west virginia department of environmental protection

Water Management Plan:
Well Pad Overview

WMP 02427 | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad | County: Marshall

MODIFICATION **Effective: 12/14/2021**

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supercedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

API Number:	Well Name/Number:	API Number:	Well Name/Number:
047-051-02127	Charles Jamison MSH 8H		
047-051-02294	Charles Jamison MSH 6H		
047-051-02295	Charles Jamison MSH 206H		
047-051-02301	Charles Jamison MSH 10H		
047-051-02302	Charles Jamison MSH 210H		
047-051-02425	Charles Jamison MSH 410H		
047-051-02426	Charles Jamison MSH 610H		
047-051-02427	Charles Jamison MSH 810H		

The following water consumption estimates (in gallons) have been reported for this plan:

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	31,752,000
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activites:	210,000
Total for Well Pad	32,802,000

Est. Construction Start: 7/1/2019

Est. Reclamation End: 10/15/2026

Dawn Newell

Digitally signed by Dawn Newell
Date: 2021.12.14 17:03:38 -05'00'

Water Management Plan:
Primary Water Sources

WMP 02427	API/ID Number	see overview	Operator:	SWN Production Company, LLC	
Plan Type: Well Pad	Charles Jamison MSH Well Pad				

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

For any sources identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this water management plan.

WMP 02427 | API Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Stream/River

- Source **Wheeling Creek @ Iskon** Marshall Owner: **Iskcon New Vrindaban, Inc.**

Max. daily purchase (gal) | Intake Latitude: 39.967973 | Intake Longitude: -80.599241

☐ Regulated Stream? | Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 47.36** **Min. Passby (cfs): 27.5**

DEP Comments: This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or the Wheeling Creek @ Sligar site

- Source **Wheeling Creek @ Schafer** Marshall Owner: **Betty Jane Schafer**

Max. daily purchase (gal) | Intake Latitude: 39.99257 | Intake Longitude: -80.634912

☐ Regulated Stream? | Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 49.70** **Min. Passby (cfs): 27.5**

DEP Comments: Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Little Wheeling Creek @ Main Street Bank** Ohio Owner: **Main Street Bank**

Max. daily purchase (gal) | Intake Latitude: 40.064076 | Intake Longitude: -80.614406

☐ Regulated Stream? | Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 23.00** **Min. Passby (cfs): 2.83**

DEP Comments: This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Source **Paw Paw Creek @ Horizon Ventures** Marion Owner: **Horizon Ventures of WV, Inc**

Max. daily purchase (gal) | Intake Latitude: 39.552426 | Intake Longitude: -80.166833

☐ Regulated Stream? Ref. Gauge ID: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 26.96** **Min. Passby (cfs): 4.57**

DEP Comments: This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Source **Little Wheeling Creek @ Rt. 40 Staging Area** Ohio Owner: **JDS Investments, LLC**

Max. daily purchase (gal) | Intake Latitude: 40.078324 | Intake Longitude: -80.591145

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 64.80** **Min. Passby (cfs): 2.83**

DEP Comments:

- Source **Wheeling Creek @ Sligar** Marshall Owner: **Terry Sligar**

Max. daily purchase (gal) | Intake Latitude: 40.013185 | Intake Longitude: -80.652863

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 47.36** **Min. Passby (cfs): 28.64**

DEP Comments: This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or Wheeling Creek @ Iskcon site.

- Source **Middle Wheeling Creek @ Gribben** Ohio Owner: **Lawrence Kevin Gribber**

Max. daily purchase (gal) | Intake Latitude: 40.036777 | Intake Longitude: -80.598008

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs): 6.26**

DEP Comments:

- Source **Short Creek @ Cain** Ohio Owner: **Susan L. Cain**

Max. daily purchase (gal) | Intake Latitude: 40.155061 | Intake Longitude: -80.651431

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 64.49** **Min. Passby (cfs): 7.68**

DEP Comments:

- Source **Middle Wheeling Creek @ Supler** Ohio Owner: **Gregory and Peggy Supler**

Max. daily purchase (gal) | Intake Latitude: 40.04409 | Intake Longitude: -80.55348

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 62.57** **Min. Passby (cfs): 4.17**

DEP Comments:

- Source **Big Wheeling Creek @ Wheeling Staging Area** Ohio Owner: **Fulton Storage, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.077019	-80.713866

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 43.57** **Min. Passby (cfs): 40.03**

DEP Comments:

- Source **Ohio River @ Extraction B Panhandle** Brooke Owner: **SWN Production Company, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.233469	-80.654359

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 4,375 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **WV Fork Fish Creek @ Francis** Marshall Owner: **Loretta J. Francis**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	39.733295	-80.579415

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 3,000 **Min. Gauge Reading (cfs): 63.69** **Min. Passby (cfs): 17.55**

DEP Comments:

- Source **Ohio River @ Proctor Peacemaker** Wetzel Owner: **SWN Production Company, LLC**

Max. daily purchase (gal) Intake Latitude: 39.714299 Intake Longitude: -80.825862

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 6,000 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Booths Creek @ Reliance Minerals** Monongalia Owner: **Reliance Minerals, Inc.**

Max. daily purchase (gal) Intake Latitude: 39.530405 Intake Longitude: -79.978079

☐ Regulated Stream? Ref. Gauge ID: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 18.65** **Min. Passby (cfs): 0.48**

DEP Comments:

- Source **West Virginia Fork of Fish Creek @ Van Scyoc Withdrawal** Wetzel Owner: **Israel D Van Scyoc**

Max. daily purchase (gal) Intake Latitude: 39.6908 Intake Longitude: -80.4762

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs): 5.45**

DEP Comments:

- Source **Buffalo Creek @ Bethany VFD Withdrawal Site** Brooke Owner: **Bethany Pike Volunteer Fire Department**

Max. daily purchase (gal) | Intake Latitude: 40.253422 | Intake Longitude: -80.600319

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,100 **Min. Gauge Reading (cfs): 67.66** **Min. Passby (cfs): 61.29**

DEP Comments: This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Source **Whiteday Creek @ Sorine Withdrawal Site** Marion Owner: **Andrew Sorine, Jr.**

Max. daily purchase (gal) | Intake Latitude: 39.472311 | Intake Longitude: -79.977123

☐ Regulated Stream? Ref. Gauge ID: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 20.25** **Min. Passby (cfs): 2.29**

DEP Comments:

- Source **Buffalo Creek @ DNR** Brooke Owner: **SWN Water Resources Company, LLC**

Max. daily purchase (gal) | Intake Latitude: 40.19386 | Intake Longitude: -80.525796

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,200 **Min. Gauge Reading (cfs): 54.63** **Min. Passby (cfs): 43.52**

DEP Comments:

- Source **Fish Creek @ Gribben** Marshall Owner: **Revocable Living Trust of M. Peggy Gribben**

Max. daily purchase (gal) Intake Latitude: 39.753271 Intake Longitude: -80.597913

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 56.96** **Min. Passby (cfs): 23.94**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Buffalo Creek @ Forney** Brooke Owner: **Forney & Sons Holding Company, LLC**

Max. daily purchase (gal) Intake Latitude: 40.193453 Intake Longitude: -80.52175

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 53.07** **Min. Passby (cfs): 43.52**

DEP Comments:

- Source **Buffalo Creek @ Fuchs** Brooke Owner: **Beverly Fuchs**

Max. daily purchase (gal) Intake Latitude: 40.258863 Intake Longitude: -80.60337

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments:

- Source **Buffalo Creek @ Greathouse Withdrawal Site** Brooke Owner: **Linda Greathouse**

Max. daily purchase (gal) | Intake Latitude: 40.20895 | Intake Longitude: -80.60105

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,300 **Min. Gauge Reading (cfs): 60.42** **Min. Passby (cfs): 54.51**

DEP Comments:

- Source **Buffalo Creek @ Labelle Farms** Brooke Owner: **Steve Paul**

Max. daily purchase (gal) | Intake Latitude: 40.204444 | Intake Longitude: -80.598645

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 59.20** **Min. Passby (cfs): 53.8**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Source **Buffalo Creek @ Worthley Withdrawal Site** Brooke Owner: **Kimberly C. Worthley**

Max. daily purchase (gal) | Intake Latitude: 40.210978 | Intake Longitude: -80.548779

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 53.07** **Min. Passby (cfs): 44.83**

DEP Comments:

- Source **Buffalo Creek @ WVDOH** Brooke Owner: **West Virginia Division of Highways**

Max. daily purchase (gal) Intake Latitude: 40.258863 Intake Longitude: -80.60337

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: http://www.erh.noaa.gov/ohrfc//flows.shtml

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- Source **Buffalo Creek @ Zatta** Brooke Owner: **Edward Zatta**

Max. daily purchase (gal) Intake Latitude: 40.253588 Intake Longitude: -80.600254

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,520 **Min. Gauge Reading (cfs): 66.37** **Min. Passby (cfs): 61.29**

DEP Comments: This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Source **Cross Creek @ Bullock Withdrawal Site** Brooke Owner: **Isabelle Bullock**

Max. daily purchase (gal) Intake Latitude: 40.30735 Intake Longitude: -80.569317

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 19.32** **Min. Passby (cfs): 20.99**

DEP Comments:

- Source **Cross Creek @ DNR** Brooke Owner: **WVDNR**

Max. daily purchase (gal) | Intake Latitude: 40.300536 | Intake Longitude: -80.542229

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 3,000 **Min. Gauge Reading (cfs): 22.44** **Min. Passby (cfs): 22.44**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Cross Creek @ Norfolk and Western Railway** Brooke Owner: **Wheeling & Lake Erie Railway Company**

Max. daily purchase (gal) | Intake Latitude: 40.30802 | Intake Longitude: -80.599193

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs): 0**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Cross Creek @ Palizzi** Brooke Owner: **Campbell Palizzi**

Max. daily purchase (gal) | Intake Latitude: 40.302427 | Intake Longitude: -80.582753

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 23.11** **Min. Passby (cfs): 22.44**

DEP Comments: May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Source **WV Fork Fish Creek @ Derby** Wetzel Owner: **Steven Derby**

Max. daily purchase (gal) | Intake Latitude: 39.709329 | Intake Longitude: -80.536079

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 52.24** **Min. Passby (cfs): 8.21**

DEP Comments:

- Source **Fish Creek @ Guzek** Marshall Owner: **Walter A. Guzek**

Max. daily purchase (gal) | Intake Latitude: 39.753021 | Intake Longitude: -80.613941

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 56.96** **Min. Passby (cfs): 24.44**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Little Wheeling Creek @ Edge Withdrawal Site** Ohio Owner: **Alice Mae Edge**

Max. daily purchase (gal) | Intake Latitude: 40.098 | Intake Longitude: -80.5558

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs):**

DEP Comments:

WMP 02427 | API Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Purchased Water

- Source **Adrian Public Service District** Upshur Owner: **Adrian Public Service District**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Ref. Gauge ID: 3054500 TYGART VALLEY RIVER AT PHILIPPI, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **155.85** **Min. Passby (cfs):** **75.51**

DEP Comments:

- Source **American Petroleum Partners (Wheeling Creek @ Wilson)** Marshall Owner: **Phillip Wilson**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
3,500,000	39.975882	-80.62967

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): **4,200** **Min. Gauge Reading (cfs):** **47.36** **Min. Passby (cfs):** **26.09**

DEP Comments:

- Source **Covestro, LLC** Marshall Owner: **Covestro, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,050,000	39.7218	-80.830231

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Elite Gasfield Services** Brooke Owner: **Elite Gasfield Services**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,000,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Grandview-Doolin PSD** Wetzel Owner: **Grandview-Doolin Public Service District**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
60,480	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Marshall County Public Service District 3** Marshall Owner: **Marshall County Public Service District #4**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Tap Location is: (39.906400, -80.586200)

- Source **Marshall County Public Service District 4** Marshall Owner: **Marshall County Public Service District #4**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
80,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Source **Ohio County PSD** Ohio Owner: **Ohio county PSD**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ 4K Industrial Park** Belmont, OH Owner: **4K Industrial Park, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,982,000	40.098805	-80.711328

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ J&R Excavating** Marshall Owner: **J&R Excavating**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,890,000	39.998509	-80.737336

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ Oasis Transport Withdrawal Site** Brooke Owner: **Oasis Transport, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,890,000	40.331551	-80.601034

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Range Tap @ Corbin Withdrawal Site** Brooke Owner: **Range Resources Corp.**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,100,000	40.229983	-80.521067

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **The Village of Valley Grove** Ohio Owner: **The Village of Valley Grove**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Valley Falls PSD** Marion Owner: **Valley Falls PSD**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Tygart Valley Dam Ref. Gauge ID: 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **397.39** **Min. Passby (cfs):**

DEP Comments:

- Source **Wheeling Creek #1 @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,440,000	39.95205	-80.56189

☐ Regulated Stream? Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **18.23** **Min. Passby (cfs):** **16.63**

DEP Comments:

- Source **Wheeling Creek # 2 @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,880,000	39.949577	-80.531255

☐ Regulated Stream? Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **18.23** **Min. Passby (cfs):** **16.24**

DEP Comments:

- Source **Wheeling Water Department** Ohio Owner: **Wheeling Water Department**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Source Summary **MODIFICATION** **Effective: 12/14/2021**

WMP 02427 API Number see overview Operator: SWN Production Company, LLC

Plan Type Well Pad Charles Jamison MSH Well Pad

Groundwater

- Source **Shoemaker Groundwater Wells @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
576,000	40.0222	-80.733888

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **800** **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals. https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82090 | Source Name: Shoemaker Groundwater Wells @ HG Energy

HG Energy, LLC

Source Latitude: 40.0222

Source Longitude: -80.733888

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- ☐ Endangered Species?
- ☐ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☑ Regulated Stream? — Ohio River Min. Flow
- ☐ Proximate PSD?
- ☑ Gauged Stream?

Max. Pump rate (gpm): 800

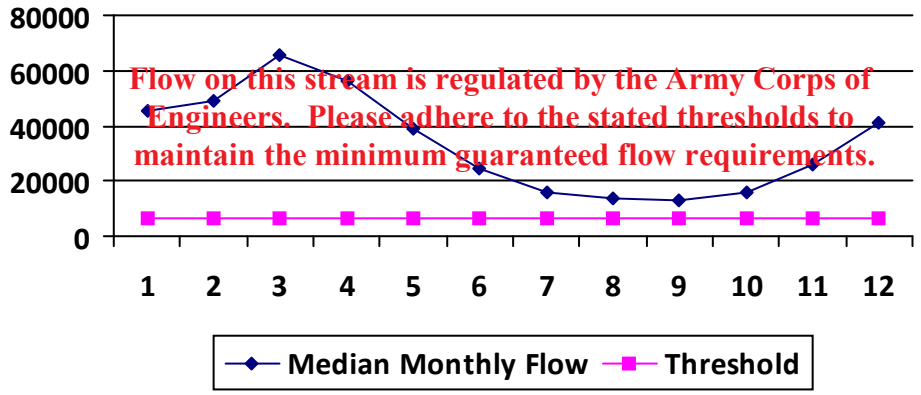
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	1.78
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82071 | Source Name: Adrian Public Service District / Adrian Public Service District

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5020001

Drainage Area (sq. mi.): 197.33 | County: Upshur

- [ ] Endangered Species?
- [ ] Mussel Stream?
- [x] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream?
- [x] Proximate PSD? — City of Buckhannon Water Plant
- [x] Gauged Stream?

Max. Pump rate (gpm):

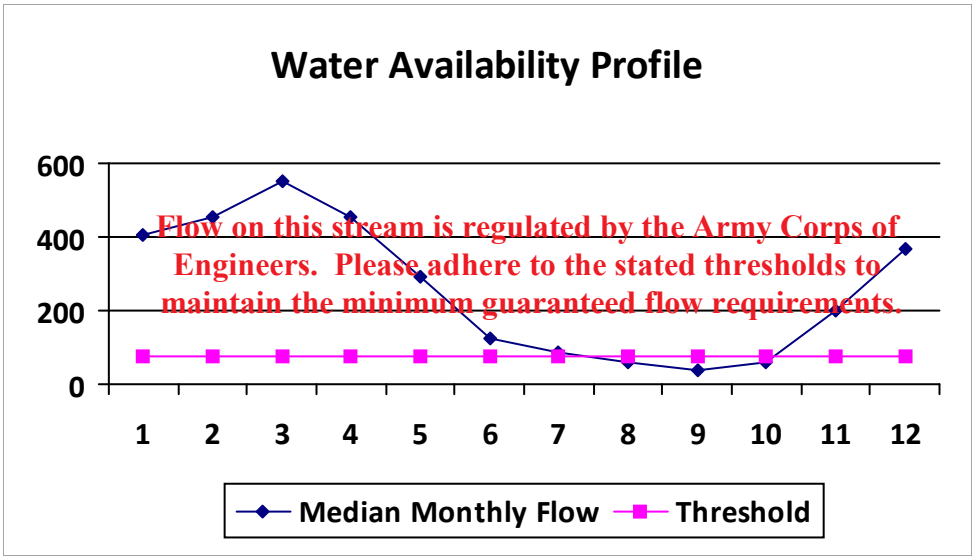
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3054500 | TYGART VALLEY RIVER AT PHILIPPI, WV

Drainage Area (sq. mi.): 914.00 | Gauge Threshold (cfs): 341

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	402.75		
2	456.66		
3	551.03		
4	451.73		
5	291.41		
6	124.17		
7	85.17		
8	59.44		
9	37.59		
10	60.75		
11	201.45		
12	368.28		



Water Availability Assessment of Location

Base Threshold (cfs)	73.62
Upstream Demand (cfs):	4.94
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	18.41
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82072 | Source Name: American Petroleum Partners (Wheeling Creek @ W
Phillip Wilson

Source Latitude: 39.975882
Source Longitude: -80.62967

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 192.96 | County: Marshall

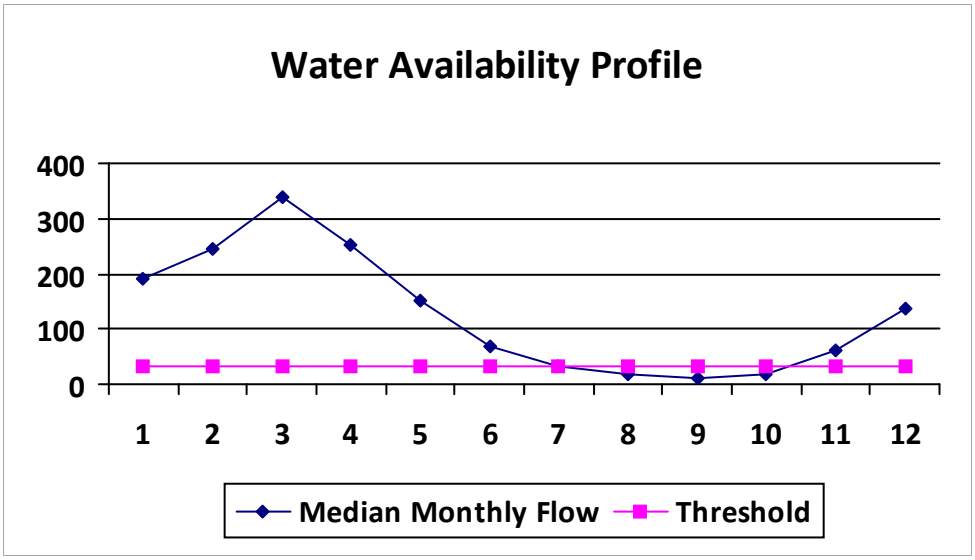
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks: 3
Max. Truck pump rate (gpm) 1000

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	191.17	41.98	149.44
2	243.94	41.98	202.22
3	338.32	41.98	296.60
4	251.15	41.98	209.42
5	153.09	41.98	111.37
6	69.68	41.98	27.95
7	30.79	41.98	-10.93
8	18.01	41.98	-23.71
9	11.44	41.98	-30.28
10	18.96	41.98	-22.76
11	59.65	41.98	17.93
12	135.26	41.98	93.53



Water Availability Assessment of Location

Base Threshold (cfs)	26.09
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	6.52
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82073 | Source Name: Covestro, LLC / Covestro, LLC

Source Latitude: 39.7218

Source Longitude: -80.830231

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [ ] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Grandview-Doolin PSD
- [x] Gauged Stream?

Max. Pump rate (gpm):

Max. Simultaneous Trucks:

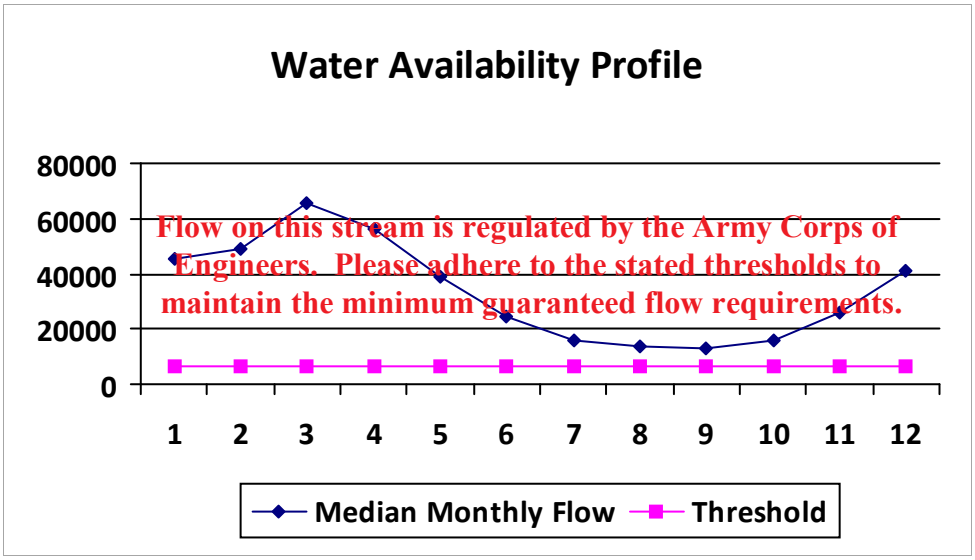
Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82075 | Source Name: Elite Gasfield Services / Elite Gasfield Services

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 25000 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — City of Follansbee
- [x] Gauged Stream?

Max. Pump rate (gpm):

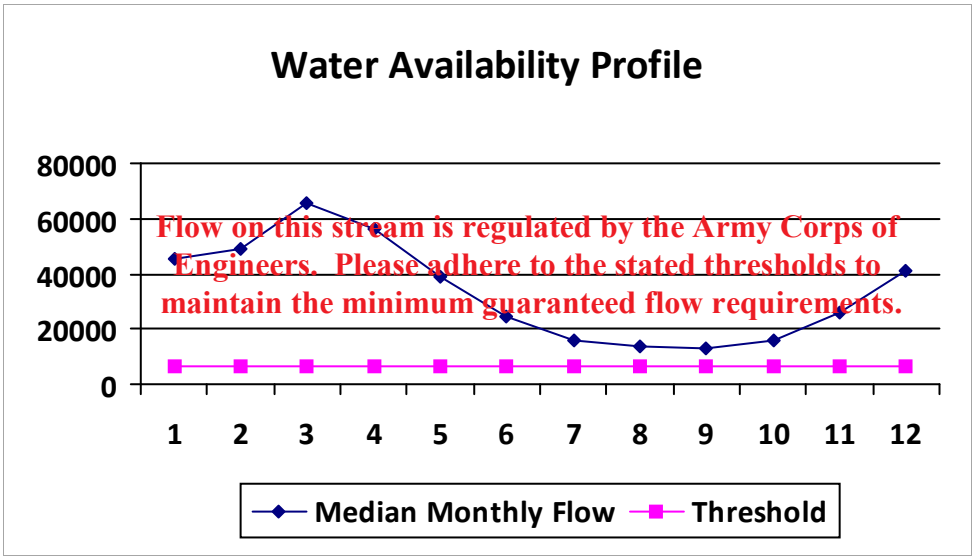
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82077 | Source Name: Grandview-Doolin PSD

Grandview-Doolin Public Service District

Source Latitude: -

Source Longitude: -

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Grandview-Doolin PSD
- [x] Gauged Stream?

Max. Pump rate (gpm):

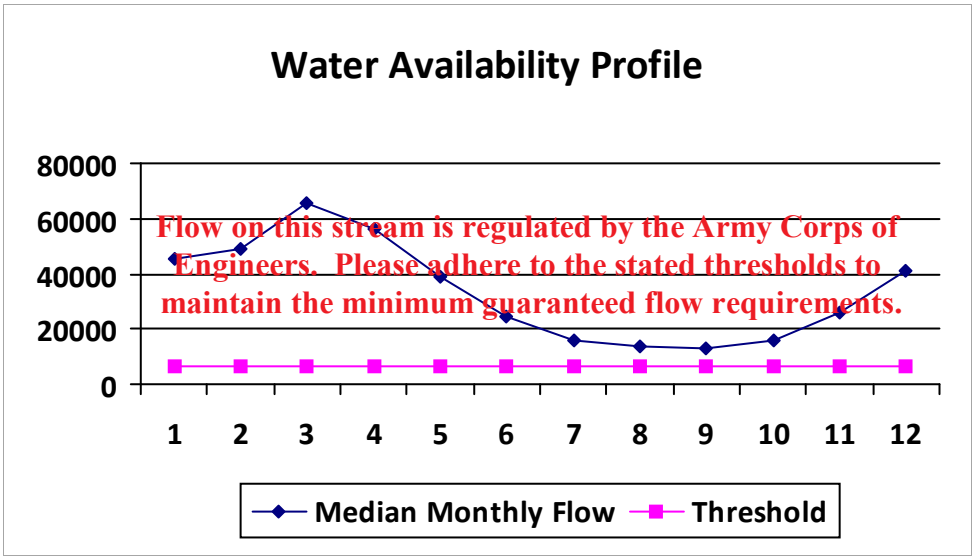
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82080 | Source Name: Marshall County Public Service District 3 / Marshall County Public Service District #4

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Moundsville Water Department
- [ ] Gauged Stream?

Max. Pump rate (gpm):

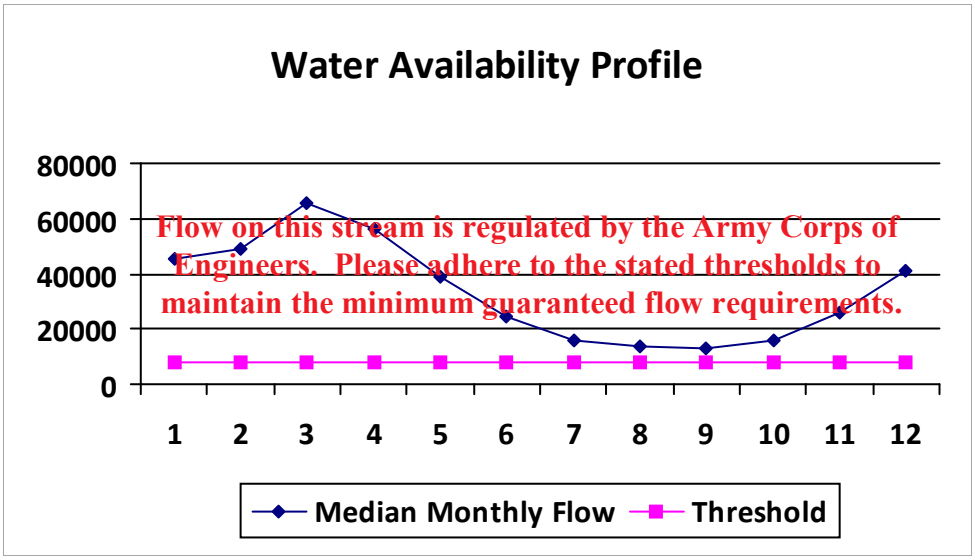
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82081 | Source Name: Marshall County Public Service District 4 / Marshall County Public Service District #4

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Moundsville Water Department
- [ ] Gauged Stream?

Max. Pump rate (gpm):

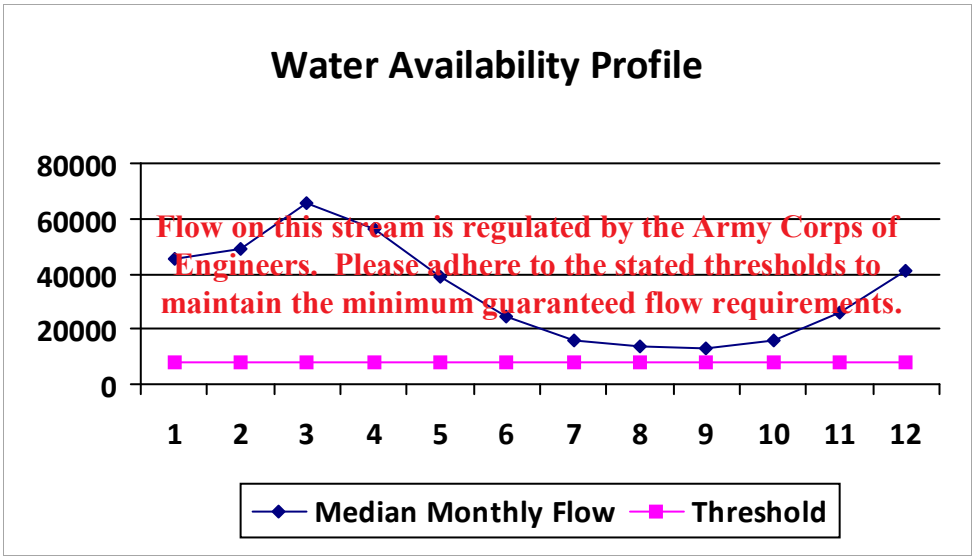
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82082 | Source Name: Ohio County PSD / Ohio county PSD | Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

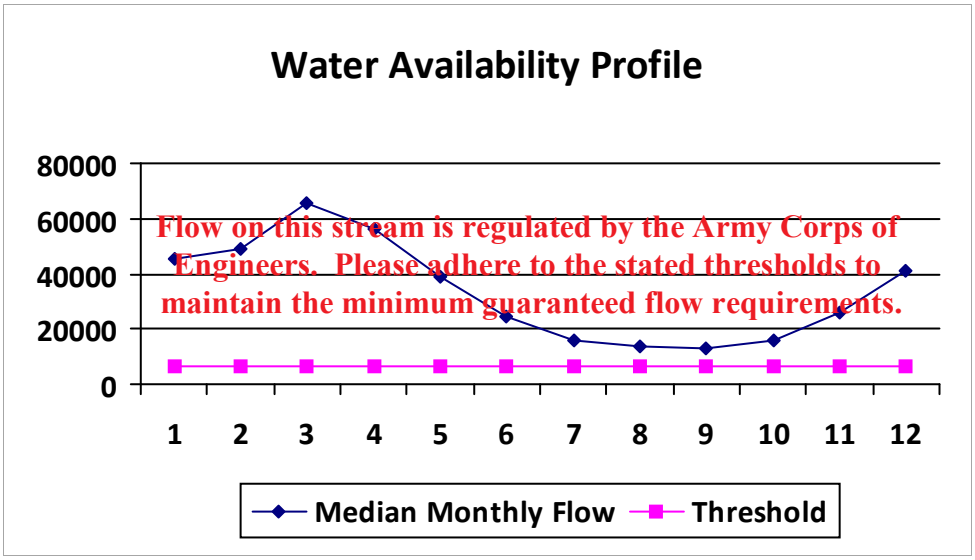
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82083 | Source Name: Ohio River @ 4K Industrial Park / 4K Industrial Park, LLC

Source Latitude: 40.098805

Source Longitude: -80.711328

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Belmont, OH

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

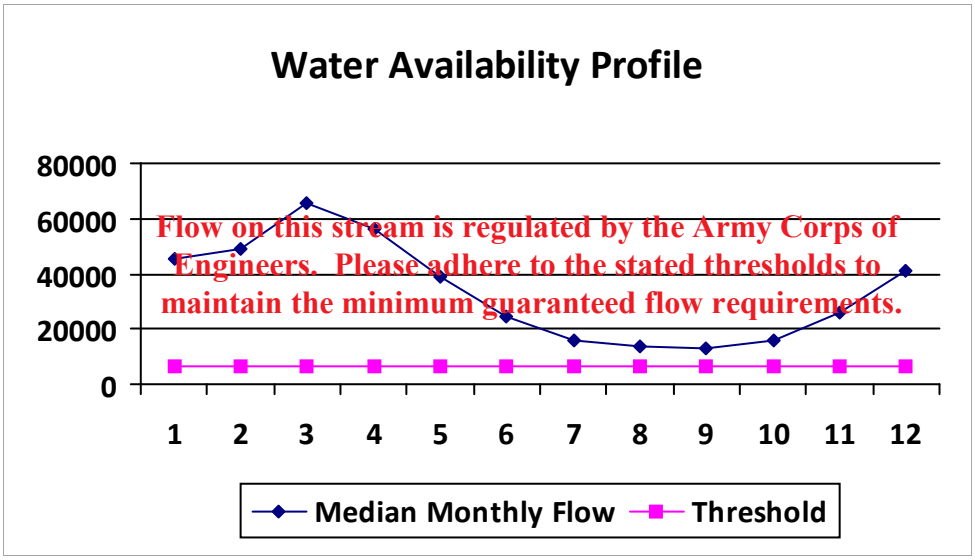
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm):

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82084 | Source Name: Ohio River @ J&R Excavating / J&R Excavating

Source Latitude: 39.998509

Source Longitude: -80.737336

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

Max. Simultaneous Trucks: 0

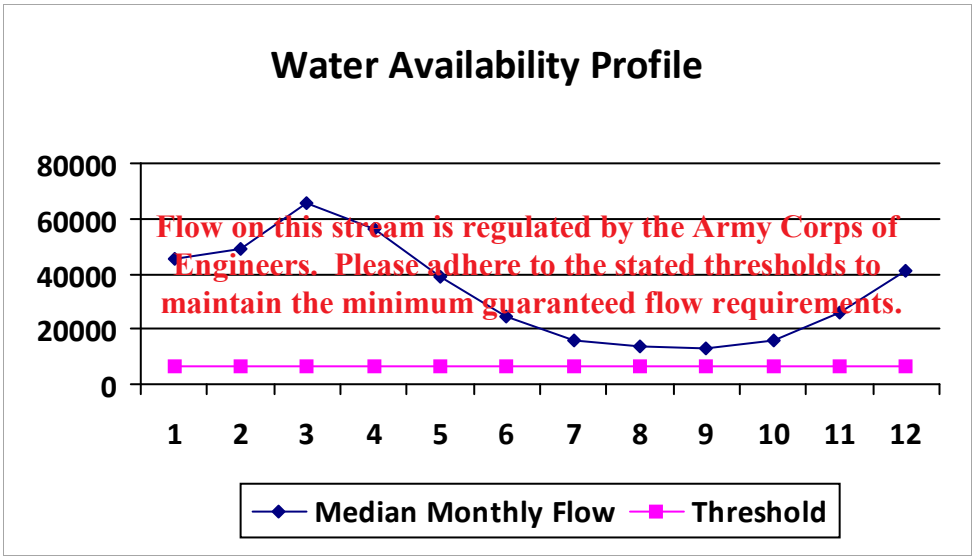
Max. Truck pump rate (gpm):

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82085 | Source Name: Ohio River @ Oasis Transport Withdrawal Site

Oasis Transport, LLC

Source Latitude: 40.331551

Source Longitude: -80.601034

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

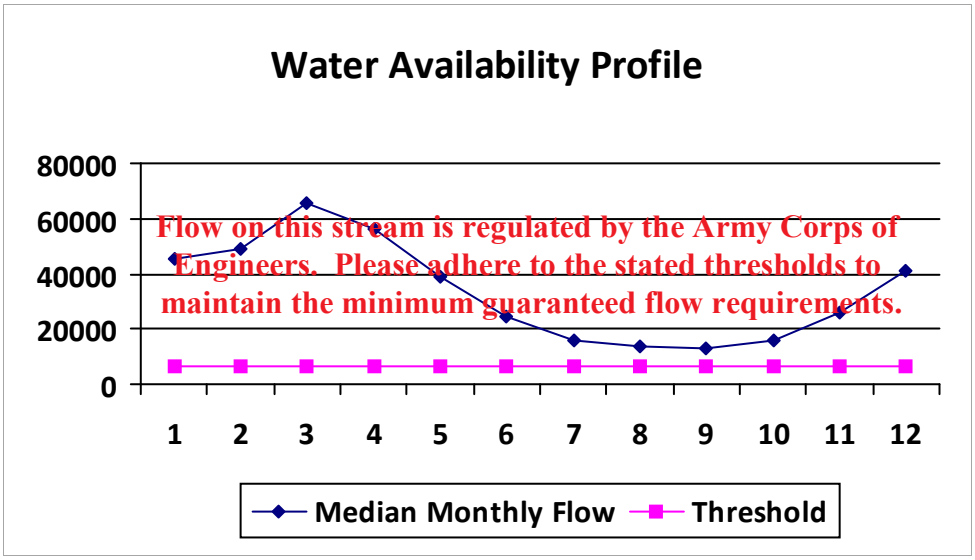
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82087 | Source Name: Range Tap @ Corbin Withdrawal Site

Range Resources Corp.

Source Latitude: 40.229983

Source Longitude: -80.521067

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

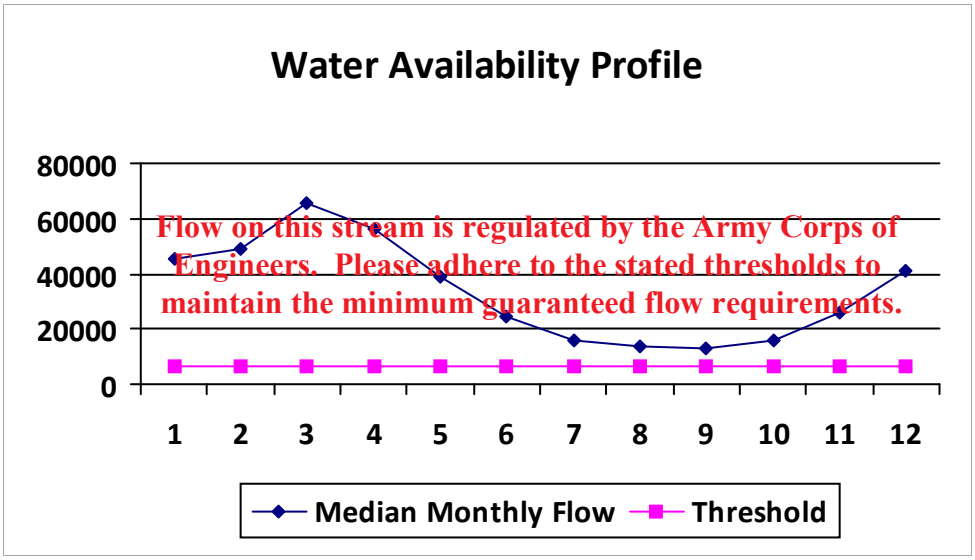
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82091 | Source Name: The Village of Valley Grove / The Village of Valley Grove

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

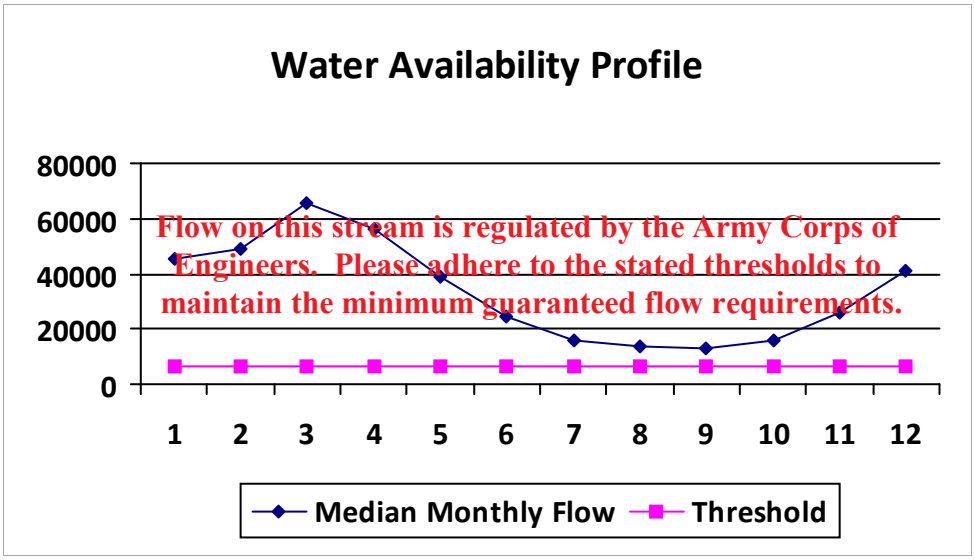
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82092 | Source Name: Valley Falls PSD / Valley Falls PSD

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5020001

Drainage Area (sq. mi.): 1367.05 | County: Marion

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Tygart Valley Dam
- [x] Proximate PSD? — City of Fairmont
- [x] Gauged Stream?

Max. Pump rate (gpm):

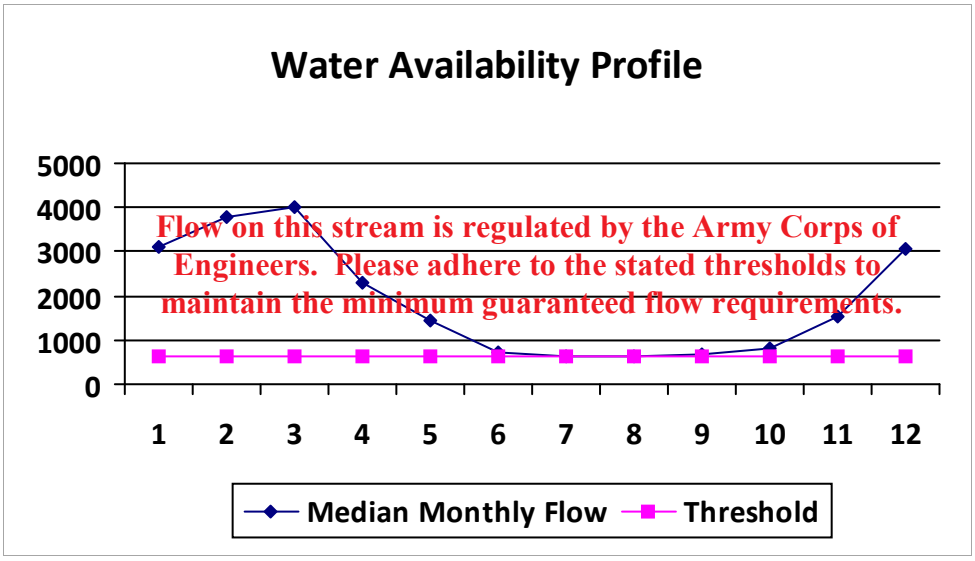
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3057000 | TYGART VALLEY RIVER AT COLFAX, WV

Drainage Area (sq. mi.): 1,363.00 | Gauge Threshold (cfs): 624

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	3,116.33	-	-
2	3,762.53	-	-
3	4,020.62	-	-
4	2,297.81	-	-
5	1,441.95	-	-
6	729.86	-	-
7	613.75	-	-
8	623.01	-	-
9	694.86	-	-
10	793.38	-	-
11	1,551.03	-	-
12	3,049.68	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82096 | Source Name: Wheeling Creek #1 @ HG Energy

HG Energy, LLC

Source Latitude: 39.95205

Source Longitude: -80.56189

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 156.06 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

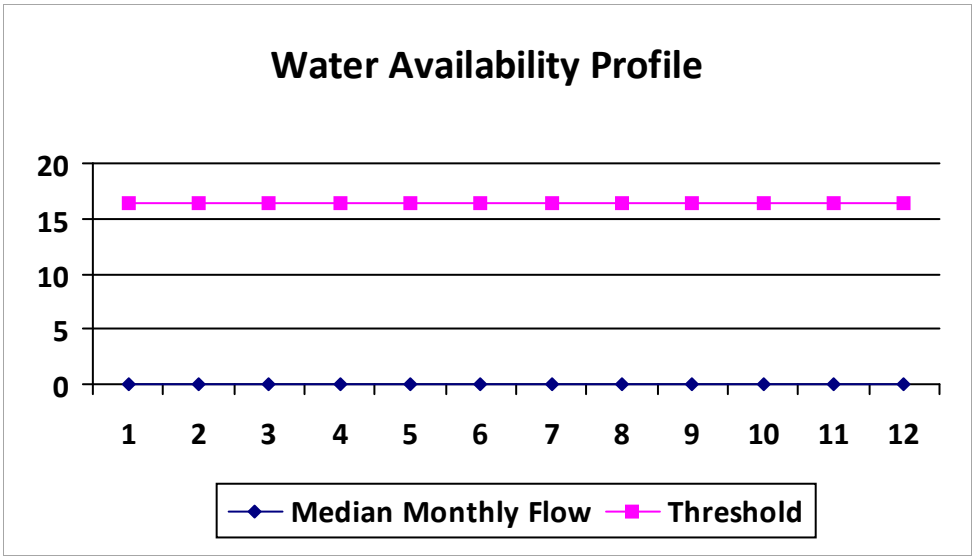
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00		-
2	0.00		-
3	0.00		-
4	0.00		-
5	0.00		-
6	0.00		-
7	0.00		-
8	0.00		-
9	0.00		-
10	0.00		-
11	0.00		-
12	0.00		-



Water Availability Assessment of Location

Base Threshold (cfs)	16.43
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82097 | Source Name: Wheeling Creek # 2 @ HG Energy

HG Energy, LLC

Source Latitude: 39.949577

Source Longitude: -80.531255

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 152.4 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

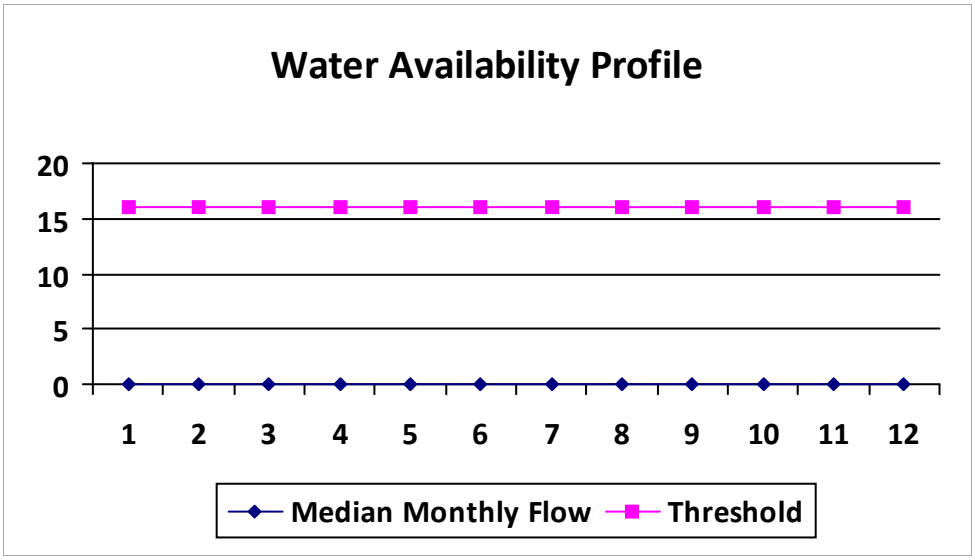
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00		-
2	0.00		-
3	0.00		-
4	0.00		-
5	0.00		-
6	0.00		-
7	0.00		-
8	0.00		-
9	0.00		-
10	0.00		-
11	0.00		-
12	0.00		-



Water Availability Assessment of Location

Base Threshold (cfs)	16.04
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82098 | Source Name: Wheeling Water Department / Wheeling Water Department

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

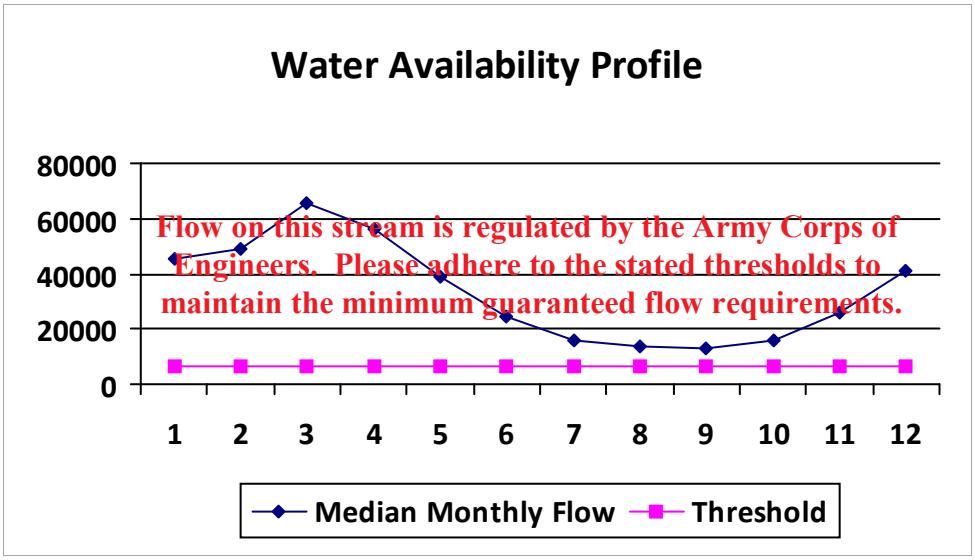
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82037 | Source Name: Wheeling Creek @ Iskon / Iskcon New Vrindaban, Inc.

Source Latitude: 39.967973

Source Longitude: -80.599241

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 189.6 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 2,500

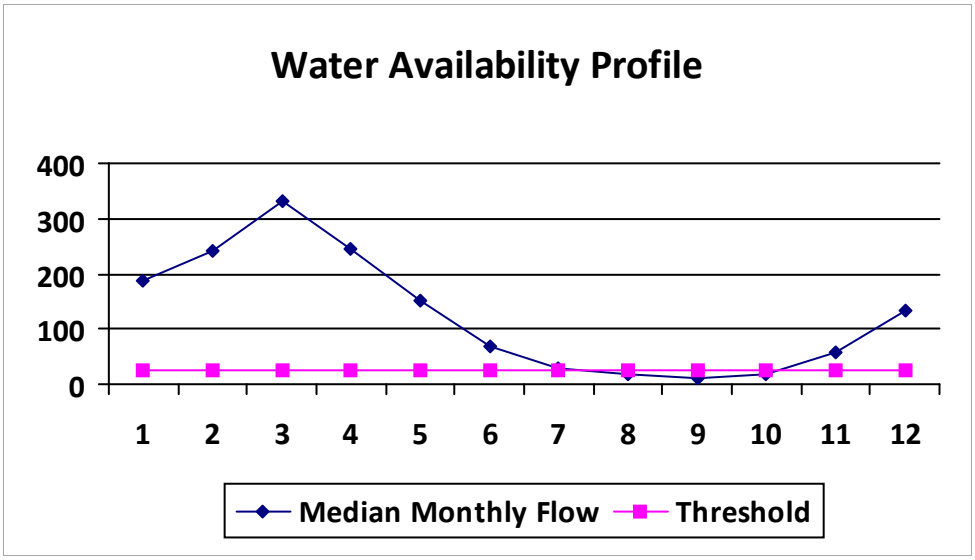
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	187.84	31.21	156.81
2	239.69	31.21	208.66
3	332.43	31.21	301.40
4	246.77	31.21	215.74
5	150.42	31.21	119.39
6	68.46	31.21	37.43
7	30.25	31.21	-0.78
8	17.70	31.21	-13.33
9	11.25	31.21	-19.78
10	18.63	31.21	-12.40
11	58.61	31.21	27.58
12	132.90	31.21	101.87



Water Availability Assessment of Location

Base Threshold (cfs)	25.64
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**43.57**
Passby at Location (cfs):	**25.64**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82038 | Source Name: Wheeling Creek @ Schafer / Betty Jane Schafer

Source Latitude: 39.99257

Source Longitude: -80.634912

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 203.38 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 5,250

Max. Simultaneous Trucks:

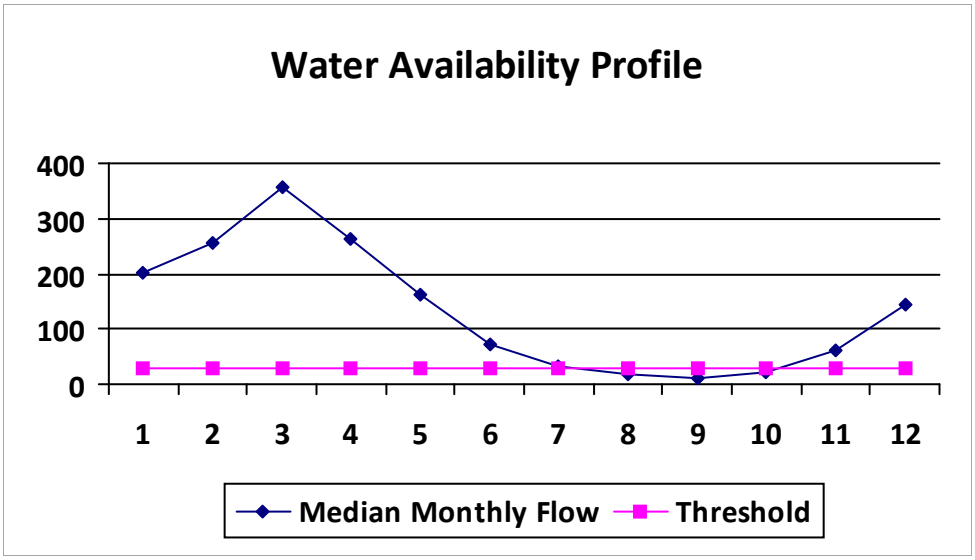
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	201.49	39.20	162.43
2	257.11	39.20	218.06
3	356.59	39.20	317.53
4	264.71	39.20	225.65
5	161.35	39.20	122.30
6	73.44	39.20	34.38
7	32.45	39.20	-6.60
8	18.98	39.20	-20.08
9	12.06	39.20	-26.99
10	19.99	39.20	-19.07
11	62.87	39.20	23.81
12	142.56	39.20	103.50



Water Availability Assessment of Location

Base Threshold (cfs)	27.50
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**49.70**
Passby at Location (cfs):	**27.50**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82039 | Source Name: Little Wheeling Creek @ Main Street Bank / Main Street Bank

Source Latitude: 40.064076

Source Longitude: -80.614406

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 13.94 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000

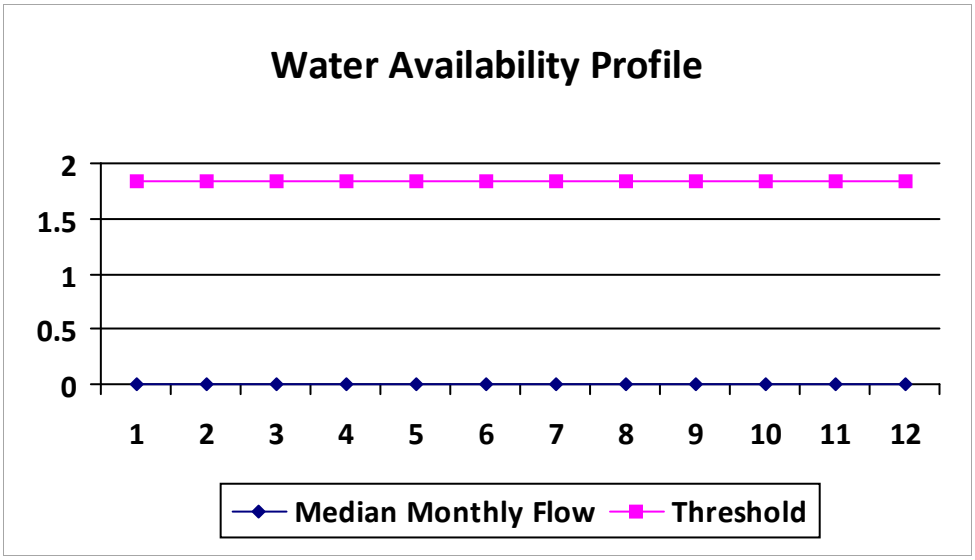
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00	10.00	-
2	0.00	10.00	-
3	0.00	10.00	-
4	0.00	10.00	-
5	0.00	10.00	-
6	0.00	10.00	-
7	0.00	10.00	-
8	0.00	10.00	-
9	0.00	10.00	-
10	0.00	10.00	-
11	0.00	10.00	-
12	0.00	10.00	-



Water Availability Assessment of Location

Base Threshold (cfs)	1.47
Upstream Demand (cfs):	3.34
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.37
Ungauged Stream Safety (cfs):	0.37
Min. Gauge Reading (cfs):	**31.80**
Passby at Location (cfs):	**2.20**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP	02427	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Charles Jamison MSH Well Pad		

Source ID: 82040 Source Name: Paw Paw Creek @ Horizon Ventures

Horizon Ventures of WV, Inc

Source Latitude: 39.552426

Source Longitude: -80.166833

HUC-8 Code: 5020003

Drainage Area (sq. mi.) 28.34 County: Marion

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

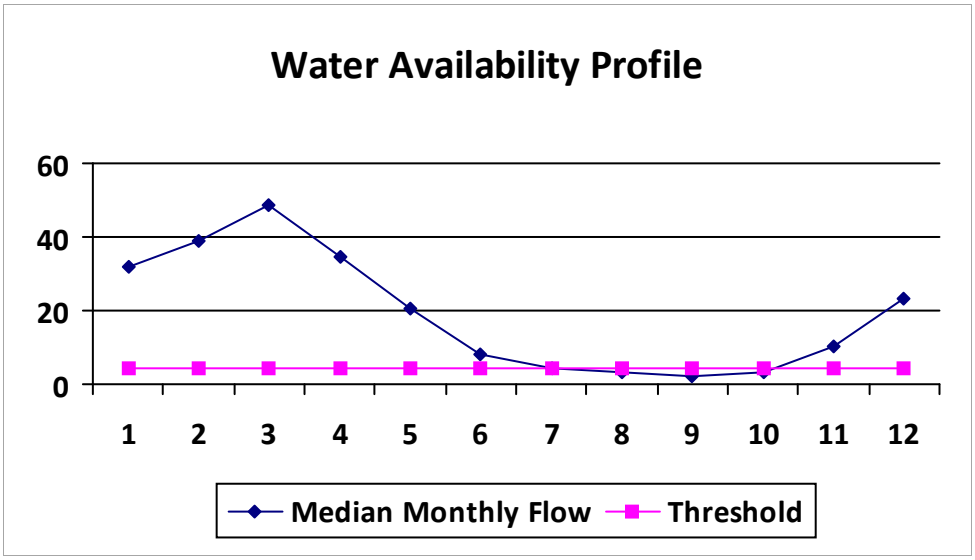
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Drainage Area (sq. mi.): 116.00 Gauge Threshold (cfs): 15

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	31.74	9.95	21.86
2	39.11	9.95	29.23
3	48.41	9.95	38.52
4	34.37	9.95	24.48
5	20.75	9.95	10.86
6	8.19	9.95	-1.70
7	4.57	9.95	-5.32
8	3.18	9.95	-6.70
9	2.35	9.95	-7.54
10	3.03	9.95	-6.86
11	10.46	9.95	0.58
12	23.48	9.95	13.59



Water Availability Assessment of Location

Base Threshold (cfs)	3.66
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.92
Ungauged Stream Safety (cfs):	0.92
Min. Gauge Reading (cfs):	**26.96**
Passby at Location (cfs):	**5.50**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82041 | Source Name: Little Wheeling Creek @ Rt. 40 Staging Area
JDS Investments, LLC

Source Latitude: 40.078324
Source Longitude: -80.591145

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 13.94 | County: Ohio

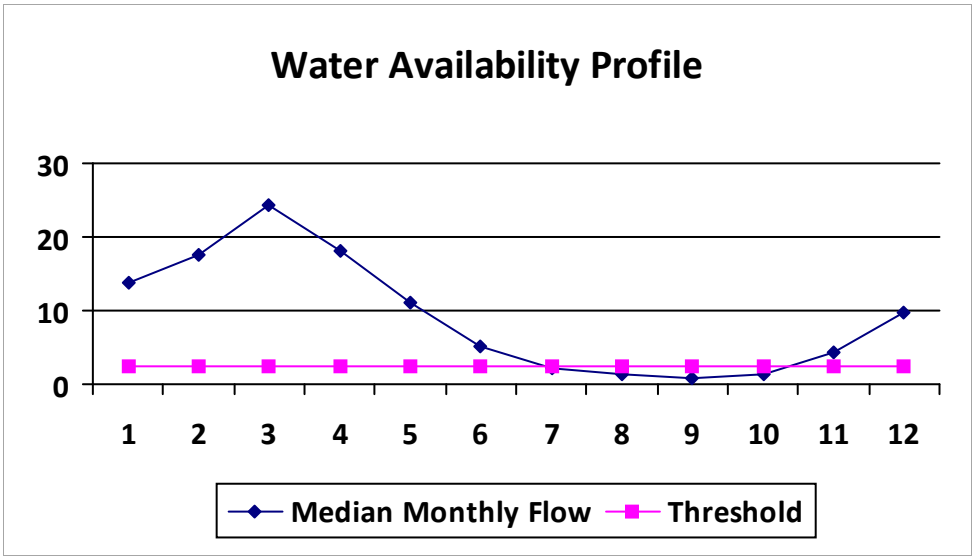
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.81	10.62	3.55
2	17.62	10.62	7.36
3	24.44	10.62	14.18
4	18.14	10.62	7.88
5	11.06	10.62	0.80
6	5.03	10.62	-5.23
7	2.22	10.62	-8.03
8	1.30	10.62	-8.96
9	0.83	10.62	-9.43
10	1.37	10.62	-8.89
11	4.31	10.62	-5.95
12	9.77	10.62	-0.49



Water Availability Assessment of Location

Base Threshold (cfs)	1.89
Upstream Demand (cfs):	3.34
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.47
Ungauged Stream Safety (cfs):	0.47
Min. Gauge Reading (cfs):	**64.80**
Passby at Location (cfs):	**2.83**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82042 | Source Name: Wheeling Creek @ Sligar / Terry Sligar

Source Latitude: 40.013185

Source Longitude: -80.652863

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 211.8 | County: Marshall

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☑ Gauged Stream?

Max. Pump rate (gpm): 3,360

Max. Simultaneous Trucks:

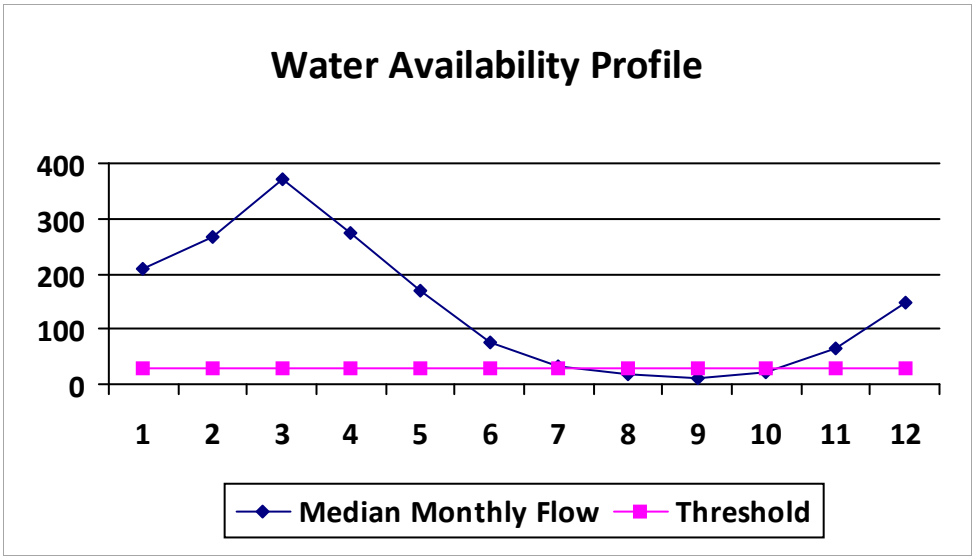
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	209.83	36.13	173.84
2	267.76	36.13	231.77
3	371.35	36.13	335.36
4	275.67	36.13	239.68
5	168.03	36.13	132.05
6	76.48	36.13	40.49
7	33.80	36.13	-2.19
8	19.77	36.13	-16.22
9	12.56	36.13	-23.42
10	20.81	36.13	-15.17
11	65.47	36.13	29.49
12	148.46	36.13	112.48



Water Availability Assessment of Location

Base Threshold (cfs)	28.64
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**45.49**
Passby at Location (cfs):	**28.64**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP	02427	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Charles Jamison MSH Well Pad		

Source ID: 82043 Source Name: Middle Wheeling Creek @ Gribben
Lawrence Kevin Gribber

Source Latitude: 40.036777
Source Longitude: -80.598008

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 30.81 County: Ohio

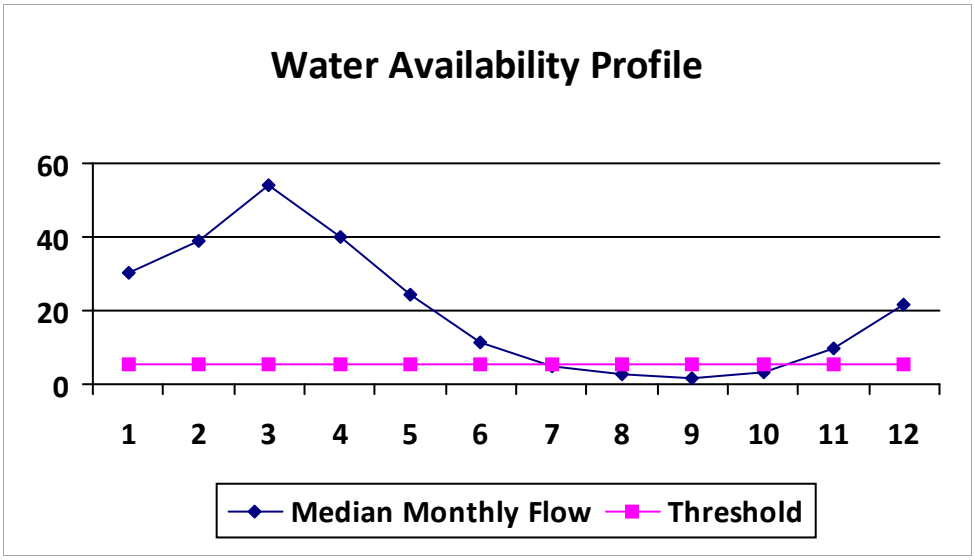
☐ Endangered Species? ☐ Mussel Stream? ☐ ZCC
☐ Trout Stream? ☐ Tier 3? ☐ WH
☐ Regulated Stream?
☐ Proximate PSD?
☐ Gauged Stream?

Max. Pump rate (gpm): 2,000
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	30.52	10.71	20.18
2	38.95	10.71	28.61
3	54.02	10.71	43.68
4	40.10	10.71	29.76
5	24.44	10.71	14.10
6	11.13	10.71	0.79
7	4.92	10.71	-5.42
8	2.88	10.71	-7.46
9	1.83	10.71	-8.51
10	3.03	10.71	-7.31
11	9.52	10.71	-0.82
12	21.60	10.71	11.26



Water Availability Assessment of Location

Base Threshold (cfs)	4.17
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	1.04
Ungauged Stream Safety (cfs):	1.04
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**6.25**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82044 | Source Name: Short Creek @ Cain / Susan L. Cain

Source Latitude: 40.155061

Source Longitude: -80.651431

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 16.58 | County: Ohio

☐ Endangered Species? ☐ Mussel Stream? ☐ ZCC

☐ Trout Stream? ☐ Tier 3? ☐ WH

☐ Regulated Stream?

☐ Proximate PSD?

☐ Gauged Stream?

Max. Pump rate (gpm): 3,360

Max. Simultaneous Trucks:

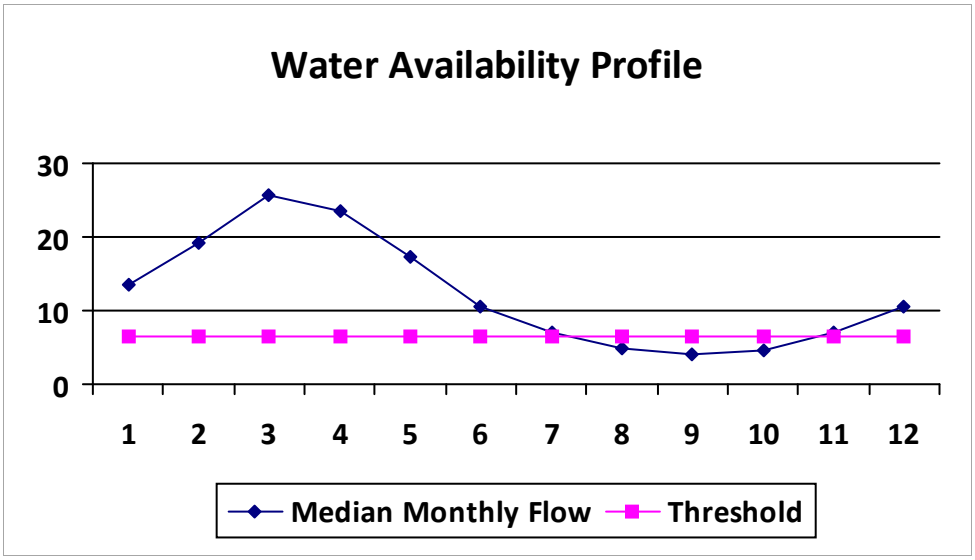
Max. Truck pump rate (gpm)

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.39	15.17	-1.60
2	19.18	15.17	4.20
3	25.67	15.17	10.68
4	23.44	15.17	8.45
5	17.30	15.17	2.31
6	10.56	15.17	-4.43
7	6.97	15.17	-8.01
8	4.87	15.17	-10.12
9	3.99	15.17	-11.00
10	4.71	15.17	-10.27
11	6.97	15.17	-8.02
12	10.55	15.17	-4.43



Water Availability Assessment of Location

Base Threshold (cfs)	5.12
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	1.28
Ungauged Stream Safety (cfs):	1.28
Min. Gauge Reading (cfs):	**64.49**
Passby at Location (cfs):	**7.68**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82045 | Source Name: Middle Wheeling Creek @ Supler / Gregory and Peggy Supler

Source Latitude: 40.04409

Source Longitude: -80.55348

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 20.54 | County: Ohio

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,500

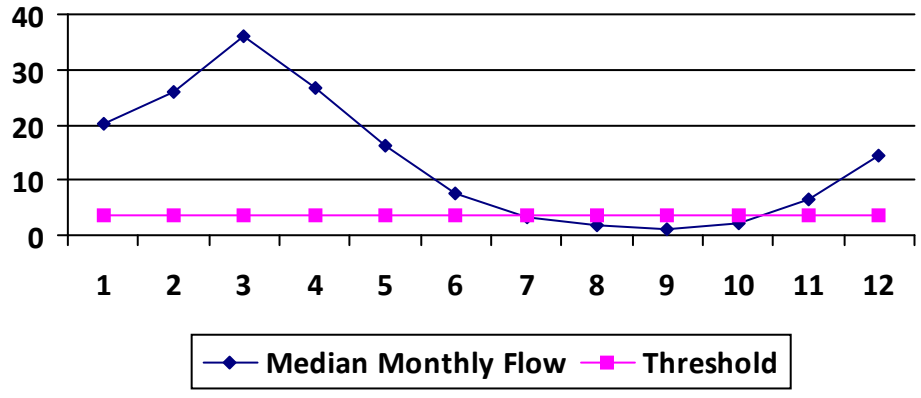
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	20.35	9.74	10.73
2	25.97	9.74	16.35
3	36.01	9.74	26.39
4	26.73	9.74	17.11
5	16.30	9.74	6.68
6	7.42	9.74	-2.20
7	3.28	9.74	-6.34
8	1.92	9.74	-7.70
9	1.22	9.74	-8.40
10	2.02	9.74	-7.60
11	6.35	9.74	-3.27
12	14.40	9.74	4.78



Water Availability Assessment of Location

Base Threshold (cfs)	2.78
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.69
Ungauged Stream Safety (cfs):	0.69
Min. Gauge Reading (cfs):	**62.57**
Passby at Location (cfs):	**4.17**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82046 | Source Name: Big Wheeling Creek @ Wheeling Staging Area
Fulton Storage, LLC

Source Latitude: 40.077019
Source Longitude: -80.713866

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 296.04 | County: Ohio

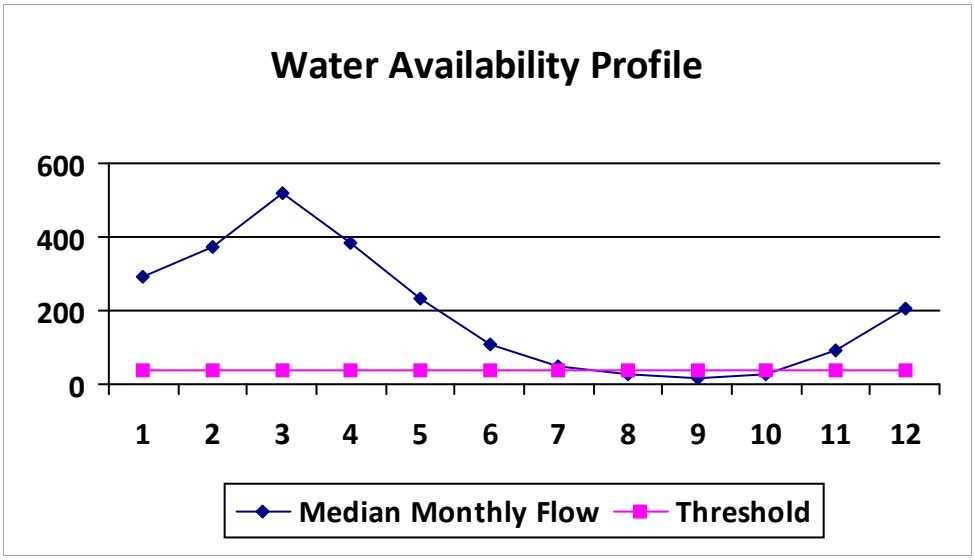
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	293.29	45.60	247.82
2	374.26	45.60	328.78
3	519.05	45.60	473.58
4	385.31	45.60	339.84
5	234.87	45.60	189.40
6	106.90	45.60	61.43
7	47.24	45.60	1.77
8	27.63	45.60	-17.84
9	17.56	45.60	-27.91
10	29.09	45.60	-16.38
11	91.52	45.60	46.05
12	207.51	45.60	162.04



Water Availability Assessment of Location

Base Threshold (cfs)	40.03
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**43.57**
Passby at Location (cfs):	**40.03**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82047 | Source Name: Ohio River @ Extraction B Panhandle
SWN Production Company, LLC

Source Latitude: 40.233469
Source Longitude: -80.654359

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

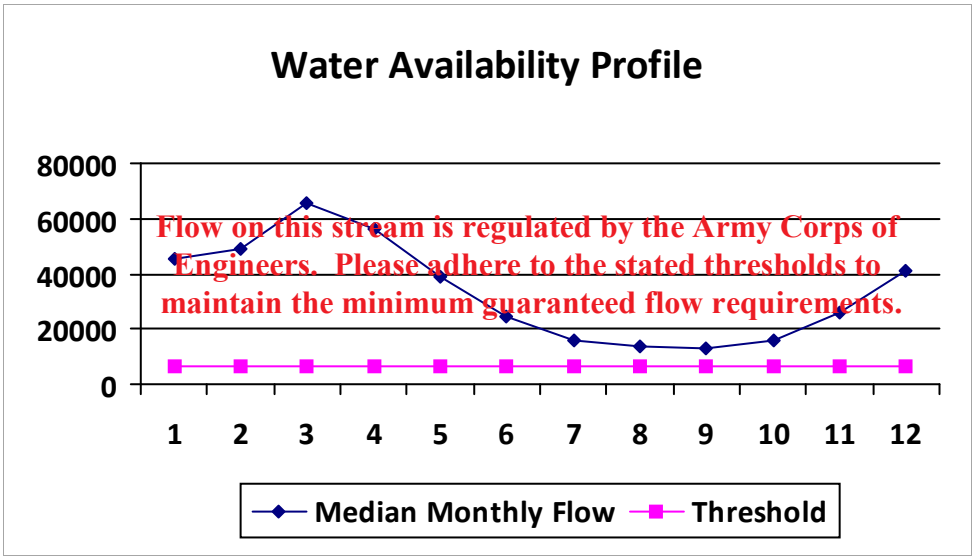
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Beech Bottom Water Dept.
- [x] Gauged Stream?

Max. Pump rate (gpm): 4,375
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.75
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82048 | Source Name: WV Fork Fish Creek @ Francis / Loretta J. Francis

Source Latitude: 39.733295

Source Longitude: -80.579415

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 86.51 | County: Marshall

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 3,000

Max. Simultaneous Trucks:

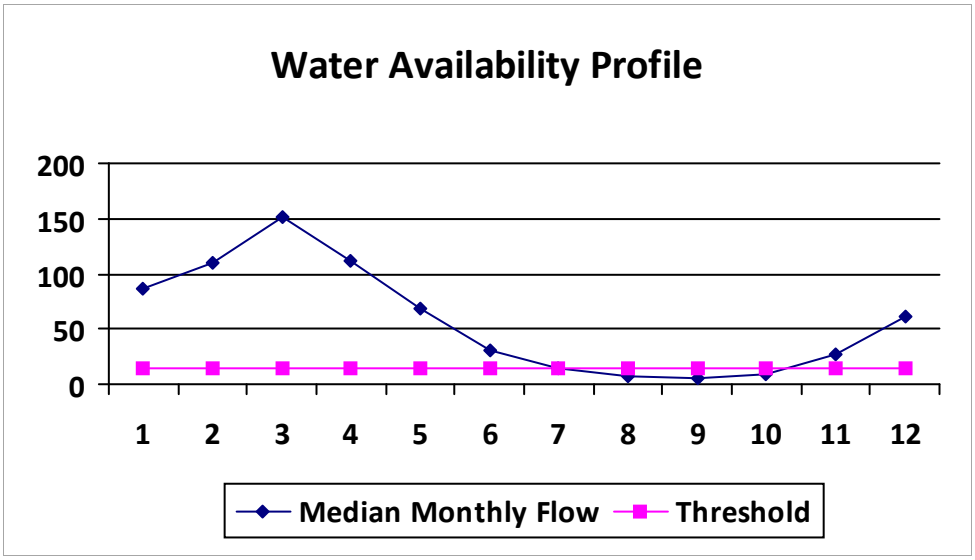
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	85.71	24.23	61.77
2	109.37	24.23	85.43
3	151.68	24.23	127.74
4	112.60	24.23	88.66
5	68.63	24.23	44.70
6	31.24	24.23	7.30
7	13.80	24.23	-10.13
8	8.07	24.23	-15.86
9	5.13	24.23	-18.80
10	8.50	24.23	-15.43
11	26.74	24.23	2.81
12	60.64	24.23	36.71



Water Availability Assessment of Location

Base Threshold (cfs)	11.70
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.68
Headwater Safety (cfs):	2.92
Ungauged Stream Safety (cfs):	2.92
Min. Gauge Reading (cfs):	**63.68**
Passby at Location (cfs):	**17.55**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82049 | Source Name: Ohio River @ Proctor Peacemaker

SWN Production Company, LLC

Source Latitude: 39.714299

Source Longitude: -80.825862

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Beech Bottom Water Dept.
- [x] Gauged Stream?

Max. Pump rate (gpm): 6,000

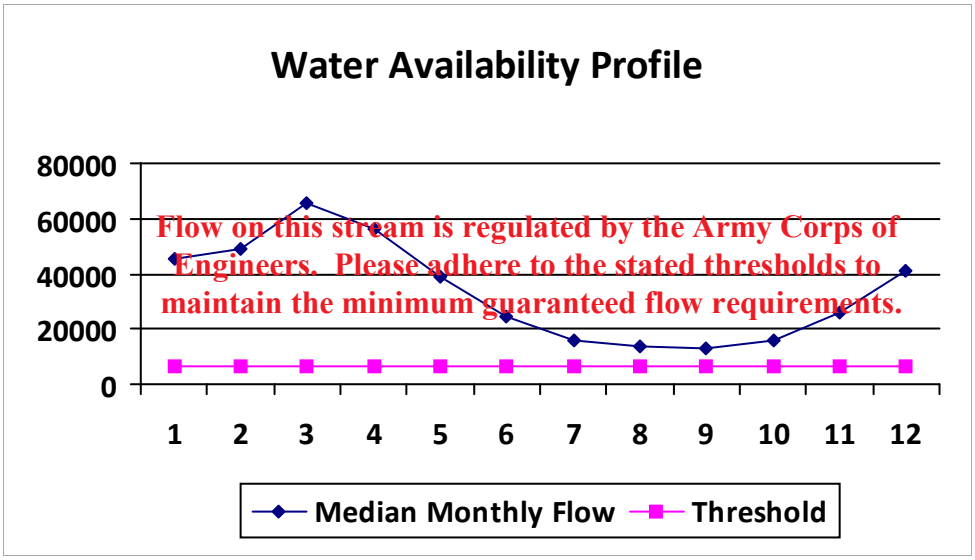
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	13.37
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82050 | Source Name: Booths Creek @ Reliance Minerals

Reliance Minerals, Inc.

Source Latitude: 39.530405

Source Longitude: -79.978079

HUC-8 Code: 5020003

Drainage Area (sq. mi.): 1.79 | County: Monongalia

- ☐ Endangered Species?
- ☐ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☑ Proximate PSD? Morgantown Utility Board
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

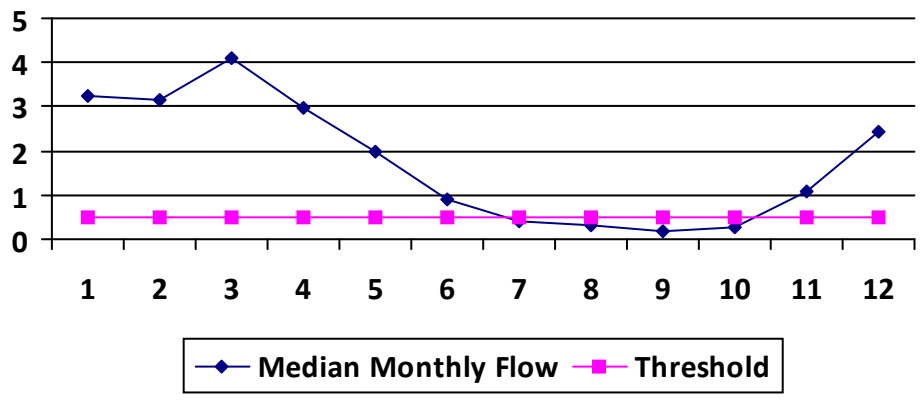
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Drainage Area (sq. mi.): 63.20 | Gauge Threshold (cfs): 14

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	3.25	5.05	-1.69
2	3.16	5.05	-1.77
3	4.12	5.05	-0.82
4	2.98	5.05	-1.96
5	1.97	5.05	-2.97
6	0.89	5.05	-4.04
7	0.41	5.05	-4.53
8	0.30	5.05	-4.64
9	0.17	5.05	-4.76
10	0.29	5.05	-4.65
11	1.08	5.05	-3.86
12	2.43	5.05	-2.50



Water Availability Assessment of Location

Base Threshold (cfs)	0.40
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.10
Ungauged Stream Safety (cfs):	0.10
Min. Gauge Reading (cfs):	**25.46**
Passby at Location (cfs):	**0.59**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82051 | Source Name: West Virginia Fork of Fish Creek @ Van Scyoc With Israel D Van Scyoc

Source Latitude: 39.6908

Source Longitude: -80.4762

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 21.96 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000

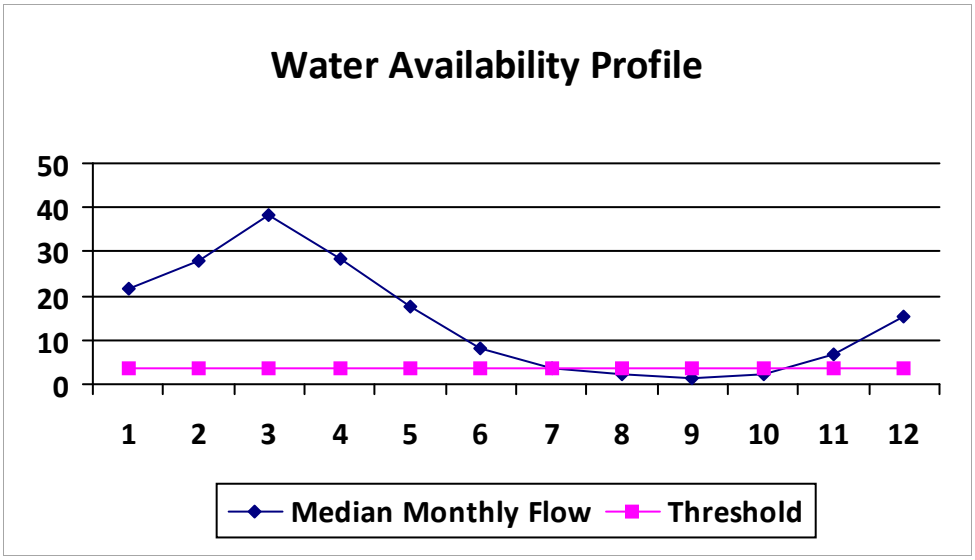
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	21.76	8.91	13.15
2	27.76	8.91	19.16
3	38.50	8.91	29.90
4	28.58	8.91	19.98
5	17.42	8.91	8.82
6	7.93	8.91	-0.67
7	3.50	8.91	-5.10
8	2.05	8.91	-6.55
9	1.30	8.91	-7.30
10	2.16	8.91	-6.44
11	6.79	8.91	-1.81
12	15.39	8.91	6.79



Water Availability Assessment of Location

Base Threshold (cfs)	2.97
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	1.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.74
Ungauged Stream Safety (cfs):	0.74
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**5.45**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82052 | Source Name: Buffalo Creek @ Bethany VFD Withdrawal Site
Bethany Pike Volunteer Fire Department

Source Latitude: 40.253422
Source Longitude: -80.600319

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 158.69 | County: Brooke

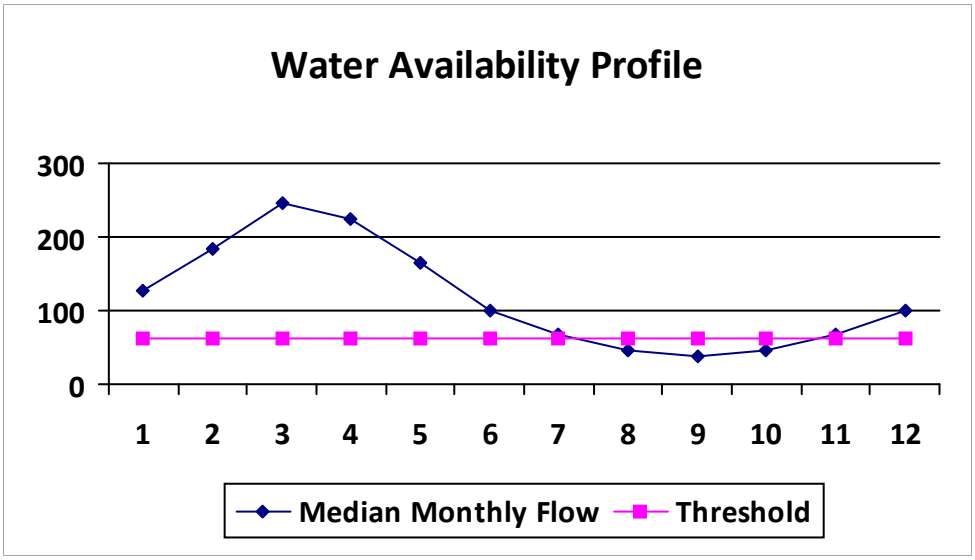
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,100
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	128.18	81.44	46.75
2	183.60	81.44	102.17
3	245.67	81.44	164.24
4	224.32	81.44	142.88
5	165.56	81.44	84.12
6	101.06	81.44	19.63
7	66.76	81.44	-14.68
8	46.57	81.44	-34.86
9	38.15	81.44	-43.29
10	45.11	81.44	-36.32
11	66.70	81.44	-14.73
12	101.01	81.44	19.57



Water Availability Assessment of Location

Base Threshold (cfs)	49.03
Upstream Demand (cfs):	13.25
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.91
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	12.26
Min. Gauge Reading (cfs):	**67.66**
Passby at Location (cfs):	**61.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82053 | Source Name: Whiteday Creek @ Sorine Withdrawal Site

Andrew Sorine, Jr.

