


Western Water & Land, Inc. TEP Groundwater Monitoring Field Form

Project Information			
Mar/April 2022			
Project:	TEP Rule 411 Workovers	Sample Purpose:	March/April 2022 411
Site Name (TEP Pad):	Tompkins	Site Facility ID (05-045)	22823; 22474; 22476; 22478; 22481
Station Name:	Tompkins MW-1	Site API:	438312
Station COGCC Facility ID:	754072	Sample Date:	6/8/22
Field Sample ID:	Tompkins MW-1	Start Time:	11:36
Landowner Name:	Thomas & Lynn Tompkins	End Time:	12:35
Landowner Address:	0269 County Rd 309 Parachute	Sample Time:	13:00
Water Right/Well Owner:	TEP Rocky Mtn LLC	Sample Team:	CWJ + BDS
Water Right/Well Permit:	296864	Sampler:	BDS
Receipt Number:	3668314	Lead Signature/Date:	 6/8/22

Station Information			
Station Description: MW NW of pad; downslope past small spill way			
Approximate Distance to Well Pad (from well location): ~150 ft NW of pad			
Station Type:	Well / Spring / Seep / Other:	Water Use:	Domestic / Irrigation / Monitoring
Sampling Location: Kitchen Tap / Pipe / Well House / Hose bib / Hydrant / Other: Spigot			
GPS Well Location:	Zone	x -108.015052	y 39.460706 z 5494
GPS Sampling Location:	Zone	x "	y " z "
Total Depth (ft):	162	Static Depth to Water (ft):	123.45 Well diameter (in): 4
Total Volume x 3 (gal)	75.49	Total Volume Purged (gal)	250

Weather Conditions			
Sky:	Clear / Scattered / Cloudy / Overcast Clear	Estimated Air Temp (deg F):	75°F
Precipitation:	None / Light / Moderate / Heavy None	Precip Type:	None / Rain / Sleet / Hail / Snow
Wind:	Calm / Light / Mod / Strong Calm	Wind Speed/Direction:	0 mph

Field Measurements							
Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	16.4	1300		YSI P2	Container	1312 16.6
pH	s.u.	7.50					8.03
Sp. Conductivity	uS/cm	506.7					498.8
Conductivity	uS/cm	424.1					420.2
DO Saturation	%	43.6					67.5
DO	mg/L	4.08					5.57
Baro Press	mmHg	624.5					629.3
ORP	RmV	440.0					484.9
Turbidity	NTU	9.64	1300	AU	Micro TPW		9.25, 9.21, 9.88
Discharge	g/m	15				bucket	21 sec PER 5 GAL
Color:	Clear / White / Yellow / Brown / Green / Blue / Other			Light / Med / Dark			
Odor:	None / Mild / Mod / Strong						
Effervescence:	None / Mild / Mod / Strong			Bubbles: None / Low / Mod / High			
Sediment:	None / Light / Mod / Heavy			VOA Headspace: None / ≤ Pea Size / ≥ Pea Size			
Lab Analysis:	Rule 615 / Monitoring Well / Other 411						
Field Filtered:	Yes / No		Filter Size:	NA		No. Filters used: NA	

Western Water & Land, Inc.
TEP Groundwater Monitoring Field Form

Templets MW-1

Well Purging Information		
Date: <i>6/8/22</i>	Purge Method: <i>3 casing volumes / stable parameters</i>	
Total Depth, ft (d _t): <i>162</i>	Static Depth to Water, ft (d _w): <i>123.45</i>	Sample/Set Depth (ft):
Casing Radius (in): <i>2</i>		
Total Well/Casing Volume (gal or ft ³): <i>25.16</i>	Total Volume x 3 (gal or ft ³): <i>75.49</i>	

1 ft³ = 7.48 gal

Casing Volume = πr²(d_t-d_w)

$$\pi \left(\frac{2}{12}\right)^2 (162 - 123.45) = 3.36 \times 7.48 = 25.16 \times 3 = 75.49$$

Purge #	Time	Temp (°C) ±0.2°C ±3%	pH (s.u.) ±0.2 s.u.	SpC (uS/cm) ±3%	Cond (uS/cm)	DO (%)	DO (mg/L) ±10%	ORP (RmV) ±10 RmV	Water Clarity (Poor/Mod/Good) or NTUs ±10% OR <5	Effervescence (None/Slight/Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
1	1220	15.6	7.63	511.1	421.9	64.3	6.24	420.6	MOD	NONE	5	5
2	1226	15.9	7.43	507.5	419.7	45.0	4.43	520.7	MOD	NONE	10	15
3	1227	15.9	7.43	507.2	419.5	43.0	4.25	527.8	MOD		10	25
4	1228	15.9	7.43	505.8	418.7	44.5	4.40	532.5	MOD		20	45
5	1229	15.9	7.41	507.1	419.1	48.9	4.81	537.4	MOD		15	60
6	1231	16.0	7.43	506.4	419.6	74.1	7.43	542.2			10	70
7	1232	16.0	7.44	506.2	418.6	57.5	5.03	640.8			10	80
8	1233	16.0	7.44	506.1	419.1	47.4	4.64	535.1	MOD		10	90
9	1234	16.0	7.45	506.6	418.7	46.4	4.54	527.4			20	110
10	1235	16.0	7.45	506.8	419.4	46.6	4.55	514.2			10	120
11	1236	16.0	7.44	506.6	419.4	45.2	4.43	489.9			10	130
12	1238	16.0	7.44	506.1	419.1	42.0	4.08				10	140
13	1239	16.0	7.46	505.7	418.7	41.0	4.04	494.2	BETTER		20	160
14	1240	15.9	7.44	505.8	418.7	42.6	4.20	-	GOOD		10	170
15	1242	15.9	-	-	418.9	41.4	4.06	-			20	190
16	1243	16.0	7.44	506.1	418.1	42.2	4.17				20	210
17	1245	16.0	7.45	506.1	418.1	42.0	4.06	476.1	GOOD		20	230
18	1247	16.0	7.45	505.5	417.8	39.8	3.96	467.6	GOOD		20	250
19	1249	16.1	7.47	505.2	418.6	41.7	4.16	-			30	280
20	1251	16.0	7.45	504.6	418.1	41.5	4.06	449.7	GOOD		20	300

Purge discharge rate:	GPM	Time: <i>1246 PUMP ON</i>
Sample discharge rate:	GPM	Time:

