0208394
WELL	208568	20134-R	W0526	WHITESIDE WELL 1-20134	https://dnrweb.state.co.us/CDSS/Structures/Details/0208568
WELL	208638	2820-F	W4257	YOKOOJI WELL 2-P-02820-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0208638
WELL	208639	2819-F, 2819-F-R, 70139-F	W4257	YOKOOJI WELL 2819-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0208639
WELL	208640		W4257	YOKOOJI WELL 3	https://dnrweb.state.co.us/CDSS/Structures/Details/0208640
WELL	210446	79209-F		BRANCUCCI NT LFH WELL 79209-F	https://dnrweb.state.co.us/CDSS/Structures/Details/0210446

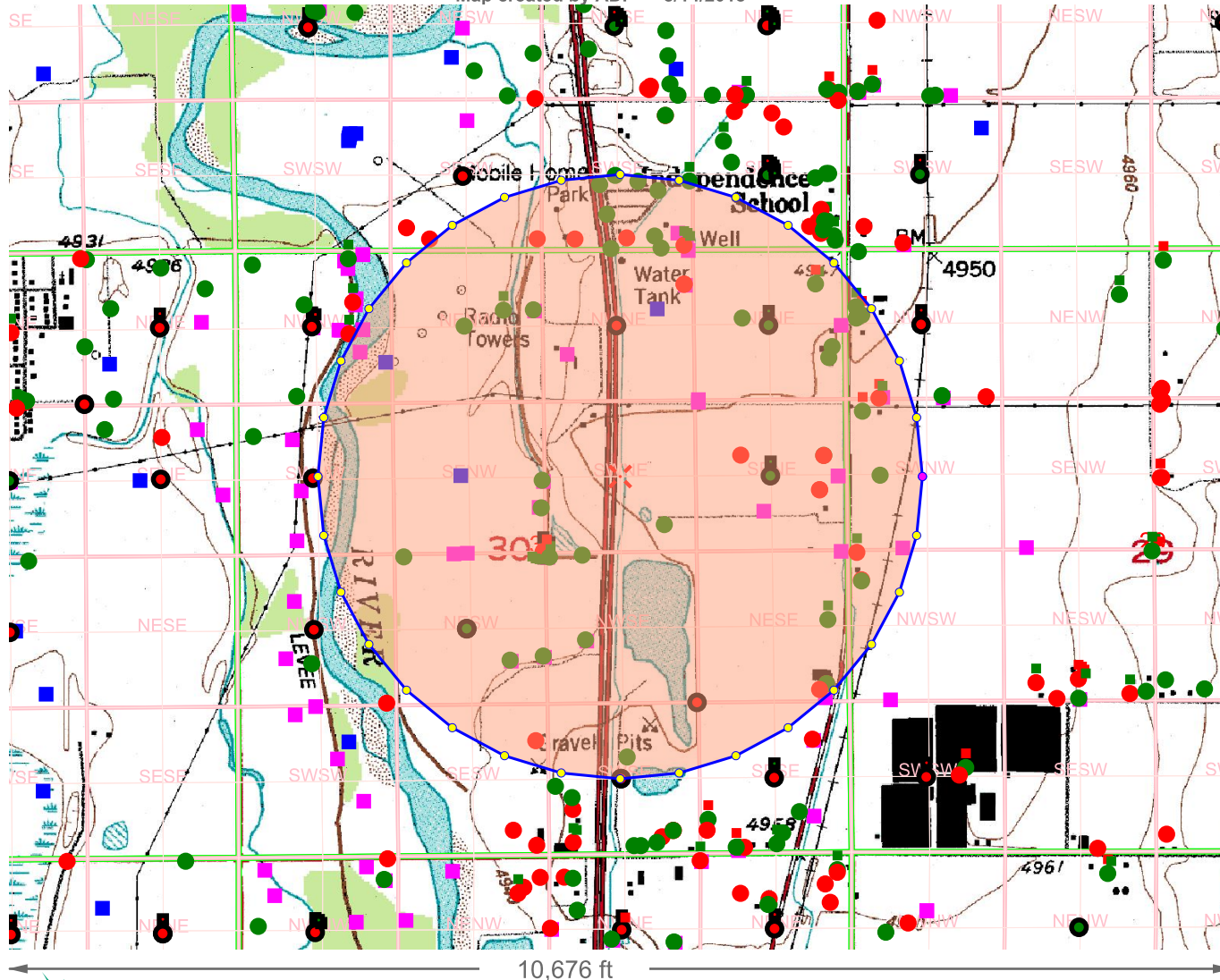
Table 3				
API_NUM	WELL_NAME	WELL_STATUS	PLSS_LOCATION	OPERATOR_NAME
05-123-08336	PLATTE GRAVEL 1	PLUGGED AND ABANDONED	SENW 30 1N 66W 6	SANDS-AMERICAN CORP
05-123-10826	PERRY 1-30-D	PRODUCING	NWNW 30 1N 66W 6	NOBLE ENERGY INC
05-123-11730	BRANCUCCI FEDERAL 1	PRODUCING	NWNE 30 1N 66W 6	NOBLE ENERGY INC

AQUAMAP

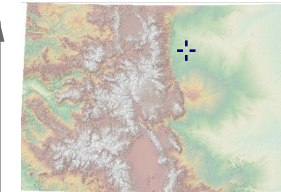
Colorado Division of Water Resources

NGL South Weld SWD 1 Half Mile Radius

Map created by ADF 8/14/2018



MAP NAVIGATION



Click to create PDF
 UTM X, Zone 13: 367161
 UTM Y, Zone 13: 4185226
 Long: -106° 30' 32.4"
 Lat: 37° 48' 17.2"
 UTM and Geographic(LL) coordinates in NAD 83