Source Latitude: 39.472311

Source Longitude: -79.977123

HUC-8 Code: 5020003

Drainage Area (sq. mi.): 12.29 | County: Marion

- ☐ Endangered Species?
- ☐ Mussel Stream?
- ☐ ZCC
- ☑ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

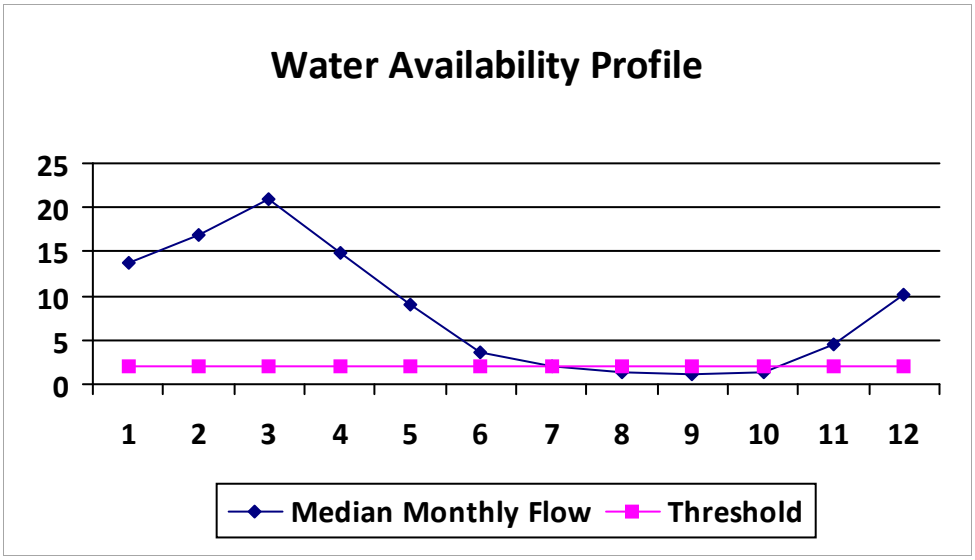
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3061500 | BUFFALO CREEK AT BARRACKVILLE, WV

Drainage Area (sq. mi.): 116.00 | Gauge Threshold (cfs): 15

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.77	6.84	7.02
2	16.96	6.84	10.21
3	20.99	6.84	14.24
4	14.90	6.84	8.15
5	9.00	6.84	2.25
6	3.55	6.84	-3.20
7	1.98	6.84	-4.77
8	1.38	6.84	-5.37
9	1.02	6.84	-5.73
10	1.31	6.84	-5.44
11	4.54	6.84	-2.21
12	10.18	6.84	3.43



Water Availability Assessment of Location

Base Threshold (cfs)	1.59
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.40
Ungauged Stream Safety (cfs):	0.40
Min. Gauge Reading (cfs):	**26.96**
Passby at Location (cfs):	**2.38**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82054 | Source Name: Buffalo Creek @ DNR
SWN Water Resources Company, LLC

Source Latitude: 40.19386
Source Longitude: -80.525796

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 98.28 | County: Brooke

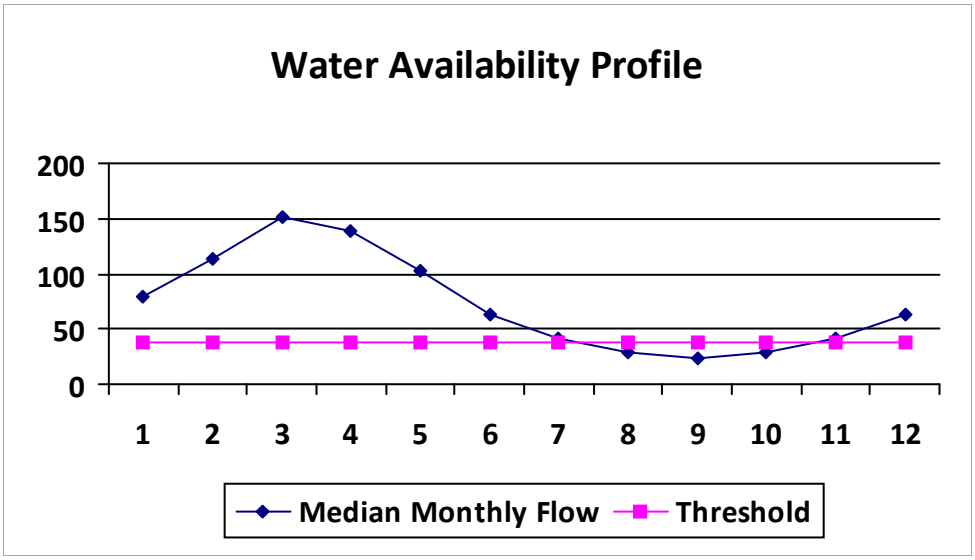
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 3,200
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	79.39	45.08	34.65
2	113.71	45.08	68.97
3	152.15	45.08	107.41
4	138.92	45.08	94.18
5	102.53	45.08	57.79
6	62.59	45.08	17.85
7	41.34	45.08	-3.40
8	28.84	45.08	-15.90
9	23.62	45.08	-21.12
10	27.94	45.08	-16.80
11	41.31	45.08	-3.43
12	62.56	45.08	17.82



Water Availability Assessment of Location

Base Threshold (cfs)	30.36
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	5.57
Pump rate (cfs):	7.13
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	7.59
Min. Gauge Reading (cfs):	**54.63**
Passby at Location (cfs):	**43.52**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82055 | Source Name: Fish Creek @ Gribben
Revocable Living Trust of M. Peggy Gribben

Source Latitude: 39.753271
Source Longitude: -80.597913

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 141.61 | County: Marshall

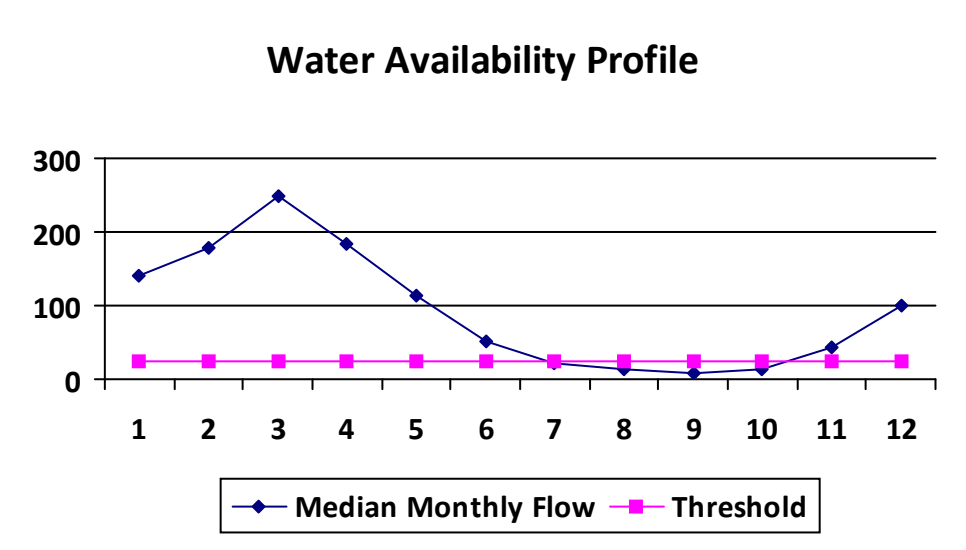
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	140.29	33.30	107.15
2	179.02	33.30	145.88
3	248.28	33.30	215.14
4	184.31	33.30	151.17
5	112.35	33.30	79.20
6	51.13	33.30	17.99
7	22.60	33.30	-10.55
8	13.22	33.30	-19.93
9	8.40	33.30	-24.75
10	13.92	33.30	-19.23
11	43.78	33.30	10.63
12	99.26	33.30	66.12



Water Availability Assessment of Location

Base Threshold (cfs)	19.15
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.79
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	**23.94**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP	02427	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Charles Jamison MSH Well Pad		

Source ID: 82056 Source Name: Buffalo Creek @ Forney
Forney & Sons Holding Company, LLC

Source Latitude: 40.193453
Source Longitude: -80.52175

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 98.28 County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

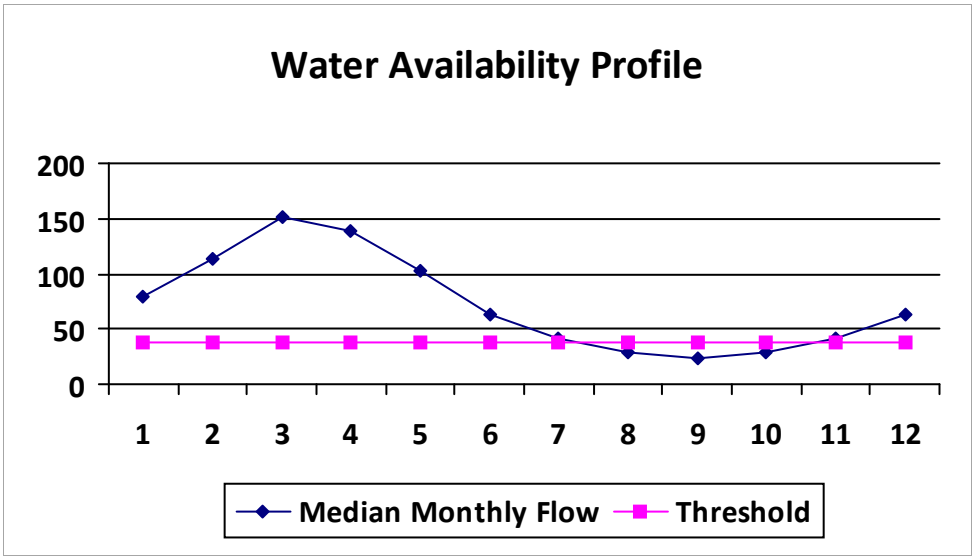
Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	79.39	43.52	36.21
2	113.71	43.52	70.53
3	152.15	43.52	108.97
4	138.92	43.52	95.74
5	102.53	43.52	59.35
6	62.59	43.52	19.41
7	41.34	43.52	-1.84
8	28.84	43.52	-14.34
9	23.62	43.52	-19.56
10	27.94	43.52	-15.24
11	41.31	43.52	-1.87
12	62.56	43.52	19.37



Water Availability Assessment of Location

Base Threshold (cfs)	30.36
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	5.57
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	7.59
Min. Gauge Reading (cfs):	**53.07**
Passby at Location (cfs):	**43.52**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82057 | Source Name: Buffalo Creek @ Fuchs / Beverly Fuchs

Source Latitude: 40.258863

Source Longitude: -80.60337

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 163.22 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 5,250

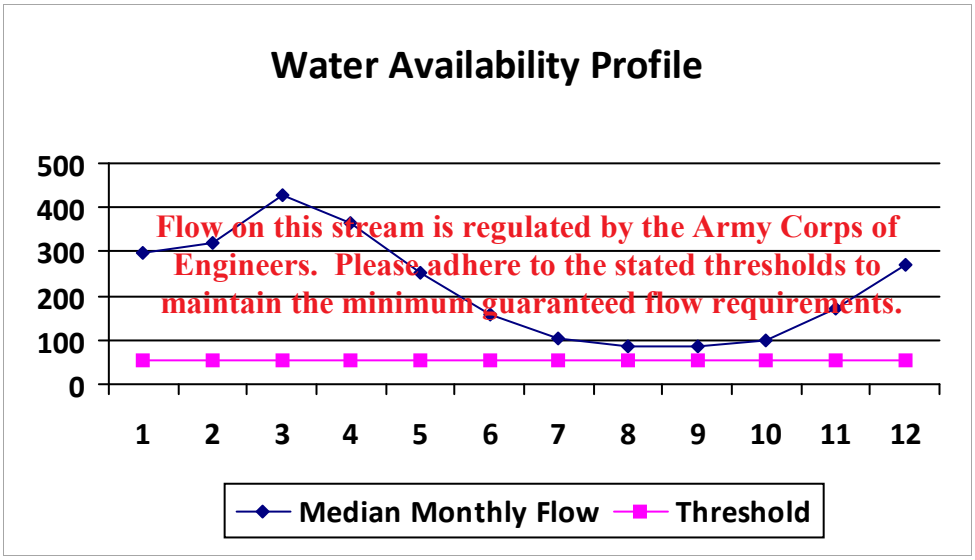
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	298.37	-	-
2	321.22	-	-
3	428.94	-	-
4	366.27	-	-
5	252.66	-	-
6	158.65	-	-
7	104.46	-	-
8	87.49	-	-
9	83.57	-	-
10	101.20	-	-
11	171.71	-	-
12	269.64	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	10.56
Ungauged Stream Safety (cfs):	10.56
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82058 | Source Name: Buffalo Creek @ Greathouse Withdrawal Site / Linda Greathouse

Source Latitude: 40.20895

Source Longitude: -80.60105

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 138.56 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 3,300

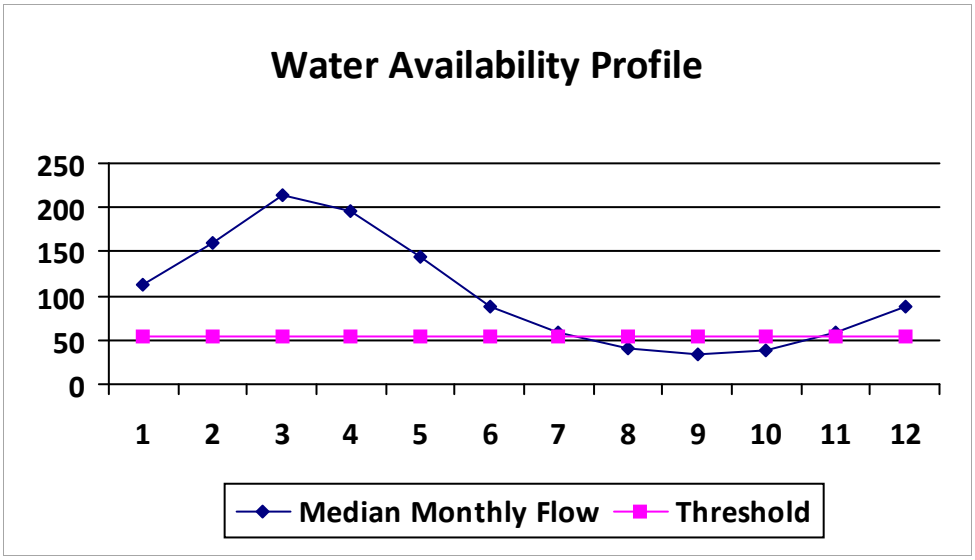
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	111.92	66.43	45.74
2	160.31	66.43	94.13
3	214.51	66.43	148.32
4	195.86	66.43	129.68
5	144.56	66.43	78.37
6	88.24	66.43	22.06
7	58.29	66.43	-7.90
8	40.66	66.43	-25.52
9	33.31	66.43	-32.88
10	39.39	66.43	-26.79
11	58.24	66.43	-7.94
12	88.19	66.43	22.01



Water Availability Assessment of Location

Base Threshold (cfs)	42.81
Upstream Demand (cfs):	5.57
Downstream Demand (cfs):	1.00
Pump rate (cfs):	7.35
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	10.70
Min. Gauge Reading (cfs):	**60.42**
Passby at Location (cfs):	**54.51**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82059 | Source Name: Buffalo Creek @ Labelle Farms / Steve Paul

Source Latitude: 40.204444

Source Longitude: -80.598645

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 136.79 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 5,250

Max. Simultaneous Trucks: 0

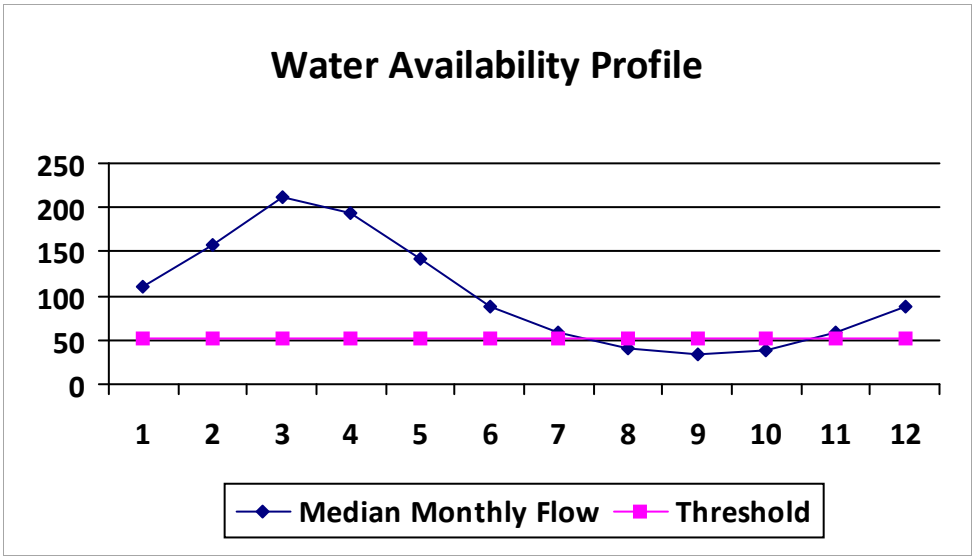
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	110.49	64.52	46.05
2	158.27	64.52	93.82
3	211.77	64.52	147.33
4	193.36	64.52	128.92
5	142.71	64.52	78.27
6	87.12	64.52	22.67
7	57.54	64.52	-6.90
8	40.14	64.52	-24.30
9	32.88	64.52	-31.56
10	38.89	64.52	-25.55
11	57.50	64.52	-6.95
12	87.07	64.52	22.62



Water Availability Assessment of Location

Base Threshold (cfs)	42.26
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.98
Pump rate (cfs):	11.70
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	10.57
Min. Gauge Reading (cfs):	**59.20**
Passby at Location (cfs):	**53.81**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82060 | Source Name: Buffalo Creek @ Worthley Withdrawal Site
Kimberly C. Worthley

Source Latitude: 40.210978
Source Longitude: -80.548779

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 113.49 | County: Brooke

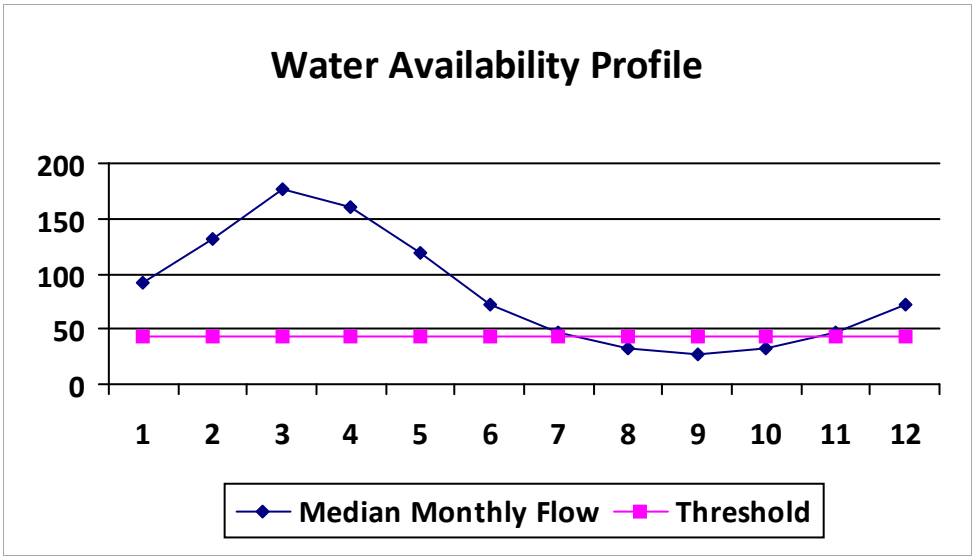
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [x] Proximate PSD? Hammond PSD
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	91.67	49.40	42.38
2	131.31	49.40	82.01
3	175.70	49.40	126.40
4	160.42	49.40	111.13
5	118.40	49.40	69.11
6	72.28	49.40	22.98
7	47.74	49.40	-1.55
8	33.31	49.40	-15.99
9	27.28	49.40	-22.02
10	32.26	49.40	-17.03
11	47.70	49.40	-1.59
12	72.24	49.40	22.94



Water Availability Assessment of Location

Base Threshold (cfs)	35.06
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	1.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	8.77
Min. Gauge Reading (cfs):	**53.07**
Passby at Location (cfs):	**44.83**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82061 | Source Name: Buffalo Creek @ WVDOH
West Virginia Division of Highways

Source Latitude: 40.258863
Source Longitude: -80.60337

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 163.22 | County: Brooke

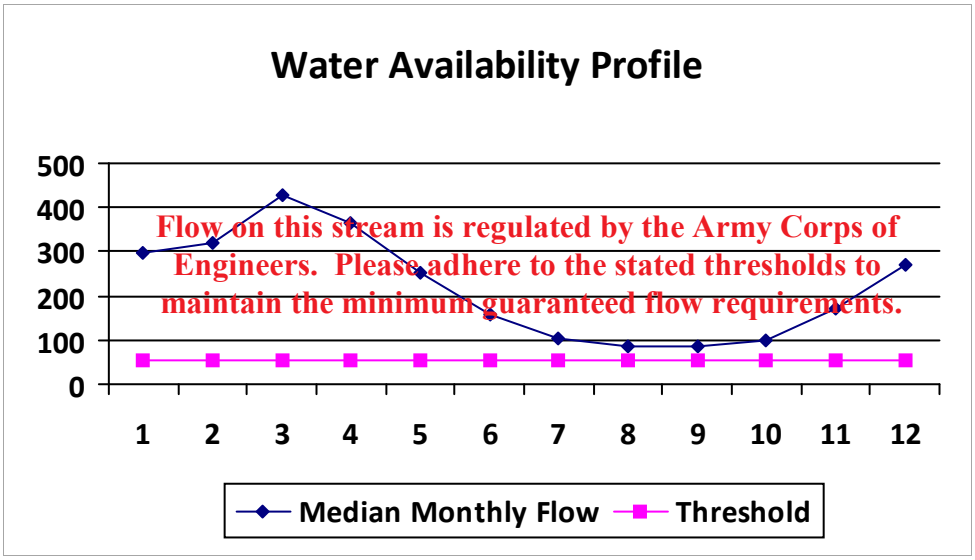
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,360
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	298.37	-	-
2	321.22	-	-
3	428.94	-	-
4	366.27	-	-
5	252.66	-	-
6	158.65	-	-
7	104.46	-	-
8	87.49	-	-
9	83.57	-	-
10	101.20	-	-
11	171.71	-	-
12	269.64	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	10.56
Ungauged Stream Safety (cfs):	10.56
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82062 | Source Name: Buffalo Creek @ Zatta / Edward Zatta

Source Latitude: 40.253588

Source Longitude: -80.600254

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 158.69 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,520

Max. Simultaneous Trucks: 0

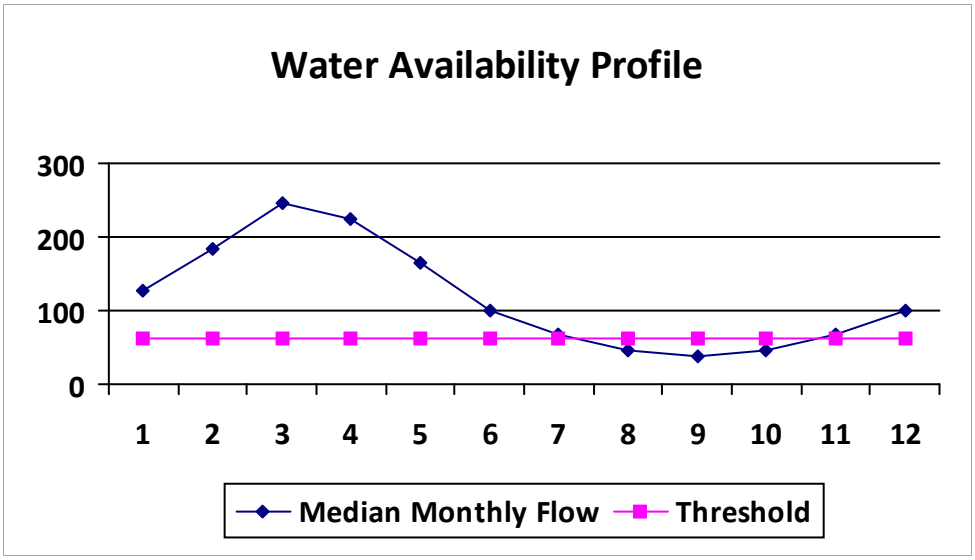
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	128.18	80.15	48.04
2	183.60	80.15	103.46
3	245.67	80.15	165.53
4	224.32	80.15	144.17
5	165.56	80.15	85.42
6	101.06	80.15	20.92
7	66.76	80.15	-13.39
8	46.57	80.15	-33.57
9	38.15	80.15	-42.00
10	45.11	80.15	-35.03
11	66.70	80.15	-13.44
12	101.01	80.15	20.87



Water Availability Assessment of Location

Base Threshold (cfs)	49.03
Upstream Demand (cfs):	13.25
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.61
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	12.26
Min. Gauge Reading (cfs):	**66.36**
Passby at Location (cfs):	**61.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82063 | Source Name: Cross Creek @ Bullock Withdrawal Site / Isabelle Bullock

Source Latitude: 40.30735

Source Longitude: -80.569317

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 74.66 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,500

Max. Simultaneous Trucks:

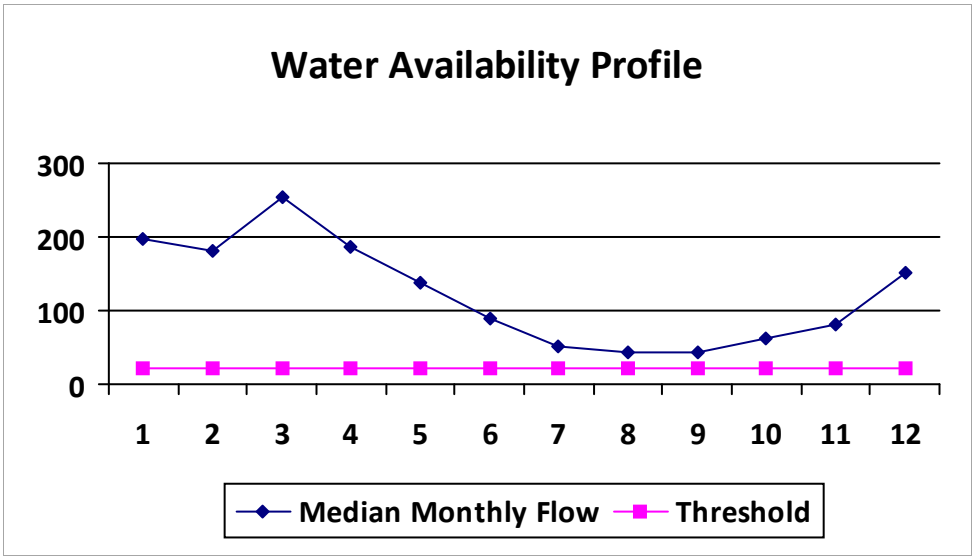
Max. Truck pump rate (gpm)

Reference Gauge: 3110830 | KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90

Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	195.97	26.56	169.48
2	180.05	26.56	153.56
3	253.89	26.56	227.40
4	186.52	26.56	160.03
5	138.84	26.56	112.35
6	89.57	26.56	63.08
7	50.78	26.56	24.29
8	42.06	26.56	15.57
9	43.77	26.56	17.28
10	61.47	26.56	34.98
11	81.23	26.56	54.74
12	151.05	26.56	124.56



Water Availability Assessment of Location

Base Threshold (cfs)	16.79
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.20
Min. Gauge Reading (cfs):	**19.32**
Passby at Location (cfs):	**20.99**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82064 | Source Name: Cross Creek @ DNR / WVDNR

Source Latitude: 40.300536

Source Longitude: -80.542229

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 68.58 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 3,000

Max. Simultaneous Trucks:

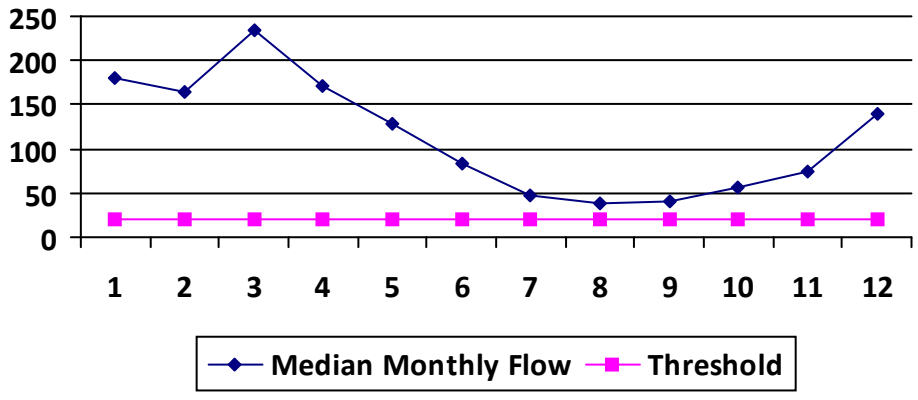
Max. Truck pump rate (gpm)

Reference Gauge: 3110830 | KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90

Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	180.01	25.97	154.07
2	165.39	25.97	139.45
3	233.21	25.97	207.27
4	171.33	25.97	145.39
5	127.53	25.97	101.59
6	82.28	25.97	56.34
7	46.64	25.97	20.70
8	38.64	25.97	12.69
9	40.20	25.97	14.26
10	56.46	25.97	30.52
11	74.61	25.97	48.67
12	138.75	25.97	112.81



Water Availability Assessment of Location

Base Threshold (cfs)	15.43
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.68
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	3.86
Min. Gauge Reading (cfs):	**20.43**
Passby at Location (cfs):	**19.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82065 | Source Name: Cross Creek @ Norfolk and Western Railway / Wheeling & Lake Erie Railway Company

Source Latitude: 40.30802

Source Longitude: -80.599193

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 79.78 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 5,250

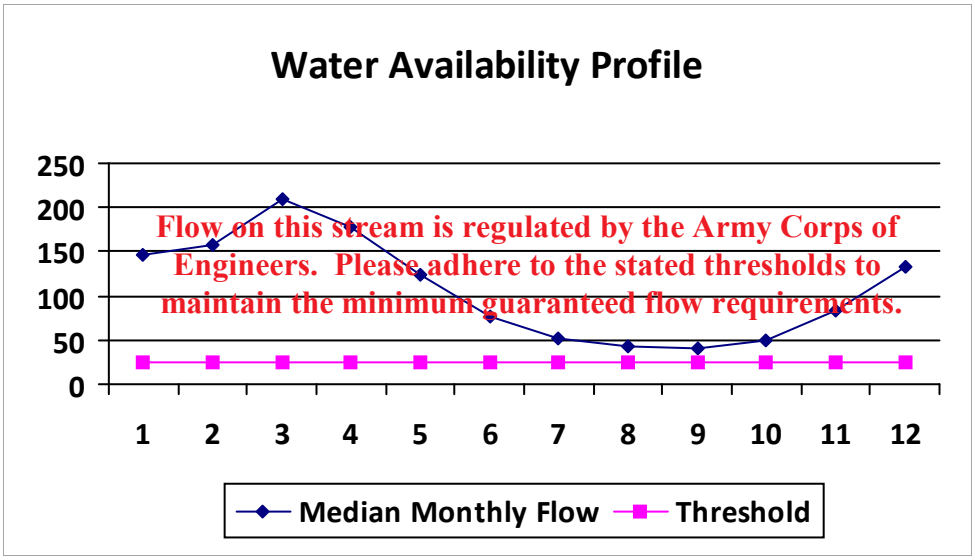
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	145.84	-	-
2	157.01	-	-
3	209.66	-	-
4	179.03	-	-
5	123.50	-	-
6	77.55	-	-
7	51.06	-	-
8	42.76	-	-
9	40.85	-	-
10	49.46	-	-
11	83.93	-	-
12	131.80	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	5.16
Ungauged Stream Safety (cfs):	5.16
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82066 | Source Name: Cross Creek @ Palizzi / Campbell Palizzi

Source Latitude: 40.302427

Source Longitude: -80.582753

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 79.78 | County: Brooke

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200

Max. Simultaneous Trucks:

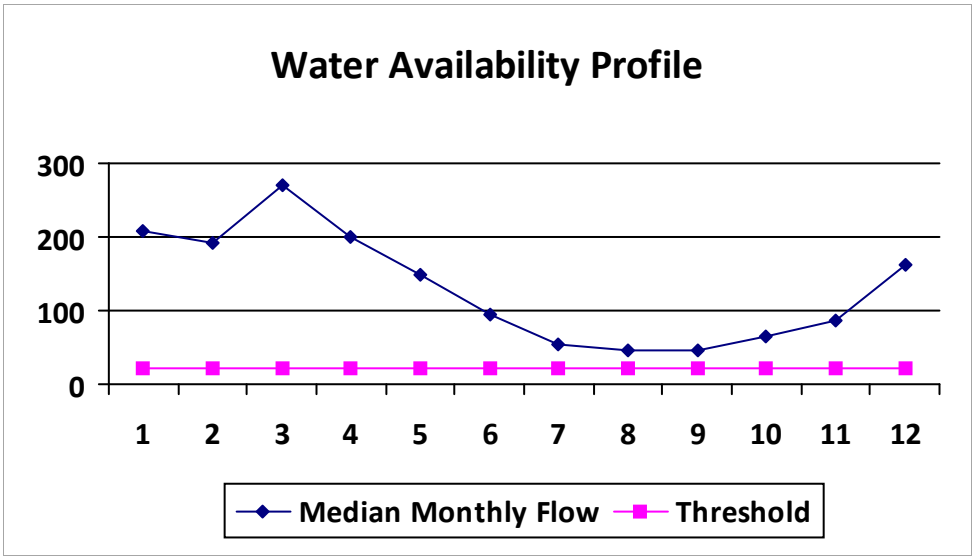
Max. Truck pump rate (gpm)

Reference Gauge: 3110830 | KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90

Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	209.41	31.79	177.64
2	192.40	31.79	160.62
3	271.30	31.79	239.53
4	199.31	31.79	167.54
5	148.36	31.79	116.59
6	95.71	31.79	63.94
7	54.26	31.79	22.49
8	44.94	31.79	13.17
9	46.77	31.79	14.99
10	65.68	31.79	33.91
11	86.80	31.79	55.02
12	161.41	31.79	129.64



Water Availability Assessment of Location

Base Threshold (cfs)	17.95
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.49
Min. Gauge Reading (cfs):	**23.11**
Passby at Location (cfs):	**22.43**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP	02427	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Charles Jamison MSH Well Pad		

Source ID: 82067 Source Name: WV Fork Fish Creek @ Derby
Steven Derby

Source Latitude: 39.709329
Source Longitude: -80.536079

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 48.62 County: Wetzel

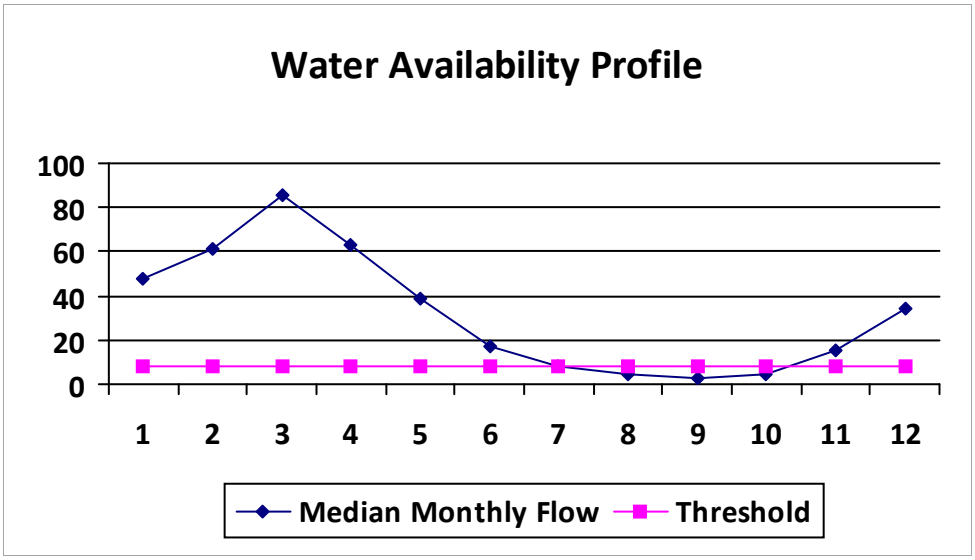
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	48.17	20.22	28.06
2	61.47	20.22	41.36
3	85.25	20.22	65.14
4	63.28	20.22	43.18
5	38.57	20.22	18.47
6	17.56	20.22	-2.55
7	7.76	20.22	-12.35
8	4.54	20.22	-15.57
9	2.88	20.22	-17.22
10	4.78	20.22	-15.33
11	15.03	20.22	-5.08
12	34.08	20.22	13.97



Water Availability Assessment of Location

Base Threshold (cfs)	6.57
Upstream Demand (cfs):	1.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	1.64
Ungauged Stream Safety (cfs):	1.64
Min. Gauge Reading (cfs):	**67.36**
Passby at Location (cfs):	**9.86**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82068 | Source Name: Fish Creek @ Guzek / Walter A. Guzek

Source Latitude: 39.753021

Source Longitude: -80.613941

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 144.57 | County: Marshall

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200

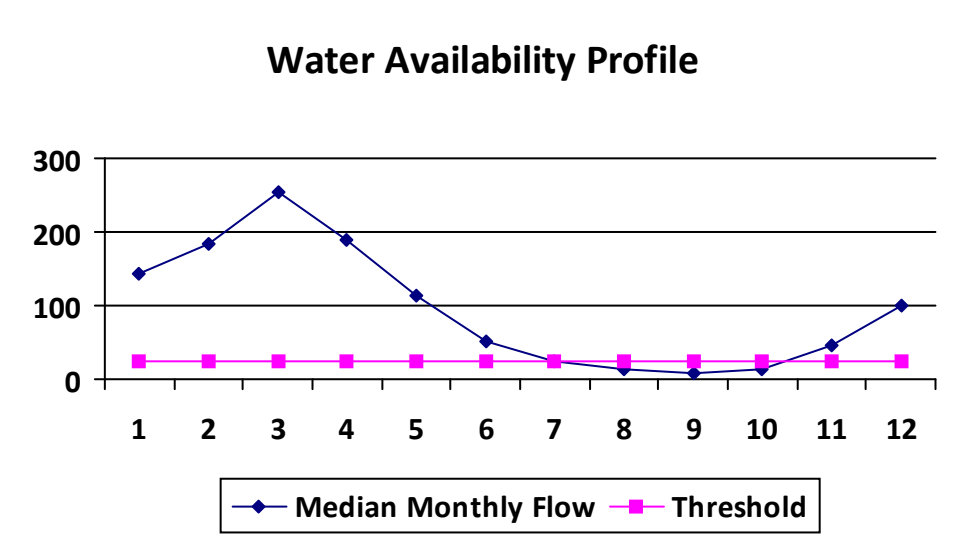
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	143.23	33.80	109.60
2	182.77	33.80	149.14
3	253.47	33.80	219.85
4	188.16	33.80	154.54
5	114.70	33.80	81.07
6	52.20	33.80	18.58
7	23.07	33.80	-10.56
8	13.49	33.80	-20.13
9	8.57	33.80	-25.05
10	14.21	33.80	-19.42
11	44.69	33.80	11.07
12	101.34	33.80	67.71



Water Availability Assessment of Location

Base Threshold (cfs)	19.55
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.89
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	**24.44**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

MODIFICATION **Effective: 12/14/2021**

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

Source ID: 82069 | Source Name: Little Wheeling Creek @ Edge Withdrawal Site / Alice Mae Edge

Source Latitude: 40.098

Source Longitude: -80.5558

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 4.26 | County: Ohio

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

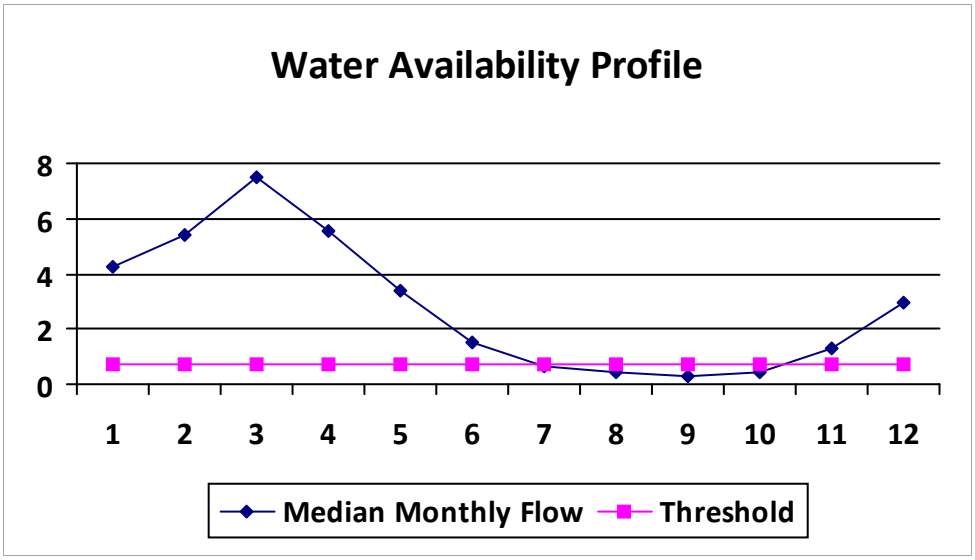
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	4.22	5.32	-0.90
2	5.39	5.32	0.26
3	7.47	5.32	2.34
4	5.54	5.32	0.42
5	3.38	5.32	-1.74
6	1.54	5.32	-3.59
7	0.68	5.32	-4.44
8	0.40	5.32	-4.73
9	0.25	5.32	-4.87
10	0.42	5.32	-4.71
11	1.32	5.32	-3.81
12	2.99	5.32	-2.14



Water Availability Assessment of Location

Base Threshold (cfs)	0.58
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.14
Ungauged Stream Safety (cfs):	0.14
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**0.86**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Water Management Plan:
Secondary Water Sources

WMP 02427 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Charles Jamison MSH Well Pad

MODIFICATION **Effective: 12/14/2021**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Centralized Freshwater Impoundment

Source ID: 82099 Source Name: Ballato Freshwater Impoundment

Source Lat: 40.308611 Source Long: -80.565028 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1877

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82100 Source Name: Barry Greathouse Freshwater Impoundment

Source Lat: 40.18831 Source Long: -80.63714 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1869**

Source ID: 82102 Source Name: Corbin Freshwater Impoundment

Source Lat: 40.233122 Source Long: -80.524025 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1870**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82103 Source Name: Durig A Freshwater Impoundment

Source Lat: 39.715905 Source Long: -80.636785 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1862**

Source ID: 82104 Source Name: Durig B Freshwater Impoundment

Source Lat: 38.8022 Source Long: -80.638491 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1863**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82105 Source Name: Elmer Freshwater Impoundment

Source Lat: 38.831351 Source Long: -80.276326 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1847**

Source ID: 82106 Source Name: Farmer Freshwater Impoundment

Source Lat: 40.146183 Source Long: -80.573857 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1871**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82107 Source Name: Ferrell Freshwater Impoundment

Source Lat: 40.04445 Source Long: -80.53023 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1874**

Source ID: 82108 Source Name: Heartwood Forestland Freshwater Impoundment

Source Lat: 39.123961 Source Long: -81.098573 County: Ritchie

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1878**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82109 Source Name: Helen Miller Freshwater Impoundment

Source Lat: 40.085722 Source Long: -80.623333 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1059**

Source ID: 82110 Source Name: Hickman Freshwater Impoundment

Source Lat: 40.041361 Source Long: -80.548944 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1875**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82115 Source Name: Hupp 1 Freshwater Impoundment

Source Lat: 40.175058 Source Long: -80.567622 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1873**

Source ID: 82116 Source Name: Hupp 2 Freshwater Impoundment

Source Lat: 40.175069 Source Long: -80.578206 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1058**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82117 Source Name: Kelley #2 Freshwater Impoundment

Source Lat: 39.681388 Source Long: -80.701113 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1865**

Source ID: 82118 Source Name: Kestner Freshwater Impoundment

Source Lat: 40.147904 Source Long: -80.539568 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1872**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82119 Source Name: Linda Greathouse Freshwater Impoundment

Source Lat: 40.205416 Source Long: -80.608805 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1876**

Source ID: 82120 Source Name: Lipps Freshwater Impoundment

Source Lat: 38.8446 Source Long: -80.3413 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1850**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82121 Source Name: McGlumphy Freshwater Impoundment

Source Lat: 40.152588 Source Long: -80.587667 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1060**

Source ID: 82122 Source Name: Messenger Freshwater Impoundment

Source Lat: 393674857 Source Long: -80.689887 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1859**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82123 Source Name: Reliance Minerals A Freshwater Impoundment

Source Lat: 39.521316 Source Long: -79.973907 County: Monongalia

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1868**

Source ID: 82124 Source Name: Reliance Minerals B Freshwater Impoundment

Source Lat: 39.524571 Source Long: -79.974529 County: Monongalia

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1867**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82125 Source Name: Ross #2 Freshwater Impoundment

Source Lat: 38.9839 Source Long: -80.2628 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1851**

Source ID: 82126 Source Name: Stern Freshwater Impoundment

Source Lat: 39.733943 Source Long: -80.64695 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1826**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82127 Source Name: Worthley Freshwater Impoundment

Source Lat: 40.216869 Source Long: -80.548592 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1061**

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Purchased Water

Source ID: 82070 Source Name: 4K Industrial Park, LLC
Commercial Supplier

Source Lat: 40.100395 Source Long: -80.71269 County: Belmont, OH

Max. Daily Purchase (gal) 588,000

DEP Comments: Treated and recycled flowback/produced water

Source ID: 82074 Source Name: Elite Gasfield Services, Midland Borough
Commercial Supplier

Source Lat: 40.644598 Source Long: -80.469382 County:

Max. Daily Purchase (gal) 2,000,000

DEP Comments: Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82076 Source Name: Equitrans Water Services, LLC Cook Impoundment
Commercial Supplier

Source Lat: 39.817197 Source Long: -80.477956 County: Greene, PA

Max. Daily Purchase (gal) 2,100,000

DEP Comments: PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

Source ID: 82078 Source Name: Grant Town Water
Public Water Provider

Source Lat: 39.559407 Source Long: -80.172893 County: Marion

Max. Daily Purchase (gal) 100,000

DEP Comments: @ Horizon Ventures Withdrawal Location

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82079 Source Name: Hydro Recovery, LP

Commercial Supplier

Source Lat: 40.419251 Source Long: -80.422684 County: Washington, MD

Max. Daily Purchase (gal) 1,000,000

DEP Comments: Treated and recycled flowback/produced water

Source ID: 82086 Source Name: Pennsylvania American Water

Public Water Provider

Source Lat: Source Long: County:

Max. Daily Purchase (gal) 864,000

DEP Comments: Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82088 Source Name: Raw Water Pond @ Horizon Ventures Industrial Facility

Source Lat: 39.5535 Source Long: -80.16742 County: Marion

Max. Daily Purchase (gal) 1,008,000

DEP Comments:

Source ID: 82089 Source Name: Robinson Fork @ HG Energy Oil & Gas Operator

Source Lat: 39.979222 Source Long: -80.487472 County: Washington, MD

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

Important:

MODIFICATION Effective: 12/14/2021

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82093 Source Name: Washington Pike PSD @ Brook Hills Park
Public Water Provider

Source Lat: 40.26632 Source Long: -80.543592 County: Brooke

Max. Daily Purchase (gal) 1,000,000

DEP Comments:

Source ID: 82094 Source Name: WFN Impoundment A @ HG Energy
Oil & Gas Operator

Source Lat: 39.991417 Source Long: -80.488694 County: Washington, PA

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82095 Source Name: WFN Impoundment B @ HG Energy
Oil & Gas Operator

Source Lat: 39.991917 Source Long: -80.4965 County: Washington, PA

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

Source ID: 82101 Source Name: Columbia Gas Transmission (TCO Elson) FWI

Source Lat: 39.75398 Source Long: -80.613604 County: Marshall

Max. Daily Purchase (gal)

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-547**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82111 Source Name: Hieronimus #1 Freshwater Impoundment

Source Lat: 39.811 Source Long: -80.5212 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1856**

Source ID: 82112 Source Name: Hieronimus #2 Freshwater Impoundment

Source Lat: 39.8149 Source Long: -80.5233 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1857**

WMP 02427	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Charles Jamison MSH Well Pad	

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 82113 Source Name: Hieronimus #3 Freshwater Impoundment

Source Lat: 39.8162 Source Long: -80.5266 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1761**

Source ID: 82114 Source Name: Hieronimus #4 Freshwater Impoundment

Source Lat: 39.8198 Source Long: -80.5295 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1858**

Important: **MODIFICATION** **Effective: 12/14/2021**

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Recycled Frac Water

Source ID: 82128 Source Name: Various

Source Lat: Source Long: County:

Max. Daily Purchase (gal):

DEP Comments: Various sources include, but are not limited to, the Charles Jamison MSH well pad.

Water Management Plan

Action: Modified **Effective Date:** 2/2/2022
Operator: SWN Production Company, LLC
WMP ID: 2427
Plan Type: Well Pad
Facility Name: Charles Jamison MSH Well Pad
County: Marshall
Lat: 39.791889
Long: -80.607624

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supersedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

Api	Wellname
047-051-02127	Charles Jamison MSH 8H
047-051-02294	Charles Jamison MSH 6H
047-051-02295	Charles Jamison MSH 206H
047-051-02301	Charles Jamison MSH 10H
047-051-02302	Charles Jamison MSH 210H
047-051-02425	Charles Jamison MSH 410H
047-051-02426	Charles Jamison MSH 610H
047-051-02427	Charles Jamison MSH 810H
047-051-02434	Charles Jamison MSH 406H
047-051-02436	Charles Jamison MSH 606H

The following water consumption estimates (in gallons) have been reported for this plan.

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	19,051,200
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activities:	210,000
Total for Well Pad:	20,101,200

Primary Sources

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and enforceable as such.

For any source identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this Water Management Plan.

- Big Wheeling Creek @ Wheeling Staging Area

Type:	Stream/River	Gauged Stream:	YES
County:	Ohio	Ref Gauge ID:	3112000
Owner:	Fulton Storage, LLC	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	40.077019	Minimum Gauge Reading (cfs):	43.57
Intake Longitude:	-80.713866	Minimum Passby (cfs):	40.03
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	296.04		
Regulated Stream:	NO		

PWS Within 1 Mile:	NO

Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Booths Creek @ Reliance Minerals

Type:	Stream/River
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Intake Latitude:	39.530405
Intake Longitude:	-79.978079
HUC-8 Code:	5020003
Drainage Area (sq miles):	1.79
Regulated Stream:	NO
PWS Within 1 Mile:	YES Morgantown Utility Board

Gauged Stream:	NO
Ref Gauge ID:	3062500
Ref Gauge Name:	DECKERS CREEK AT MORGANTOWN, WV
Minimum Gauge Reading (cfs):	18.65
Minimum Passby (cfs):	.48
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Buffalo Creek @ Bethany VFD Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Bethany Pike Volunteer Fire Department
Intake Latitude:	40.253422
Intake Longitude:	-80.600319
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	67.66
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Buffalo Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.19386
Intake Longitude:	-80.525796
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	54.63
Minimum Passby (cfs):	43.52
Endangered Species:	NO

PWS Within 1 Mile:	NO	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	3200

Comments:

- Buffalo Creek @ Forney

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3111500
Owner:	Forney & Sons Holding Company, LLC	Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Intake Latitude:	40.193453	Minimum Gauge Reading (cfs):	53.07
Intake Longitude:	-80.52175	Minimum Passby (cfs):	43.52
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	98.28	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	2500
PWS Within 1 Mile:	NO		

Comments:

- Buffalo Creek @ Fuchs

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	9999999
Owner:	Beverly Fuchs	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.258863	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.60337	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	163.22	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	5250
PWS Within 1 Mile:	NO		

Comments:

- Buffalo Creek @ Greathouse Withdrawal Site

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3111500
Owner:	Linda Greathouse	Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Intake Latitude:	40.20895	Minimum Gauge Reading (cfs):	60.42
Intake Longitude:	-80.60105	Minimum Passby (cfs):	54.51
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	138.56	Mussel Stream:	YES
Regulated Stream:	NO		
PWS Within 1 Mile:	NO		

Maximum Pump Rate (gpm):	3300

Comments:

- Buffalo Creek @ Labelle Farms

Type:	Stream/River
County:	Brooke
Owner:	Steve Paul
Intake Latitude:	40.204444
Intake Longitude:	-80.598645
HUC-8 Code:	5030106
Drainage Area (sq miles):	136.79
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	59.2
Minimum Passby (cfs):	53.8
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Buffalo Creek @ WVDOH

Type:	Stream/River
County:	Brooke
Owner:	West Virginia Division of Highways
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Buffalo Creek @ Worthley Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Kimberly C. Worthley
Intake Latitude:	40.210978
Intake Longitude:	-80.548779
HUC-8 Code:	5030106

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07

Drainage Area (sq miles):	113.49	Minimum Passby (cfs):	44.83
Regulated Stream:	NO	Endangered Species:	NO
PWS Within 1 Mile:	YES Hammond PSD	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Zatta

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3111500
Owner:	Edward Zatta	Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Intake Latitude:	40.253588	Minimum Gauge Reading (cfs):	66.37
Intake Longitude:	-80.600254	Minimum Passby (cfs):	61.29
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	158.69	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	3100
PWS Within 1 Mile:	NO		

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Cross Creek @ Bullock Withdrawal Site

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3110830
Owner:	Isabelle Bullock	Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Intake Latitude:	40.30735	Minimum Gauge Reading (cfs):	19.32
Intake Longitude:	-80.569317	Minimum Passby (cfs):	20.99
HUC-8 Code:	5030101	Endangered Species:	NO
Drainage Area (sq miles):	74.66	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	2500
PWS Within 1 Mile:	NO		

Comments:

- Cross Creek @ DNR

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3110830
Owner:	WVDNR	Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Intake Latitude:	40.300536	Minimum Gauge Reading (cfs):	22.44
Intake Longitude:	-80.542229	Minimum Passby (cfs):	22.44
HUC-8 Code:	5030101		
Drainage Area (sq miles):	68.58		

Regulated Stream:	NO	Endangered Species:	NO
PWS Within 1 Mile:	NO	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	3000

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Cross Creek @ Norfolk and Western Railway

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	9999999
Owner:	Wheeling & Lake Erie Railway Company	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.30802	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.599193	Minimum Passby (cfs):	
HUC-8 Code:	5030101	Endangered Species:	NO
Drainage Area (sq miles):	79.78	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	5250
PWS Within 1 Mile:	NO		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Cross Creek @ Palizzi

Type:	Stream/River	Gauged Stream:	NO
County:	Brooke	Ref Gauge ID:	3110830
Owner:	Campbell Palizzi	Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Intake Latitude:	40.302427	Minimum Gauge Reading (cfs):	23.11
Intake Longitude:	-80.582753	Minimum Passby (cfs):	22.44
HUC-8 Code:	5030101	Endangered Species:	NO
Drainage Area (sq miles):	79.78	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	4200
PWS Within 1 Mile:	NO		

Comments:
May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Fish Creek @ Gribben

Type:	Stream/River	Gauged Stream:	NO
County:	Marshall	Ref Gauge ID:	3112000
Owner:	Revocable Living Trust of M.	Ref Gauge Name:	WHEELING CREEK AT ELM

	Peggy Gribben
Intake Latitude:	39.753271
Intake Longitude:	-80.597913
HUC-8 Code:	5030106
Drainage Area (sq miles):	141.61
Regulated Stream:	NO
PWS Within 1 Mile:	NO

	GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	23.94
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Fish Creek @ Guzek

Type:	Stream/River
County:	Marshall
Owner:	Walter A. Guzek
Intake Latitude:	39.753021
Intake Longitude:	-80.613941
HUC-8 Code:	5030106
Drainage Area (sq miles):	144.57
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	24.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Little Wheeling Creek @ Edge Withdrawal Site

Type:	Stream/River
County:	Ohio
Owner:	Alice Mae Edge
Intake Latitude:	40.098
Intake Longitude:	-80.5558
HUC-8 Code:	5030106
Drainage Area (sq miles):	4.26
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Little Wheeling Creek @ Main Street Bank

Type:	Stream/River
County:	Ohio
Owner:	Main Street Bank
Intake Latitude:	40.064076
Intake Longitude:	-80.614406
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	23
Minimum Passby (cfs):	2.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Little Wheeling Creek @ Rt. 40 Staging Area

Type:	Stream/River
County:	Ohio
Owner:	JDS Investments, LLC
Intake Latitude:	40.078324
Intake Longitude:	-80.591145
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	64.8
Minimum Passby (cfs):	2.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Gribben

Type:	Stream/River
County:	Ohio
Owner:	Lawrence Kevin Gribber
Intake Latitude:	40.036777
Intake Longitude:	-80.598008
HUC-8 Code:	5030106
Drainage Area (sq miles):	30.81
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	6.26
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Supler

Type:	Stream/River
County:	Ohio
Owner:	Gregory and Peggy Supler
Intake Latitude:	40.04409
Intake Longitude:	-80.55348
HUC-8 Code:	5030106
Drainage Area (sq miles):	20.54
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	62.57
Minimum Passby (cfs):	4.17
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Ohio River @ Extraction B Panhandle

Type:	Stream/River
County:	Brooke
Owner:	SWN Production Company, LLC
Intake Latitude:	40.233469
Intake Longitude:	-80.654359
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4375

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Proctor Peacemaker

Type:	Stream/River
County:	Wetzel
Owner:	SWN Production Company, LLC
Intake Latitude:	39.714299
Intake Longitude:	-80.825862
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	6000

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Paw Paw Creek @ Horizon Ventures

Type:	Stream/River
County:	Marion
Owner:	Horizon Ventures of WV, Inc
Intake Latitude:	39.552426
Intake Longitude:	-80.166833
HUC-8 Code:	5020003
Drainage Area (sq miles):	28.34
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Minimum Gauge Reading (cfs):	26.96
Minimum Passby (cfs):	4.57
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Short Creek @ Cain

Type:	Stream/River
County:	Ohio
Owner:	Susan L. Cain
Intake Latitude:	40.155061
Intake Longitude:	-80.651431
HUC-8 Code:	5030106
Drainage Area (sq miles):	16.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	64.49
Minimum Passby (cfs):	7.68
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	3360

Comments:

- WV Fork Fish Creek @ Derby

Type:	Stream/River
County:	Wetzel
Owner:	Steven Derby
Intake Latitude:	39.709329
Intake Longitude:	-80.536079
HUC-8 Code:	5030106
Drainage Area (sq miles):	48.62
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	52.24
Minimum Passby (cfs):	8.21
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate	4200

(gpm):	

Comments:

- WV Fork Fish Creek @ Francis

Type:	Stream/River
County:	Marshall
Owner:	Loretta J. Francis
Intake Latitude:	39.733295
Intake Longitude:	-80.579415
HUC-8 Code:	5030106
Drainage Area (sq miles):	86.51
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	63.69
Minimum Passby (cfs):	17.55
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:

- WV Fork of Fish Creek @ Van Scyoc Withdrawal Site

Type:	Stream/River
County:	Wetzel
Owner:	Israel D Van Scyoc
Intake Latitude:	39.6908
Intake Longitude:	-80.4762
HUC-8 Code:	5030106
Drainage Area (sq miles):	21.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	5.45
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Wheeling Creek @ Iskon

Type:	Stream/River
County:	Marshall
Owner:	Iskcon New Vrindaban, Inc.
Intake Latitude:	39.967973
Intake Longitude:	-80.599241
HUC-8 Code:	5030106
Drainage Area (sq miles):	189.6
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	27.5
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:
This site shall not be operated concurrently with the Wheeling Creek @ Schafer location or the Wheeling Creek @ Sligar site.

- Wheeling Creek @ Schafer

Type:	Stream/River
County:	Marshall
Owner:	Betty Jane Schafer
Intake Latitude:	39.99257
Intake Longitude:	-80.634912
HUC-8 Code:	5030106
Drainage Area (sq miles):	203.38
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	49.7
Minimum Passby (cfs):	27.5
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Wheeling Creek @ Sligar

Type:	Stream/River
County:	Marshall
Owner:	Terry Sligar
Intake Latitude:	40.013185
Intake Longitude:	-80.652863
HUC-8 Code:	5030106
Drainage Area (sq miles):	211.8
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	28.64
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or Wheeling Creek @ Iskcon site.

- Whiteday Creek @ Sorine Withdrawal Site

Type:	Stream/River
County:	Marion
Owner:	Andrew Sorine, Jr.
Intake Latitude:	39.472311
Intake Longitude:	-79.977123
HUC-8 Code:	5020003
Drainage Area (sq miles):	12.29

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Minimum Gauge Reading (cfs):	20.25
Minimum Passby	2.29

Regulated Stream:	NO
PWS Within 1 Mile:	NO

(cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Adrian Public Service District

Type:	Purchased Water
County:	Upshur
Owner:	Adrian Public Service District
Intake Latitude:	38.9775
Intake Longitude:	-80.22083
HUC-8 Code:	5020001
Drainage Area (sq miles):	197.33
Regulated Stream:	YES
PWS Within 1 Mile:	YES City of Buckhannon Water Plant

Gauged Stream:	YES
Ref Gauge ID:	3054500
Ref Gauge Name:	TYGART VALLEY RIVER AT PHILIPPI, WV
Minimum Gauge Reading (cfs):	155.85
Minimum Passby (cfs):	75.51
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	

Comments:

- American Petroleum Partners (Wheeling Creek @ Wilson)

Type:	Purchased Water
County:	Marshall
Owner:	Phillip Wilson
Intake Latitude:	39.975882
Intake Longitude:	-80.62967
HUC-8 Code:	5030106
Drainage Area (sq miles):	192.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	26.09
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- Covestro, LLC

Type:	Purchased Water
County:	Marshall
Owner:	Covestro, LLC
Intake Latitude:	39.7218
Intake Longitude:	-80.830231
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	

Regulated Stream:	YES Ohio River Min. Flow	Endangered Species:	NO
PWS Within 1 Mile:	YES Grandview-Doolin PSD	Mussel Stream:	NO
		Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Elite Gasfield Services

Type:	Purchased Water	Gauged Stream:	YES
County:	Brooke	Ref Gauge ID:	9999999
Owner:	Elite Gasfield Services	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.32667	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.59861	Minimum Passby (cfs):	
HUC-8 Code:	5030101	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES City of Follansbee		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Grandview-Doolin PSD

Type:	Purchased Water	Gauged Stream:	YES
County:	Wetzel	Ref Gauge ID:	9999999
Owner:	Grandview-Doolin Public Service District	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	39.71361	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.82583	Minimum Passby (cfs):	
HUC-8 Code:	5030201	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Grandview-Doolin PSD		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Marshall County Public Service District 3

Type:	Purchased Water	Gauged Stream:	NO
County:	Marshall	Ref Gauge ID:	9999999

Owner:	Marshall County Public Service District #3	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	39.93556	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.75833	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Moundsville Water Department		

Comments:
Tap Location is: (39.906400, -80.586200)

- Marshall County Public Service District 4

Type:	Purchased Water	Gauged Stream:	NO
County:	Marshall	Ref Gauge ID:	9999999
Owner:	Marshall County Public Service District #4	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	39.93556	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.75833	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Moundsville Water Department		

Comments:
Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Ohio County PSD

Type:	Purchased Water	Gauged Stream:	YES
County:	Ohio	Ref Gauge ID:	9999999
Owner:	Ohio county PSD	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.14972	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.70167	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Wheeling Water Department		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before

purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ 4K Industrial Park

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Intake Latitude:	40.098805
Intake Longitude:	-80.711328
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ J&R Excavating

Type:	Purchased Water
County:	Marshall
Owner:	J&R Excavating
Intake Latitude:	39.998509
Intake Longitude:	-80.737336
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Oasis Transport Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Oasis Transport, LLC
Intake Latitude:	40.331551
Intake Longitude:	-80.601034
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	

PWS Within 1 Mile:	NO	Endangered Species:	YES
		Mussel Stream:	YES
		Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Range Tap @ Corbin Withdrawal Site

Type:	Purchased Water	Gauged Stream:	YES
County:	Brooke	Ref Gauge ID:	9999999
Owner:	Range Resources Corp.	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.229983	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.521067	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	YES
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	NO		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- The Village of Valley Grove

Type:	Purchased Water	Gauged Stream:	YES
County:	Ohio	Ref Gauge ID:	9999999
Owner:	The Village of Valley Grove	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.14972	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.70167	Minimum Passby (cfs):	
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	25000	Mussel Stream:	YES
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Wheeling Water Department		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Valley Falls PSD

Type:	Purchased Water	Gauged Stream:	YES
County:	Marion	Ref Gauge ID:	3057000

Owner:	Valley Falls PSD
Intake Latitude:	39.45889
Intake Longitude:	-80.15583
HUC-8 Code:	5020001
Drainage Area (sq miles):	1367.05
Regulated Stream:	YES Tygart Valley Dam
PWS Within 1 Mile:	YES City of Fairmont

Ref Gauge Name:	TYGART VALLEY RIVER AT COLFAX, WV
Minimum Gauge Reading (cfs):	397.39
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek # 2 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.949577
Intake Longitude:	-80.531255
HUC-8 Code:	5030106
Drainage Area (sq miles):	152.4
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.24
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek #1 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.95205
Intake Longitude:	-80.56189
HUC-8 Code:	5030106
Drainage Area (sq miles):	156.06
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.63
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Water Department

Type:	Purchased Water
County:	Ohio
Owner:	Wheeling Water Department
Intake Latitude:	40.14972

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam

Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Shoemaker Groundwater Wells @ HG Energy

Type:	Groundwater
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	40.0222
Intake Longitude:	-80.733888
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	800

Comments:
This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals.
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Secondary Sources

For each proposed secondary water source identified in your water management plan (i.e. groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow and quality-tested by the operator at the request of the drinking well owner prior to the operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.
- The use of recycled frac water is always encouraged.

- 4K Industrial Park, LLC

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Source Latitude:	40.100395
Source Longitude:	-80.71269
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Ballato Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Nick Ballato and Christopher Ballato
Source Latitude:	40.308611
Source Longitude:	-80.565028
Reference WMP:	1877

Comments:

- Barry Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Barry Greathouse
Source Latitude:	40.18831
Source Longitude:	-80.63714
Reference WMP:	1869

Comments:

- Columbia Gas Transmission (TCO Elson) FWI

Type:	Purchased Water
County:	Marshall
Owner:	Columbia Gas Transmission, LLC.
Source Latitude:	39.75398
Source Longitude:	-80.613604
Reference WMP:	547

Comments:

- Corbin Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Margaret Corbin
Source Latitude:	40.233122
Source Longitude:	-80.524025

Reference WMP:	1870

Comments:

- Durig A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	39.715905
Source Longitude:	-80.636785
Reference WMP:	1862

Comments:

- Durig B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	38.8022
Source Longitude:	-80.638491
Reference WMP:	1863

Comments:

- Elite Gasfield Services, Midland Borough

Type:	Purchased Water
County:	Beaver, PA
Owner:	Elite Gasfield Services
Source Latitude:	40.644598
Source Longitude:	-80.469382
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Elmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Charles and Thomas Elmer
Source Latitude:	38.831351
Source Longitude:	-80.276326
Reference WMP:	1847

Comments:

- Equitrans Water Services, LLC Cook Impoundment

Type:	Purchased Water
County:	Greene, PA
Owner:	Equitrans Water Services, LLC

Source Latitude:	39.817197
Source Longitude:	-80.477956
Reference WMP:	

Comments:
PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

- Farmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Clarence Farmer
Source Latitude:	40.146183
Source Longitude:	-80.573857
Reference WMP:	1871

Comments:

- Ferrell Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Kevin Ferrell
Source Latitude:	40.04445
Source Longitude:	-80.53023
Reference WMP:	1874

Comments:

- Grant Town Water

Type:	Purchased Water
County:	Marion
Owner:	Town of Grant Town
Source Latitude:	39.559407
Source Longitude:	-80.172893
Reference WMP:	

Comments:
@ Horizon Ventures Withdrawal Location

- Heartwood Forestland Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ritchie
Owner:	Wanda Bartlett
Source Latitude:	39.123961
Source Longitude:	-81.098573
Reference WMP:	1878

Comments:

- Helen Miller Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Helen J. Miller
Source Latitude:	40.085722
Source Longitude:	-80.623333
Reference WMP:	1059

Comments:

- Hickman Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Mark Hickman et al
Source Latitude:	40.041361
Source Longitude:	-80.548944
Reference WMP:	1875

Comments:

- Hieronimus #1 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.811
Source Longitude:	-80.5212
Reference WMP:	1856

Comments:

- Hieronimus #2 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8149
Source Longitude:	-80.5233
Reference WMP:	1857

Comments:

- Hieronimus #3 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8162
Source Longitude:	-80.5266
Reference WMP:	1761

Comments:

- Hieronimus #4 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8198
Source Longitude:	-80.5295
Reference WMP:	1858

Comments:

- Hupp 1 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Hupp
Source Latitude:	40.175058
Source Longitude:	-80.567622
Reference WMP:	1873

Comments:

- Hupp 2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Wylie Hupp
Source Latitude:	40.175069
Source Longitude:	-80.578206
Reference WMP:	1058

Comments:

- Hydro Recovery, LP

Type:	Purchased Water
County:	Washington, PA
Owner:	Hydro Recovery, LP - Burgettstown
Source Latitude:	40.419251
Source Longitude:	-80.422684
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Kelley #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Margaret Sue Kelley
Source Latitude:	39.681388

Source Longitude:	-80.701113
Reference WMP:	1865

Comments:

- Kestner Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Gary Kestner
Source Latitude:	40.147904
Source Longitude:	-80.539568
Reference WMP:	1872

Comments:

- Linda Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Linda Greathouse
Source Latitude:	40.205416
Source Longitude:	-80.608805
Reference WMP:	1876

Comments:

- Lipps Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Ralph and Opal Lipps
Source Latitude:	38.8446
Source Longitude:	-80.3413
Reference WMP:	1850

Comments:

- McGlumphy Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Steven M. McGlumphy
Source Latitude:	40.152588
Source Longitude:	-80.587667
Reference WMP:	1060

Comments:

- Messenger Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Chesapeake Energy

Source Latitude:	393674857
Source Longitude:	-80.689887
Reference WMP:	1859

Comments:

- Pennsylvania American Water

Type:	Purchased Water
County:	
Owner:	Pennsylvania American Water
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Raw Water Pond @ Horizon Ventures

Type:	Purchased Water
County:	Marion
Owner:	Horizon Ventures of WV, Inc
Source Latitude:	39.5535
Source Longitude:	-80.16742
Reference WMP:	

Comments:

- Recycled Frac Water

Type:	Recycled Frac Water
County:	
Owner:	
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Treated and recycled flowback/produced water sources may include, but are not limited to this well pad.

- Reliance Minerals A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.521316
Source Longitude:	-79.973907
Reference WMP:	1868

Comments:

- Reliance Minerals B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.524571
Source Longitude:	-79.974529
Reference WMP:	1867

Comments:

- Robinson Fork @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy II Appalachia, LLC.
Source Latitude:	39.979222
Source Longitude:	-80.487472
Reference WMP:	

Comments:

- Ross #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Mike Ross
Source Latitude:	38.9839
Source Longitude:	-80.2628
Reference WMP:	1851

Comments:

- Stern Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Marshall
Owner:	Alton and Mary Stern
Source Latitude:	39.733943
Source Longitude:	-80.64695
Reference WMP:	1826

Comments:

- WFN Impoundment A @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy, LLC
Source Latitude:	39.991417
Source Longitude:	-80.488694
Reference WMP:	

Comments:

- WFN Impoundment B @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy
Source Latitude:	39.991917
Source Longitude:	-80.4965
Reference WMP:	

Comments:

- Washington Pike PSD @ Brook Hills Park

Type:	Purchased Water
County:	Brooke
Owner:	Washington Pike PSD
Source Latitude:	40.26632
Source Longitude:	-80.543592
Reference WMP:	

Comments:

- Worthley Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Kimberly Worthley
Source Latitude:	40.216869
Source Longitude:	-80.548592
Reference WMP:	1061

Comments:

Water Management Plan:
Well Pad Overview

WMP 02544 | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad | County: Brooke

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supercedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

API Number:	Well Name/Number:	API Number:	Well Name/Number:
047-009-00328	Brownlee Land Ventures BRK 6H		

The following water consumption estimates (in gallons) have been reported for this plan:

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	18,768,960
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activites:	210,000
Total for Well Pad	19,818,960

Est. Construction Start: 4/1/2022

Est. Reclamation End: 9/27/2026

Dawn Newell

Digitally signed by Dawn Newell
Date: 2021.11.02 15:11:46 -04'00'

Water Management Plan:
Primary Water Sources

WMP 02544	API/ID Number	see overview	Operator:	SWN Production Company, LLC	
Plan Type: Well Pad	Brownlee Land Ventures Well Pad				

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

For any sources identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this water management plan.

Source Summary

WMP	02544	API Number	see overview	Operator:	SWN Production Company, LLC
Plan Type	Well Pad		Brownlee Land Ventures Well Pad		

Stream/River

- Source **Wheeling Creek @ Iskon** Marshall Owner: **Iskcon New Vrindaban, Inc.**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	39.967973	-80.599241

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 47.36** **Min. Passby (cfs): 27.5**

DEP Comments: This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or the Wheeling Creek @ Sligar site

- Source **Wheeling Creek @ Schafer** Marshall Owner: **Betty Jane Schafer**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	39.99257	-80.634912

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 49.70** **Min. Passby (cfs): 27.5**

DEP Comments: Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Little Wheeling Creek @ Main Street Bank** Ohio Owner: **Main Street Bank**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.064076	-80.614406

☐ Regulated Stream? Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 23.00** **Min. Passby (cfs): 2.83**

DEP Comments: This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Source **Paw Paw Creek @ Horizon Ventures** Marion Owner: **Horizon Ventures of WV, Inc**

Max. daily purchase (gal) | Intake Latitude: 39.552426 | Intake Longitude: -80.166833

☐ Regulated Stream? Ref. Gauge ID: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 26.96** **Min. Passby (cfs): 4.57**

DEP Comments: This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Source **Little Wheeling Creek @ Rt. 40 Staging Area** Ohio Owner: **JDS Investments, LLC**

Max. daily purchase (gal) | Intake Latitude: 40.078324 | Intake Longitude: -80.591145

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 64.80** **Min. Passby (cfs): 2.83**

DEP Comments:

- Source **Wheeling Creek @ Sligar** Marshall Owner: **Terry Sligar**

Max. daily purchase (gal) | Intake Latitude: 40.013185 | Intake Longitude: -80.652863

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 47.36** **Min. Passby (cfs): 28.64**

DEP Comments: This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or Wheeling Creek @ Iskcon site.

- Source **Middle Wheeling Creek @ Gribben** Ohio Owner: **Lawrence Kevin Gribber**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.036777	-80.598008

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs): 6.26**

DEP Comments:

- Source **Short Creek @ Cain** Ohio Owner: **Susan L. Cain**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.155061	-80.651431

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 64.49** **Min. Passby (cfs): 7.68**

DEP Comments:

- Source **Middle Wheeling Creek @ Supler** Ohio Owner: **Gregory and Peggy Supler**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.04409	-80.55348

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 62.57** **Min. Passby (cfs): 4.17**

DEP Comments:

- Source **Big Wheeling Creek @ Wheeling Staging Area** Ohio Owner: **Fulton Storage, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.077019	-80.713866

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 43.57** **Min. Passby (cfs): 40.03**

DEP Comments:

- Source **Ohio River @ Extraction B Panhandle** Brooke Owner: **SWN Production Company, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.233469	-80.654359

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 4,375 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **WV Fork Fish Creek @ Francis** Marshall Owner: **Loretta J. Francis**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	39.733295	-80.579415

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 3,000 **Min. Gauge Reading (cfs): 63.69** **Min. Passby (cfs): 17.55**

DEP Comments:

- Source **Ohio River @ Proctor Peacemaker** Wetzel Owner: **SWN Production Company, LLC**

Max. daily purchase (gal) Intake Latitude: 39.714299 Intake Longitude: -80.825862

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 6,000 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Booths Creek @ Reliance Minerals** Monongalia Owner: **Reliance Minerals, Inc.**

Max. daily purchase (gal) Intake Latitude: 39.530405 Intake Longitude: -79.978079

☐ Regulated Stream? Ref. Gauge ID: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 18.65** **Min. Passby (cfs): 0.48**

DEP Comments:

- Source **West Virginia Fork of Fish Creek @ Van Scyoc Withdrawal** Wetzel Owner: **Israel D Van Scyoc**

Max. daily purchase (gal) Intake Latitude: 39.6908 Intake Longitude: -80.4762

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs): 5.45**

DEP Comments:

- Source **Buffalo Creek @ Bethany VFD Withdrawal Site** Brooke Owner: **Bethany Pike Volunteer Fire Department**

Max. daily purchase (gal) | Intake Latitude: 40.253422 | Intake Longitude: -80.600319

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,100 **Min. Gauge Reading (cfs): 67.66** **Min. Passby (cfs): 61.29**

DEP Comments: This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Source **Whiteday Creek @ Sorine Withdrawal Site** Marion Owner: **Andrew Sorine, Jr.**

Max. daily purchase (gal) | Intake Latitude: 39.472311 | Intake Longitude: -79.977123

☐ Regulated Stream? Ref. Gauge ID: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 20.25** **Min. Passby (cfs): 2.29**

DEP Comments:

- Source **Buffalo Creek @ DNR** Brooke Owner: **SWN Water Resources Company, LLC**

Max. daily purchase (gal) | Intake Latitude: 40.19386 | Intake Longitude: -80.525796

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,200 **Min. Gauge Reading (cfs): 54.63** **Min. Passby (cfs): 43.52**

DEP Comments:

- Source **Fish Creek @ Gribben** Marshall Owner: **Revocable Living Trust of M. Peggy Gribben**

Max. daily purchase (gal) Intake Latitude: 39.753271 Intake Longitude: -80.597913

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 56.96** **Min. Passby (cfs): 23.94**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Buffalo Creek @ Forney** Brooke Owner: **Forney & Sons Holding Company, LLC**

Max. daily purchase (gal) Intake Latitude: 40.193453 Intake Longitude: -80.52175

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 53.07** **Min. Passby (cfs): 43.52**

DEP Comments:

- Source **Buffalo Creek @ Fuchs** Brooke Owner: **Beverly Fuchs**

Max. daily purchase (gal) Intake Latitude: 40.258863 Intake Longitude: -80.60337

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments:

- Source **Buffalo Creek @ Greathouse Withdrawal Site** Brooke Owner: **Linda Greathouse**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.20895	-80.60105

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 3,300 **Min. Gauge Reading (cfs): 60.42** **Min. Passby (cfs): 54.51**

DEP Comments:

- Source **Buffalo Creek @ Labelle Farms** Brooke Owner: **Steve Paul**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.204444	-80.598645

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 59.20** **Min. Passby (cfs): 53.8**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Source **Buffalo Creek @ Worthley Withdrawal Site** Brooke Owner: **Kimberly C. Worthley**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
	40.210978	-80.548779

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 53.07** **Min. Passby (cfs): 44.83**

DEP Comments:

- Source **Buffalo Creek @ WVDOH** Brooke Owner: **West Virginia Division of Highways**

Max. daily purchase (gal) Intake Latitude: 40.258863 Intake Longitude: -80.60337

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: http://www.erh.noaa.gov/ohrfc//flows.shtml

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- Source **Buffalo Creek @ Zatta** Brooke Owner: **Edward Zatta**

Max. daily purchase (gal) Intake Latitude: 40.253588 Intake Longitude: -80.600254

☐ Regulated Stream? Ref. Gauge ID: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Max. Pump rate (gpm): 2,520 **Min. Gauge Reading (cfs): 66.37** **Min. Passby (cfs): 61.29**

DEP Comments: This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Source **Cross Creek @ Bullock Withdrawal Site** Brooke Owner: **Isabelle Bullock**

Max. daily purchase (gal) Intake Latitude: 40.30735 Intake Longitude: -80.569317

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 2,500 **Min. Gauge Reading (cfs): 19.32** **Min. Passby (cfs): 20.99**

DEP Comments:

- Source **Cross Creek @ DNR** Brooke Owner: **WVDNR**

Max. daily purchase (gal) | Intake Latitude: 40.300536 | Intake Longitude: -80.542229

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 3,000 **Min. Gauge Reading (cfs): 22.44** **Min. Passby (cfs): 22.44**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Cross Creek @ Norfolk and Western Railway** Brooke Owner: **Wheeling & Lake Erie Railway Company**

Max. daily purchase (gal) | Intake Latitude: 40.30802 | Intake Longitude: -80.599193

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): 5,250 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs): 0**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Cross Creek @ Palizzi** Brooke Owner: **Campbell Palizzi**

Max. daily purchase (gal) | Intake Latitude: 40.302427 | Intake Longitude: -80.582753

☐ Regulated Stream? Ref. Gauge ID: 3110830 KINGS CREEK AT WEIRTON, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 23.11** **Min. Passby (cfs): 22.44**

DEP Comments: May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Source **WV Fork Fish Creek @ Derby** Wetzel Owner: **Steven Derby**

Max. daily purchase (gal) | Intake Latitude: 39.709329 | Intake Longitude: -80.536079

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 52.24** **Min. Passby (cfs): 8.21**

DEP Comments:

- Source **Fish Creek @ Guzek** Marshall Owner: **Walter A. Guzek**

Max. daily purchase (gal) | Intake Latitude: 39.753021 | Intake Longitude: -80.613941

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 56.96** **Min. Passby (cfs): 24.44**

DEP Comments: Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Source **Little Wheeling Creek @ Edge Withdrawal Site** Ohio Owner: **Alice Mae Edge**

Max. daily purchase (gal) | Intake Latitude: 40.098 | Intake Longitude: -80.5558

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 61.46** **Min. Passby (cfs):**

DEP Comments:

Source Summary

WMP	02544	API Number	see overview	Operator:	SWN Production Company, LLC
Plan Type	Well Pad	Brownlee Land Ventures Well Pad			

Purchased Water

- Source **Adrian Public Service District** Upshur Owner: **Adrian Public Service District**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Ref. Gauge ID: 3054500 TYGART VALLEY RIVER AT PHILIPPI, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **155.85** **Min. Passby (cfs):** **75.51**

DEP Comments:

- Source **American Petroleum Partners (Wheeling Creek @ Wilson)** Marshall Owner: **Phillip Wilson**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
3,500,000	39.975882	-80.62967

☐ Regulated Stream? Ref. Gauge ID: 3112000 WHEELING CREEK AT ELM GROVE, WV

Max. Pump rate (gpm): **4,200** **Min. Gauge Reading (cfs):** **47.36** **Min. Passby (cfs):** **26.09**

DEP Comments:

- Source **Covestro, LLC** Marshall Owner: **Covestro, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,050,000	39.7218	-80.830231

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Elite Gasfield Services** Brooke Owner: **Elite Gasfield Services**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,000,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Grandview-Doolin PSD** Wetzel Owner: **Grandview-Doolin Public Service District**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
60,480	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Marshall County Public Service District 3** Marshall Owner: **Marshall County Public Service District #4**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Tap Location is: (39.906400, -80.586200)

- Source **Marshall County Public Service District 4** Marshall Owner: **Marshall County Public Service District #4**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
80,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Source **Ohio County PSD** Ohio Owner: **Ohio county PSD**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ 4K Industrial Park** Belmont, OH Owner: **4K Industrial Park, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,982,000	40.098805	-80.711328

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ J&R Excavating** Marshall Owner: **J&R Excavating**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,890,000	39.998509	-80.737336

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Ohio River @ Oasis Transport Withdrawal Site** Brooke Owner: **Oasis Transport, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,890,000	40.331551	-80.601034

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Range Tap @ Corbin Withdrawal Site** Brooke Owner: **Range Resources Corp.**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,100,000	40.229983	-80.521067

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **The Village of Valley Grove** Ohio Owner: **The Village of Valley Grove**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Source **Valley Falls PSD** Marion Owner: **Valley Falls PSD**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
144,000	-	-

☑ Regulated Stream? Tygart Valley Dam Ref. Gauge ID: 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **397.39** **Min. Passby (cfs):**

DEP Comments:

- Source **Wheeling Creek #1 @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
1,440,000	39.95205	-80.56189

☐ Regulated Stream? Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **18.23** **Min. Passby (cfs):** **16.63**

DEP Comments:

- Source **Wheeling Creek # 2 @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
2,880,000	39.949577	-80.531255

☐ Regulated Stream? Ref. Gauge ID: 3111955 Wheeling Creek near Majorsville, WV

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **18.23** **Min. Passby (cfs):** **16.24**

DEP Comments:

- Source **Wheeling Water Department** Ohio Owner: **Wheeling Water Department**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
720,000	-	-

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: Refer to the specified sation on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Source Summary

WMP 02544 API Number see overview Operator: SWN Production Company, LLC

Plan Type Well Pad Brownlee Land Ventures Well Pad

Groundwater

- Source **Shoemaker Groundwater Wells @ HG Energy** Marshall Owner: **HG Energy, LLC**

Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
576,000	40.0222	-80.733888

☑ Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **800** **Min. Gauge Reading (cfs):** **6,468.00** **Min. Passby (cfs):**

DEP Comments: This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals. https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81507 | Source Name: Shoemaker Groundwater Wells @ HG Energy
HG Energy, LLC

Source Latitude: 40.0222
Source Longitude: -80.733888

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

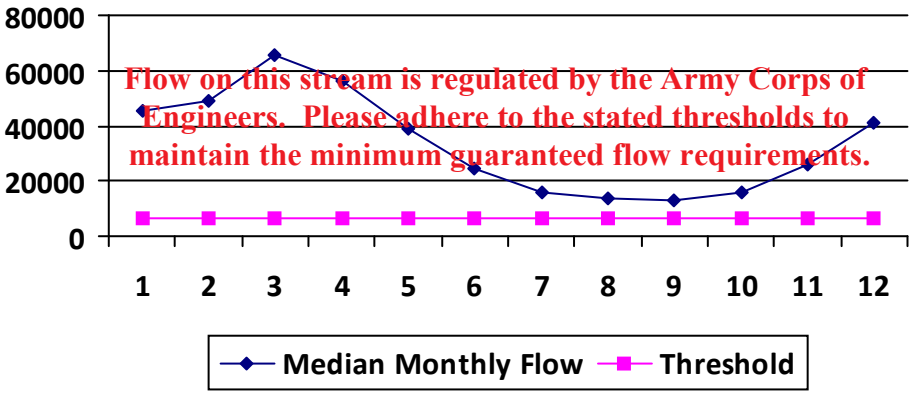
- [ ] Endangered Species?
- [ ] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 800
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	1.78
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81488 | Source Name: Adrian Public Service District / Adrian Public Service District

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5020001

Drainage Area (sq. mi.): 197.33 | County: Upshur

- [ ] Endangered Species?
- [ ] Mussel Stream?
- [x] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream?
- [x] Proximate PSD? — City of Buckhannon Water Plant
- [x] Gauged Stream?

Max. Pump rate (gpm):

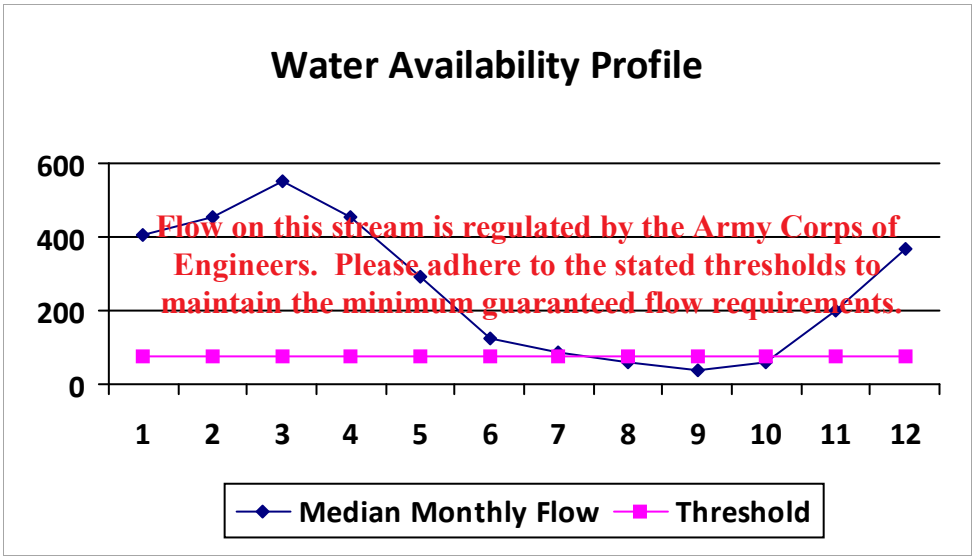
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3054500 TYGART VALLEY RIVER AT PHILIPPI, WV

Drainage Area (sq. mi.): 914.00 | Gauge Threshold (cfs): 341

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	402.75		
2	456.66		
3	551.03		
4	451.73		
5	291.41		
6	124.17		
7	85.17		
8	59.44		
9	37.59		
10	60.75		
11	201.45		
12	368.28		



Water Availability Assessment of Location

Base Threshold (cfs)	73.62
Upstream Demand (cfs):	4.94
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	18.41
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81489 | Source Name: American Petroleum Partners (Wheeling Creek @ W
Phillip Wilson

Source Latitude: 39.975882
Source Longitude: -80.62967

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 192.96 | County: Marshall

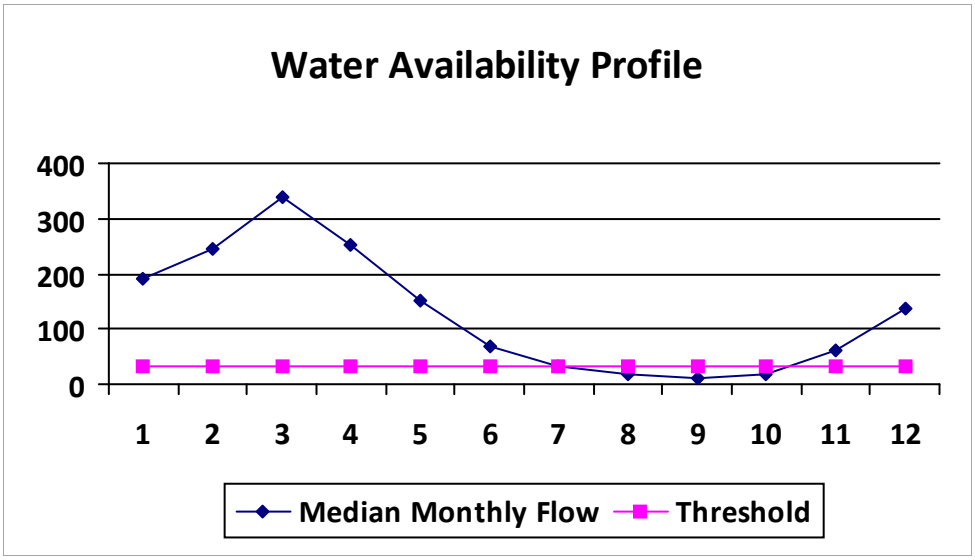
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks: 3
Max. Truck pump rate (gpm) 1000

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	191.17	41.98	149.44
2	243.94	41.98	202.22
3	338.32	41.98	296.60
4	251.15	41.98	209.42
5	153.09	41.98	111.37
6	69.68	41.98	27.95
7	30.79	41.98	-10.93
8	18.01	41.98	-23.71
9	11.44	41.98	-30.28
10	18.96	41.98	-22.76
11	59.65	41.98	17.93
12	135.26	41.98	93.53



Water Availability Assessment of Location

Base Threshold (cfs)	26.09
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	6.52
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81490 | Source Name: Covestro, LLC (Covestro, LLC)

Source Latitude: 39.7218

Source Longitude: -80.830231

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [ ] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Grandview-Doolin PSD
- [x] Gauged Stream?

Max. Pump rate (gpm):

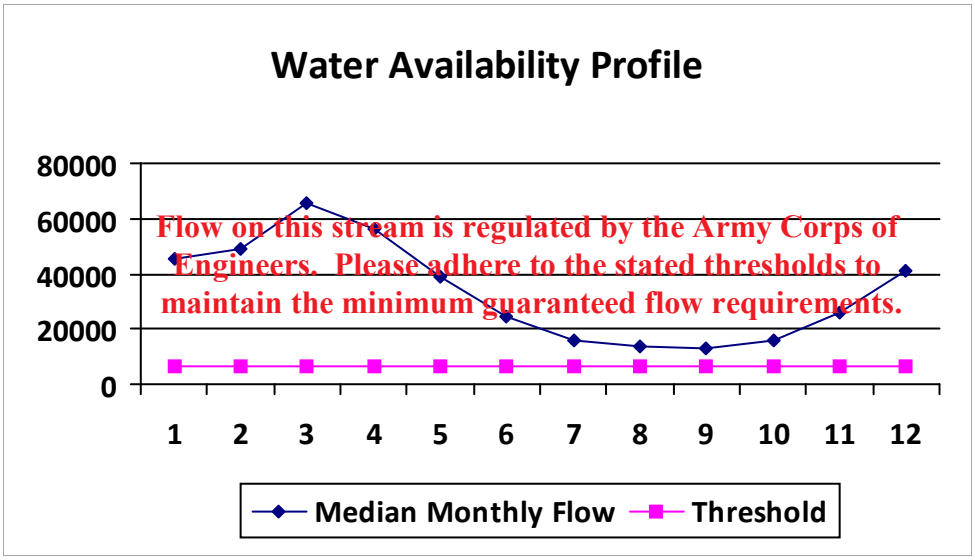
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81492 | Source Name: Elite Gasfield Services / Elite Gasfield Services

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 25000 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — City of Follansbee
- [x] Gauged Stream?

Max. Pump rate (gpm):

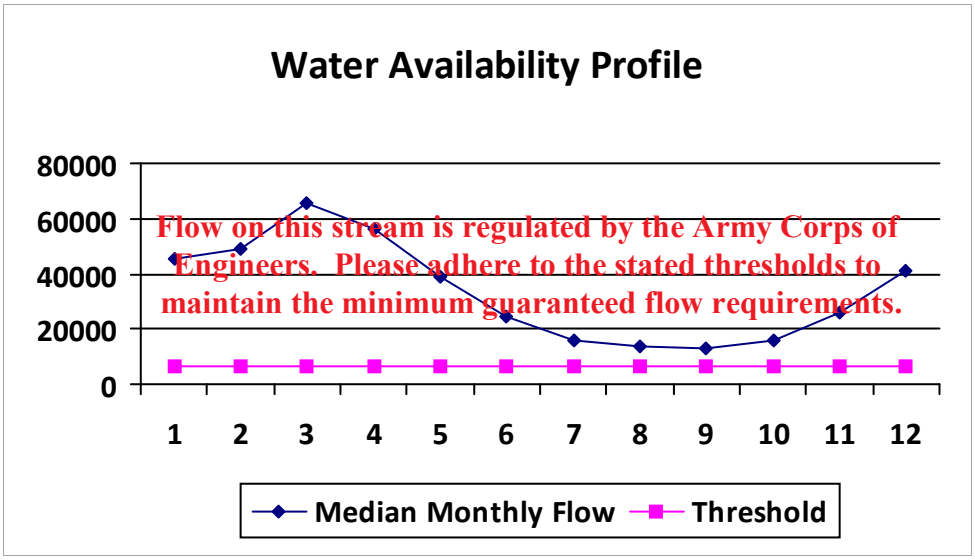
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81494 | Source Name: Grandview-Doolin PSD / Grandview-Doolin Public Service District

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Grandview-Doolin PSD
- [x] Gauged Stream?

Max. Pump rate (gpm):

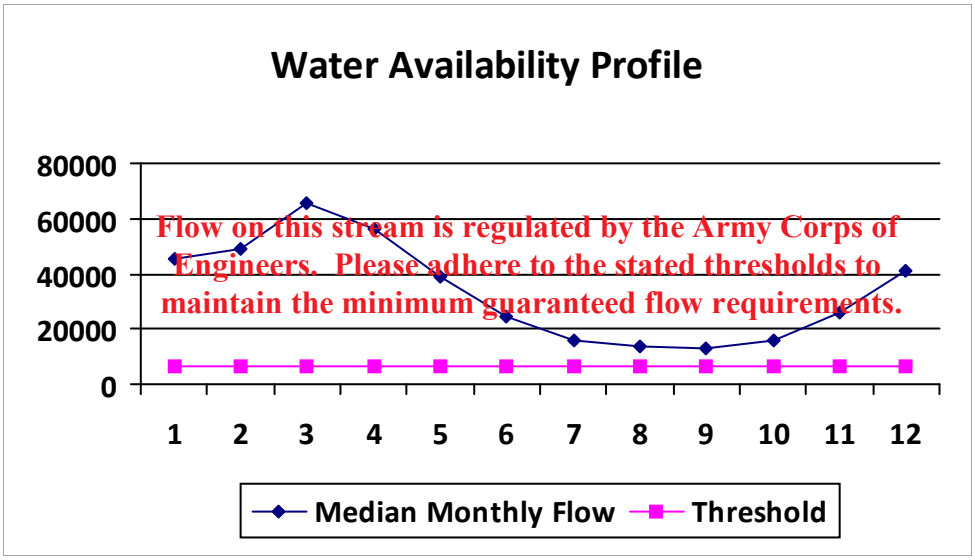
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81497 | Source Name: Marshall County Public Service District 3 / Marshall County Public Service District #4

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Moundsville Water Department
- [ ] Gauged Stream?

Max. Pump rate (gpm):

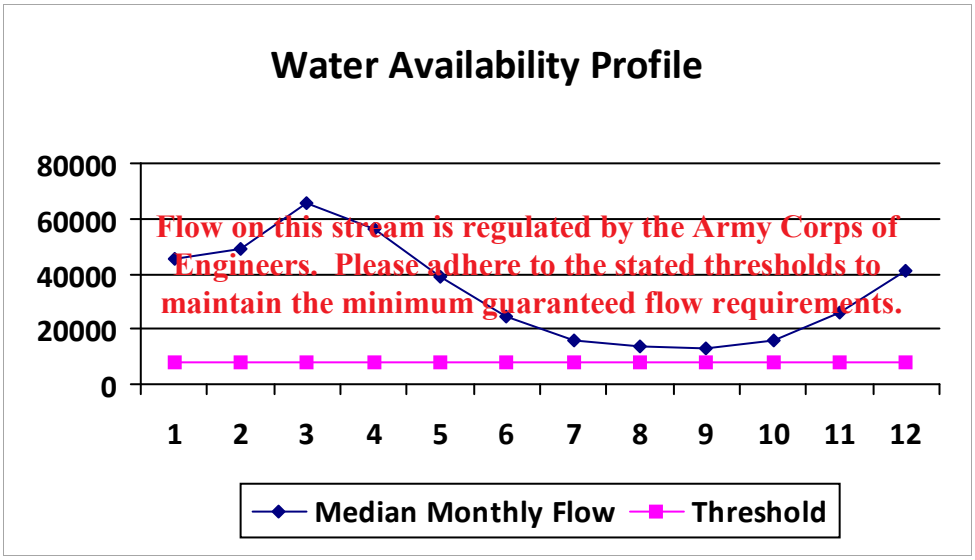
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81498 | Source Name: Marshall County Public Service District 4 / Marshall County Public Service District #4

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Moundsville Water Department
- [ ] Gauged Stream?

Max. Pump rate (gpm):

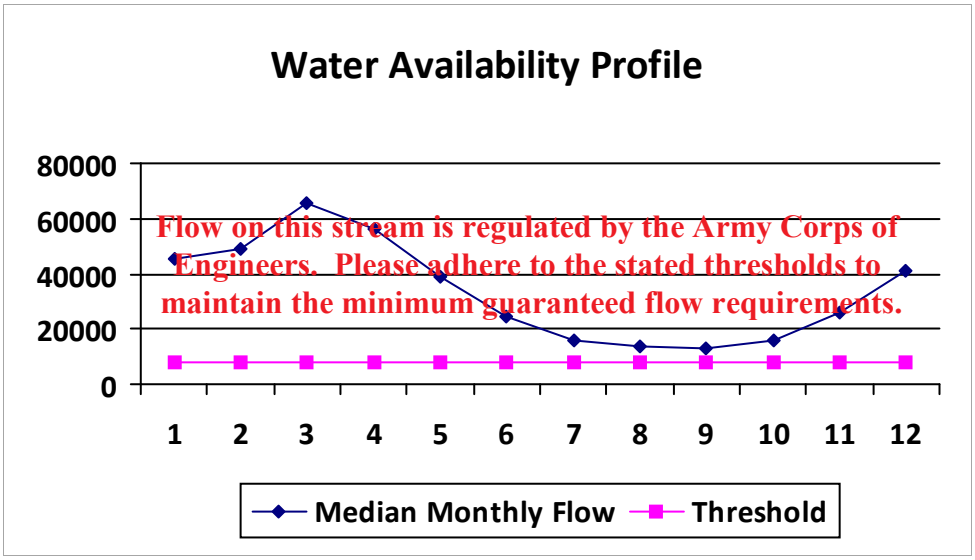
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81499 | Source Name: Ohio County PSD / Ohio county PSD | Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

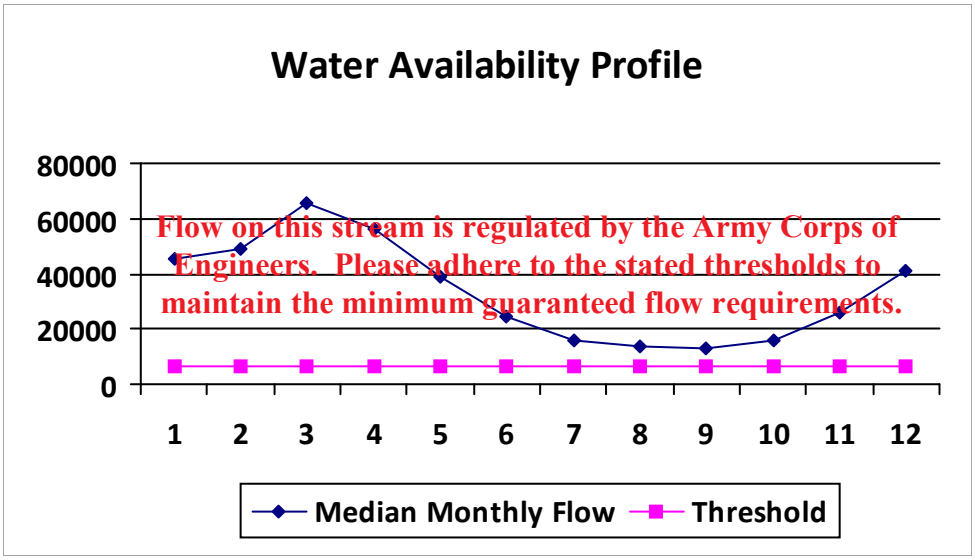
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81500 | Source Name: Ohio River @ 4K Industrial Park / 4K Industrial Park, LLC

Source Latitude: 40.098805

Source Longitude: -80.711328

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Belmont, OH

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

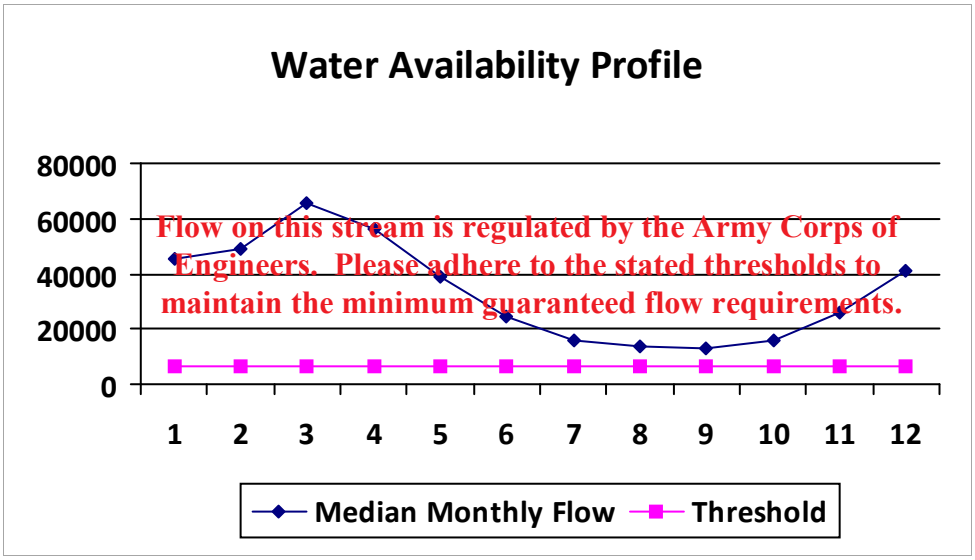
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm):

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81501 | Source Name: Ohio River @ J&R Excavating / J&R Excavating

Source Latitude: 39.998509

Source Longitude: -80.737336

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

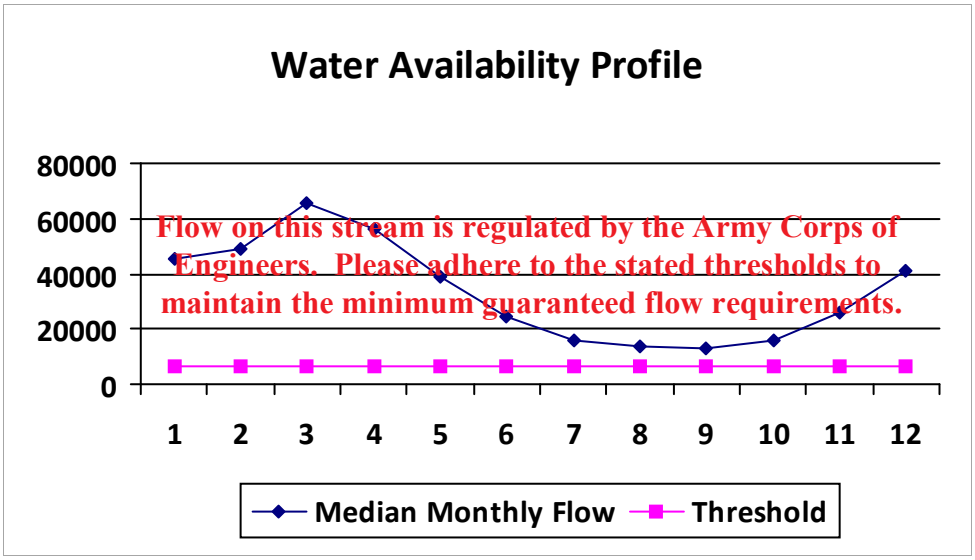
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm):

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81502 | Source Name: Ohio River @ Oasis Transport Withdrawal Site

Oasis Transport, LLC

Source Latitude: 40.331551

Source Longitude: -80.601034

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

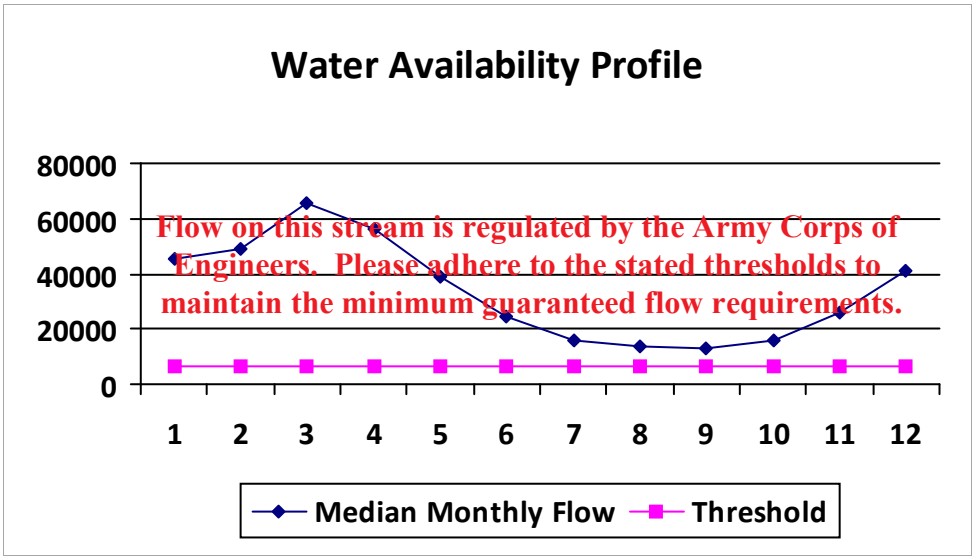
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81504 | Source Name: Range Tap @ Corbin Withdrawal Site

Range Resources Corp.

Source Latitude: 40.229983

Source Longitude: -80.521067

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

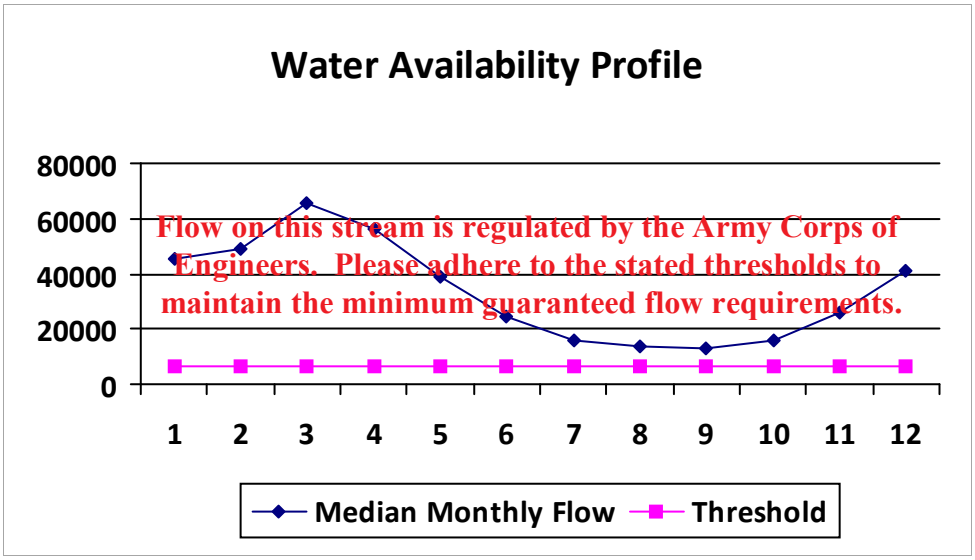
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81508 | Source Name: The Village of Valley Grove / The Village of Valley Grove

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

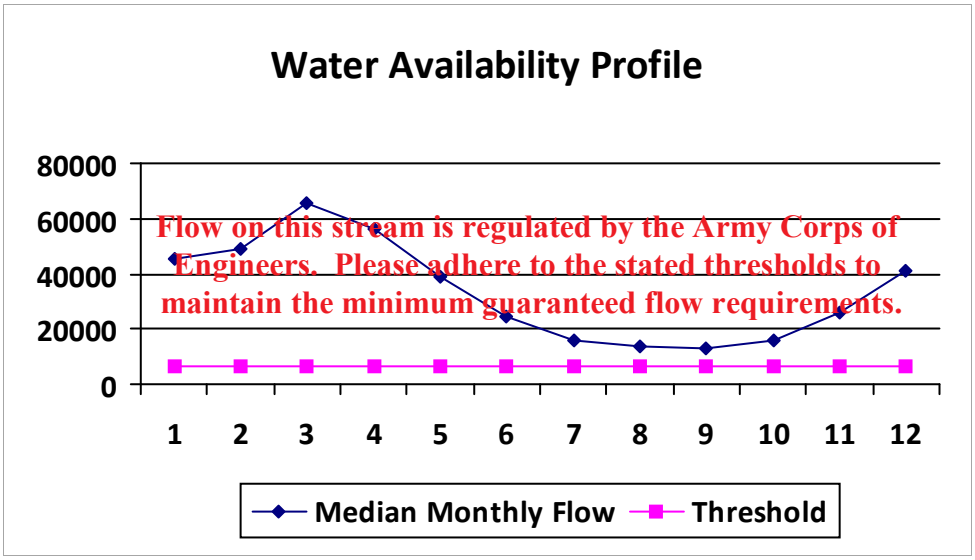
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81509 | Source Name: Valley Falls PSD (Valley Falls PSD)

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5020001

Drainage Area (sq. mi.): 1367.05 | County: Marion

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Tygart Valley Dam
- [x] Proximate PSD? — City of Fairmont
- [x] Gauged Stream?

Max. Pump rate (gpm):

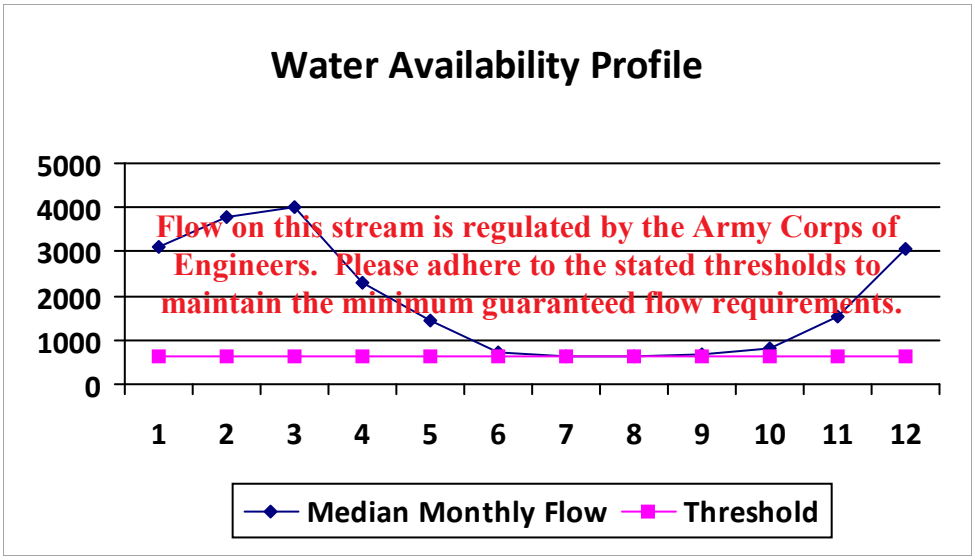
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Drainage Area (sq. mi.): 1,363.00 | Gauge Threshold (cfs): 624

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	3,116.33	-	-
2	3,762.53	-	-
3	4,020.62	-	-
4	2,297.81	-	-
5	1,441.95	-	-
6	729.86	-	-
7	613.75	-	-
8	623.01	-	-
9	694.86	-	-
10	793.38	-	-
11	1,551.03	-	-
12	3,049.68	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81513 | Source Name: Wheeling Creek #1 @ HG Energy

HG Energy, LLC

Source Latitude: 39.95205

Source Longitude: -80.56189

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 156.06 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

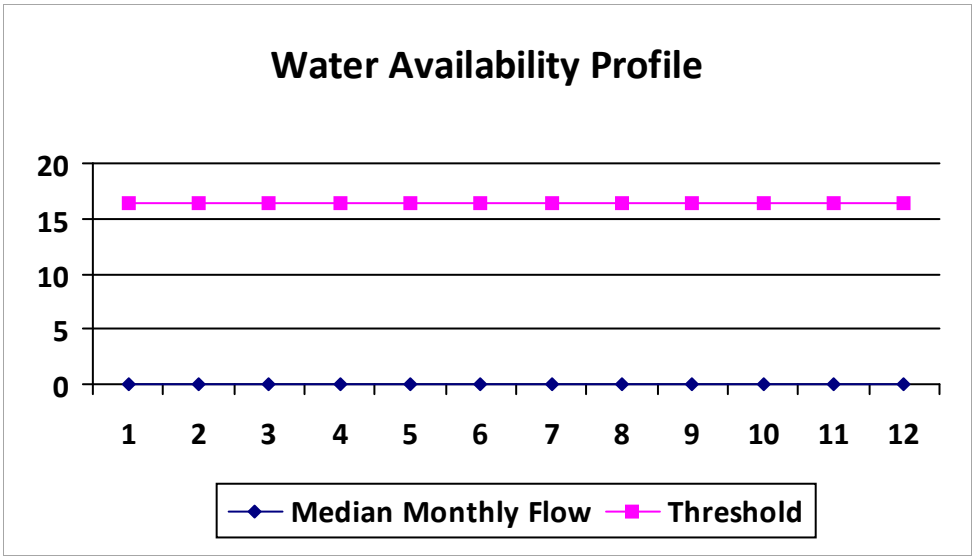
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00		-
2	0.00		-
3	0.00		-
4	0.00		-
5	0.00		-
6	0.00		-
7	0.00		-
8	0.00		-
9	0.00		-
10	0.00		-
11	0.00		-
12	0.00		-



Water Availability Assessment of Location

Base Threshold (cfs)	16.43
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81514 | Source Name: Wheeling Creek # 2 @ HG Energy

HG Energy, LLC

Source Latitude: 39.949577

Source Longitude: -80.531255

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 152.4 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm):

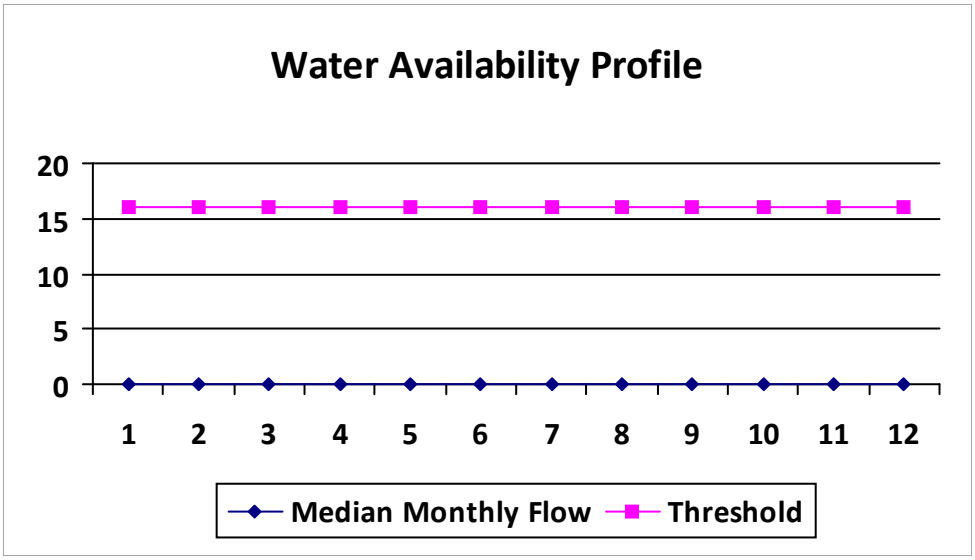
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00		-
2	0.00		-
3	0.00		-
4	0.00		-
5	0.00		-
6	0.00		-
7	0.00		-
8	0.00		-
9	0.00		-
10	0.00		-
11	0.00		-
12	0.00		-



Water Availability Assessment of Location

Base Threshold (cfs)	16.04
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81515 | Source Name: Wheeling Water Department | Wheeling Water Department

Source Latitude: - | Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Wheeling Water Department
- [x] Gauged Stream?

Max. Pump rate (gpm):

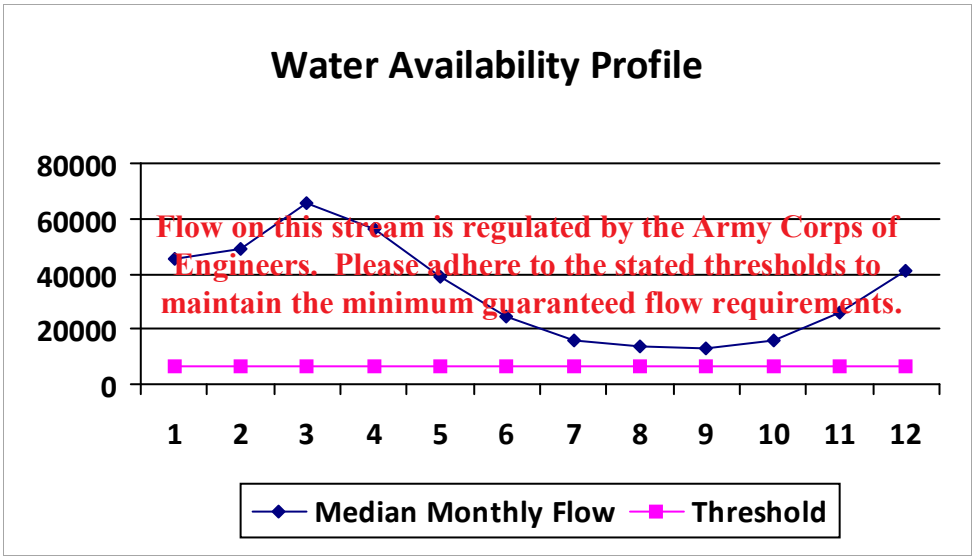
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81454 | Source Name: Wheeling Creek @ Iskon
Iskcon New Vrindaban, Inc.

Source Latitude: 39.967973
Source Longitude: -80.599241

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 189.6 | County: Marshall

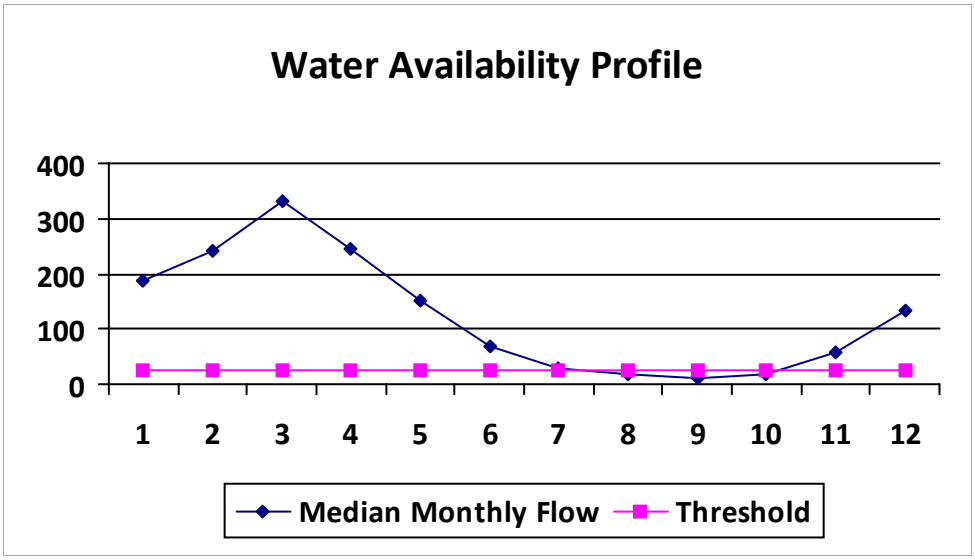
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	187.84	31.21	156.81
2	239.69	31.21	208.66
3	332.43	31.21	301.40
4	246.77	31.21	215.74
5	150.42	31.21	119.39
6	68.46	31.21	37.43
7	30.25	31.21	-0.78
8	17.70	31.21	-13.33
9	11.25	31.21	-19.78
10	18.63	31.21	-12.40
11	58.61	31.21	27.58
12	132.90	31.21	101.87



Water Availability Assessment of Location

Base Threshold (cfs)	25.64
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**43.57**
Passby at Location (cfs):	**25.64**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81455 | Source Name: Wheeling Creek @ Schafer / Betty Jane Schafer

Source Latitude: 39.99257

Source Longitude: -80.634912

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 203.38 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 5,250

Max. Simultaneous Trucks:

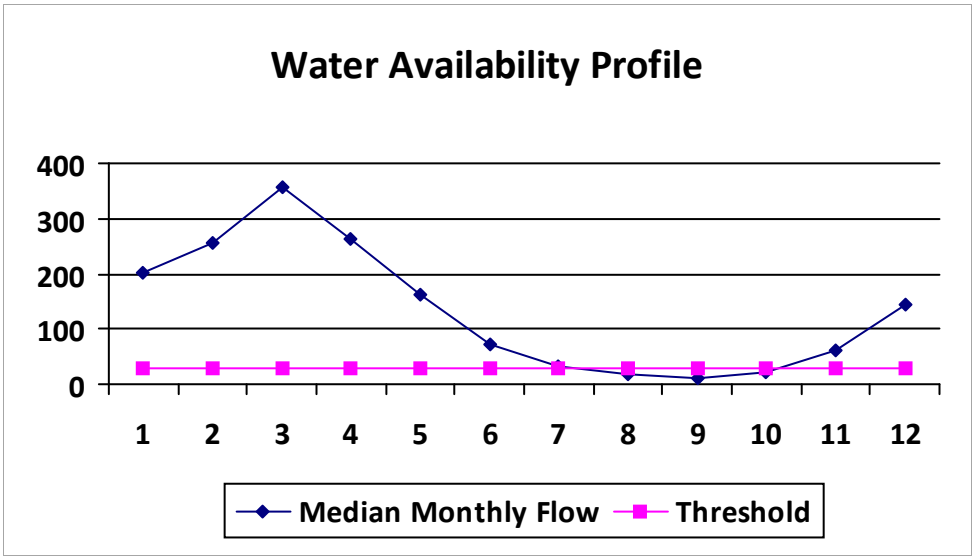
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	201.49	39.20	162.43
2	257.11	39.20	218.06
3	356.59	39.20	317.53
4	264.71	39.20	225.65
5	161.35	39.20	122.30
6	73.44	39.20	34.38
7	32.45	39.20	-6.60
8	18.98	39.20	-20.08
9	12.06	39.20	-26.99
10	19.99	39.20	-19.07
11	62.87	39.20	23.81
12	142.56	39.20	103.50



Water Availability Assessment of Location

Base Threshold (cfs)	27.50
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**49.70**
Passby at Location (cfs):	**27.50**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81456 | Source Name: Little Wheeling Creek @ Main Street Bank / Main Street Bank

Source Latitude: 40.064076

Source Longitude: -80.614406

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 13.94 | County: Ohio

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

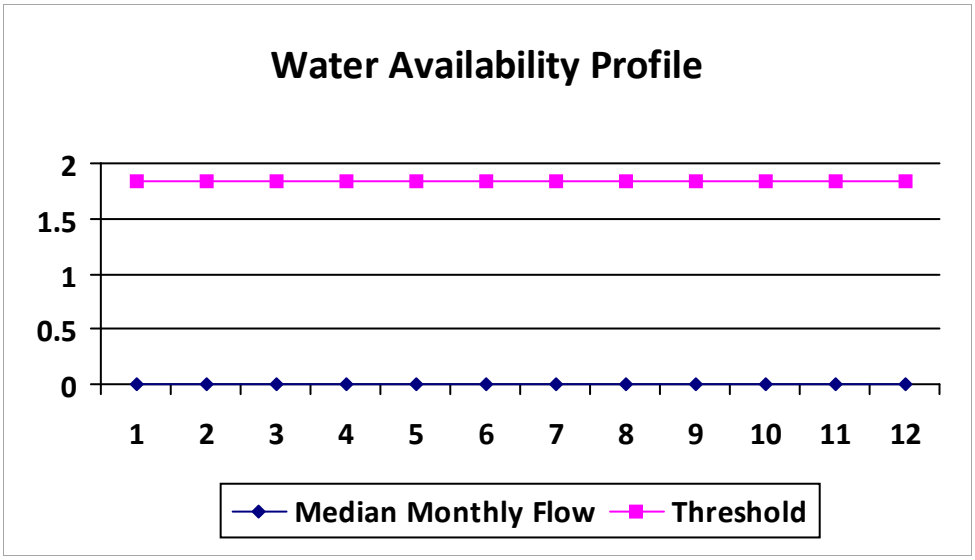
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3111955 | Wheeling Creek near Majorsville, WV

Drainage Area (sq. mi.): 152.00 | Gauge Threshold (cfs): 16

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	0.00	10.00	-
2	0.00	10.00	-
3	0.00	10.00	-
4	0.00	10.00	-
5	0.00	10.00	-
6	0.00	10.00	-
7	0.00	10.00	-
8	0.00	10.00	-
9	0.00	10.00	-
10	0.00	10.00	-
11	0.00	10.00	-
12	0.00	10.00	-



Water Availability Assessment of Location

Base Threshold (cfs)	1.47
Upstream Demand (cfs):	3.34
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.37
Ungauged Stream Safety (cfs):	0.37
Min. Gauge Reading (cfs):	**31.80**
Passby at Location (cfs):	**2.20**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP	02544	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Brownlee Land Ventures Well Pad		

Source ID: 81457 Source Name: Paw Paw Creek @ Horizon Ventures
Horizon Ventures of WV, Inc

Source Latitude: 39.552426
Source Longitude: -80.166833

HUC-8 Code: 5020003

Drainage Area (sq. mi.) 28.34 County: Marion

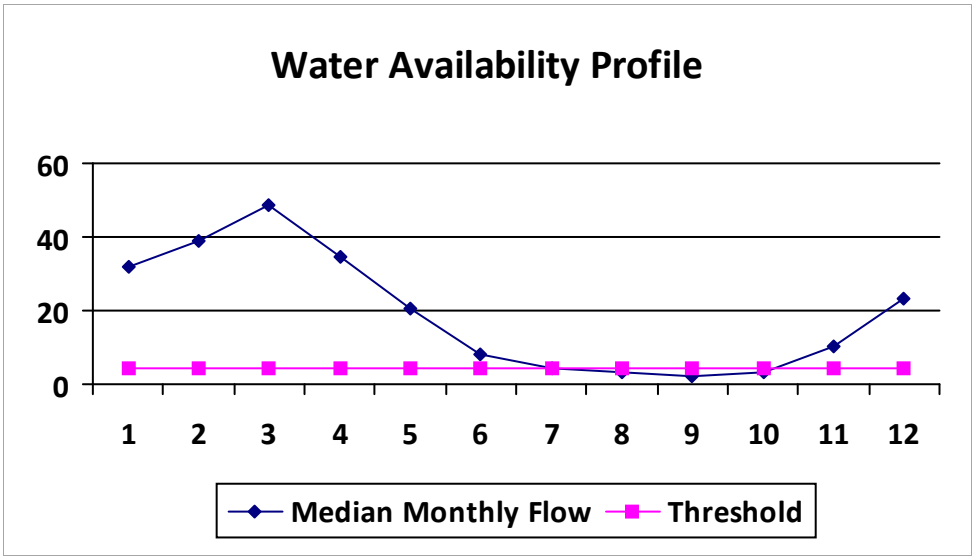
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3061500 BUFFALO CREEK AT BARRACKVILLE, WV

Drainage Area (sq. mi.): 116.00 Gauge Threshold (cfs): 15

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	31.74	9.95	21.86
2	39.11	9.95	29.23
3	48.41	9.95	38.52
4	34.37	9.95	24.48
5	20.75	9.95	10.86
6	8.19	9.95	-1.70
7	4.57	9.95	-5.32
8	3.18	9.95	-6.70
9	2.35	9.95	-7.54
10	3.03	9.95	-6.86
11	10.46	9.95	0.58
12	23.48	9.95	13.59



Water Availability Assessment of Location

Base Threshold (cfs)	3.66
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.92
Ungauged Stream Safety (cfs):	0.92
Min. Gauge Reading (cfs):	**26.96**
Passby at Location (cfs):	**5.50**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81458 | Source Name: Little Wheeling Creek @ Rt. 40 Staging Area
JDS Investments, LLC

Source Latitude: 40.078324
Source Longitude: -80.591145

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 13.94 | County: Ohio

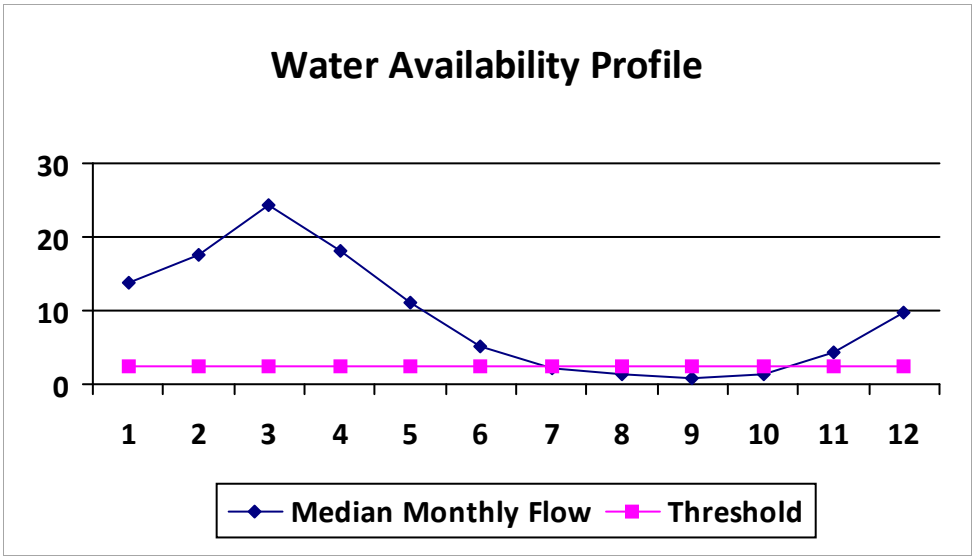
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.81	10.62	3.55
2	17.62	10.62	7.36
3	24.44	10.62	14.18
4	18.14	10.62	7.88
5	11.06	10.62	0.80
6	5.03	10.62	-5.23
7	2.22	10.62	-8.03
8	1.30	10.62	-8.96
9	0.83	10.62	-9.43
10	1.37	10.62	-8.89
11	4.31	10.62	-5.95
12	9.77	10.62	-0.49



Water Availability Assessment of Location

Base Threshold (cfs)	1.89
Upstream Demand (cfs):	3.34
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.47
Ungauged Stream Safety (cfs):	0.47
Min. Gauge Reading (cfs):	**64.80**
Passby at Location (cfs):	**2.83**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81459 | Source Name: Wheeling Creek @ Sligar / Terry Sligar

Source Latitude: 40.013185

Source Longitude: -80.652863

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 211.8 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 3,360

Max. Simultaneous Trucks:

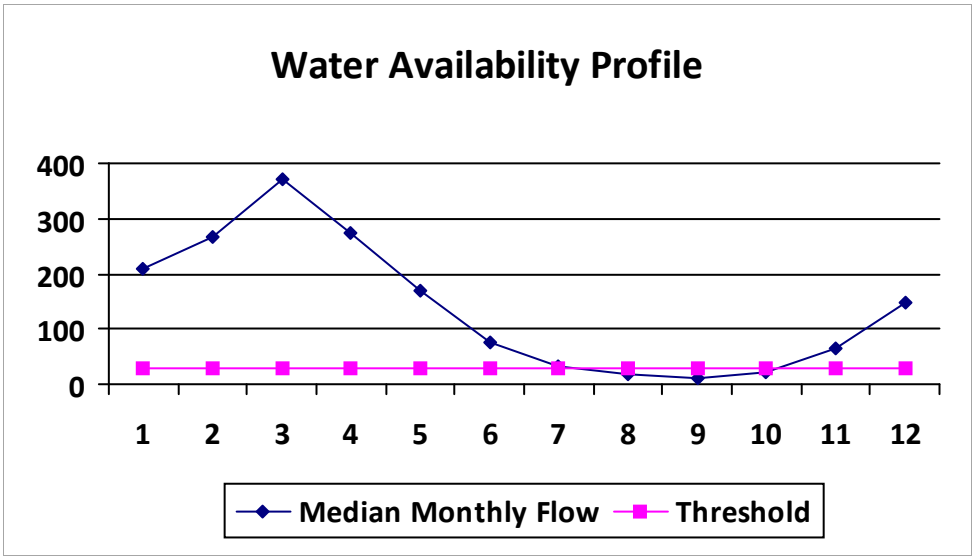
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	209.83	36.13	173.84
2	267.76	36.13	231.77
3	371.35	36.13	335.36
4	275.67	36.13	239.68
5	168.03	36.13	132.05
6	76.48	36.13	40.49
7	33.80	36.13	-2.19
8	19.77	36.13	-16.22
9	12.56	36.13	-23.42
10	20.81	36.13	-15.17
11	65.47	36.13	29.49
12	148.46	36.13	112.48



Water Availability Assessment of Location

Base Threshold (cfs)	28.64
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**45.49**
Passby at Location (cfs):	**28.64**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81460 | Source Name: Middle Wheeling Creek @ Gribben | Lawrence Kevin Gribber

Source Latitude: 40.036777

Source Longitude: -80.598008

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 30.81 | County: Ohio

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

Max. Simultaneous Trucks:

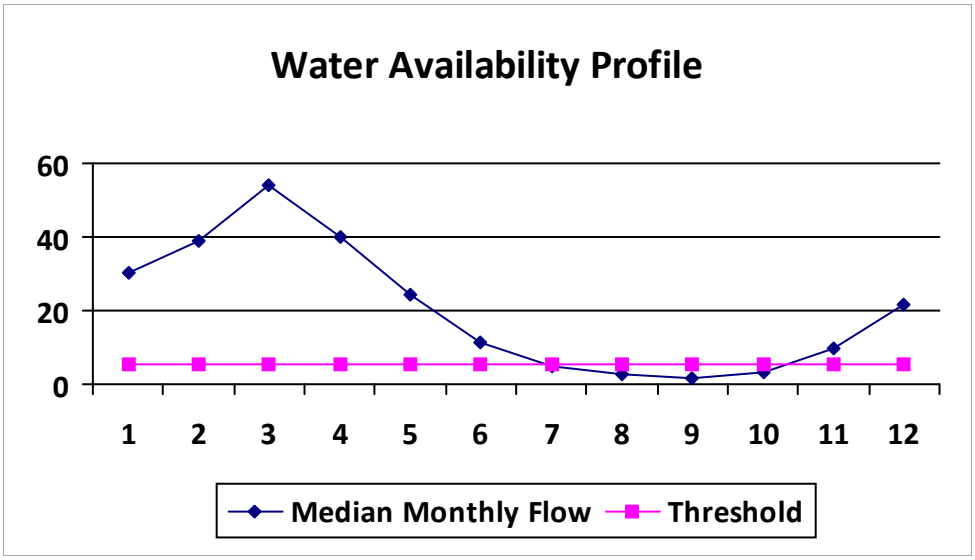
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	30.52	10.71	20.18
2	38.95	10.71	28.61
3	54.02	10.71	43.68
4	40.10	10.71	29.76
5	24.44	10.71	14.10
6	11.13	10.71	0.79
7	4.92	10.71	-5.42
8	2.88	10.71	-7.46
9	1.83	10.71	-8.51
10	3.03	10.71	-7.31
11	9.52	10.71	-0.82
12	21.60	10.71	11.26



Water Availability Assessment of Location

Base Threshold (cfs)	4.17
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	1.04
Ungauged Stream Safety (cfs):	1.04
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**6.25**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP	02544	API/ID Number	see overview	Operator:	SWN Production Company, LLC
Plan Type:	Well Pad		Brownlee Land Ventures Well Pad		

Source ID: 81461 Source Name: Short Creek @ Cain
Susan L. Cain

Source Latitude: 40.155061
Source Longitude: -80.651431

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 16.58 County: Ohio

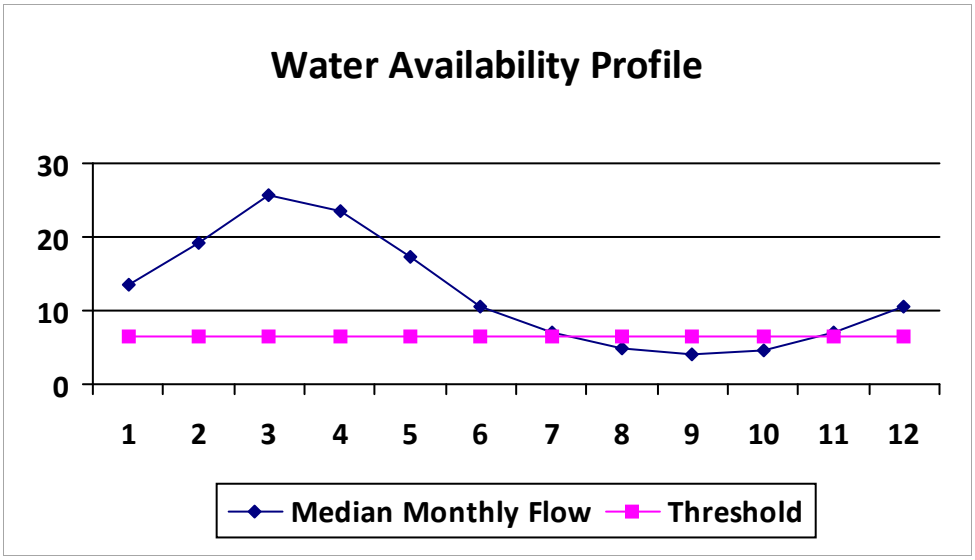
☐ Endangered Species? ☐ Mussel Stream? ☐ ZCC
☐ Trout Stream? ☐ Tier 3? ☐ WH
☐ Regulated Stream?
☐ Proximate PSD?
☐ Gauged Stream?

Max. Pump rate (gpm): 3,360
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.39	15.17	-1.60
2	19.18	15.17	4.20
3	25.67	15.17	10.68
4	23.44	15.17	8.45
5	17.30	15.17	2.31
6	10.56	15.17	-4.43
7	6.97	15.17	-8.01
8	4.87	15.17	-10.12
9	3.99	15.17	-11.00
10	4.71	15.17	-10.27
11	6.97	15.17	-8.02
12	10.55	15.17	-4.43



Water Availability Assessment of Location

Base Threshold (cfs)	5.12
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	1.28
Ungauged Stream Safety (cfs):	1.28
Min. Gauge Reading (cfs):	**64.49**
Passby at Location (cfs):	**7.68**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81462 | Source Name: Middle Wheeling Creek @ Supler

Gregory and Peggy Supler

Source Latitude: 40.04409

Source Longitude: -80.55348

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 20.54 | County: Ohio

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,500

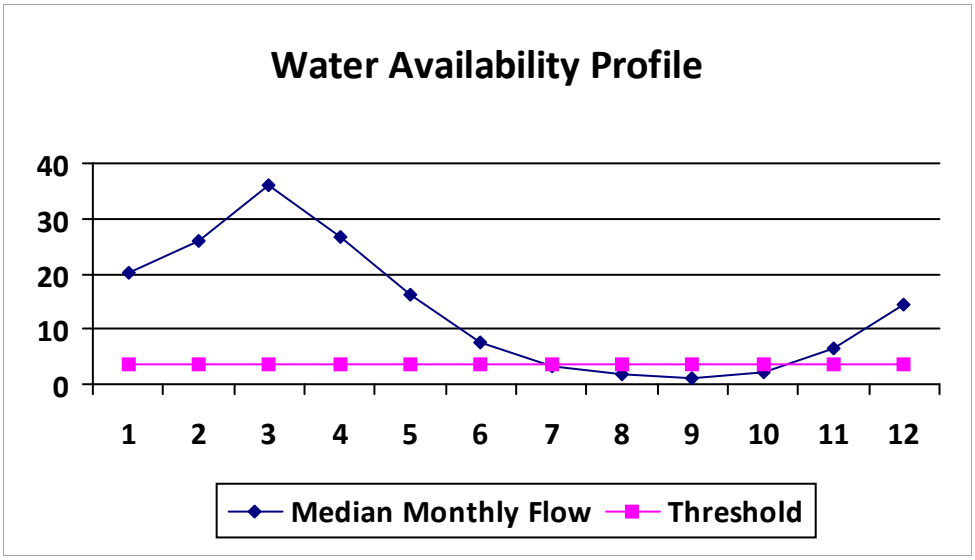
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	20.35	9.74	10.73
2	25.97	9.74	16.35
3	36.01	9.74	26.39
4	26.73	9.74	17.11
5	16.30	9.74	6.68
6	7.42	9.74	-2.20
7	3.28	9.74	-6.34
8	1.92	9.74	-7.70
9	1.22	9.74	-8.40
10	2.02	9.74	-7.60
11	6.35	9.74	-3.27
12	14.40	9.74	4.78



Water Availability Assessment of Location

Base Threshold (cfs)	2.78
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.69
Ungauged Stream Safety (cfs):	0.69
Min. Gauge Reading (cfs):	**62.57**
Passby at Location (cfs):	**4.17**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81463 | Source Name: Big Wheeling Creek @ Wheeling Staging Area
Fulton Storage, LLC

Source Latitude: 40.077019
Source Longitude: -80.713866

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 296.04 | County: Ohio

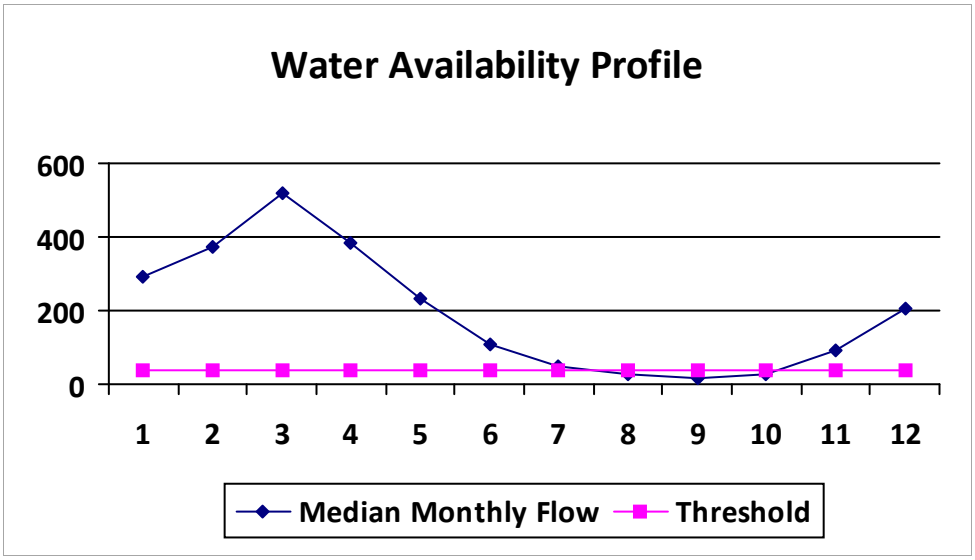
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	293.29	45.60	247.82
2	374.26	45.60	328.78
3	519.05	45.60	473.58
4	385.31	45.60	339.84
5	234.87	45.60	189.40
6	106.90	45.60	61.43
7	47.24	45.60	1.77
8	27.63	45.60	-17.84
9	17.56	45.60	-27.91
10	29.09	45.60	-16.38
11	91.52	45.60	46.05
12	207.51	45.60	162.04



Water Availability Assessment of Location

Base Threshold (cfs)	40.03
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**43.57**
Passby at Location (cfs):	**40.03**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81464 | Source Name: Ohio River @ Extraction B Panhandle | SWN Production Company, LLC

Source Latitude: 40.233469

Source Longitude: -80.654359

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Beech Bottom Water Dept.
- [x] Gauged Stream?

Max. Pump rate (gpm): 4,375

Max. Simultaneous Trucks: 0

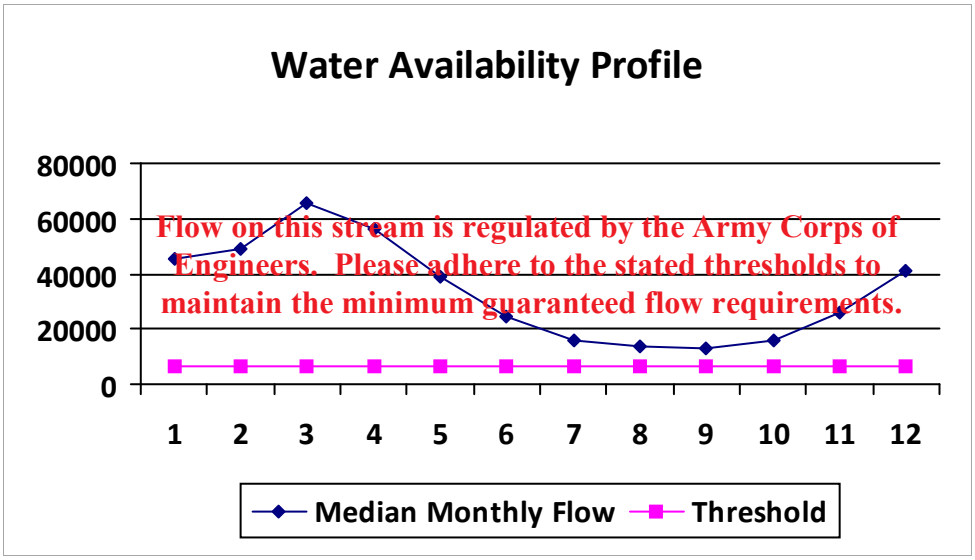
Max. Truck pump rate (gpm) 0

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.75
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81465 | Source Name: WV Fork Fish Creek @ Francis

Loretta J. Francis

Source Latitude: 39.733295

Source Longitude: -80.579415

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 86.51 | County: Marshall

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,000

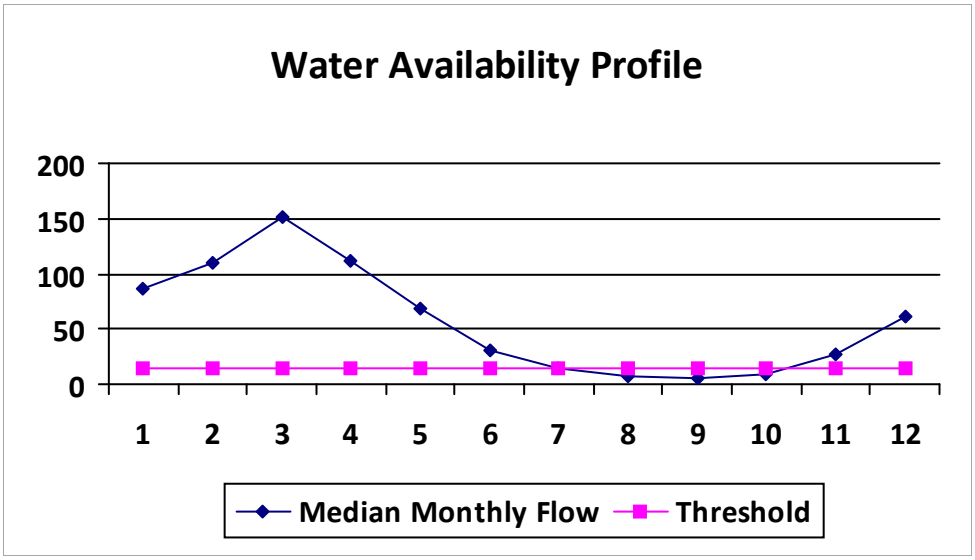
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	85.71	24.23	61.77
2	109.37	24.23	85.43
3	151.68	24.23	127.74
4	112.60	24.23	88.66
5	68.63	24.23	44.70
6	31.24	24.23	7.30
7	13.80	24.23	-10.13
8	8.07	24.23	-15.86
9	5.13	24.23	-18.80
10	8.50	24.23	-15.43
11	26.74	24.23	2.81
12	60.64	24.23	36.71



Water Availability Assessment of Location

Base Threshold (cfs)	11.70
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.68
Headwater Safety (cfs):	2.92
Ungauged Stream Safety (cfs):	2.92
Min. Gauge Reading (cfs):	**63.68**
Passby at Location (cfs):	**17.55**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81466 | Source Name: Ohio River @ Proctor Peacemaker | SWN Production Company, LLC

Source Latitude: 39.714299

Source Longitude: -80.825862

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [x] Proximate PSD? — Beech Bottom Water Dept.
- [x] Gauged Stream?

Max. Pump rate (gpm): 6,000

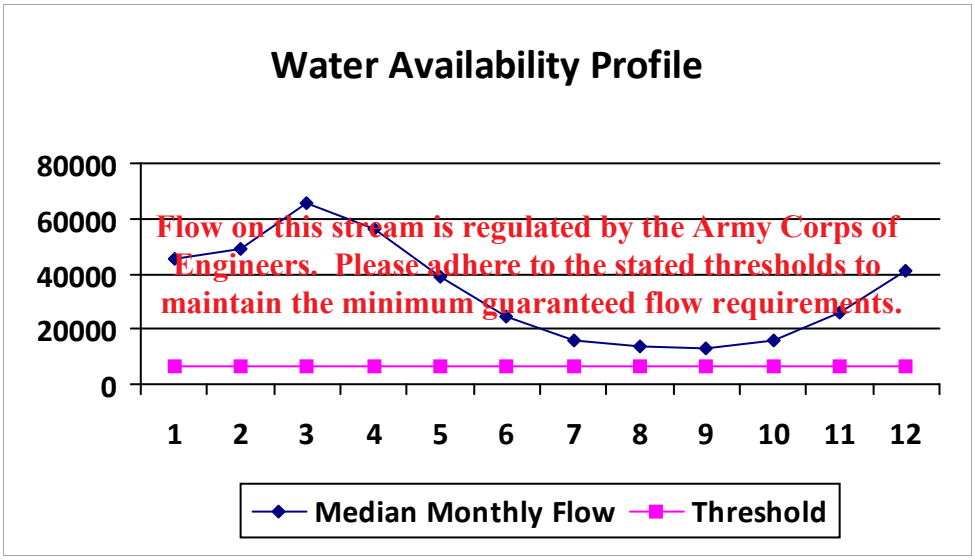
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	13.37
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81467 | Source Name: Booths Creek @ Reliance Minerals

Reliance Minerals, Inc.

Source Latitude: 39.530405

Source Longitude: -79.978079

HUC-8 Code: 5020003

Drainage Area (sq. mi.): 1.79 | County: Monongalia

- ☐ Endangered Species?
- ☐ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☑ Proximate PSD? — Morgantown Utility Board
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

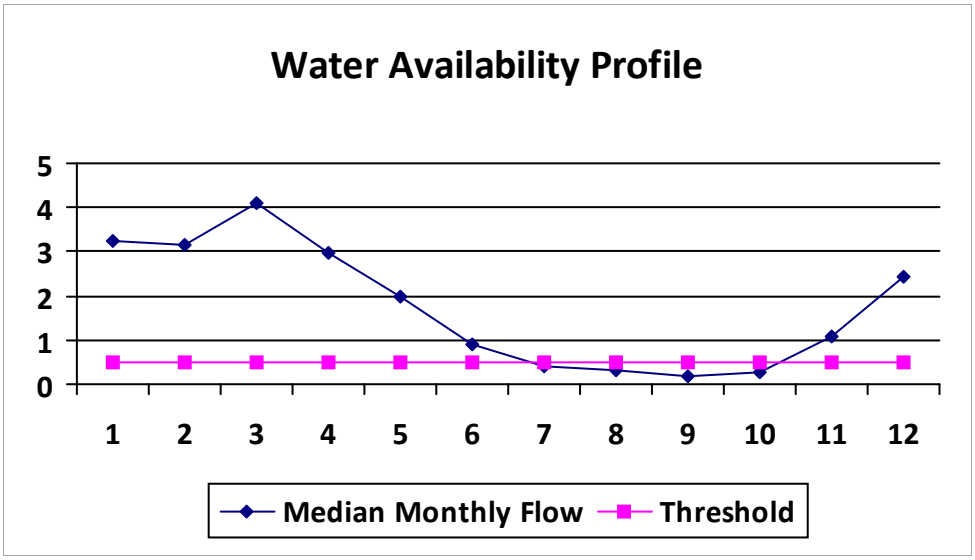
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Drainage Area (sq. mi.): 63.20 | Gauge Threshold (cfs): 14

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	3.25	5.05	-1.69
2	3.16	5.05	-1.77
3	4.12	5.05	-0.82
4	2.98	5.05	-1.96
5	1.97	5.05	-2.97
6	0.89	5.05	-4.04
7	0.41	5.05	-4.53
8	0.30	5.05	-4.64
9	0.17	5.05	-4.76
10	0.29	5.05	-4.65
11	1.08	5.05	-3.86
12	2.43	5.05	-2.50



Water Availability Assessment of Location

Base Threshold (cfs)	0.40
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.10
Ungauged Stream Safety (cfs):	0.10
Min. Gauge Reading (cfs):	**25.46**
Passby at Location (cfs):	**0.59**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81468 | Source Name: West Virginia Fork of Fish Creek @ Van Scyoc With Israel D Van Scyoc

Source Latitude: 39.6908

Source Longitude: -80.4762

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 21.96 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000

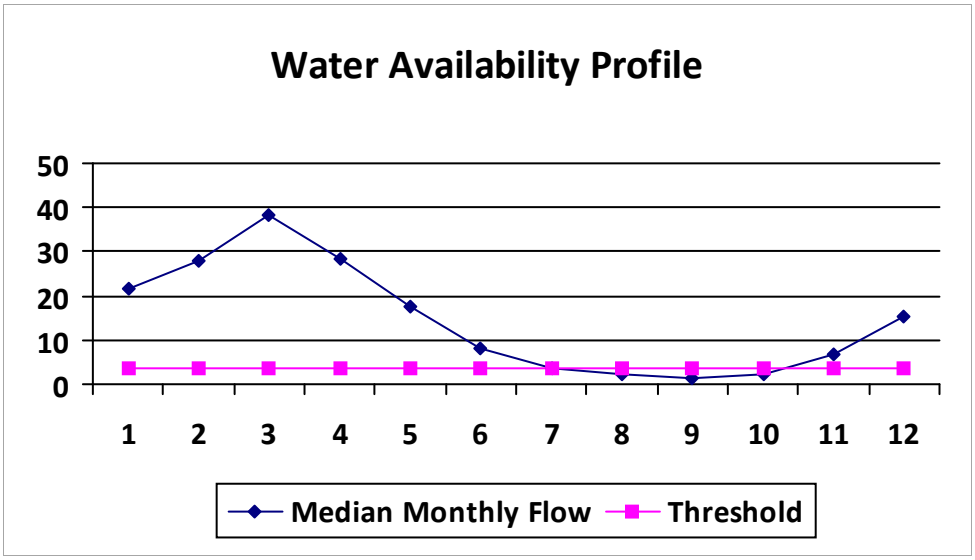
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	21.76	8.91	13.15
2	27.76	8.91	19.16
3	38.50	8.91	29.90
4	28.58	8.91	19.98
5	17.42	8.91	8.82
6	7.93	8.91	-0.67
7	3.50	8.91	-5.10
8	2.05	8.91	-6.55
9	1.30	8.91	-7.30
10	2.16	8.91	-6.44
11	6.79	8.91	-1.81
12	15.39	8.91	6.79



Water Availability Assessment of Location

Base Threshold (cfs)	2.97
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	1.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.74
Ungauged Stream Safety (cfs):	0.74
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**5.45**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81469 | Source Name: Buffalo Creek @ Bethany VFD Withdrawal Site
Bethany Pike Volunteer Fire Department

Source Latitude: 40.253422
Source Longitude: -80.600319

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 158.69 | County: Brooke

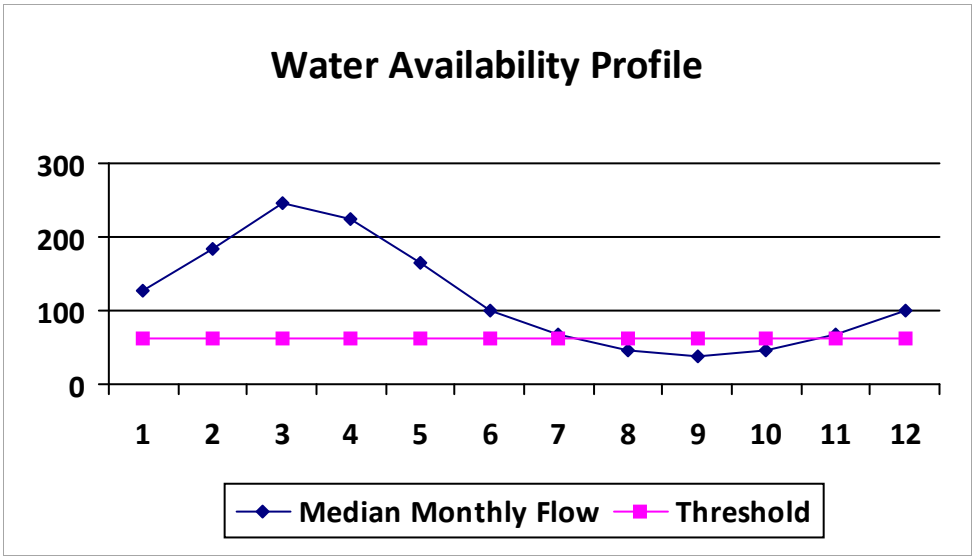
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,100
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	128.18	81.44	46.75
2	183.60	81.44	102.17
3	245.67	81.44	164.24
4	224.32	81.44	142.88
5	165.56	81.44	84.12
6	101.06	81.44	19.63
7	66.76	81.44	-14.68
8	46.57	81.44	-34.86
9	38.15	81.44	-43.29
10	45.11	81.44	-36.32
11	66.70	81.44	-14.73
12	101.01	81.44	19.57



Water Availability Assessment of Location

Base Threshold (cfs)	49.03
Upstream Demand (cfs):	13.25
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.91
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	12.26
Min. Gauge Reading (cfs):	**67.66**
Passby at Location (cfs):	**61.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81470 | Source Name: Whiteday Creek @ Sorine Withdrawal Site
Andrew Sorine, Jr.

Source Latitude: 39.472311
Source Longitude: -79.977123

HUC-8 Code: 5020003

Drainage Area (sq. mi.): 12.29 | County: Marion

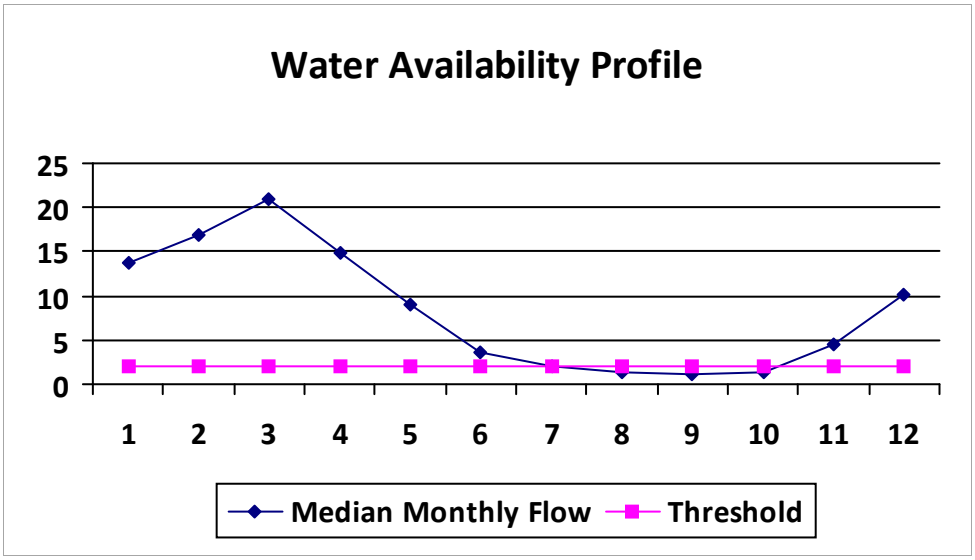
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [x] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,000
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3061500 | BUFFALO CREEK AT BARRACKVILLE, WV

Drainage Area (sq. mi.): 116.00 | Gauge Threshold (cfs): 15

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	13.77	6.84	7.02
2	16.96	6.84	10.21
3	20.99	6.84	14.24
4	14.90	6.84	8.15
5	9.00	6.84	2.25
6	3.55	6.84	-3.20
7	1.98	6.84	-4.77
8	1.38	6.84	-5.37
9	1.02	6.84	-5.73
10	1.31	6.84	-5.44
11	4.54	6.84	-2.21
12	10.18	6.84	3.43



Water Availability Assessment of Location

Base Threshold (cfs)	1.59
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.40
Ungauged Stream Safety (cfs):	0.40
Min. Gauge Reading (cfs):	**26.96**
Passby at Location (cfs):	**2.38**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81471 | Source Name: Buffalo Creek @ DNR
SWN Water Resources Company, LLC

Source Latitude: 40.19386
Source Longitude: -80.525796

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 98.28 | County: Brooke

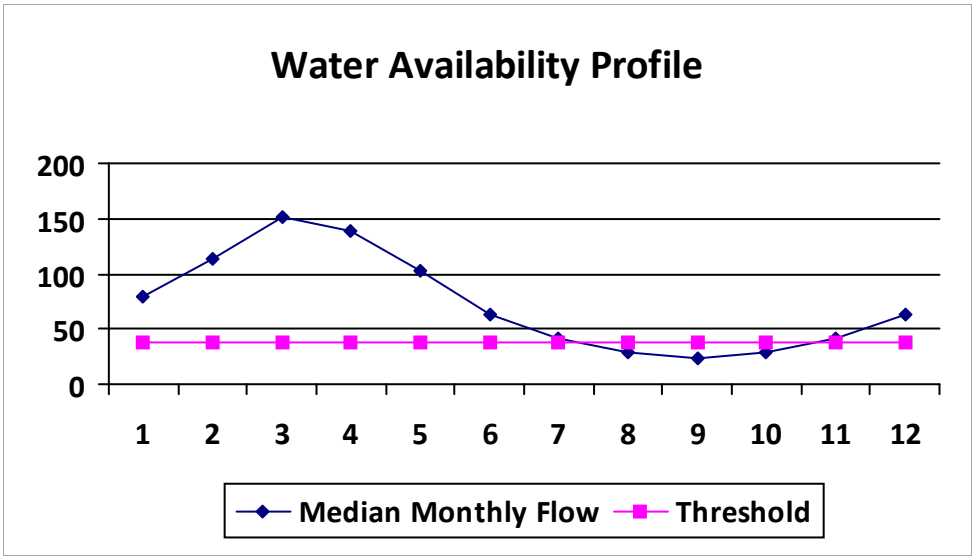
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 3,200
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	79.39	45.08	34.65
2	113.71	45.08	68.97
3	152.15	45.08	107.41
4	138.92	45.08	94.18
5	102.53	45.08	57.79
6	62.59	45.08	17.85
7	41.34	45.08	-3.40
8	28.84	45.08	-15.90
9	23.62	45.08	-21.12
10	27.94	45.08	-16.80
11	41.31	45.08	-3.43
12	62.56	45.08	17.82



Water Availability Assessment of Location

Base Threshold (cfs)	30.36
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	5.57
Pump rate (cfs):	7.13
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	7.59
Min. Gauge Reading (cfs):	**54.63**
Passby at Location (cfs):	**43.52**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81472 | Source Name: Fish Creek @ Gribben
Revocable Living Trust of M. Peggy Gribben

Source Latitude: 39.753271
Source Longitude: -80.597913

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 141.61 | County: Marshall

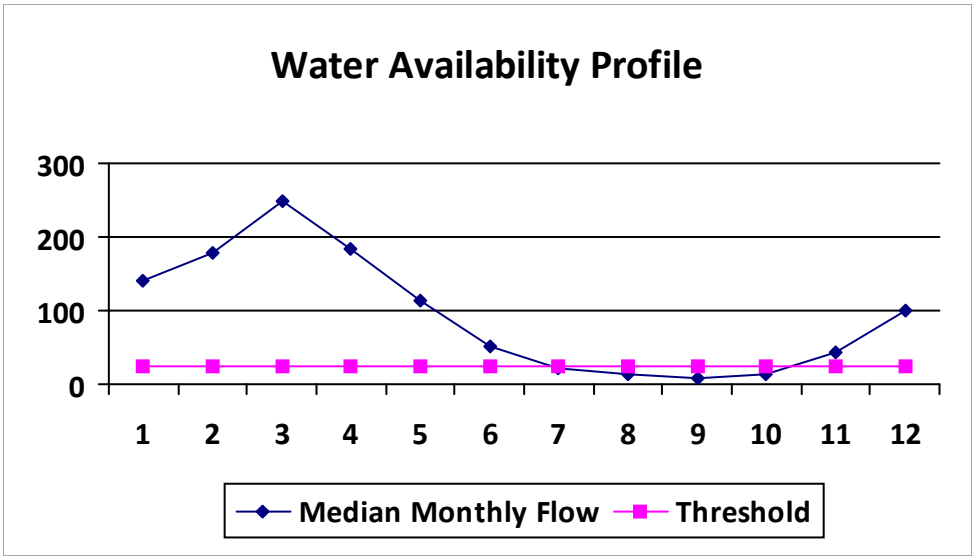
- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	140.29	33.30	107.15
2	179.02	33.30	145.88
3	248.28	33.30	215.14
4	184.31	33.30	151.17
5	112.35	33.30	79.20
6	51.13	33.30	17.99
7	22.60	33.30	-10.55
8	13.22	33.30	-19.93
9	8.40	33.30	-24.75
10	13.92	33.30	-19.23
11	43.78	33.30	10.63
12	99.26	33.30	66.12



Water Availability Assessment of Location

Base Threshold (cfs)	19.15
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.79
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	**23.94**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81473 | Source Name: Buffalo Creek @ Forney

Forney & Sons Holding Company, LLC

Source Latitude: 40.193453

Source Longitude: -80.52175

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 98.28 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,500

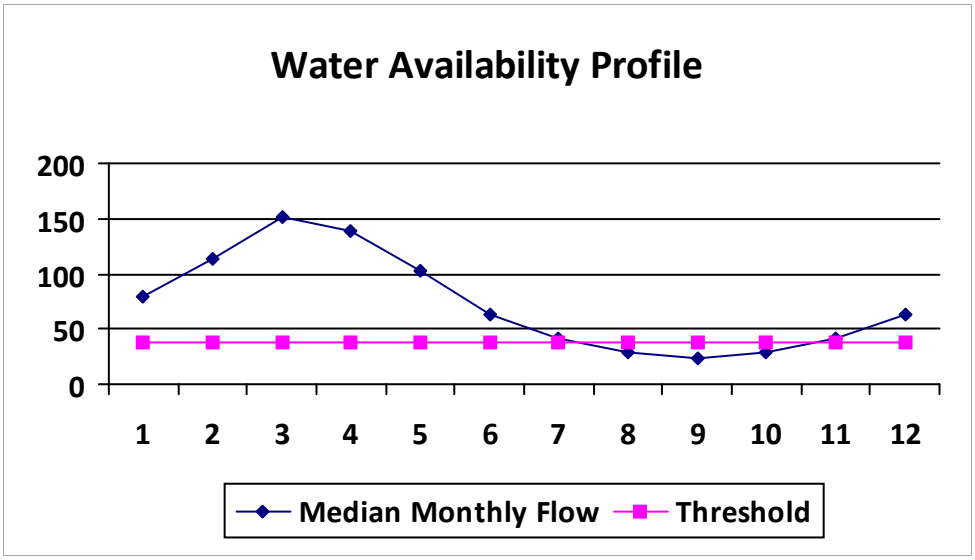
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	79.39	43.52	36.21
2	113.71	43.52	70.53
3	152.15	43.52	108.97
4	138.92	43.52	95.74
5	102.53	43.52	59.35
6	62.59	43.52	19.41
7	41.34	43.52	-1.84
8	28.84	43.52	-14.34
9	23.62	43.52	-19.56
10	27.94	43.52	-15.24
11	41.31	43.52	-1.87
12	62.56	43.52	19.37



Water Availability Assessment of Location

Base Threshold (cfs)	30.36
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	5.57
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	7.59
Min. Gauge Reading (cfs):	**53.07**
Passby at Location (cfs):	**43.52**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81474 | Source Name: Buffalo Creek @ Fuchs / Beverly Fuchs

Source Latitude: 40.258863

Source Longitude: -80.60337

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 163.22 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 5,250

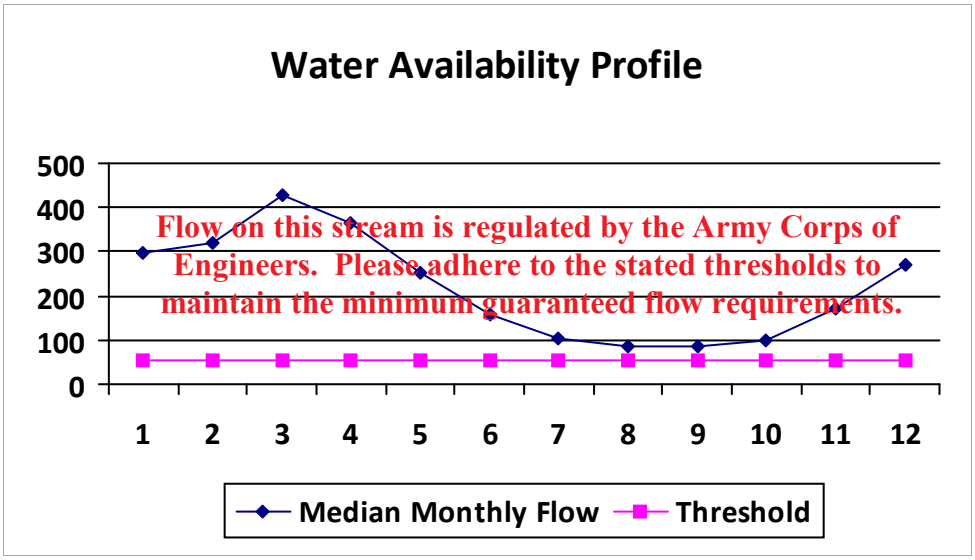
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	298.37	-	-
2	321.22	-	-
3	428.94	-	-
4	366.27	-	-
5	252.66	-	-
6	158.65	-	-
7	104.46	-	-
8	87.49	-	-
9	83.57	-	-
10	101.20	-	-
11	171.71	-	-
12	269.64	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	10.56
Ungauged Stream Safety (cfs):	10.56
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81475 | Source Name: Buffalo Creek @ Greathouse Withdrawal Site / Linda Greathouse

Source Latitude: 40.20895

Source Longitude: -80.60105

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 138.56 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,300

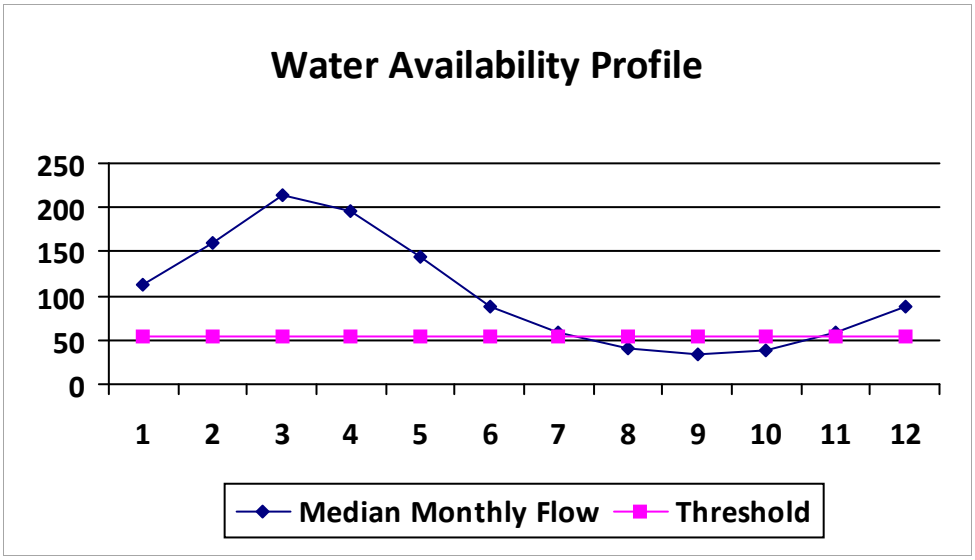
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	111.92	66.43	45.74
2	160.31	66.43	94.13
3	214.51	66.43	148.32
4	195.86	66.43	129.68
5	144.56	66.43	78.37
6	88.24	66.43	22.06
7	58.29	66.43	-7.90
8	40.66	66.43	-25.52
9	33.31	66.43	-32.88
10	39.39	66.43	-26.79
11	58.24	66.43	-7.94
12	88.19	66.43	22.01



Water Availability Assessment of Location

Base Threshold (cfs)	42.81
Upstream Demand (cfs):	5.57
Downstream Demand (cfs):	1.00
Pump rate (cfs):	7.35
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	10.70
Min. Gauge Reading (cfs):	**60.42**
Passby at Location (cfs):	**54.51**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81476 | Source Name: Buffalo Creek @ Labelle Farms

Steve Paul

Source Latitude: 40.204444

Source Longitude: -80.598645

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 136.79 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 5,250

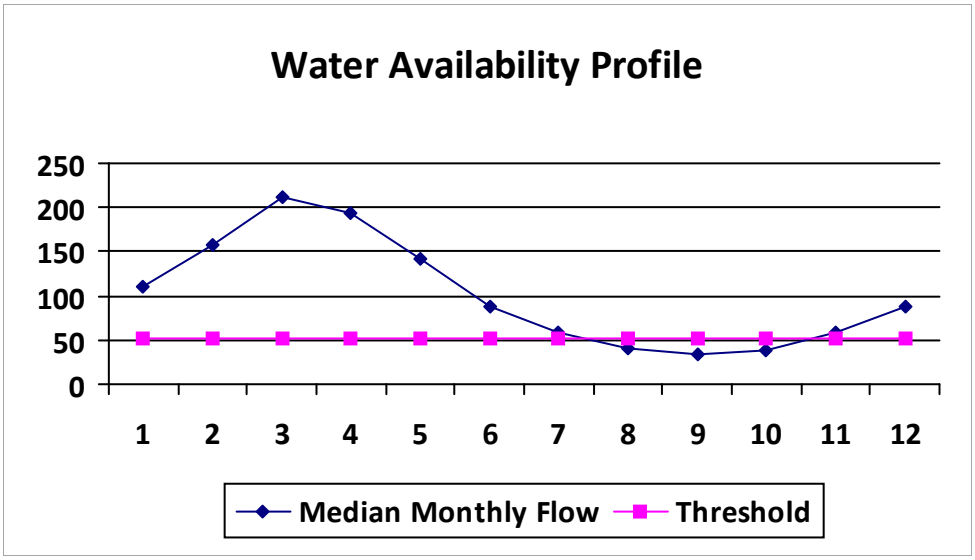
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	110.49	64.52	46.05
2	158.27	64.52	93.82
3	211.77	64.52	147.33
4	193.36	64.52	128.92
5	142.71	64.52	78.27
6	87.12	64.52	22.67
7	57.54	64.52	-6.90
8	40.14	64.52	-24.30
9	32.88	64.52	-31.56
10	38.89	64.52	-25.55
11	57.50	64.52	-6.95
12	87.07	64.52	22.62



Water Availability Assessment of Location

Base Threshold (cfs)	42.26
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.98
Pump rate (cfs):	11.70
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	10.57
Min. Gauge Reading (cfs):	**59.20**
Passby at Location (cfs):	**53.81**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81477 | Source Name: Buffalo Creek @ Worthley Withdrawal Site
Kimberly C. Worthley

Source Latitude: 40.210978
Source Longitude: -80.548779

HUC-8 Code: 5030106

Drainage Area (sq. mi.) 113.49 | County: Brooke

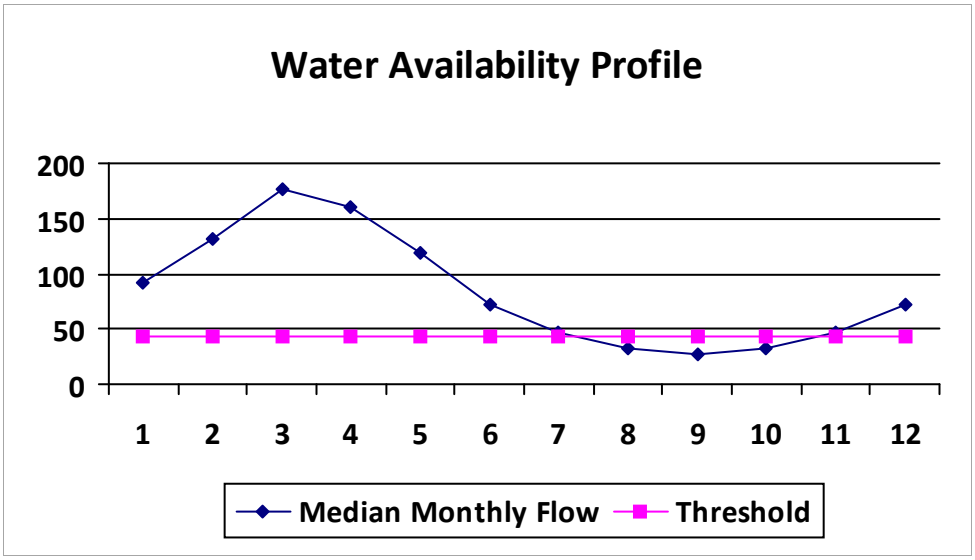
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [x] Proximate PSD? Hammond PSD
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	91.67	49.40	42.38
2	131.31	49.40	82.01
3	175.70	49.40	126.40
4	160.42	49.40	111.13
5	118.40	49.40	69.11
6	72.28	49.40	22.98
7	47.74	49.40	-1.55
8	33.31	49.40	-15.99
9	27.28	49.40	-22.02
10	32.26	49.40	-17.03
11	47.70	49.40	-1.59
12	72.24	49.40	22.94



Water Availability Assessment of Location

Base Threshold (cfs)	35.06
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	1.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	8.77
Min. Gauge Reading (cfs):	**53.07**
Passby at Location (cfs):	**44.83**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81478 | Source Name: Buffalo Creek @ WVDOH
West Virginia Division of Highways