DATA DISPLAY

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Background | <input checked="" type="checkbox"/> Counties | <input checked="" type="checkbox"/> Water Well Application |
| Quad Maps | <input checked="" type="checkbox"/> PLSS | <input type="checkbox"/> DWR Parcels |
| <input type="radio"/> Low <input checked="" type="radio"/> High | <input type="checkbox"/> Roads | <input checked="" type="checkbox"/> EPA Well Notification |
| Transparency | <input type="checkbox"/> Hydrography | <input checked="" type="checkbox"/> Oil/Gas Well Location |
| | <input type="checkbox"/> County Parcels (No Public Access) | |
| | <input type="checkbox"/> Towns | More Data |

LOCATION

Section: 30 Township: 1 Range: 66 Meridian: Sixth
[PLSS Locator](#) [Quick Zoom](#) [Spacing](#)

PRINTING

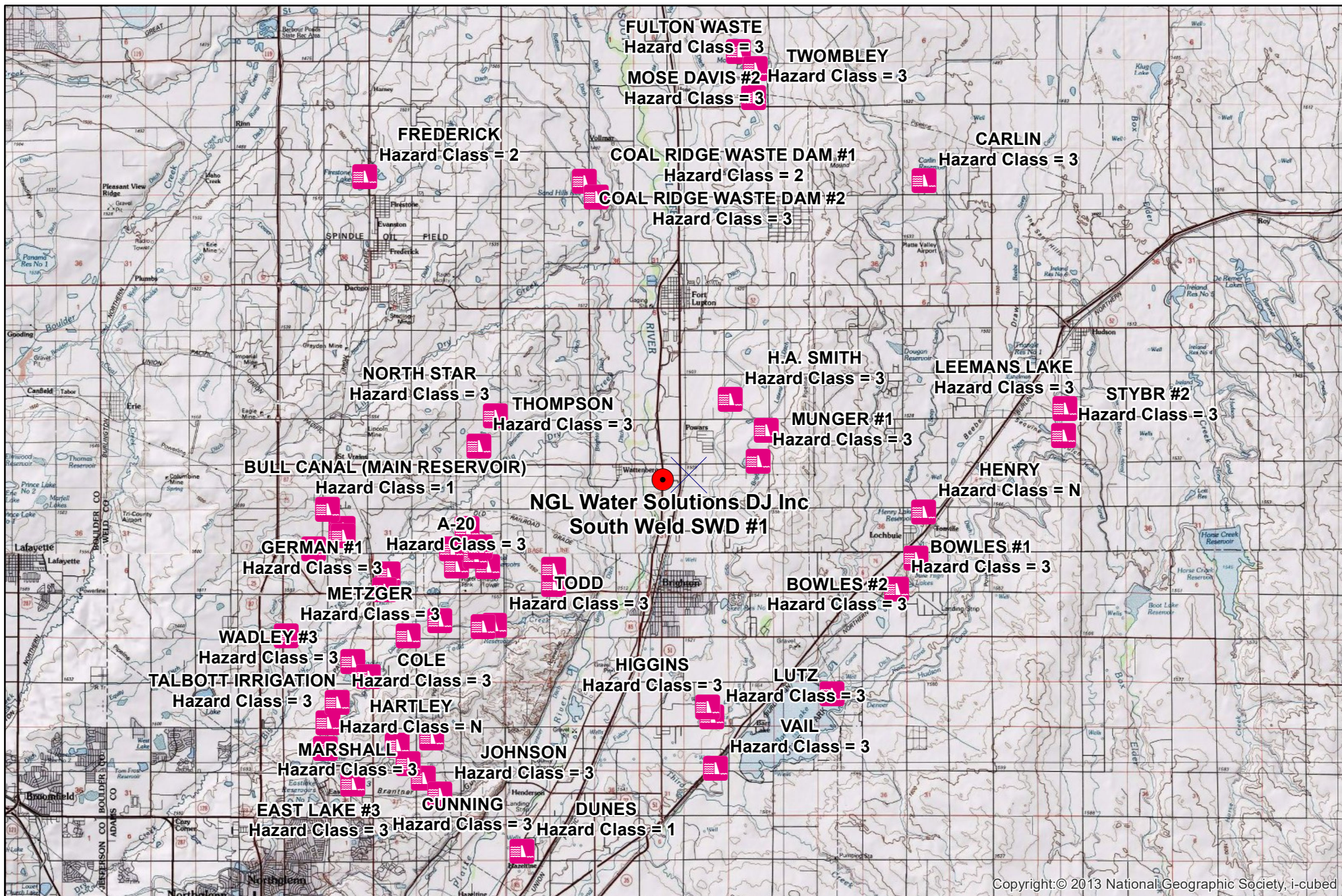
Output Scale: 18,000 Page Size: 8.5x11 User: ADF
 Title: NGL South Weld SWD 1 Half Mile Radius

Note: The well locations displayed on AquaMap are based on location information provided by well permit application forms and are only as accurate as the information provided. The actual physical locations of all wells have not been field verified and may vary from the location displayed. Refer to a copy of the original well permit file, available on the Division of Water Resources website, for well location details.



Based on work developed at <http://www.carto.net>

Address location by Bing Maps
 AquaMap Version 3.0.1 July 5, 2009



NGL Water Solutions DJ LLC **South Weld SWD #1** **Dams within 10 miles**



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1 inch = 15,000 feet