Source Latitude: 40.258863
Source Longitude: -80.60337

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 163.22 | County: Brooke

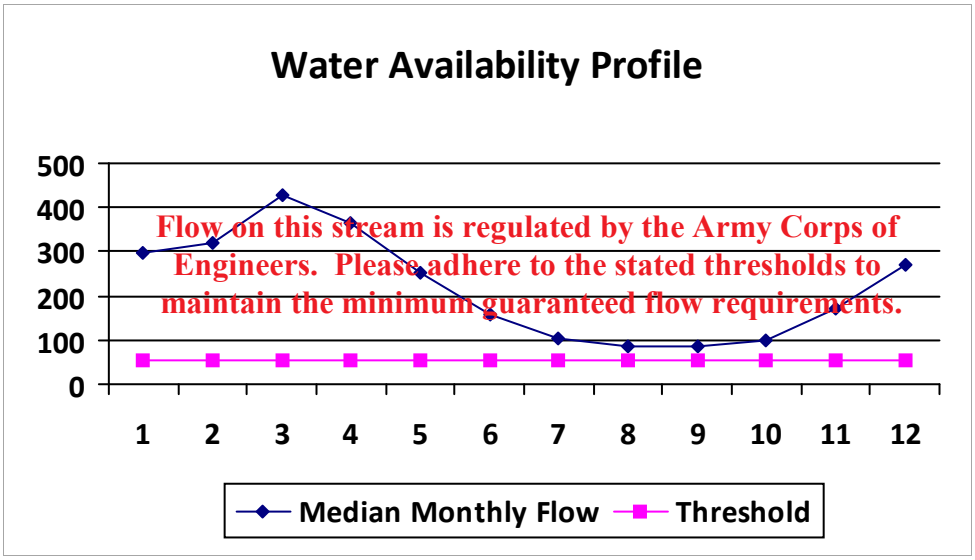
- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,360
Max. Simultaneous Trucks:
Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	298.37	-	-
2	321.22	-	-
3	428.94	-	-
4	366.27	-	-
5	252.66	-	-
6	158.65	-	-
7	104.46	-	-
8	87.49	-	-
9	83.57	-	-
10	101.20	-	-
11	171.71	-	-
12	269.64	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	7.49
Headwater Safety (cfs):	10.56
Ungauged Stream Safety (cfs):	10.56
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81479 | Source Name: Buffalo Creek @ Zatta / Edward Zatta

Source Latitude: 40.253588

Source Longitude: -80.600254

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 158.69 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,520

Max. Simultaneous Trucks: 0

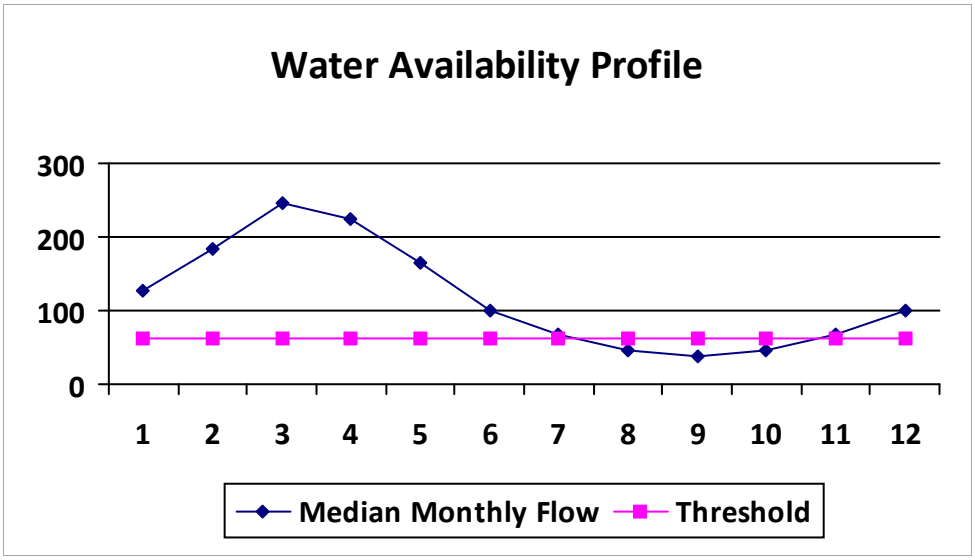
Max. Truck pump rate (gpm) 0

Reference Gauge: 3111500 | SHORT CREEK NEAR DILLONVALE, OH

Drainage Area (sq. mi.): 123.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	128.18	80.15	48.04
2	183.60	80.15	103.46
3	245.67	80.15	165.53
4	224.32	80.15	144.17
5	165.56	80.15	85.42
6	101.06	80.15	20.92
7	66.76	80.15	-13.39
8	46.57	80.15	-33.57
9	38.15	80.15	-42.00
10	45.11	80.15	-35.03
11	66.70	80.15	-13.44
12	101.01	80.15	20.87



Water Availability Assessment of Location

Base Threshold (cfs)	49.03
Upstream Demand (cfs):	13.25
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.61
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	12.26
Min. Gauge Reading (cfs):	**66.36**
Passby at Location (cfs):	**61.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81480 | Source Name: Cross Creek @ Bullock Withdrawal Site / Isabelle Bullock

Source Latitude: 40.30735

Source Longitude: -80.569317

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 74.66 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 2,500

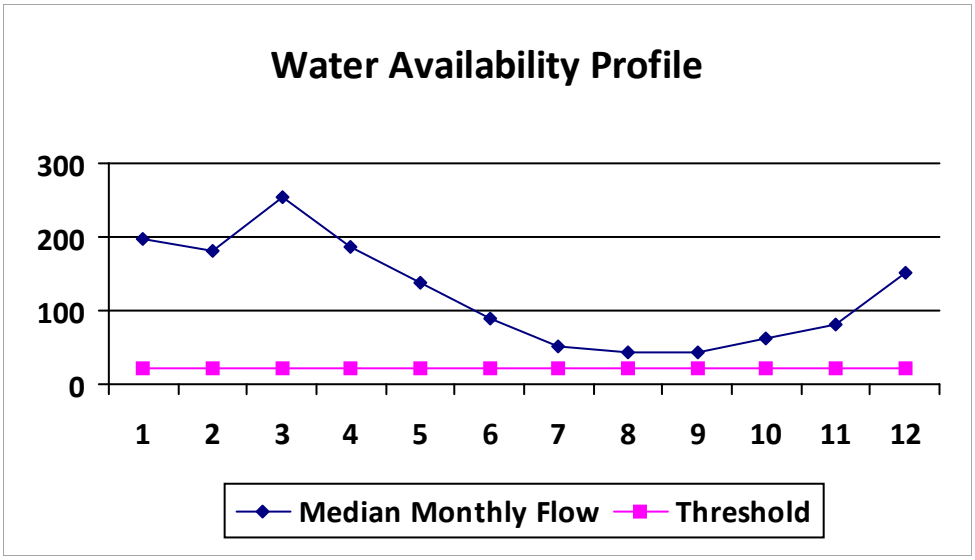
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3110830 KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90 | Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	195.97	26.56	169.48
2	180.05	26.56	153.56
3	253.89	26.56	227.40
4	186.52	26.56	160.03
5	138.84	26.56	112.35
6	89.57	26.56	63.08
7	50.78	26.56	24.29
8	42.06	26.56	15.57
9	43.77	26.56	17.28
10	61.47	26.56	34.98
11	81.23	26.56	54.74
12	151.05	26.56	124.56



Water Availability Assessment of Location

Base Threshold (cfs)	16.79
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	5.57
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.20
Min. Gauge Reading (cfs):	**19.32**
Passby at Location (cfs):	**20.99**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81481 | Source Name: Cross Creek @ DNR / WVDNR

Source Latitude: 40.300536

Source Longitude: -80.542229

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 68.58 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 3,000

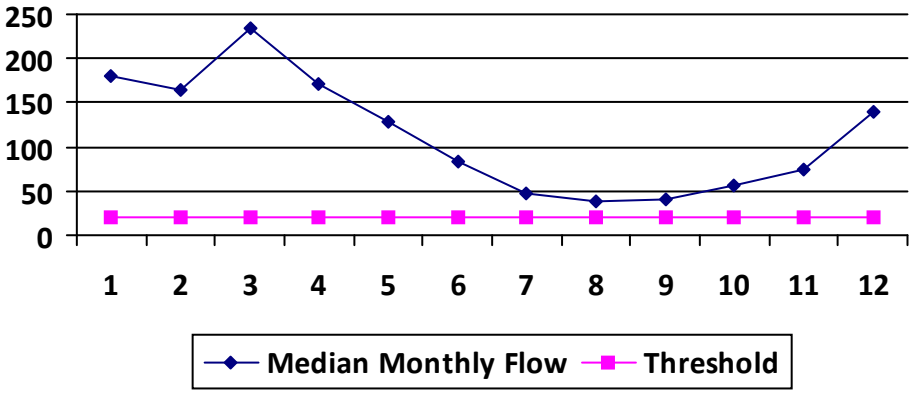
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3110830 KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90 | Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	180.01	25.97	154.07
2	165.39	25.97	139.45
3	233.21	25.97	207.27
4	171.33	25.97	145.39
5	127.53	25.97	101.59
6	82.28	25.97	56.34
7	46.64	25.97	20.70
8	38.64	25.97	12.69
9	40.20	25.97	14.26
10	56.46	25.97	30.52
11	74.61	25.97	48.67
12	138.75	25.97	112.81



Water Availability Assessment of Location

Base Threshold (cfs)	15.43
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	6.68
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	3.86
Min. Gauge Reading (cfs):	**20.43**
Passby at Location (cfs):	**19.28**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81482 | Source Name: Cross Creek @ Norfolk and Western Railway / Wheeling & Lake Erie Railway Company

Source Latitude: 40.30802

Source Longitude: -80.599193

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 79.78 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [x] Regulated Stream? — Ohio River Min. Flow
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 5,250

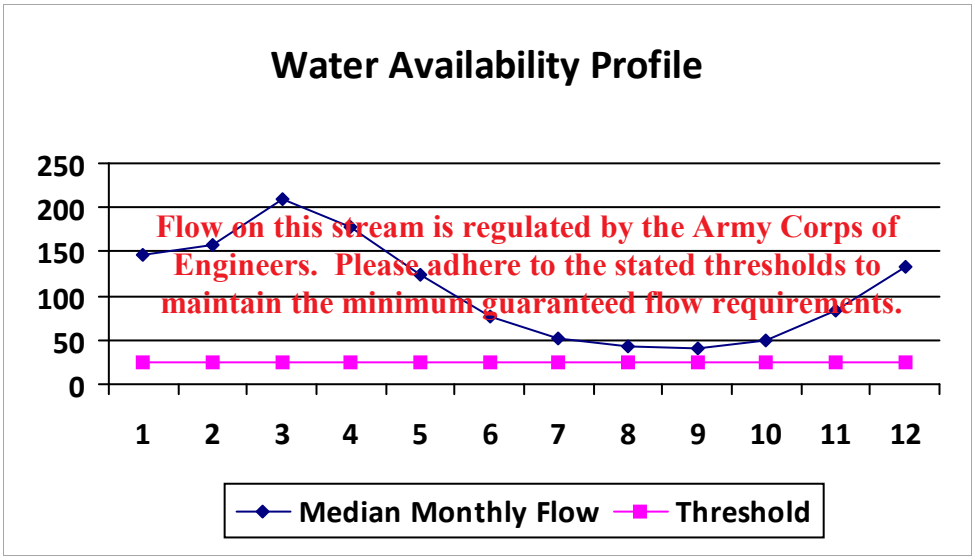
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	145.84	-	-
2	157.01	-	-
3	209.66	-	-
4	179.03	-	-
5	123.50	-	-
6	77.55	-	-
7	51.06	-	-
8	42.76	-	-
9	40.85	-	-
10	49.46	-	-
11	83.93	-	-
12	131.80	-	-



Water Availability Assessment of Location

Base Threshold (cfs)	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	11.70
Headwater Safety (cfs):	5.16
Ungauged Stream Safety (cfs):	5.16
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81483 | Source Name: Cross Creek @ Palizzi / Campbell Palizzi

Source Latitude: 40.302427

Source Longitude: -80.582753

HUC-8 Code: 5030101

Drainage Area (sq. mi.): 79.78 | County: Brooke

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 4,200

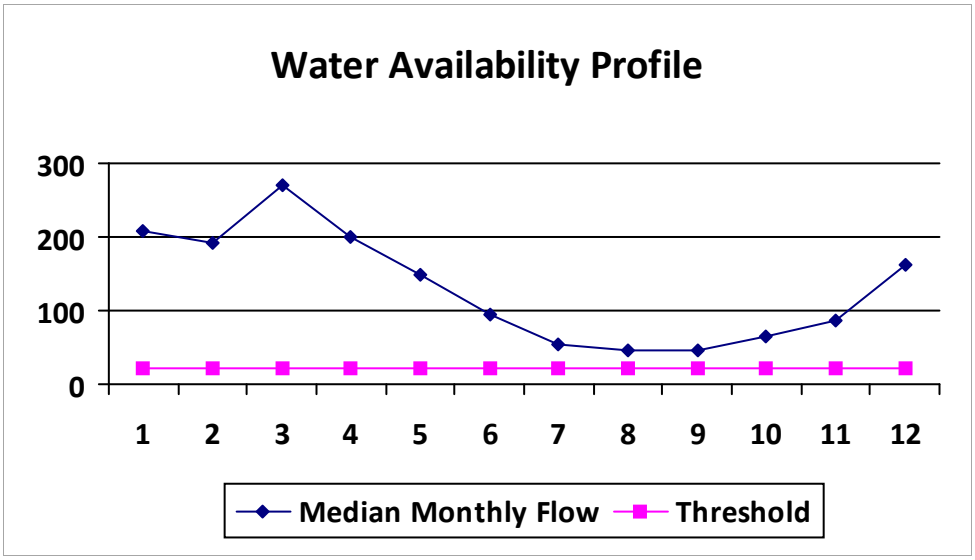
Max. Simultaneous Trucks:

Max. Truck pump rate (gpm)

Reference Gauge: 3110830 KINGS CREEK AT WEIRTON, WV

Drainage Area (sq. mi.): 48.90 | Gauge Threshold (cfs): 11

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	209.41	31.79	177.64
2	192.40	31.79	160.62
3	271.30	31.79	239.53
4	199.31	31.79	167.54
5	148.36	31.79	116.59
6	95.71	31.79	63.94
7	54.26	31.79	22.49
8	44.94	31.79	13.17
9	46.77	31.79	14.99
10	65.68	31.79	33.91
11	86.80	31.79	55.02
12	161.41	31.79	129.64



Water Availability Assessment of Location

Base Threshold (cfs)	17.95
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.49
Min. Gauge Reading (cfs):	**23.11**
Passby at Location (cfs):	**22.43**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81484 | Source Name: WV Fork Fish Creek @ Derby / Steven Derby

Source Latitude: 39.709329

Source Longitude: -80.536079

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 48.62 | County: Wetzel

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] ZCC
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] WH
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Max. Pump rate (gpm): 4,200

Max. Simultaneous Trucks:

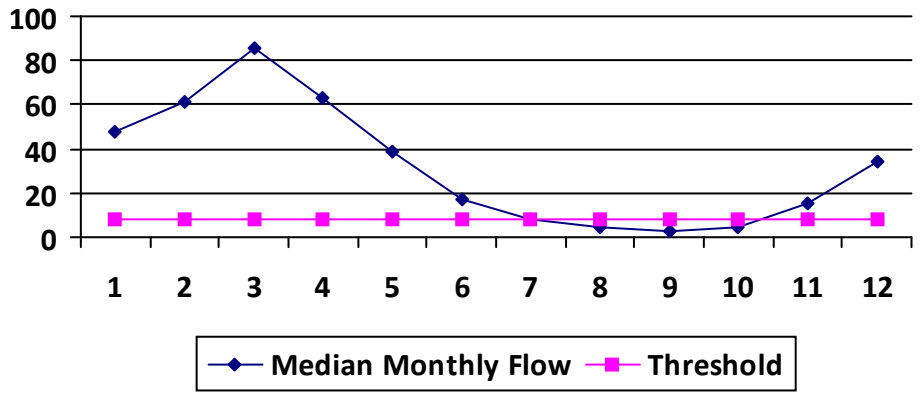
Max. Truck pump rate (gpm)

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00

Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	48.17	20.22	28.06
2	61.47	20.22	41.36
3	85.25	20.22	65.14
4	63.28	20.22	43.18
5	38.57	20.22	18.47
6	17.56	20.22	-2.55
7	7.76	20.22	-12.35
8	4.54	20.22	-15.57
9	2.88	20.22	-17.22
10	4.78	20.22	-15.33
11	15.03	20.22	-5.08
12	34.08	20.22	13.97



Water Availability Assessment of Location

Base Threshold (cfs)	6.57
Upstream Demand (cfs):	1.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	1.64
Ungauged Stream Safety (cfs):	1.64
Min. Gauge Reading (cfs):	**67.36**
Passby at Location (cfs):	**9.86**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81485 | Source Name: Fish Creek @ Guzek / Walter A. Guzek

Source Latitude: 39.753021

Source Longitude: -80.613941

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 144.57 | County: Marshall

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 4,200

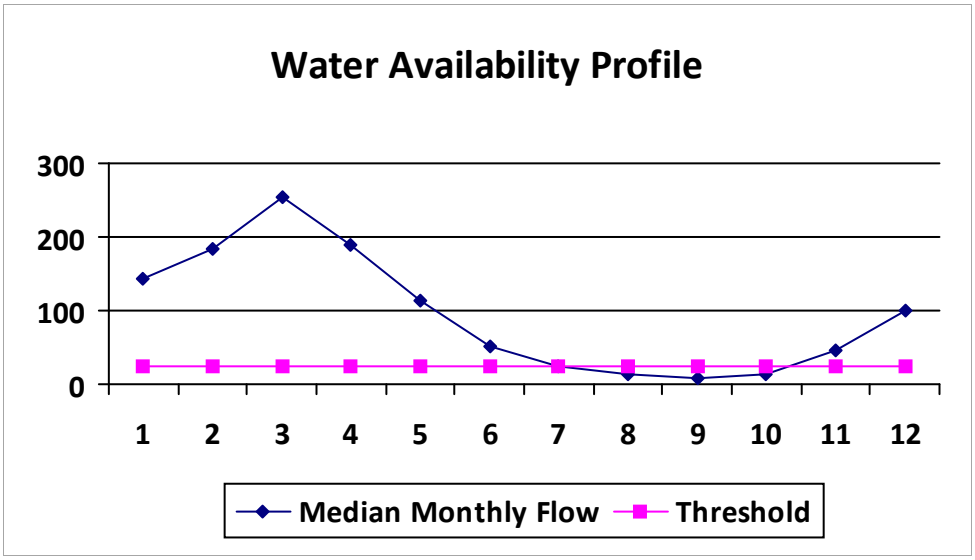
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	143.23	33.80	109.60
2	182.77	33.80	149.14
3	253.47	33.80	219.85
4	188.16	33.80	154.54
5	114.70	33.80	81.07
6	52.20	33.80	18.58
7	23.07	33.80	-10.56
8	13.49	33.80	-20.13
9	8.57	33.80	-25.05
10	14.21	33.80	-19.42
11	44.69	33.80	11.07
12	101.34	33.80	67.71



Water Availability Assessment of Location

Base Threshold (cfs)	19.55
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	9.36
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	4.89
Min. Gauge Reading (cfs):	**56.86**
Passby at Location (cfs):	**24.44**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Source ID: 81486 | Source Name: Little Wheeling Creek @ Edge Withdrawal Site / Alice Mae Edge

Source Latitude: 40.098

Source Longitude: -80.5558

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 4.26 | County: Ohio

- ☐ Endangered Species?
- ☑ Mussel Stream?
- ☐ ZCC
- ☐ Trout Stream?
- ☐ Tier 3?
- ☐ WH
- ☐ Regulated Stream?
- ☐ Proximate PSD?
- ☐ Gauged Stream?

Max. Pump rate (gpm): 2,000

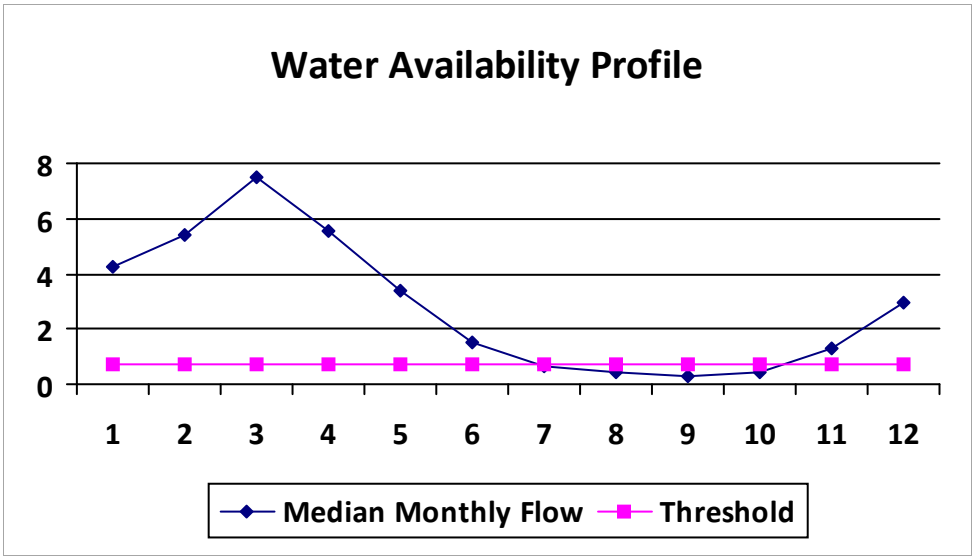
Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm) 0

Reference Gauge: 3112000 | WHEELING CREEK AT ELM GROVE, WV

Drainage Area (sq. mi.): 281.00 | Gauge Threshold (cfs): 38

Month	Median monthly flow (cfs)	Threshold (+ pump rate)	Estimated Available water (cfs)
1	4.22	5.32	-0.90
2	5.39	5.32	0.26
3	7.47	5.32	2.34
4	5.54	5.32	0.42
5	3.38	5.32	-1.74
6	1.54	5.32	-3.59
7	0.68	5.32	-4.44
8	0.40	5.32	-4.73
9	0.25	5.32	-4.87
10	0.42	5.32	-4.71
11	1.32	5.32	-3.81
12	2.99	5.32	-2.14



Water Availability Assessment of Location

Base Threshold (cfs)	0.58
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.46
Headwater Safety (cfs):	0.14
Ungauged Stream Safety (cfs):	0.14
Min. Gauge Reading (cfs):	**61.46**
Passby at Location (cfs):	**0.86**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Water Management Plan:
Secondary Water Sources

WMP 02544 | API/ID Number: see overview | Operator: SWN Production Company, LLC

Plan Type: Well Pad | Brownlee Land Ventures Well Pad

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Centralized Freshwater Impoundment

Source ID: 81516 Source Name: Ballato Freshwater Impoundment

Source Lat: 40.308611 Source Long: -80.565028 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1877

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81517 Source Name: Barry Greathouse Freshwater Impoundment

Source Lat: 40.18831 Source Long: -80.63714 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1869**

Source ID: 81519 Source Name: Corbin Freshwater Impoundment

Source Lat: 40.233122 Source Long: -80.524025 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1870**

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81520 Source Name: Durig A Freshwater Impoundment

Source Lat: 39.715905 Source Long: -80.636785 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1862**

Source ID: 81521 Source Name: Durig B Freshwater Impoundment

Source Lat: 38.8022 Source Long: -80.638491 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1863**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81522 Source Name: Elmer Freshwater Impoundment

Source Lat: 38.831351 Source Long: -80.276326 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1847**

Source ID: 81523 Source Name: Farmer Freshwater Impoundment

Source Lat: 40.146183 Source Long: -80.573857 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1871**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81524 Source Name: Ferrell Freshwater Impoundment

Source Lat: 40.04445 Source Long: -80.53023 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1874**

Source ID: 81525 Source Name: Heartwood Forestland Freshwater Impoundment

Source Lat: 39.123961 Source Long: -81.098573 County: Ritchie

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1878**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81526 Source Name: Helen Miller Freshwater Impoundment

Source Lat: 40.085722 Source Long: -80.623333 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1059**

Source ID: 81527 Source Name: Hickman Freshwater Impoundment

Source Lat: 40.041361 Source Long: -80.548944 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1875**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81532 Source Name: Hupp 1 Freshwater Impoundment

Source Lat: 40.175058 Source Long: -80.567622 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1873**

Source ID: 81533 Source Name: Hupp 2 Freshwater Impoundment

Source Lat: 40.175069 Source Long: -80.578206 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1058**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81534 Source Name: Kelley #2 Freshwater Impoundment

Source Lat: 39.681388 Source Long: -80.701113 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1865**

Source ID: 81535 Source Name: Kestner Freshwater Impoundment

Source Lat: 40.147904 Source Long: -80.539568 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1872**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81536 Source Name: Linda Greathouse Freshwater Impoundment

Source Lat: 40.205416 Source Long: -80.608805 County: Brooke

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1876**

Source ID: 81537 Source Name: Lipps Freshwater Impoundment

Source Lat: 38.8446 Source Long: -80.3413 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1850**

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81538 Source Name: McGlumphy Freshwater Impoundment

Source Lat: 40.152588 Source Long: -80.587667 County: Ohio

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1060**

Source ID: 81539 Source Name: Messenger Freshwater Impoundment

Source Lat: 393674857 Source Long: -80.689887 County: Wetzel

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1859**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81540 Source Name: Reliance Minerals A Freshwater Impoundment

Source Lat: 39.521316 Source Long: -79.973907 County: Monongalia

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1868**

Source ID: 81541 Source Name: Reliance Minerals B Freshwater Impoundment

Source Lat: 39.524571 Source Long: -79.974529 County: Monongalia

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1867**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81542 Source Name: Ross #2 Freshwater Impoundment

Source Lat: 38.9839 Source Long: -80.2628 County: Upshur

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1851**

Source ID: 81543 Source Name: Stern Freshwater Impoundment

Source Lat: 39.733943 Source Long: -80.64695 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1826**

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81544 Source Name: Worthley Freshwater Impoundment

Source Lat: 40.216869 Source Long: -80.548592 County: Brooke

Max. Daily Purchase (gal)

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1061**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Purchased Water

Source ID: 81487 Source Name: 4K Industrial Park, LLC
Commercial Supplier

Source Lat: 40.100395 Source Long: -80.71269 County: Belmont, OH

Max. Daily Purchase (gal) 588,000

DEP Comments: Treated and recycled flowback/produced water

Source ID: 81491 Source Name: Elite Gasfield Services, Midland Borough
Commercial Supplier

Source Lat: 40.644598 Source Long: -80.469382 County:

Max. Daily Purchase (gal) 2,000,000

DEP Comments: Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81493 Source Name: Equitrans Water Services, LLC Cook Impoundment

Commercial Supplier

Source Lat: 39.817197 Source Long: -80.477956 County: Greene, PA

Max. Daily Purchase (gal) 2,100,000

DEP Comments: PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

Source ID: 81495 Source Name: Grant Town Water

Public Water Provider

Source Lat: 39.559407 Source Long: -80.172893 County: Marion

Max. Daily Purchase (gal) 100,000

DEP Comments: @ Horizon Ventures Withdrawal Location

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81496 Source Name: Hydro Recovery, LP

Commercial Supplier

Source Lat: 40.419251 Source Long: -80.422684 County: Washington, MD

Max. Daily Purchase (gal) 1,000,000

DEP Comments: Treated and recycled flowback/produced water

Source ID: 81503 Source Name: Pennsylvania American Water

Public Water Provider

Source Lat: Source Long: County:

Max. Daily Purchase (gal) 864,000

DEP Comments: Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81505 Source Name: Raw Water Pond @ Horizon Ventures Industrial Facility

Source Lat: 39.5535 Source Long: -80.16742 County: Marion

Max. Daily Purchase (gal) 1,008,000

DEP Comments:

Source ID: 81506 Source Name: Robinson Fork @ HG Energy Oil & Gas Operator

Source Lat: 39.979222 Source Long: -80.487472 County: Washington, MD

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81510 Source Name: Washington Pike PSD @ Brook Hills Park

Public Water Provider

Source Lat: 40.26632 Source Long: -80.543592 County: Brooke

Max. Daily Purchase (gal) 1,000,000

DEP Comments:

Source ID: 81511 Source Name: WFN Impoundment A @ HG Energy

Oil & Gas Operator

Source Lat: 39.991417 Source Long: -80.488694 County: Washington, PA

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81512 Source Name: WFN Impoundment B @ HG Energy
Oil & Gas Operator

Source Lat: 39.991917 Source Long: -80.4965 County: Washington, PA

Max. Daily Purchase (gal) 1,600,000

DEP Comments:

Source ID: 81518 Source Name: Columbia Gas Transmission (TCO Elson) FWI

Source Lat: 39.75398 Source Long: -80.613604 County: Marshall

Max. Daily Purchase (gal)

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-547**

WMP 02544	API/ID Number: see overview	Operator: SWN Production Company, LLC
Plan Type: Well Pad	Brownlee Land Ventures Well Pad	

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81528 Source Name: Hieronimus #1 Freshwater Impoundment

Source Lat: 39.811 Source Long: -80.5212 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1856**

Source ID: 81529 Source Name: Hieronimus #2 Freshwater Impoundment

Source Lat: 39.8149 Source Long: -80.5233 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1857**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 81530 Source Name: Hieronimus #3 Freshwater Impoundment

Source Lat: 39.8162 Source Long: -80.5266 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1761**

Source ID: 81531 Source Name: Hieronimus #4 Freshwater Impoundment

Source Lat: 39.8198 Source Long: -80.5295 County: Marshall

Max. Daily Purchase (gal):

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted. **Reference: WMP-1858**

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

•For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.

•For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Recycled Frac Water

Source ID: 81545 Source Name: Various

Source Lat: Source Long: County:

Max. Daily Purchase (gal):

DEP Comments: Various sources include, but are not limited to, the Brownlee Land Ventures well pad.

Water Management Plan

Action: Approved **Effective Date:** 2/7/2022
Operator: SWN Production Company, LLC
WMP ID: 2647
Plan Type: Well Pad
Facility Name: Shannon Fields OHI
County: Ohio
Lat: 40.088389
Long: -80.65778

Dawn Newell Digitally signed by Dawn Newell Date: 2022.02.07 15:05:38 -05'00'

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supersedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

Api	Wellname
047-069-00334	Shannon Fields OHI 210H

The following water consumption estimates (in gallons) have been reported for this plan.

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	22,455,720
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activities:	210,000
Total for Well Pad:	23,505,720

Primary Sources

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and

- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and enforceable as such.

For any source identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this Water Management Plan.

- Big Wheeling Creek @ Wheeling Staging Area

Type:	Stream/River
County:	Ohio
Owner:	Fulton Storage, LLC
Intake Latitude:	40.077019
Intake Longitude:	-80.713866
HUC-8 Code:	5030106
Drainage Area (sq miles):	296.04
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	43.57
Minimum Passby (cfs):	40.03
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Booths Creek @ Reliance Minerals

Type:	Stream/River
County:	Monongalia

Gauged Stream:	NO
Ref Gauge ID:	3062500

Owner:	Reliance Minerals, Inc.
Intake Latitude:	39.530405
Intake Longitude:	-79.978079
HUC-8 Code:	5020003
Drainage Area (sq miles):	1.79
Regulated Stream:	NO
PWS Within 1 Mile:	YES Morgantown Utility Board

Ref Gauge Name:	DECKERS CREEK AT MORGANTOWN, WV
Minimum Gauge Reading (cfs):	18.65
Minimum Passby (cfs):	.48
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Buffalo Creek @ Bethany VFD Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Bethany Pike Volunteer Fire Department
Intake Latitude:	40.253422
Intake Longitude:	-80.600319
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	67.66
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Buffalo Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.19386
Intake Longitude:	-80.525796
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	54.63
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3200

Comments:

- Buffalo Creek @ Forney

Type:	Stream/River
County:	Brooke

Gauged Stream:	NO
Ref Gauge ID:	3111500

Owner:	Forney & Sons Holding Company, LLC
Intake Latitude:	40.193453
Intake Longitude:	-80.52175
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Fuchs

Type:	Stream/River
County:	Brooke
Owner:	Beverly Fuchs
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:

- Buffalo Creek @ Greathouse

Type:	Stream/River
County:	Brooke
Owner:	Linda Greathouse
Intake Latitude:	40.20895
Intake Longitude:	-80.60105
HUC-8 Code:	5030106
Drainage Area (sq miles):	138.56
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	59.75
Minimum Passby (cfs):	54.51
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:

- Buffalo Creek @ Labelle Farms

Type:	Stream/River
County:	Brooke
Owner:	Steve Paul

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR

Intake Latitude:	40.204444
Intake Longitude:	-80.598645
HUC-8 Code:	5030106
Drainage Area (sq miles):	136.79
Regulated Stream:	NO
PWS Within 1 Mile:	NO

	DILLONVALE, OH
Minimum Gauge Reading (cfs):	59.2
Minimum Passby (cfs):	53.8
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Buffalo Creek @ WVDOH

Type:	Stream/River
County:	Brooke
Owner:	West Virginia Division of Highways
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Buffalo Creek @ Worthley Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Kimberly C. Worthley
Intake Latitude:	40.210978
Intake Longitude:	-80.548779
HUC-8 Code:	5030106
Drainage Area (sq miles):	113.49
Regulated Stream:	NO
PWS Within 1 Mile:	YES Hammond PSD

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	44.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Zatta

Type:	Stream/River
County:	Brooke
Owner:	Edward Zatta
Intake Latitude:	40.253588
Intake Longitude:	-80.600254
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	66.37
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Cross Creek @ Bullock Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Isabelle Bullock
Intake Latitude:	40.30735
Intake Longitude:	-80.569317
HUC-8 Code:	5030101
Drainage Area (sq miles):	74.66
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	19.32
Minimum Passby (cfs):	20.99
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Cross Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.300536
Intake Longitude:	-80.542229
HUC-8 Code:	5030101
Drainage Area (sq miles):	68.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	22.44
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Cross Creek @ Norfolk and Western Railway

Type:	Stream/River
County:	Brooke
Owner:	Wheeling & Lake Erie Railway Company
Intake Latitude:	40.30802
Intake Longitude:	-80.599193
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Cross Creek @ Palizzi

Type:	Stream/River
County:	Brooke
Owner:	Campbell Palizzi
Intake Latitude:	40.302427
Intake Longitude:	-80.582753
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	23.11
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Fish Creek @ Gribben

Type:	Stream/River
County:	Marshall
Owner:	Revocable Living Trust of M. Peggy Gribben
Intake Latitude:	39.753271
Intake Longitude:	-80.597913
HUC-8 Code:	5030106
Drainage Area (sq miles):	141.61
Regulated Stream:	NO
PWS Within 1	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	23.94
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Mile:	

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Fish Creek @ Guzek

Type:	Stream/River
County:	Marshall
Owner:	Walter A. Guzek
Intake Latitude:	39.753021
Intake Longitude:	-80.613941
HUC-8 Code:	5030106
Drainage Area (sq miles):	144.57
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	24.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Little Wheeling Creek @ Edge Withdrawal Site

Type:	Stream/River
County:	Ohio
Owner:	Alice Mae Edge
Intake Latitude:	40.098
Intake Longitude:	-80.5558
HUC-8 Code:	5030106
Drainage Area (sq miles):	4.26
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Little Wheeling Creek @ Main Street Bank

Type:	Stream/River
County:	Ohio
Owner:	Main Street Bank
Intake Latitude:	40.064076
Intake Longitude:	-80.614406
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94

Gauged Stream:	NO
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	23
Minimum Passby (cfs):	2.83

Regulated Stream:	NO
PWS Within 1 Mile:	NO

Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Little Wheeling Creek @ Rt. 40 Staging Area

Type:	Stream/River
County:	Ohio
Owner:	JDS Investments, LLC
Intake Latitude:	40.078324
Intake Longitude:	-80.591145
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	64.8
Minimum Passby (cfs):	2.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Gribben

Type:	Stream/River
County:	Ohio
Owner:	Lawrence Kevin Gribber
Intake Latitude:	40.036777
Intake Longitude:	-80.598008
HUC-8 Code:	5030106
Drainage Area (sq miles):	30.81
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	6.26
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Supler

Type:	Stream/River
County:	Ohio
Owner:	Gregory and Peggy Supler
Intake Latitude:	40.04409
Intake Longitude:	-80.55348
HUC-8 Code:	5030106
Drainage Area (sq miles):	20.54
Regulated Stream:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	62.57
Minimum Passby (cfs):	4.17
Endangered Species:	NO

PWS Within 1 Mile:	NO	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	2500

Comments:

- Ohio River @ Extraction B Panhandle

Type:	Stream/River	Gauged Stream:	YES
County:	Brooke	Ref Gauge ID:	9999999
Owner:	SWN Production Company, LLC	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	40.233469	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.654359		
HUC-8 Code:	5030106	Minimum Passby (cfs):	
Drainage Area (sq miles):	25000	Endangered Species:	NO
Regulated Stream:	YES Ohio River Min. Flow	Mussel Stream:	YES
PWS Within 1 Mile:	YES Beech Bottom Water Dept.	Maximum Pump Rate (gpm):	4375

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Proctor Peacemaker

Type:	Stream/River	Gauged Stream:	YES
County:	Wetzel	Ref Gauge ID:	9999999
Owner:	SWN Production Company, LLC	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	39.714299	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.825862		
HUC-8 Code:	5030106	Minimum Passby (cfs):	
Drainage Area (sq miles):	25000	Endangered Species:	NO
Regulated Stream:	YES Ohio River Min. Flow	Mussel Stream:	YES
PWS Within 1 Mile:	YES Beech Bottom Water Dept.	Maximum Pump Rate (gpm):	6000

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Paw Paw Creek @ Horizon Ventures

Type:	Stream/River	Gauged Stream:	NO
County:	Marion	Ref Gauge ID:	3061500
Owner:	Horizon Ventures of WV, Inc	Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Intake Latitude:	39.552426	Minimum Gauge	26.96

Intake Longitude:	-80.166833
HUC-8 Code:	5020003
Drainage Area (sq miles):	28.34
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Reading (cfs):	
Minimum Passby (cfs):	4.57
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Short Creek @ Cain

Type:	Stream/River
County:	Ohio
Owner:	Susan L. Cain
Intake Latitude:	40.155061
Intake Longitude:	-80.651431
HUC-8 Code:	5030106
Drainage Area (sq miles):	16.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	64.49
Minimum Passby (cfs):	7.68
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	3360

Comments:

- WV Fork Fish Creek @ Derby

Type:	Stream/River
County:	Wetzel
Owner:	Steven Derby
Intake Latitude:	39.709329
Intake Longitude:	-80.536079
HUC-8 Code:	5030106
Drainage Area (sq miles):	48.62
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	52.24
Minimum Passby (cfs):	8.21
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- WV Fork Fish Creek @ Francis

Type:	Stream/River
County:	Marshall
Owner:	Loretta J. Francis
Intake Latitude:	39.733295
Intake Longitude:	-80.579415

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge	63.69

HUC-8 Code:	5030106	Reading (cfs):	
Drainage Area (sq miles):	86.51	Minimum Passby (cfs):	17.55
Regulated Stream:	NO	Endangered Species:	NO
PWS Within 1 Mile:	NO	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	3000

Comments:

- WV Fork of Fish Creek @ Van Scyoc Withdrawal Site

Type:	Stream/River	Gauged Stream:	NO
County:	Wetzel	Ref Gauge ID:	3112000
Owner:	Israel D Van Scyoc	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	39.6908	Minimum Gauge Reading (cfs):	61.46
Intake Longitude:	-80.4762	Minimum Passby (cfs):	5.45
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	21.96	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	2000
PWS Within 1 Mile:	NO		

Comments:

- Wheeling Creek @ Iskcon

Type:	Stream/River	Gauged Stream:	YES
County:	Marshall	Ref Gauge ID:	3112000
Owner:	Iskcon New Vrindaban, Inc.	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	39.967973	Minimum Gauge Reading (cfs):	47.36
Intake Longitude:	-80.599241	Minimum Passby (cfs):	27.5
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	189.6	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	2500
PWS Within 1 Mile:	NO		

Comments:

- Wheeling Creek @ Schafer

Type:	Stream/River	Gauged Stream:	YES
County:	Marshall	Ref Gauge ID:	3112000
Owner:	Betty Jane Schafer	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	39.99257	Minimum Gauge Reading (cfs):	49.7
Intake Longitude:	-80.634912	Minimum Passby (cfs):	27.5
HUC-8 Code:	5030106		
Drainage Area (sq miles):	203.38		

Regulated Stream:	NO	Endangered Species:	NO
PWS Within 1 Mile:	NO	Mussel Stream:	YES
		Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Wheeling Creek @ Sligar

Type:	Stream/River	Gauged Stream:	YES
County:	Marshall	Ref Gauge ID:	3112000
Owner:	Terry Sligar	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	40.013185	Minimum Gauge Reading (cfs):	47.36
Intake Longitude:	-80.652863	Minimum Passby (cfs):	28.64
HUC-8 Code:	5030106	Endangered Species:	NO
Drainage Area (sq miles):	211.8	Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	3360
PWS Within 1 Mile:	NO		

Comments:
This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or Wheeling Creek @ Iskcon site.

- Whiteday Creek @ Sorine Withdrawal Site

Type:	Stream/River	Gauged Stream:	NO
County:	Marion	Ref Gauge ID:	3061500
Owner:	Andrew Sorine, Jr.	Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Intake Latitude:	39.472311	Minimum Gauge Reading (cfs):	20.25
Intake Longitude:	-79.977123	Minimum Passby (cfs):	2.29
HUC-8 Code:	5020003	Endangered Species:	NO
Drainage Area (sq miles):	12.29	Mussel Stream:	NO
Regulated Stream:	NO	Maximum Pump Rate (gpm):	2000
PWS Within 1 Mile:	NO		

Comments:

- Adrian Public Service District

Type:	Purchased Water	Gauged Stream:	YES
County:	Upshur	Ref Gauge ID:	3054500
Owner:	Adrian Public Service District	Ref Gauge Name:	TYGART VALLEY RIVER AT PHILIPPI, WV
Intake Latitude:	38.9775		

Intake Longitude:	-80.22083	Minimum Gauge Reading (cfs):	155.85
HUC-8 Code:	5020001		
Drainage Area (sq miles):	197.33	Minimum Passby (cfs):	75.51
		Endangered Species:	NO
Regulated Stream:	YES	Mussel Stream:	NO
PWS Within 1 Mile:	YES City of Buckhannon Water Plant	Maximum Pump Rate (gpm):	

Comments:

- American Petroleum Partners (Wheeling Creek @ Wilson)

Type:	Purchased Water	Gauged Stream:	NO
County:	Marshall	Ref Gauge ID:	3112000
Owner:	American Petroleum Partners, LLC	Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Intake Latitude:	39.975882	Minimum Gauge Reading (cfs):	47.36
Intake Longitude:	-80.62967		
HUC-8 Code:	5030106	Minimum Passby (cfs):	26.09
Drainage Area (sq miles):	192.96	Endangered Species:	NO
		Mussel Stream:	YES
Regulated Stream:	NO	Maximum Pump Rate (gpm):	4200
PWS Within 1 Mile:	NO		

Comments:

- Covestro, LLC

Type:	Purchased Water	Gauged Stream:	YES
County:	Marshall	Ref Gauge ID:	9999999
Owner:	Covestro, LLC	Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Intake Latitude:	39.7218	Minimum Gauge Reading (cfs):	6468
Intake Longitude:	-80.830231		
HUC-8 Code:	5030201	Minimum Passby (cfs):	
Drainage Area (sq miles):	25000	Endangered Species:	NO
		Mussel Stream:	NO
Regulated Stream:	YES Ohio River Min. Flow	Maximum Pump Rate (gpm):	
PWS Within 1 Mile:	YES Grandview-Doolin PSD		

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Elite Gasfield Services

Type:	Purchased Water	Gauged Stream:	YES
County:	Brooke	Ref Gauge ID:	9999999
Owner:	Elite Gasfield Services	Ref Gauge Name:	Ohio River Station: Willow

Intake Latitude:	40.32667
Intake Longitude:	-80.59861
HUC-8 Code:	5030101
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES City of Follansbee

	Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Grandview-Doolin PSD

Type:	Purchased Water
County:	Wetzel
Owner:	Grandview-Doolin Public Service District
Intake Latitude:	39.71361
Intake Longitude:	-80.82583
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Grandview-Doolin PSD

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Marshall County Public Service District 3

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #3
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water Department

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Tap Location is: (39.906400, -80.586200)

- Marshall County Public Service District 4

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #4
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water Department

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Ohio County PSD

Type:	Purchased Water
County:	Ohio
Owner:	Ohio county PSD
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ 4K Industrial Park

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Intake Latitude:	40.098805
Intake Longitude:	-80.711328
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO

Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ J&R Excavating

Type:	Purchased Water
County:	Marshall
Owner:	J&R Excavating
Intake Latitude:	39.998509
Intake Longitude:	-80.737336
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Oasis Transport Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Oasis Transport, LLC
Intake Latitude:	40.331551
Intake Longitude:	-80.601034
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Range Tap @ Corbin Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Range Resources Corp.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow

Intake Latitude:	40.229983
Intake Longitude:	-80.521067
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

	Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- The Village of Valley Grove

Type:	Purchased Water
County:	Ohio
Owner:	The Village of Valley Grove
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Valley Falls PSD

Type:	Purchased Water
County:	Marion
Owner:	Valley Falls PSD
Intake Latitude:	39.45889
Intake Longitude:	-80.15583
HUC-8 Code:	5020001
Drainage Area (sq miles):	1367.05
Regulated Stream:	YES Tygart Valley Dam
PWS Within 1 Mile:	YES City of Fairmont

Gauged Stream:	YES
Ref Gauge ID:	3057000
Ref Gauge Name:	TYGART VALLEY RIVER AT COLFAX, WV
Minimum Gauge Reading (cfs):	397.39
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek # 2 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.949577
Intake Longitude:	-80.531255
HUC-8 Code:	5030106
Drainage Area (sq miles):	152.4
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.24
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek #1 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.95205
Intake Longitude:	-80.56189
HUC-8 Code:	5030106
Drainage Area (sq miles):	156.06
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.63
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Water Department

Type:	Purchased Water
County:	Ohio
Owner:	Wheeling Water Department
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Shoemaker Groundwater Wells @ HG Energy

Type:	Groundwater
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	40.0222
Intake Longitude:	-80.733888
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	800

Comments:
This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals.
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Secondary Sources

For each proposed secondary water source identified in your water management plan (i.e. groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow and quality-tested by the operator at the request of the drinking well owner prior to the operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.
- The use of recycled frac water is always encouraged.

- 4K Industrial Park, LLC

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Source Latitude:	40.100395
Source Longitude:	-80.71269
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Ballato Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Nick Ballato and Christopher Ballato
Source Latitude:	40.308611
Source Longitude:	-80.565028
Reference WMP:	1877

Comments:

- Barry Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Barry Greathouse
Source Latitude:	40.18831
Source Longitude:	-80.63714
Reference WMP:	1869

Comments:

- Columbia Gas Transmission (TCO Elson) FWI

Type:	Purchased Water
County:	Marshall
Owner:	Columbia Gas Transmission, LLC.
Source Latitude:	39.75398
Source Longitude:	-80.613604
Reference WMP:	547

Comments:

- Corbin Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Margaret Corbin
Source Latitude:	40.233122
Source Longitude:	-80.524025
Reference WMP:	1870

Comments:

- Durig A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	39.715905
Source Longitude:	-80.636785
Reference WMP:	1862

Comments:

- Durig B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	38.8022
Source Longitude:	-80.638491
Reference WMP:	1863

Comments:

- Elite Gasfield Services, Midland Borough

Type:	Purchased Water
County:	Beaver, PA
Owner:	Elite Gasfield Services
Source Latitude:	40.644598
Source Longitude:	-80.469382
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Elmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Charles and Thomas Elmer
Source Latitude:	38.831351
Source Longitude:	-80.276326
Reference WMP:	1847

Comments:

- Equitrans Water Services, LLC Cook Impoundment

Type:	Purchased Water
County:	Greene, PA
Owner:	Equitrans Water Services, LLC
Source Latitude:	39.817197
Source Longitude:	-80.477956
Reference WMP:	

Comments:
PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

- Farmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Clarence Farmer
Source Latitude:	40.146183

Source Longitude:	-80.573857
Reference WMP:	1871

Comments:

- Ferrell Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Kevin Ferrell
Source Latitude:	40.04445
Source Longitude:	-80.53023
Reference WMP:	1874

Comments:

- Grant Town Water

Type:	Purchased Water
County:	Marion
Owner:	Town of Grant Town
Source Latitude:	39.559407
Source Longitude:	-80.172893
Reference WMP:	

Comments:
@ Horizon Ventures Withdrawal Location

- Heartwood Forestland Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ritchie
Owner:	Wanda Bartlett
Source Latitude:	39.123961
Source Longitude:	-81.098573
Reference WMP:	1878

Comments:

- Helen Miller Centralized Freshwater Impoundment

Type:	Multi-site impoundment
County:	Ohio
Owner:	Helen J. Miller
Source Latitude:	40.085722
Source Longitude:	-80.623333
Reference WMP:	1059

Comments:

- Hickman Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio

Owner:	Mark Hickman et al
Source Latitude:	40.041361
Source Longitude:	-80.548944
Reference WMP:	1875

Comments:

- Hieronimus #1 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.811
Source Longitude:	-80.5212
Reference WMP:	1856

Comments:

- Hieronimus #2 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8149
Source Longitude:	-80.5233
Reference WMP:	1857

Comments:

- Hieronimus #3 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8162
Source Longitude:	-80.5266
Reference WMP:	1761

Comments:

- Hieronimus #4 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8198
Source Longitude:	-80.5295
Reference WMP:	1858

Comments:

- Hupp 1 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment

County:	Brooke
Owner:	John Hupp
Source Latitude:	40.175058
Source Longitude:	-80.567622
Reference WMP:	1873

Comments:

- Hupp 2 Centralized Freshwater Impoundment

Type:	Multi-site impoundment
County:	Brooke
Owner:	John Wylie Hupp
Source Latitude:	40.175069
Source Longitude:	-80.578206
Reference WMP:	1060

Comments:

- Hydro Recovery, LP

Type:	Purchased Water
County:	Washington, PA
Owner:	Hydro Recovery, LP - Burgettstown
Source Latitude:	40.419251
Source Longitude:	-80.422684
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Kelley #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Margaret Sue Kelley
Source Latitude:	39.681388
Source Longitude:	-80.701113
Reference WMP:	1865

Comments:

- Kestner Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Gary Kestner
Source Latitude:	40.147904
Source Longitude:	-80.539568
Reference WMP:	1872

Comments:

- Linda Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Linda Greathouse
Source Latitude:	40.205416
Source Longitude:	-80.608805
Reference WMP:	1876

Comments:

- Lipps Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Ralph and Opal Lipps
Source Latitude:	38.8446
Source Longitude:	-80.3413
Reference WMP:	1850

Comments:

- McGlumphy Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Steven M. McGlumphy
Source Latitude:	40.152588
Source Longitude:	-80.587667
Reference WMP:	1060

Comments:

- Messenger Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Chesapeake Energy
Source Latitude:	393674857
Source Longitude:	-80.689887
Reference WMP:	1859

Comments:

- Pennsylvania American Water

Type:	Purchased Water
County:	
Owner:	Pennsylvania American Water
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Raw Water Pond @ Horizon Ventures

Type:	Purchased Water
County:	Marion
Owner:	Horizon Ventures of WV, Inc
Source Latitude:	39.5535
Source Longitude:	-80.16742
Reference WMP:	

Comments:

- Recycled Frac Water

Type:	Recycled Frac Water
County:	
Owner:	
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Treated and recycled flowback/produced water sources may include, but are not limited to this well pad.

- Reliance Minerals A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.521316
Source Longitude:	-79.973907
Reference WMP:	1868

Comments:

- Reliance Minerals B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.524571
Source Longitude:	-79.974529
Reference WMP:	1867

Comments:

- Robinson Fork @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy II Appalachia, LLC.

Source Latitude:	39.979222
Source Longitude:	-80.487472
Reference WMP:	

Comments:

- Ross #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Mike Ross
Source Latitude:	38.9839
Source Longitude:	-80.2628
Reference WMP:	1851

Comments:

- Stern Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Marshall
Owner:	Alton and Mary Stern
Source Latitude:	39.733943
Source Longitude:	-80.64695
Reference WMP:	1826

Comments:

- WFN Impoundment A @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy, LLC
Source Latitude:	39.991417
Source Longitude:	-80.488694
Reference WMP:	

Comments:

- WFN Impoundment B @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy
Source Latitude:	39.991917
Source Longitude:	-80.4965
Reference WMP:	

Comments:

- Washington Pike PSD @ Brook Hills Park

Type:	Purchased Water
County:	Brooke

Owner:	Washington Pike PSD
Source Latitude:	40.26632
Source Longitude:	-80.543592
Reference WMP:	

Comments:

- Worthley Centralized Freshwater Impoundment

Type:	Multi-site impoundment
County:	Brooke
Owner:	Kimberly Worthley
Source Latitude:	40.216869
Source Longitude:	-80.548592
Reference WMP:	1061

Comments:

West Virginia Department of Environmental Protection

601 57th Street SE

Charleston, WV

Pollution and Emergency Spills 1-800-642-3074

www.dep.wv.gov

Water Management Plan

Action: Approved **Effective Date:** 3/18/2022
Operator: SWN Production Company, LLC
WMP ID: 2647
Plan Type: Well Pad
Facility Name: Shannon Fields OHI Well Pad
County: Ohio
Lat: 40.088389
Long: -80.65778

APPROVED
By Dawn Newell at 3:58 pm, 3/18/22

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supersedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

Api	Wellname
047-069-00334	Shannon Fields OHI 210H
047-069-00338	Shannon Fields OHI 10H

The following water consumption estimates (in gallons) have been reported for this plan.

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	20,444,760
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activities:	210,000
Total for Well Pad:	21,494,760

Primary Sources

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and

- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and enforceable as such.

For any source identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this Water Management Plan.

- Big Wheeling Creek @ Wheeling Staging Area

Type:	Stream/River
County:	Ohio
Owner:	Fulton Storage, LLC
Intake Latitude:	40.077019
Intake Longitude:	-80.713866
HUC-8 Code:	5030106
Drainage Area (sq miles):	296.04
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	43.57
Minimum Passby (cfs):	40.03
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Booths Creek @ Reliance Minerals

Type:	Stream/River
County:	Monongalia

Gauged Stream:	NO
Ref Gauge ID:	3062500

Owner:	Reliance Minerals, Inc.
Intake Latitude:	39.530405
Intake Longitude:	-79.978079
HUC-8 Code:	5020003
Drainage Area (sq miles):	1.79
Regulated Stream:	NO
PWS Within 1 Mile:	YES Morgantown Utility Board

Ref Gauge Name:	DECKERS CREEK AT MORGANTOWN, WV
Minimum Gauge Reading (cfs):	18.65
Minimum Passby (cfs):	.48
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Buffalo Creek @ Bethany VFD Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Bethany Pike Volunteer Fire Department
Intake Latitude:	40.253422
Intake Longitude:	-80.600319
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	67.66
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Buffalo Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.19386
Intake Longitude:	-80.525796
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	54.63
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3200

Comments:

- Buffalo Creek @ Forney

Type:	Stream/River
County:	Brooke
Owner:	Forney & Sons

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR

	Holding Company, LLC
Intake Latitude:	40.193453
Intake Longitude:	-80.52175
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

	DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Fuchs

Type:	Stream/River
County:	Brooke
Owner:	Beverly Fuchs
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:

- Buffalo Creek @ Greathouse Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Linda Greathouse
Intake Latitude:	40.20895
Intake Longitude:	-80.60105
HUC-8 Code:	5030106
Drainage Area (sq miles):	138.56
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	60.42
Minimum Passby (cfs):	54.51
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3300

Comments:

- Buffalo Creek @ Labelle Farms

Type:	Stream/River
County:	Brooke
Owner:	Steve Paul
Intake Latitude:	40.204444

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH

Intake Longitude:	-80.598645
HUC-8 Code:	5030106
Drainage Area (sq miles):	136.79
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	59.2
Minimum Passby (cfs):	53.8
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Buffalo Creek @ WVDOH

Type:	Stream/River
County:	Brooke
Owner:	West Virginia Division of Highways
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Buffalo Creek @ Worthley Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Kimberly C. Worthley
Intake Latitude:	40.210978
Intake Longitude:	-80.548779
HUC-8 Code:	5030106
Drainage Area (sq miles):	113.49
Regulated Stream:	NO
PWS Within 1 Mile:	YES Hammond PSD

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	44.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Zatta

Type:	Stream/River

Gauged Stream:	NO

County:	Brooke
Owner:	Edward Zatta
Intake Latitude:	40.253588
Intake Longitude:	-80.600254
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	66.37
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Cross Creek @ Bullock Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Isabelle Bullock
Intake Latitude:	40.30735
Intake Longitude:	-80.569317
HUC-8 Code:	5030101
Drainage Area (sq miles):	74.66
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	19.32
Minimum Passby (cfs):	20.99
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Cross Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.300536
Intake Longitude:	-80.542229
HUC-8 Code:	5030101
Drainage Area (sq miles):	68.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	22.44
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Cross Creek @ Norfolk and Western Railway

Type:	Stream/River
County:	Brooke
Owner:	Wheeling & Lake Erie Railway Company
Intake Latitude:	40.30802
Intake Longitude:	-80.599193
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Cross Creek @ Palizzi

Type:	Stream/River
County:	Brooke
Owner:	Campbell Palizzi
Intake Latitude:	40.302427
Intake Longitude:	-80.582753
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	23.11
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Fish Creek @ Gribben

Type:	Stream/River
County:	Marshall
Owner:	Revocable Living Trust of M. Peggy Gribben
Intake Latitude:	39.753271
Intake Longitude:	-80.597913
HUC-8 Code:	5030106
Drainage Area (sq miles):	141.61
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	23.94
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Fish Creek @ Guzek

Type:	Stream/River
County:	Marshall
Owner:	Walter A. Guzek
Intake Latitude:	39.753021
Intake Longitude:	-80.613941
HUC-8 Code:	5030106
Drainage Area (sq miles):	144.57
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	24.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Little Wheeling Creek @ Edge Withdrawal Site

Type:	Stream/River
County:	Ohio
Owner:	Alice Mae Edge
Intake Latitude:	40.098
Intake Longitude:	-80.5558
HUC-8 Code:	5030106
Drainage Area (sq miles):	4.26
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Little Wheeling Creek @ Main Street Bank

Type:	Stream/River
County:	Ohio
Owner:	Main Street Bank
Intake Latitude:	40.064076
Intake Longitude:	-80.614406
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94

Gauged Stream:	NO
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	23
Minimum Passby (cfs):	2.83
Endangered Species:	NO

Regulated Stream:	NO
PWS Within 1 Mile:	NO

Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Little Wheeling Creek @ Rt. 40 Staging Area

Type:	Stream/River
County:	Ohio
Owner:	JDS Investments, LLC
Intake Latitude:	40.078324
Intake Longitude:	-80.591145
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	64.8
Minimum Passby (cfs):	2.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Gribben

Type:	Stream/River
County:	Ohio
Owner:	Lawrence Kevin Gribber
Intake Latitude:	40.036777
Intake Longitude:	-80.598008
HUC-8 Code:	5030106
Drainage Area (sq miles):	30.81
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	6.26
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Supler

Type:	Stream/River
County:	Ohio
Owner:	Gregory and Peggy Supler
Intake Latitude:	40.04409
Intake Longitude:	-80.55348
HUC-8 Code:	5030106
Drainage Area (sq miles):	20.54

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	62.57
Minimum Passby (cfs):	4.17
Endangered Species:	NO
Mussel Stream:	YES

Regulated Stream:	NO
PWS Within 1 Mile:	NO

Maximum Pump Rate (gpm):	2500

Comments:

- Ohio River @ Extraction B Panhandle

Type:	Stream/River
County:	Brooke
Owner:	SWN Production Company, LLC
Intake Latitude:	40.233469
Intake Longitude:	-80.654359
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4375

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Proctor Peacemaker

Type:	Stream/River
County:	Wetzel
Owner:	SWN Production Company, LLC
Intake Latitude:	39.714299
Intake Longitude:	-80.825862
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	6000

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Paw Paw Creek @ Horizon Ventures

Type:	Stream/River
County:	Marion
Owner:	Horizon Ventures of WV, Inc

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV

Intake Latitude:	39.552426
Intake Longitude:	-80.166833
HUC-8 Code:	5020003
Drainage Area (sq miles):	28.34
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	26.96
Minimum Passby (cfs):	4.57
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Short Creek @ Cain

Type:	Stream/River
County:	Ohio
Owner:	Susan L. Cain
Intake Latitude:	40.155061
Intake Longitude:	-80.651431
HUC-8 Code:	5030106
Drainage Area (sq miles):	16.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	64.49
Minimum Passby (cfs):	7.68
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	3360

Comments:

- WV Fork Fish Creek @ Derby

Type:	Stream/River
County:	Wetzel
Owner:	Steven Derby
Intake Latitude:	39.709329
Intake Longitude:	-80.536079
HUC-8 Code:	5030106
Drainage Area (sq miles):	48.62
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	52.24
Minimum Passby (cfs):	8.21
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- WV Fork Fish Creek @ Francis

Type:	Stream/River
County:	Marshall
Owner:	Loretta J. Francis
Intake Latitude:	39.733295
Intake Longitude:	-80.579415

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading	63.69

HUC-8 Code:	5030106
Drainage Area (sq miles):	86.51
Regulated Stream:	NO
PWS Within 1 Mile:	NO

(cfs):	
Minimum Passby (cfs):	17.55
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:

- WV Fork of Fish Creek @ Van Scyoc Withdrawal Site

Type:	Stream/River
County:	Wetzel
Owner:	Israel D Van Scyoc
Intake Latitude:	39.6908
Intake Longitude:	-80.4762
HUC-8 Code:	5030106
Drainage Area (sq miles):	21.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	5.45
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Wheeling Creek @ Iskcon

Type:	Stream/River
County:	Marshall
Owner:	Iskcon New Vrindaban, Inc.
Intake Latitude:	39.967973
Intake Longitude:	-80.599241
HUC-8 Code:	5030106
Drainage Area (sq miles):	189.6
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	27.5
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Wheeling Creek @ Schafer

Type:	Stream/River
County:	Marshall
Owner:	Betty Jane Schafer
Intake Latitude:	39.99257
Intake Longitude:	-80.634912
HUC-8 Code:	5030106
Drainage Area (sq	203.38

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	49.7
Minimum Passby (cfs):	27.5

miles):	
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Wheeling Creek @ Sligar

Type:	Stream/River
County:	Marshall
Owner:	Terry Sligar
Intake Latitude:	40.013185
Intake Longitude:	-80.652863
HUC-8 Code:	5030106
Drainage Area (sq miles):	211.8
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	28.64
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
This site shall not be operated concurrently with the Wheeling Creek @ Schaffer location or Wheeling Creek @ Iskcon site.

- Whiteday Creek @ Sorine Withdrawal Site

Type:	Stream/River
County:	Marion
Owner:	Andrew Sorine, Jr.
Intake Latitude:	39.472311
Intake Longitude:	-79.977123
HUC-8 Code:	5020003
Drainage Area (sq miles):	12.29
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Minimum Gauge Reading (cfs):	20.25
Minimum Passby (cfs):	2.29
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Adrian Public Service District

Type:	Purchased Water
County:	Upshur
Owner:	Adrian Public Service District
Intake Latitude:	38.9775

Gauged Stream:	YES
Ref Gauge ID:	3054500
Ref Gauge Name:	TYGART VALLEY RIVER AT PHILIPPI, WV
Minimum Gauge Reading	155.85

Intake Longitude:	-80.22083
HUC-8 Code:	5020001
Drainage Area (sq miles):	197.33
Regulated Stream:	YES
PWS Within 1 Mile:	YES City of Buckhannon Water Plant

(cfs):	
Minimum Passby (cfs):	75.51
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	

Comments:

- American Petroleum Partners (Wheeling Creek @ Wilson)

Type:	Purchased Water
County:	Marshall
Owner:	American Petroleum Partners, LLC
Intake Latitude:	39.975882
Intake Longitude:	-80.62967
HUC-8 Code:	5030106
Drainage Area (sq miles):	192.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	26.09
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- Covestro, LLC

Type:	Purchased Water
County:	Marshall
Owner:	Covestro, LLC
Intake Latitude:	39.7218
Intake Longitude:	-80.830231
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Grandview-Doolin PSD

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Elite Gasfield Services

Type:	Purchased Water
County:	Brooke

Gauged Stream:	YES
Ref Gauge ID:	9999999

Owner:	Elite Gasfield Services
Intake Latitude:	40.32667
Intake Longitude:	-80.59861
HUC-8 Code:	5030101
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES City of Follansbee

Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Grandview-Doolin PSD

Type:	Purchased Water
County:	Wetzel
Owner:	Grandview-Doolin Public Service District
Intake Latitude:	39.71361
Intake Longitude:	-80.82583
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Grandview-Doolin PSD

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Marshall County Public Service District 3

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #3
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

	Department

Comments:
Tap Location is: (39.906400, -80.586200)

- Marshall County Public Service District 4

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #4
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water Department

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Ohio County PSD

Type:	Purchased Water
County:	Ohio
Owner:	Ohio county PSD
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ 4K Industrial Park

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Intake Latitude:	40.098805
Intake Longitude:	-80.711328

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam

HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ J&R Excavating

Type:	Purchased Water
County:	Marshall
Owner:	J&R Excavating
Intake Latitude:	39.998509
Intake Longitude:	-80.737336
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Oasis Transport Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Oasis Transport, LLC
Intake Latitude:	40.331551
Intake Longitude:	-80.601034
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Range Tap @ Corbin Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Range Resources Corp.
Intake Latitude:	40.229983
Intake Longitude:	-80.521067
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- The Village of Valley Grove

Type:	Purchased Water
County:	Ohio
Owner:	The Village of Valley Grove
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Valley Falls PSD

Type:	Purchased Water
County:	Marion
Owner:	Valley Falls PSD
Intake Latitude:	39.45889
Intake Longitude:	-80.15583
HUC-8 Code:	5020001
Drainage Area (sq miles):	1367.05

Gauged Stream:	YES
Ref Gauge ID:	3057000
Ref Gauge Name:	TYGART VALLEY RIVER AT COLFAX, WV
Minimum Gauge Reading (cfs):	397.39
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES

Regulated Stream:	YES Tygart Valley Dam
PWS Within 1 Mile:	YES City of Fairmont

Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek # 2 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.949577
Intake Longitude:	-80.531255
HUC-8 Code:	5030106
Drainage Area (sq miles):	152.4
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.24
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek #1 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.95205
Intake Longitude:	-80.56189
HUC-8 Code:	5030106
Drainage Area (sq miles):	156.06
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.63
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Water Department

Type:	Purchased Water
County:	Ohio
Owner:	Wheeling Water Department
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate	

PWS Within 1 Mile:	YES Wheeling Water Department

(gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Shoemaker Groundwater Wells @ HG Energy

Type:	Ground Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	40.0222
Intake Longitude:	-80.733888
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	800

Comments:
This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals.
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Secondary Sources

For each proposed secondary water source identified in your water management plan (i.e. groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow and quality-tested by the operator at the request of the drinking well owner prior to the operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.
- The use of recycled frac water is always encouraged.

- 4K Industrial Park, LLC

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Source Latitude:	40.100395

Source Longitude:	-80.71269
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Ballato Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Nick Ballato and Christopher Ballato
Source Latitude:	40.308611
Source Longitude:	-80.565028
Reference WMP:	1877

Comments:

- Barry Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Barry Greathouse
Source Latitude:	40.18831
Source Longitude:	-80.63714
Reference WMP:	1869

Comments:

- Columbia Gas Transmission (TCO Elson) FWI

Type:	Purchased Water
County:	Marshall
Owner:	Columbia Gas Transmission, LLC.
Source Latitude:	39.75398
Source Longitude:	-80.613604
Reference WMP:	547

Comments:

- Corbin Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Margaret Corbin
Source Latitude:	40.233122
Source Longitude:	-80.524025
Reference WMP:	1870

Comments:

- Durig A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	39.715905
Source Longitude:	-80.636785
Reference WMP:	1862

Comments:

- Durig B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	38.8022
Source Longitude:	-80.638491
Reference WMP:	1863

Comments:

- Elite Gasfield Services, Midland Borough

Type:	Purchased Water
County:	Beaver, PA
Owner:	Elite Gasfield Services
Source Latitude:	40.644598
Source Longitude:	-80.469382
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Elmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Charles and Thomas Elmer
Source Latitude:	38.831351
Source Longitude:	-80.276326
Reference WMP:	1847

Comments:

- Equitrans Water Services, LLC Cook Impoundment

Type:	Purchased Water
County:	Greene, PA
Owner:	Equitrans Water Services, LLC
Source Latitude:	39.817197
Source Longitude:	-80.477956
Reference WMP:	

Comments:
PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

- Farmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Clarence Farmer
Source Latitude:	40.146183
Source Longitude:	-80.573857
Reference WMP:	1871

Comments:

- Ferrell Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Kevin Ferrell
Source Latitude:	40.04445
Source Longitude:	-80.53023
Reference WMP:	1874

Comments:

- Grant Town Water

Type:	Purchased Water
County:	Marion
Owner:	Town of Grant Town
Source Latitude:	39.559407
Source Longitude:	-80.172893
Reference WMP:	

Comments:
@ Horizon Ventures Withdrawal Location

- Heartwood Forestland Freshwater Impoundment

Type:	Centralized Freshwater Impoundment

County:	Ritchie
Owner:	Wanda Bartlett
Source Latitude:	39.123961
Source Longitude:	-81.098573
Reference WMP:	1878

Comments:

- Helen Miller Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Helen J. Miller
Source Latitude:	40.085722
Source Longitude:	-80.623333
Reference WMP:	1059

Comments:

- Hickman Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Mark Hickman et al
Source Latitude:	40.041361
Source Longitude:	-80.548944
Reference WMP:	1875

Comments:

- Hieronimus #1 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.811
Source Longitude:	-80.5212
Reference WMP:	1856

Comments:

- Hieronimus #2 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8149
Source Longitude:	-80.5233

Reference WMP:	1857

Comments:

- Hieronimus #3 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8162
Source Longitude:	-80.5266
Reference WMP:	1761

Comments:

- Hieronimus #4 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8198
Source Longitude:	-80.5295
Reference WMP:	1858

Comments:

- Hupp 1 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Hupp
Source Latitude:	40.175058
Source Longitude:	-80.567622
Reference WMP:	1873

Comments:

- Hupp 2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Wylie Hupp
Source Latitude:	40.175069
Source Longitude:	-80.578206
Reference WMP:	1058

Comments:

- Hydro Recovery, LP

Type:	Purchased Water
County:	Washington, PA
Owner:	Hydro Recovery, LP - Burgettstown
Source Latitude:	40.419251
Source Longitude:	-80.422684
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Kelley #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Margaret Sue Kelley
Source Latitude:	39.681388
Source Longitude:	-80.701113
Reference WMP:	1865

Comments:

- Kestner Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Gary Kestner
Source Latitude:	40.147904
Source Longitude:	-80.539568
Reference WMP:	1872

Comments:

- Linda Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Linda Greathouse
Source Latitude:	40.205416
Source Longitude:	-80.608805
Reference WMP:	1876

Comments:

- Lipps Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur

Owner:	Ralph and Opal Lipps
Source Latitude:	38.8446
Source Longitude:	-80.3413
Reference WMP:	1850

Comments:

- McGlumphy Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Steven M. McGlumphy
Source Latitude:	40.152588
Source Longitude:	-80.587667
Reference WMP:	1060

Comments:

- Messenger Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Chesapeake Energy
Source Latitude:	393674857
Source Longitude:	-80.689887
Reference WMP:	1859

Comments:

- Pennsylvania American Water

Type:	Purchased Water
County:	
Owner:	Pennsylvania American Water
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Raw Water Pond @ Horizon Ventures

Type:	Purchased Water
County:	Marion
Owner:	Horizon Ventures of WV, Inc
Source Latitude:	39.5535
Source Longitude:	-80.16742

Reference WMP:	

Comments:

- Recycled Frac Water

Type:	Recycled Frac Water
County:	
Owner:	
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Treated and recycled flowback/produced water sources may include, but are not limited to this well pad.

- Reliance Minerals A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.521316
Source Longitude:	-79.973907
Reference WMP:	1868

Comments:

- Reliance Minerals B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.524571
Source Longitude:	-79.974529
Reference WMP:	1867

Comments:

- Robinson Fork @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy II Appalachia, LLC.
Source Latitude:	39.979222
Source Longitude:	-80.487472
Reference WMP:	

Comments:

- Ross #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Mike Ross
Source Latitude:	38.9839
Source Longitude:	-80.2628
Reference WMP:	1851

Comments:

- Stern Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Marshall
Owner:	Alton and Mary Stern
Source Latitude:	39.733943
Source Longitude:	-80.64695
Reference WMP:	1826

Comments:

- WFN Impoundment A @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy, LLC
Source Latitude:	39.991417
Source Longitude:	-80.488694
Reference WMP:	

Comments:

- WFN Impoundment B @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy
Source Latitude:	39.991917
Source Longitude:	-80.4965
Reference WMP:	

Comments:

- Washington Pike PSD @ Brook Hills Park

Type:	Purchased Water
County:	Brooke
Owner:	Washington Pike PSD
Source Latitude:	40.26632
Source Longitude:	-80.543592
Reference WMP:	

Comments:

- Worthley Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Kimberly Worthley
Source Latitude:	40.216869
Source Longitude:	-80.548592
Reference WMP:	1061

Comments:

West Virginia Department of Environmental Protection

601 57th Street SE

Charleston, WV

Pollution and Emergency Spills 1-800-642-3074

www.dep.wv.gov

Water Management Plan

Action: Approved **Effective Date:** 3/21/2022
Operator: SWN Production Company, LLC
WMP ID: 2727
Plan Type: Well Pad
Facility Name: Roth OHI Well Pad
County: Ohio
Lat: 40.151149
Long: -80.686973

APPROVED
By Dawn Newell at 1:41 pm, 3/21/22

This Water Management Plan governs all water withdrawals associated with the identified well pad. This plan supersedes any previously approved water management plans issued for the included wells. This plan is not in effect until at least one well-work permit identified below has been issued, and remains valid until all listed permits are released or expire.

Api	Wellname
047-069-00339	Roth OHI 10H

The following water consumption estimates (in gallons) have been reported for this plan.

Construction:	210,000
Drilling Activities:	210,000
Hydraulic Fracture:	25,137,000
Post-Fracture:	210,000
Incidental Uses:	210,000
Reclamation Activities:	210,000
Total for Well Pad:	26,187,000

Primary Sources

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and

- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and enforceable as such.

For any source identified by DEP as having known mussel, trout, or endangered species populations, the operator should consult with the Department of Natural Resources and the United States Fish and Wildlife Service prior to initiating any withdrawals.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov. Signage requirements must be satisfied within 24 hours of activating this Water Management Plan.

- Big Wheeling Creek @ Wheeling Staging Area

Type:	Stream/River
County:	Ohio
Owner:	Fulton Storage, LLC
Intake Latitude:	40.077019
Intake Longitude:	-80.713866
HUC-8 Code:	5030106
Drainage Area (sq miles):	296.04
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	43.57
Minimum Passby (cfs):	40.03
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Booths Creek @ Reliance Minerals

Type:	Stream/River
County:	Monongalia

Gauged Stream:	NO
Ref Gauge ID:	3062500

Owner:	Reliance Minerals, Inc.
Intake Latitude:	39.530405
Intake Longitude:	-79.978079
HUC-8 Code:	5020003
Drainage Area (sq miles):	1.79
Regulated Stream:	NO
PWS Within 1 Mile:	YES Morgantown Utility Board

Ref Gauge Name:	DECKERS CREEK AT MORGANTOWN, WV
Minimum Gauge Reading (cfs):	18.65
Minimum Passby (cfs):	.48
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Buffalo Creek @ Bethany VFD Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Bethany Pike Volunteer Fire Department
Intake Latitude:	40.253422
Intake Longitude:	-80.600319
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	67.66
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Zatta location.

- Buffalo Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.19386
Intake Longitude:	-80.525796
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	54.63
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3200

Comments:

- Buffalo Creek @ Forney

Type:	Stream/River
County:	Brooke
Owner:	Forney & Sons

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR

	Holding Company, LLC
Intake Latitude:	40.193453
Intake Longitude:	-80.52175
HUC-8 Code:	5030106
Drainage Area (sq miles):	98.28
Regulated Stream:	NO
PWS Within 1 Mile:	NO

	DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	43.52
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Fuchs

Type:	Stream/River
County:	Brooke
Owner:	Beverly Fuchs
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:

- Buffalo Creek @ Greathouse Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Linda Greathouse
Intake Latitude:	40.20895
Intake Longitude:	-80.60105
HUC-8 Code:	5030106
Drainage Area (sq miles):	138.56
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	60.42
Minimum Passby (cfs):	54.51
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3300

Comments:

- Buffalo Creek @ Labelle Farms

Type:	Stream/River
County:	Brooke
Owner:	Steve Paul
Intake Latitude:	40.204444

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH

Intake Longitude:	-80.598645
HUC-8 Code:	5030106
Drainage Area (sq miles):	136.79
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	59.2
Minimum Passby (cfs):	53.8
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 8.34 cfs (2.23ft upstream & 2.05ft downstream) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the threshold will revert back to the USGS gage.

- Buffalo Creek @ WVDOH

Type:	Stream/River
County:	Brooke
Owner:	West Virginia Division of Highways
Intake Latitude:	40.258863
Intake Longitude:	-80.60337
HUC-8 Code:	5030106
Drainage Area (sq miles):	163.22
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Buffalo Creek @ Worthley Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Kimberly C. Worthley
Intake Latitude:	40.210978
Intake Longitude:	-80.548779
HUC-8 Code:	5030106
Drainage Area (sq miles):	113.49
Regulated Stream:	NO
PWS Within 1 Mile:	YES Hammond PSD

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	53.07
Minimum Passby (cfs):	44.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Buffalo Creek @ Zatta

Type:	Stream/River

Gauged Stream:	NO

County:	Brooke
Owner:	Edward Zatta
Intake Latitude:	40.253588
Intake Longitude:	-80.600254
HUC-8 Code:	5030106
Drainage Area (sq miles):	158.69
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	66.37
Minimum Passby (cfs):	61.29
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3100

Comments:
This location shall not be used concurrently with the Buffalo Creek @ Bethany Pike VFD location.

- Cross Creek @ Bullock Withdrawal Site

Type:	Stream/River
County:	Brooke
Owner:	Isabelle Bullock
Intake Latitude:	40.30735
Intake Longitude:	-80.569317
HUC-8 Code:	5030101
Drainage Area (sq miles):	74.66
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	19.32
Minimum Passby (cfs):	20.99
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Cross Creek @ DNR

Type:	Stream/River
County:	Brooke
Owner:	WVDNR
Intake Latitude:	40.300536
Intake Longitude:	-80.542229
HUC-8 Code:	5030101
Drainage Area (sq miles):	68.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	22.44
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 15.69 cfs (1.14 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Cross Creek @ Norfolk and Western Railway

Type:	Stream/River
County:	Brooke
Owner:	Wheeling & Lake Erie Railway Company
Intake Latitude:	40.30802
Intake Longitude:	-80.599193
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Cross Creek @ Palizzi

Type:	Stream/River
County:	Brooke
Owner:	Campbell Palizzi
Intake Latitude:	40.302427
Intake Longitude:	-80.582753
HUC-8 Code:	5030101
Drainage Area (sq miles):	79.78
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3110830
Ref Gauge Name:	KINGS CREEK AT WEIRTON, WV
Minimum Gauge Reading (cfs):	23.11
Minimum Passby (cfs):	22.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
May not be used concurrently with Cross Creek @ Bullocks withdrawal site.

- Fish Creek @ Gribben

Type:	Stream/River
County:	Marshall
Owner:	Revocable Living Trust of M. Peggy Gribben
Intake Latitude:	39.753271
Intake Longitude:	-80.597913
HUC-8 Code:	5030106
Drainage Area (sq miles):	141.61
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	23.94
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 4.07 cfs (0.69 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Fish Creek @ Guzek

Type:	Stream/River
County:	Marshall
Owner:	Walter A. Guzek
Intake Latitude:	39.753021
Intake Longitude:	-80.613941
HUC-8 Code:	5030106
Drainage Area (sq miles):	144.57
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	56.96
Minimum Passby (cfs):	24.44
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:
Qualifies under §35-8-9.1.a.1.B. Passby requirement of 3.28 cfs (0.75 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Little Wheeling Creek @ Edge Withdrawal Site

Type:	Stream/River
County:	Ohio
Owner:	Alice Mae Edge
Intake Latitude:	40.098
Intake Longitude:	-80.5558
HUC-8 Code:	5030106
Drainage Area (sq miles):	4.26
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Little Wheeling Creek @ Main Street Bank

Type:	Stream/River
County:	Ohio
Owner:	Main Street Bank
Intake Latitude:	40.064076
Intake Longitude:	-80.614406
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94

Gauged Stream:	NO
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	23
Minimum Passby (cfs):	2.83
Endangered Species:	NO

Regulated Stream:	NO
PWS Within 1 Mile:	NO

Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This site shall not be used concurrently with the Little Wheeling Creek @ Rt. 40 Staging Area location.

- Little Wheeling Creek @ Rt. 40 Staging Area

Type:	Stream/River
County:	Ohio
Owner:	JDS Investments, LLC
Intake Latitude:	40.078324
Intake Longitude:	-80.591145
HUC-8 Code:	5030106
Drainage Area (sq miles):	13.94
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	64.8
Minimum Passby (cfs):	2.83
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Gribben

Type:	Stream/River
County:	Ohio
Owner:	Lawrence Kevin Gribber
Intake Latitude:	40.036777
Intake Longitude:	-80.598008
HUC-8 Code:	5030106
Drainage Area (sq miles):	30.81
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	6.26
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Middle Wheeling Creek @ Supler

Type:	Stream/River
County:	Ohio
Owner:	Gregory and Peggy Supler
Intake Latitude:	40.04409
Intake Longitude:	-80.55348
HUC-8 Code:	5030106
Drainage Area (sq miles):	20.54

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	62.57
Minimum Passby (cfs):	4.17
Endangered Species:	NO
Mussel Stream:	YES

Regulated Stream:	NO
PWS Within 1 Mile:	NO

Maximum Pump Rate (gpm):	2500

Comments:

- Ohio River @ Extraction B Panhandle

Type:	Stream/River
County:	Brooke
Owner:	SWN Production Company, LLC
Intake Latitude:	40.233469
Intake Longitude:	-80.654359
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4375

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Proctor Peacemaker

Type:	Stream/River
County:	Wetzel
Owner:	SWN Production Company, LLC
Intake Latitude:	39.714299
Intake Longitude:	-80.825862
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Beech Bottom Water Dept.

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	6000

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Paw Paw Creek @ Horizon Ventures

Type:	Stream/River
County:	Marion
Owner:	Horizon Ventures of WV, Inc

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV

Intake Latitude:	39.552426
Intake Longitude:	-80.166833
HUC-8 Code:	5020003
Drainage Area (sq miles):	28.34
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	26.96
Minimum Passby (cfs):	4.57
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:
This source shall not be used concurrently with the Paw Paw Creek @ Dobbins location.

- Short Creek @ Cain

Type:	Stream/River
County:	Ohio
Owner:	Susan L. Cain
Intake Latitude:	40.155061
Intake Longitude:	-80.651431
HUC-8 Code:	5030106
Drainage Area (sq miles):	16.58
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3111500
Ref Gauge Name:	SHORT CREEK NEAR DILLONVALE, OH
Minimum Gauge Reading (cfs):	64.49
Minimum Passby (cfs):	7.68
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	3360

Comments:

- WV Fork Fish Creek @ Derby

Type:	Stream/River
County:	Wetzel
Owner:	Steven Derby
Intake Latitude:	39.709329
Intake Longitude:	-80.536079
HUC-8 Code:	5030106
Drainage Area (sq miles):	48.62
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	52.24
Minimum Passby (cfs):	8.21
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- WV Fork Fish Creek @ Francis

Type:	Stream/River
County:	Marshall
Owner:	Loretta J. Francis
Intake Latitude:	39.733295
Intake Longitude:	-80.579415

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading	63.69

HUC-8 Code:	5030106
Drainage Area (sq miles):	86.51
Regulated Stream:	NO
PWS Within 1 Mile:	NO

(cfs):	
Minimum Passby (cfs):	17.55
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3000

Comments:

- WV Fork of Fish Creek @ Van Scyoc Withdrawal Site

Type:	Stream/River
County:	Wetzel
Owner:	Israel D Van Scyoc
Intake Latitude:	39.6908
Intake Longitude:	-80.4762
HUC-8 Code:	5030106
Drainage Area (sq miles):	21.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	61.46
Minimum Passby (cfs):	5.45
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2000

Comments:

- Wheeling Creek @ Iskcon

Type:	Stream/River
County:	Marshall
Owner:	Iskcon New Vrindaban, Inc.
Intake Latitude:	39.967973
Intake Longitude:	-80.599241
HUC-8 Code:	5030106
Drainage Area (sq miles):	189.6
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	27.5
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	2500

Comments:

- Wheeling Creek @ Schafer

Type:	Stream/River
County:	Marshall
Owner:	Betty Jane Schafer
Intake Latitude:	39.99257
Intake Longitude:	-80.634912
HUC-8 Code:	5030106
Drainage Area (sq	203.38

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	49.7
Minimum Passby (cfs):	27.5

miles):	
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	5250

Comments:
Qualifies under 35-8-9.1.a.1.B. Passby requirement of 20.8 cfs (1.27 ft on staff gauge) must be adhered to at all times. If staff gauge is compromised, DEP must be notified immediately, and the ref. USGS gauging station targets must also be exceeded.

- Wheeling Creek @ Sligar

Type:	Stream/River
County:	Marshall
Owner:	Terry Sligar
Intake Latitude:	40.013185
Intake Longitude:	-80.652863
HUC-8 Code:	5030106
Drainage Area (sq miles):	211.8
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	28.64
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	3360

Comments:
This site shall not be operated concurrently with the Wheeling Creek @ Schafer location or Wheeling Creek @ Iskcon site.

- Whiteday Creek @ Sorine Withdrawal Site

Type:	Stream/River
County:	Marion
Owner:	Andrew Sorine, Jr.
Intake Latitude:	39.472311
Intake Longitude:	-79.977123
HUC-8 Code:	5020003
Drainage Area (sq miles):	12.29
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3061500
Ref Gauge Name:	BUFFALO CREEK AT BARRACKVILLE, WV
Minimum Gauge Reading (cfs):	20.25
Minimum Passby (cfs):	2.29
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	2000

Comments:

- Adrian Public Service District

Type:	Purchased Water
County:	Upshur
Owner:	Adrian Public Service District
Intake Latitude:	38.9775

Gauged Stream:	YES
Ref Gauge ID:	3054500
Ref Gauge Name:	TYGART VALLEY RIVER AT PHILIPPI, WV
Minimum Gauge Reading	155.85

Intake Longitude:	-80.22083
HUC-8 Code:	5020001
Drainage Area (sq miles):	197.33
Regulated Stream:	YES
PWS Within 1 Mile:	YES City of Buckhannon Water Plant

(cfs):	
Minimum Passby (cfs):	75.51
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	

Comments:

- American Petroleum Partners (Wheeling Creek @ Wilson)

Type:	Purchased Water
County:	Marshall
Owner:	American Petroleum Partners, LLC
Intake Latitude:	39.975882
Intake Longitude:	-80.62967
HUC-8 Code:	5030106
Drainage Area (sq miles):	192.96
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	NO
Ref Gauge ID:	3112000
Ref Gauge Name:	WHEELING CREEK AT ELM GROVE, WV
Minimum Gauge Reading (cfs):	47.36
Minimum Passby (cfs):	26.09
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	4200

Comments:

- Covestro, LLC

Type:	Purchased Water
County:	Marshall
Owner:	Covestro, LLC
Intake Latitude:	39.7218
Intake Longitude:	-80.830231
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Grandview-Doolin PSD

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Elite Gasfield Services

Type:	Purchased Water
County:	Brooke

Gauged Stream:	YES
Ref Gauge ID:	9999999

Owner:	Elite Gasfield Services
Intake Latitude:	40.32667
Intake Longitude:	-80.59861
HUC-8 Code:	5030101
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES City of Follansbee

Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Grandview-Doolin PSD

Type:	Purchased Water
County:	Wetzel
Owner:	Grandview-Doolin Public Service District
Intake Latitude:	39.71361
Intake Longitude:	-80.82583
HUC-8 Code:	5030201
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Grandview-Doolin PSD

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Marshall County Public Service District 3

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #3
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

	Department

Comments:
Tap Location is: (39.906400, -80.586200)

- Marshall County Public Service District 4

Type:	Purchased Water
County:	Marshall
Owner:	Marshall County Public Service District #4
Intake Latitude:	39.93556
Intake Longitude:	-80.75833
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Moundsville Water Department

Gauged Stream:	NO
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Public Service District 4 purchases water from Moundsville Water Department wells. (Tap Location is: 39.872607, -80.548329)

- Ohio County PSD

Type:	Purchased Water
County:	Ohio
Owner:	Ohio county PSD
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ 4K Industrial Park

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Intake Latitude:	40.098805
Intake Longitude:	-80.711328

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam

HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ J&R Excavating

Type:	Purchased Water
County:	Marshall
Owner:	J&R Excavating
Intake Latitude:	39.998509
Intake Longitude:	-80.737336
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Ohio River @ Oasis Transport Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Oasis Transport, LLC
Intake Latitude:	40.331551
Intake Longitude:	-80.601034
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Range Tap @ Corbin Withdrawal Site

Type:	Purchased Water
County:	Brooke
Owner:	Range Resources Corp.
Intake Latitude:	40.229983
Intake Longitude:	-80.521067
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	YES
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- The Village of Valley Grove

Type:	Purchased Water
County:	Ohio
Owner:	The Village of Valley Grove
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	YES Wheeling Water Department

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecast website:
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Valley Falls PSD

Type:	Purchased Water
County:	Marion
Owner:	Valley Falls PSD
Intake Latitude:	39.45889
Intake Longitude:	-80.15583
HUC-8 Code:	5020001
Drainage Area (sq miles):	1367.05

Gauged Stream:	YES
Ref Gauge ID:	3057000
Ref Gauge Name:	TYGART VALLEY RIVER AT COLFAX, WV
Minimum Gauge Reading (cfs):	397.39
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES

Regulated Stream:	YES Tygart Valley Dam
PWS Within 1 Mile:	YES City of Fairmont

Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek # 2 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.949577
Intake Longitude:	-80.531255
HUC-8 Code:	5030106
Drainage Area (sq miles):	152.4
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.24
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Creek #1 @ HG Energy

Type:	Purchased Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	39.95205
Intake Longitude:	-80.56189
HUC-8 Code:	5030106
Drainage Area (sq miles):	156.06
Regulated Stream:	NO
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	3111955
Ref Gauge Name:	Wheeling Creek near Majorsville, WV
Minimum Gauge Reading (cfs):	18.23
Minimum Passby (cfs):	16.63
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate (gpm):	

Comments:

- Wheeling Water Department

Type:	Purchased Water
County:	Ohio
Owner:	Wheeling Water Department
Intake Latitude:	40.14972
Intake Longitude:	-80.70167
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	YES
Maximum Pump Rate	

PWS Within 1 Mile:	YES Wheeling Water Department

(gpm):	

Comments:
Refer to the specified station on the National Weather Service's Ohio River forecasts at the following website before purchasing water: https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

- Shoemaker Groundwater Wells @ HG Energy

Type:	Ground Water
County:	Marshall
Owner:	HG Energy, LLC
Intake Latitude:	40.0222
Intake Longitude:	-80.733888
HUC-8 Code:	5030106
Drainage Area (sq miles):	25000
Regulated Stream:	YES Ohio River Min. Flow
PWS Within 1 Mile:	NO

Gauged Stream:	YES
Ref Gauge ID:	9999999
Ref Gauge Name:	Ohio River Station: Willow Island Lock & Dam
Minimum Gauge Reading (cfs):	6468
Minimum Passby (cfs):	
Endangered Species:	NO
Mussel Stream:	NO
Maximum Pump Rate (gpm):	800

Comments:
This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals.
https://forecast.weather.gov/product.php?site=NWS&product=RVF&issuedby=TIR

Secondary Sources

For each proposed secondary water source identified in your water management plan (i.e. groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow and quality-tested by the operator at the request of the drinking well owner prior to the operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.
- The use of recycled frac water is always encouraged.

- 4K Industrial Park, LLC

Type:	Purchased Water
County:	Belmont, OH
Owner:	4K Industrial Park, LLC
Source Latitude:	40.100395

Source Longitude:	-80.71269
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Ballato Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Nick Ballato and Christopher Ballato
Source Latitude:	40.308611
Source Longitude:	-80.565028
Reference WMP:	1877

Comments:

- Barry Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Barry Greathouse
Source Latitude:	40.18831
Source Longitude:	-80.63714
Reference WMP:	1869

Comments:

- Columbia Gas Transmission (TCO Elson) FWI

Type:	Purchased Water
County:	Marshall
Owner:	Columbia Gas Transmission, LLC.
Source Latitude:	39.75398
Source Longitude:	-80.613604
Reference WMP:	547

Comments:

- Corbin Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Margaret Corbin
Source Latitude:	40.233122
Source Longitude:	-80.524025
Reference WMP:	1870

Comments:

- Durig A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	39.715905
Source Longitude:	-80.636785
Reference WMP:	1862

Comments:

- Durig B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	David and Bonnie Durig
Source Latitude:	38.8022
Source Longitude:	-80.638491
Reference WMP:	1863

Comments:

- Elite Gasfield Services, Midland Borough

Type:	Purchased Water
County:	Beaver, PA
Owner:	Elite Gasfield Services
Source Latitude:	40.644598
Source Longitude:	-80.469382
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Elmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Charles and Thomas Elmer
Source Latitude:	38.831351
Source Longitude:	-80.276326
Reference WMP:	1847

Comments:

- Equitrans Water Services, LLC Cook Impoundment

Type:	Purchased Water
County:	Greene, PA
Owner:	Equitrans Water Services, LLC
Source Latitude:	39.817197
Source Longitude:	-80.477956
Reference WMP:	

Comments:
PA DEP WMP-317902-5 Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.

- Farmer Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Clarence Farmer
Source Latitude:	40.146183
Source Longitude:	-80.573857
Reference WMP:	1871

Comments:

- Ferrell Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Kevin Ferrell
Source Latitude:	40.04445
Source Longitude:	-80.53023
Reference WMP:	1874

Comments:

- Grant Town Water

Type:	Purchased Water
County:	Marion
Owner:	Town of Grant Town
Source Latitude:	39.559407
Source Longitude:	-80.172893
Reference WMP:	

Comments:
@ Horizon Ventures Withdrawal Location

- Heartwood Forestland Freshwater Impoundment

Type:	Centralized Freshwater Impoundment

County:	Ritchie
Owner:	Wanda Bartlett
Source Latitude:	39.123961
Source Longitude:	-81.098573
Reference WMP:	1878

Comments:

- Helen Miller Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Helen J. Miller
Source Latitude:	40.085722
Source Longitude:	-80.623333
Reference WMP:	1059

Comments:

- Hickman Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Mark Hickman et al
Source Latitude:	40.041361
Source Longitude:	-80.548944
Reference WMP:	1875

Comments:

- Hieronimus #1 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.811
Source Longitude:	-80.5212
Reference WMP:	1856

Comments:

- Hieronimus #2 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8149
Source Longitude:	-80.5233

Reference WMP:	1857

Comments:

- Hieronimus #3 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8162
Source Longitude:	-80.5266
Reference WMP:	1761

Comments:

- Hieronimus #4 Freshwater Impoundment

Type:	Purchased Water
County:	Marshall
Owner:	Paul and Sandra Hieronimus
Source Latitude:	39.8198
Source Longitude:	-80.5295
Reference WMP:	1858

Comments:

- Hupp 1 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Hupp
Source Latitude:	40.175058
Source Longitude:	-80.567622
Reference WMP:	1873

Comments:

- Hupp 2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	John Wylie Hupp
Source Latitude:	40.175069
Source Longitude:	-80.578206
Reference WMP:	1058

Comments:

- Hydro Recovery, LP

Type:	Purchased Water
County:	Washington, PA
Owner:	Hydro Recovery, LP - Burgettstown
Source Latitude:	40.419251
Source Longitude:	-80.422684
Reference WMP:	

Comments:
Treated and recycled flowback/produced water

- Kelley #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Margaret Sue Kelley
Source Latitude:	39.681388
Source Longitude:	-80.701113
Reference WMP:	1865

Comments:

- Kestner Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Gary Kestner
Source Latitude:	40.147904
Source Longitude:	-80.539568
Reference WMP:	1872

Comments:

- Linda Greathouse Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Linda Greathouse
Source Latitude:	40.205416
Source Longitude:	-80.608805
Reference WMP:	1876

Comments:

- Lipps Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur

Owner:	Ralph and Opal Lipps
Source Latitude:	38.8446
Source Longitude:	-80.3413
Reference WMP:	1850

Comments:

- McGlumphy Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Ohio
Owner:	Steven M. McGlumphy
Source Latitude:	40.152588
Source Longitude:	-80.587667
Reference WMP:	1060

Comments:

- Messenger Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Wetzel
Owner:	Chesapeake Energy
Source Latitude:	393674857
Source Longitude:	-80.689887
Reference WMP:	1859

Comments:

- Pennsylvania American Water

Type:	Purchased Water
County:	
Owner:	Pennsylvania American Water
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Please ensure that the sourcing of this water confirms to all rules and guidance provided by PA DEP.

- Raw Water Pond @ Horizon Ventures

Type:	Purchased Water
County:	Marion
Owner:	Horizon Ventures of WV, Inc
Source Latitude:	39.5535
Source Longitude:	-80.16742

Reference WMP:	

Comments:

- Recycled Frac Water

Type:	Recycled Frac Water
County:	
Owner:	
Source Latitude:	
Source Longitude:	
Reference WMP:	

Comments:
Treated and recycled flowback/produced water sources may include, but are not limited to this well pad.

- Reliance Minerals A Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.521316
Source Longitude:	-79.973907
Reference WMP:	1868

Comments:

- Reliance Minerals B Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Monongalia
Owner:	Reliance Minerals, Inc.
Source Latitude:	39.524571
Source Longitude:	-79.974529
Reference WMP:	1867

Comments:

- Robinson Fork @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy II Appalachia, LLC.
Source Latitude:	39.979222
Source Longitude:	-80.487472
Reference WMP:	

Comments:

- Ross #2 Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Upshur
Owner:	Mike Ross
Source Latitude:	38.9839
Source Longitude:	-80.2628
Reference WMP:	1851

Comments:

- Stern Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Marshall
Owner:	Alton and Mary Stern
Source Latitude:	39.733943
Source Longitude:	-80.64695
Reference WMP:	1826

Comments:

- WFN Impoundment A @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy, LLC
Source Latitude:	39.991417
Source Longitude:	-80.488694
Reference WMP:	

Comments:

- WFN Impoundment B @ HG Energy

Type:	Purchased Water
County:	Washington, PA
Owner:	HG Energy
Source Latitude:	39.991917
Source Longitude:	-80.4965
Reference WMP:	

Comments:

- Washington Pike PSD @ Brook Hills Park

Type:	Purchased Water
County:	Brooke
Owner:	Washington Pike PSD
Source Latitude:	40.26632
Source Longitude:	-80.543592
Reference WMP:	

Comments:

- Worthley Freshwater Impoundment

Type:	Centralized Freshwater Impoundment
County:	Brooke
Owner:	Kimberly Worthley
Source Latitude:	40.216869
Source Longitude:	-80.548592
Reference WMP:	1061

Comments:

West Virginia Department of Environmental Protection

601 57th Street SE

Charleston, WV

Pollution and Emergency Spills 1-800-642-3074

www.dep.wv.gov

ENVIRONMENTAL SERVICE LABORATORIES, INC.

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PADEP: 43-04934

14 April 2022

RPG Resources LLC
Attn: Dave Schuster
314 Boden Ave
Carnegie, PA 15106

Work Order: 2032543
Project: SWN Freshwater Impoundment - WV

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
Worthley	2032543-01	Water	03/29/2022 10:00	3/30/22 17:00	
Trip Blank - WV	2032543-02	Water	03/29/2022 00:00	3/30/22 17:00	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

R	Received out of recommended hold time. Sample does not meet hold time requirements of 40 CFR Part 136.
J	The reported result is an estimated value less than the Reporting Limit (RL) but greater than the Method Detection Limit (MDL).
H	Analyzed out of recommended hold time. Sample does not meet hold time requirements of 40 CFR Part 136.
RL	Reporting Limit
MDL	Method Detection Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Alicia N Johnston

Alicia Johnston
Project Manager

ENVIRONMENTAL SERVICE LABORATORIES, INC.

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RPG Resources LLC
314 Boden Ave
Carnegie, PA 15106

Reported: 04/14/2022 12:11

Lab Sample ID#: 2032543-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: Worthley

Sample Date: 03/29/2022 10:00
Receipt Date: 03/30/2022 17:00

Analyte	Sample Result	Units	Data Qualifier	MDL	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
General Chemistry	**Analytical Method: EPA 1664B**					**Prep Method: ASTM D3987-06**		
Oil & Grease (HEM)	<1.4	mg/L		1.4	5.4	TLL/JK/TJC	04/08/22 10:20	04/08/22 17:58
General Chemistry	**Analytical Method: EPA300.0 2.1**					**Prep Method: No Prep - WetChem**		
Chloride	3.78	mg/L		0.303	2.00	TLL	04/10/22 21:41	04/10/22 21:41
General Chemistry	**Analytical Method: SM2510 B-11**					**Prep Method: W_No Prep WetChem**		
Specific Conductance	153	umhos/cm		5.00	5.00	AW	04/05/22 10:55	04/05/22 10:55
General Chemistry	**Analytical Method: SM2540 C-11**					**Prep Method: No Prep - WetChem**		
Total Dissolved Solids	84	mg/L		9	25	LMB	04/04/22 10:53	04/04/22 12:30
General Chemistry	**Analytical Method: SM2540 F-11**					**Prep Method: No Prep - WetChem**		
Settleable Solids	<0.500	mL/L		0.500	0.500	DAA	03/31/22 06:43	03/31/22 07:43
General Chemistry	**Analytical Method: SM4500-H B-11**					**Prep Method: No Prep - WetChem**		
pH	7.96	S.U.	H,R			TLL	04/07/22 16:55	04/07/22 16:55
Temp at time of pH, °C	18.0		H,R			TLL	04/07/22 16:55	04/07/22 16:55
General Chemistry	**Analytical Method: SM4500-O G-01**					**Prep Method: No Prep - WetChem**		
Dissolved Oxygen	6.60	mg/L	H,H			JAW	04/01/22 16:09	04/01/22 18:26
General Chemistry	**Analytical Method: SM5540 C-11**					**Prep Method: No Prep - WetChem**		
MBAS, calc as LAS, mol wt 348 g/mol	<0.0799	mg/L		0.0799	0.200	TLL	03/31/22 09:20	03/31/22 09:20
Total Metals	**Analytical Method: EPA200.7 4.4**					**Prep Method: EPA 200.7 4.4**		
Aluminum	0.007	mg/L	J	0.005	0.010	ANO	03/31/22 08:14	04/04/22 07:45
Barium	0.037	mg/L		0.004	0.005	ANO	03/31/22 08:14	04/04/22 07:45
Calcium	19.1	mg/L		0.091	0.500	ANO	03/31/22 08:14	04/04/22 07:45
Iron	<0.0153	mg/L		0.0153	0.0200	ANO	03/31/22 08:14	04/04/22 07:45
Manganese	0.004	mg/L	J	0.001	0.005	ANO	03/31/22 08:14	04/04/22 07:45

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PADEP: 43-04934

RPG Resources LLC
314 Boden Ave
Carnegie, PA 15106

Reported: 04/14/2022 12:11

Lab Sample ID#: 2032543-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: Worthley

Sample Date: 03/29/2022 10:00
Receipt Date: 03/30/2022 17:00

Analyte	Sample Result	Units	Data Qualifier	MDL	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Volatile Organics	**Analytical Method: EPA8260D**					**Prep Method: Purge and Trap**		
Benzene	<0.410	ug/L		0.410	1.00	MJK	04/05/22 02:01	04/05/22 02:01
Toluene	<0.370	ug/L		0.370	1.00	MJK	04/05/22 02:01	04/05/22 02:01
Ethyl Benzene	<0.420	ug/L		0.420	1.00	MJK	04/05/22 02:01	04/05/22 02:01
m,p-Xylenes	<1.05	ug/L		1.05	2.00	MJK	04/05/22 02:01	04/05/22 02:01
o-Xylene	<0.450	ug/L		0.450	1.00	MJK	04/05/22 02:01	04/05/22 02:01
Total Xylenes	<0.450	ug/L		0.450	1.00	MJK	04/05/22 02:01	04/05/22 02:01
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*80-120*			*MJK*	*04/05/22 02:01*	*04/05/22 02:01*
Surrogate: Toluene-d8	*101 %*		*88-110*			*MJK*	*04/05/22 02:01*	*04/05/22 02:01*
Surrogate: 4-Bromofluorobenzene	*98 %*		*86-115*			*MJK*	*04/05/22 02:01*	*04/05/22 02:01*

Lab Sample ID#: 2032543-02
Sample Type: Water
Sample Source: Trip Blank
Sampler: Client
Client Sample ID: Trip Blank - WV

Sample Date: 03/29/2022 00:00
Receipt Date: 03/30/2022 17:00

Analyte	Sample Result	Units	Data Qualifier	MDL	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Volatile Organics	**Analytical Method: EPA8260D**					**Prep Method: Purge and Trap**		
Benzene	<0.410	ug/L		0.410	1.00	MJK	04/05/22 02:26	04/05/22 02:26
Toluene	<0.370	ug/L		0.370	1.00	MJK	04/05/22 02:26	04/05/22 02:26
Ethyl Benzene	<0.420	ug/L		0.420	1.00	MJK	04/05/22 02:26	04/05/22 02:26
m,p-Xylenes	<1.05	ug/L		1.05	2.00	MJK	04/05/22 02:26	04/05/22 02:26
o-Xylene	<0.450	ug/L		0.450	1.00	MJK	04/05/22 02:26	04/05/22 02:26
Total Xylenes	<0.450	ug/L		0.450	1.00	MJK	04/05/22 02:26	04/05/22 02:26
Surrogate: 1,2-Dichloroethane-d4	*105 %*		*80-120*			*MJK*	*04/05/22 02:26*	*04/05/22 02:26*
Surrogate: Toluene-d8	*101 %*		*88-110*			*MJK*	*04/05/22 02:26*	*04/05/22 02:26*
Surrogate: 4-Bromofluorobenzene	*97 %*		*86-115*			*MJK*	*04/05/22 02:26*	*04/05/22 02:26*

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209

SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376

NORTHERN DIVIS
435 Broad Street
Montoursville, PA
(570) 321-9003
FAX: (570) 321-19

2032543

FOR INTERNAL LABORATORY USE ONLY

Requested TAT:
Rush _____ days ☐
Standard ☒

Sample Identification	ESL# 2032543	Sample Type: Composite Date on/off	Composite Time on/off	Grab Date	Grab Time	Matrix	# of Containers	Container Type / Preservative	Analysis Requested
Wathley	01			3/29/22	1000	W	3	Plastic Liter None	Chloride, Dissolved Oxygen, pH, MBAS, Settleable Solids, TDS, SC
						W	1	Plastic Pint HNO3	Al, Ba, Ca, Fe, Mn
						W	1	Amber Glass Liter HCl	Oil and Grease
						W	3	40mL Amber Vial HCl	BTEX
TRIP BLANK	02					W	2	40mL Amber Vial HCl	BTEX

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes: Circle State of Collection
WV OH SWN Freshwater Impoundment

	Date/ Time		Date/ Time
Sampled By: (Signature)	3/29/2022 1000		
Relinquished By: (Signature)	3/29/2022 1530	Received By: (Signature)	Amanda Hay (04247) 3-30-22 7:15
Relinquished By: (Signature)	(04247) 3/30/20 1520	Received By: (Signature)	3/30/22 1520
Relinquished By: (Signature)	3/30/20 1640	Received By: (Signature)	3/30/22 1700

Company/Name: **RPG Resources**
Address: 314 Boden Avenue
Carnegie, PA 15106
Contacts: Dave Schuster - 724-766-9441
Dawn Keller - 501-697-7230
Tyler Bryant - 832-796-6520
Email Address: dschuster@rpgres.com
Invoice to SWN WV

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature _____

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE RECEIPT AND REVIEW FORM

Client: RPG - Worthley	Work Or 2032543

PART A: GENERAL INFORMATION- SATELLITE LABORATORY

Received by/Lab ID: 04247	Date/Time Received: 3/30/22 7:15
Method of Delivery: (Client Drop-Off) ESL Courier Other: _____	Received on Ice? (YES) NO
Sample Receipt Temperature: 1.4 °C	IR Gun ID: # 7
Containers Removed by Satellite Lab for Analysis of: FECAL TC/EC TC MPN EC MPN TC/EC MPN (N/A)	

PART B: GENERAL INFORMATION- INDIANA LABORATORY

Received by/Lab ID: JMYNSS	Samples Received on Ice? (YES) NO
Date/Time Received: 3/30 BW 17a	Date Sampled: 3/29 PW
Method of Delivery: FedEx UPS Client Drop off ~~ESL courier~~ Other: _____	
Sample Receipt Temperature: 0.0 °C	IR Gun ID: 3
Sample State of Collection: (PA) NY OH (WV) Other: _____	PWSID Compliance Drinking Water Samples: YES (NO)

JA 3/30/22

PART C: Receipt Details

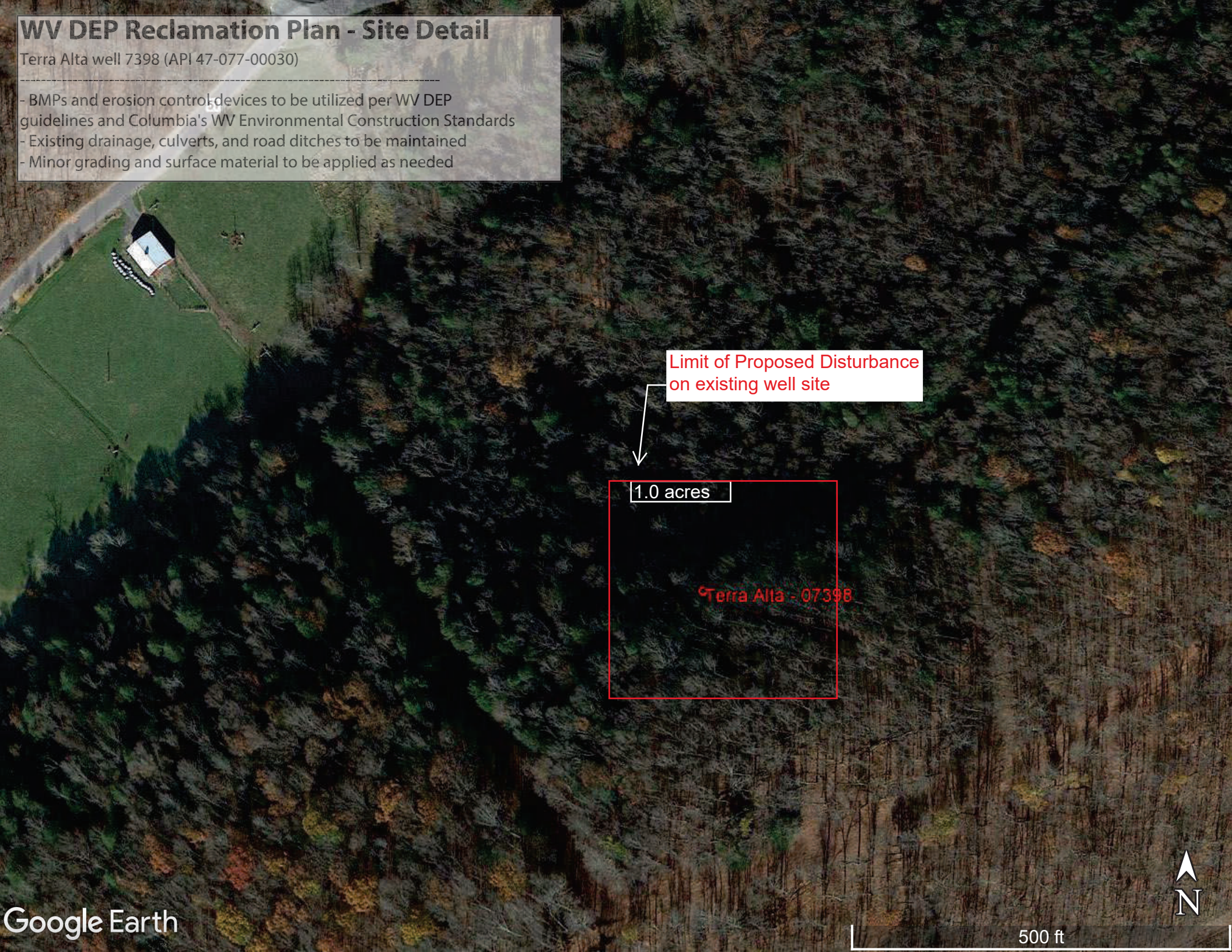
Completed (if different from above): _____ / / _____
Signature Date Time

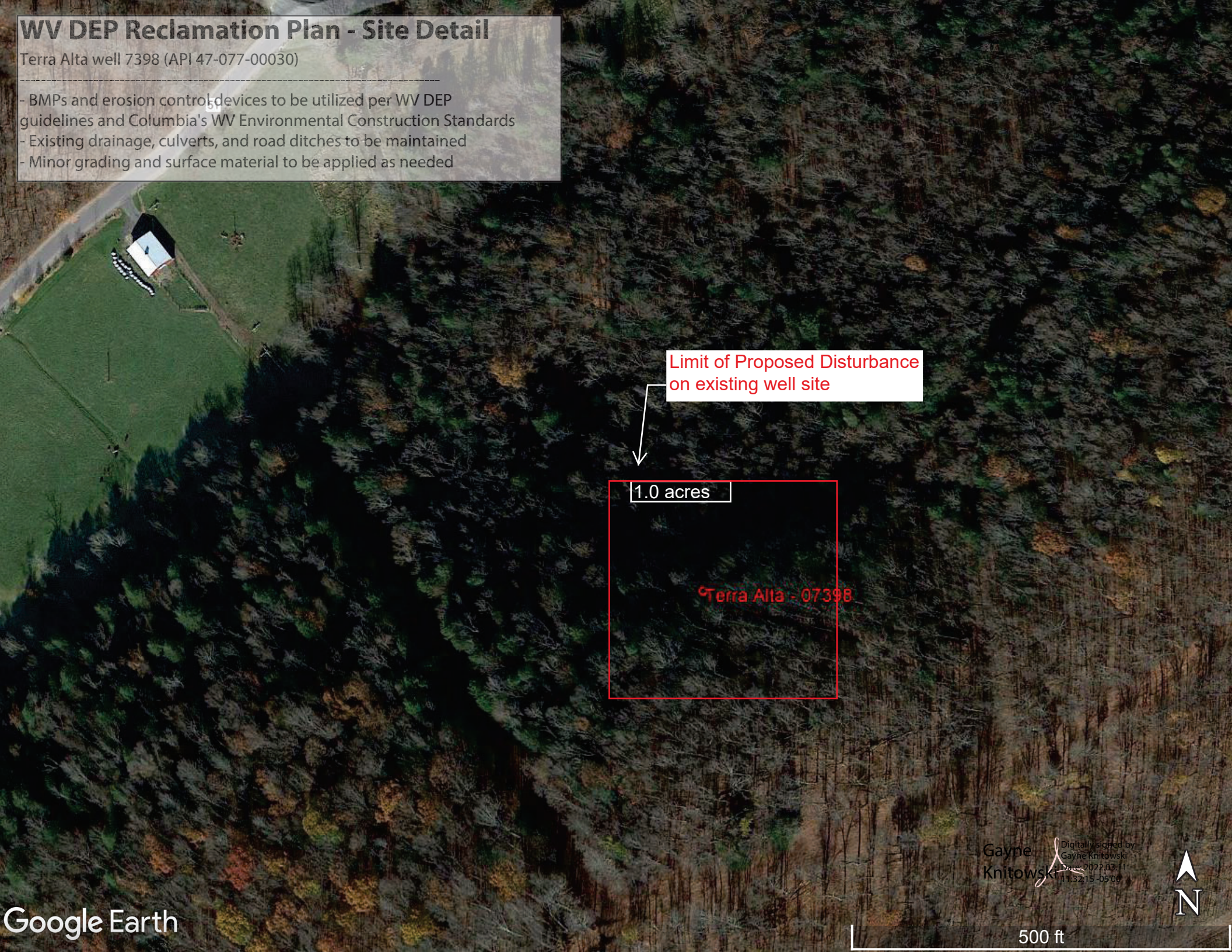
Sample Receipt Criteria		Comments/Qualifiers (Required for Non-Conforming Items)
Chain of custody documents included with samples?	(YES) NO	Comments:
COC form is properly signed in relinquished/received sections?	(YES) NO	Comments:
Sample containers intact and sealed?	(YES) NO	Circle Applicable: Damaged Container Leaking Container Custody Seal Broken Other: _____
Number of containers received matches number indicated on COC?	(YES) NO	Sample IDs and Containers Affected:
Sample IDs on COC match IDs on bottles?	(YES) NO	Sample IDs and Containers Affected:
Date and time on COC match date and time on bottles?	(YES) NO	Sample IDs and Containers Affected:
Samples received within holding time?	(YES) NO	Sample IDs and Containers Affected:
Samples received at appropriate pH for analysis requested?	(YES) NO	Sample IDs and Containers Affected and Observed pH:
Samples requiring thermal preservation within 0 ≤ 6°C? Microbiology within 0 ≤ 10°C?	(YES) NO	For non-WV samples outside of thermal preservation range sampled same day and received on ice are considered acceptable as long as the cooling process has begun.
Adequate sample volume received?	(YES) NO	Analyses Affected:
VOA vials free of headspace (defined as < 6 mm bubble)?	(YES) NO	Sample IDs and Containers Affected:
Other Comments:		**Deficiency Log Created:** (YES) (NO)

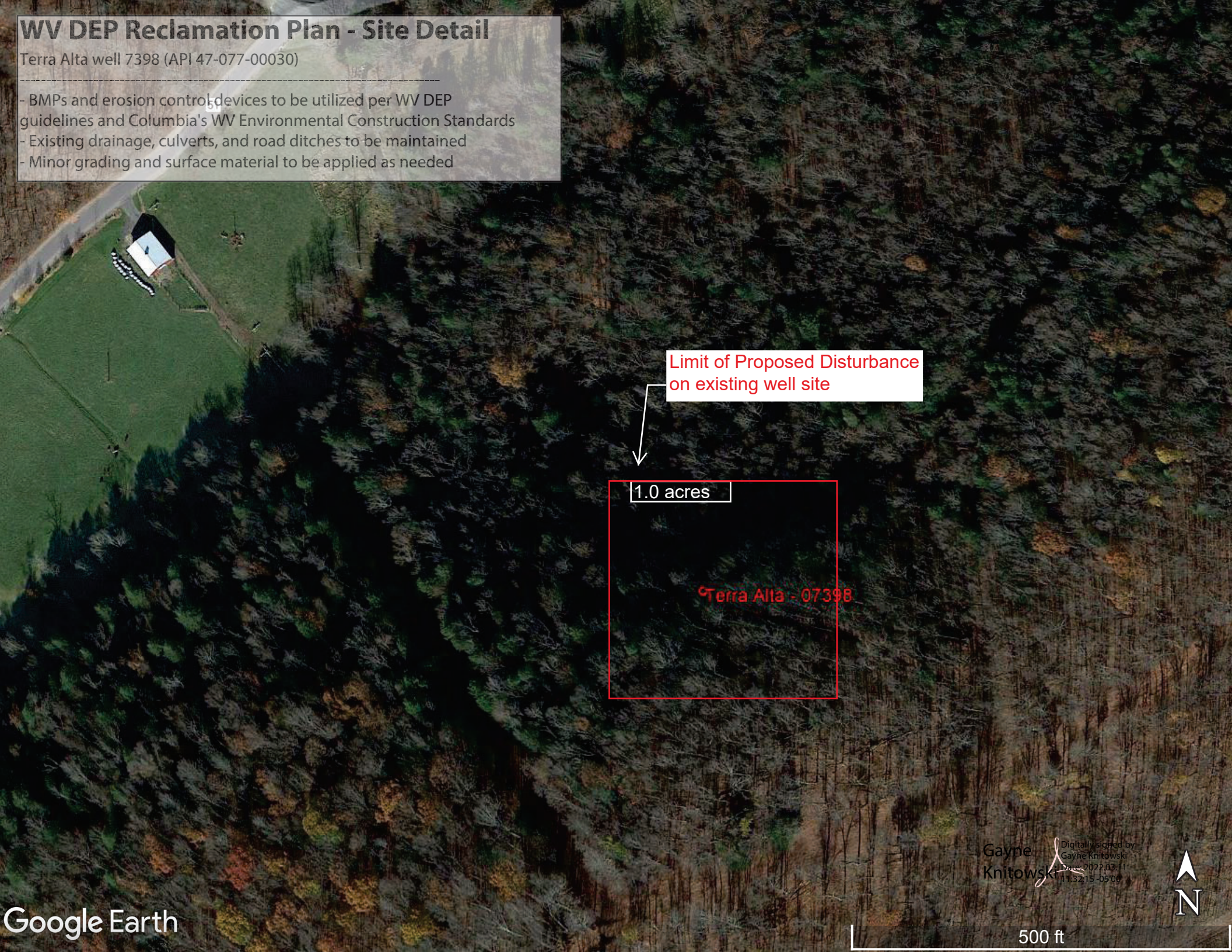
WV DEP Reclamation Plan - Site Detail

Terra Alta well 7398 (API 47-077-00030)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed




WV DEP Reclamation Plan - Site Detail
Terra Alta well 7398 (API 47-077-00030)
- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed
Limit of Proposed Disturbance on existing well site
1.0 acres
Terra Alta - 07398
Gayne Knitowski
Digitally signed by Gayne Knitowski
Date: 2022.03.11 11:32:15 -05'00'
N
500 ft
Google Earth


WV DEP Reclamation Plan - Site Detail
Terra Alta well 7398 (API 47-077-00030)
- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
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Terra Alta - 07398
Gayne Knitowski
Digitally signed by Gayne Knitowski
Date: 2022.03.11 11:32:15 -05'00'
N
500 ft
Google Earth

Form WW-9

Operator's Well No. Shannon Fields OHI 210H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 20.94 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 17

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Attachment 3C			

Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Gayne Knitowski Digitally signed by Gayne Knitowski Date: 2022.01.25 08:04:19 -05'00'

Comments: _____

Title: Oil & Gas Inspector Date: 1-25-2022

Field Reviewed? (X) Yes ( ) No

Form WW-9

Operator's Well No. Shannon Fields OHI 210H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 20.94 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 17

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
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Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: Oil & Gas Inspector Date: _____

Field Reviewed? (_____) Yes (_____) No

Ordering Instructions

MRO18 – Facilities Maintenance and Repair & Operations (MRO) and Industrial Supplies

Ordering Requirements – Any Agency may order Facilities MRO and Industrial Supplies from the vendor's (Fastenal) online catalog. The ordering guidelines are:

1. If the product is available on another statewide contract (SWC), it must be ordered from that contract, not Fastenal. http://www.state.wv.us/admin/purchase/swc/default.html

2. The intended use of this contract is for MRO products and Industrial supplies that Fastenal can provide. http://www.state.wv.us/admin/purchase/swc/INDEQP.htm

Contact Information:

Fastenal West Virginia Government Sales Office
905 Morris Street
Charleston, West Virginia 25301
Phone: 304-345-5108
wvgov@fastenal.com

Special Instructions– Contract Pricing Viewing Instructions--Only

1. Navigate to www.fastenal.com



1. At the upper right-hand corner of the page, select My Account.

2. For Username enter “access#1” (without the quotation marks).
3. For Password enter “wvcode11” (without the quotation marks).



4. Search items on the site as applicable.
5. This site is for price viewing only. Orders placed using this Username and Password combination is not monitored and will not be fulfilled. Please see important information below.

IMPORTANT:
You must create an account for your agency. If you need help, please contact the Dedicated Government Sales Team located in the dedicated Fastenal Government sales office information is listed below. DO NOT place orders on the price viewing site as they will not be processed by Fastenal. This is only for price viewing for the state of West Virginia.

How to get started on creating your Fastenal Online Account

Contact Information:

Fastenal West Virginia Government Sales Office
905 Morris Street
Charleston, West Virginia 25301
Phone: 304-345-5108
Email: wvgov@fastenal.com

How to Get Started:

Open an account at your dedicated Fastenal West Virginia Government Sales Office

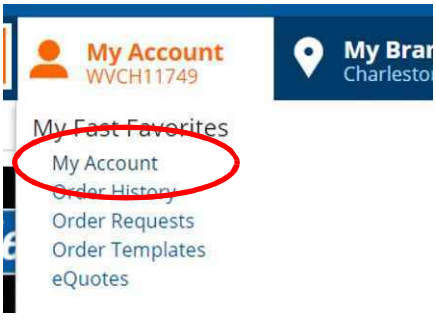
1. Contact your dedicated Fastenal West Virginia Government Sales Office (wvgov@fastenal.com)
2. Identify yourself as a State agency or political subdivision (please have your sales tax exemption number or certificate available)
3. Once you open an account, your dedicated sales team will take care of set-up under the State Contract (please allow 3 -5 business days for processing)

If you need assistance or want to place an order today, please contact Fastenal's West Virginia Government Sales Office 304.345.5108 or email wvgov@fastenal.com

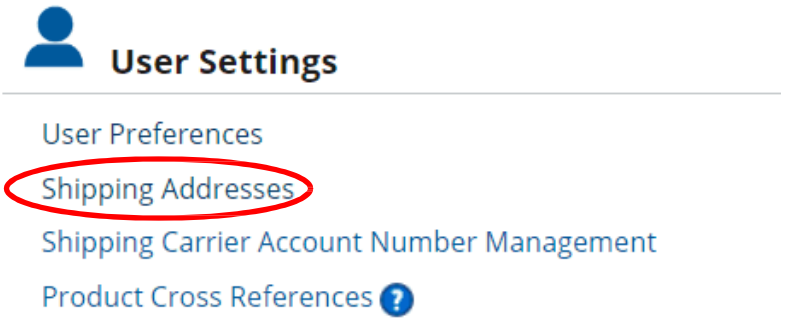
Register your account on Fastenal.com

Contact your West Virginia dedicated sales team to validate your email address and account number. Once your email has been updated to your account, allow 24 hours before registering on www.fastenal.com via the following steps:

1. Click on My Account
2. Click on Register and enter E-mail, Username, and Password
3. Enter the Security Code received via e-mail
4. Select "Government Contract" and enter contact info
5. Select the best option under "Do you have a Fastenal Account Number?"
   -"Yes, and I have two invoices from my account" – Account info will automatically link
   -"Yes, but I do not have two invoices from my account" – Account info will link when the Fastenal branch verifies your information
   -"No, I do not have a Fastenal account" – Call your dedicated sales team to set up an account which can be linked later
6. Click "My Account"



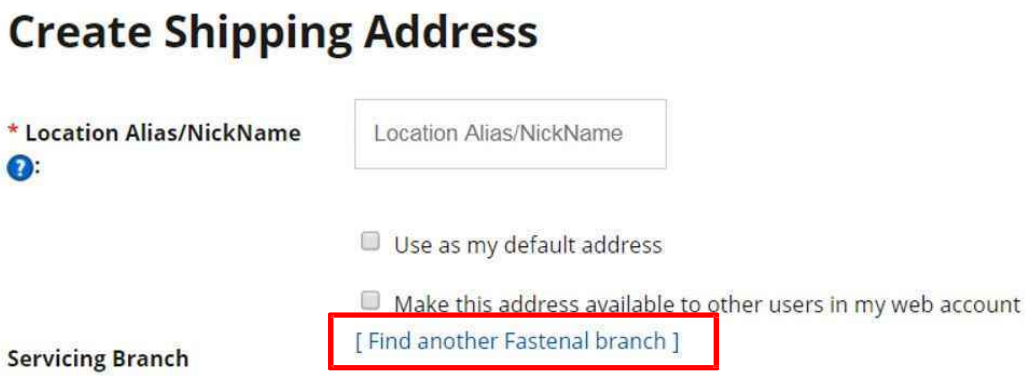
7. Scroll down to “User Settings” and choose Shipping Addresses



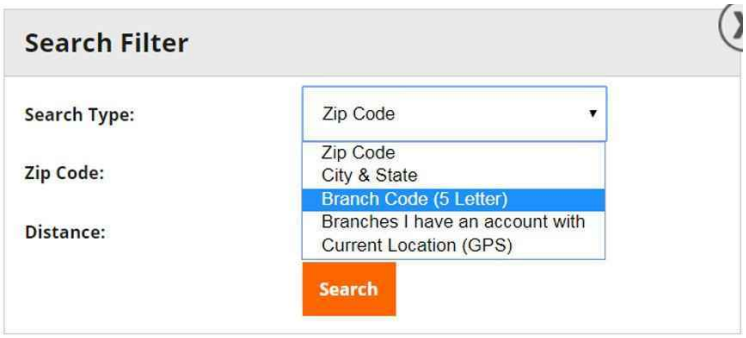
8. You will choose “Add Address”



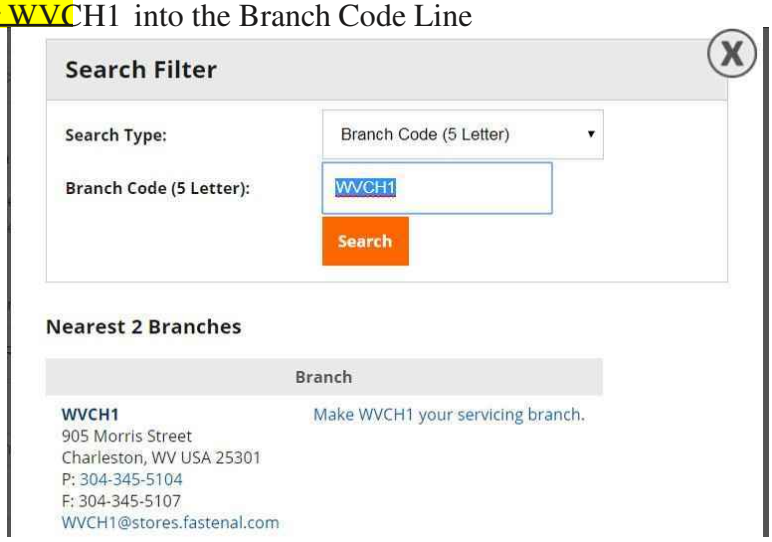
9. Choose “[Find another Fastenal branch]”



10. Scroll down to “Branch Code (5 Letter)”



11. Please enter WVCH1 into the Branch Code Line



12. Click on “Make WVCH1 your servicing branch” – ***This has to be chosen for your orders to be routed correctly.***

Contact Information:

Fastenal West Virginia Government Sales Office
905 Morris Street
Charleston, West Virginia 25301
Phone: 304-345-5108
Email: wvgov@fastenal.com

Ordering Instructions: An agency may order Maintenance, Repair, and Operations (MRO) equipment and Industrial Supplies from Vendor (FASTENAL) catalog. **The ordering guidelines are:**

A. An Agency delivery order (ADO) must be issued with the appropriate documentation attached for orders under $25,000.00 **EXCEPT** when any single item exceeds $10,000.00 and must be processed as a Central delivery order (CDO).
B. Agencies must obtain confirmation of every order and retained in the file for orders less than $25,000.00.
C. A Centralized delivery order (CDO) must be issues for orders over $25,000.00 or when any single item exceeds $10,000.00 and must be processed by the Purchasing Division.
D. Agencies should indicate the Statewide Contract MRO18 on all orders or quotes. All Quotes must be signed by an agent of Fastenal and an agency procurement officer identified on the Agency Procurement Designation Form on file with the WV Purchasing Division. A current list of procurement officers may be found at: http://www.state.wv.us/admin/purchase/vrc/agencyli.html

How to submit the completed order to the Vendor – All ADO's may be processed by the agency and sent to the vendor. All CDO's will be processed and sent to the vendor by the Purchasing Division.

POLITICAL SUBDIVISIONS: Contact Fastenal to confirm that contract pricing is available.

Contact Information:

Fastenal West Virginia Government Sales Office
905 Morris Street
Charleston, West Virginia 25301
Phone: 304-345-5108
wvgov@fastenal.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

6 inch production casing cement summary Big 464 3H L-004013 3H API 47-103-03432-00-00

1 message

Rig-Patterson294 <Patterson294@eqt.com> Sat, Apr 16, 2022 at 1:36 PM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

DEP Cement Form.docx
16K

Cement report Big 464 3H.pdf
5766K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Automatic reply: [EXTERNAL] Re: Address?

1 message

Zavatchan, John <JZavatchan@eqt.com> Thu, Jun 23, 2022 at 2:54 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

I am currently out of the office. If you require immediate assistance, please contact Erin Spine - espine@eqt.com

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

BIG 106H cement job report for 6" casing

1 message

Rig-Patterson292 <Patterson292@eqt.com> Fri, Jun 24, 2022 at 12:50 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "Vitovsky, Mitchell" <MVitovsky@eqt.com>

Kenneth,
Attached is the report for the successfully completed cement job on 6" production string for the BIG 245 106H. We are skidding to the BIG 245 114H and will be drilling 8 1/2" hole to approx 24,900'. We will then run 6" casing and cement. I will send you the cement report for the 114H once that well is completed.

Thank you,

Joe Eversman
Clayton Harmon
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

DEP Cement Report BIG245 106H.docx
17K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Big 464 5H Cement Job Log

1 message

Rig-Patterson294 <Patterson294@eqt.com> Fri, Apr 22, 2022 at 10:41 PM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

DEP Cement Form - Copy.docx
16K

Big 464 5H production cement job log .pdf
10372K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Big 464 7H production cement info

1 message

Rig-Patterson294 <Patterson294@eqt.com> Sat, Apr 30, 2022 at 10:40 PM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

Big 464 7H production cement job log.pdf
4031K

DEP Cement Form - Copy.docx
16K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Big 464 9H production cement reports

1 message

Rig-Patterson294 <Patterson294@eqt.com> Sat, May 7, 2022 at 5:19 PM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

DEP Cement Form.docx
16K

Production cement job report.pdf
7227K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

BIG245 104H 6" cement job form

1 message

Rig-Patterson292 <Patterson292@eqt.com> Mon, Jun 20, 2022 at 1:39 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Please see attached,

Good afternoon,
We have successfully completed the cement job on the 6" production string on the BIG245 104H. Plan moving forward is to skid ahead to the BIG245 106H to drill 8.5" our 8.5" hole section, Run 6" casing and cement.

Thank you and have a great day.

Matt Kiter
Clayton Harmon
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

DEP Cement Report BIG245 104H.docx
17K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

BIG245 114H cement job report for 6" casing

1 message

Rig-Patterson292 <Patterson292@eqt.com> Sat, Jul 2, 2022 at 7:05 AM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "Vitovsky, Mitchell" <MVitovsky@eqt.com>

Kenneth,
Attached is the report for the successfully completed cement job on 6" production string for the BIG 245 114H. We are skidding to the BIG 245 112H and will be drilling 8 1/2" hole to approx 26,516'. We will then run 6" casing and cement. I will send you the cement report for the 112H once that well is completed.

Joe Eversman
Kevin Slater
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

DEP Cement Report BIG245 114H.docx
17K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Cash Well Work Permits - OGI Signoff

13 messages

Wilson, Olivia <OPishioneri@eqt.com> Thu, Jun 30, 2022 at 4:32 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Good Afternoon Ken,

We are going to be submitting permit applications for the Cash 1H, 3H, 5H & 7H well work permits soon. The 1H will be a modification and the rest will be new permits. I have uploaded the files listed below to the box.com link here for you: https://myeqt.box.com/s/x98hrypxju7joc8ivth82h4zltuxmrzh. Can you please review & provide sign off on each well?

- WW-6B Forms
- WBDs
- WW-9 Forms (Note that Cash 1H does not require a WW-9 since this is a modification to an existing permit)
- Prognosis
- Site Safety & Environmental Plan
- Site As-built Drawings

Note that the Site Safety & Environmental Plan & The Site As-Built Drawings were previously approved by Bryan Harris. I wasn't sure if you would need to sign off on them as well so figured I would pass them along just in case. Let me know if you'd rather I email all of these pdfs to you, I will just have to send a few separate emails so they all go through so I figured a box link may be easier. Thank you!

Olivia Wilson

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

724.250.0180

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 8:24 AM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Good Morning Ken,

Just wanted to check in to make sure the box link I sent you last week worked. Let me know if you need me to send individual pdfs instead.

Thanks,

Olivia Wilson

724.250.0180

[Quoted text hidden]
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 9:57 AM
To: "Wilson, Olivia" <OPishioneri@eqt.com>

I will need individual pdfs please.
[Quoted text hidden]

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:05 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Hi Ken – see attachments for Cash 1H. I've also included the site safety plan & the approved drawings. I will send Cash 3H, 5H & 7H separately.

Thanks!

Olivia Wilson

724.250.0180

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Wednesday, July 6, 2022 9:57 AM
To: Wilson, Olivia <OPishioneri@eqt.com>
Subject: [EXTERNAL] Re: Cash Well Work Permits - OGI Signoff

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

---

3 attachments

Cash 1H_OGI Signoff Packet (Mod).pdf
1287K

Cash_ERP for Well Permits (Signed) 4.8.2021.pdf
2586K

2021.6.15 Cash Pad Approved Site Plans pgs 1 and 6.pdf
1839K

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:05 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Ken – attached is the packet for Cash 3H.

Thanks,

Olivia Wilson

724.250.0180

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Wednesday, July 6, 2022 9:57 AM
To: Wilson, Olivia <OPishioneri@eqt.com>
Subject: [EXTERNAL] Re: Cash Well Work Permits - OGI Signoff

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

I will need individual pdfs please.

[Quoted text hidden]

Cash 3H_OGI Signoff Packet (New).pdf
2057K

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:06 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Packet for Cash 5H.

Thanks,

Olivia Wilson

724.250.0180

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Wednesday, July 6, 2022 9:57 AM
To: Wilson, Olivia <OPishioneri@eqt.com>
Subject: [EXTERNAL] Re: Cash Well Work Permits - OGI Signoff

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

I will need individual pdfs please.

[Quoted text hidden]

Cash 5H_OGI Signoff Packet (New).pdf
2057K

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:06 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Packet for Cash 7H. Please confirm you received all pdfs when you get a minute. Thanks!

Olivia Wilson

724.250.0180

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Wednesday, July 6, 2022 9:57 AM
To: Wilson, Olivia <OPishioneri@eqt.com>
Subject: [EXTERNAL] Re: Cash Well Work Permits - OGI Signoff

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

I will need individual pdfs please.

[Quoted text hidden]

Cash 7H_OGI Signoff Packet (New).pdf
2016K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 10:12 AM
To: "Wilson, Olivia" <OPishioneri@eqt.com>

These are for an existing pad, is that correct ?
[Quoted text hidden]

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:13 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

The pad is currently being built & is scheduled to be finished around 7/20/22.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 10:16 AM
To: "Wilson, Olivia" <OPishioneri@eqt.com>

Thanks!
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 10:41 AM
To: "Wilson, Olivia" <OPishioneri@eqt.com>

Here you go.
[Quoted text hidden]

4 attachments

- **Cash 1H_OGI Signoff Packet (Mod).pdf**
  1356K
- **Cash 3H_OGI Signoff Packet (New).pdf**
  2133K
- **Cash 5H_OGI Signoff Packet (New).pdf**
  2132K
- **Cash 7H_OGI Signoff Packet (New).pdf**
  2093K

Wilson, Olivia <OPishioneri@eqt.com> Wed, Jul 6, 2022 at 10:50 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Zavatchan, John" <JZavatchan@eqt.com>, "Shrum, Becky" <BShrum@eqt.com>

Thank you!

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 10:59 AM
To: "Wilson, Olivia" <OPishioneri@eqt.com>

You are welcome.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Cavatica Unit 2H ICP #1 Cement notice

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 21, 2022 at 2:07 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

We are planning run intermediate casing and cement Cavatica Unit 2H API # 47103034820000 today 5/21/2022.

We will walk rig back to Cavatica Unit 1H and restart intermediate #1 sidetrack tomorrow 5/22/2022.

Please notify us if you have any questions or concerns.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Cavatica Unit 2H

AFE# A11829-D

API# 47103034820000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Cement results for Cavatica 1H, Surface cement, H&P 317

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sun, May 15, 2022 at 7:24 AM
To: Eric May <emay@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Here are the results for surface cement job. Thanks

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

CAVATICA 1H SURFACE CEMENT REPORT.pdf
233K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Cement results for Cavatica 1H, Surface cement, H&P 317

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sun, May 15, 2022 at 7:24 AM
To: Eric May <emay@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Here are the results for surface cement job. Thanks

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

CAVATICA 1H SURFACE CEMENT REPORT.pdf
233K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Corrected Completion Form

1 message

Rig-Patterson294 <Patterson294@eqt.com> Sat, Apr 23, 2022 at 12:23 AM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

DEP Cement Form - Copy.docx
16K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Denver Well Work Permits - ISO Request

7 messages

Shrum, Becky <BShrum@eqt.com> Thu, May 26, 2022 at 4:18 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Wilson, Olivia" <OPishioneri@eqt.com>, "Zavatchan, John" <JZavatchan@eqt.com>

Good Afternoon Ken,

We are going to be submitting permit applications for the Denver 1H, 3H, 5H, 7H & 9H well work permits soon. The 7H will be a modification and the rest will be new permits. Can you please review the attached documents (also listed below) & provide your approvals/sign offs?

- WW-6B Forms
- WBDs
- WW-9 Forms
- Prognosis
- Site Safety & Environmental Plan
- Site As-built Drawings

Let me know if you have any questions or need additional information.

Thank you,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Denver ISO.zip
10378K

Zavatchan, John <JZavatchan@eqt.com> Fri, May 27, 2022 at 6:54 AM
To: "Shrum, Becky" <BShrum@eqt.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Wilson, Olivia" <OPishioneri@eqt.com>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>

Good morning Kenneth.

Becky sent these files to you yesterday, but I don't believe you can receive ZIP files, so I am going to send them in multiple e-mails.

Attached are the as-built drawings and EAP for your review and signature. I will send the well specific information in a separate e-mail.

Thanks,

John Zavatchan

Project Specialist – Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

412-584-3132

jzavatchan@eqt.com

Schedule B

From: Shrum, Becky <BShrum@eqt.com>
Sent: Thursday, May 26, 2022 4:19 PM
To: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Cc: Wilson, Olivia <OPishioneri@eqt.com>; Zavatchan, John <JZavatchan@eqt.com>
Subject: Denver Well Work Permits - ISO Request

Good Afternoon Ken,

We are going to be submitting permit applications for the Denver 1H, 3H, 5H, 7H & 9H well work permits soon. The 7H will be a modification and the rest will be new permits. Can you please review the attached documents (also listed below) & provide your approvals/sign offs?

- WW-6B Forms
- WBDs
- WW-9 Forms
- Prognosis
- Site Safety & Environmental Plan
- Site As-built Drawings

Let me know if you have any questions or need additional information.

Thank you,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

FOCUS
Zero is Possible

[Quoted text hidden]

2 attachments

Denver AB - 11x17 (signed).pdf
4370K

Denver EAP 2022.05.10.pdf
3448K

Zavatchan, John <JZavatchan@eqt.com> Fri, May 27, 2022 at 6:57 AM
To: "Shrum, Becky" <BShrum@eqt.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "Wilson, Olivia" <OPishioneri@eqt.com>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>

Kenneth,

E-mail two of two. This is the well-specific information for the following wells:

Denver 1H – New well

Denver 3H – New well

Denver 5H – New well

Denver 7H – Permit number 103-03365

Denver 9H – New well

Please let us know if you need any additional information.

Have a good weekend!

John Zavatchan

Project Specialist – Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

412-584-3132

jzavatchan@eqt.com

Schedule B

[Quoted text hidden]
[Quoted text hidden]

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16 attachments

- **Denver 1H - WBD.pdf**
  58K
- **Denver 1H WW-6B Form 5.2022.pdf**
  392K
- **Denver 1H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf**
  118K
- **Denver 3H - WBD.pdf**
  137K
- **Denver 3H WW-6B Form 5.2022.pdf**
  392K
- **Denver 3H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf**
  113K
- **Denver 5H - WBD.pdf**
  57K
- **Denver 5H WW-6B Form 5.2022.pdf**
  391K
- **Denver 5H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf**
  109K
- **Denver 7H - WBD.pdf**
  97K
- **Denver 7H WW-6B Form 5.2022.pdf**
  554K
- **Denver 7H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf**
  119K
- **Denver 9H - WBD.pdf**
  57K
- **Denver 9H_WW-6B Form 5.2022.pdf**
  653K
- **Denver 9H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf**
  108K
- **DENVER GEOLOGIC PROGNOSIS.pdf**
  34K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, May 27, 2022 at 10:17 AM
To: "Zavatchan, John" <JZavatchan@eqt.com>

Here you go.
[Quoted text hidden]

2 attachments

Denver AB - 11x17 (signed).pdf
4417K

Denver EAP 2022.05.10.pdf
3501K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, May 27, 2022 at 10:32 AM
To: "Zavatchan, John" <JZavatchan@eqt.com>

Here you go.
[Quoted text hidden]

10 attachments

Denver 1H WW-6B Form 5.2022.pdf
454K

Denver 1H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf
172K

Denver 3H WW-6B Form 5.2022.pdf
454K

Denver 3H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf
172K

Denver 5H WW-6B Form 5.2022.pdf
454K

Denver 5H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf
172K

Denver 7H WW-6B Form 5.2022.pdf
475K

Denver 7H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf
172K

Denver 9H_WW-6B Form 5.2022.pdf
514K

Denver 9H_WW-9 - Fluids Cuttings Rec Plan 5.2022.pdf
172K

Zavatchan, John <JZavatchan@eqt.com> Fri, May 27, 2022 at 10:38 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Got ‘em both, Thanks and have a great weekend!

JZ

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Friday, May 27, 2022 10:33 AM
To: Zavatchan, John <JZavatchan@eqt.com>
Subject: [EXTERNAL] Re: Denver Well Work Permits - ISO Request

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, May 27, 2022 at 10:58 AM
To: "Zavatchan, John" <JZavatchan@eqt.com>

You too.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

DEP Form and cement report for Big 464 1H

1 message

Rig-Patterson294 <Patterson294@eqt.com> Fri, Apr 8, 2022 at 5:21 PM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

DEP Cement Form - Copy (2).docx
16K

Document_2022-04-08_171436.pdf
4523K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

FW: Blatt redline

1 message

Dawn Keller <Dawn_Keller@swn.com> Thu, May 19, 2022 at 10:29 AM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Hi Ken,

I was hoping to meet with you to get a redline signed for a berm reduction on the Blatt Pad located in Wetzel County. We have this pad on the drill schedule and would like to reduce the berm to create more room on the pad for equipment. The plan is attached.

Also, if you have Tyler county too, I would like to get the Spencer FWI closure released. We believe that we have reached the 70% vegetative coverage required for E&S removal and release of the freshwater impoundment closure.

Let me know when you are available to review the redline.

Thanks!

Dawn Keller

Senior Environmental Specialist

Southwestern Energy

1300 Fort Pierpont Drive Suite 201

Morgantown, WV 26508

O: 304-884-1683

C: 501-697-7230

From: John Dubowski <John_Dubowski@swn.com>
Sent: Wednesday, May 18, 2022 1:15 PM
To: Dawn Keller <Dawn_Keller@SWN.COM>
Cc: Kalab Taylor <Kalab_Taylor@SWN.COM>
Subject: Blatt redline

Dawn,

Will you request a redline for the Blatt site?

John Dubowski
Construction Superintendent

Southwestern Energy

1300 Fort Pierpont Dr., Suite 201

Morgantown WV 26508

Cell: 346-773-6078, Tel: 304-884-1678
john_dubowski@swn.com

www.swn.com

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person responsible for delivering it to the addressee, you may not copy or distribute this communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

Blatt Berm Reduction Redline.pdf
818K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

FW: PNG 29 Video and Pictures

2 messages

Fry, Doug <DFry@eqt.com> Wed, Jun 29, 2022 at 7:04 AM
To: "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>

Hello Ken, I had a Lidar camera out to the Cox well to check for the minute gases we see on annular flows and no gas was present after plugging. We will cement to surface today and rig down.
We will be moving to the Leasure well next.
Thank you.

-----Original Message-----
From: McWhirter, Kenny <KMcWhirter@eqt.com>
Sent: Tuesday, June 28, 2022 9:49 AM
To: Fry, Doug <DFry@eqt.com>
Subject: PNG 29 Video and Pictures

Your message is ready to be sent with the following file or link attachments:

IR_0635
IR_0636
MOV_0634

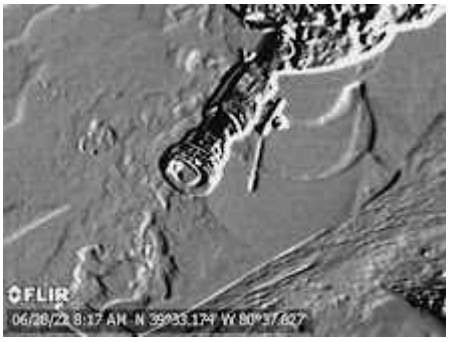
Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.
FOCUS
Zero is Possible

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

3 attachments



IR_0635.jpg
393K



IR_0636.jpg
384K

MOV_0634.mp4
10694K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jun 29, 2022 at 8:24 AM
To: "Fry, Doug" <DFry@eqt.com>

OK Thanks.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Fwd: Cedar Pad Access Road Pre-Construction Meeting

2 messages

Harris, Bryan O <bryan.o.harris@wv.gov> Tue, May 17, 2022 at 10:48 AM
To: Kenneth L Greynolds <kenneth.l.greynolds@wv.gov>

---------- Forwarded message ---------
From: **Frank Cosner** <fcosner@anteroresources.com>
Date: Tue, May 17, 2022 at 8:54 AM
Subject: Cedar Pad Access Road Pre-Construction Meeting
To: Aaron Kunzler <akunzler@anteroresources.com>, Adam Voris <avoris@anteroresources.com>, Michael Cleaves <mcleaves@anteroresources.com>, Tony Moenich <tmoenich@anteroresources.com>, Aric Martin <amartin@anteroresources.com>, Jonah Turner <jturner@anteroresources.com>, Daniel Grimes <dgrimes@anteroresources.com>, Bryan.O.Harris@wv.gov <Bryan.O.Harris@wv.gov>, Gast, Corey M <Corey.M.Gast@wv.gov>, Rizo, Erasmo <erizo@cecinc.com>, jrobinson@cecinc.com <jrobinson@cecinc.com>, John Angiulli <jangiulli@anteroresources.com>, Daniel Bulian <dbulian@anteroresources.com>, Brady Gutta <BGutta@anteroresources.com>, Krissa Chapman <kchapman@anteroresources.com>, Randall Randolph <rrandolph@anteroresources.com>, Jeremy Burkhammer <jburkhammer@anteroresources.com>, william.s.wood@wv.gov <william.s.wood@wv.gov>, Drew Snider <dsnider@anteroresources.com>, Robert Wirks <rwirks@anteroresources.com>, Josh Minnich <jminnich@anteroresources.com>, David Patsy <dpatsy@anteroresources.com>, Dwaine Doss (dwainedoss@dossenterprises.com) <dwainedoss@dossenterprises.com>, Charlie Chase <charlie.chase@dossenterprises.com>, Greg Miller - Doss <greg@dossenterprises.com>, Mike Thomas <mike.thomas@dossenterprises.com>, Shawn Fleming <shawn.fleming@dossenterprises.com>, rob.barnosky@dossenterprises.com <rob.barnosky@dossenterprises.com>

Add that pickup trucks can access McKimmie Ridge at the Elementary School in Reader.

We will conduct the Preconstruction Meeting for the start of the Cedar Pad Access Road build. We will meet at the wide area on McKimmie Ridge approx.. 700 feet northeast of the proposed Cedar Pad Access Road entrance.

Design – Need 4 sets of large plans

6 sets of small plans.

8 EA. Geotech reports.

Directions to the site (Bonded Route for large trucks)

From RT-20 in Pine Grove, WV (In front of Valley High School) turn east onto North Fork Road follow to next intersection across 2nd bridge. Turn left onto CO. 15/17 (N Fork Rd) and Travel 2.2 miles. Turn left onto WV-17 (Barker Run Road) and travel for 2.3 miles. Turn Left onto CO. 17/1 (Morgan Ashland Ridge Road) and travel 2.7 miles. Turn left onto CO. 52 (McKimmie Ridge Rd) go 1.6 miles to proposed Cedar Pad Access Road entrance on the left. Please be sure to abide by the Antero posted speed limits at all times. Residents will take pictures or videos of speeding and send to Antero.

Address

1934 McKimmie Ridge Rd, Reader WV 26167

Entrance Coordinates (Nad 83):

Lat: 39.585290°

Long: -80.706670°

As always, some of you are included for informational purposes only and do not need to attend unless you would like to.

Please forward meeting invite to anyone I may have missed.

Thanks very much,

Frank Cosner

Senior Construction Supervisor - WV

Antero Resources

535 White Oaks Blvd

Bridgeport, WV 26330

304 641-0810 Cell

304-842-4100 Office

304-842-4527 Direct

FCosner@AnteroResources.Com

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

invite.ics
7K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Tue, May 17, 2022 at 12:28 PM
To: "Harris, Bryan O" <bryan.o.harris@wv.gov>

Thanks Bryan
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

H&P 317 Update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Wed, May 18, 2022 at 5:59 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

We have cut off the 9 5/8” intermediate casing on the Cavatica unit 1H at 1,770’ and are currently laying down the casing. We will trip in hole and verify depth prior to setting cement kick off plug early tomorrow morning. While waiting on cement we will walk 15’ to the Cavatica 2H and drill surface and intermediate #1 and then walk rig back to the Cavatica 1H to drill intermediate #1 sidetrack.

Please let us know if you have any questions or concerns.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

H&P 317 Update

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Thu, May 19, 2022 at 8:43 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run surface casing and cement Cavatica Unit 2H API # 47103034820000.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Cavatica Unit 2H

AFE# A11829-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 21, 2022 at 12:40 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run intermediate casing and cement Cavatica Unit 2H API # 47103034820000.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Cavatica Unit 2H

AFE# A11829-D

API# 47103034820000

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Leasure #2 P&A Application Submittal - 2022

1 message

Shrum, Becky <BShrum@eqt.com> Mon, Mar 21, 2022 at 9:27 AM
To: "McLaughlin, Jeffrey W" <Jeffrey.W.McLaughlin@wv.gov>, "Rhodes, Jacob K" <Jacob.K.Rhodes@wv.gov>, "Brewer, Charles T" <Charles.T.Brewer@wv.gov>
Cc: "Spine, Erin" <ESpine@eqt.com>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Good Morning Jeff,

Attached is a plugging submittal for the Leasure #2 well. The inspector's signoff is included in the attachment. It is currently on the schedule for 6/27/2022.

I will also FedEx a hard copy to your office this week.

Let me know if you have questions.

Thanks,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Leasure #2_P&A Submittal 3.21.2022.pdf
2991K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Leasure #2 P&A Inspector Review/Signoff Requested

5 messages

Shrum, Becky <BShrum@eqt.com> Mon, Mar 14, 2022 at 3:00 PM
To: "Harris, Bryan O" <bryan.o.harris@wv.gov>, "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>

Good Afternoon Bryan & Ken,

I wasn't sure who would be reviewing this, so I wanted to send it to both.

Attached is the plugging application for the Leasure #2 well that we intend to plug in a few months. Can you please review & provide your signoff as needed? Let me know if you need additional information or if you'd like to meet with someone from our plugging team to discuss.

Thank you,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Leasure #2_Notification & Inspector Packet 3.14.2022.pdf
2339K

Shrum, Becky <BShrum@eqt.com> Thu, Mar 17, 2022 at 9:14 AM
To: "Harris, Bryan O" <bryan.o.harris@wv.gov>, "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>

Good Morning,

I was just checking to see if either of you were able to review this yet?

Thank you,

Becky Shrum

EQT Production Company

[Quoted text hidden]
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Mar 18, 2022 at 9:22 AM
To: "Shrum, Becky" <BShrum@eqt.com>

Here you go.
[Quoted text hidden]

Leasure #2_Notification & Inspector Packet 3.14.2022 (1).pdf
2408K

Shrum, Becky <BShrum@eqt.com> Mon, Mar 21, 2022 at 8:33 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Perfect. Thanks, Ken!

Becky Shrum

EQT Production Company

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Friday, March 18, 2022 9:22 AM
To: Shrum, Becky <BShrum@eqt.com>
Subject: [EXTERNAL] Re: Leasure #2 P&A Inspector Review/Signoff Requested

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Mon, Mar 21, 2022 at 9:00 AM
To: "Shrum, Becky" <BShrum@eqt.com>

You're welcome.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Michael Kuhn 16H Cement Job Log

1 message

Rig-Patterson294 <Patterson294@eqt.com> Sun, Mar 27, 2022 at 6:45 AM
To: "Kenneth.L.Greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

2 attachments

DEP Cement Form - Copy.docx
16K

Michael Kuhn 16H Production Cement Job Log.pdf
6747K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice of spud

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 14, 2022 at 12:37 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hour notice to spud, Run casing and cement surface on the Cavatica 1H

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice of spud of ICP1

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sun, May 15, 2022 at 5:53 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hour notice to spud ICP1, Run casing and cement ICP1 on the Cavatica 1H

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice of spud of ICP1

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sun, May 15, 2022 at 5:53 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hour notice to spud ICP1, Run casing and cement ICP1 on the Cavatica 1H

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice of spud

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 14, 2022 at 12:37 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hour notice to spud, Run casing and cement surface on the Cavatica 1H

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Red Lady

Well: Cavatica Unit 1H

AFE# A11831-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice to re-enter Toroweap 1H

1 message

Rig H&P 317 <righandp317@anteroresources.com> Wed, Apr 27, 2022 at 5:57 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to re-enter Toroweap 1H. API# 47095027650000

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice to run and cement production casing on Toroweap 1H

1 message

Rig H&P 317 <righandp317@anteroresources.com> Tue, May 3, 2022 at 7:02 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run 5.5 production casing and cement Toroweap 1H.

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 1H

AFE# A116179D

API: 47-095-02765-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Notice to run and cement production casing on Toroweap 2H

1 message

Rig H&P 317 <righandp317@anteroresources.com> Mon, Apr 25, 2022 at 3:52 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice to run and cement production casing on Toroweap 2H. 47095027660000

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Patterson 292 BIG 245 102H 6" Cement job

1 message

Rig-Patterson292 <Patterson292@eqt.com> Thu, Jun 16, 2022 at 2:19 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Good afternoon,
We have successfully cemented our production string.
Plan forward is to skid over to the BIG245 104H to drill, run casing and cement the production string.

Thank you and have a great day.

Matt Kiter
Clayton Harmon
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

DEP Cement Report BIG245 102H.docx
17K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Patterson 292, BIG 245 102H Est Spud

1 message

Rig-Patterson292 <Patterson292@eqt.com> Wed, Jun 8, 2022 at 8:10 AM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "Vitovsky, Mitchell" <MVitovsky@eqt.com>, "Barrett, Ronald (Contractor)" <Ron.Barrett@eqt.com>

Good morning,
We are planning to spud on the BIG 245 102H, Permit # 47-103-03440-00-00 on Friday 6/10/22 @ 6am.

Thank you and have a great day.

Matt Kiter
Kevin Slater
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Patterson 292, BIG 245

1 message

Rig-Patterson292 <Patterson292@eqt.com> Tue, Jun 14, 2022 at 3:38 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Good afternoon,
We plan to run 6" production casing and cement the BIG 245 102H within the next 48 hrs.
After this we plan to skid to the BIG 245 104H and begin drilling our 8.5" hole section.

Thank you.

Matt Kiter
Kevin Slater
412-266-8208
Patterson 292
Patterson292@eqt.com

FOCUS
Zero is Possible

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RE: BIG245 112H 47-103-03445 - Well Work Permit Modification

6 messages

Zavatchan, John <JZavatchan@eqt.com> Mon, Mar 14, 2022 at 10:42 AM
To: "Bryan Harris (Bryan.O.Harris@wv.gov)" <bryan.o.harris@wv.gov>, "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Wilson, Olivia" <OPishioneri@eqt.com>, "Weimer, Branden" <Branden.Weimer@eqt.com>

Good morning Ken.

Bryan let me know this morning that you are now the OGI for Wetzel County. Please see my request below and let me know if you have any questions or concerns.

Thanks,

John Zavatchan

Project Specialist – Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

412-584-3132

jzavatchan@eqt.com

Schedule B

From: Zavatchan, John
Sent: Monday, March 14, 2022 10:36 AM
To: Bryan Harris (Bryan.O.Harris@wv.gov) <bryan.o.harris@wv.gov>
Cc: Shrum, Becky (BShrum@eqt.com) <BShrum@eqt.com>; Pishioneri, Olivia (OPishioneri@eqt.com) <OPishioneri@eqt.com>
Subject: BIG245 112H 47-103-03445 - Well Work Permit Modification

Bryan,

EQT is hoping to submit a modification to the subject well permit to extend the approved lateral. When you get a chance, can you review the attached documents and provide signoff?

Let me know if you have any questions or concerns.

Thanks,

John Zavatchan

Project Specialist – Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

412-584-3132

jzavatchan@eqt.com

Schedule B

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

BIG245 112H WW-6B for OGI Signoff 2022.03.14.pdf
647K

Zavatchan, John <JZavatchan@eqt.com> Wed, Mar 16, 2022 at 9:27 AM
To: "Bryan Harris (Bryan.O.Harris@wv.gov)" <bryan.o.harris@wv.gov>, "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>
Cc: "Shrum, Becky" <BShrum@eqt.com>, "Wilson, Olivia" <OPishioneri@eqt.com>, "Weimer, Branden" <Branden.Weimer@eqt.com>

Good morning Ken!

Have you had a chance to look at the attached documents? Can you sign them digitally?

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BIG245 112H WW-6B for OGI Signoff 2022.03.14.pdf
647K

Zavatchan, John <JZavatchan@eqt.com> Wed, Mar 23, 2022 at 11:32 AM
To: "Greynolds, Kenneth L" <Kenneth.L.Greynolds@wv.gov>

Ken,

As we discussed. Please let me know if you have any questions.

Thanks,

John Zavatchan

Project Specialist – Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

412-584-3132

jzavatchan@eqt.com

Schedule B

From: Zavatchan, John
Sent: Monday, March 14, 2022 10:43 AM
To: Bryan Harris (Bryan.O.Harris@wv.gov) <bryan.o.harris@wv.gov>; Greynolds, Kenneth L <Kenneth.L.Greynolds@wv.gov>
Cc: Shrum, Becky (BShrum@eqt.com) <BShrum@eqt.com>; Pishioneri, Olivia (OPishioneri@eqt.com) <OPishioneri@eqt.com>; Weimer, Branden (Branden.Weimer@EQT.COM) <Branden.Weimer@EQT.COM>

[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

BIG245 112H WW-6B for OGI Signoff 2022.03.14.pdf
647K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Thu, Mar 24, 2022 at 8:32 AM
To: "Zavatchan, John" <JZavatchan@eqt.com>

Here you go.
[Quoted text hidden]

BIG245 112H WW-6B for OGI Signoff 2022.03.14.pdf
721K

Zavatchan, John <JZavatchan@eqt.com> Thu, Mar 24, 2022 at 8:34 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Thanks Ken!

JZ

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Thursday, March 24, 2022 8:32 AM
To: Zavatchan, John <JZavatchan@eqt.com>
Subject: [EXTERNAL] Re: FW: BIG245 112H 47-103-03445 - Well Work Permit Modification

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Thu, Mar 24, 2022 at 8:36 AM
To: "Zavatchan, John" <JZavatchan@eqt.com>

You are welcome.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Re: H&P 519 - Ryland Unit 3H (03458) update

2 messages

Harris, Bryan O <bryan.o.harris@wv.gov> Mon, Mar 7, 2022 at 7:15 AM
To: Rig H&P 519 <righandp519@anteroresources.com>, Kenneth L Greynolds <kenneth.l.greynolds@wv.gov>

Kenneth.l.greynolds@wv.gov

On Mon, Mar 7, 2022 at 7:13 AM Rig H&P 519 <righandp519@anteroresources.com> wrote:

> Can you send us the email address for Ken, Thanks
>
> Antero Resources Company Representatives
> Rick Lawson / Matt Honeycutt
>
> H&P 519
>
> Pad: Journeyman
>
> Well: Ryland Unit 3H
>
> AFE# A11661-D
>
> API: 47-103-03458
> Rig Phone: (303) 353-5456
>
> Email: Righandp519@anteroresources.com
>
> ---
>
> **From:** Harris, Bryan O <bryan.o.harris@wv.gov>
> **Sent:** Monday, March 7, 2022 7:00 AM
> **To:** Rig H&P 519 <righandp519@anteroresources.com>
> **Subject:** Re: H&P 519 - Ryland Unit 3H (03458) update
>
> This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.
>
> ---
>
> You can remove me from email string, you have a new inspector.
>
> Ken Greynolds
>
> On Sat, Mar 5, 2022 at 5:08 PM Rig H&P 519 <righandp519@anteroresources.com> wrote:
>
> > Good Afternoon Mr. Harris,
> >
> > We are currently drilling ahead in the lateral section of the well. We anticipate to TD this evening, and will begin running production casing Sunday 3/6/2022, followed by pumping production cement on Monday 3/7/2022.

Thanks,

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 3H

AFE# A11661-D

API: 47-103-03458
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Rig H&P 519 <righandp519@anteroresources.com> Mon, Mar 7, 2022 at 7:20 AM
To: "Harris, Bryan O" <bryan.o.harris@wv.gov>, Kenneth L Greynolds <kenneth.l.greynolds@wv.gov>

Ok thanks

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 28, 2022 at 1:05 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to spud, Run surface casing, and cement Baldy 2H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 2H

AFE# A11835-D

API# 47103034790000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Fri, May 27, 2022 at 1:20 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run intermediate casing and cement Baldy 1H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 1H

AFE# A11837-D

API# 47103034780000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Tue, May 24, 2022 at 5:05 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to spud, run surface, and cement Baldy 1H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 1H

AFE# A11837-D

API# 47103034780000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Tue, May 24, 2022 at 5:05 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to spud, run surface, and cement Baldy 1H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 1H

AFE# A11837-D

API# 47103034780000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Thu, Jun 30, 2022 at 5:50 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hr Notice to run production casing and cement Baldy 2H

Antero Resources Company Representatives

James Washburn/Eric Comer

H&P 317

Pad: Red Lady

Well: Baldy Unit 2H

AFE# A11835-D

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Tue, Jun 14, 2022 at 5:03 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run 5.5 production casing and cement Baldy 3H.

Antero Resources Company Representatives

James Washburn/Eric Comer

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Rig H&P 317 <righandp317@anteroresources.com> Tue, Jun 21, 2022 at 11:20 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached is the Production cement report from the Baldy 3h. We perforated casing @18,410'-18,420' and pumped cement. We currently have the cement head on and shut in with 1900 psi on it. We will hold for 22 hrs. and will then be walking to the Baldy 2H to drill out.

Antero Resources Company Representatives

Aaron Marlow/Chance Darkow

[Quoted text hidden]
[Quoted text hidden]

cement report Baldy 3H Production.pdf
302K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Mon, Jun 20, 2022 at 6:21 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

We are running in to perf casing to try and be able to circulate.

Antero Resources Company Representatives

Aaron Marlow/Chance Darkow

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

From: Rig H&P 317 <>
Sent: Sunday, June 19, 2022 8:24 AM
To: 'Kenneth.l.greynolds@wv.gov' <Kenneth.l.greynolds@wv.gov>
Subject: RIG 317 update

We ran into issues on Circulating Casing, Production casing is in the ground but not cemented. We are currently working on establishing flow to try and continue operations, will update as we go.

Antero Resources Company Representatives

Aaron Marlow/Chance Darkow

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sun, Jun 19, 2022 at 8:23 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

We ran into issues on Circulating Casing, Production casing is in the ground but not cemented. We are currently working on establishing flow to try and continue operations, will update as we go.

Antero Resources Company Representatives

Aaron Marlow/Chance Darkow

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Fri, Jun 17, 2022 at 8:21 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to walk rig to Baldy 2H and re-enter.

Antero Resources Company Representatives

Aaron Marlow/Chance Darkow

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

1 message

Rig H&P 317 <righandp317@anteroresources.com> Wed, Jun 1, 2022 at 10:01 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice to run casing and cement ICP

Antero Resources Company Representatives

James Washburn/Eric Comer

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Mon, May 30, 2022 at 1:01 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run intermediate casing and cement Baldy 2H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 2H

AFE# A11835-D

API# 47103034790000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Rig H&P 317 <righandp317@anteroresources.com> Mon, May 30, 2022 at 6:14 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to spud, run surface casing, and cement Baldy 3H.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 3H

AFE# A11833-D

API# 47103034800000

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 28, 2022 at 1:07 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached cement reports so far.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 1H

AFE# A11837-D

API# 47103034780000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

7 attachments

- **JOB REPORT.pdf** 313K
- **CAVATICA 1H KOP CEMENT REPORT.pdf** 239K
- **CAVATICA 1H SURFACE CEMENT REPORT.pdf** 233K
- **JOB REPORT.pdf** 283K
- **CAVATICA 2H INTERM CEMENT REPORT.pdf** 221K
- **CAVATICA 2H SURFACE CEMENT REPORT.pdf** 227K
- **JOB REPORT.pdf** 262K

Rig H&P 317 <righandp317@anteroresources.com> Sat, May 28, 2022 at 11:40 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached cement report.

Antero Resources Company Representatives

Aaron Marlow/Frank Doherty

H&P 317

Pad: Red Lady

Well: Baldy Unit 2H

[Quoted text hidden]

JOB REPORT.pdf
277K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

RIG 317 update

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Sat, Jul 2, 2022 at 8:13 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice on re-enter of Baldy 1H

Antero Resources Company Representatives

James Washburn/Eric Comer

H&P 317

Pad: Red Lady

Well: Baldy Unit 1H

AFE# A11837-D

API# 47103034780000

Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Rig H&P 317 <righandp317@anteroresources.com> Sun, Jul 10, 2022 at 2:59 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice to run production casing and cement Baldy 1H

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland 1H sidetrack

1 message

Rig H&P 519 <righandp519@anteroresources.com> Thu, Mar 24, 2022 at 9:48 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Kenneth just wanted to give you an update on the upcoming Ryland 1H, its looking like around the 28th we will be skidding back to the well. We will drill the cement out of 5.5 casing to around 6700', cut and retrieve the casing, set packer and cement plug, trip out pipe, wait on cement for 24hrs, trip in and sidetrack the well. Any issues or concerns please give us a call. Thank you.

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland 1H update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 30, 2022 at 5:35 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Mr. Greynolds can you call our foreman Brandon Jeffcoat 903-744-3641, we have a change of plans out here on the well and want to make sure we are good to go. Thanks alot

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland 1H update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 30, 2022 at 5:35 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Mr. Greynolds can you call our foreman Brandon Jeffcoat 903-744-3641, we have a change of plans out here on the well and want to make sure we are good to go. Thanks alot

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland 1H update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 30, 2022 at 5:35 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Mr. Greynolds can you call our foreman Brandon Jeffcoat 903-744-3641, we have a change of plans out here on the well and want to make sure we are good to go. Thanks alot

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland 1H update

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Thu, Mar 31, 2022 at 10:58 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>

Mr. Greynolds, just wanting to give you a quick update, we perforated casing at 6130' we did get circulation, will continue on to set a cement plug. Followed by cutting casing at 3003', set packer and another cement plug. Wait on cement go in and sidetrack.

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Thu, Mar 31, 2022 at 11:09 AM
To: Rig H&P 519 <righandp519@anteroresources.com>
Cc: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>

Thanks for the update.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland Unit 1H (03456) tentative plan

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 30, 2022 at 6:37 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>
Cc: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>

Mr. Greynolds, Mr. Newlon,

To provide an update on the recommendations we have to move forward. We are looking to set an internal mechanical plug inside our 5.5" casing at a depth of ~6200' MD. We will then perforate with 21 shots over 3 feet with a 0.73 projectile at depth of ~6130' MD and establish circulation or an injection rate to perform a cement squeeze. From there, we will plan to cut off casing at ~3000' MD and set a cement plug to begin side track efforts.

Please let us know if any questions or concerns.

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland Unit 1H (03456) update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Thu, Mar 31, 2022 at 9:01 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>
Cc: Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Good evening,

Attached is the cement summary from today's job. All went well and according to plan.

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Ryland 1H isolation .pdf
1441K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland Unit 1H (03456) Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Fri, Apr 1, 2022 at 7:20 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>
Cc: Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Good evening,

We just finished pumping our kick off/sidetrack plug. All went good and according to plan. Please see the attached summary.

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 1H R/S

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Ryland 1H ST Plug.pdf
1536K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Ryland Unit 3H (03458) update/cement summary. Welder Unit 1H resume operations

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Tue, Mar 8, 2022 at 4:28 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Good morning Mr. Greynolds,

Please see the attached cement summary for the Ryland Unit 3H production cement.

We also anticipate skidding to the Welder Unit 1H (03461) to resume drilling operations later this morning. 3/8/2022.

Thanks,

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Ryland Unit 3H

AFE# A11661-D

API: 47-103-03458
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Ryland Unit 3H Production cement summary.pdf
2122K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Tue, Mar 8, 2022 at 8:09 AM
To: Rig H&P 519 <righandp519@anteroresources.com>

Received, thank you.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Spencer FWI closure

5 messages

Dawn Keller <Dawn_Keller@swn.com> Wed, Jun 8, 2022 at 1:25 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Hi Ken,

Have you submitted the final inspection for the Spencer FWI closure located in Tyler County to Kelly Kees yet? I would like to get it released back to the landowner. Also, do you have the contact info for the new Tyler County inspector? Just let me know.

Thanks!

Dawn Keller
Senior Environmental Specialist
SWN SWAPP Division
501-697-7230
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Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Jun 10, 2022 at 9:14 AM
To: Dawn Keller <Dawn_Keller@swn.com>

Can you please provide for me an API # for one of the wells on the pad, the well pad name, Impoundment ID # and name, and whether it was an associated or centralized impoundment. I will try to get it into Kelly today. I do not have the contact info for the new Tyler County inspector. You should be able to get it from Doug Newlon or the Charleston office.
[Quoted text hidden]

Dawn Keller <Dawn_Keller@swn.com> Fri, Jun 10, 2022 at 10:37 AM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

It is a Centralized FWI. Spencer Freshwater Impoundment- 095-FWC-00010.

Spencer Pad- One of the wells is the Spencer Unit 1113A: API# 47095020340000

Let me know if you need anything else.

Thanks!

Dawn Keller

Senior Environmental Specialist

Southwestern Energy

1300 Fort Pierpont Drive Suite 201

Morgantown, WV 26508

O: 304-884-1683

C: 501-697-7230

[Quoted text hidden]
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Jun 10, 2022 at 2:38 PM
To: Dawn Keller <Dawn_Keller@swn.com>

Thanks!
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Jun 10, 2022 at 2:50 PM
To: Dawn Keller <Dawn_Keller@swn.com>

You are welcome.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Spencer FWI coordinates

2 messages

Dawn Keller <Dawn_Keller@swn.com> Thu, May 19, 2022 at 2:40 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Spencer Freshwater Impoundment	Tyler	39.498829	-80.912620

Hi Ken,

Here are the coordinates for the Spencer FWI closure located in Tyler County. Please let me know if we are good to remove E&S and if the FWI is released by WVDEP.

Also, please let me know when you would like to meet to review the Blatt redline.

Thanks!

Dawn Keller

Senior Environmental Specialist

Southwestern Energy

1300 Fort Pierpont Drive Suite 201

Morgantown, WV 26508

O: 304-884-1683

C: 501-697-7230

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Dawn Keller <Dawn_Keller@swn.com> Thu, May 19, 2022 at 2:42 PM
To: "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>

Here is the street address:

500 Ivers Flats Road (CR26) Bridgeway Addition Middlebourne, WV 26149

[Quoted text hidden]
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

test

1 message

Rig-Patterson294 <Patterson294@eqt.com> Thu, Mar 17, 2022 at 1:44 PM
To: "Kenneth.L.Greynolds@wv.gov" <Kenneth.L.Greynolds@wv.gov>

Patterson 294

rig cell: 412-290-2168

Patterson294@eqt.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 2H Cement report

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, Mar 26, 2022 at 1:18 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached Toroweap Unit 2H Intermediate cement report.

Regards,

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02766-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

cement report Toroweap 2H Intermediate.pdf
272K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 2H Intermediate casing and cement

1 message

Rig H&P 317 <righandp317@anteroresources.com> Thu, Mar 24, 2022 at 11:15 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24 hr notice to run intermediate casing and cement.

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02766-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 2H Spud notice

1 message

Rig H&P 317 <righandp317@anteroresources.com> Wed, Mar 23, 2022 at 7:14 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice on spud, running casing, and cementing surface on Toroweap 2H API# 47095027660000

Projected casing set depth 326’ TVD

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11679-D

API: 47-095-02766-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 2H

2 messages

Rig H&P 317 <righandp317@anteroresources.com> Wed, Apr 6, 2022 at 11:21 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice to re-enter Toroweap 2H. 47095027660000

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02766-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Rig H&P 317 <righandp317@anteroresources.com> Thu, Apr 14, 2022 at 1:50 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

24hr notice to run and cement production casing on Toroweap 2H. 47095027660000

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 3H spud, surface casing and cement

1 message

Rig H&P 317 <righandp317@anteroresources.com> Fri, Mar 25, 2022 at 2:55 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to spud, run surface casing, and cement Toroweap 3H.

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 3H

AFE# A11683-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 3H surface cement report

1 message

Rig H&P 317 <righandp317@anteroresources.com> Sat, Mar 26, 2022 at 9:27 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached surface cement report for the Toroweap Unit 3H. We are currently waiting on cement and will pressure test BOPE and spud the intermediate #1 section tomorrow morning.

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 3H

AFE# A11683-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

cement report Toroweap 3H Surface.pdf
233K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap 3H

1 message

Rig H&P 317 <righandp317@anteroresources.com> Tue, Apr 5, 2022 at 11:30 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Notice to run production casing and cement Toroweap 3H. 47095027670000

Antero Resources Company Representatives

James Washburn / Eric Comer

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 3H

AFE# A11683-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Toroweap Unit 2H Cement report

1 message

Rig H&P 317 <righandp317@anteroresources.com> Wed, Apr 27, 2022 at 6:31 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Attached production cement report for the Toroweap Unit 2H.

Regards,

Antero Resources Company Representatives
Aaron Marlow / Frank Doherty

H&P 317

Pad: Grand Pad

Well: Toroweap Unit 2H

AFE# A11681-D

API: 47-095-02767-00-00
Rig Phone: (713) 678-0755

Email: Righandp317@anteroresources.com

cement report Toroweap 2H Production.pdf
306K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Wable Unit 1H/H7P 519 update (02780)

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Apr 20, 2022 at 12:47 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>
Cc: Eric May <emay@anteroresources.com>

Mr. Greynolds,

Good morning. Please see the attached summary for the surface cement job. Job went as planned. Our next steps are to wait on cement, perform Nipple up BOP and test. Followed by drilling our intermediate section 1 – run casing and cement. Please reach out with any questions or concerns.

Thanks,

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Nalley

Well: Wable Unit 1H

AFE# A11792-D

API: 47-095-02780
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Wable 1H surface.pdf
1476K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Welder Unit 2H (03462) update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Fri, Mar 25, 2022 at 1:37 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>
Cc: Eric May <emay@anteroresources.com>

Good Morning Mr. Greynolds,

We anticipate to begin running production casing later today 3/25/2022 on the Welder Unit 2H, followed by pumping cement – anticipated to begin on Saturday evening 3/26/2022.

We will send a cement summary upon completion of the cement job.

Thanks,

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Welder Unit 2H (03462) update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sun, Mar 27, 2022 at 2:22 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>
Cc: Eric May <emay@anteroresources.com>

Mr. Greynolds,

Please see the attached production cement job summary. Job went as planned.

Thanks,

Antero Resources Company Representatives
Rick Lawson / Matt Honeycutt

H&P 519

Pad: Journeyman

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

welder unit 2H .pdf
2133K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

Wrigley Pre-Construction Meeting

2 messages

Frank Cosner <fcosner@anteroresources.com> Wed, May 4, 2022 at 2:56 PM
To: Ben Farkas-Worthy <bfarkas-worthy@anteroresources.com>, Aaron Kunzler <akunzler@anteroresources.com>, Aric Martin <amartin@anteroresources.com>, John Angiulli <jangiulli@anteroresources.com>, Brady Gutta <BGutta@anteroresources.com>, Daniel Bulian <dbulian@anteroresources.com>, Daniel Grimes <dgrimes@anteroresources.com>, Tony Moenich <tmoenich@anteroresources.com>, Michael Cleaves <mcleaves@anteroresources.com>, Robert Wirks <rwirks@anteroresources.com>, Brian Reynolds <breynolds@anteroresources.com>, Krissa Chapman <kchapman@anteroresources.com>, Randall Randolph <rrandolph@anteroresources.com>, Jim Wilson <jiwilson@anteroresources.com>, "Gast, Corey M" <Corey.M.Gast@wv.gov>, "Ken Greynolds (kenneth.l.greynolds@wv.gov)" <kenneth.l.greynolds@wv.gov>, Cory Thomas <cthomas@anteroresources.com>, Cyrus Kump <ckump@navituseng.com>, Drew Snider <dsnider@anteroresources.com>

We will have our Pre-Construction Meeting for the Wrigley Pad on Monday May 9th at 11:00 AM. We will meet in the graveled wide area before the Box Culvert on the Gorrell Pad Lease Road. There will be active road work on Rock Run so please be mindful of where you park and do not block access to ongoing activities.

Wrigley Pad – From Rt 18 (Bridge at the South end of Middlebourne) go west on Wick road for 10.5 miles, turn right onto the Gorrell Pad lease road go 1,000 feet and then on your left you will cross over box culverts and turn Right onto Rock Run Rd. Go 1 mile to planned site entrance on the left.

Design, - Please bring 4 sets of large plans and 6 sets of small plans along with Geotech Reports.

Any questions or comments please respond ASAP. Also please forward to anyone I may have missed. As always, some of you are copied for notification only and do not need to attend unless you would like to.

Thanks very much,

Frank Cosner

Senior Construction Supervisor - WV

Antero Resources

535 White Oaks Blvd

Bridgeport, WV 26330

304 641-0810 Cell

304-842-4100 Office

304-842-4527 Direct

FCosner@AnteroResources.Com



invite.ics
5K

Frank Cosner <fcosner@anteroresources.com> Mon, May 9, 2022 at 9:31 AM
To: Daniel Poole <dpoole@anteroresources.com>, Ben Farkas-Worthy <bfarkas-worthy@anteroresources.com>, Aaron Kunzler <akunzler@anteroresources.com>, Aric Martin <amartin@anteroresources.com>, John Angiulli <jangiulli@anteroresources.com>, Brady Gutta <BGutta@anteroresources.com>, Daniel Bulian <dbulian@anteroresources.com>, Daniel Grimes <dgrimes@anteroresources.com>, Tony Moenich <tmoenich@anteroresources.com>, Michael Cleaves <mcleaves@anteroresources.com>, Robert Wirks <rwirks@anteroresources.com>, Brian Reynolds <breynolds@anteroresources.com>, Krissa Chapman <kchapman@anteroresources.com>, Randall Randolph <rrandolph@anteroresources.com>, Jim Wilson <jiwilson@anteroresources.com>, "Gast, Corey M" <Corey.M.Gast@wv.gov>, "Ken Greynolds (kenneth.l.greynolds@wv.gov)" <kenneth.l.greynolds@wv.gov>, Cory Thomas <cthomas@anteroresources.com>, Cyrus Kump <ckump@navituseng.com>, Drew Snider <dsnider@anteroresources.com>

FYSA

Get Outlook for iOS<https://aka.ms/o0ukef>

From: Frank Cosner <fcosner@anteroresources.com>
Sent: Wednesday, May 4, 2022 11:56:05 AM
To: Ben Farkas-Worthy <bfarkas-worthy@anteroresources.com>; Aaron Kunzler <akunzler@anteroresources.com>; Aric Martin <amartin@anteroresources.com>; John Angiulli <jangiulli@anteroresources.com>; Brady Gutta <BGutta@anteroresources.com>; Daniel Bulian <dbulian@anteroresources.com>; Daniel Grimes <dgrimes@anteroresources.com>; Tony Moenich <tmoenich@anteroresources.com>; Michael Cleaves <mcleaves@anteroresources.com>; Robert Wirks <rwirks@anteroresources.com>; Brian Reynolds <breynolds@anteroresources.com>; Krissa Chapman <kchapman@anteroresources.com>; Randall Randolph <rrandolph@anteroresources.com>; Jim Wilson <jiwilson@anteroresources.com>; Gast, Corey M <Corey.M.Gast@wv.gov>; Ken Greynolds (kenneth.l.greynolds@wv.gov) <kenneth.l.greynolds@wv.gov>; Cory Thomas <cthomas@anteroresources.com>; Cyrus Kump <ckump@navituseng.com>; Drew Snider <dsnider@anteroresources.com>
Subject: Wrigley Pre-Construction Meeting
When: Monday, May 9, 2022 8:00 AM-9:00 AM.
Where: Gorrell Pad Staging area near the Box Culvert

We will have our Pre-Construction Meeting for the Wrigley Pad on Monday May 9th at 11:00 AM. We will meet in the graveled wide area before the Box Culvert on the Gorrell Pad Lease Road. There will be active road work on Rock Run so please be mindful of where you park and do not block access to ongoing activities.

Wrigley Pad – From Rt 18 (Bridge at the South end of Middlebourne) go west on Wick road for 10.5 miles, turn right onto the Gorrell Pad lease road go 1,000 feet and then on your left you will cross over box culverts and turn Right onto Rock Run Rd. Go 1 mile to planned site entrance on the left.

Design, - Please bring 4 sets of large plans and 6 sets of small plans along with Geotech Reports.

Any questions or comments please respond ASAP. Also please forward to anyone I may have missed. As always, some of you are copied for notification only and do not need to attend unless you would like to.

Thanks very much,

Frank Cosner
Senior Construction Supervisor - WV

Antero Resources
535 White Oaks Blvd
Bridgeport, WV 26330

304 641-0810 Cell
304-842-4100 Office
304-842-4527 Direct
FCosner@AnteroResources.Com<mailto:FCosner@AnteroResources.Com>

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3 attachments



image001.png
13K



image002.png
22K

invite.ics
7K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WV Plugging Affidavit Signatures

8 messages

Mizgorski, Tyler <Tyler.Mizgorski@eqt.com> Wed, Jul 6, 2022 at 11:21 AM
To: "kenneth.L.greynolds@wv.gov" <kenneth.L.greynolds@wv.gov>, "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>
Cc: "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

Ken/Strader,

We have a number of plugging affidavits that need to be signed and filed for your regions. They have already been signed and notarized by the plugging contractors. How would you prefer that we get them to you for signature? Do the originals need to be mailed to you or can we e-mail you copies for signature? Also once you have signed what is the proper process for getting them filed with the DEP?

Thanks,

Tyler Mizgorski

Production Engineer WV/OH

412-526-2386

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

---

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 11:55 AM
To: "Mizgorski, Tyler" <Tyler.Mizgorski@eqt.com>
Cc: "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

You can email them. Once we have signed them, you will have to send them to Jackie Thornton in the Charleston office.
[Quoted text hidden]

Mizgorski, Tyler <Tyler.Mizgorski@eqt.com> Wed, Jul 6, 2022 at 12:26 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

Thank you Ken. Can they be sent to Jackie Digitally or do they need to be mailed?

-Tyler

From: Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>
Sent: Wednesday, July 6, 2022 11:56 AM
To: Mizgorski, Tyler <Tyler.Mizgorski@eqt.com>
Cc: strader.c.gower@wv.gov; Fry, Doug <DFry@eqt.com>; Toplovich, Mark <Mark.Toplovich@eqt.com>; Schultz, Jacob <JSchultz@eqt.com>; Cindric, Eric <Eric.Cindric@eqt.com>
Subject: [EXTERNAL] Re: WV Plugging Affidavit Signatures

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 12:46 PM
To: "Mizgorski, Tyler" <Tyler.Mizgorski@eqt.com>
Cc: "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

You would have to check with her on that.
[Quoted text hidden]

Mizgorski, Tyler <Tyler.Mizgorski@eqt.com> Wed, Jul 6, 2022 at 2:24 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

Thank you sir will do.

I will be going through the affidavits to see what all is out there needing signature but I have attached a few of the recent ones from erliewine

Thanks,

Tyler Mizgorski

Production Engineer WV/OH

412-526-2386

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

[Quoted text hidden]

SKMBT_C28422062209010.pdf
110K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Wed, Jul 6, 2022 at 2:43 PM
To: "Mizgorski, Tyler" <Tyler.Mizgorski@eqt.com>

Here you go.
[Quoted text hidden]

SKMBT_C28422062209010.pdf
186K

Mizgorski, Tyler <Tyler.Mizgorski@eqt.com> Wed, Jul 6, 2022 at 3:48 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>
Cc: "strader.c.gower@wv.gov" <strader.c.gower@wv.gov>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Schultz, Jacob" <JSchultz@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>

Ken,

Please see 3 additional recent Affidavits attached for Hieronimus, Mason Conlon, and Ernest Watson

[Quoted text hidden]

3 attachments

Mason.pdf
64K

Watson.pdf
58K

Hieronimus.pdf
97K

Mizgorski, Tyler <Tyler.Mizgorski@eqt.com> Wed, Jul 6, 2022 at 3:48 PM
To: "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>

Thank you Sir.

[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Fri, Apr 8, 2022 at 10:54 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently circulating at (TD 17,032'). Plan forward will be to circulate today, start tripping out laying down singles this evening.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Thu, Apr 7, 2022 at 8:26 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently drilling lateral. Plan forward will be to drill lateral to TD, Circulate wellbore clean.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Fri, Apr 8, 2022 at 10:54 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently circulating at (TD 17,032'). Plan forward will be to circulate today, start tripping out laying down singles this evening.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Thu, Apr 7, 2022 at 8:26 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently drilling lateral. Plan forward will be to drill lateral to TD, Circulate wellbore clean.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Apr 6, 2022 at 7:47 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping in to, drill curve. Plan forward will be to drill curve to LP, Drill lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Tue, Mar 22, 2022 at 4:59 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 2H we are currently drilling lateral. Plan forward will be to continue drilling lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Mon, Mar 21, 2022 at 7:29 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 2H we are currently drilling curve. Plan forward will be to land curve, Drill lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sun, Mar 20, 2022 at 11:01 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 2H we are currently tripping out to pick up curve & lateral assembly. Plan forward will be to finish tripping out, Lay down air bha, pick up ATC trip in drill curve & lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Mar 19, 2022 at 9:01 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 2H we are currently drilling 8 ¾" air tangent to KOP, Plan forward will be to drill to KOP, Attempt air curve, Load wellbore with SOBM, Trip out, Pick up Curve & Lateral assembly, Trip in drill Curve & Lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Mar 19, 2022 at 9:01 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 2H we are currently drilling 8 ¾" air tangent to KOP, Plan forward will be to drill to KOP, Attempt air curve, Load wellbore with SOBM, Trip out, Pick up Curve & Lateral assembly, Trip in drill Curve & Lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Thu, Mar 17, 2022 at 7:19 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently running production casing. Plan forward will be to Land casing, circulate, pump production cement, set pack off, nipple down BOPE, Release rig. Immediately after rig release, we will skid to the Welder Unit 2H API# 47-103-03462 , Nipple up BOPE, Test BOPE, Pick up air BHA, Trip in, Drill shoe trac, perform FIT.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Thu, Mar 17, 2022 at 8:49 AM
To: Rig H&P 519 <righandp519@anteroresources.com>
Cc: Eric May <emay@anteroresources.com>

Got it, thank you.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 16, 2022 at 8:26 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently running production casing. Plan forward will be to run casing until tomorrow morning.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Tue, Mar 15, 2022 at 9:12 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently tripping out to run production casing. Plan forward will be to trip out to base of curve, Circulate, Trip out to surface, Lay down BHA, Rig up & Run production casing.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Tue, Mar 15, 2022 at 9:12 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently tripping out to run production casing. Plan forward will be to trip out to base of curve, Circulate, Trip out to surface, Lay down BHA, Rig up & Run production casing.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Mon, Mar 14, 2022 at 7:59 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently drilling lateral. Plan forward will be to drill lateral to TD, Circulate wellbore clean, Begin tripping out to run production casing. TD will be 23,731, Planned production casing will be set @ 23,711'.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Mon, Mar 14, 2022 at 9:10 AM
To: Rig H&P 519 <righandp519@anteroresources.com>
Cc: Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Thanks for the update.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sun, Mar 13, 2022 at 9:06 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently drilling lateral. Plan forward will be to drill lateral to TD, Circulate wellbore clean.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Mar 12, 2022 at 8:02 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently drilling lateral. Plan forward will be to continue to drill lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Fri, Mar 11, 2022 at 7:39 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently tripping in with our curve & lateral BHA. Plan forward will be to finish trip in, drill curve & lateral.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Mar 11, 2022 at 8:35 AM
To: Rig H&P 519 <righandp519@anteroresources.com>
Cc: Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Thank you for the update.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sun, Apr 10, 2022 at 8:58 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently running production casing. Plan foreard will be to land casing, Circulate, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Thu, Mar 10, 2022 at 6:50 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently drilling air tangent to KOP. Plan forward will be to drill to KOP, drill air curve to 30°+-, Load hole with SOBM, Trip out, Pick up curve & lateral assembly.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Wed, Mar 9, 2022 at 11:55 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>
Cc: Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Welder Unit 1H we are currently tripping in to drill out shoe trac. Plan forward will be to drill shoe trac, load wellbore with brine, perform FIT, trip out, Trip in displacing brine, Drill air tangent to KOP.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 1H

AFE# A11655-D

API: 47-103-03461
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Sat, Apr 9, 2022 at 10:49 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good morning, On the Ryland Unit 1H we are currently tripping out laying down singles. Plan forward will be to finish trip out, Lay down BHA, Run production casing, Pump production cement.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update & Production Cement Job Log

2 messages

Rig H&P 519 <righandp519@anteroresources.com> Fri, Mar 18, 2022 at 7:39 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Mr. Greynolds

Good morning, Yesterday we wrapped up the Welder Unit 1H attached is the production cement job log. We have skidded over to the Welder Unit 2H API# 47-103-03462. Currently we are picking up drill pipe. Plan forward will be to pick up remaining drill pipe, pick up BHA, trip in, drill shoe trac, drill 15' of formation, load wellbore with brine, perform FIT, Trip out, trip in displacing brine, Drill tangent to KOP on air.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Welder Unit 2H

AFE# A11653-D

API: 47-103-03462
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Welder 1H 5.5 Cement PJR.pdf
1344K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov> Fri, Mar 18, 2022 at 9:13 AM
To: Rig H&P 519 <righandp519@anteroresources.com>
Cc: Eric May <emay@anteroresources.com>

Thanks for the update.
[Quoted text hidden]

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update & Production Cement Job Log

1 message

Rig H&P 519 <righandp519@anteroresources.com> Mon, Apr 11, 2022 at 2:30 PM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>

Mr. Greynolds

Good afternoon, On the Ryland Unit 1H we are cleaning mud tanks preparing to move to the Nalley pad. We are planning to start moving the rig on 4/13/2022. Attached is the production cement job log for the Ryland Unit 2H.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Ryland Unit 1HST Production Cement.pdf
1818K

Greynolds, Kenneth L <kenneth.l.greynolds@wv.gov>

WVDEP Daily Update

1 message

Rig H&P 519 <righandp519@anteroresources.com> Tue, Apr 12, 2022 at 11:34 AM
To: "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, Eric May <emay@anteroresources.com>

Good morning, On the Ryland Unit 1H we are rigging down preparing to move to the Nalley pad.

Antero Resources Company Representatives
Brandon Haire / Jose Silva

H&P 519

Pad: Journeyan

Well: Ryland Unit 1H

AFE# A11665-D

API: 47-103-03456
Rig Phone: (303) 353-5456

Email: Righandp519@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

24 Notice

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, Apr 1, 2022 at 12:39 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving 24hr notice of intent to spud Mule Unit 2H API#47017069170000, we will drill surface to TD, run casing, cement casing, nipple up BOPE, test BOPE, drill out shoe track, conduct FIT, mist drill ICP 1 to TD, run casing, and cement casing. Feel free to contact with any questions or concerns.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Mule Unit 1H

AFE#: A11784-D

Ward, Samuel D <samuel.d.ward@wv.gov>

24hr notice H&P 531

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Jan 3, 2022 at 1:24 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>
Cc: Rig H&P 531 <righandp531@anteroresources.com>

Sam we are giving a 24hr notice with intent to run intermediate 1 casing and pump cement on Sandy 1H

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

Ward, Samuel D <samuel.d.ward@wv.gov>

24hr Notice

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, Mar 6, 2022 at 6:54 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving intent to run 5.5” casing and pump production cement on the Earl Unit 2H API# 47085104150000. After pumping cement on Earl Unit 2H we will skid rig to Sandy Unit 1H API# 47085104170000 nipple up, Test BOPE, and begin to drill 8.75” section to KOP, then we will drill 8.5” curve and lateral to TD.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 2H

AFE#: A11554-D

Ward, Samuel D <samuel.d.ward@wv.gov>

24hr Notice

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Feb 26, 2022 at 11:57 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

24hr notice intent to run 5.5” production casing and cement Earl Unit 1H API# 47085104140000. After Cement we will skid to Earl Unit 2H API # 47085104150000, nipple up BOPE, test, drillout shoe track, FIT and begin to drill 8.75” section. We will then trip out and change BHA and trip in and drill curve and lateral. If there are any questions do not hesitate to call.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 1H

AFE#: A11552-D

Ward, Samuel D <samuel.d.ward@wv.gov>

24hr Notice

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, Apr 3, 2022 at 6:53 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving 24hr notice of intent to spud Mule Unit 3H API# 47017069180000, we will drill surface to TD, run casing, cement casing, nipple up BOPE, test BOPE, drill out shoe track, conduct FIT, mist drill ICP 1 to TD, run casing, and cement casing. Feel free to contact with any questions or concerns.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Mule Unit 2H

AFE#: A11782-D

Ward, Samuel D <samuel.d.ward@wv.gov>

510840 Jackson Leeson - 2022 P&A Application Submittal

3 messages

Shrum, Becky <BShrum@eqt.com> Mon, Feb 14, 2022 at 4:01 PM
To: "McLaughlin, Jeffrey W" <jeffrey.w.mclaughlin@wv.gov>, "Rhodes, Jacob K" <Jacob.K.Rhodes@wv.gov>, "Brewer, Charles T" <Charles.T.Brewer@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: "Spine, Erin" <ESpine@eqt.com>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Danford, Matt" <Matt.Danford@eqt.com>

Good Afternoon Jeff,

Attached is the plugging submittal for the 510840 Jackson Leeson well. The inspector's signoff is included in the attachment.

I will also FedEx a hard copy of the application to your office.

Let me know if you have questions.

Thanks,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

To learn about EQT's environmental, social and governance efforts visit:
https://esg.eqt.com

510840 Jackson Leeson_P&A Submittal 2.14.2022.pdf
6852K

Shrum, Becky <BShrum@eqt.com> Thu, Feb 24, 2022 at 10:05 AM
To: "McLaughlin, Jeffrey W" <jeffrey.w.mclaughlin@wv.gov>, "Rhodes, Jacob K" <Jacob.K.Rhodes@wv.gov>, "Brewer, Charles T" <Charles.T.Brewer@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: "Spine, Erin" <ESpine@eqt.com>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Danford, Matt" <Matt.Danford@eqt.com>

Jeff,

Attached are a few waivers we have received since submittal.

Thanks,

Becky Shrum

EQT Production Company

[Quoted text hidden]
[Quoted text hidden]

3 attachments

510840 Leeson - Coal Waiver - Mark Alan McKain.pdf
517K

510840 Leeson - Coal Waiver - Suzanne C. Kingsley.pdf
922K

510840 Leeson - Coal Waiver - Mary Beth McDougal.pdf

519K

Shrum, Becky <BShrum@eqt.com> Thu, Mar 24, 2022 at 11:04 AM
To: "McLaughlin, Jeffrey W" <jeffrey.w.mclaughlin@wv.gov>, "Rhodes, Jacob K" <Jacob.K.Rhodes@wv.gov>, "Brewer, Charles T" <Charles.T.Brewer@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: "Spine, Erin" <ESpine@eqt.com>, "Fry, Doug" <DFry@eqt.com>, "Toplovich, Mark" <Mark.Toplovich@eqt.com>, "Danford, Matt" <Matt.Danford@eqt.com>

Good Morning Jeff,

We are planning on moving to this well to P&A next week. Do you know if you'll have the permit issued by then? Do you need anything else from us?

[Quoted text hidden]
[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

510840 Jackson Leeson P&A Inspector Review/Signoff Requested

6 messages

Shrum, Becky <BShrum@eqt.com> Tue, Feb 8, 2022 at 9:45 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Good Morning Sam,

Attached is the plugging application for the 510840 Jackson Leeson well that we intend to plug this year.

Can you please review & provide your signoff as needed?

Let me know if you need additional information or if you'd like to meet with someone from our plugging team to discuss.

Thank you,

Becky Shrum

Project Specialist - Permitting

EQT Production Company

400 Woodcliff Drive

Canonsburg, PA 15317

O: 724.271.7314

C: 412.660.0654

BShrum@EQT.com

To learn about EQT's environmental, social and governance efforts visit:
https://esg.eqt.com

510840 Jackson Leeson_Inspector & Notification Packet 2.7.2022.pdf
3507K

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Feb 11, 2022 at 11:30 AM
To: "Shrum, Becky" <BShrum@eqt.com>

Hi Becky,

I signed this, but on the WW-9, you do not show what will be done with the fluid from plugging. Based on the procedure, there will be some gel come back in displacement. There will likely be a steel pit and any gel returned to surface will have to go somewhere. It could be next well, or disposal. There is a chance that the office will ask for another WW-9. If you want to ammend this and send just the WW-9 to me, I'll sign and return.I also changed the name of the inspector in the procedure as well.

Sam
[Quoted text hidden]

EQT 510840 P&A Signed.pdf
2336K

Shrum, Becky <BShrum@eqt.com> Fri, Feb 11, 2022 at 12:07 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Hi Sam,

I have reached out to our plugging team for clarification. They may be giving you a call to discuss also, since this isn't really up my alley.

If they do want a pit, there is a fee associated with that, correct? If so, can you tell me how much?

Also, if the WW-9 needs revised, should notifications to owners & coal parties be resent?

Thank you,

Becky Shrum

EQT Production Company

From: Ward, Samuel D <samuel.d.ward@wv.gov>
Sent: Friday, February 11, 2022 11:30 AM
To: Shrum, Becky <BShrum@eqt.com>
Subject: [EXTERNAL] Re: 510840 Jackson Leeson P&A Inspector Review/Signoff Requested

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Feb 11, 2022 at 12:49 PM
To: "Shrum, Becky" <BShrum@eqt.com>

Fee only applies to an earth pit. A steel pit to catch associated plugging fluids should not apply to a fee. No need to resend any other paperwork. Just modify the WW-9 to reflect that there will be a way to catch fluids that we know will be there and that they will be disposed of or go to the next plugging job.
[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Feb 11, 2022 at 12:50 PM
To: "Shrum, Becky" <BShrum@eqt.com>

As a follow up, I'm not sure you need to check the pit box, just say what the steel pit will be used for.

On Fri, Feb 11, 2022 at 12:07 PM Shrum, Becky <BShrum@eqt.com> wrote:
[Quoted text hidden]

Shrum, Becky <BShrum@eqt.com> Fri, Feb 11, 2022 at 2:09 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Sam,

Doug Fry has told me that a steel pit will be used. Attached is the revised WW-9 form. Will this be sufficient?

Thanks,

[Quoted text hidden]

510840 Jackson Leeson_WW-9 Form 2.11.2022.pdf
112K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Abandoned Well - 124 Center Court Bridgeport

3 messages

Nicholas.A.Cabo@dominionenergy.com <Nicholas.A.Cabo@dominionenergy.com> Tue, Jul 13, 2021 at 4:43 PM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Sam,

Please see well logs and map for our site visit tomorrow. The well is located outside of BHE's Bridgeport Storage Pool and is associated with Clarksburg Light & Heat Co. I will see you onsite tomorrow at 10:30am.

Thanks,

Nick

CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

5 attachments



IMG951528.jpg
197K



IMG951524.jpg
425K



F-32164 Completion Report 1.jpg
183K

F-32164 Completion Report 2.jpg
64K





F-32164.jpg
110K

Ward, Samuel D <Samuel.D.Ward@wv.gov>
To: "Harmon, Henry J" <Henry.J.Harmon@wv.gov>

Here is the map and site info that Dominion sent. Not sure how the number on the card equates to the well and location that we are looki

Sent from my iPhone

Begin forwarded message:

From: Nicholas.A.Cabo@dominionenergy.com
Date: July 13, 2021 at 4:43:50 PM EDT
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Subject: [External] Abandoned Well - 124 Center Court Bridgeport

[Quoted text hidden]

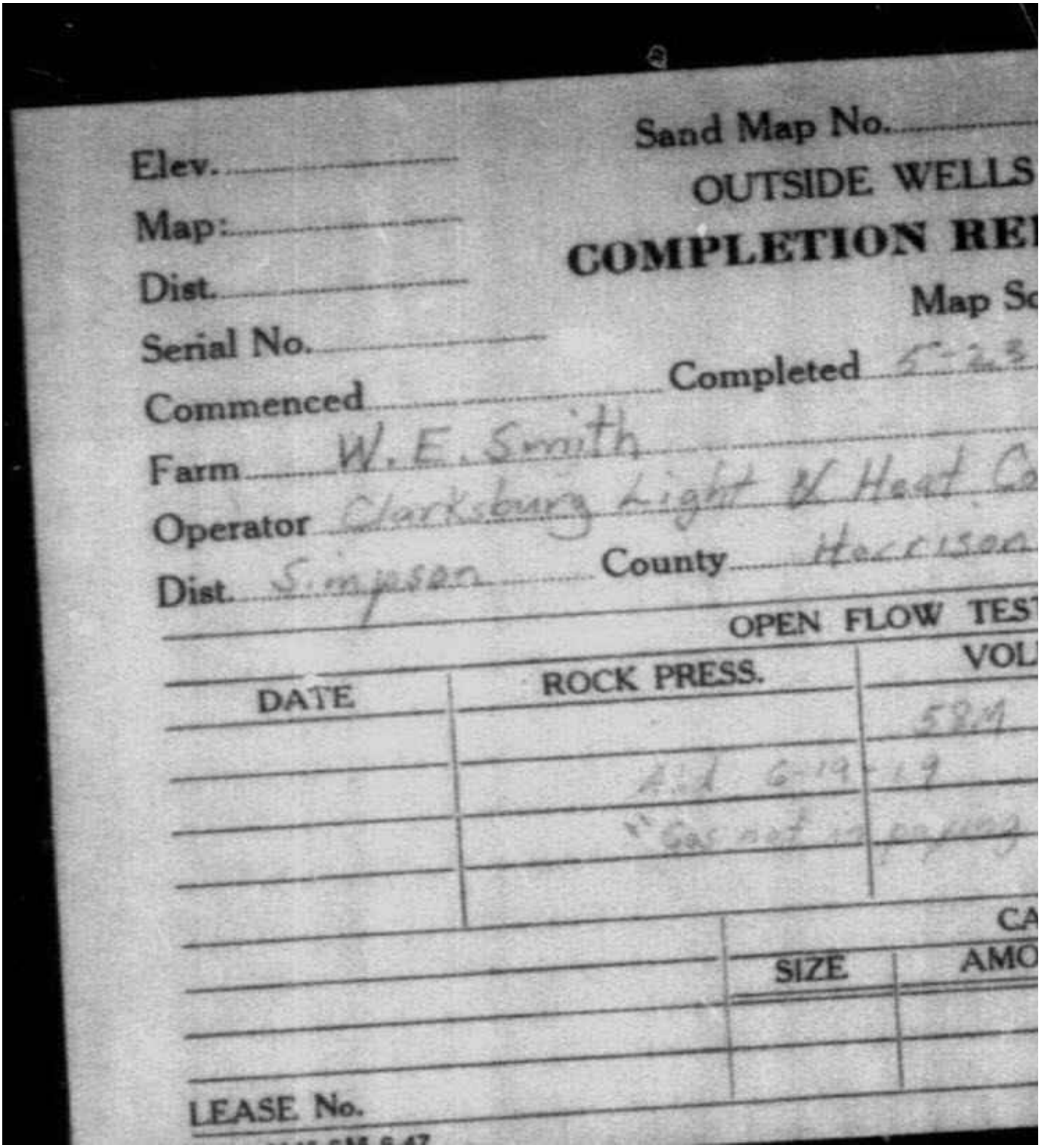



2018039









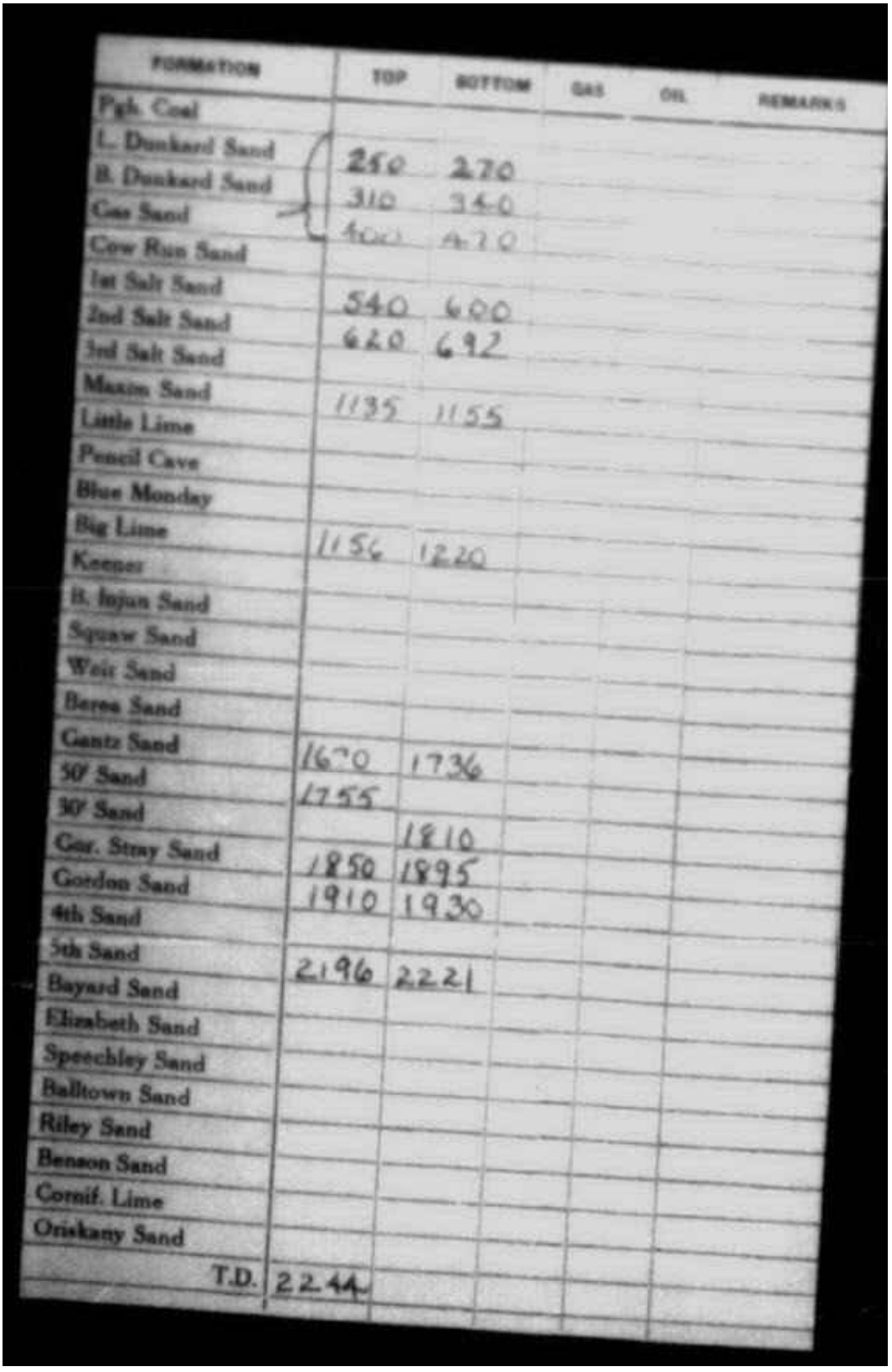
Elev.
Map:
Dist.
Serial No.
Commenced
Farm W. E. Smith
Operator Clarksburg Light & Heat Co
Dist. Simpson
Sand Map No.
OUTSIDE WELLS
COMPLETION RE
Map So
Completed 5-23
County Harrison

OPEN FLOW TEST

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	4:1 6-19	19
	"Gas not	

SIZE	AMO

LEASE No.



FORMATION	TOP	BOTTOM	GAS	OIL	REMARKS
Pgh. Coal					
L. Dunkard Sand	250	270			
B. Dunkard Sand	310	340			
Gas Sand	400	420			
Cow Run Sand					
1st Salt Sand	540	600			
2nd Salt Sand	620	692			
3rd Salt Sand					
Maxim Sand	1135	1155			
Little Lime					
Pencil Cave					
Blue Monday					
Big Lime	1156	1220			
Keener					
B. Injun Sand					
Squaw Sand					
Weir Sand					
Berea Sand					
Gantz Sand	1670	1736			
50' Sand	1755				
30' Sand		1810			
Gor. Stray Sand	1850	1895			
Gordon Sand	1910	1930			
4th Sand					
5th Sand	2196	2221			
Bayard Sand					
Elizabeth Sand					
Speechley Sand					
Balltown Sand					
Riley Sand					
Benson Sand					
Cornif. Lime					
Oriskany Sand					
T.D.	2244				



Harmon, Henry J <Henry.J.Harmon@wv.gov> Tue, Jul 13, 2021 at 4:52 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Thank you. Good luck and let me know how it turns out.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

[EXTERNAL] Antero Roma Lou Pad Startup

1 message

Bryan Hemard <bhemard@anteroresources.com> Sun, Jul 18, 2021 at 4:12 PM
To: "daniel.a.flack@wv.gov" <daniel.a.flack@wv.gov>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>
Cc: Bryan Hemard <bhemard@anteroresources.com>, Mike Grueneberg <mgrueneberg@anteroresources.com>, Tim Matlock <tmatlock@anteroresources.com>, Chad Roy <croy@anteroresources.com>, Daniel Martinez <damartinez@anteroresources.com>, Chris Young <cyoung@anteroresources.com>, "James C. Carter" <jcarter@anteroresources.com>, Keith Stansbury <kstansbury@anteroresources.com>

Mr. Flack and Mr. Ward,

We were unable to find the contacts for Tyler County. If you could please forward to the appropriate person we would appreciate it.

Antero will be commencing fracturing operations on the Roma Lou pad tomorrow, 19JUL21.

Please call or reply with any questions or concerns.

Best Regards,

Bryan

Bryan Hemard
Antero Onsite Representative
535 White Oaks Boulevard
Bridgeport, WV 26330
970-210-1824 Cell

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Antero: Gorrell Pad

2 messages

Mike Grueneberg <mgrueneberg@anteroresources.com> Tue, Jun 22, 2021 at 12:10 AM
To: "Samuel.d.ward@wv.gov" <Samuel.d.ward@wv.gov>
Cc: Cory Woods <cwoods@anteroresources.com>, Jerrako Evans <jevans@anteroresources.com>, Steve Raymondo <sraymondo@anteroresources.com>, Bryan Hemard <bhemard@anteroresources.com>, "James C. Carter" <jcarter@anteroresources.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Mr. Ward,

We will be starting drillout operations in the next 24 hrs on the Gorrell Pad. We will be starting with the Hodge 1H, 1st of 5 wells.

Please call or reply with any questions or concerns.

Mike Grueneberg
Completions AOR
Antero Resources
701-721-1459<tel:701-721-1459>

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, Jun 22, 2021 at 10:20 AM
To: Mike Grueneberg <mgrueneberg@anteroresources.com>, "Haught, Derek M" <Derek.M.Haught@wv.gov>
Cc: Cory Woods <cwoods@anteroresources.com>, Jerrako Evans <jevans@anteroresources.com>, Steve Raymondo <sraymondo@anteroresources.com>, Bryan Hemard <bhemard@anteroresources.com>, "James C. Carter" <jcarter@anteroresources.com>

Gentlemen,

This is Derek Haught's territory.
Sam
[Quoted text hidden]

InspectorMap 04-07-2021.pdf
470K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Automatic reply: Possible Dominion Well

1 message

Ronald L. Walden <ronald.l.walden@dominionenergy.com> Fri, Jun 19, 2020 at 1:59 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

I will be out of the office on Friday afternoon 6/19/2020 and all day Monday 6/22/2020 but returning first thing on Tuesday 6/23/2020. If you need to reach me please call my cell phone at 1-304-290-5377. Thanks, Ron

In my absence please contact one or more of the following DETI Geological Services personnel:

Jamie Moore @ 1-540-641-4044 (james.h.moore.lii@dominionenergy.com)

Pete Battles @ 1-304-203-0949 (peter.l.battles@dominionenergy.com)

Matt Goralczyk @ 1-304-669-6230 (matthew.e.goralczyk@dominionenergy.com)

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] CW-550 Google Maps Location

1 message

ronald.l.walden@dominionenergy.com <ronald.l.walden@dominionenergy.com> Mon, Apr 5, 2021 at 4:23 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>
Cc: "jason.e.bach@dominionenergy.com" <jason.e.bach@dominionenergy.com>, "jason.e.drummond@dominionenergy.com" <jason.e.drummond@dominionenergy.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Sam,

The attached file shows the Google Maps Location and coordinates for EGTS Well CW-550.

Ron --

Ronald L. Walden, PG, CPG

Supervisor, Geologic Services

Gas Storage Department

Eastern Gas Transmission and Storage, Inc. (EGTS)

925 White Oaks Boulevard

Bridgeport, WV 26330

(Office Phone): 681-842-3374

(Cell Phone): 304-290-5377

(Fax): 681-842-3390

Berkshire Hathaway Energy Company recently purchased certain gas transmission and storage companies from Dominion Energy, Inc. This new BHE GT&S unit is now a standalone subsidiary of Berkshire Hathaway Energy Company's Pipeline Group. Please note that during a transition period, employees of the BHE GT&S unit will continue to utilize a Dominion Energy email address; however, BHE GT&S is not affiliated with Dominion Energy in any way. Any inferences with respect to the BHE GT&S use of a Dominion Energy email address should be disregarded, as the sender is no longer affiliated with Dominion Energy

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CW-550 Google Maps Location.jpg
469K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] EGTS - CW-550 - Slip Review

9 messages

jason.e.bach@dominionenergy.com <jason.e.bach@dominionenergy.com> Tue, Apr 6, 2021 at 1:15 PM
To: "Samuel.d.ward@wv.gov" <Samuel.d.ward@wv.gov>
Cc: "ronald.l.walden@dominionenergy.com" <ronald.l.walden@dominionenergy.com>, "john.m.love@dominionenergy.com" <john.m.love@dominionenergy.com>, "jeffrey.t.renner@dominionenergy.com" <jeffrey.t.renner@dominionenergy.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Sam,

As a follow up to yesterday's conversation, regarding the slip in the vicinity of CW-550, EGTS is providing the following site review information. Schematics, photos, and a satellite image have also been attached. If you need any further information for your report, please feel free to contact Ron Walden or myself and we will provide assistance, if possible. Thanks.

CW-550 is a located on a flat area, which potentially appears to be a strip mining bench. The associated pipeline runs up the hill, directly above the well. A ditch exists between the pipeline ROW and the edge of the well location, which diverts any runoff from the pipeline to the southern end of location.

The closest slip area is located approximately 140' to the north of the well. It is on the downslope side of the bench.

There is a joint of pipe sticking out of the edge of the bench, in the vicinity of the slips nearest the well, which appears to serve as some sort of drain. Water was observed

running from this pipe and pooling below the slip area. It looks to be 9-5/8” casing and is extremely corroded. This pipe did not appear to have been installed as part of any well site reclamation activities.

A spring was observed in the woods, uphill of the slip area. The water from this spring ponded on the bench, but did not have any outflow. This indicated the flow from the spring was likely percolating into the ground, with the direction of the flow being unknown from that point. The ponded area is approximately 40’ from the slips.

The slips extend into the wooded area to the north of the well. These slips were observed over at least a 200’ interval, with the slips possibly extending further to the north.

At this time, there is no indication any runoff related to CW-550 or the associated pipeline has caused the water flow associated with the slips. The spring and ponded water area in the woods above the slip serve as indicators that the cause is related to water flowing from and through the hillside. If this area is determined to be a strip bench, it would be a reasonable to suspect the water present is from either springs that were buried during mine reclamation, water that has collected in the fill and created flow paths, or a combination of both.

EGTS’s assessment indicates that, while the slip is located on the same bench occupied by well CW-550, no activities related to operation of the well or pipeline has caused the issue.

Jason E. Bach, PG
Engineering Technical Consultant

Eastern Gas Transmission & Storage

925 White Oaks Boulevard
Bridgeport, WV 26330

(O): 681.842.3329

(M): 304.669.4850
(F): 681.842.3390



Berkshire Hathaway Energy Company recently purchased certain gas transmission and storage companies from Dominion Energy, Inc. This new BHE GT&S unit is now a standalone subsidiary of Berkshire Hathaway Energy Company's Pipeline Group. Please note that during a transition period, employees of the BHE GT&S unit will continue to utilize a Dominion Energy email address; however, BHE GT&S is not affiliated with Dominion Energy in any way. Any inferences with respect to the BHE GT&S use of a Dominion Energy email address should be disregarded, as the sender is no longer affiliated with Dominion Energy.

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Copy of CW-550 Photos Drawing.pdf
960K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Apr 7, 2021 at 10:29 AM
To: "jason.e.bach@dominionenergy.com" <jason.e.bach@dominionenergy.com>

Thank You Jason.

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Apr 7, 2021 at 10:34 AM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>,

"Harmon, Henry J" <Henry.J.Harmon@wv.gov>, "Martin, James A" <James.A.Martin@wv.gov>

All,

I didn't remember who was included in the original C-1 for Mary Small, so I included all of the usuals. This was a quick hand drawn, but fairly accurate representation of the area by one of EGTS's (dominion) engineers. This slip is going behind the Entegra Energy (environmental cleanup service) property. I observed the same things as Mr. Bach. Scott has passed this to AML, to see if this may be an old strip bench. I will be forwarding this to them as well.

Sam

From: jason.e.bach@dominionenergy.com <jason.e.bach@dominionenergy.com>
Sent: Tuesday, April 6, 2021 1:16 PM
To: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Cc: ronald.l.walden@dominionenergy.com; john.m.love@dominionenergy.com; jeffrey.t.renner@dominionenergy.com
Subject: [External] EGTS - CW-550 - Slip Review

CAUTION: External email. Do not click links or open attachments unless you verify sender.

[Quoted text hidden]

Copy of CW-550 Photos Drawing.pdf
960K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Apr 7, 2021 at 10:45 AM
To: "Mozena, Daniel A" <Daniel.A.Mozena@wv.gov>

Hi Dan,

Here is a report and assessment from Eastern Gas Transmission and Storage, formerly Dominion Energy. They had the drilling/storage field engineer and two other engineers out to look at the slip on Mary Small's property. This is a quick drawing they took from the field. I observed many of the same things as their engineers. The slip extends into the woods quite a ways. It appears the drain that is at the end of the slip has added to the severity of the slip, but since it is in the end of the slip, probably no the cause. Also, EGTS says that they did not install the drain, because of the distance from the well and the type of drain that it is. This is 9-5/8" casing, and does not comply with the standards that Dominion requires for drainage. They believe someone else installed the drain. I concur with this, as it does not look like any drain I have seen installed by dominion as a means of draining water from a hillside. Is appears to have been used casing, and this is not something they or my office would have approved. Jason's contact is in his email, if you have any questions for him.

I cannot say that this is or is not a strip bench. If it is, it is very old. It does have the appearance of a strip bench, given the depth and direction of a large bench that follows the side of a hill. I did not walk very fare around the bench to confirm this.

Sam

From: jason.e.bach@dominionenergy.com <jason.e.bach@dominionenergy.com>
Sent: Tuesday, April 6, 2021 1:16 PM
To: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Cc: ronald.l.walden@dominionenergy.com; john.m.love@dominionenergy.com; jeffrey.t.renner@dominionenergy.com
Subject: [External] EGTS - CW-550 - Slip Review

CAUTION: External email. Do not click links or open attachments unless you verify sender.

[Quoted text hidden]

Copy of CW-550 Photos Drawing.pdf
960K

Mozena, Daniel A <Daniel.A.Mozena@wv.gov> Wed, Apr 7, 2021 at 10:56 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: "Mozena, Daniel A" <Daniel.A.Mozena@wv.gov>

Sam,
Thanks for the information, there has been no mining in the area, but the old casing does appear to be the problem with the inlet end covered and the drainage coming out of the exposed end is going subsurface into the slip area. The area has not been mined and there is no signs of coal material exposed anywhere along the slope in the area. The landslide is nothing mining related. Let me know if you have any questions.

Have a good day,
Dan

Sent from my iPhone

On Apr 7, 2021, at 10:45 AM, Ward, Samuel D <Samuel.D.Ward@wv.gov> wrote:

[Quoted text hidden]
[Quoted text hidden]
<image001.png>

Berkshire Hathaway Energy Company recently purchased certain gas transmission and storage companies from Dominion Energy, Inc. This new BHE GT&S unit is now a standalone subsidiary of Berkshire Hathaway Energy Company's Pipeline Group. Please note that during a transition period, employees of the BHE GT&S unit will continue to utilize a Dominion Energy email address; however, BHE GT&S is not affiliated with Dominion Energy in any way. Any inferences with respect to the BHE GT&S use of a Dominion Energy email address should be disregarded, as the sender is no longer affiliated with Dominion Energy.

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transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

<Copy of CW-550 Photos Drawing.pdf>



image001.png
8K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Apr 7, 2021 at 10:57 AM
To: "Mozena, Daniel A" <Daniel.A.Mozena@wv.gov>

Thank you,

I was on the phone when you called, with another complaint.

Sam

Sent from my iPhone

> On Apr 7, 2021, at 10:56 AM, Mozena, Daniel A <Daniel.A.Mozena@wv.gov> wrote:
>
> Sam,
> [Quoted text hidden]

Mozena, Daniel A <Daniel.A.Mozena@wv.gov> Wed, Apr 7, 2021 at 10:58 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Nothing important, call when you have time.

Dan

Sent from my iPhone

> On Apr 7, 2021, at 10:57 AM, Ward, Samuel D <Samuel.D.Ward@wv.gov> wrote:
>
> Thank you,

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Apr 7, 2021 at 1:21 PM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>, "Harmon, Henry J" <Henry.J.Harmon@wv.gov>, "Martin, James A" <James.A.Martin@wv.gov>

All,

Dan Mozena from DEP AML, just called me back. He will send me his inspection report next week. There is no record of any mining in the area. He also said that the elevation is wrong for the coal that would be stripped in the area. He walked out into the woods and agrees that the bulk of the slip has likely started farther around the bench than the area where the well pad is. I pulled some historical photos on our site and also in Google Earth. It does appear that a road went up the hill toward the slip, and turned toward the well, at one point in the past (somewhere between 1996 and 2003 the road changed according to Google Earth photos). The edge of the turn would have been right near the very end of the slip. The pipe in the ground (9-5/8" casing) likely was not installed by Dominion. This does not look like something they would have used. It is impossible to say if it was once part of the road. The well was drilled around May of 1910. There are springs all across the hillside, and the bulk of the slip is behind the Entegra Energy property. I am not sure if Mrs. Small owns the woods, or Mr. Sutton, who owns Entegra Energy. There are multiple areas where water is ponding in the woods that has no outlet. This is likely the cause of the slip, as water is moving subsurface to drain.

If anyone from the office wants to meet me to put eyes on this, let me know when and we can meet. I don't see how this slip can be caused by Dominion's activity. The pipe drain is making the slip worse at the end where the slip starts above Mrs. Small's house, but I don't believe that is what started the slip. Mrs. Small told Dan Mozena and me that the pipe has been there for a long time, and she does not remember if Dominion installed the pipe.

Sam

[Quoted text hidden]

Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov> Wed, Apr 7, 2021 at 1:57 PM

To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>, "Harmon, Henry J" <Henry.J.Harmon@wv.gov>, "Martin, James A" <James.A.Martin@wv.gov>

I doubt strip mining that occurred 75 to 100 years ago is mapped accurately. I live in Cross Lanes and cut firewood on a fellow who pointed out to me the subtle difference that the diameter of the trees was twice as much or more on the upper part of the ridge. I will email Nick Schaer to see if he has lidar of that area. It will definitively prove or disprove mining.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

[EXTERNAL] Elmer Freshwater Impoundment Dewatering Notification

1 message

Casey Bartkus <Casey_Bartkus@swn.com> Mon, Jul 19, 2021 at 9:38 AM
To: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Jim Childers <Jim_Childers@swn.com>, Stephen Kadlubar <Stephen_Kadlubar@swn.com>, Justin Booth <Justin_Booth@swn.com>, Dawn Keller <Dawn_Keller@swn.com>

Good morning Kelly and Sam,

SWN plans to dewater the Elmer FWI in Upshur County, according to the approved dewatering plans, ultimately for impoundment closure. We are waiting for approval of the closure permit, but hope to receive this soon. We plan to start dewatering activities, weather permitting, tomorrow 7/20. I have attached recent water sampling results for your review.

Thank you

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

Southwestern Energy

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

Elmer-1031927_1 ESL 04 21 2021 0806.pdf
1530K

Ward, Samuel D <samuel.d.ward@wv.gov>

[EXTERNAL] Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, Jul 16, 2021 at 8:00 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 7-17-21 at 8:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Sun, Jul 11, 2021 at 4:54 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel Ward <samuel.d.ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 7-12-21 at 5:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] FW: [External] Re: McCauley FWI Reclaim

1 message

Dawn Keller <Dawn_Keller@swn.com> Wed, May 26, 2021 at 9:41 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Hi Sam,

Just wanted to let you know that all E&S has been removed from the McCauley FWI reclaim and our land department is going to inform the landowners that the site has been released.

Thanks!

Dawn Keller

Senior Environmental Specialist

SWN SWAPP Division

Mobile: 501-697-7230

Dawn_keller@swn.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Fw: Antero: Grand Pad Drillout Ops

1 message

Curt Anderson <canderson@anteroresources.com> Thu, Jun 24, 2021 at 3:29 PM
To: "Samuel.d.ward@wv.gov" <Samuel.d.ward@wv.gov>
Cc: Ryan Estrada <restrada@anteroresources.com>, Curt Anderson <canderson@anteroresources.com>, Don Fenstermaker <dfenstermaker@anteroresources.com>, Barney Etcher <betcher@anteroresources.com>, Tim Matlock <tmatlock@anteroresources.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

To whom it may concern

Antero will start drillout ops for Grand Pad on 6/25/21. The first well will be the Tapeats 3H.

Thanks

Curt Anderson

Antero Onsite Representative

West Virginia

Cell# 940.389.1443

From: Curt Anderson
Sent: Thursday, June 24, 2021 1:43 PM
To: derek.m.haught@wv.com
Cc: Ryan Estrada; Curt Anderson; Don Fenstermaker; Barney Etcher; Tim Matlock
Subject: Antero: Grand Pad Drillout Ops

To whom it may concern

Antero will start drillout ops for Grand Pad on 6/25/21. The first well will be the Tapeats 3H.

Thanks

Curt Anderson

Antero Onsite Representative

West Virginia

Cell# 940.389.1443

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] FW: Company Name Change

1 message

ronald.l.walden@dominionenergy.com <ronald.l.walden@dominionenergy.com> Mon, Dec 14, 2020 at 12:03 PM
To: "darrell.l.murphy@wv.gov" <darrell.l.murphy@wv.gov>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Darrell & Sam,

I wanted to make sure you both received the attached document and the email below I sent to Melanie.

Thanks,

Ron --

Ronald L. Walden, PG, CPG

Supervisor, Geologic Services

Gas Storage Department

Eastern Gas Transmission and Storage, Inc. (EGTS)

925 White Oaks Boulevard

Bridgeport, WV 26330

(Office Phone): 681-842-3374

(Cell Phone): 304-290-5377

(Fax): 681-842-3390



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---

From: Ronald L. Walden (Gas Transmission - 2)
Sent: Monday, December 14, 2020 11:43 AM
To: melanie.s.hankins@wv.gov
Cc: Jeffrey T Renner (Gas Transmission - 2) <jeffrey.t.renner@dominionenergy.com>; John M Love (Gas Transmission - 2) (john.m.love@dominionenergy.com) <john.m.love@dominionenergy.com>; Jackie B Maraney (Gas Transmission - 2) (jackie.b.maraney@dominionenergy.com) <jackie.b.maraney@dominionenergy.com>; Baige A Casto (Gas Transmission - 2) <Baige.A.Casto@dominionenergy.com>
Subject: Company Name Change

Melanie,

Would you be able to help me with the WVDEP process of officially getting my company name changed from Dominion Energy Transmission, Inc. to Eastern Gas Transmission and Storage, Inc.?

I attached a scanned copy of the official name change document.

Please call me on my cell phone number (1-304-290-5377) so we could discuss the process.

Thanks,

Ron --

Ronald L. Walden, PG, CPG

Supervisor, Geologic Services

Gas Storage Department

Eastern Gas Transmission and Storage, Inc. (EGTS)

925 White Oaks Boulevard

Bridgeport, WV 26330

(Office Phone): 681-842-3374

(Cell Phone): 304-290-5377

(Fax): 681-842-3390



Berkshire Hathaway Energy Company recently purchased certain gas transmission and storage companies from Dominion Energy, Inc. This new BHE GT&S unit is now a standalone subsidiary of Berkshire Hathaway Energy Company's Pipeline Group. Please note that during a transition period, employees of the BHE GT&S unit will continue to utilize a Dominion Energy email address; however, BHE GT&S is not affiliated with Dominion Energy in any way. Any inferences with respect to the BHE GT&S use of a Dominion Energy email address should be disregarded, as the sender is no longer affiliated with Dominion Energy

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Eastern Gas Transmission and Storage, Inc._Dominion Energy Transmission, Inc.-DE-Amendment (Change of Name).pdf
617K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] FW: Comparative Analysis - 124 Center Court Bridgeport

9 messages

Nicholas.A.Cabo@dominionenergy.com <Nicholas.A.Cabo@dominionenergy.com> Mon, Jul 12, 2021 at 5:42 PM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Sam,

Please see the gas analysis below. Feel free to contact me if you have any questions.

Thanks,
Nick

Nick Cabo

Supervisor Environmental

DEO/DEWV

2397 Davisson Run Road, Clarksburg, WV 26301

O: 304-624-2227 C: 304-266-5431

Dominion Energy

From: Chris Swann <chris.swann@criticalcontrol.com>
Sent: Friday, June 25, 2021 4:16 PM
To: Ryan T Moats (Gas Distribution - 5) <ryan.t.moats@dominionenergy.com>
Cc: Ashley Free <ashley.free@criticalcontrol.com>
Subject: [EXTERNAL] Comparative Analysis - 124 Center Court Bridgeport

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

Ryan, 1 KNOWN sample was submitted along with 1 UNKNOWN sample for comparative analysis. From the data gathered I conclude that the UNKNOWN sample does NOT MATCH the KNOWN sample.

The data is presented in two different sets, one as the reports came out of the GC and the other with the air contamination removed for easier comparison. You can see the data and my reasoning below.

KNOWN - 124 CENTER COURT LINE	UNKNOWN - 124 CENTER COURT BORE HOLE

Raw Data

Nitrogen	1.0875	1.0875%
Oxygen	0.1307	0.1307%
Methane	90.9054	90.9056%
CO2	0.076	0.0760%
Ethane	5.5138	5.5138%
Propane	1.3577	1.3577%
iso-Butane	0.1992	0.1992%
n-Butane	0.3323	0.3323%
iso-Pentane	0.1116	0.1116%
n-Pentane	0.0877	0.0877%
C6+	0.1979	0.1979%
Total	99.9998	100.0000%

Nitrogen	42.8516	42.8516%
Oxygen	5.2176	5.2176%
Methane	46.498	46.4980%
CO2	1.9268	1.9268%
Ethane	2.4604	2.4604%
Propane	0.6655	0.6655%
iso-Butane	0.1192	0.1192%
n-Butane	0.1255	0.1255%
iso-Pentane	0.0615	0.0615%
n-Pentane	0.0163	0.0163%
C6+	0.0576	0.0576%
Total	100.0000	100.0000%

Air Removed

KNOWN - 124 CENTER COURT LINE		
Nitrogen		0.0000%
Oxygen		0.0000%
Methane	90.9054	92.0639%
CO2	0.0360	0.0365%
Ethane	5.5138	5.5841%
Propane	1.3577	1.3750%
iso-Butane	0.1992	0.2017%
n-Butane	0.3323	0.3365%
iso-Pentane	0.1116	0.1130%
n-Pentane	0.0877	0.0888%
C6+	0.1979	0.2004%

UNKNOWN - 124 CENTER COURT BORE HOLE		
Nitrogen		0.0000%
Oxygen		0.0000%
Methane	46.4980	89.6074%
CO2	1.8868	3.6361%
Ethane	2.4604	4.7415%
Propane	0.6655	1.2825%
iso-Butane	0.1192	0.2297%
n-Butane	0.1255	0.2419%
iso-Pentane	0.0615	0.1185%
n-Pentane	0.0163	0.0314%
C6+	0.0576	0.1110%

Total	98.7416	100.0000%	Total	51.8908	100.0000%

While the UNKNOWN sample is geological in origin, there are many differences between the components that indicate that the samples do not match. There is an elevated amount of Co2 in the unknown sample that is not related to air contamination, the ratio between Iso-Butane and N-Butane shows variance between the samples as well as a different ratio between Iso-Pentane and N-Pentane, along with a lower amount of C6+. These factors indicate to me that the samples submitted do NOT MATCH.

Our processors are out of the office today, so I will send the protrend reports after they get them processed.

Let me know if you have any questions.

Christopher Swann
Lab Supervisor | **Critical Control Energy Services**

CRITICAL CONTROL Energy Services

8444 Water Street | Stonewood, WV | 26301
Direct: 304.931.4126 | **Local:** 50121

CriticalControl.com

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CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, Jul 13, 2021 at 11:24 AM
To: "Harmon, Henry J" <Henry.J.Harmon@wv.gov>

FYI, the analysis.

Sent from my iPhone

Begin forwarded message:

> **From:** Nicholas.A.Cabo@dominionenergy.com
> **Date:** July 12, 2021 at 5:42:16 PM EDT
> **To:** "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
> **Subject: [External] FW: Comparative Analysis - 124 Center Court Bridgeport**
>
> [Quoted text hidden]

Harmon, Henry J <Henry.J.Harmon@wv.gov> Tue, Jul 13, 2021 at 12:55 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

There's no mention of the mercaptan in the report. Were you told verbally that they tested for mercaptan?

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, Jul 13, 2021 at 1:36 PM
To: "Harmon, Henry J" <Henry.J.Harmon@wv.gov>

No, he said other fillers. I assumed he meant mercaptan, because I also assumed that all of their residential gas had it as an additive

Sent from my iPhone

> On Jul 13, 2021, at 12:55 PM, Harmon, Henry J <Henry.J.Harmon@wv.gov> wrote:
>
> There's no mention of the mercaptan in the report. Were you told verbally that they tested for mercaptan?
>
> ---
>
> **From:** Ward, Samuel D <Samuel.D.Ward@wv.gov>
> **Sent:** Tuesday, July 13, 2021 11:25 AM
> **To:** Harmon, Henry J <Henry.J.Harmon@wv.gov>
> **Subject:** Fwd: [External] FW: Comparative Analysis - 124 Center Court Bridgeport
>
> FYI, the analysis.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** Nicholas.A.Cabo@dominionenergy.com
> > **Date:** July 12, 2021 at 5:42:16 PM EDT
> > **To:** "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
> > **Subject: [External] FW: Comparative Analysis - 124 Center Court Bridgeport**
> >
> > CAUTION: External email. Do not click links or open attachments unless you verify sender.
> >
> > Sam,
> >
> > Please see the gas analysis below. Feel free to contact me if you have any questions.
> >
> > Thanks,
> > Nick
> >
> > Nick Cabo
> >
> > Supervisor Environmental
> >
> > DEO/DEWV
> >
> > 2397 Davisson Run Road, Clarksburg, WV 26301
> >
> > O: 304-624-2227 C: 304-266-5431

<image001.png>
[Quoted text hidden]
<image002.png>
[Quoted text hidden]

2 attachments



image001.png
2K



image002.png
11K

Harmon, Henry J <Henry.J.Harmon@wv.gov> Tue, Jul 13, 2021 at 1:39 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Ok, just so I understand then, in addition to the deviations described below, there are also signature fillers that are not present in the ground gas?

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, Jul 13, 2021 at 1:48 PM
To: "Harmon, Henry J" <Henry.J.Harmon@wv.gov>

To be honest, he may not have used the word fillers either. He was specific about the methane content and nitrogen content. I don't recall exactly what word he used, but I understood it to be things they recognize as their gas and mercaptan was an assumption on my part. Does it look like there are similarities of the gasses? No disrespect intended, but I'm not sure why this part is so important.

Sent from my iPhone

> On Jul 13, 2021, at 1:39 PM, Harmon, Henry J <Henry.J.Harmon@wv.gov> wrote:
>
> [Quoted text hidden]

Harmon, Henry J <Henry.J.Harmon@wv.gov> Tue, Jul 13, 2021 at 2:27 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

It's important only in the context that these are facts pertinent to the investigation of this matter, such as it is. I passed those facts along to the cabinet secretary and I hate looking stupid.

So at this point, Dominion's position is that it's not their gas, which is driven by 2 facts: 1) chemical signature of the gas is different and 2) they observed some kind of hole that directly underlies their pipeline.

Could there be any alternative sources for the gas coming out of the hole? Could there be another pipeline under the Dominion line? Would it not be common to use the same ROW for line installation?

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, Jul 13, 2021 at 2:59 PM
To: "Harmon, Henry J" <Henry.J.Harmon@wv.gov>

I am sorry if I made you look bad. I was driving when I was speaking to Dominion about the analytics. I didn't take notes. I feel confident he used the word fillers that I assumed was mercaptan, but that could just be referring to the other products that make up

the gas as a whole. I don't recall us doubting analytics taken in the past, and I've seen them take samples before. The whole of the makeup was not significant to me, if they had test results to prove that the gas was not from their line. It could stand to reason that this may be an old water well that Dominions line leaked into, and the makeup of gasses in the water well were enough to change the makeup of the dominion gas. All who were present said the gas definitely came from below the Dominion line and that there was a stump or pole plugging some sort of hole that the gas was coming from.

Yes, That is very accurate. Until the email, I was uncertain that they actually saw a borehole. The contractor that excavated the site has gone on vacation, and Dominion is trying to get in touch with him to have him call me for more specific questions. The groundskeeper said they pulled the stump/telephone pole out, and that was where the gas seemed to be coming from. He did not say anything about a borehole, but based on the email string with the analytics, it is reasonable to assume that is the case, until I speak with the contractor.

I suppose another source could be the cause of the leak. If there was indeed a borehole and that is where the sample was taken, they probably inserted a small pipe into the hole and sealed it off as best they could then allowed the pipe to purge for an accurate sample the way they did the last one I watched, I'd say not likely for another source. I can't say until we hear back from the contractor. Perhaps in city limits the same ROW may be used for lines with caution, but it seems like an environmental disaster to be digging too close on gas lines and I probably would have been made aware of another line in the same ROW, and that operator there to represent as well.

Again, I am sorry if I made you look bad. Nick Cabo, that sent me the email with the analytics is my source. I understand the impact of what this potential well could mean. The office is asking way more specific questions than I can answer. I'm third person in the information chain from my source. All of Nick's contact info is listed in the email with the analytics. He wasn't on site either though. We're still waiting on the contractor who is on vacation.

[Quoted text hidden]

Harmon, Henry J <Henry.J.Harmon@wv.gov> Tue, Jul 13, 2021 at 3:08 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

No worries. Thanks for the clarifications.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Lipps Dewatering Notification

1 message

Dawn Keller <Dawn_Keller@swn.com> Wed, May 26, 2021 at 10:07 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Kees, Kelly L" <Kelly.L.Kees@wv.gov>
Cc: Jim Childers <Jim_Childers@swn.com>, Stephen Kadlubar <Stephen_Kadlubar@swn.com>, Casey Bartkus <Casey_Bartkus@swn.com>, Justin Booth <Justin_Booth@swn.com>

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Hi Kelly and Sam,

SWN plans to dewater the Lipps Freshwater Impoundment in Upshur County according to the approved dewatering plans in anticipation of closure. The earliest anticipated date to begin dewatering is 6/1/2021, weather permitting. I have attached recent water sampling results for your review.

Thanks!

Dawn Keller

Senior Environmental Specialist

SWN SWAPP Division

Mobile: 501-697-7230

Dawn_keller@swn.com

Lipps- 1031929_1 ESL 04 21 2021 0806.pdf
1522K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.02.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 2, 2021 at 6:08 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/02/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade Unit 1H

Current operation: Rig move

Projected operation: Move rig to Blizzard pad, rig up, drill surface, run casing, cement, nipple up & test BOPE, drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Wade 2H

Next well: Wade Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Patty Unit 2H

Current operation: Moving rig/ Rigging up

Projected operation: Move rig to Roma Lou pad, rig up, drill surface, run casing, cement, nipple up & test BOPE, drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Roy Unit 1H

Next well: Roy Unit 1H, Pad: Roma Lou, County: Tyler

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.02.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 2, 2021 at 6:08 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/02/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade Unit 1H

Current operation: Rig move

Projected operation: Move rig to Blizzard pad, rig up, drill surface, run casing, cement, nipple up & test BOPE, drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Wade 2H

Next well: Wade Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Patty Unit 2H

Current operation: Moving rig/ Rigging up

Projected operation: Move rig to Roma Lou pad, rig up, drill surface, run casing, cement, nipple up & test BOPE, drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Roy Unit 1H

Next well: Roy Unit 1H, Pad: Roma Lou, County: Tyler

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.09.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 9, 2021 at 6:27 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/09/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade Unit 1H

Current operation: Drilling Intermediate 1

Projected operation: Drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Wade 2H, rig up, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, nipple down

Next well: Wade Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Roy Unit 1H

Current operation: Picking up 12.25” BHA

Projected operation: Drill Intermediate, trip out, run casing, cement, nipple down, walk rig to Roy Unit 2H, rig up, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, nipple down

Next well: Roy Unit 2H, Pad: Roma Lou, County: Tyler

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.16.2021

4 messages

Eric May <emay@anteroresources.com> Sun, May 16, 2021 at 7:32 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/16/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Pechora Unit 1H

Current operation: Picking up 17.5” Surface BHA

Projected operation: Drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, nipple down, walk rig to Pechora Unit 2H, rig up, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement.

Next well: Pechora Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Fleetwood Unit 2H

Current operation: Drilling Intermediate

Projected operation: Drill Intermediate to TD, trip out, run casing, cement, nipple down, walk rig to Patty Unit 2H, rig up, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, wait on cement, pick up drill pipe, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP.

Next well: Patty Unit 2H, Pad: Roma Lou, County: Tyler

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, May 18, 2021 at 1:37 PM
To: Eric May <emay@anteroresources.com>

Eric,

Do you know which pad in Dodridge is being built? I received notice of the pre-construction meeting, but was unable to attend. I don't know which pad or where it is. I haven't gone looking yet, but would like to check in from time to time.

Sam

[Quoted text hidden]

Eric May <emay@anteroresources.com> Tue, May 18, 2021 at 1:59 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

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Sam
It looks to me like it will be Gaspar Pad, I'm on the road and won't be able to get directions, I deal only with drilling so I'm not sure direction sheets have been made for that as of yet.

Eric May
Drilling Foreman
970-371-5427
emay@anteroresources.com

On May 18, 2021, at 1:37 PM, Ward, Samuel D <Samuel.D.Ward@wv.gov> wrote:

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]
Email: emay@anteroresources.com<mailto:emay@anteroresources.com>

Ward, Samuel D <Samuel.D.Ward@wv.gov> Tue, May 18, 2021 at 2:36 PM
To: Eric May <emay@anteroresources.com>

Thank you. I can probably pull it up with the pad name and get coordinates. If you are able to send directions later, that would be great though.
Sent from my iPhone

> On May 18, 2021, at 1:59 PM, Eric May <emay@anteroresources.com> wrote:

> CAUTION: External email. Do not click links or open attachments unless you verify sender.
>
> [Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.23.2021

1 message

Eric May <emay@anteroresources.com> Sun, May 23, 2021 at 7:34 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/23/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Pechora Unit 2H

Current operation: Drilling 8.75” tangent

Projected operation: Drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement, walk rig to Pechora Unit 1H, nipple up test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM.

Next well: Pechora Unit 1H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Fleetwood Unit 2H

Current operation: Drilled lateral to TD and currently tripping out of hole

Projected operation: Trip out of hole, run production casing, pump cement, nipple down, skid rig to Fleetwood Unit 1H, nipple up test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement.

Next well: Fleetwood Unit 1H, Pad: Roma Lou, County: Tyler

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/05.30.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 30, 2021 at 6:07 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 05/30/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Pechora Unit 2H

Current operation: Cementing

Projected operation: Nipple down, walk rig to Pechora unit 1H, Drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement

Next well: Pechora Unit 1H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Fleetwood Unit 1H

Current operation: Circulating at TD

Projected operation: Trip out of hole, run production casing, pump cement, nipple down, skid rig to Roy Unit 2H, nipple up test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement.

Next well: Roy Unit 2H, Pad: Roma Lou, County: Tyler

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/06.06.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jun 6, 2021 at 6:20 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 06/06/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Pechora Unit 1H

Current operation: Running production casing

Projected operation: Run casing, circulate, cement, nipple down, walk rig to Whitmore unit 2H, Drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement

Next well: Whitmore Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Roy Unit 2H

Current operation: Drilling lateral

Projected operation: Drill to TD, circulate, trip out of hole, run production casing, pump cement, nipple down, skid rig to Roy Unit 1H, nipple up test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement.

Next well: Roy Unit 1H, Pad: Roma Lou, County: Tyler

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/06.13.2021

1 message

Eric May <emay@anteroresources.com> Sun, Jun 13, 2021 at 7:31 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 06/13/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Whitmore Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out, run production casing, burst airlock, circulate, pump cement, nipple down, walk rig to Whitmore unit 1H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral.

Next well: Whitmore Unit 1H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Roy Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, skid rig to Patty Unit 2H, nipple up test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement.

Next well: Patty Unit 2H, Pad: Roma Lou, County: Tyler

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/06.20.2021

1 message

Eric May <emay@anteroresources.com> Sun, Jun 20, 2021 at 7:42 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 06/20/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Whitmore Unit 1H

Current operation: Drilling curve

Projected operation: Drill curve, drill lateral to TD, circulate, trip out, run production casing, burst airlock, circulate, pump cement, nipple down, walk rig to Wade unit 2H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral.

Next well: Wade Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Patty Unit 2H

Current operation: Circulating at TD

Projected operation: Circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, skid rig to Patty Unit 1H, rig up, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, wait on cement, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral.

Next well: Patty Unit 1H, Pad: Roma Lou, County: Tyler

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/06.27.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jun 27, 2021 at 6:21 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>

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Marcellus Drilling Update 06/27/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Whitmore Unit 1H

Current operation: Running production casing

Projected operation: Run production casing, burst airlock, circulate, pump cement, nipple down, walk rig to Wade unit 2H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve assembly, drill curve, round trip for lateral assembly, drill lateral.

Next well: Wade Unit 2H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Patty Unit 1H

Current operation: Drilling 12-1/4” section

Projected operation: Drill to ICP, load hole, trip out, run 9 5/8” casing, cement, wait on cement, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve and lateral assembly, drill curve, drill lateral, circulate, lay down drill pipe, run production casing, circulate, cement, clean pits/rig down

Next well: Charlotte Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/7.04.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jul 4, 2021 at 6:11 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

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Marcellus Drilling Update 7/04/2021

Happy 4th of July!!

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade unit 2H

Current operation: Circulating @ TD

Projected operation: Circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, walk rig to Wade unit 1H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, drill tangent to KOP, displace with SOBM, round trip for curve assembly, drill curve, round trip for lateral assembly, drill lateral.

Next well: Wade Unit 1H, Pad: Blizzard, County: Tyler

Rig: H&P 519

Pad: Roma Lou

County: Tyler

Well: Patty Unit 1H

Current operation: Laying down drill pipe

Projected operation: Lay down drill pipe, run production casing, circulate, cement, clean pits/rig down, Move rig to Gadd pad starting on 7-6-21

Next well: Charlotte Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Marcellus/Drilling/WVDEP Weekly Update/7.11.2021

1 message

Eric May <emay@anteroresources.com> Sun, Jul 11, 2021 at 7:11 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

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Marcellus Drilling Update 7/11/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, clean pits/rig down, move rig to Shepherd pad starting on 7-16-21.

Next well: Rapids Unit 1H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Charlotte Unit 1H

Current operation: Moving rig to Gadd pad

Projected operation: Complete rig move, rig up, pick up drill pipe, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, run casing, cement, walk rig to Charlotte 2H, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate.

Next well: Charlotte Unit 2H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[EXTERNAL] Marcellus/Drilling/WVDEP Weekly Update/7.18.2021

1 message

Eric May <emay@anteroresources.com> Sun, Jul 18, 2021 at 7:12 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 7/18/2021

Rig: H&P 317

Pad: Blizzard

County: Tyler

Well: Wade unit 1H

Current operation: Moving rig to Shepherd pad

Projected operation: Rig down on Blizzard pad, move rig, rig up on Shepherd pad

Next well: Rapids Unit 1H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Charlotte Unit 2H

Current operation: Running surface casing

Projected operation: Run surface casing, cement, nipple up & test BOPE, casing test, drill intermediate, trip out, run casing, cement, walk rig to Busch 1H, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, trip out, run casing, cement, walk rig to Busch 2H.

Next well: Busch Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Ross 2 Dewatering Notification

1 message

Dawn Keller <Dawn_Keller@swn.com> Mon, May 10, 2021 at 3:43 PM
To: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Jim Childers <Jim_Childers@swn.com>, Stephen Kadlubar <Stephen_Kadlubar@swn.com>, Bill Vavrek <Bill_Vavrek@swn.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Hi Kelly and Sam,

SWN plans to dewater the Ross 2 Freshwater Impoundment in Upshur County according to the approved dewatering plans to maintain freeboard. The earliest anticipated date to begin dewatering is 5/17/2021, weather permitting. I have attached recent water sampling results for your review.

Thanks!

Dawn Keller

Senior Regulatory Analyst-SWN SWA Division

Mobile: 501-697-7230

Dawn_keller@swn.com

Ross 2- 1031928_1 ESL 04 21 2021 0806.pdf

1517K

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Tyler County Contact

1 message

Mike Grueneberg <mgrueneberg@anteroresources.com> Thu, Jun 17, 2021 at 6:15 PM
To: "Samuel.d.ward@wv.gov" <Samuel.d.ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Mr. Ward,

Just curious who our state contact would be for the Gorrell Pad?

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] Vacation

1 message

Dawn Keller <Dawn_Keller@swn.com> Wed, Jul 14, 2021 at 4:19 PM
To: "Stollings, Barry W" <Barry.W.Stollings@wv.gov>, "Harris, Bryan O" <Bryan.O.Harris@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Knitowski, Gayne J" <Gayne.J.Knitowski@wv.gov>
Cc: Chad Keilman <Chad_Keilman@swn.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Good Afternoon Gentlemen,

I just wanted to let you all know that I will be on vacation July 15- July 23. If there are any pressing issues or if you need anything please reach out to Chad Keilman at 501-428-3114 or Josh Boyda at 501-428-3636. Thank you and have a great week!

Dawn Keller

Senior Environmental Specialist

SWN SWAPP Division

Mobile: 501-697-7230

Dawn_keller@swn.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 5-16-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, May 16, 2021 at 11:02 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Joseph McCourt <joseph.mccourt@wv.gov>, "Joseph.A.McCourt@wv.gov" <'Joseph.A.McCourt@wv.gov'>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

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FRAC:

Pad: Grand

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Zipper frac Vishnu Unit 1H & 2H wells 1 & 2 of 5 (Zipper set #1).

Projected Weekly Operations: Continue zipper fracing, set #1 Vishnu Unit 1H & 2H.

Pad: Gorrell

County: Tyler

Frac Crew: Halliburton 6

Current Operations: Zipper frac Hodge Unit 1H & Garrison Unit 2H wells 1 & 2 of 5 (Zipper set #1).

Projected Weekly Operations: Continue zipper fracing set #1, Hodge Unit 1H & Garrison Unit 2H.

-

Frac Plug Drillout Operations:

Pad: Elk Fork

County: Tyler

Single Rig: Mountain States Pressure Services (MSPSI)

Current Operations: Move in and rig up frac plug drill out equipment on the Yough Unit 1H, well 1 of 5.

Projected Weekly Operations: Start drill out early in the week on Yough Unit 1H and move to Cheat Unit 2H well.

-

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 5-2-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 2, 2021 at 7:08 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

FRAC:

Pad: Elk Fork

County: Tyler

Current Operations: Zipper frac the Yough 1H, Cheat 1H, Cheat 2H. Wells 3, 4, 5 of 5 (zipper set #2).

Projected Weekly Operations: Continue zipper frac operations on zipper set #2.

Frac Crew: Halliburton 12

Pad: Gorrell

County: Tyler

Current Operations: Wait on drilling rig to move off pad.

Projected Weekly Operations: Start to move in rig up frac and support equipment mid-week. Estimated to start frac operations early next-week.

Frac Crew: Halliburton 6

Frac Plug Drillout Operations:

Pad: Peggy June

County: Doddridge

Current Operations: Drilling plugs on the Whitehill 2H & Fraley 1H. Wells 2 & 3 of 8.

Projected Weekly Operations: Continue frac plug drillout operations on wells 2-8 of 8.

Dual Rigs: MSPSI & CWS

Cement Bond Logs:

Pad: Gorrell

County: Tyler

Current Operations: Wait on drilling to finish rig move off pad.

Projected Weekly Operations: MIRU to pull cement bond logs on 5 of 5 wells mid-week.

Pad: Grand

County: Tyler

Current Operations: Wait on drilling rig to finish rig move off pad.

Projected Weekly Operations: MIRU to pull cement bond logs on 5 of 5 wells late-week.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com


Antero
Resources


Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 5-23-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, May 23, 2021 at 11:53 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Joseph McCourt <joseph.mccourt@wv.gov>, "Joseph.A.McCourt@wv.gov" <'Joseph.A.McCourt@wv.gov'>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

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FRAC:

Pad: Grand

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Zipper frac Vishnu Unit 1H & 2H wells 1 & 2 of 5 (Zipper set #1).

Projected Weekly Operations: Continue zipper fracing, set #1 Vishnu Unit 1H & 2H, Estimated to complete zipper set 1 around 6/1

Pad: Gorrell

County: Tyler

Frac Crew: Halliburton 6

Current Operations: Zipper frac Hodge Unit 1H & Garrison Unit 2H wells 1 & 2 of 5 (Zipper set #1).

Projected Weekly Operations: Continue zipper fracing set #1, Hodge Unit 1H & Garrison Unit 2H, Estimated to complete zipper set 1 around 6/1

Frac Plug Drillout Operations:

Pad: Elk Fork

County: Tyler

Single Rig: Mountain States Pressure Services (MSPSI)

Current Operations: Drilling Plugs on Cheat Unit 2H, well 2 of 5.

Projected Weekly Operations: Complete drill out on Cheat Unit 2H well and Cheat Unit 1H and move to the Tygart Unit 1H.

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 5-30-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 30, 2021 at 8:39 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

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FRAC:

Pad: Gorrell

County: Tyler

Current Operations: Zipper frac the Garrison 1H, Mills 1H, Mills 2H.

Projected Weekly Operations: Continue MIRU zipper frac operations.

Frac Crew: Halliburton 6

Pad: Grand

County: Tyler

Current Operations: Zipper frac the Vishnu 1H & Vishnu 2H.

Projected Weekly Operations: Well swaps to zipper set #2 (Tapeats 1H, 2H, 3H) today. Continue with zipper frac operations.

Frac Crew: Halliburton 12

-

Frac Plug Drillout Operations:

Pad: Elk Fork

County: Tyler

Current Operations: Frac plug drillout on the Tygart 2H, well 4 of 5.

Projected Weekly Operations: Continue frac plug drillout operations on wells 4 & 5 of 5. Finish drillout operations late-week, pad cleanup.

Rig: MSPSI

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 5-9-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 9, 2021 at 7:52 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

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FRAC:

Pad: Elk Fork

County: Tyler

Current Operations: Zipper frac the Yough 1H, Cheat 1H, Cheat 2H. Wells 3, 4, 5 of 5 (zipper set #2).

Projected Weekly Operations: Continue zipper frac operations on zipper set #2 through mid-week. Rig down move off frac fleet.

Frac Crew: Halliburton 12

Pad: Gorrell

County: Tyler

Current Operations: Move in rig up Halliburton fleet #6 and support equipment.

Projected Weekly Operations: Continue MIRU frac fleet. Start frac operations early-week.

Frac Crew: Halliburton 6

Pad: Grand

County: Tyler

Current Operations: Prep pad to receive Halliburton fleet #6.

Projected Weekly Operations: Move in rig up Halliburton fleet #12 and support equipment mid-week. Start frac operations late-week.

Frac Crew: Halliburton 12

Frac Plug Drillout Operations:

Pad: Peggy June

County: Doddridge

Current Operations: Drilling plugs on the Russel 2H, well 8 of 8.

Projected Weekly Operations: Finish frac plug drillout operations tomorrow, start rig down move off equipment. Handover to Production flowback late-week.

Dual Rigs: CWS

Pad: Elk Fork

County: Tyler

Current Operations: Finish frac operations mid-week.

Projected Weekly Operations: Finish frac operations mid-week. Start MIRU for single rig drillout.

Rig: MSPSI

Cement Bond Logs:

Pad: Grand

County: Tyler

Current Operations: Pull cement bond logs of 5 of 5 wells.

Projected Weekly Operations: Pull cement bond logs. Prep to start MIRU frac fleet.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 6-13-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jun 13, 2021 at 11:38 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

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FRAC:

Pad: Grand

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Zipper frac Tapeats Unit 1H, 2H, & 3H wells 3, 4, & 5 of 5 (Zipper set #2).

Projected Weekly Operations: Continue zipper fracing, set #2 Tapeats Unit 1H, 2H, & 3H, Estimated to complete zipper set 2 around 6/21

Pad: Gorrell

County: Tyler

Frac Crew: Halliburton 6

Current Operations: Zipper frac Garrison Unit 1H, Mills Unit 1H & 2H wells 3, 4, & 5 of 5 (Zipper set #2).

Projected Weekly Operations: Complete zipper fracing set #2. Estimated to complete fracing early in the week 6/15, rig down frac equipment and start prepping pad for drill out of frac plugs

-

Frac Plug Drillout Operations:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 6-20-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jun 20, 2021 at 11:31 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

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FRAC:

Pad: Grand

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Zipper frac Tapeats Unit 1H, 2H, & 3H wells 3, 4, & 5 of 5 (Zipper set #2).

Projected Weekly Operations: Complete zipper fracing set #2, Tapeats Unit 1H, 2H, & 3H. Rig down frac equipment and move over to drill out late in the week.

-

Frac Plug Drillout Operations:

Pad: Gorrell

County: Tyler

Single Rig: Consolidated Well Services (CWS)

Current Operations: Hodge 1H - Rigging up drill out equipment.

Projected Weekly Operations: Complete rig up and drill out plugs on Hodge 1H, then move to the Garrison 2H well.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 6-27-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jun 27, 2021 at 8:41 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

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FRAC:

No activity.

Frac Plug Drillout Operations:

Pad: Gorrell

County: Tyler

Current Operations: Frac plug drillout on the Garrison 2H, well 2 of 5.

Projected Weekly Operations: Continue frac plug drillout on wells 2 – 5 of 5.

Rig: Consolidated Well Services

Pad: Grand

County: Tyler

Current Operations: Frac plug drillout on the Tapeats 3H, well 1 of 5.

Projected Weekly Operations: Continue frac plug drillout on well 1 – 5 of 5.

Rig: DeepWell

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 6-6-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jun 6, 2021 at 7:07 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

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FRAC:

Pad: Gorrell

County: Tyler

Current Operations: Zipper frac the Garrison 1H, Mills 1H, Mills 2H.

Projected Weekly Operations: Continue zipper frac the Garrison 1H, Mills 1H, Mills 2H.

Frac Crew: Halliburton 6

Pad: Grand

County: Tyler

Current Operations: Zipper frac the Tapeats 1H, Tapeats 2H, Tapeats 3H.

Projected Weekly Operations: Continue zipper frac the Tapeats 1H, 2H, 3H.

Frac Crew: Halliburton 12

Frac Plug Drillout Operations:

Pad: Elk Fork

County: Tyler

Current Operations: Moving off drillout equipment.

Projected Weekly Operations: Continue move off drillout equipment, clean pad. Production handover mid-week.

Rig: MSPSI

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 7-11-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jul 11, 2021 at 7:31 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

FRAC:

Pad: Roma Lou

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Wait on Drilling rig to complete rig down move off of pad.

Projected Weekly Operations: Hold Pre frac meeting, prep pad, run CBL's, MIRU frac equipment for Simul-frac Operations. Anticipate to start fracing Late in week/Early next week.

-

Frac Plug Drillout Operations:

Pad: Grand

County: Tyler

Rig: DeepWell

Current Operations: Tapeats 1H – Fishing parted drill out BHA. Well 3 of 5.

Projected Weekly Operations: Complete fishing lost BHA and drill out of plugs on Tapeats 1H well, then move to the Vishu unit wells and drill out.

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

[EXTERNAL] WVDEP Antero Completions Weekly Update, Week of 7-18-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jul 18, 2021 at 10:10 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Roma Lou

County: Tyler

Frac Crew: Halliburton 12

Current Operations: Final rig up of frac fleet for Simulfrac Operations.

Projected Weekly Operations: Prime Up Pressure test, and start fracing on Patty Unit 1H, Patty Unit 2H, Roy Unit 1H, Roy Unit 2H, Fleetwood Unit 1H, & Fleetwood Unit 2H.

Pad: Blizzard

County: Tyler

Frac Crew: Halliburton 6

Current Operations: Wait on pad hand over from drilling.

Projected Weekly Operations: Pre Frac onsite meeting, run CBL's and prep pad for frac fleet arrival.

Frac Plug Drillout Operations:

Pad: Grand

County: Tyler

Rig: DeepWell

Current Operations: Tapeats 1H – POOH with workstring. Well 3 of 5.

Projected Weekly Operations: Complete fishing lost BHA and drill out of plugs on Tapeats 1H well, then move to the Vishu unit wells and drill out.

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

[External] WVDEP Antero Completions Weekly Update, Week of 7-4-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jul 4, 2021 at 7:42 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

FRAC:

No activity.

Frac Plug Drillout Operations:

Pad: Gorrell

County: Tyler

Current Operations: Frac plug drillout on the Mills 2H, well 4 of 5.

Projected Weekly Operations: Continue frac plug drillout on wells 4 – 5 of 5. Estimated to finish drillout operations mid-week.

Rig: Consolidated Well Services

Pad: Grand

County: Tyler

Current Operations: Frac plug drillout on the Tapeats 2H, well 2 of 5.

Projected Weekly Operations: Continue frac plug drillout on wells 2 – 5 of 5. Estimated to finish drillout operations July 16th.

Rig: DeepWell

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

Abatement Extension

2 messages

Ward, Samuel D <samuel.d.ward@wv.gov> Tue, May 3, 2022 at 4:02 PM
To: Scott Rodeheaver <j.scott.rodeheaver@wv.gov>, Doug Newlon <douglas.c.newlon@wv.gov>, Jackie N Thornton <jackie.n.thornton@wv.gov>, Eli Wagoner <ewagoner@anteroresources.com>

Scott,

Could you please enter this into the system, and mail the certified copies? Antero anticipates that testing and cleanup will take longer than seven days.

Eli, this will serve as your wellhead copy until I am able to get back there to post the wellhead copy. Antero is granted 30 days from today's date. If you need another extension, let me know.

Sam

17-06000 Antero OXF1AHS Abatement Extension.pdf
297K

Eli Wagoner <ewagoner@anteroresources.com> Tue, May 24, 2022 at 12:46 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>, Scott Rodeheaver <j.scott.rodeheaver@wv.gov>, Doug Newlon <douglas.c.newlon@wv.gov>, Jackie N Thornton <jackie.n.thornton@wv.gov>

Sam

We are headed out tomorrow to get the required soil and water samples. The labs have been a bit backed up lately so just in case we cannot get the results back in time to get the report finalized I would like to request one additional extension for NOV #11801. If you have any questions or concerns please feel free to contact me at anytime.

Thank you

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com



From: Ward, Samuel D [mailto:samuel.d.ward@wv.gov]
Sent: Tuesday, May 3, 2022 4:02 PM
To: Scott Rodeheaver; Doug Newlon; Jackie N Thornton; Eli Wagoner
Subject: Abatement Extension

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero - OXF 98 Updated Engineering Plan NOD

3 messages

Kees, Kelly L <kelly.l.kees@wv.gov> Wed, Mar 9, 2022 at 10:54 AM
To: Mallory Stanton <mstanton@anteroresources.com>, Dani Devito <ddevito@shalepro.com>, Diane Blair <dblair@anteroresources.com>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I have reviewed the construction plans for the above referenced well pad as prepared by Rettew and received by the WVDEP-Office of Oil & Gas on 2-11-2022 and I have the following comments:

1. On the reclamation plans found on pages 33-36 you need to provide a reclamation sequence. Within the sequence you need to provide any compaction specs needed to reclaim the sight. The maximum fill lift thickness will be 24 inches. Reclamation fills will be compacted to 90% of Standard Proctor density (ASTM D-698).

2. Also during reclamation will the sumps remain open or will they be removed and the berm breached?

If you have any questions, please do not hesitate to contact me. Please return the revised plan set to me as a pdf.

Kelly L. Kees, P.E.
Office of Oil and Gas
WVDEP
601 57th St SE,
Charleston, WV 25304
(304)926-0440

Mallory Stanton <mstanton@anteroresources.com> Wed, Mar 9, 2022 at 1:23 PM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>, Dani Devito <ddevito@shalepro.com>, Diane Blair <dblair@anteroresources.com>

Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Hey Kelly,

I went back through the plans and confirmed the reclamation narrative is on page 28. Rettew specifies 95% of the Standard Proctor and 12” lifts. The narrative also notes sumps will be maintained post reclamation. Let me know if you need anything else updated.

Thanks,

Mallory

From: Kees, Kelly L <kelly.l.kees@wv.gov>
Sent: Wednesday, March 9, 2022 8:54 AM
To: Mallory Stanton <mstanton@anteroresources.com>; Dani Devito <ddevito@shalepro.com>; Diane Blair <dblair@anteroresources.com>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>; Newlon, Douglas C <douglas.c.newlon@wv.gov>; Ward, Samuel D <samuel.d.ward@wv.gov>
Subject: Antero - OXF 98 Updated Engineering Plan NOD

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[Quoted text hidden]

Mallory Stanton <mstanton@anteroresources.com> Thu, Mar 10, 2022 at 11:13 AM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>, Dani Devito <ddevito@shalepro.com>, Diane Blair <dblair@anteroresources.com>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Kelly, did you find this? Also want to make sure you have the correct design dated 1/12/22?

Thanks,

Mallory

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero 531 Gander 1H PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Feb 3, 2022 at 7:38 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the PJR and casing tally for the Gander Unit 1H 5.5” Production casing cement job.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 1H

AFE#: A11556-D

2 attachments

Gander 1H PJR.docx
702K

Gander 1H Production Casing Tally.pdf
633K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Earl 1H Surface PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, Jan 9, 2022 at 2:35 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the surface PJR for Earl Unit 1H API# 47085104140000. If there are any questions feel free to contact us.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 1H

AFE#: A11552-D

2 attachments

Earl Unit 1H Surface Casing Tally.pdf
103K

Earl Unit 1H Surface PJR.pdf
3507K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Earl 2H Intermediate PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Jan 8, 2022 at 2:13 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Intermediate casing tally and PJR for the Earl Unit 2H API# 47085104150000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 2H

AFE#: A11554-D

2 attachments

Earl 2H Intermediate Casing Tally.pdf
164K

Earl 2H Intermediate PJR.pdf
3559K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Intent to spud

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Dec 30, 2021 at 7:00 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Sam,

We will be spudding the Sandy 1H on 1/1/2022 drill surface, run surface casing, pump cement and nipple up and test BOPE.

H&P 531

Weekly West Pad

AFE: A11560-D

API: 47-085104170000

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, Jan 4, 2022 at 8:23 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Please see attached casing tally and PJR for Sandy Unit 1H API# 47085104170000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

2 attachments

Sandy 1H Intermediate Casing Tally.pdf
158K

Sandy 1H Intermediate PJR.pdf
3626K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, Jan 4, 2022 at 8:23 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Please see attached casing tally and PJR for Sandy Unit 1H API# 47085104170000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

2 attachments

Sandy 1H Intermediate Casing Tally.pdf
158K

Sandy 1H Intermediate PJR.pdf
3626K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Surface PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Jan 1, 2022 at 10:58 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Please see attached surface casing tally and PJR for Sandy Unit 1H API# 47085104170000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

2 attachments

Sandy 1H Surface PJR.pdf
2106K

Sandy 1H Surface Casing Tally.pdf
103K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, Jan 7, 2022 at 12:57 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving 24hr intent to spud Earl Unit 1H API# 47085104140000, drill surface, run casing, cement, nipple up BOPE, Test, drill intermediate 1, run casing and cement. If there are any questions feel free to contact us.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 2H

AFE#: A11554-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Jan 3, 2022 at 8:44 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving 24hr intent to spud Earl Unit 2H API# 47085104150000, drill surface, run casing, cement, nipple up BOPE, Test, drill intermediate 1, run casing and cement. If there are any questions feel free to contact us.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P 531 Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, Jan 30, 2022 at 7:23 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

We are currently circulating at TD on Gander Unit 1H API# 47085104160000. We are giving notice of intent to run 5.5” production casing and cement. After well is cemented and capped we will skid rig over to Maxson Unit 1H API # 47085104120000, nipple up BOPE and reenter to begin drilling 8.75” section and then curve and lateral.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Gander Unit 1H

AFE#: A11669-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero H&P531 Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Jan 3, 2022 at 5:03 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving intent to run 9 5/8” casing and cement in next 24-36hrs on Sandy Unit 1H API# 47085104170000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero Rig 531 Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, May 2, 2022 at 8:03 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving notice of intent to run production casing and cement on the McKean Unit 1H API# 47017069140000. After it is cased and cemented we will nipple down BOP, skid rig to the Calhoun Unit 2H API# 47017069120000, nipple up BOPE test BOPE, and begin to drill tangent, followed by curve and lateral.

Thanks,

Jesse Lawson / Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 1H

AFE#: A11776-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero Weekley West Pad

5 messages

Dennis Zbosnik <dzbosnik@anteroresources.com> Thu, Mar 31, 2022 at 9:41 PM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>
Cc: Completions Update <completionsupdate@anteroresources.com>, Ryan Rivera <rrivera@anteroresources.com>, Bryan Hemard <bhemard@anteroresources.com>, Dennis Zbosnik <dzbosnik@anteroresources.com>

Mr. Ward,

We will begin frac operations on the Weekley West this weekend, start date is planed for April 3rd.

Thank You,

Dennis Zbosnik

AOR Completions

Marcellus and Utica Completions

(304) 709-2613

dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>

Matthews7:7

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Apr 1, 2022 at 8:08 AM
To: Dennis Zbosnik <dzbosnik@anteroresources.com>

Which county is this? I'm covering a lot of counties until more inspectors get hired. I am not familiar with this pad.

Thank You,
Sam
[Quoted text hidden]

Dennis Zbosnik <dzbosnik@anteroresources.com> Fri, Apr 1, 2022 at 9:41 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Hi Sam,
Yeah I know the state had a bunch of inspectors quit, Weekley is off Sunnyside exit in Dodgeridge county.

Dennis Zbosnik
AOR Completions
West Virginia, Marcellus
(304)709-2613
Matthew 7:7

On Apr 1, 2022, at 08:09, Ward, Samuel D <samuel.d.ward@wv.gov> wrote:

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

_____

Which county is this? I'm covering a lot of counties until more inspectors get hired. I am not familiar with this pad.

Thank You,
Sam

On Thu, Mar 31, 2022 at 9:41 PM Dennis Zbosnik <dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>> wrote:
Mr. Ward,

We will begin frac operations on the Weekley West this weekend, start date is planed for April 3rd.

Thank You,

Dennis Zbosnik

AOR Completions

Marcellus and Utica Completions

(304) 709-2613

dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com><mailto:dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>>

Matthews7:7

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Apr 1, 2022 at 9:44 AM
To: Dennis Zbosnik <dzbosnik@anteroresources.com>

Thank you. That is my area... I haven't had Dodridge long though
[Quoted text hidden]

Dennis Zbosnik <dzbosnik@anteroresources.com> Fri, Apr 1, 2022 at 11:45 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Ok sounds good, if you need anything let me know,

Dennis Zbosnik
AOR Completions
West Virginia, Marcellus
(304)709-2613
Matthew 7:7

On Apr 1, 2022, at 09:44, Ward, Samuel D <samuel.d.ward@wv.gov> wrote:

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

Thank you. That is my area... I haven't had Dodridge long though

On Fri, Apr 1, 2022 at 9:41 AM Dennis Zbosnik <dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>> wrote:
Hi Sam,
Yeah I know the state had a bunch of inspectors quit, Weekley is off Sunnyside exit in Dodgeridge county.

Dennis Zbosnik
AOR Completions
West Virginia, Marcellus
(304)709-2613
Matthew 7:7

On Apr 1, 2022, at 08:09, Ward, Samuel D <samuel.d.ward@wv.gov<mailto:samuel.d.ward@wv.gov>> wrote:

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

Which county is this? I'm covering a lot of counties until more inspectors get hired. I am not familiar with this pad.

Thank You,
Sam

On Thu, Mar 31, 2022 at 9:41 PM Dennis Zbosnik <dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com><mailto:dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>>> wrote:
Mr. Ward,

We will begin frac operations on the Weekley West this weekend, start date is planed for April 3rd.

Thank You,

Dennis Zbosnik

AOR Completions

Marcellus and Utica Completions

(304) 709-2613

dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com><mailto:dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>><mailto:dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com><mailto:dzbosnik@anteroresources.com<mailto:dzbosnik@anteroresources.com>>>

Matthews7:7

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero, H&P 531, Maxson 1H Prod Cement PJR

2 messages

Rig H&P 531 <righandp531@anteroresources.com> Sat, Feb 12, 2022 at 6:47 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the PJR and casing tally for the Maxson Unit 1H 5.5” Production casing cement job.

Lost Returns During Displacement, Est Cement Top 6,908’, Cement top will be verified with CBL after rig moves off.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 2H

AFE#: A11558-D

Maxson 1H Production Cement PJR.pdf
2236K

Rig H&P 531 <righandp531@anteroresources.com> Sat, Feb 12, 2022 at 6:50 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Casing tally failed to attach so here it is.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 2H

AFE#: A11558-D

[Quoted text hidden]

Maxson 1H 5.5" Prod Casing Tally.pdf
272K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero_H&P 531_Maxson Unit 2H Production Cement PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Feb 19, 2022 at 6:39 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the PJR and casing tally for the Maxson Unit 2H 5.5” Production casing cement job.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 2H

AFE#: A11558-D

2 attachments

Maxson 2H Production Cement PJR.pdf
2373K

Maxson 2H 5.5" Production Casing Tally.pdf
269K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero_H&P531_McKean Unit 1H Production Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, May 6, 2022 at 6:48 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please see attached Cement PJR along with 5.5" Casing Tally,

Update: Currently Preparing to skid Rig to the Calhoun Unit 2H, we anticipate starting to drill 8.75" section around 8 pm tonight.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 1H

AFE#: A11776-D

2 attachments

McKean 1H Casing Tally.pdf
639K

McKean 1H Production Cement PJR.pdf
4455K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero_H&P531_Notice of intent to Run Production Casing and Cement.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, May 10, 2022 at 7:00 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Calhoun Unit 2H API# 47017069120000.

Notice of intent to run production casing and cement.

Anticipate Start Running Casing 24-36 hrs from now.

Update: After Well is cemented we will nipple down BOP and Release Rig.

Skid Rig to the Calhoun Unit 1H API# 47017069130000 (1st Slim Hole).

Nipple up & test BOPE, and drill tangent, curve and lateral.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Calhoun Unit 2H

AFE#: A11778-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero_H&P531_Production Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, May 15, 2022 at 7:40 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please see attached Production Cement PJR along with Casing Tally,

Update: Just finished testing BOP's, Currently Preparing to Pick up BHA and Drill pipe to start drilling 6.75'' Section on the Calhoun 1H (Slim Hole), we anticipate starting drilling later on this afternoon 05/15.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Calhoun Unit 1H

AFE#: A11780-D

2 attachments

Calhoun 2H Production Casing Tally.pdf
275K

Calhoun 2H Production Cement PJR.pdf
3248K

Ward, Samuel D <samuel.d.ward@wv.gov>

Antero_H&P531_Sandy Unit 1H Production Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Mar 17, 2022 at 6:45 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Current operations: Rigging down Preparing to Move Rig to the Gaspar Pad.

Please see attached Production Cement PJR and Casing Tally.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Sandy Unit 1H

AFE#: A11560-D

2 attachments

Sandy Unit 1H Production Cement PJR.pdf
2414K

Sandy Unit 1H Production Casing Tally.pdf
270K

Ward, Samuel D <samuel.d.ward@wv.gov>

Automatic reply: WVDEP Office of Oil and Gas Contact List

1 message

Cory Knote <cknote@anteroresources.com> Fri, Oct 15, 2021 at 9:53 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>

I am out of the office returning 10/26/21. Please contact Tim Neill with any questions, or concerns. Thanks

Ward, Samuel D <samuel.d.ward@wv.gov>

Calhoun 2H ICP1 Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Wed, Apr 13, 2022 at 6:38 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 1H

AFE#: A11776-D

2 attachments

Calhoun 2H ICP1 Cement PJR.pdf
1858K

Calhoun 2H ICP1 Casing Tally.pdf
206K

Ward, Samuel D <samuel.d.ward@wv.gov>

Calhoun 2H Surface Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Apr 11, 2022 at 7:39 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Calhoun Unit 2H

AFE#: A11778-D

2 attachments

Calhoun 2H Surface Cement PJR.pdf
2810K

Calhoun 2H Surface Casing Tally.pdf
196K

Ward, Samuel D <samuel.d.ward@wv.gov>

Dogwood Pad Start Up

1 message

Bryan Hemard <bhemard@anteroresources.com> Fri, Feb 4, 2022 at 4:59 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, "brian.o.harris@wv.gov" <brian.o.harris@wv.gov>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>

Dear Mr Ward, Mr Harris, and Mr Newlon,

Frac Operations for the Dogwood pad will be starting within the next 24hrs. The initial wells will be the Daags 1H and Gribben 2H.

Please reply or call with any questions or concerns.

Bryan Hemard
Antero Onsite Representative
535 White Oaks Boulevard
Bridgeport, WV 26330
970-210-1824 Cell

Ward, Samuel D <samuel.d.ward@wv.gov>

Earl Unit 2H Surface PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Jan 6, 2022 at 12:28 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the surface casing tally and PJR for the Earl Unit 2H API# 47085104150000.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 2H

AFE#: A11554-D

2 attachments

Earl 2H Surface PJR.pdf
3633K

Earl 2H Surface Casing Tally.pdf
103K

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification 8-31-21

1 message

Aric Martin <amartin@anteroresources.com> Tue, Aug 31, 2021 at 11:56 PM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>, "Derek.M.Haught@wv.gov" <Derek.M.Haught@wv.gov>
Cc: Eli Wagoner <ewagoner@anteroresources.com>, Sam Myers <smyers@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 9-1-21 at 11:45 pm .If you have any questions or concerns please feel free to contact me at any time. Thanks,

Aric Martin
Environmental Field Supervisor
535 White Oaks BLVD
Bridgeport, WV 26330
304-641-4770
amartin@anteroresources.com<mailto:amartin@anteroresources.com>
[cid:image001.jpg@01D711DB.C4E2B1E0]

Sent from my iPhone

cidimage001.jpg@01D711DB.C4E2B1E0
12K

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, Oct 29, 2021 at 7:41 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 10-30-21 at 7:30 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Sat, Oct 16, 2021 at 10:42 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 10-17-21 at 10:30 AM If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Mon, Oct 4, 2021 at 10:35 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, "Haught, Derek M" <Derek.M.Haught@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 10-5-21 at 10:30 AM. If you have any questions or concerns please feel free to contact me at any time.

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Wed, Sep 22, 2021 at 8:55 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 9-23-21 at 9:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Wed, Sep 8, 2021 at 3:38 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel D Ward <samuel.d.ward@wv.gov>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 9-9-21 at 3:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Aug 26, 2021 at 11:19 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-27-21 at 11:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency Sump Notification

1 message

Aric Martin <amartin@anteroresources.com> Tue, Aug 17, 2021 at 4:55 PM
To: "Derek.M.Haught@wv.gov" <Derek.M.Haught@wv.gov>
Cc: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-18-21 at 5:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Thanks,

Aric Martin

Environmental Field Supervisor

535 White Oaks BLVD

Bridgeport, WV 26330

304-641-4770

amartin@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency Sump Notification

1 message

Aric Martin <amartin@anteroresources.com> Mon, Aug 16, 2021 at 12:14 PM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>
Cc: "Derek.M.Haught@wv.gov" <Derek.M.Haught@wv.gov>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-17-21 at 11:30 AM. If you have any questions or concerns please feel free to contact me at any time.

Aric Martin

Environmental Field Supervisor

535 White Oaks BLVD

Bridgeport, WV 26330

304-641-4770

amartin@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, Aug 13, 2021 at 6:48 PM
To: Samuel D Ward <samuel.d.ward@wv.gov>, Derek Haught <Derek.M.Haught@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-14-21 at 6:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Wed, Apr 6, 2022 at 6:50 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 4-7-22 at 7:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Wed, Aug 11, 2021 at 7:18 AM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-12-21 at 7:30 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

3 messages

Eli Wagoner <ewagoner@anteroresources.com> Tue, Aug 3, 2021 at 5:36 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 8-3-21 at 5:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov> Wed, Aug 4, 2021 at 12:38 PM
To: Eli Wagoner <ewagoner@anteroresources.com>

Thanks Eli,

I think this is the best way to address this. You are covered in my book by sending these.

Sam

[Quoted text hidden]

Eli Wagoner <ewagoner@anteroresources.com> Wed, Aug 4, 2021 at 1:58 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Thanks for the reply. I probably should have touched base with you before, now that we have active drill/frack in your area. We actually added this to the well site safety plan and in the process it says we will always notify you. Since the well site safety plan is approved as part of the permit it covers us all and we can keep the pads dewatered when trucks can't keep up, this will help prevent pads from slipping or electrical equipment from being submerged.

Sent from my iPhone

On Aug 4, 2021, at 12:38 PM, Ward, Samuel D <samuel.d.ward@wv.gov> wrote:

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

Thanks Eli,

I think this is the best way to address this. You are covered in my book by sending these.

Sam

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Jul 29, 2021 at 3:24 PM
To: Derek Haught <Derek.M.Haught@wv.gov>, Samuel Ward <samuel.d.ward@wv.gov>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 7-30-21 at 3:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Sat, Jun 11, 2022 at 3:19 PM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 6-12-22 at 3:3:0 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Wed, Jun 8, 2022 at 9:29 PM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 6-9-22 at 9:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Jun 2, 2022 at 5:36 PM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 6-3-22 at 5:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Mar 24, 2022 at 8:53 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 3-25-22 at 9:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Mon, May 16, 2022 at 7:41 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 5-17-22 at 7:30 AM.
If you have any questions or concerns please feel free to contact me at any time.
Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, May 6, 2022 at 3:34 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 5-7-22 at 12:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Mon, Mar 7, 2022 at 12:45 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 3-8-22 at 1:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, Feb 25, 2022 at 8:52 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 2-26-22 at 9:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Feb 17, 2022 at 9:02 PM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 2-18-22 at 9:00 PM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Thu, Feb 3, 2022 at 7:54 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 2-4-22 at 8:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Sun, Jan 9, 2022 at 10:41 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 1-10-22 at 10:30 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Sat, Dec 11, 2021 at 11:12 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 12-12-21 at 11:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency Sump Notification

1 message

Eli Wagoner <ewagoner@anteroresources.com> Mon, Dec 6, 2021 at 1:27 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 12-7-21 at 1:30 PM. If you have any questions or concerns please feel free to contact me at any time.

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump notification

3 messages

Eli Wagoner <ewagoner@anteroresources.com> Mon, Apr 18, 2022 at 10:07 AM
To: Samuel D Ward <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 4-19-22 at 10:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Sent from my iPhone

Ward, Samuel D <samuel.d.ward@wv.gov> Mon, Apr 18, 2022 at 10:52 AM
To: Eli Wagoner <ewagoner@anteroresources.com>

I just drove by your house. It was sun shine and dry weather…
[Quoted text hidden]

Eli Wagoner <ewagoner@anteroresources.com> Mon, Apr 18, 2022 at 1:31 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

It was hammering them in Wetzel county

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com



From: Ward, Samuel D [mailto:samuel.d.ward@wv.gov]
Sent: Monday, April 18, 2022 10:53 AM
To: Eli Wagoner
Subject: Re: Emergency sump notification

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Emergency sump release

1 message

Eli Wagoner <ewagoner@anteroresources.com> Fri, May 20, 2022 at 10:09 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: Sump Release <sumprelease@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 5-21-22 at 10:00 AM. If you have any questions or concerns please feel free to contact me at any time.

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Expedited H6A Horizontal Well Work Permit (API: 47-017-06932)

9 messages

Stansberry, Wade A <wade.a.stansberry@wv.gov> Thu, Jun 16, 2022 at 2:24 PM
To: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I have attached a copy of the newly issued well permit number. This will serve as your copy.

47-017-06932- REDWOOD 2H

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

4 attachments

- **47-017-06932 - Copy.pdf** 3186K
- **IR-26 Blank.pdf** 169K
- **WMP02126 Oxford 98 pad mod 2022.05.12.pdf** 256K
- **Oxford 98 SSP.pdf** 10016K

Dani Devito <ddevito@shalepro.com> Fri, Jun 17, 2022 at 11:39 AM
To: "Stansberry, Wade A" <Wade.A.Stansberry@wv.gov>
Cc: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Wade,
Thanks for getting all these out yesterday!
Dani

Dani DeVito
Director, Permitting & Marketing

304.709.7100 ext. 103
304.288.7104

www.shalepro.com

On Jun 16, 2022, at 2:24 PM, Stansberry, Wade A <Wade.A.Stansberry@wv.gov> wrote:

<47-017-06932 - Copy.pdf>

Stansberry, Wade A <wade.a.stansberry@wv.gov> Fri, Jun 17, 2022 at 2:57 PM
To: Dani Devito <ddevito@shalepro.com>
Cc: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

No problem.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

[Quoted text hidden]

Dani Devito <ddevito@shalepro.com> Fri, Jun 17, 2022 at 3:27 PM
To: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>
Cc: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Wade, are we still waiting on the Redwood 3H or did I just miss it?

Dani DeVito
Director, Permitting & Marketing

304.709.7100 ext. 103
304.288.7104

www.shalepro.com

On Jun 17, 2022, at 2:57 PM, Stansberry, Wade A <wade.a.stansberry@wv.gov> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

No problem.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

On Fri, Jun 17, 2022 at 11:39 AM Dani Devito <ddevito@shalepro.com> wrote:

> Wade,
> Thanks for getting all these out yesterday!
> Dani
>
> Dani DeVito
> Director, Permitting & Marketing
>
> <ShalePro Email Signature Size.png>
>
> 304.709.7100 ext. 103
> 304.288.7104
>
> www.shalepro.com
>
> [Quoted text hidden]

Stansberry, Wade A <wade.a.stansberry@wv.gov> Fri, Jun 17, 2022 at 4:20 PM
To: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

This has a typo in the cover letter. I will fix this Tuesday morning, June 21st. I cannot log into my database from home. State offices are closed today due to Juneteenth.
This application/cover letter is supposed to state REDWOOD 3H, not REDWOOD 2H.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

[Quoted text hidden]

Mallory Stanton <mstanton@anteroresources.com> Mon, Jun 20, 2022 at 12:07 PM
To: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I think the Rewood 2H API is wrong on the cover letter can we get that updated?

From: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Sent: Friday, June 17, 2022 2:21 PM
To: Mallory Stanton <mstanton@anteroresources.com>; Diane Blair <dblair@anteroresources.com>; Dani DeVito <ddevito@shalepro.com>; David Sponaugle <dsponaug@assessor.state.wv.us>; Ward, Samuel D <samuel.d.ward@wv.gov>
Subject: Re: Expedited H6A Horizontal Well Work Permit (API: 47-017-06932)

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Dani Devito <ddevito@shalepro.com>
To: Mallory Stanton <mstanton@anteroresources.com>
Cc: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@asse

Mallory,
Wade resent it to me on Friday. I'll forward it.
Dani

Dani DeVito
Director, Permitting & Marketing

SHALEPRO
ENERGY SERVICES

304.709.7100 ext. 103
304.288.7104

www.shalepro.com

On Jun 20, 2022, at 12:07 PM, Mallory Stanton <mstanton@anteroresources.com> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender

[Quoted text hidden]

Mallory Stanton <mstanton@anteroresources.com> Mon, Jun 20, 2022 at 12:10 PM
To: Dani Devito <ddevito@shalepro.com>
Cc: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I think Redwood 2H should be 47-017-06931-00 not 32 that's the 3H.

[Quoted text hidden]

Stansberry, Wade A <wade.a.stansberry@wv.gov> Mon, Jun 20, 2022 at 12:11 PM
To: Mallory Stanton <mstanton@anteroresources.com>
Cc: Dani Devito <ddevito@shalepro.com>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I resent a correction on Friday. I resent you a copy.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

FW: Ed Yost LOD Modification

1 message

Matthew Dudley <mdudley@anteroresources.com> Tue, Feb 15, 2022 at 3:37 PM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>
Cc: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Doug,

I have been trying to reach Derek, but I briefly communicated with Sam today and he informed me Derek is no longer with OOG. At your convenience, would you please review the attached PDF and email below regarding the subject modification? If you have any questions or need anything additional information, please do not hesitate to contact me by phone or email. Thank you in advance, Doug.

J. Matthew Dudley

Design Engineer Lead

(C): 304.844.8030

(O): 304.842.4716

(E): mdudley@anteroresources.com

From: Matthew Dudley
Sent: Tuesday, February 15, 2022 2:06 PM
To: 'Derek.M.Haught@wv.gov' <Derek.M.Haught@wv.gov>
Subject: Ed Yost LOD Modification

Good afternoon, Derek.

At your convenience, would you please review the attached plan sheets referencing the LOD modification for the Ed Yost Well Pad? This modification entails a 0.08 acre LOD increase in order to tie into the planned Antero Midstream ROW and avoid incidental disturbance between the two LODs. If we need to meet in person to obtain your signature, just let me know what will work for your schedule. We are in the process of receiving signature from the property owner, Mr. Mercer this week. Please give me a call if you have any questions or concerns.

Thank you,

Matt

J. Matthew Dudley

Design Engineer Lead

535 White Oaks Blvd.

Bridgeport, WV 26330

(C): 304.844.8030

(O): 304.842.4716

(E): mdudley@anteroresources.com

Ed Yost Final Plan 02-11-2022_Part1_1,8,16.pdf
6343K

Ward, Samuel D <samuel.d.ward@wv.gov>

FW: Elmer Imp Closure Precon meeting

1 message

Dawn Keller <Dawn_Keller@swn.com> Wed, Jul 28, 2021 at 10:20 AM
To: Emily Uzar <euzar@rpgres.com>, "David J. Schuster" <dschuster@rpgres.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

-----Original Appointment-----
From: John Dubowski <John_Dubowski@swn.com>
Sent: Tuesday, July 27, 2021 8:32 PM
To: John Dubowski; John Dubowski; Reid Croft; merton hinzman; Justin Booth; Johnny Richards; Robey Brian; Dawn Keller; Casey Bartkus
Subject: Elmer Imp Closure Precon meeting
When: Tuesday, August 10, 2021 10:00 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Elmer Impoundment

invite.ics
3K

Ward, Samuel D <samuel.d.ward@wv.gov>

FW: Emergency Sump Notification

1 message

Aric Martin <amartin@anteroresources.com> Wed, May 4, 2022 at 8:25 AM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>

For your records. Thanks

Aric

From: Aric Martin
Sent: Tuesday, May 3, 2022 8:49 PM
To: Sump Notification (Field) <sumpnotificationfield@anteroresources.com>
Subject: Emergency Sump Notification

In accordance with Antero Resources' well site safety plan, permission is being granted to operate the sumps at active drilling and completions sites in West Virginia (WV) in accordance with the Stormwater Sump Operation SOP (E-SUMP-P-V1). All Sumps must be tested and meet the requirements of the SOP before being discharged. All sump testing must be recorded on the sump testing forms and stored in the FieldLink database. This permission is effective 5-3-22 at 9:00 PM until 5-4-22 at 9:00 PM. In all other circumstances falling outside of these conditions, you must drain the sumps using water trucks or other means (i.e., no discharge permitted). If you have any questions or concerns, please contact me immediately.

Thanks,

Aric Martin

Aric Martin

Environmental Field Supervisor

535 White Oaks BLVD

Bridgeport, WV 26330

304-641-4770

amartin@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

FW: Emergency sump release

1 message

Aric Martin <amartin@anteroresources.com> Fri, May 27, 2022 at 8:34 AM
To: "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>

Emergency Sump Release 5-27-22.

Aric Martin

Environmental Field Supervisor

535 White Oaks BLVD

Bridgeport, WV 26330

304-641-4770

amartin@anteroresources.com

From: Aric Martin <amartin@anteroresources.com>
Sent: Friday, May 27, 2022 7:52 AM
To: Sump Notification (Field) <sumpnotificationfield@anteroresources.com>
Subject: Emergency sump release

In accordance with Antero Resources' well site safety plan, permission is being granted to operate the sumps at active drilling and completions sites in West Virginia (WV) in accordance with the Stormwater Sump Operation SOP (E-SUMP-P-V1). All Sumps must be tested and meet the requirements of the SOP before being discharged. All sump testing must be recorded on the sump testing forms and stored in the FieldLink database. This permission is effective 5-27-22 at 8:00 AM until 5-28-22 at 8:00 AM. In all other circumstances falling outside of these conditions, you must drain the sumps using water trucks or other means (i.e., no discharge permitted). If you have any questions or concerns, please contact me immediately.

Thanks

Aric

Ward, Samuel D <samuel.d.ward@wv.gov>

Fw: EQT Plugging 597713 GM Dye 47-033-70946 Harrison County WV R&J Well Service

2 messages

Jeremy Osborne <rjwellservice@hotmail.com> Wed, Aug 11, 2021 at 8:51 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, dfry <dfry@eqt.com>, "Williams, Josh" <JoshWilliams@eqt.com>, "mtoplovich@eqt.com" <mtoplovich@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>, "Jackson, Nathan (Contractor)" <sonJackson@eqt.com>, "Mizgorski, Tyler" <Tyler.Mizgorski@eqt.com>, "Fox, Matthew" <MaFox@eqt.com>, "Johnson, Nathaniel" <NaJohnson@eqt.com>

See below for pics of returns from well. Pieces of wood, rocks, rubber, and 3 sticks.

Jeremy Osborne
R&J Well Service, Inc.
606-424-2265 (Cell)
606-785-0086 (Home)

From: Jeremy Osborne <rjwellservice@hotmail.com>
Sent: Wednesday, August 11, 2021 8:45 PM
To: Jeremy Osborne <rjwellservice@hotmail.com>
Subject:







Get Outlook for iOS

EQT Plugging 597713 GM Dye 47-033-70946 Harrison County WV R&J Well Service.xlsx
51K

Fry, Doug <DFry@eqt.com> Thu, Aug 12, 2021 at 6:11 AM
To: Jeremy Osborne <rjwellservice@hotmail.com>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, "Williams, Josh" <JoshWilliams@eqt.com>, "Toplovich, Mark" <MToplovich@eqt.com>, "Cindric, Eric" <Eric.Cindric@eqt.com>, "Jackson, Nathan (Contractor)" <sonJackson@eqt.com>, "Mizgorski, Tyler" <Tyler.Mizgorski@eqt.com>, "Fox, Matthew" <MaFox@eqt.com>, "Johnson, Nathaniel" <NaJohnson@eqt.com>

Thanks Jeremy, Sam, we will get a bit and go in there and see if we can get any deeper. We also ran a collar locater and found the bottom of the casing at about 570'..

Thanks.

[Quoted text hidden]

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Ward, Samuel D <samuel.d.ward@wv.gov>

H-59

2 messages

wendell.a.hill@dominionenergy.com Fri, Aug 27, 2021 at 8:08 AM
<wendell.a.hill@dominionenergy.com>
To: "Samuel.D.Ward@WV.GOV" <Samuel.D.Ward@wv.gov>
Cc: "jonell.l.carver@dominionenergy.com" <jonell.l.carver@dominionenergy.com>, "Nicholas.A.Cabo@dominionenergy.com" <Nicholas.A.Cabo@dominionenergy.com>, "molly.a.wells@dominionenergy.com" <molly.a.wells@dominionenergy.com>

Sam ,per your request answering the questions concerning the slip investigation .

- Dominion does not affiliate any responsibility with the mountain slip on the Cash McCall property . The original lay date of this line was 1915 . The slip area affected our pipeline Right Of Way from approximately 300 feet below . Dominion installed a replacement in 2016 around the slip area approximately 200 feet south of the slip, laying east toward the top of the ridge in an area totally avoiding the affected area. This relay is totally out of the effected slip area and has not contributed to the continuation of the slippage .
- Dominion Pipelines are Foot Patrolled on an Annual / Semi-Annual basis for various monitoring compliance reasons and possible land slippage effecting our facilities is included .

Thanks for working with us in this investigation . Wendell Hill, DEWV Manager Gas Operation

Wendell Hill

DEWV

Manager G&P

1-304-476-0216 cell

1-304-624-2244 office

" Your attidude is the regulator for your LIFE"

CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

Ward, Samuel D <samuel.d.ward@wv.gov> Fri, Aug 27, 2021 at 9:43 AM
To: "wendell.a.hill@dominionenergy.com" <wendell.a.hill@dominionenergy.com>

Thank you.
[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

H&P 531 Antero Resources Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Wed, May 25, 2022 at 10:34 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving intent to run 5” casing and cement on the Calhoun Unit 1H API#47017069130000, after cementing the casing string we will skid rig to Mule Unit 3H API#47017069180000, nipple up BOP test, trip in drill tangent section, curve and lateral.

Thanks,

Jesse Lawson / Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Calhoun Unit 1H

AFE#: A11780-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Hamilton & Vogt CWP Closure & Inspection Report Request

1 message

Shawn Donovan <sdonovan@anteroresources.com> Mon, Jan 24, 2022 at 6:51 PM
To: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>
Cc: Paige Gardner <pgardner@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Hi Kelly –

Please be advised that WVDEP Inspector Sam Ward (cc'd here) inspected both the Hamilton and Vogt CWP sites earlier this month following our site closure and reclamation. Following the inspections Mr. Ward indicated that no further action was required.

Could you provide:

1) confirmation that these CWPs have been closed out in the WVDEP database; and

2) the final, signed WVDEP Inspection reports for both the Hamilton and Vogt CWPs for our records?

Thanks,

Shawn Donovan

Environmental & Regulatory Manager

Antero Midstream

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

1615 Wynkoop St.

Denver, CO 80202

303.357.6893 Office

720.840.0599 Cell

303.357.7315 Fax

sdonovan@anteroresources.com

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Ward, Samuel D <samuel.d.ward@wv.gov>

Hamilton and Vogt CWP Full Reclamation Inspection Request

13 messages

Paige Gardner <pgardner@anteroresources.com> Mon, Nov 8, 2021 at 3:21 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Lyndon Hall <lhall@anteroresources.com>, Brian Ratica <bratica@anteroresources.com>

Good afternoon Sam, and happy November!

I hope this email finds you well. I am writing as a follow-up to the voicemail I left you today (Monday, November 8, 2021) regarding the Hamilton (39.367, -80.740) and Vogt (39.278, -80.740) sites; as I mentioned in my voicemail, both sites are ready for your post reclamation inspection and release. All controls have been removed and solid vegetation has been established at both sites where former waste pits were. Lyndon (CC'd here) and I would like to accompany you during your site visit if our schedule(s) allow so please let me know what your availability looks like and we will do our best to accommodate. Please feel free to call either one of us with any questions/concerns regarding this request. Thank you, sir, and I look forward to hearing from you soon. Have a wonderful rest of the day!

Warmly,

Paige Gardner, CES

Environmental Specialist II

Antero Resources

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

535 White Oaks Blvd

Bridgeport, WV 26330

304.842.9765 Office

304.203.4292 Cell

pgardner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov> Mon, Nov 8, 2021 at 3:30 PM
To: Paige Gardner <pgardner@anteroresources.com>
Cc: Brian Ratica <bratica@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>

Hi Paige,

I'm currently quarantined with a Covid kid. She and I are well. By state rules, my quarantine doesn't officially start until she is released (Friday), and I can get out early with a negative test 5 days later. Otherwise it's 14 days or release by health department if I test positive. Please remind me if you don't hear from me in about two weeks. I'm sure my return to work will be very busy.

Sam

[Quoted text hidden]

Paige Gardner <pgardner@anteroresources.com> Mon, Nov 8, 2021 at 3:39 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: Brian Ratica <bratica@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>

Oh Sam, I am sorry to read this but am glad you both are faring well despite your little one being COVID positive; I hope that y'all continue to have mild symptoms and make full and speedy recoveries!! I will circle back with you after the Thanksgiving holiday (week of 11/29) if I haven't heard back from you before then. Y'all take care!!

Sincerely,

Paige Gardner, CES

Environmental Specialist II

304.842.9765 Office

304.203.4292 Cell

pgardner@anteroresources.com

From: Ward, Samuel D <samuel.d.ward@wv.gov>
Sent: Monday, November 8, 2021 3:31 PM
To: Paige Gardner <pgardner@anteroresources.com>
Cc: Brian Ratica <bratica@anteroresources.com>; Lyndon Hall <lhall@anteroresources.com>
Subject: Re: Hamilton and Vogt CWP Full Reclamation Inspection Request

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[Quoted text hidden]

Paige Gardner <pgardner@anteroresources.com> Mon, Nov 29, 2021 at 9:35 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: Brian Ratica <bratica@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>

Good morning, Sam –

I hope this email finds you well post COVID-19 quarantine and the Thanksgiving Holiday! I am writing as a follow-up to our previous correspondence regarding the Hamilton (39.367, -80.740) and Vogt (39.278, -80.740) sites; both sites are ready for your post reclamation inspection and release. Lyndon (CC'd here) and I would like to accompany you during your site visit if our schedule(s) allow so please let me know what your availability looks like and we will do our best to accommodate. Please call either one of us with any questions/concerns regarding this request.

I look forward to hearing from you soon and again, I hope you are feeling well.

Have a wonderful rest of the day!

Sincerely,

Paige Gardner, CES

Environmental Specialist II

304.842.9765 Office

304.203.4292 Cell

pgardner@anteroresources.com

[Quoted text hidden]

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Thanks,

[Quoted text hidden]

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Hi Paige,

Sorry for the radio silence. I've been running hard since coming back from quarantine. I can try to make it out in the next two weeks, but I won't try to make a set date for the schedule. We are down to seven inspectors right now and at least two of our current inspectors are taking annual leave through the end of the year, so they don't lose any accrued time. I'm covering a lot of territory. I will do my best to be there, but it may be a quick stop as I come through. Can't promise I'll have time to schedule it or meet. I understand that Antero wants representative boots on the ground with me, but that may not work out. There is likely very little that I can't call and ask about if I see something out of place, and I will absolutely work with Antero if I do find something out of the ordinary. All that being said, I believe one of these has a gate code that I will need for access. In the event that I cannot meet, can you provide the code?

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If I don't talk to you until after Christmas (or the New Year), I hope you have a peaceful and relaxing holiday season. Thank you for your help and support in closing out these sites and others this past year; we are looking forward to 2022!

Take care and stay safe, Sam.

[Quoted text hidden]

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Hi Paige,

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Sam

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Thanks again, Sam.

[Quoted text hidden]

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To: Paige Gardner <pgardner@anteroresources.com>

I think they are fine. I did not walk all of the way across the Vogt. There was a heavy wrecker recovery on the Parkersburg side of the main road. They had equipment and traffic backed up and I got out before I got stuck. If any E&S remains, it can be pulled. Grass looks great.

[Quoted text hidden]

Paige Gardner <pgardner@anteroresources.com> Tue, Jan 4, 2022 at 2:15 PM

To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Awesome, awesome! Thanks for the additional detail/information.

PS – I am glad you didn't get stuck in traffic! Have a wonderful rest of the day.

[Quoted text hidden]

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Is there any way you could please send me a copy of the close-out inspection reports for Hamilton and Vogt for our internal records? My boss, Shawn Donovan, was hoping to follow-up with Kelly Keys sometime this week regarding the two sites as a follow-up to your visit a couple weeks ago.

Thanks so much,

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov> Wed, Jan 19, 2022 at 12:00 PM
To: Paige Gardner <pgardner@anteroresources.com>

Hi Paige,

The documents were sent to the office last Friday. They are available for viewing/download in Application Extender. I am not supposed to share documents directly with anyone. The office would have to send an official copy, with the received time/date stamp for the office. Kelly is our only PE at the moment, and she has H-6A permits as her priority first. I'm not sure her schedule, but I expect these will be entered as soon as she can.

Sam

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Hamilton and Vogt CWP Full Reclamation Inspection Request

13 messages

Paige Gardner <pgardner@anteroresources.com> Mon, Nov 8, 2021 at 3:21 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Lyndon Hall <lhall@anteroresources.com>, Brian Ratica <bratica@anteroresources.com>

Good afternoon Sam, and happy November!

I hope this email finds you well. I am writing as a follow-up to the voicemail I left you today (Monday, November 8, 2021) regarding the Hamilton (39.367, -80.740) and Vogt (39.278, -80.740) sites; as I mentioned in my voicemail, both sites are ready for your post reclamation inspection and release. All controls have been removed and solid vegetation has been established at both sites where former waste pits were. Lyndon (CC'd here) and I would like to accompany you during your site visit if our schedule(s) allow so please let me know what your availability looks like and we will do our best to accommodate. Please feel free to call either one of us with any questions/concerns regarding this request. Thank you, sir, and I look forward to hearing from you soon. Have a wonderful rest of the day!

Warmly,

Paige Gardner, CES

Environmental Specialist II

Antero Resources

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

535 White Oaks Blvd

Bridgeport, WV 26330

304.842.9765 Office

304.203.4292 Cell

pgardner@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov> Mon, Nov 8, 2021 at 3:30 PM
To: Paige Gardner <pgardner@anteroresources.com>
Cc: Brian Ratica <bratica@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>

Hi Paige,

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Sam

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Ward, Samuel D <samuel.d.ward@wv.gov>

Hamilton and Vogt CWP Full Reclamation Release

1 message

Lyndon Hall <lhall@anteroresources.com> Thu, Oct 14, 2021 at 1:23 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Paige Gardner <pgardner@anteroresources.com>, Brian Ratica <bratica@anteroresources.com>

Hey Sam,

To follow up from our phone call…

Both the Hamilton (39.367, -80.740) and Vogt (39.278, -80.740) sites are ready for your post reclamation inspection and release. All controls have been removed and there is a solid stand of vegetation on both sites where the former waste pits were.

Paige and myself would like to accompany you during your site visit if schedules allow, I know the state has you spread pretty thing right now.

Next up will be McGill, Richard Gary, and Coastal 1.

Thank you, sir!

Lyndon E. Hall

Water Field Compliance



535 White Oaks Blvd

Bridgeport, WV 26330

(304) 672-5750

lhall@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Heflin FWI Land Application - OOG Notification

1 message

Shawn Donovan <sdonovan@anteroresources.com> Mon, Sep 20, 2021 at 12:04 PM
To: "SAMUEL.D.WARD@WV.GOV" <SAMUEL.D.WARD@wv.gov>
Cc: Lyndon Hall <lhall@anteroresources.com>, Paige Gardner <pgardner@anteroresources.com>, Jason Schmidle <jschmidle@anteroresources.com>, Burt Simcox <bsimcox@anteroresources.com>

Good morning –

In accordance with the attached authorization, Antero is hereby providing notice of land application (i.e. dewatering) at the Heflin Freshwater Impoundment (FWI) will commence as early as Wednesday, September 22nd. Samples will be collected and submitted to WVDEP in accordance with this authorization. Feel free to contact me directly should you have any questions or require additional information.

Thanks,

Shawn Donovan

Environmental & Regulatory Manager

Antero Midstream

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

1615 Wynkoop St.

Denver, CO 80202

303.357.6893 Office

720.840.0599 Cell

303.357.7315 Fax

sdonovan@anteroresources.com

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S2064 Copie19052211381.pdf
60K

Ward, Samuel D <samuel.d.ward@wv.gov>

Heflin FWI Land Application Sample Results - September 2021

1 message

Eli Craig <ecraig@anteroresources.com> Fri, Oct 22, 2021 at 6:07 PM
To: "Kelly.L.Kees@wv.gov" <Kelly.L.Kees@wv.gov>, "SAMUEL.D.WARD@WV.GOV" <SAMUEL.D.WARD@wv.gov>
Cc: Shawn Donovan <sdonovan@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>

Kelly & Sam,

Please see attached the water sampling results for a sample collected during the dewatering of the Heflin Centralized Freshwater Impoundment in accordance with the Freshwater Impoundment Land Application Authorization issued by WVDEP.

Should you have any questions or require additional information, please feel free to contact me directly.

Thanks

Eli Craig

Environmental Specialist III

Antero Resources | Antero Midstream

1615 Wynkoop St / 1881 16th St.

Denver, CO 80202

Office- 303.357.6491

Cell -720.512.9247

ecraig@anteroresources.com



Heflin Discharge Sample Results September-2021.pdf
3055K

Ward, Samuel D <samuel.d.ward@wv.gov>

Intent to Spud

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, Mar 29, 2022 at 6:23 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

We intent to spud surface on Mule 1H API#47017069160000, we will drill surface to TD, trip out run casing, cement, wait on cement, nipple up and test BOPE, drillout shoe track, FIT, drill intermediate 1 to TD trip out and run casing and cement.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Mule Unit 1H

AFE#: A11784-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Intermediate Cement PJR for Earl Unit 1H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Jan 13, 2022 at 6:27 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Intermediate Cement PJR for Earl Unit 1H API# 47085104140000. If there are any questions feel free to contact us.

Thanks,

Tommy Erp & Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 1H

AFE#: A11552-D

Earl 1H Cement pjr.pdf
2872K

Ward, Samuel D <samuel.d.ward@wv.gov>

Intermediate Cement PJR for Maxson Unit 1H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Jan 22, 2022 at 6:30 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Intermediate Cement PJR for Maxson Unit 1H API# 47085104120000.
If there are any questions feel free to contact us.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 1H

Maxson 1H Intermediate Cement PJR.pdf
2064K

Ward, Samuel D <samuel.d.ward@wv.gov>

Intermediate Cement PJR for Maxson Unit 2H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sun, Jan 16, 2022 at 7:57 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Intermediate Cement PJR for Maxson Unit 2H API# 47085104130000. If there are any questions feel free to contact us.

Update: We will Skid over to the Maxson 1H this morning, anticipate spudding surface around 7 pm tonight if all goes as planned.

Thanks,

Tommy Erp & Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 2H

AFE#: A11558-D

Maxson 2H Intermediate Cement PJR.pdf
2893K

Ward, Samuel D <samuel.d.ward@wv.gov>

Journeyman Pad: Frac Notification

1 message

Cory Woods <cwoods@anteroresources.com> Tue, May 24, 2022 at 9:01 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, Ross Steffy <rsteffy@anteroresources.com>
Cc: Cory Woods <cwoods@anteroresources.com>, John Burks <jburks@anteroresources.com>, Ryan Rivera <rrivera@anteroresources.com>, James Pierce <jpierce@anteroresources.com>

All,

We will be starting zipper frac ops on the Trader 1H & Trader 2H wells on May 25, 2022, which is the first 2 of 7 wells. Please contact me if you have any questions

Cory Woods
Onsite Representative Antero Completions
West Virginia, Marcellus Shale
469-285-9327
cwoods@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Lake FWI Land Application - OOG Notification

1 message

Shawn Donovan <sdonovan@anteroresources.com> Mon, Sep 20, 2021 at 12:01 PM
To: "SAMUEL.D.WARD@WV.GOV" <SAMUEL.D.WARD@wv.gov>
Cc: Lyndon Hall <lhall@anteroresources.com>, Paige Gardner <pgardner@anteroresources.com>, Jason Schmidle <jschmidle@anteroresources.com>

Good morning –

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Thanks,

Shawn Donovan

Environmental & Regulatory Manager

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2019-5-15 Lake Land App Memo.pdf
60K

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Lake FWI Land Application Sample Results - September 2021

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Kelly & Sam,

Please see attached the water sampling results for a sample collected during the dewatering of the Lake Centralized Freshwater Impoundment in accordance with the Freshwater Impoundment Land Application Authorization issued by WVDEP.

Should you have any questions or require additional information, please feel free to contact me directly.

Thanks

Eli Craig

Environmental Specialist III

Antero Resources | Antero Midstream

1615 Wynkoop St / 1881 16th St.

Denver, CO 80202

Office- 303.357.6491

Cell -720.512.9247

ecraig@anteroresources.com



Lake Discharge Sample Results September-2021.pdf
1612K

Ward, Samuel D <samuel.d.ward@wv.gov>

Lipps Centralized Impoundment #2 (097-FWC-00057) Closure Approval

2 messages

Kees, Kelly L <Kelly.L.Kees@wv.gov> Wed, Jun 9, 2021 at 1:26 PM
To: Casey Bartkus <Casey_Bartkus@swn.com>, "Brittany Woody - Southwestern (Brittany_Woody@swn.com)" <brittany_woody@swn.com>
Cc: "Brewer, Charles T" <Charles.T.Brewer@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

I have reviewed the closure for the subject centralized impoundment and I am approving these plans. Prior to any work commencing on site please provide 7-day notice to the office and county inspector using the IMP-2 form. Also provide notice to the surface owner.

Once closure is complete please notify your county inspector for verification and let me know so I can close it out in RBDMS.

2021-6-9 SWN Lipps FWI Approved Closure Plans.pdf
1017K

Casey Bartkus <Casey_Bartkus@swn.com> Wed, Jun 9, 2021 at 1:51 PM
To: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>, Brittany Woody <Brittany_Woody@swn.com>
Cc: "Brewer, Charles T" <Charles.T.Brewer@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Kelly, thank you very much!

Sam, please see the attached IMP-2 form with our intent to begin the closure process as early as June 16, 2021, weather-depending. At this time, we are planning a preconstruction meeting on site at 1pm that day. We will notify the landowner as well.

Please let me know if you need anything else.

Thanks

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

Southwestern Energy

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

[Quoted text hidden]

2021-6-9 SWN Lipps FWI Approved Closure Plans.pdf
1017K

Ward, Samuel D <samuel.d.ward@wv.gov>

Lipps FWI release

2 messages

Dawn Keller <Dawn_Keller@swn.com> Thu, Jan 13, 2022 at 9:00 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Hi Sam,

Just confirming that the Lipps got released?

Thanks!

Dawn Keller

Senior Environmental Specialist

Southwestern Energy

1300 Fort Pierpont Drive Suite 201

Morgantown, WV 26508

O: 304-884-1683

C: 501-697-7230

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person

responsible for delivering it to the addressee, you may not copy or distribute this communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

Ward, Samuel D <samuel.d.ward@wv.gov> Wed, Jan 19, 2022 at 11:56 AM
To: Dawn Keller <Dawn_Keller@swn.com>

Yes, the inspection for closure was turned in last week on Friday. It is also available for viewing in application extender, as a public document.

Sam

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Lipps FWI

1 message

Dawn Keller <Dawn_Keller@swn.com> Wed, Oct 20, 2021 at 10:51 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Hi Sam,

We believe that we have reached 70% vegetative cove on the Lipps FWI closure and would like to remove E&S and get the area released to the landowner. Will you please take a look and perform and submit a final inspection, if you are satisfied with the reclaim? Let me know.

Thanks!

Dawn Keller

Senior Environmental Specialist

Southwestern Energy

1300 Fort Pierpont Drive Suite 201

Morgantown, WV 26508

O: 304-884-1683

C: 501-697-7230

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person responsible for delivering it to the addressee, you may not copy or distribute this

communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/09.05.2021

1 message

Eric May <emay@anteroresources.com> Sun, Sep 5, 2021 at 6:46 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 9/05/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Rapids unit 1H

Current operation: Circulating casing at TD

Projected operation: Pump cement, nipple down, clean pits, rig down, move rig to Margery pad

Next well: Parr Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Peeler Unit 1H

Current operation: Tripping out of hole

Projected operation: Trip out of hole, run production casing, circulate, pump cement, nipple down, skid rig to Busch unit 3H, nipple up bope, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve/lateral assembly, trip in hole, drill curve, drill lateral, run production casing, cement.

Next well: Busch Unit 3H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/09.12.2021

1 message

Eric May <emay@anteroresources.com> Sun, Sep 12, 2021 at 6:35 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 9/12/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr unit 1H

Current operation: Move rig to Margery pad

Projected operation: Finish moving rig to Margery pad, rig up, pick up drill pipe, nipple up diverter, pick up bha, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to Parr Unit 2H.

Next well: Parr Unit 2H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Busch Unit 3H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to skid to Busch Unit 2H, walk rig, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS bha, trip in hole, drill curve, drill lateral.

Next well: Busch Unit 2H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/09.19.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Sep 19, 2021 at 6:20 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 9/19/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr unit 2H

Current operation: Drilling intermediate

Projected operation: Drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to National Unit 1H, nipple up diverter, pick up bha, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to National Unit 2H,

Next well: National Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Busch Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to skid to Busch Unit 1H, walk rig, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS bha, trip in hole, drill curve, drill lateral.

Next well: Busch Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/09.19.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Sep 19, 2021 at 6:20 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 9/19/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr unit 2H

Current operation: Drilling intermediate

Projected operation: Drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to National Unit 1H, nipple up diverter, pick up bha, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to National Unit 2H,

Next well: National Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Busch Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to skid to Busch Unit 1H, walk rig, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS bha, trip in hole, drill curve, drill lateral.

Next well: Busch Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/09.26.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Sep 26, 2021 at 6:49 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 9/26/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: National unit 2H

Current operation: Trip out of hole to run intermediate casing

Projected operation: Run intermediate casing, pump cement, prepare to walk to Glamdring Unit 1H, nipple up diverter, pick up bha, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, prepare to walk to Glamdring Unit 2H, drill surface, run casing, cement, nipple up and test bope, drill shoe track, FIT, drill intermediate section

Next well: Glamdring Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Busch Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to skid to Charlotte Unit 2H, walk rig, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS bha, trip in hole, drill curve, drill lateral.

Next well: Charlotte Unit 2H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.03.2021

1 message

Eric May <emay@anteroresources.com> Sun, Oct 3, 2021 at 6:57 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/03/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Glamdring Unit 2H

Current operation: Drilling 8 ¾ tangent

Projected operation: Drill tangent to kick off point, load hole with SOBM, trip out, pick up flex RSS BHA, trip in, drill curve, round trip for stiff RSS BHA, drill lateral, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to walk rig to Glamdring Unit 1H, walk rig, nipple up and test bope.

Next well: Glamdring Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Charlotte Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to skid to Charlotte Unit 1H, walk rig, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS bha, trip in hole, drill curve, drill lateral.

Next well: Charlotte Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.10.2021

1 message

Eric May <emay@anteroresources.com> Sun, Oct 10, 2021 at 6:18 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/10/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Glamdring Unit 2H

Current operation: Lateral at TD and tripping out of hole

Projected operation: Trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to walk rig to Glamdring Unit 1H, walk rig, nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Glamdring Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Charlotte Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, clean mud tanks, rig down, prepare to move rig to Dogwood pad, move rig.

Next well: Daags Unit 1H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.10.2021

1 message

Eric May <emay@anteroresources.com> Sun, Oct 10, 2021 at 6:18 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/10/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Glamdring Unit 2H

Current operation: Lateral at TD and tripping out of hole

Projected operation: Trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to walk rig to Glamdring Unit 1H, walk rig, nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Glamdring Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Charlotte Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, clean mud tanks, rig down, prepare to move rig to Dogwood pad, move rig.

Next well: Daags Unit 1H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.17.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Oct 17, 2021 at 6:22 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/17/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Glamdring Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, prepare to walk rig to National Unit 2H, walk rig, nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: National Unit 2H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Daags Unit 1H

Current operation: Moving rig to Dogwood pad

Projected operation: Move rig, rig up, drill surface, run casing, pump cement, nipple up bope, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement

Next well: Gribben Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/1.02.2022

1 message

Eric May <emay@anteroresources.com> Sun, Jan 2, 2022 at 7:33 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 1/02/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Capitol Unit 1H

Current operation: Running production casing

Projected operation: Run production casing, burst airlock, circulate, pump cement, nipple down, prepare to walk rig to Capitol 2H, walk rig, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill tangent, load hole SOBM, trip out, pick up RSS BHA, trip in hole, drill curve, round trip for stiff RSS BHA, drill lateral, circulate, trip out, run production casing, pump cement.

Next well: Capitol Unit 2H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Welder Unit 2H

Current operation: Moving rig to Journeyman pad

Projected operation: Finish moving rig to Journeyman pad, rig up, pick up drill pipe, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, walk rig to Welder Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, walk rig to Ryland Unit 3H.

Next well: Welder Unit 1H, Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Sandy Unit 1H

Current operation: Testing BOPE in preparation to drill intermediate section

Projected operation: Test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, walk rig to Earl Unit 2H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, walk rig to Earl Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement.

Next well: Earl Unit 2H, Pad: Weekley West, County: Ritchie

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.24.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Oct 24, 2021 at 6:20 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/24/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: National Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, walk rig to National Unit 1H, nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: National Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Daags Unit 1H

Current operation: Trip out to run surface casing

Projected operation: Trip out of hole, run surface casing, circulate, pump cement, nipple up bope and test, pick bha, trip in hole, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, circulate, pump cement, skid rig to Gribben unit 2H, rig up, drill surface, load hole, trip out, run surface casing, pump cement, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, skid rig to Gribben unit 1H

Next well: Gribben Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/10.31.2021

1 message

Eric May <emay@anteroresources.com> Sun, Oct 31, 2021 at 6:56 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 10/31/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: National Unit 1H

Current operation: Drilling curve

Projected operation: Drill curve, round trip for stiff RSS BHA, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, walk rig to National Unit 1H, nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Parr Unit 2H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Gribben Unit 1H

Current operation: Nipple up and testing BOPE

Projected operation: Nipple up bope and test, pick bha, trip in hole, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, circulate, pump cement, skid rig to Orner unit 2H, rig up, drill surface, load hole, trip out, run surface casing, pump cement, nipple up and test bope, pick up bha, trip in hole, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, skid rig to Orner unit 1H

Next well: Orner Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/1.09.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jan 9, 2022 at 6:28 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 1/09/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Capitol Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, lay down bha, run production casing, burst airlock, circulate, pump cement, nipple down, prepare to walk rig to Maroon 1H, walk rig, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill tangent, load hole SOBM, trip out, pick up RSS BHA, trip in hole, drill curve, round trip for stiff RSS BHA, drill lateral, circulate, trip out, run production casing, pump cement.

Next well: Maroon Unit 1H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Welder Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate to TD, circulate, load hole, run intermediate casing, pump cement, skid rig to Welder Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, skid rig to Ryland Unit 3H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, skid rig to Ryland Unit 2H.

Next well: Welder Unit 1H, Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Earl Unit 1H

Current operation: Testing BOPE in preparation to drill intermediate section

Projected operation: Test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, skid rig to Maxson Unit 2H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, walk rig to Maxson Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement.

Next well: Maxson Unit 2H, Pad: Weekley West, County: Ritchie

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/11.07.2021

1 message

Eric May <emay@anteroresources.com> Sun, Nov 7, 2021 at 6:28 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 11/07/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr Unit 2H

Current operation: Drill shoe track

Projected operation: Drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, walk rig to Parr Unit 1H.

Next well: Parr Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Orner Unit 1H

Current operation: Pick up drill pipe and rack in derrick

Projected operation: Pick up drill pipe, pick up BHA, trip in hole, drill shoe track, FIT, drill 8 ¾ tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, set packoff and test seals, nipple down, walk rig to Orner Unit 2H.

Next well: Orner Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/11.14.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Nov 14, 2021 at 6:32 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 11/14/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr Unit 1H

Current operation: Nipple up and test BOPE

Projected operation: Nipple up and test bope, pick up BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole with SOBM, trip out of hole, pick up curve BHA, trip in hole, drill curve, trip out of hole, pick up lateral BHA, trip in hole, drill lateral to TD, Circulate and condition mud, lay down drill pipe

Next well: Capitol Unit 1H, Pad: Thin Air, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Orner Unit 1H

Current operation: Drill lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, skid rig to Orner Unit 2H, nipple up and test bope, pick up 8.75” tangent bha, trip in hole, drill shoe track +15’, FIT, trip out of hole, stage in hole, drill tangent, load hole with obm, trip out of hole, laydown bha, pick up curve and lateral assembly, trip in hole, drill curve and lateral

Next well: Orner Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/11.21.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Nov 21, 2021 at 6:13 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Happy Thanksgiving!!!

-

Marcellus Drilling Update 11/21/2021

Rig: H&P 317

Pad: Margery

County: Tyler

Well: Parr Unit 1H

Current operation: Laying down drill pipe

Projected operation: Run production casing, burst airlock/circulate condition mud, pump cement, set pack off, nipple down, clean mud tanks, rig down, move rig to thin air pad

Next well: Axtel Unit 1H, Pad: Thin Air, County: Tyler

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Orner Unit 2H

Current operation: Drilling Curve

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, skid rig to Gribben Unit 1H, nipple up and test bope, pick up 8.75” tangent bha, trip in hole, drill shoe track, FIT, trip out of hole, stage in hole, drill tangent, load hole, trip out of hole, laydown bha, pick up directional tools, trip in hole, drill curve and lateral

Next well: Gribben Unit 1H, Pad: Dogwood, County: Wetzel

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/11.28.2021

1 message

Eric May <emay@anteroresources.com> Sun, Nov 28, 2021 at 7:18 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 11/28/2021

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Axtel Unit 1H

Current operation: Moving rig to Thin Air pad

Projected operation: Rig down, move rig to thin air pad, rig up, pick up drill pipe, pick up bha, drill surface, run casing, pump cement, nipple up bope, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, prepare to skid to Purple Unit 2H.

Next well: Purple Unit 2H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Gribben Unit 1H

Current operation: Drilling tangent

Projected operation: Drill tangent, load hole, trip out of hole, laydown bha, pick up directional tools, trip in hole, drill curve and drill lateral to TD, circulate and condition mud, trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, skid rig to Gribben Unit 2H.

Next well: Gribben Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/1.16.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jan 16, 2022 at 6:21 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 1/16/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Maroon Unit 1H

Current operation: Drilling 8 ¾” tangent section

Projected operation: Drill tangent to TD, load hole with sobm, round trip for curve assembly, drill curve, circulate, round trip for lateral assembly, drill lateral to TD, circulate, trip out of hole, lay down bha, run production casing, burst airlock, circulate, pump cement, nipple down, prepare to walk rig to Maroon 2H, walk rig, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill tangent.

Next well: Maroon Unit 2H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 3H

Current operation: Rigging up to run intermediate casing

Projected operation: Run intermediate casing, pump cement, skid rig to Ryland Unit 2H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, skid rig to Ryland Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement.

Next well: Ryland Unit 2H, Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Maxson Unit 1H

Current operation: Skid rig to Maxson 1H

Projected operation: Skid rig, rig up conductor,pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, Skid rig to Gander Unit 1H, pick up BHA, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill intermediate section, circulate, load hole, run intermediate casing, pump cement, pick up drill pipe, casing test, pick up directional, trip in hole, drill shoe track, FIT, drill tangent section

Next well: Gander Unit 1H, Pad: Weekley West, County: Ritchie

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/12.05.2021

1 message

Eric May <emay@anteroresources.com> Sun, Dec 5, 2021 at 6:55 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 12/05/2021

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Axtel Unit 1H

Current operation: Running intermediate casing

Projected operation: Run intermediate casing, pump cement, install pack off, nipple down, prepare to walk to Purple Unit 2H, walk rig, nipple up diverter, pick up bha, drill surface, run casing, pump cement, nipple up bope, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, prepare to skid to Purple Unit 1H.

Next well: Purple Unit 2H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Gribben Unit 1H

Current operation: Well at TD, jarring on fish at 3,074', bottom of fish at 3,247'.

Projected operation: Jar on fish, free stuck pipe, retrieve fish and trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, prepare to skid rig to Gribben Unit 2H, skid rig.

Next well: Gribben Unit 2H, Pad: Dogwood, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/12.12.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Dec 12, 2021 at 6:06 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 12/12/2021

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Maroon Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, walk to Maroon Unit 1H, drill surface, run casing, pump cement, nipple up bope, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, prepare to skid to Capital Unit 2H.

Next well: Maroon Unit 1H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Gribben Unit 2H

Current operation: Tripping out to pick up curve assembly

Projected operation: Drill curve and drill lateral to TD, circulate and condition mud, trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, skid rig to Daggs Unit 1H, nipple up and test bope, drill tangent section, load hole trip out, Swap directional bha, trip in hole, drill curve,

Next well: Daggs Unit 1H, Pad: Dogwood, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Doddridge

Well: Sandy Unit 1H

Current operation: Preparing to start moving rig on Monday, Will continue to move throughout week

Projected operation: Move rig to the Weekley West pad

Next well: Earl Unit 2H, Pad: Weekley West, County: Doddridge

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/12.19.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Dec 19, 2021 at 5:57 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 12/19/2021

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Capitol Unit 2H

Current operation: Running intermediate casing

Projected operation: Run intermediate casing, pump cement, walk to Capitol Unit 1H, drill surface, run casing, pump cement, nipple up bope, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump cement, pick up drill pipe, pick up directional tools, drill tangent section, load hole, trip out of hole, pick up directional bha

Next well: Capitol Unit 1H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Daags Unit 1H

Current operation: Tripping out of hole to pick up directional tools

Projected operation: Swap bha, trip in hole, drill curve and lateral to TD, circulate and condition mud, trip out of hole, lay down BHA, run production casing, burst airlock/circulate and condition mud, pump cement, set pack off, nipple down, clean pits, rig down move rig to Journeyman pad

Next well: Welder Unit 2H, Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Doddridge

Well: Sandy Unit 1H

Current operation: Rigging up, rig will be on idle time till the 26th then will finish rigging up and preparing for a 1/1/2022 spud date

Projected operation: Move rig to the Weekley West pad

Next well: Earl Unit 2H, Pad: Weekley West, County: Doddridge

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/12.26.2021

1 message

Eric May <emay@anteroresources.com> Sun, Dec 26, 2021 at 7:30 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 12/26/2021

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Capitol Unit 1H

Current operation: Round tripping for RSS BHA to finish drilling tangent

Projected operation: Round trip for RSS BHA, drill tangent section, drill curve, round trip for stiff lateral assembly, drill lateral, circulate, trip out, run production casing, burst airlock, circulate, pump cement, nipple down, prepare to walk rig to Capitol 2H, walk rig, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, trip out, stage in hole, drill tangent.

Next well: Capitol Unit 2H, Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Dogwood

County: Wetzel

Well: Daags Unit 1H

Current operation: Cleaning mud tanks

Projected operation: Clean mud tanks, rig down, move rig to Journeyman pad, rig up.

Next well: Welder Unit 2H, Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Sandy Unit 1H

Current operation: Rig will be on idle time untill the 27th of December, then will finish rigging up and preparing for a 1/1/2022 spud date.

Projected operation: Rig idle, rig up, pick up drill pipe, pick up BHA, spud surface on 1/1/2022, drill surface, load hole, trip out of hole, nipple down diverter, run surface casing, pump cement.

Next well: Earl Unit 2H, Pad: Weekley West, County: Ritchie

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/1.23.2022

1 message

Joe Honeycutt <jhoneycutt@anteroresources.com> Sun, Jan 23, 2022 at 8:49 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 1/23/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Maroon Unit 1H

Current operation: Drilled lateral to TD, trip out of hole to run production casing.

Projected operation: Circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Maroon Unit 2H

Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Trader Unit 2H

Current operation: Drill shoe track, perform FIT, drill intermediate section.

Projected operation: Drill shoe track, FIT, unload hole, drill intermediate section, blow hole clean, load hole, trip out of hole, run intermediate casing, pump intermediate cement.

Next well: Trader Unit 1H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Gander Unit 1H

Current operation: Drill shoe track, perform FIT, drill intermediate section.

Projected operation: Drill shoe track, FIT, unload hole, drill intermediate section, blow hole clean, load hole, trip out of hole, run intermediate casing, pump intermediate cement.

Next well: Maxson Unit 1H

Pad: Weekley West, County: Ritchie

Thank you,

Joe Honeycutt

Drilling Superintendent

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/1.30.2022

1 message

Eric May <emay@anteroresources.com> Sun, Jan 30, 2022 at 7:12 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 1/30/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Maroon Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Purple Unit 1H

Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Trader Unit 1H

Current operation: Drilling tangent section

Projected operation: Drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Trader Unit 2H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Gander Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Maxson Unit 1H

Pad: Weekley West, County: Ritchie

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/2.06.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Feb 6, 2022 at 6:37 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 2/06/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Purple Unit 1H

Current operation: Picking up BHA

Projected operation: Pick up directional BHA, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement

Next well: Purple Unit 2H

Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Trader Unit 2H

Current operation: Skidding rig to Trader Unit 2H

Projected operation: Nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Ryland Unit 1H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Maxson Unit 1H

Current operation: Drilling curve

Projected operation: Drill curve, drill lateral to TD, circulate and condition, trip out of hole, run production casing, pump production cement, nipple down, skid rig to Maxson Unit 2H, nipple up and test BOPE, pick up directional bha, trip in hole drill shoe track, FIT, drill tangent section

Next well: Maxson Unit 2H

Pad: Weekley West, County: Ritchie

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/2.13.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Feb 13, 2022 at 6:21 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 2/13/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Purple Unit 1H

Current operation: Running production casing

Projected operation: Run production casing, circulate, cement, nipple down bope, walk rig to Purple Unit 2H, nipple up and test bope, pick up directional BHA, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, trip out of hole, pick up lateral BHA, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement

Next well: Purple Unit 2H

Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Trader Unit 2H

Current operation: Tripping out of hole

Projected operation: Trip out of hole, laydown bha, run production casing, pump cement, nipple down bope, skid rig to Ryland Unit 1H, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Ryland Unit 1H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Maxson Unit 2H

Current operation: Drilling 8.75” tangent section

Projected operation: Load hole, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral to TD, circulate and condition, trip out of hole, run production casing, pump production cement, nipple down, skid rig to Earl Unit 1H, nipple up and test BOPE, pick up directional bha, trip in hole drill shoe track, FIT, drill tangent section

Next well: Earl Unit 1H

Pad: Weekley West, County: Ritchie

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/2.20.2022

1 message

Eric May <emay@anteroresources.com> Sun, Feb 20, 2022 at 7:09 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>

Marcellus Drilling Update 2/20/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Purple Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump production cement, nipple down bope, walk rig to Axtel Unit 1H, nipple up and test bope, pick up directional BHA, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, trip out of hole, pick up lateral BHA, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement.

Next well: Axtel Unit 1H

Pad: Thin Air, County: Wetzel

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 1H

Current operation: Circulate and condition mud at TD

Projected operation: Circulate and condition mud, trip out of hole, laydown bha, run production casing, burst airlock, circulate, pump cement, nipple down bope, skid rig to Ryland Unit 2H, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Ryland Unit 2H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Earl Unit 1H

Current operation: Drilling 8.75” tangent section

Projected operation: Drill 8.75” tangent section to KOP, load hole, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, drill lateral to TD, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement, nipple down, skid rig to Earl Unit 2H, nipple up and test BOPE, pick up directional bha, trip in hole drill shoe track, FIT, drill tangent section

Next well: Earl Unit 2H

Pad: Weekley West, County: Ritchie

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/2.27.2022

1 message

Eric May <emay@anteroresources.com> Sun, Feb 27, 2022 at 7:02 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>

Marcellus Drilling Update 2/27/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Axtel Unit 1H

Current operation: Tripping in hole to drill tangent section

Projected operation: Drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up flex RSS BHA, trip in hole, drill curve, trip out of hole, pick up lateral BHA, drill lateral, circulate and condition, trip out of hole, run production casing, pump production cement, set and test packoff, nipple down, clean mud tanks, rig down, prepare to move rig to Grand pad.

Next well: Toroweap Unit 1H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 2H

Current operation: Circulate and condition mud at TD

Projected operation: Circulate and condition mud, trip out of hole, laydown bha, run production casing, burst airlock, circulate, pump cement, nipple down bope, skid rig to Ryland Unit 3H, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Ryland Unit 3H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Earl Unit 1H

Current operation: Running production casing

Projected operation: Run production casing, burst airlock, circulate, pump production cement, nipple down, skid rig to Earl Unit 2H, nipple up and test BOPE, pick up directional bha, trip in hole drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Earl Unit 2H

Pad: Weekley West, County: Ritchie

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/3.06.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Mar 6, 2022 at 6:11 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>

Marcellus Drilling Update 3/06/2022

Rig: H&P 317

Pad: Thin Air

County: Wetzel

Well: Axtel Unit 1H

Current operation: Laying down drill pipe

Projected operation: Lay down drill pipe, run production casing, pump production cement, set and test packoff, nipple down, clean mud tanks, rig down, move rig to Grand pad.

Next well: Toroweap Unit 1H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 3H

Current operation: Trip out of hole at TD

Projected operation: Trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down bope, skid rig to Welder Unit 1H, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Welder Unit 1H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Earl Unit 2H

Current operation: Trip out of hole at TD

Projected operation: Trip out of hole, run production casing, burst airlock, circulate, pump production cement, nipple down, skid rig to Sandy Unit 1H, nipple up and test BOPE, pick up directional bha, trip in hole drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Sandy Unit 1H

Pad: Weekley West, County: Ritchie

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/3.13.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Mar 13, 2022 at 6:25 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>

Marcellus Drilling Update 3/13/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 1H

Current operation: Moving rig to Grand pad

Projected operation: Moving rig to Grand pad, rig up, drill surface, run surface casing, pump surface cement, nipple up and test BOPE, drill shoe track, 15’ of new formation, FIT, drill intermediate

Next well: Toroweap Unit 2H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Welder Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down bope, skid rig to Welder Unit 2H, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement.

Next well: Welder Unit 2H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Weekley West

County: Ritchie

Well: Sandy Unit 1H

Current operation: Circulate at TD

Projected operation: Circulate, trip out of hole laying down drill pipe, run production casing, burst airlock, circulate, pump production cement, nipple down, clean mud tanks, rig down and prepare rig to move to Gaspar pad

Next well: Mule Unit 1H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/3.20.2022

1 message

Eric May <emay@anteroresources.com> Sun, Mar 20, 2022 at 6:29 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 3/20/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 1H

Current operation: Rigging up on Grand pad

Projected operation: Rig up, drill surface, run surface casing, pump surface cement, nipple up and test BOPE, drill shoe track, 15’ of new formation, FIT, drill intermediate, trip out, run intermediate casing, pump cement, prep to walk to Toroweap Unit 2H.

Next well: Toroweap Unit 2H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Welder Unit 2H

Current operation: Drilling tangent

Projected operation: Drill tangent section to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition, trip out of hole, run production casing, burst airlock, circulate, pump production cement, prepare to skid rig to Ryland Unit 1H for remediation.

Next well: Ryland Unit 1H

Pad: Journeyman, County: Wetzel

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 1H

Current operation: Rigging down, move rig to Gaspar pad.

Projected operation: Rig down, move rig, rig up, prepare to drill surface.

Next well: Mule Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/3.27.2022

1 message

Eric May <emay@anteroresources.com> Sun, Mar 27, 2022 at 7:11 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 3/27/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 3H

Current operation: Drilling intermediate

Projected operation: Drill intermediate to TD, blow hole clean, load hole with brine, trip out of hole, run casing, pump cement, wait on cement, pick up drill pipe and rack in derrick, pick up BHA, stage in hole, drill shoe track, load hole with brine, FIT, trip out of hole, stage in hole, drill tangent to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Toroweap Unit 2H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 1H

Current operation: Skidding rig and center up over well

Projected operation: Nipple up and test BOPE, pick up BHA, trip in hole, drill cement, circulate, trip out of hole, lay down BHA, pick up casing scraper, trip in hole, load hole with SOBM, trip out of hole, perform free point with wireline, perforate casing with wireline, circulate, sever casing, lay down casing, pick up 8 ¾ BHA, trip in hole, circulate, trip out of hole, pick up inflatable bridge plug, trip in hole, install bridge plug above cut casing, pump 750' cement balance plug, trip out, wait on cement.

Next well: Wable Unit 1H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 1H

Current operation: Finishing rig move to Gaspar pad.

Projected operation: Rig up, drill surface, run surface casing, pump surface cement, nipple up and test BOPE, drill shoe track and 15' of new formation, FIT, drill intermediate, trip out, run intermediate casing, pump cement, prep to walk to Mule Unit 2H.

Next well: Mule Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/4.03.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Apr 3, 2022 at 6:40 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 4/03/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 3H

Current operation: Drilling lateral

Projected operation: Drill lateral, circulate and condition mud, trip out of hole, run production casing, pump cement, nipple down BOPE, Walk rig to Toroweap 2H, nipple up and test BOPE, pick up BHA, stage in hole, drill shoe track, load hole with brine, FIT, trip out of hole, stage in hole, drill tangent to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Toroweap Unit 2H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Journeyman

County: Wetzel

Well: Ryland Unit 1H

Current operation: Repairing rig

Projected operation: Repair rig, time drill off plug, drill tangent section, load hole with sobm, trip out of hole pick up RSS, drill curve, drill lateral, circulate and condition mud, trip out of hole laying down drill pipe, run production casing, circulate, pump cement, nipple down BOPE, clean mud tanks, prepare for rig move to Nalley pad

Next well: Wable Unit 1H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate, load hole with brine, trip out of hole , run intermediate casing, circulate, pump cement, nipple down BOPE, skid rig to Mule 3H, rig up, drill surface, run surface casing, pump surface cement, nipple up and test BOPE, drill shoe track and 15’ of new formation, FIT, drill intermediate, trip out, run intermediate casing, pump cement.

Next well: Mule Unit 3H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/4.17.2022

1 message

Eric May <emay@anteroresources.com> Sun, Apr 17, 2022 at 7:48 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 4/17/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 2H

Current operation: Tripping in hole with wash pipe to wash over fish

Projected operation: Trip in hole, wash over fish, trip out of hole, pick up wiper trip BHA, trip in hole, wash and ream to top of fish, trip out of hole, pick up screw in sub, trip in hole, screw into fish, trip out of hole, lay down fishing BHA and fish, run production casing, pump cement, set and test pack off, nipple down BOPE, walk rig to Toroweap 1H.

Next well: Toroweap Unit 1H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Wable Unit 1H

Current operation: Moving rig to Nalley pad and rigging up

Projected operation: Move rig to Nalley pad, rig up, perform pre spud inspection, pick up surface drilling BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15' formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Wable Unit 2H.

Next well: Wable Unit 2H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mckean Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate section to TD, load hole with brine, trip out of hole , run intermediate casing, circulate, pump cement, wait on cement, pick up BHA, stage in hole, drill shoe track, load hole with brine, FIT, trip out of hole, stage in hole, drill tangent to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition mud, trip out of hole, run production casing, pump cement, set and test packoff, nipple down, prepare to skid to Mckean Unit 1H.

Next well: Mckean Unit 1H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/4.24.2022

1 message

Eric May <emay@anteroresources.com> Sun, Apr 24, 2022 at 7:14 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 4/24/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 2H

Current operation: Drilling sidetrack lateral

Projected operation: Drill lateral to TD, circulate, trip out, run production casing, pump cement, set and test pack off, nipple down BOPE, prepare to walk rig to Toroweap Unit 1H.

Next well: Toroweap Unit 1H

Pad: Grand, County: Tyler

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Wable Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate section to TD, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Jed Unit 1H, skid rig, pick up surface drilling BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15' formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Jed Unit 2H.

Next well: Jed Unit 1H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mckean Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, pump cement, set and test packoff, nipple down, prepare to skid to Mckean Unit 1H, skid rig, pick up BHA, stage in hole, drill shoe track, load hole with brine, FIT, trip out of hole, stage in hole, drill tangent to KOP, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Mckean Unit 1H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/5.01.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 1, 2022 at 6:19 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 5/01/2022

Rig: H&P 317

Pad: Grand

County: Tyler

Well: Toroweap Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, lay down drill pipe, run production casing, pump cement, nipple down BOPE, Clean mud tanks, prepare rig to move to Red Lady pad

Next well: Cavatica Unit 1H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Greenwood Unit 1H

Current operation: Picking up 8.75” BHA

Projected operation: Trip in hole, drill shoe track, FIT, drill tanget section to TD, load hole with SOBM, trip out of hole, pick up coring tools, trip in hole, core drilling, trip out of hole with core, wiper run, run wire line, trip in hole, pump kick off plug, wait on cement, trip in hole, time drill off plug, drill curve and lateral

Next well: Jed Unit 2H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mckean Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate, pump cement, nipple down, Skid rig to Calhoun Unit 2H, Nipple up and test BOPE, pick up directional BHA, trip in hole, drill shoe track, FIT, Drill tangent section, load hole, round trip to pick up curve and lateral BHA, Drill curve and lateral

Next well: Calhoun Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/5.08.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 8, 2022 at 6:33 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 5/08/2022

Rig: H&P 317

Pad: Red Lady

County: Tyler

Well: Cavatica Unit 1H

Current operation: Moving rig to Red Lady pad

Projected operation: Move rig to Red Lady pad, rig up, nipple up conductor, drill surface, run surface casing, pump surface cement, nipple up and test BOPE

Next well: Cavatica Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Greenwood Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate, cement, nipple down, skid rig to Jed Unit 2H, Nipple up and test BOPE, pick up directional bha, trip in hole, drill tangent section

Next well: Jed Unit 2H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Calhoun Unit 2H

Current operation: Tripping in hole to drill curve

Projected operation: Drill curve and lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate, pump cement, nipple down, Skid rig to Calhoun Unit 1H (Slim hole), Nipple up and test BOPE, pick up directional BHA, trip in hole, drill shoe track, FIT, Drill tangent section, load hole, round trip to pick up curve and lateral BHA, Drill curve and lateral

Next well: Calhoun Unit 1H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/5.15.2022

1 message

Eric May <emay@anteroresources.com> Sun, May 15, 2022 at 7:34 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 5/15/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Cavatica Unit 1H

Current operation: Testing BOPE

Projected operation: Pick up BHA, drill intermediate section to TD, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to walk rig to Cavatica Unit 2H, walk rig, pick up surface drilling BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15’ formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Baldy Unit 1H.

Next well: Cavatica Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Jed Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, skid rig to Jed Unit 1H, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Jed Unit 1H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Calhoun Unit 1H

Current operation: Finished BOPE test, preparing to pick up tangent BHA.

Projected operation: Pick up directional BHA, trip in hole, drill shoe track, FIT, trip out, unload hole, drill tangent section, load hole with SOBM, trip out of hole, pick up curve and lateral BHA, trip in hole, drill curve, drill lateral, circulate and condition mud, trip out of hole, run production casing, circulate, burst airlock, pump cement, nipple down, prepare to skid rig to Mule Unit 3H.

Next well: Mule Unit 3H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/5.22.2022

1 message

Eric May <emay@anteroresources.com> Sun, May 22, 2022 at 6:25 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 5/22/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Cavatica Unit 2H

Current operation: Preparing to walk rig to Cavatica Unit 1H

Projected operation: Walk rig, nipple up and test BOPE, pick up BHA, drill sidetrack intermediate section to TD, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to walk rig to Baldy Unit 1H, walk rig, pick up surface drilling BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15’ formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Baldy Unit 2H.

Next well: Cavatica Unit 1H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Jed Unit 1H

Current operation: Lateral at TD, circulate and condition mud in preparation for trip out of hole.

Projected operation: Circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, skid rig to Wable Unit 2H, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition mud, trip out of hole, run production casing, pump cement.

Next well: Wable Unit 2H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Calhoun Unit 1H

Current operation: Drilled curve to landing point, circulating in preparation to round trip for lateral RSS BHA.

Projected operation: Round trip for lateral RSS BHA, drill lateral, circulate and condition mud, trip out of hole, run production casing, circulate and condition mud, burst airlock, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Mule Unit 3H.

Next well: Mule Unit 3H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/5.29.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, May 29, 2022 at 6:19 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 5/29/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 2H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate to TD, load hole, trip out of hole, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to walk rig to Baldy Unit 3H, walk rig, pick up surface drilling BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15’ formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, wait on cement, pick up BHA, trip in hole, drill shoe track and 15’ of formation, FIT, drill tangent section to TD, load hole with sobm, circulate and condition mud, trip out of hole, pick up curve BHA, trip in hole, drill curve

Next well: Baldy Unit 3H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Wable Unit 2H

Current operation: Lateral at TD, circulate and condition mud in preparation for trip out of hole.

Projected operation: Circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate, pump cement, nipple down, skid rig to Wable Unit 1H, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral, circulate and condition mud, trip out of hole (lay down drill pipe), run production casing, pump cement.

Next well: Wable Unit 2H

Pad: Nalley, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 3H

Current operation: Drilling 6.75” tangent section

Projected operation: Drill tangent to TD, load hole with sobm, round trip for RSS BHA, drill curve, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate and condition mud, burst airlock, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Mule Unit 2H.

Next well: Mule Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/6.05.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jun 5, 2022 at 7:18 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 6/05/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 3H

Current operation: Time drill off cement plug

Projected operation: Drill intermediate to TD, circulate, trip out of hole, run intermediate casing, pump cement, set and test pack off, wait on cement, pick up BHA, trip in hole, drill shoe track and 15’ formation, FIT, drill 8.75” tangent section, load hole with sobm, circulate and condition mud, trip out of hole, pick up curve BHA, trip in hole, drill curve, round trip for lateral BHA, Drill lateral to TD

Next well: Baldy Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Wable Unit 1H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole (laying down drill string), run production casing, burst airlock, circulate, pump cement, nipple down, clean mud pits, rig down, prepare to move to Eldon pad .

Next well: Clutter Unit 1H

Pad: Eldon, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 3H

Current operation: Drilling down to curve kick off plug depth

Projected operation: Drill to 6,700', trip out of hole, trip in open ended, pump cement plug, wait on cement, pick up BHA, trip in hole, kick off cement plug, drill curve, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Mule Unit 2H.

Next well: Mule Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/6.12.2022

1 message

Eric May <emay@anteroresources.com> Sun, Jun 12, 2022 at 6:31 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>

Marcellus Drilling Update 6/12/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 3H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Baldy Unit 2H, walk rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Baldy Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Nalley

County: Tyler

Well: Wable Unit 1H

Current operation: Cleaning mud tanks, preparing to move to Eldon pad.

Projected operation: Rig down, move rig to Eldon pad, rig up, conduct pre spud inspection, pick up surface BHA, drill surface, trip out, run surface casing, pump cement, nipple up and test BOPE, pick up BHA, trip in hole, drill shoe track and 15' formation, FIT, drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, prepare to skid rig to Clutter Unit 2H.

Next well: Clutter Unit 1H

Pad: Eldon, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 3H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Mule Unit 2H, skid rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Mule Unit 2H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/6.19.2022

1 message

Eric May <emay@anteroresources.com> Sun, Jun 19, 2022 at 8:37 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "Stephen.E.McCoy@wv.gov" <Stephen.E.McCoy@wv.gov>

Marcellus Drilling Update 6/19/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 3H

Current operation: Ran production casing to TD and lost returns, currently trying to establish returns.

Projected operation: Establish returns, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to walk rig to Baldy Unit 2H, walk rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Baldy Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Eldon

County: Tyler

Well: Clutter Unit 1H

Current operation: Performing FIT in preparation of drilling intermediate section.

Projected operation: Drill intermediate section, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Clutter Unit 2H. Skid rig, pick up BHA, drill surface, blow hole clean, load hole, trip out, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, stage in hole, drill shoe track and 15' formation, load hole, FIT, trip out of hole, stage in hole, drill intermediate, blow clean, load hole, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Phaeton Unit 1H.

Next well: Clutter Unit 2H

Pad: Eldon, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 2H

Current operation: Drilled tangent section to KOP, currently fishing dropped object at KOP.

Projected operation: Fish and retrieve object, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to skid rig to Mule Unit 1H, skid rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Mule Unit 1H

Pad: Gaspar, County: Doddridge

Thank you,

Eric May

Drilling Foreman

Mobile: 970-371-5427

Email: emay@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/6.26.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jun 26, 2022 at 6:44 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "Stephen.E.McCoy@wv.gov" <Stephen.E.McCoy@wv.gov>

Marcellus Drilling Update 6/26/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to walk rig to Baldy Unit 1H, walk rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral.

Next well: Baldy Unit 1H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Eldon

County: Tyler

Well: Phaeton Unit 1H

Current operation: Drilling intermediate section

Projected operation: Drill intermediate section to TD, load hole, trip out, run intermediate casing, pump cement, set and test pack off, nipple down, prepare to skid rig to Folger Unit 3H. Skid rig, pick up BHA, drill surface, blow hole clean, load hole, trip out, run surface casing, pump cement, wait on cement, nipple up and test BOPE, pick up BHA, stage in hole, drill shoe track and 15' formation, load hole, FIT, trip out of hole, stage in hole, drill intermediate, blow clean, load hole, trip out, run intermediate casing, pump cement, set and test pack off, wait on cement, pick up directional BHA, trip in hole, drill shoe track, FIT, drill tangent section, load hole, trip out of hole, pick up RSS BHA, trip in hole, drill curve/lateral

Next well: Folger Unit 3H

Pad: Eldon, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 1H

Current operation: Drilling tangent section

Projected operation: Drill tangent to KOP, load hole, trip out of hole, pick up RSS BHA, trip in hole, drill curve, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, clean mud tanks, rig down and prepare to move to Cashew pad

Next well: Smelt Unit 2H

Pad: Cashew, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/7.03.2022

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jul 3, 2022 at 6:42 AM
To: Brandon Jeffcoat <bjeffcoat@anteroresources.com>, "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>, Joe Honeycutt <jhoneycutt@anteroresources.com>, "Kenneth.l.greynolds@wv.gov" <Kenneth.l.greynolds@wv.gov>, "Stephen.E.McCoy@wv.gov" <Stephen.E.McCoy@wv.gov>

Marcellus Drilling Update 7/03/2022

Rig: H&P 317

Pad: Red Lady

County: Wetzel

Well: Baldy Unit 1H

Current operation: Drilling tangent

Projected operation: Drill tangent section, load hole, trip out of hole, pick up curve assembly, trip in hole, drill curve, trip out of hole, pick up lateral assembly, trip in hole, drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, prepare to walk rig to Catvatica Unit 2H, walk rig, nipple up and test BOPE, pick up directional BHA, trip in hole, drill tangent section, load hole with SOBM, trip out of hole, pick up RSS BHA, trip in hole, drill curve

Next well: Catvatica Unit 2H

Pad: Red Lady, County: Wetzel

Rig: H&P 519

Pad: Eldon

County: Tyler

Well: Folger Unit 3H

Current operation: Drilling Lateral

Projected operation: Drill lateral to TD, circulate and condition mud, trip out of hole, run production casing, burst air lock, circulate and condition mud, pump cement, set pack off, nipple down BOPE, skid rig to Folger unit 2H, nipple up conductor, drill surface, load hole, trip out of hole, run surface casing, pump surface cement, nipple up and test BOPE, pick up directional bha, trip in hole, drill shoe track, FIT, drill intermediate section, load hole, trip out of hole, run intermediate casing, pump intermediate cement, wait on cement

Next well: Folger Unit 2H

Pad: Eldon, County: Tyler

Rig: H&P 531

Pad: Gaspar Pad

County: Doddridge

Well: Mule Unit 1H

Current operation: Laying down drill pipe

Projected operation: Lay down drill string, run production casing, burst airlock, circulate and condition mud, pump cement, nipple down, set and test pack off, install night cap, clean mud tanks, rig down and prepare to move to Cashew pad

Next well: Smelt Unit 2H

Pad: Cashew, County: Doddridge

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/7.25.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Jul 25, 2021 at 6:20 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 7/25/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Rapids unit 1H

Current operation: Nipple up and test bope

Projected operation: Drill shoe track, FIT, drill intermediate section, load hole with brine, trip out of hole, run intermediate casing, pump cement, nipple down, walk rig to Rapids unit 2H, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, load hole with brine, trip out of hole, run intermediate casing, pump cement

Next well: Rapids Unit 2H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Busch 3H

Current operation: Preparing to spud

Projected operation: Drill surface, trip out of hole, run surface casing, cement, nipple up & test BOPE, casing test, drill intermediate, trip out, run casing, cement, walk rig to Peeler 1H, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, trip out, run casing, cement, walk rig to Peeler 2H.

Next well: Peeler Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/8.01.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Aug 1, 2021 at 6:15 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 8/01/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Gatrell unit 1H

Current operation: Preparing to run intermediate casing

Projected operation: Run intermediate casing, pump cement, nipple down, walk rig to Gatrell unit 2H, drill surface, trip out of hole, run surface casing, pump cement, nipple up and test bope, trip in hole, drill shoe track, FIT, drill intermediate section, load hole with brine, trip out of hole, run intermediate casing, pump cement, wait on cement, pick up drill pipe, drill 8 ¾” air tangent, load hole with sobm, trip out of hole, pick up curve assembly

Next well: Gatrell Unit 2H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Peeler unit 3H

Current operation: Wait on cement

Projected operation: Pick up BHA, drill intermediate, trip out, run casing, cement, walk rig to Blake 1H, drill surface, run casing, cement, nipple up & test BOPE, casing test, drill intermediate, trip out, run casing, cement, wait on cement, pick up drill pipe, pick up curve assembly

Next well: Blake Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/8.08.2021

1 message

Eric May <emay@anteroresources.com> Sun, Aug 8, 2021 at 7:13 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 8/08/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Gatrell unit 2H

Current operation: Drilling lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, pump cement, nipple down, walk rig to Gatrell unit 1H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve assembly, trip in hole, drill curve, drill lateral.

Next well: Gatrell Unit 1H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Blake Unit 1H

Current operation: Tripping in hole to drill tangent

Projected operation: Drill tangent, load hole with SOBM, trip out of hole, pick up curve and lateral assembly, trip in hole, drill curve and lateral, trip out, run production casing, cement, skid rig to Peeler Unit 3H.

Next well: Peeler Unit 3H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/8.15.2021

1 message

Eric May <emay@anteroresources.com> Sun, Aug 15, 2021 at 6:58 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 8/15/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Gatrell unit 1H

Current operation: Drilled lateral to TD, tripping out of hole

Projected operation: Trip out of hole, run production casing, pump cement, nipple down, walk rig to Rapids unit 2H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve assembly, trip in hole, drill curve, drill lateral.

Next well: Rapids Unit 2H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Peeler Unit 3H

Current operation: Drilling cement

Projected operation: Drill cement, drill sidetrack intermediate to TD, circulate, load hole with brine, trip out, run intermediate casing, pump cement, wait on cement, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve assembly, trip in hole, drill curve, drill lateral.

Next well: Peeler Unit 2H, Pad: Gadd, County: Wetzel

Thank you,

Eric May

Drilling Foreman

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Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/8.22.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Aug 22, 2021 at 6:24 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 8/22/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Rapids unit 2H

Current operation: Drilled lateral to TD

Projected operation: Circulate, trip out of hole, run production casing, pump cement, nipple down, walk rig to Rapids unit 1H, nipple up, test BOPE, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve assembly, trip in hole, drill curve, round trip for lateral assembly, drill lateral

Next well: Rapids Unit 1H, Pad: Shepherd, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Peeler Unit 3H

Current operation: Running production casing

Projected operation: Run production casing, circulate, pump cement, nipple down, skid rig to Peeler unit 2H, nipple up bope, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve assembly, trip in hole, drill curve, drill lateral, run production casing, cement, nipple down

Next well: Peeler Unit 2H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Marcellus/Drilling/WVDEP Weekly Update/8.29.2021

1 message

Brandon Jeffcoat <bjeffcoat@anteroresources.com> Sun, Aug 29, 2021 at 6:18 AM
To: "douglas.c.newlon@wv.gov" <douglas.c.newlon@wv.gov>, "michael.d.goff@wv.gov" <michael.d.goff@wv.gov>, "kenneth.l.greynolds@wv.gov" <kenneth.l.greynolds@wv.gov>, "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "cragin.blevins@wv.gov" <cragin.blevins@wv.gov>, Tim Neill <tneill@anteroresources.com>, Robert Odenthal <rodenthal@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Rig H&P 317 <righandp317@anteroresources.com>, Rig H&P 519 <righandp519@anteroresources.com>, Eric May <emay@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Cory Knote <cknote@anteroresources.com>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Rig H&P 531 <righandp531@anteroresources.com>, "bryan.o.harris@wv.gov" <bryan.o.harris@wv.gov>

Marcellus Drilling Update 8/29/2021

Rig: H&P 317

Pad: Shepherd

County: Tyler

Well: Rapids unit 1H

Current operation: Tripping in hole to drill lateral

Projected operation: Drill lateral to TD, circulate, trip out of hole, run production casing, pump cement, nipple down, clean pits, rig down, move rig to Margery pad

Next well: Parr Unit 1H, Pad: Margery, County: Tyler

Rig: H&P 519

Pad: Gadd

County: Wetzel

Well: Peeler Unit 2H

Current operation: Tripping out of hole

Projected operation: Trip out of hole, run production casing, circulate, pump cement, nipple down, skid rig to Peeler unit 1H, nipple up bope, pick up bha, trip in hole, drill shoe track, FIT, trip out, stage in, drill tangent section, load hole with SOBM, trip out of hole pick up curve/lateral assembly, trip in hole, drill curve, drill lateral, run production casing, cement, nipple down

Next well: Peeler Unit 1H, Pad: Gadd, County: Wetzel

Thank you,

Brandon Jeffcoat

Drilling Foreman

Mobile: 903-744-3641

Email: bjeffcoat@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Mckean 1H ICP1 Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, Apr 15, 2022 at 7:23 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 1H

AFE#: A11776-D

2 attachments

Mckean 1H ICP1 Cement PJR.pdf
1799K

Mckean 1H ICP1 Casing Tally.pdf
207K

Ward, Samuel D <samuel.d.ward@wv.gov>

Mckean 1H Surface Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Thu, Apr 14, 2022 at 8:35 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 1H

AFE#: A11776-D

2 attachments

Mckean 1H Surface Casing Tally.pdf
197K

Mckean 1H Surface Cement PJR.pdf
2012K

Ward, Samuel D <samuel.d.ward@wv.gov>

Mckean 2H Surface Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Apr 16, 2022 at 6:21 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 2H

AFE#: A11774-D

2 attachments

McKean 2H Surface Cement PJR..pdf
1834K

McKean 2H Surface Casing Tally.pdf
198K

Ward, Samuel D <samuel.d.ward@wv.gov>

Mckean Unit 2H ICP1 9.625" Cement PJR.

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Apr 18, 2022 at 6:41 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good Morning,

Please See attached Cement PJR and Casing Tally,

Update: This was the Last Well on Stage 1 of Batch drilling, We will continue on with 8.75" section Curve and Lateral on this well then Head Back the other way.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 2H

AFE#: A11774-D

2 attachments

McKean 2H ICP1 9.625" Cement PJR.pdf
1805K

McKean 2H ICP1 9.625" Casing Tally.pdf
207K

Ward, Samuel D <samuel.d.ward@wv.gov>

Modification Horizontal H6A Well Work Permit API: 47-017-06917)

3 messages

Stansberry, Wade A <wade.a.stansberry@wv.gov> Tue, Mar 29, 2022 at 10:16 AM
To: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I have attached a copy of the newly issued well permit number. This will serve as your copy.

47-017-06917 - MULE UNIT 2H

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry
Environmental Resource Specialist 3
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 ext. 41115
(304) 926-0452 fax
Wade.A.Stansberry@wv.gov

47-017-06917 - mod.pdf
5050K

Dani Devito <ddevito@shalepro.com> Tue, Mar 29, 2022 at 10:19 AM
To: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>
Cc: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Thank you, Wade!

Dani DeVito
Director, Permitting & Marketing

SHALEPRO
ENERGY SERVICES

304.709.7100 ext. 103
304.288.7104

www.shalepro.com

On Mar 29, 2022, at 10:16 AM, Stansberry, Wade A <wade.a.stansberry@wv.gov> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

[Quoted text hidden]
<47-017-06917 - mod.pdf>

Diane Blair <dblair@anteroresources.com> Tue, Mar 29, 2022 at 10:31 AM
To: Dani Devito <ddevito@shalepro.com>, "Stansberry, Wade A" <wade.a.stansberry@wv.gov>
Cc: Mallory Stanton <mstanton@anteroresources.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Yes, thank you Wade, have a good day.

Regards,

Diane Blair

From: Dani Devito <ddevito@shalepro.com>
Sent: Tuesday, March 29, 2022 8:20 AM
To: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Cc: Mallory Stanton <mstanton@anteroresources.com>; Diane Blair <dblair@anteroresources.com>; David Sponaugle <dsponaug@assessor.state.wv.us>; Ward, Samuel D <samuel.d.ward@wv.gov>
Subject: Re: Modification Horizontal H6A Well Work Permit API: 47-017-06917)

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[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Mule 1H PJR

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, Apr 1, 2022 at 11:25 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Please see attached PJR

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Mule Unit 1H

AFE#: A11784-D

2 attachments

Mule 1H Intermediate PJR.pdf
2184K

Mule 1H Intermediate Casing Tally.pdf
154K

Ward, Samuel D <samuel.d.ward@wv.gov>

Nalley Pad: Frac Notification

1 message

Cory Woods <cwoods@anteroresources.com> Wed, Jun 22, 2022 at 12:38 PM
To: "derek.m.haught@wv.gov" <derek.m.haught@wv.gov>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>, Peter Herrin <pherrin@anteroresources.com>
Cc: Cory Woods <cwoods@anteroresources.com>, Dennis Zbosnik <dzbosnik@anteroresources.com>, Mike Szabo <mszabo@anteroresources.com>, Ryan Rivera <rrivera@anteroresources.com>

All,

We will be starting zipper frac ops on the Nalley Pad on June 24, 2022. The first set of wells we will be fracing are the Wable 1H, Wable 2H & Jed 2H which are 3 of 5 wells. Please contact me if you have any questions.

Cory Woods
Onsite Representative Antero Completions
West Virginia, Marcellus Shale
469-285-9327
cwoods@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Notice of Violation (NOV) # 11801 Abatement Request Oxford 1 Pad

6 messages

Eli Wagoner <ewagoner@anteroresources.com> Fri, Jul 1, 2022 at 6:48 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>, Jackie N Thornton <jackie.n.thornton@wv.gov>
Cc: Gretchen Kohler <gkohler@anteroresources.com>, Chelsea Grossi <cgrossi@anteroresources.com>

Mr. Ward

Please find the attached response and abatement request for NOV#11801. Please feel free to contact me at any time if you have any questions or comments.

Thank You

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com

Oxford 1 NOV Abatement Request wAttach 7.1.22.pdf
12126K

Thornton, Jackie N <jackie.n.thornton@wv.gov> Wed, Jul 6, 2022 at 8:00 AM
Cc: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Sam,
I'm good with it if you are.
[Quoted text hidden]
--
Jackie Thornton
Environmental Resource Analyst
WVDEP-Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
jackie.n.thornton@wv.gov
304-206-6015

Ward, Samuel D <samuel.d.ward@wv.gov> Wed, Jul 6, 2022 at 8:37 AM
To: "Thornton, Jackie N" <jackie.n.thornton@wv.gov>

I planned to ask you about this today. Eli told me Friday that this was ready, but he was waiting on the results and the legal team to decide if they thought it was ready to send. I'll get this abated this evening.
[Quoted text hidden]

Thornton, Jackie N <jackie.n.thornton@wv.gov> Wed, Jul 6, 2022 at 8:42 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

I saw it yesterday but didn't get to it until this morning. I'm running a little (LOT) behind after 5 days off. lol
[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov> Wed, Jul 6, 2022 at 8:49 AM
To: "Thornton, Jackie N" <jackie.n.thornton@wv.gov>

Yeah, I know that feeling. I still have inspections to enter from when my computer crashed. I probably just need to stay in a day and do them all, but I keep having to meet this person or that person to sign mods or plugging permits or complanits.
[Quoted text hidden]

Thornton, Jackie N <jackie.n.thornton@wv.gov> Wed, Jul 6, 2022 at 9:03 AM

To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

I understand that too. We need a 9 day week with 6 working days and 3 weekend days to make life work anymore.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Oxford 1 NOV extension

1 message

Eli Wagoner <ewagoner@anteroresources.com> Mon, May 2, 2022 at 5:25 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

Sam

As we discussed earlier I would like to request an extension for Notice of Violation (NOV) #11801, for the following reasons:

- Leaching of material to the collection sumps is slower than anticipated
- Lab analysis and results will likely not be completed in time to allow report preparation in time for the deadline

I am requesting the standard 30 day extension for the response to the NOV

Thank You

Eli Wagoner, PE

Environmental and Regulatory Manager (WV)

PH: (304) 842-4068

CELL: (304) 476-9770

Ewagoner@anteroresources.com


Antero
Resources

Ward, Samuel D <samuel.d.ward@wv.gov>

PJR Earl Unit 1H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, Mar 1, 2022 at 11:11 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Please see attached PJR for the Earl Unit 1H API# 47085104140000, 5.5” cement job and casing tally as ran.

Thanks,

Jesse Lawson & Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Earl Unit 2H

AFE#: A11554-D

2 attachments

PJR Earl 1H 5.5 Cement.pdf
2215K

Earl 1H Casing Tally (As Ran).pdf
617K

Ward, Samuel D <samuel.d.ward@wv.gov>

Plugging Horizontal H6A Well Work Permit (API: 47-033-05794 & 47-033-05795)

2 messages

Stansberry, Wade A <wade.a.stansberry@wv.gov> Thu, May 26, 2022 at 1:25 PM
To: Mallory Stanton <mstanton@anteroresources.com>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, dpalmer@harrisoncountywv.com, mcopeland@harrisoncountywv.com, Jeffrey McLaughlin <jeffrey.w.mclaughlin@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I have attached a copy of the newly issued well permit number. This will serve as your copy.

47-033-05794 - PLAUGHER UNIT 1H
47-033-05795 - PLAUGHER UNIT 2H

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

4 attachments

47-033-05794 - Copy.pdf
1342K

47-033-05795 - Copy.pdf
3763K

IR-8 Blank.pdf
237K

IR-8 Blank.pdf
237K

Mallory Stanton <mstanton@anteroresources.com> Fri, May 27, 2022 at 11:29 AM
To: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>, Diane Blair <dblair@anteroresources.com>, Dani DeVito <ddevito@shalepro.com>, "dpalmer@harrisoncountywv.com" <dpalmer@harrisoncountywv.com>, "mcopeland@harrisoncountywv.com" <mcopeland@harrisoncountywv.com>, Jeffrey McLaughlin <jeffrey.w.mclaughlin@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Thanks Wade!

From: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Sent: Thursday, May 26, 2022 11:26 AM
To: Mallory Stanton <mstanton@anteroresources.com>; Diane Blair <dblair@anteroresources.com>; Dani DeVito <ddevito@shalepro.com>; dpalmer@harrisoncountywv.com; mcopeland@harrisoncountywv.com; Jeffrey McLaughlin <jeffrey.w.mclaughlin@wv.gov>; Ward, Samuel D <samuel.d.ward@wv.gov>
Subject: Plugging Horizontal H6A Well Work Permit (API: 47-033-05794 & 47-033-05795)

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Possible Dominion Well

20 messages

Ward, Samuel D <Samuel.D.Ward@wv.gov>
To: "Ronald L. Walden (Energy - 2)" <ronald.l.walden@dominionenergy.com>, Keith Swisher <KeithA.Swisher@dominionenergy.com>
Cc: "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>, "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Martin, James A" <James

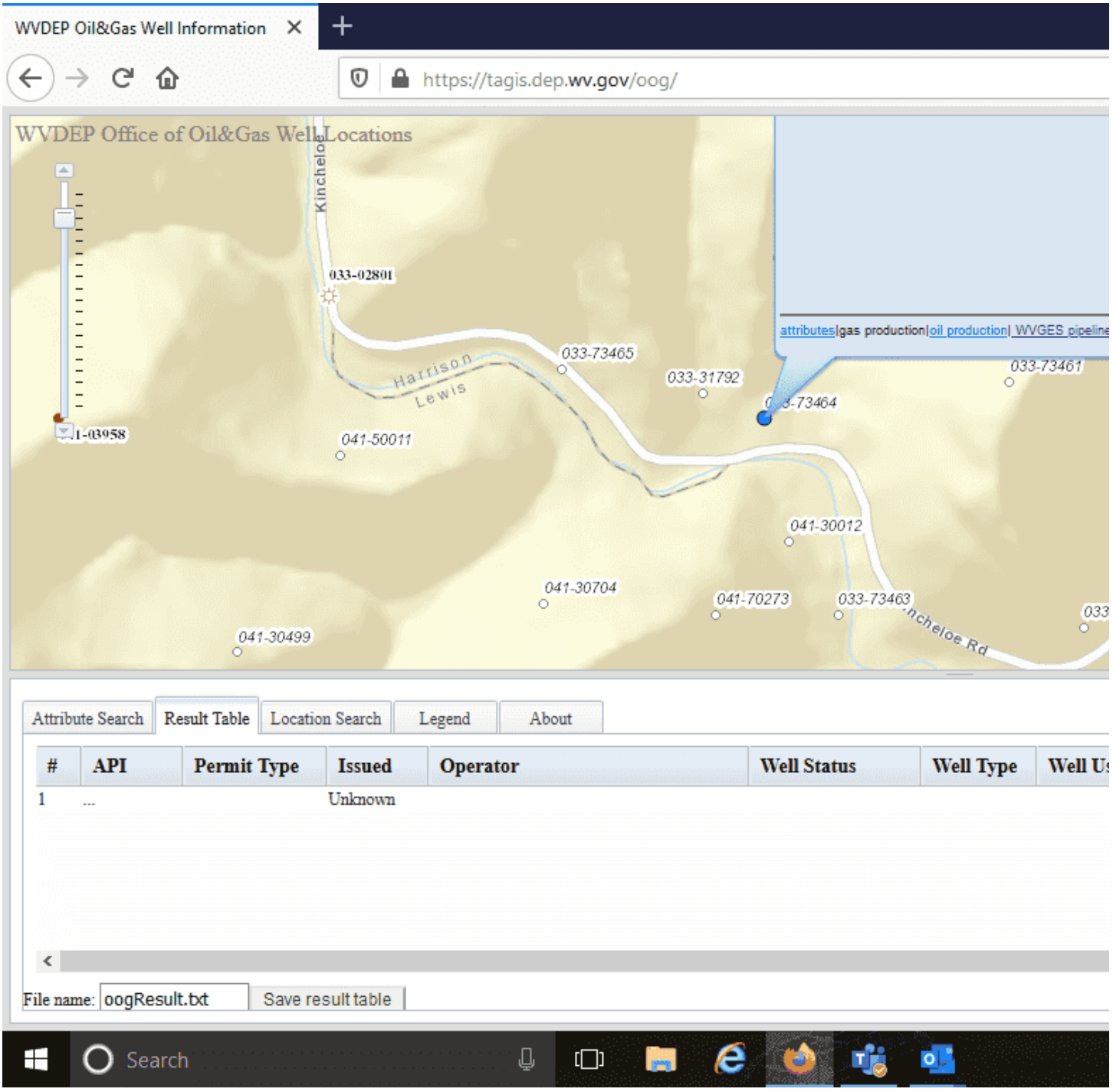
Hi Ron,

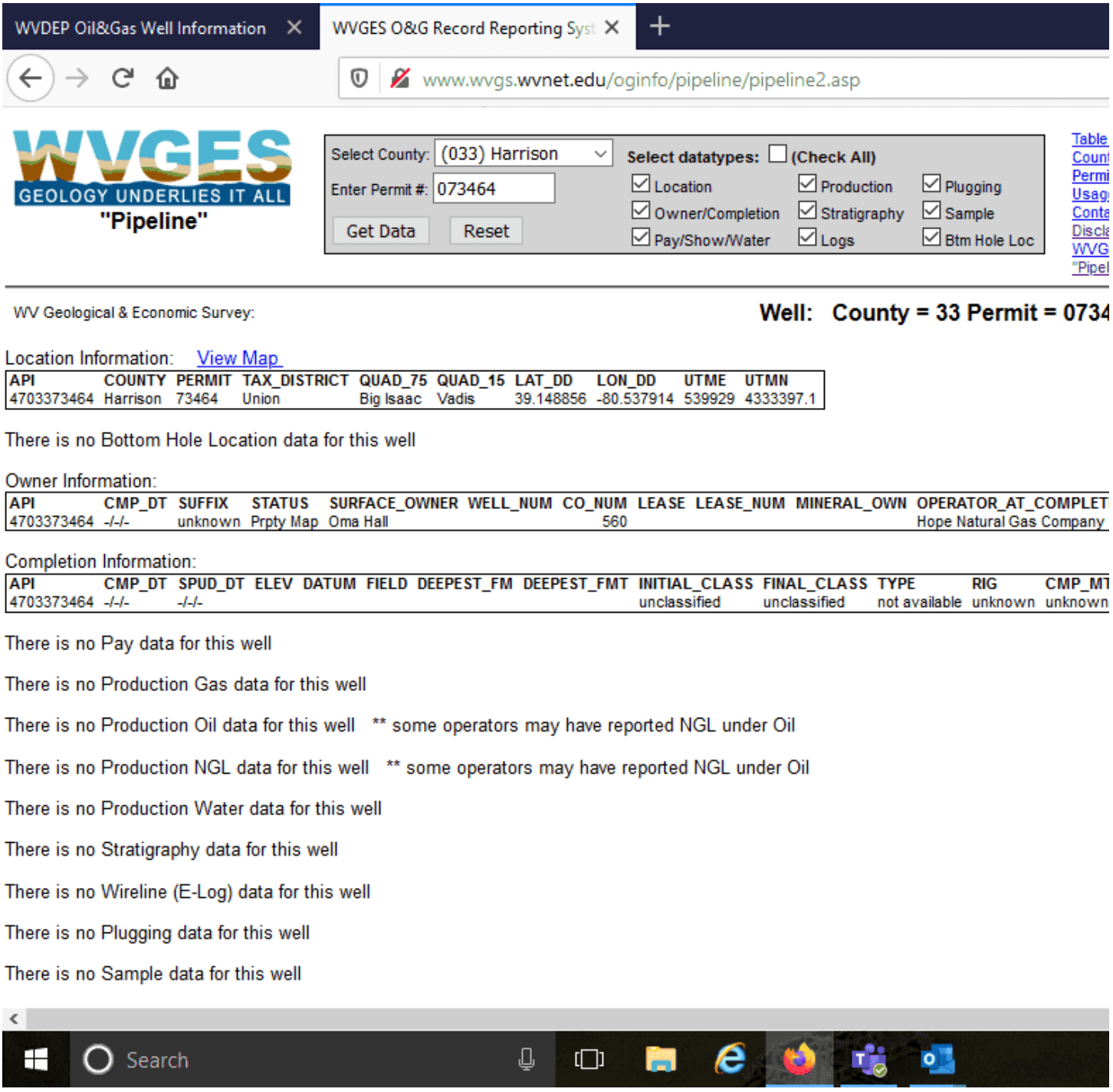
I hope all is well with you. I investigated a water complaint in Kinchelo, yesterday. The complainant was filling a swimming pool, and pur building near the water well, that the land owner says housed the old engine and a derrick also stood at the end of the building at one tim indicates that this was an old Hope Natural Gas Co. well. I realize this data could be flawed.

I was wondering if Dominion could help with their spot maps to determine if this is an old Hope lease, or if it transferred ownership? GES someone available to look at this, because the building above is 76' from the water well in question and an aquifer potentially has been a Dominion? I attached two screenshots from GIS and GES, and that's how I arrived at Dominion. 47-033-073464 is the well in question, 4 wells are just outside the storage boundary, near Kinchelo. The wells are close to 47-033-02801, which is a DETI well. 33-073461 still ha well. There is another well behind these wells, 33-031283, Bradford Supply Co, W.L. Hall 3, that was drilled around 1904, @ 704' from th

Thank you,

Sam Ward


WVDEP Oil&Gas Well Information
https://tagis.dep.wv.gov/oog/
WVDEP Office of Oil&Gas Well Locations
Kincheloe
033-02801
033-73465
033-31792
033-73464
033-73461
041-50011
041-30012
041-30704
041-70273
033-73463
041-30499
Harrison
Lewis
attributes|gas production|oil production|WVGES pipeline
Attribute Search
Result Table
Location Search
Legend
About
API Permit Type Issued Operator Well Status Well Type Well Us
1 ... Unknown
File name: oogResult.txt
Save result table
Search



Ronald L. Walden <ronald.l.walden@dominionenergy.com> Thu, Jun 18, 2020 at 5:23 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: Keith A Swisher <Keith.A.Swisher@dominionenergy.com>, John M Love <john.m.love@dominionenergy.com>, James H Moore Iii <James.H.Moore.Iii@dominionenergy.com>, Jason E Bach <jason.e.bach@dominionenergy.com>, Jeffrey T Renner <jeffrey.t.renner@dominionenergy.com>, Alan W Brannon <alan.w.brannon@dominionenergy.com>, Nicholas A Cabo <Nicholas.A.Cabo@dominionenergy.com>

Sam,

The following is in response to your email concerning a recent water complainant:

After researching DETI's mapping systems and well records I noticed that the well you referenced in your email, 033-73464 (Hope Gas plugged well #560), appears to be spotted incorrectly on your map shown below. All GIS Data I found has this well spotted southeast of the location shown on your map (refer to the attached Map View files for Well #560). For your information and reference I attached the well card and plugging affidavit for the plugged Hope Gas Well #560.

Based on your map shown below, the well closest to the complainant appears to be plugged well 033-31792 (Well #F-37875 Permit 47-033-01792A or 47-033-31792). I attached all of the well data I could find for this Foreign Well F-37875. Records show that this well was owned/operated by William Cassady and plugged in 1961.

Both of these plugged wells (560 & F-37875) are located on DETI Lease Number FK108082 (see attached file).

I also found the following information for the other three (3) wells you mention in your email:

1. 47-033-73461 (C-284): This well was plugged in 1921 (see attached well card). It is located on DETI Lease Number FK108082.
2. 47-033-31283 (F-32102 – 47-033-01283A): This well was plugged in 1949 (See attached files). It is located on DETI Lease Number FK108082.
3. 47-033-02801 (13100): This is an active DETI Gas Production Well located ~2,225' from the suspected troubled well 033-31792 (F-37875) (See attached file).

Please call if you have any questions,

Ron --

Ronald L. Walden, PG, CPG

Supervisor, Dominion Energy Geologic Services

Dominion Gas Storage Department

Dominion Energy Transmission, Inc.

925 White Oaks Boulevard

Bridgeport, WV 26330

Office Phone: 681-842-3374

Cell Phone: 304-290-5377

Fax: 681-842-3390



[Quoted text hidden]

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contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

14 attachments

- **560_47-033-73464_GGX Topo Map View.pdf** 201K
- **560_F-37875 Q-Map View.pdf** 524K
- **560_47-033-73464_Well Card.pdf** 111K
- **560_47-033-73464_Plugging Affidavit.pdf** 195K
- **F-37875_47-033-31792_GGX Topo Map View.pdf** 198K
- **F-37875_47-033-31792_Well Completion Report.pdf** 579K
- **F-37875_47-033-31792_Well Plat.pdf** 487K
- **F-37875_47-033-31792_Plugging Affidavit.pdf** 773K
- **Lease FK108082.pdf** 179K
- **C-284 Well Card.pdf** 135K
- **F-32102_47-033-31283_Well Plat.pdf** 600K
- **F-32102_47-033-31283_Well Completion Report.pdf** 515K
- **F-32102_47-033-31283_Plugging Affidavit.pdf** 773K
- **13100_47-033-02801_GGX Map view.pdf** 242K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Fri, Jun 19, 2020 at 1:58 PM
To: "Ronald L. Walden" <ronald.l.walden@dominionenergy.com>

Ron,

Thank you so much with the help on this. I believe the office will handle the testing of the well, and I also think this may turn into an emergency plug job for the state. Keith called and I will contact him Monday, when I find out the time the office wants to meet on this. I saw the email come in and it was killing me, so I had to look at what you compiled, even though it's a holiday. This is excellent information and I'm not sure I can express how much your time was appreciated. You have given my office a huge heads up that may have taken quite a bit longer to compile, and still may have involved you or other outside help to get this far. I will try to keep you in the loop on what is happening, if you would like.

Best Regards,

Sam

[Quoted text hidden]

Ronald L. Walden <ronald.l.walden@dominionenergy.com> Fri, Jun 19, 2020 at 4:25 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

No problem Sam. I will do my best help whenever I can.

Have a nice weekend,
Ron —

Sent from my iPhone

On Jun 19, 2020, at 1:59 PM, Ward, Samuel D <Samuel.D.Ward@wv.gov> wrote:

[Quoted text hidden]
[Quoted text hidden]
<image001.jpg>

From: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Sent: Thursday, June 18, 2020 9:51 AM
To: Ronald L. Walden (Services - 6) <ronald.l.walden@dominionenergy.com>; Keith Swisher <KeithA.Swisher@dominionenergy.com>
Cc: Thornton, Jackie N <Jackie.N.Thornton@wv.gov>; Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>; Martin, James A <James.A.Martin@wv.gov>; Newlon, Douglas C <Douglas.C.Newlon@wv.gov>
Subject: [EXTERNAL] Possible Dominion Well

Hi Ron,

I hope all is well with you. I investigated a water complaint in Kinchelo, yesterday. The complainant was filling a swimming pool, and pumped their well down considerably, then oil began to come from the water well. There is an old metal building near the water well, that the land owner says housed the old engine and a derrick also stood at the end of the building at one time. I was unable to locate the well, but GIS spots a well near to the building, and GES Pipeline indicates that this was an old Hope Natural Gas Co. well. I realize this data could be flawed.

I was wondering if Dominion could help with their spot maps to determine if this is an old Hope lease, or if it transferred ownership? GES Pipeline indicates Hope was the last operator. We would like to know as soon as you have someone available to look at this, because the building above is 76' from the water well in question and an aquifer potentially has been affected by oil from the well. Also, would Dominion test the water in the well, if the ownership is Dominion? I attached two screenshots from GIS and GES, and that's how I arrived at Dominion. 47-033-073464 is the well in question, 47-033-073461 is also listed as Hope Natural Gas Co., and spots to the right of 73464. I believe both wells are just outside the storage boundary, near Kinchelo. The wells are close to 47-033-02801, which is a DETI well. 33-073461 still has an old standard derrick, and according to the spot on the map, measures at 900' from the water well. There is another well behind these wells, 33-031283, Bradford Supply Co, W.L. Hall 3, that was drilled around 1904, @ 704' from the water well. The suspected problem is 33-073464, which is closest to the water well.

Thank you,

Sam Ward

<image002.png>

<image003.png>

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[Quoted text hidden]

3 attachments



image001.jpg
6K

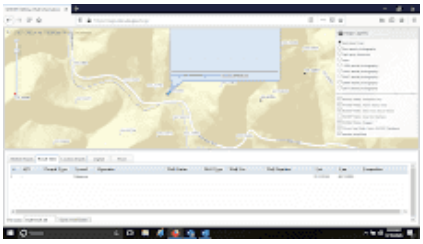


image002.png
353K



image003.png
146K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Mon, Jun 22, 2020 at 8:15 AM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

All,

Here are the files that Ron Walden, from Dominion, sent to me on Thursday evening. He has some pretty good evidence that the well that I believe caused the problem, is not the well shown on the map. It appears the problem well was plugged in 1961, and had several clay plugs and 10' cement plugs. Casing was ripped and based on the plugging affidavit, it's plausible that this well could be the source. I believe that Ron used Alpine Services for the information.

Let me know when we want to meet on site, and I'll be there. We will probably need a way to locate the well. No monument was seen. Probably will need something to dig with. The Hayhurst's have also asked for information on shocking water wells. I asked if they had ever shocked the well, during my visit and before seeing the pool.

Sam

From: Ronald L. Walden <ronald.l.walden@dominionenergy.com>
Sent: Thursday, June 18, 2020 5:24 PM
To: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Cc: Keith A Swisher <Keith.A.Swisher@dominionenergy.com>; John M Love <john.m.love@dominionenergy.com>; James H Moore Iii <James.H.Moore.Iii@dominionenergy.com>; Jason E Bach <jason.e.bach@dominionenergy.com>; Jeffrey T Renner <jeffrey.t.renner@dominionenergy.com>; Alan W Brannon <alan.w.brannon@dominionenergy.com>; Nicholas A Cabo <Nicholas.A.Cabo@dominionenergy.com>
Subject: RE: Possible Dominion Well

Sam,

[Quoted text hidden]

14 attachments

560_47-033-73464_GGX Topo Map View.pdf
201K

560_F-37875 Q-Map View.pdf
524K

560_47-033-73464_Well Card.pdf
111K

560_47-033-73464_Plugging Affidavit.pdf
195K

F-37875_47-033-31792_GGX Topo Map View.pdf
198K

F-37875_47-033-31792_Well Completion Report.pdf
579K

F-37875_47-033-31792_Well Plat.pdf
487K

F-37875_47-033-31792_Plugging Affidavit.pdf
773K

Lease FK108082.pdf
179K

C-284 Well Card.pdf
135K

F-32102_47-033-31283_Well Plat.pdf
600K

F-32102_47-033-31283_Well Completion Report.pdf
515K

F-32102_47-033-31283_Plugging Affidavit.pdf
773K

13100_47-033-02801_GGX Map view.pdf
242K

Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov> Mon, Jun 22, 2020 at 9:44 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

County health Department has well shocking info. I have attached the one from my former place of employment also. If most of that was oil in the pictures from last week, this won't help.

[Quoted text hidden]

HowtoDisinfectaPrivateWaterWell[1].pdf
20K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Mon, Jun 22, 2020 at 9:46 AM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

I know it won't help in the well with the oil. They were interested for their home water well. That being said, the well for their home is probably affected too. I know Jackie had some info that she sent out occasionally.

Get Outlook for iOS

From: Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>
Sent: Monday, June 22, 2020 9:44:20 AM

To: Ward, Samuel D <Samuel.D.Ward@wv.gov>; Newlon, Douglas C <Douglas.C.Newlon@wv.gov>; Thornton, Jackie N <Jackie.N.Thornton@wv.gov>
Cc: Martin, James A <James.A.Martin@wv.gov>; Whitlock, Renae D <Renae.D.Whitlock@wv.gov>
Subject: RE: Possible Dominion Well

[Quoted text hidden]

Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov> Mon, Jun 22, 2020 at 9:47 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

I was kinda messing with you!

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Mon, Jun 22, 2020 at 9:49 AM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

Ahhh, not enough coffee yet. My brain isn't firing on all cylinders yet.

Get Outlook for iOS

From: Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>
Sent: Monday, June 22, 2020 9:47:50 AM
[Quoted text hidden]

[Quoted text hidden]

Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov> Mon, Jun 22, 2020 at 9:52 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Whitlock, Renae D" <Renae.D.Whitlock@wv.gov>

I haven't had any. We moved my daughter to Fort Wayne, IN. Today is her first day at work. We are at her apartment and I can't get her Keurig thing to do anything. We are staying until Wednesday.

[Quoted text hidden]

Thornton, Jackie N <Jackie.N.Thornton@wv.gov> Wed, Jun 24, 2020 at 9:59 AM
To: "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>

Marty,

I wanted to follow up on our conversation from Monday. I know you said you were looking at the maps and trying to decide if we needed to maybe revisit Dominion's opinion on not owning the subject well. Have you reached a decision? If we believe that they aren't responsible at this time, I'd like to sample the water well next week and get with Sam and Doug to look for the well that might be the cause next week. What are your thoughts?

Jackie Thornton

Environmental Resource Analyst

WVDEP-Office of Oil and Gas

601 57th Street, SE

Charleston, WV 25304

Jackie.n.thornton@wv.gov

304-206-6015

From: Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>

[Quoted text hidden]

[Quoted text hidden]

Martin, James A <James.A.Martin@wv.gov> Wed, Jun 24, 2020 at 2:07 PM
To: "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>, "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>

After talking with Sam, based on the locations of all the wells, 33-01792A is by far the closest gas/oil well to the water well with the known impact. As far as we know, Dominion has had no connection to that well as it was drilled and plugged by William Cassady. Dominion did lease the property after the well was plugged in 1961.

My thought is for us to sample the water well with the issue and perhaps the other water well owned by the surface owner since he has indicated there may be a slight odor from his water. Could we possibly scale back the sampling suite and still get the information we need? The neighbor has informed Sam that he has not observed any problems with his water (although he does have a filter, etc. on his well), so I don't know that it is necessary to sample his water at this time. If he asks us to sample it, then we can. The other big lift is to try to find 1792A. Maybe the metal detector will help.

I know Dominion has offered to meet us on site, but unless it begins to look like the source of the problem is one of their wells, I'm not sure that we need anything from them at this point. I certainly think they have been very helpful thus far in researching and providing us the information they found. Please express our appreciation for their assistance.

Stay safe out there. Social distancing and PPE.

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Jun 24, 2020 at 2:34 PM
To: "Scranage, David K" <David.K.Scranage@wv.gov>

Dave,

Here is the info on the well I was talking to you about.

Sam

From: Ronald L. Walden <ronald.l.walden@dominionenergy.com>
Sent: Thursday, June 18, 2020 5:24 PM
To: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Cc: Keith A Swisher <Keith.A.Swisher@dominionenergy.com>; John M Love <john.m.love@dominionenergy.com>; James H Moore Iii <James.H.Moore.Iii@dominionenergy.com>; Jason E Bach <jason.e.bach@dominionenergy.com>; Jeffrey T Renner <jeffrey.t.renner@dominionenergy.com>; Alan W Brannon <alan.w.brannon@dominionenergy.com>; Nicholas A Cabo <Nicholas.A.Cabo@dominionenergy.com>
Subject: RE: Possible Dominion Well

Sam,

[Quoted text hidden]

14 attachments

- **560_47-033-73464_GGX Topo Map View.pdf**
  201K
- **560_F-37875 Q-Map View.pdf**
  524K
- **560_47-033-73464_Well Card.pdf**
  111K
- **560_47-033-73464_Plugging Affidavit.pdf**
  195K
- **F-37875_47-033-31792_GGX Topo Map View.pdf**
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  773K
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- **F-32102_47-033-31283_Plugging Affidavit.pdf**
  773K
- **13100_47-033-02801_GGX Map view.pdf**
  242K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Jun 24, 2020 at 2:56 PM
To: "Martin, James A" <James.A.Martin@wv.gov>, "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>, "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>

I just spoke to Dave Scranage about getting the metal detector next week. He made a good point that the casing has been pulled and there is clay to surface according to the affidavit. Unless we find part of the monument, we likely may not find the well by digging, or metal detector. He will meet Jackie and me when we go. He is interested and wants to see it. His experience in guessing where it may have been based on the building may be extremely valuable too.

Jackie, when you decide to test the water, I'll let Dave know, and he'll meet us.

Sam

[Quoted text hidden]

Thornton, Jackie N <Jackie.N.Thornton@wv.gov> Wed, Jun 24, 2020 at 2:58 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>

Thursday next week?

Sent from my iPhone

On Jun 24, 2020, at 2:56 PM, Ward, Samuel D <Samuel.D.Ward@wv.gov> wrote:

[Quoted text hidden]
[Quoted text hidden]
<image001.jpg>

From: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Sent: Thursday, June 18, 2020 9:51 AM
To: Ronald L. Walden (Services - 6) <ronald.l.walden@dominionenergy.com>; Keith Swisher <KeithA.Swisher@dominionenergy.com>
Cc: Thornton, Jackie N <Jackie.N.Thornton@wv.gov>; Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>; Martin, James A <James.A.Martin@wv.gov>; Newlon, Douglas C <Douglas.C.Newlon@wv.gov>
Subject: [EXTERNAL] Possible Dominion Well

Hi Ron,

I hope all is well with you. I investigated a water complaint in Kinchelo, yesterday. The complainant was filling a swimming pool, and pumped their well down considerably, then oil began to come from the water well. There is an old metal building near the water well, that the land owner says housed the old engine and a derrick also stood at the end of the building at one time. I was unable to locate the well, but GIS spots a well near to the building, and GES Pipeline indicates that this was an old Hope Natural Gas Co. well. I realize this data could be flawed.

I was wondering if Dominion could help with their spot maps to determine if this is an old Hope lease, or if it transferred ownership? GES Pipeline indicates Hope was the last operator. We would like to know as soon as you have someone available to look at this, because the building above is 76' from the water well in question and an aquifer potentially has been affected by oil from the well. Also, would Dominion test the water in the well, if the ownership is Dominion? I attached two screenshots from GIS and GES, and that's how I arrived at Dominion. 47-033-073464 is the well in question, 47-033-073461 is also listed as Hope Natural Gas Co., and spots to the right of 73464. I believe both wells are just outside the storage boundary, near Kinchelo. The wells are close to 47-033-02801, which is a DETI well. 33-073461 still has an old standard derrick, and according to the spot on the map, measures at 900' from the water well. There is another well behind these wells, 33-031283, Bradford Supply Co, W.L. Hall 3, that was drilled around 1904, @ 704' from the water well. The suspected problem is 33-073464, which is closest to the water well.

Thank you,

Sam Ward

<image002.png>

<image003.png>
[Quoted text hidden]

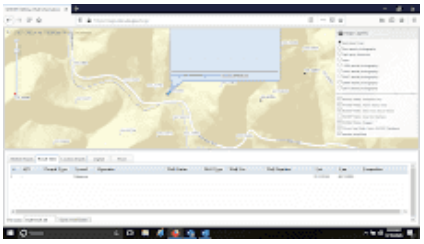
---

3 attachments



image001.jpg
6K

image002.png



353K



image003.png
146K

Ward, Samuel D <Samuel.D.Ward@wv.gov> Wed, Jun 24, 2020 at 3:01 PM
To: "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>
Cc: "Martin, James A" <James.A.Martin@wv.gov>, "Rodeheaver, J. Scott" <J.Scott.Rodeheaver@wv.gov>, "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>

Soundsgood

Get Outlook for iOS

From: Thornton, Jackie N <Jackie.N.Thornton@wv.gov>
Sent: Wednesday, June 24, 2020 2:58:54 PM
To: Ward, Samuel D <Samuel.D.Ward@wv.gov>
Cc: Martin, James A <James.A.Martin@wv.gov>; Rodeheaver, J. Scott <J.Scott.Rodeheaver@wv.gov>; Newlon, Douglas C <Douglas.C.Newlon@wv.gov>
Subject: Re: Possible Dominion Well

[Quoted text hidden]

Thornton, Jackie N <Jackie.N.Thornton@wv.gov> Thu, Jun 25, 2020 at 7:23 AM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>

Where do you want me to meet you?

Jackie Thornton

Environmental Resource Analyst

WVDEP-Office of Oil and Gas

601 57th Street, SE

Charleston, WV 25304

Jackie.n.thornton@wv.gov

304-206-6015

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Thu, Jun 25, 2020 at 1:10 PM
To: "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>

Go Mart at Jane Lew is a good place to start from. It's about 15-20 minutes out.

Sent from my iPhone

> On Jun 25, 2020, at 7:23 AM, Thornton, Jackie N <Jackie.N.Thornton@wv.gov> wrote:
>
> [Quoted text hidden]

Thornton, Jackie N <Jackie.N.Thornton@wv.gov> Thu, Jun 25, 2020 at 1:44 PM
To: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>
Cc: "Newlon, Douglas C" <Douglas.C.Newlon@wv.gov>

Great. Let's plan on 9:30-10? That work?

[Quoted text hidden]

Ward, Samuel D <Samuel.D.Ward@wv.gov> Thu, Jun 25, 2020 at 1:45 PM
To: "Thornton, Jackie N" <Jackie.N.Thornton@wv.gov>

Sounds good

Sent from my iPhone

> On Jun 25, 2020, at 1:44 PM, Thornton, Jackie N <Jackie.N.Thornton@wv.gov> wrote:
>
> [Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Production casing pressure testing requirements

1 message

Jason Baker <jbaker@anteroresources.com> Tue, Mar 8, 2022 at 8:23 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>

Douglas/Cragin/Sam,

To my knowledge, there's no legislation from the WVDEP that requires a minimum length of time to complete a pressure test of the production casing prior to commencing frac ops. The only documentation I can find is that the casing is designed to withstand the maximum operating pressure. Has there been any recent changes to this or perhaps I am incorrect? Antero is currently pressure testing the casing that exceeds API standards but am curious on if there is a time requirement specific to the WVDEP for this test. Thank you,

Jason Baker

Lead Completions Engineer

535 White Oaks Boulevard

Bridgeport, WV 26330

304-842-4090 office

304-203-3211 cell

Ward, Samuel D <samuel.d.ward@wv.gov>

RE: Hamilton & Vogt CWP Closure & Inspection Report Request

4 messages

Shawn Donovan <sdonovan@anteroresources.com> Tue, Feb 22, 2022 at 1:59 PM
To: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>
Cc: Paige Gardner <pgardner@anteroresources.com>, Lyndon Hall <lhall@anteroresources.com>, "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Good afternoon Kelly –

Apologies if I overlooked your response, but could you email the final, signed WVDEP Inspection reports for both the Hamilton & Vogt CWPs for our records? Inspector Ward (cc'd here) indicated he's unable to provide copies and they had to come from Charleston.

Thanks,

Shawn Donovan

Environmental & Regulatory Manager

303.357.6893 Office

720.840.0599 Cell

sdonovan@anteroresources.com

From: Shawn Donovan
Sent: Monday, January 24, 2022 4:51 PM
To: 'Kees, Kelly L'
Cc: Paige Gardner; Lyndon Hall; 'samuel.d.ward@wv.gov'
Subject: Hamilton & Vogt CWP Closure & Inspection Report Request

Hi Kelly –

Please be advised that WVDEP Inspector Sam Ward (cc'd here) inspected both the Hamilton and Vogt CWP sites earlier this month following our site closure and reclamation. Following the inspections Mr. Ward indicated that no further action was required.

Could you provide:

1) confirmation that these CWPs have been closed out in the WVDEP database; and

2) the final, signed WVDEP Inspection reports for both the Hamilton and Vogt CWPs for our records?

Thanks,

Shawn Donovan

Environmental & Regulatory Manager

Antero Midstream

Zero incidents
Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

1615 Wynkoop St.

Denver, CO 80202

303.357.6893 Office

720.840.0599 Cell

303.357.7315 Fax

sdonovan@anteroresources.com

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Ward, Samuel D <samuel.d.ward@wv.gov> Tue, Feb 22, 2022 at 4:13 PM
To: Shawn Donovan <sdonovan@anteroresources.com>
Cc: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>, Lyndon Hall <lhall@anteroresources.com>, Paige Gardner <pgardner@anteroresources.com>

Just FYI, there is public access to documents that are uploaded by Charleston and the inspectors. It is called Application Extender. You may need to call the office for information on how to access it from the public side. We are short staffed and may not be able to process these requests. You can also see inspection reports associated with API well numbers, as well as any document related to the well that is scanned into the system.

Sam
[Quoted text hidden]

Shawn Donovan <sdonovan@anteroresources.com> Tue, Feb 22, 2022 at 4:26 PM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>
Cc: "Kees, Kelly L" <Kelly.L.Kees@wv.gov>, Lyndon Hall <lhall@anteroresources.com>, Paige Gardner <pgardner@anteroresources.com>

Hi Sam –

Thanks for the recommendation. We are aware of the Application Xtender and have checked several times throughout the past few weeks, thinking there may have been a delay in scanning/uploading the inspection reports. As recently as this morning, we were unable to locate the inspections reports online after searching under both facility names and permit #s. Good news is that Kelly provided them earlier so problem solved.

Shawn Donovan

Environmental & Regulatory Manager

303.357.6893 Office

720.840.0599 Cell

sdonovan@anteroresources.com

From: Ward, Samuel D [mailto:samuel.d.ward@wv.gov]
Sent: Tuesday, February 22, 2022 2:13 PM
To: Shawn Donovan
Cc: Kees, Kelly L; Lyndon Hall; Paige Gardner
Subject: Re: Hamilton & Vogt CWP Closure & Inspection Report Request

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov> Tue, Feb 22, 2022 at 4:28 PM
To: Shawn Donovan <sdonovan@anteroresources.com>

Good deal. I uploaded to AX the week I inspected them, I have been experiencing permission denials. The office is working to resolve these issues.
[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

Re: Plugging Vertical Well Work Permit API: 47-017-05629) CORRECTION

2 messages

Stansberry, Wade A <wade.a.stansberry@wv.gov> Mon, Mar 28, 2022 at 9:45 AM
To: John <JZavatchan@eqt.com>, "Shrum, Becky" <bshrum@eqt.com>, Todd <tklaner@eqt.com>, Olivia Pishioneri <opishioneri@eqt.com>, Erin Spine <espine@eqt.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

CHIEFS SIGNATURE was missing from last attachment.

On Mon, Mar 28, 2022 at 9:43 AM Stansberry, Wade A <wade.a.stansberry@wv.gov> wrote:

> I have attached a copy of the newly issued well permit number. This will serve as your copy.
>
> **47-017-05629 - J510840 JACKSON LEESON**
>
> If you have any questions, then please contact us here at the Office of Oil and Gas.
>
> Thank you,
>
> **Wade A. Stansberry**
> **Environmental Resource Specialist 3**
> **West Virginia Department of Environmental Protection**
> **Office of Oil & Gas**
> **601 57th St. SE**
> **Charleston, WV 25304**
> **(304) 926-0499 ext. 41115**
> **(304) 926-0452 fax**
> **Wade.A.Stansberry@wv.gov**

2 attachments

47-017-05629 - Copy.pdf
4950K

IR-8 Blank.pdf

228K

Zavatchan, John <JZavatchan@eqt.com> Mon, Mar 28, 2022 at 9:53 AM
To: "Stansberry, Wade A" <wade.a.stansberry@wv.gov>, "Shrum, Becky" <BShrum@eqt.com>, "Klaner, Todd" <TKlaner@eqt.com>, "Wilson, Olivia" <OPishioneri@eqt.com>, "Spine, Erin" <ESpine@eqt.com>, David Sponaugle <dsponaug@assessor.state.wv.us>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Got it. Thanks Wade!

JZ

From: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Sent: Monday, March 28, 2022 9:45 AM
To: Zavatchan, John <JZavatchan@eqt.com>; Shrum, Becky <BShrum@eqt.com>; Klaner, Todd <TKlaner@eqt.com>; Wilson, Olivia <OPishioneri@eqt.com>; Spine, Erin <ESpine@eqt.com>; David Sponaugle <dsponaug@assessor.state.wv.us>; Ward, Samuel D <samuel.d.ward@wv.gov>
Subject: [EXTERNAL] Re: Plugging Vertical Well Work Permit API: 47-017-05629) CORRECTION

.::This email is from an external source. Please use caution when clicking links or opening attachments::.

[Quoted text hidden]

To learn about EQT's environmental, social and governance efforts visit: https://esg.eqt.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Rig Update

1 message

Rig H&P 531 <righandp531@anteroresources.com> Mon, Apr 25, 2022 at 7:01 PM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Giving notice of intent to run 5.5” production casing and cement on the McKean Unit 2H API #47017069150000. After casing and cement we will nipple down BOPE and skid rig to McKean Unit 1H API# 47017069140000, nipple up BOPE, test BOPE, drill 8.75” section load hole with SOBM and drill 8.5” curve and lateral.

Thanks,

Jesse Lawson / Ryan Dovey

Righandp531@anteroresources.com

Office Phone: 832-325-9258

McKean Unit 2H

AFE#: A11774-D

Ward, Samuel D <samuel.d.ward@wv.gov>

Sump Emergency notification 9-5-21

1 message

Aric Martin <amartin@anteroresources.com> Sun, Sep 5, 2021 at 11:56 AM
To: "Derek.M.Haught@wv.gov" <Derek.M.Haught@wv.gov>, "Samuel.D.Ward@wv.gov" <Samuel.D.Ward@wv.gov>
Cc: Eli Wagoner <ewagoner@anteroresources.com>

Due to overwhelming conditions it may become necessary for Antero Resources to manage stormwater on active drilling and completions sites in accordance with Antero's standard sump operation procedures, between now and 9-6-21 at 11:45 am .If you have any questions or concerns please feel free to contact me at any time.

Thanks,

Aric Martin

Environmental Field Supervisor

535 White Oaks BLVD

Bridgeport, WV 26330

304-641-4770

amartin@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

Surface Cement PJR for Gander Unit 1H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Sat, Jan 22, 2022 at 6:33 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Surface Cement PJR for Gander Unit 1H API# 47085104160000. If there are any questions feel free to contact us.

Thanks,

Tommy Erp / Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Gander Unit 1H

AFE#: A11669-D

Gander 1H Surface Cement PJR.pdf
2039K

Ward, Samuel D <samuel.d.ward@wv.gov>

Surface Cement PJR for Maxson Unit 1H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Tue, Jan 18, 2022 at 5:52 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Surface Cement PJR for Maxson Unit 1H API# 47085104120000. If there are any questions feel free to contact us.

Thanks,

Tommy Erp & Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 1H

AFE#: A11556-D

Maxson 1H Surface Cement PJR.pdf
1970K

Ward, Samuel D <samuel.d.ward@wv.gov>

Surface Cement PJR for Maxson Unit 2H

1 message

Rig H&P 531 <righandp531@anteroresources.com> Fri, Jan 14, 2022 at 5:51 AM
To: "samuel.d.ward@wv.gov" <samuel.d.ward@wv.gov>

Attached is the Surface Cement PJR for Maxson Unit 2H API# 47085104130000. If there are any questions feel free to contact us.

Thanks,

Tommy Erp & Josh Allred

Righandp531@anteroresources.com

Office Phone: 832-325-9258

Maxson Unit 2H

AFE#: A11558-D

Maxson 2H Surface Cement PJR.pdf
2774K

Ward, Samuel D <samuel.d.ward@wv.gov>

SWN - Elmer CFWI Approved Closure Plans (097-FWC-00049)

2 messages

Kees, Kelly L <kelly.l.kees@wv.gov> Fri, Jul 23, 2021 at 1:30 PM
To: Brittany Woody <brittany_woody@swn.com>, Casey Bartkus <Casey_Bartkus@swn.com>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <e027840@wv.gov>, "Ward, Samuel D" <e015789@wv.gov>

I have reviewed the closure for the subject centralized impoundment, and I am approving these plans. Prior to any work commencing on site please provide 7-day notice to the office and county inspector using the IMP-2 form. Also provide notice to the surface owner.

Once closure is complete, please notify your county inspector for verification and let me know so I can close it out in RBDMS.

--
Kelly L. Kees, P.E.
Office of Oil and Gas
WVDEP
601 57th St SE,
Charleston, WV 25304
(304)926-0440

2021-7-23 SWN - Elmer FWI Approved Closure Plans.pdf
4388K

Casey Bartkus <Casey_Bartkus@swn.com> Wed, Jul 28, 2021 at 5:25 PM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <e027840@wv.gov>, "Ward, Samuel D" <e015789@wv.gov>, John Dubowski <John_Dubowski@swn.com>, Dawn Keller <Dawn_Keller@swn.com>

Kelly and Sam,

Please see the attached IMP-2 form for notification of our intent to begin closure activities at the Elmer Impoundment starting 8/10/2021, pending weather, staffing needs and other factors. Currently, we have a preconstruction meeting scheduled on 8/10/2021 at 10am. The landowner is also being notified.

Please let me know if you have any questions or concerns.

Thank you

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

Southwestern Energy

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

[Quoted text hidden]

SWN Elmer FWI.Notification Construct Form.2021.07.28.pdf
148K

Ward, Samuel D <samuel.d.ward@wv.gov>

SWN - Elmer FWI Closure - Modification Approved

2 messages

Kees, Kelly L <kelly.l.kees@wv.gov> Mon, Aug 16, 2021 at 2:50 PM
To: Casey Bartkus <Casey_Bartkus@swn.com>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

I have reviewed the modified closure for the subject centralized impoundment, and I am approving these plans.

--
Kelly L. Kees, P.E.
Office of Oil and Gas
WVDEP
601 57th St SE,
Charleston, WV 25304
(304)926-0440

2021-8-16 SWN - Elmer FWI Modified Closure Plans.pdf
4853K

Casey Bartkus <Casey_Bartkus@swn.com> Mon, Aug 16, 2021 at 3:17 PM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: Charles T Brewer <charles.t.brewer@wv.gov>, "Newlon, Douglas C" <douglas.c.newlon@wv.gov>, "Ward, Samuel D" <samuel.d.ward@wv.gov>

Thank you very much Kelly!

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

SWN Southwestern Energy®

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

SWN Elmer FWI Reclamation Modification

5 messages

Casey Bartkus <Casey_Bartkus@swn.com> Wed, Aug 11, 2021 at 8:21 AM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>, "Angiulli, John" <jangiulli@cecinc.com>

Good morning Kelly,

At the preconstruction meeting for the Elmer FWI yesterday, it was noted that SWN erroneously left out the topsoil stockpiles required to completely reclaim the impoundment. Due to this, the LOD for the work did not extend to include the areas that contain the piles. With that being said, we have adjusted the plans sets to include these areas, which has increased the LOD 0.43 acres. The plan sets are attached.

We are beginning construction now, but we can accomplish a lot of the reclamation work without the stockpiles which will come into play at the end of the job. With this change, can we request a modification to include these areas so that the stockpiles left behind during original construction can be used for reclamation? I apologize that we missed this initially.

Please let me know if you have any questions or concerns.

Thank you

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

20210810-310253-SWN Elmer Reclamation Plans.pdf
4719K

Kees, Kelly L <kelly.l.kees@wv.gov> Wed, Aug 11, 2021 at 9:00 AM
To: Casey Bartkus <Casey_Bartkus@swn.com>
Cc: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>, "Angiulli, John" <jangiulli@cecinc.com>, Charles T Brewer <charles.t.brewer@wv.gov>

Is there any way to get sign offs from the surface owners. Anytime the LOD changes we are supposed to notice the surface owner.
[Quoted text hidden]

Casey Bartkus <Casey_Bartkus@swn.com> Wed, Aug 11, 2021 at 9:21 AM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>, "Angiulli, John" <jangiulli@cecinc.com>, Charles T Brewer <charles.t.brewer@wv.gov>

We are working on that now. The landowner group involved is a little difficult to get in front of, but I understand the need for the documentation. I'll get that over to you ASAP.

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia



1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

[Quoted text hidden]

Casey Bartkus <Casey_Bartkus@swn.com> Mon, Aug 16, 2021 at 9:51 AM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: "Ward, Samuel D" <Samuel.D.Ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>, "Angiulli, John" <jangiulli@cecinc.com>, Charles T Brewer <charles.t.brewer@wv.gov>

Good morning Kelly,

Attached are the landowner-signed plans for the requested modification at the Elmer Impoundment that includes the missed stockpiles. Please let me know if you need any additional information on this, and thank you for your help.

Thanks!

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

Southwestern Energy

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

From: Kees, Kelly L <kelly.l.kees@wv.gov>
Sent: Wednesday, August 11, 2021 9:01 AM
To: Casey Bartkus <Casey_Bartkus@SWN.COM>
Cc: Ward, Samuel D <Samuel.D.Ward@wv.gov>; Dawn Keller <Dawn_Keller@SWN.COM>; Angiulli, John <jangiulli@cecinc.com>; Charles T Brewer <charles.t.brewer@wv.gov>
Subject: [External] Re: SWN Elmer FWI Reclamation Modification

Is there any way to get sign offs from the surface owners. Anytime the LOD changes we are supposed to notice the surface owner.

[Quoted text hidden]

Elmer Impoundment.PDF
1085K

Kees, Kelly L <kelly.l.kees@wv.gov> Mon, Aug 16, 2021 at 10:43 AM
To: "Ward, Samuel D" <samuel.d.ward@wv.gov>

You good with this Sam?

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

SWN Ross 2 Impoundment Transfer

2 messages

Casey Bartkus <Casey_Bartkus@swn.com> Mon, Dec 6, 2021 at 11:30 AM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: "Ward, Samuel D" <samuel.d.ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>

-Good morning Kelly and Sam,

SWN and Mike Ross, Inc. have entered into an agreement to transfer ownership of the Ross 2 Impoundment (097-FWC-00060) to the landowner, details of which are below and within the attached executed agreement. SWN is currently planning on dewatering the impoundment (per Dawn's notification email) prior to transfer.

With this email, SWN would like to notify the Department of the transfer an absolve any responsibilities with the impoundment moving forward. Please let me know if you need any more information or if any transfer process cannot be met via this email.

Name and address of new surface owner

Mike Ross, Inc.

354 Morton Avenue

Buckhannon, WV 26201

Effective Date of Transfer: 1/6/2022

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia

Southwestern Energy

1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person responsible for delivering it to the addressee, you may not copy or distribute this communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

General Release of Claims and Waiver of Liability Regarding Impoundment_Ross Inc_ (003).pdf
1480K

Casey Bartkus <Casey_Bartkus@swn.com> Fri, Jan 7, 2022 at 2:53 PM
To: "Kees, Kelly L" <kelly.l.kees@wv.gov>
Cc: "Ward, Samuel D" <samuel.d.ward@wv.gov>, Dawn Keller <Dawn_Keller@swn.com>

Good afternoon Kelly,

Just wanted to check on this as the transfer is complete on our end. Is there anything needed from us to complete this transfer?

Thanks

Casey Bartkus

Senior Staff Environmental Specialist – SW Appalachia



1300 Fort Pierpont Drive

Suite 201

Morgantown, WV 26508

Mobile: 304-406-2051

Direct: 304-884-1666

Email: Casey_Bartkus@SWN.com

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Ward, Samuel D <samuel.d.ward@wv.gov>

Updated List for weekly Antero Resources Update

3 messages

Cory Knote <cknote@anteroresources.com> Sun, Oct 10, 2021 at 10:28 AM
To: "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Sam Ward <samuel.d.ward@wv.gov>
Cc: Tim Neill <tneill@anteroresources.com>

If one of you get a few spare minutes can I get an updated list of who should be getting the weekly Antero Resources activity updates. I see there has been some changes with people changing duties and leaving your office. Can the list be complete with names and email addresses, I am still getting a message that my emails are undeliverable to Michael.

Thanks

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com

Blevins, Cragin <cragin.blevins@wv.gov> Tue, Oct 12, 2021 at 8:23 AM
To: Cory Knote <cknote@anteroresources.com>
Cc: Sam Ward <samuel.d.ward@wv.gov>, Tim Neill <tneill@anteroresources.com>

You can take Mike Goff and Ken Greynolds off your list as well as Derek Haught, and Jim Nicholson.
[Quoted text hidden]
--

Cragin Blevins

Cory Knote <cknote@anteroresources.com> Tue, Oct 12, 2021 at 8:36 AM
To: "Blevins, Cragin" <cragin.blevins@wv.gov>
Cc: Sam Ward <samuel.d.ward@wv.gov>, Tim Neill <tneill@anteroresources.com>

Thanks Gragin,

The 3 people I have for WVDEP is You, Sam, & Doug Newlon. I appreciate the update on people. Have a great day

CAK

From: Blevins, Cragin <cragin.blevins@wv.gov>
Sent: Tuesday, October 12, 2021 8:23 AM
To: Cory Knote <cknote@anteroresources.com>
Cc: Sam Ward <samuel.d.ward@wv.gov>; Tim Neill <tneill@anteroresources.com>
Subject: Re: Updated List for weekly Antero Resources Update

This email came from outside of Antero. Do not click any link or open any attachment unless you know it is not malicious. Forward it to the helpdesk if you are not sure.

[Quoted text hidden]

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 10-03-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Oct 3, 2021 at 10:35 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Blizzard

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac the Whitmore 2H & Pechora 1H. Wells 5 & 6 of 6.

Projected Weekly Operations: Complete zipper frac operations the Whitmore 2H & Pechora 1H, RDMO and start moving FPDO equipment.

-

Pad: Shepherd

County: Tyler

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper frac the Gatrell Unit 1H & 2H. Wells 1 & 2 of 4.

Projected Weekly Operations: Continue zipper frac operations on the Gatrell Unit 1H & 2H wells.

-

Drillout

No activity.

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 10-10-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Oct 10, 2021 at 10:18 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, Luke Hare <lhare@anteroresources.com>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Shepherd

County: Tyler

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper frac the Gatrell Unit 1H & 2H. Wells 1 & 2 of 4.

Projected Weekly Operations: Complete zipper frac operations on the Gatrell Unit 1H & 2H wells, and swap to the Rapids 1H & 2H wells.

Drillout

Pad: Blizzard

County: Tyler

Rig: Mountain States (MSPSI)

Current Operations: Drilling plugs on the Pechora 2H. Well 1 of 6.

Projected Weekly Operations: Complete drill-out on the Pechora 2H & Pechora 1H, and be drilling plugs on the Whitmore 2H well.

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 11-28-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Nov 28, 2021 at 9:37 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper Frac Set #2, Peeler Unit 1H, Busch Unit 3H & 2H.

Projected Weekly Operations: Continue fracing on zipper set #2, Peeler Unit 1H, Busch Unit 3H & 2H, wells 4, 5, & 6 of 9.

-

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Wait on Drilling to move off pad

Projected Weekly Operations: Anticipate getting pad from drilling mid-week and start prepping (set frac stacks/run cbls/containment, etc) pad for frac fleet arrival around

12/6.

Thanks

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 12-05-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Dec 5, 2021 at 10:57 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper Frac Set #2, Peeler Unit 1H, Busch Unit 3H & 2H.

Projected Weekly Operations: Complete fracing on zipper set #2, Peeler Unit 1H, Busch Unit 3H & 2H, wells 4, 5, & 6 of 9, and swap to Zipper Set #3.

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Setting pad up for frac fleet arrival. Estimated to be 20% complete.

Projected Weekly Operations: Complete frac fleet rig up and start fracing on Zipper set #1, estimated to start mid week.

Thanks

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 1-2-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jan 2, 2022 at 10:03 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac operations on set #2, National 2H, Parr 1H & 2H, wells 4, 5, & 6 0f 6.

Projected Weekly Operations: Continue zipper frac operations on set #2.

Drillout:

Pad: Gadd

County: Wetzel

Dual Rigs:

Rig #1: Mountain States Pressure Services (MSPSI)

Rig #2: Consolidated Well Services (CWS)

Current Operations:

Rig #1 (MSPSI) – Peeler 1H – Move in rig up frac plug drill out (FPDO) equipment.

Rig #2 (CWS) – Charlotte 1H – Wait for temp building to be removed and rig up of rig #1.

Projected Weekly Operations:

Rig #1 (MSPSI) – Complete rig up and start FPDO on Peeler 1H well.

Rig #2 (CWS) – MIRU FPDO equipment late in the week and start FPDO on Charlotte 1H well.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 12-26-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Dec 26, 2021 at 6:10 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12.

Current Operations: Zipper frac operations on set #3 (Busch 1H, Charlotte 1H, Charlotte 2H).

Projected Weekly Operations: Complete zipper frac operations on set #3, rig down and move frac fleet off pad. Estimated frac completion date 12/27.

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac operations on set #1 (Glamdring 1H & National 2H).

Projected Weekly Operations: Complete zipper frac operations on set #1, & start swap to Zipper set #2. Estimated frac complete date 1/23.

Drillout:

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 3-20-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Mar 20, 2022 at 11:56 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Dogwood

County: Wetzel

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Orner 1H & Orner 2H. Wells 4 & 5 of 5.

Projected Weekly Operations: Continue zipper frac ops on the Orner 1H & Orner 2H.

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Prep pad for frac fleet arrival.

Projected Weekly Operations: Run CBL's, move in rig up frac fleet and start toe ops late in the week.

-

Drillout

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update Week of 3-27-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Mar 27, 2022 at 10:14 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Dogwood

County: Wetzel

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Orner 1H & Orner 2H. Wells 4 & 5 of 5.

Projected Weekly Operations: Complete zipper frac ops on the Orner 1H & Orner 2H early in the week, rig down and move off frac equipment. Will start prepping pad for drill out operations mid-week, with a chance to be moving in rig in late in the week.

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Stack fracing toe stages on all seven wells, prepping to start simulfrac operations on all 7 wells.

Projected Weekly Operations: Complete toe stages and start simulfrac operations on all 7 wells.

Pad: Weekly West

County: Ritchie

Frac Fleet: Halliburton #6 (next pad)

Current Operations: Just received pad from drilling, currently cleaning pad and prepping pad for frac fleet arrival.

Projected Weekly Operations: Move in rig up frac stacks, Run CBL's, move in rig up frac equipment late in the week, start pressure testing.

-

Drillout

No activity.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 10-17-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Oct 17, 2021 at 8:21 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Shepherd

County: Tyler

Current Operations: Zipper frac the Rapids 1H & 2H. Wells 3 & 4 of 4.

Projected Weekly Operations: Continue zipper frac the Rapids 1H & 2H.

Frac Crew: Halliburton Fleet #12

Pad: Gadd

County: Wetzel

Current Operations: Drilling rig moving off pad

Projected Weekly Operations: Pre-Frac meeting Friday morning. Pad setup to commence after.

Frac Crew: Halliburton Fleet #12.

-

Drillout

Pad: Blizzard

County: Tyler

Current Operations: Frac plug drillout on the Whitmore 1H, well 3 of 6.

Projected Weekly Operations: Continue frac plug drillout on wells 3-6.

Drillout Rig: MSPSI

Cement Bond Logs:

No activity.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 10-24-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Oct 24, 2021 at 7:33 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Shepherd

County: Tyler

Current Operations: Zipper frac the Rapids 1H & 2H. Wells 3 & 4 of 4.

Projected Weekly Operations: Continue zipper frac the Rapids 1H & 2H. Frac operations should finish up 10/29.

Frac Crew: Halliburton Fleet #12

Pad: Gadd

County: Wetzel

Current Operations: Pad prep has started. Install the sand land area and wellheads/frac stacks.

Projected Weekly Operations: Continue the pad setup throughout the week. Start MIRU HES #12 on Saturday, 10/30, with an estimated downhole date of 11/2.

Frac Crew: Halliburton Fleet #12.

-

Drillout

Pad: Blizzard

County: Tyler

Current Operations: Frac plug drillout on the Wade 2H, well 5 of 6.

Projected Weekly Operations: Continue frac plug drillout on wells 5 & 6. Handover pad to Production.

Drillout Rig: MSPSI

Cement Bond Logs:

-

Pad: Gadd

County: Wetzel

Current Operations: CBL's scheduled for Monday, 10/25 on 9/9 wells.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 10-24-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Oct 24, 2021 at 7:33 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Shepherd

County: Tyler

Current Operations: Zipper frac the Rapids 1H & 2H. Wells 3 & 4 of 4.

Projected Weekly Operations: Continue zipper frac the Rapids 1H & 2H. Frac operations should finish up 10/29.

Frac Crew: Halliburton Fleet #12

Pad: Gadd

County: Wetzel

Current Operations: Pad prep has started. Install the sand land area and wellheads/frac stacks.

Projected Weekly Operations: Continue the pad setup throughout the week. Start MIRU HES #12 on Saturday, 10/30, with an estimated downhole date of 11/2.

Frac Crew: Halliburton Fleet #12.

-

Drillout

Pad: Blizzard

County: Tyler

Current Operations: Frac plug drillout on the Wade 2H, well 5 of 6.

Projected Weekly Operations: Continue frac plug drillout on wells 5 & 6. Handover pad to Production.

Drillout Rig: MSPSI

Cement Bond Logs:

-

Pad: Gadd

County: Wetzel

Current Operations: CBL's scheduled for Monday, 10/25 on 9/9 wells.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

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Office: (304) 842-4326

tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 10-31-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Oct 31, 2021 at 1:08 PM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12

Current Operations: Pad prep and rig up of frac fleet.

Projected Weekly Operations: Estimated to be open up and start fracing on zipper set #1, Blake Unit 1H, Peeler Unit 3H & 2H, wells 1,2,&3 of 9.

-

Drillout

Pad: Blizzard

County: Tyler

Drillout Rig: MSPSI

Current Operations: Frac plug drillout on the Wade 1H, well 6 of 6.

Projected Weekly Operations: Will be landing production tubing on the Wade 1H well today, and begin rig down move off frac plug drill out equipment. Will be handing over to production department mid-week.

Pad: Shepherd

County: Tyler

Drillout Rig: MSPSI

Current Operations: Rig Down frac equipment, prep pad for drill out equipment

Projected Weekly Operations: Frac plug drill out equipment will be moving over from the Blizzard pad Monday and Tuesday with anticipated drill out start on the Rapids 1H well mid week.

Cement Bond Logs:

No Activity

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com


Antero
Resources

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 11-07-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Nov 7, 2021 at 9:44 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper Frac Blake Unit 1H, Peeler Unit 3H & 2H, wells 1, 2, & 3 of 9.

Projected Weekly Operations: Continue fracing on zipper set #1, Blake Unit 1H, Peeler Unit 3H & 2H, wells 1, 2, & 3 of 9.

-

Drillout

Pad: Shepherd

County: Tyler

Drillout Rig: MSPSI

Current Operations: Drilling frac plugs on Rapids 1H, well 1 of 4.

Projected Weekly Operations: Complete drillout on Rapids 1H, move and drillout on Rapids 2H, Gatrell 1H, and then be moving to the Gatrell 2H.

Cement Bond Logs:

No Activity

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 11-07-2021

1 message

Cory Knote <cknote@anteroresources.com> Sun, Nov 7, 2021 at 9:44 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Gadd

County: Wetzel

Frac Crew: Halliburton Fleet #12

Current Operations: Zipper Frac Blake Unit 1H, Peeler Unit 3H & 2H, wells 1, 2, & 3 of 9.

Projected Weekly Operations: Continue fracing on zipper set #1, Blake Unit 1H, Peeler Unit 3H & 2H, wells 1, 2, & 3 of 9.

-

Drillout

Pad: Shepherd

County: Tyler

Drillout Rig: MSPSI

Current Operations: Drilling frac plugs on Rapids 1H, well 1 of 4.

Projected Weekly Operations: Complete drillout on Rapids 1H, move and drillout on Rapids 2H, Gatrell 1H, and then be moving to the Gatrell 2H.

Cement Bond Logs:

No Activity

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 11-14-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Nov 14, 2021 at 6:34 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Gadd

County: Wetzel

Current Operations: Zipper frac operations on set #1 (Blake 1H, Peeler 2H, Peeler 3H).

Projected Weekly Operations: Continue zipper frac operations on set #1. Well swaps to zipper set #2 on 11/18.

Frac Crew: Halliburton Fleet #12.

-

Drillout

Pad: Shepherd

County: Tyler

Current Operations: Frac plug drillout on the Gatrell Unit 1H, well 3 of 4.

Projected Weekly Operations: Continue frac plug drillout on wells 3 & 4 of 4. Handover pad to Production ~ 11/22.

Drillout Rig: MSPSI

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

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tneill@anteroresources.com


Antero
Resources


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Keeping you healthy, safe and environmentally responsible, every day at work!

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 11-21-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Nov 21, 2021 at 7:37 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Gadd

County: Wetzel

Current Operations: Zipper frac operations on set #2 (Peeler 1H, Busch 2H, Busch 3H).

Projected Weekly Operations: Continue zipper frac operations on set #2.

Frac Crew: Halliburton Fleet #12.

-

Drillout:

Pad: Shepherd

County: Tyler

Current Operations: Pad cleanup. Prep to handover pad to Production on 11/22.

Projected Weekly Operations: Pad cleanup. Prep to handover pad to Production on 11/22.

Drillout Rig: MSPSI

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com


Antero
Resources


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Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 1-16-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jan 16, 2022 at 6:53 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Margery

County: Tyler

Current Operations: Zipper frac operations on set #2 (Parr 1H, Parr 2H, National 1H).

Projected Weekly Operations: Continue zipper frac operations on set #2. Estimated frac complete date 1/28.

Frac Crew: Halliburton Fleet #6

Pad: Dogwood

County: Wetzel

Current Operations: Pad prep for upcoming frac fleet move.

Projected Weekly Operations: Pad prep for upcoming frac fleet move. Estimated to start MIRU fleet 1/29.

Frac Crew: Next pad for Fleet #6.

-

Drillout:

Pad: Gadd

County: Wetzel

Current Operations: Dual rig drillout with CWS & MSPSI. Currently drilling plugs on wells 5 & 6 of 9.

Projected Weekly Operations: Continue FPDO operations. Estimated to complete drillout operations ~ 1/28.

Rigs: CWS & MSPSI

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

Office: (304) 842-4326

tneill@anteroresources.com


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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 12-12-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Dec 12, 2021 at 8:37 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Gadd

County: Wetzel

Current Operations: Zipper frac operations on set #3 (Busch 1H, Charlotte 1H, Charlotte 2H).

Projected Weekly Operations: Continue zipper frac operations on set #3. Estimated frac completion date 12/27.

Frac Crew: Halliburton Fleet #12.

Pad: Margery

County: Tyler

Current Operations: Zipper frac operations on set #1 (Glamdring 1H, Glamdring 2H, National 2H).

Projected Weekly Operations: Continue zipper frac operations on set #1. Estimated frac complete date 1/23.

Frac Crew: Halliburton Fleet #6

-

Drillout:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 12-19-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Dec 19, 2021 at 7:12 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Gadd

County: Wetzel

Current Operations: Zipper frac operations on set #3 (Busch 1H, Charlotte 1H, Charlotte 2H).

Projected Weekly Operations: Continue zipper frac operations on set #3. Estimated frac completion date 12/27.

Frac Crew: Halliburton Fleet #12.

Pad: Margery

County: Tyler

Current Operations: Zipper frac operations on set #1 (Glamdring 1H, Glamdring 2H, National 2H).

Projected Weekly Operations: Continue zipper frac operations on set #1. Estimated frac complete date 1/23.

Frac Crew: Halliburton Fleet #6

-

Drillout:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 1-23-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jan 23, 2022 at 10:06 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac operations on set #2 (Parr 1H, Parr 2H, National 1H).

Projected Weekly Operations: Continue zipper frac operations on set #2. Estimated frac complete date 1/30.

Pad: Dogwood

County: Wetzel

Frac Crew: Next pad for HES Fleet #6.

Current Operations: Pad prep for upcoming frac fleet move.

Projected Weekly Operations: Pad prep for upcoming frac fleet move. Estimated to start MIRU fleet 1/31.

Drillout:

Pad: Gadd

County: Wetzel

Rigs: MSPSI

Current Operations: Single rig (MSPSI) – Currently drilling plugs on Busch 2H well 10 of 11 for the pad.

Projected Weekly Operations: Complete drill out on Busch 2H & 3H wells and begin complete rig down of FPDO equipment. Estimated to hand over to production on 1/31/22.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

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Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 1-30-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jan 30, 2022 at 9:28 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC:

Pad: Margery

County: Tyler

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac operations on set #2 (Parr 2H, National 1H).

Projected Weekly Operations: Complete frac operations on 1/30, rig down and transition to a single rig drill out late in the week.

Pad: Dogwood

County: Wetzel

Frac Crew: Next pad for HES Fleet #6.

Current Operations: Pad prep for upcoming frac fleet move.

Projected Weekly Operations: Move in and rig up frac equipment, estimated to start fracing the first zipper set in the latter half of the week.

Drillout:

Pad: Gadd

County: Wetzel

Rigs: MSPSI

Current Operations: Cleaning pad to hand over to production operations.

Projected Weekly Operations: Complete clean up and hand over to production on 1/31/22.

Thanks,

Cory Knote

Completions Superintendent

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Bridgeport, WV 26330

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Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 1-9-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jan 9, 2022 at 8:16 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Margery

County: Tyler

Current Operations: Zipper frac operations on set #2 (Parr 1H, Parr 2H, National 1H).

Projected Weekly Operations: Continue zipper frac operations on set #2. Estimated frac complete date 1/23.

Frac Crew: Halliburton Fleet #6

Pad: Dogwood

County: Ritchie

Current Operations: None.

Projected Weekly Operations: Pre-Frac meeting 10:00 on 1/12. Pad prep to follow for upcoming frac.

Frac Crew: N/A

-

Drillout:

Pad: Gadd

County: Wetzel

Current Operations: Dual rig drillout with CWS & MSPSI. Currently drilling plugs out on wells 2 & 3 of 9.

Projected Weekly Operations: Continue FPDO operations. Estimated to complete drillout operations ~ 1/25.

Rigs: CWS & MSPSI

Thanks,

Tim Neill

Completions Superintendent

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 2-20-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Feb 20, 2022 at 9:52 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Dogwood

County: Wetzel

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac the Daags 1H, Gribben 1H, Gribben 2H. Wells 1, 2, 3 of 5.

Projected Weekly Operations: Continue zipper frac ops on the Daags 1H, Gribben 1H, Gribben 2H.

-

Drillout

Pad: Margery

County: Tyler

Rigs: MSPSI

Current Operations: Drilling frac plugs on the Glamdring 1H. Well 5 of 6.

Projected Weekly Operations: Complete frac plug drill out on Glamdring 1H & 2H, clean pad and prep to hand over to production.

Thanks,

-

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 2-27-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Feb 27, 2022 at 1:38 PM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Dogwood

County: Wetzel

Frac Crew: Halliburton Fleet #6

Current Operations: Zipper frac the Daags 1H, Gribben 1H, Gribben 2H. Wells 1, 2, 3 of 5.

Projected Weekly Operations: Complete zipper frac ops on the Daags 1H, Gribben 1H, Gribben 2H and swap to the Orner 1H & 2H wells.

Drillout

Pad: Margery

County: Tyler

Rigs: MSPSI

Current Operations: Cleaning Pad and handing over to production today 2/27/22.

Projected Weekly Operations: Drill out complete and handing over to production on 2/27/22.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 2-6-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Feb 13, 2022 at 8:24 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Dogwood

County: Wetzel

Current Operations: Zipper frac the Daags 1H, Gribben 1H, Gribben 2H. Wells 1, 2, 3 of 5.

Projected Weekly Operations: Continue zipper frac ops on the Daags 1H, Gribben 1H, Gribben 2H.

Frac Crew: Halliburton Fleet #6.

-

Drillout

-

Pad: Margery

County: Tyler

Current Operations: Drilling frac plugs on the National 1H. Well 3 of 6.

Projected Weekly Operations: Continue drilling frac plugs on wells 3-6 of 6. Estimated to complete drillout operations ~ 2/27.

Rig: Mountain States

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

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tneill@anteroresources.com


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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 3-13-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Mar 13, 2022 at 7:38 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Dogwood

County: Wetzel

Current Operations: Zipper frac the Orner 1H & Orner 2H. Wells 4 & 5 of 5.

Projected Weekly Operations: Continue zipper frac ops on the Orner 1H & Orner 2H.

Frac Crew: Halliburton Fleet #6

Pad: Thin Air

County: Tyler

Current Operations: Wait on drilling to finish rig move off pad.

Projected Weekly Operations: Pre-frac meeting this week. Start pad prep for upcoming frac fleet MIRU.

Frac Crew: Halliburton Fleet #12

-

Drillout

-

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 3-6-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Mar 6, 2022 at 9:38 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Dogwood

County: Wetzel

Current Operations: Zipper frac the Orner 1H & Orner 2H. Wells 4 & 5 of 5.

Projected Weekly Operations: Continue zipper frac ops on the Orner 1H & Orner 2H.

Frac Crew: Halliburton Fleet #6

-

Drillout

-

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

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tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 4-17-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Apr 17, 2022 at 8:45 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Clean out on Purple 1H stage 8 well, estimated to be done and back to fracing Monday.

Projected Weekly Operations: Continue simulfrac on all 7 wells.

Pad: Weekly West

County: Ritchie

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Gander 1H, Maxson 1H, Maxson 2H. Well 1, 2, 3 of 6.

Projected Weekly Operations: Continue zipper frac operations.

-

Drillout

Pad: Dogwood

County: Wetzel

Rig: Mountain States Pressure Services

Current Operations: POOH with work string on the Orner 2H, well 4 of 5.

Projected Weekly Operations: Complete frac plug drill out on the Orner 2H and Orner 1H wells 4 & 5 of 5. Estimated to hand over to production late in the week.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 4-24-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Apr 24, 2022 at 5:30 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Clean out on Purple 1H stage 8 well, estimated to be done and back to late fracing Monday.

Projected Weekly Operations: Continue simulfrac on all 7 wells.

Pad: Weekly West

County: Ritchie

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Gander 1H, Maxson 1H, Maxson 2H. Well 1, 2, 3 of 6.

Projected Weekly Operations: Complete zipper frac operations on the Gander 1H, Maxon1H & 2H wells and swap to the Sandy 1H, Earl 1H & 2H wells late in the week.

-

Drillout

Pad: Dogwood

County: Wetzel

Rig: Mountain States Pressure Services

Current Operations: Cleaning pad after drill out operations.

Projected Weekly Operations: Complete pad clean up and hand over to production early this week.

Thanks,

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 4-3-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Apr 3, 2022 at 8:40 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Weekley West

County: Ritchie

Current Operations: MIRU frac and support equipment.

Projected Weekly Operations: Pressure test frac equipment today and start frac operations on zipper set #1: Gander 1H, Maxson 1H, Maxson 2H. Wells 1, 2, 3 of 6.

Frac Crew: Halliburton Fleet #6

Pad: Thin Air

County: Tyler

Current Operations: Zipper frac operations on all wells.

Projected Weekly Operations: Continue zipper frac operations on 7 of 7 wells.

Frac Crew: Halliburton Fleet #12

-

Drillout

-

Pad: Dogwood

County: Wetzel

Current Operations: Prep pad to start MIRU drillout equipment.

Projected Weekly Operations: Continue pad prep, start MIRU drillout equipment early-week. Estimated to start drillout operations on the Daggs 1H on Wednesday, 4/6. Well 1 of 5.

Rig: Mountain States Pressure Services

Thanks,

Tim Neill

Completions Superintendent

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tneill@anteroresources.com


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Resources


Zero incidents
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Zero compromise
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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 5-1-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 1, 2022 at 7:25 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Weekley West

County: Ritchie

Current Operations: Zipper frac the Earl 1H, Earl 2H, Sandy 1H. Wells 4, 5, 6 of 6.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: Halliburton Fleet #6

Pad: Thin Air

County: Tyler

Current Operations: SIMULFrac operations on 7 of 7 wells.

Projected Weekly Operations: Continue frac operations.

Frac Crew: Halliburton Fleet #12

Pad: Journeyman

County: Wetzel

Current Operations: No activity.

Projected Weekly Operations: Start to prep pad for upcoming frac fleet move, late-week.

Frac Crew: Next pad for HES Fleet #6.

-

Drillout

-

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

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Zero harm
Zero compromise
Keeping you healthy, safe and environmentally responsible, every day at work!

Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 5-15-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, May 15, 2022 at 1:46 PM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: SIMULFrac operations on 7 of 7 wells.

Projected Weekly Operations: Continue simulfrac on all 7 wells. Estimated frac completion 5/25.

Pad: Weekly West

County: Ritchie

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Earl 1H, Earl 2H, Sandy 1H. Wells 4, 5, 6 of 6.

Projected Weekly Operations: Complete frac operations, rig down and prep for dual rig drill out. Estimated to complete frac operations 5/18.

-

Pad: Journeyman

County: Wetzel

Frac Fleet: Halliburton #6 (next pad)

Current Operations: Prep pad for frac operations.

Projected Weekly Operations: Estimated to start moving in frac equipment late in the week 5/19 to 5/20.

FRAC

Pad: Grand Pad (2nd visit)

County: Tyler

Frac Fleet: Halliburton #12 (next pad)

Current Operations: Wait on completions

Projected Weekly Operations: Pre Frac meeting on Monday, set wellheads, run CBL's, and start prepping pad for the arrival of HES fleet 12 after the Thin Air pad.

-

Drillout

No Activity This week

Thanks,

-

Cory Knote

Completions Superintendent

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cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 5-22-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, May 22, 2022 at 9:42 PM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Thin Air

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: SIMULFrac operations on 7 of 7 wells.

Projected Weekly Operations: Complete fracing all 7 wells midweek and start rig down and prep for a single rig drill out.

Pad: Journeyman

County: Wetzel

Frac Fleet: Halliburton #6

Current Operations: Rigging up frac equipment.

Projected Weekly Operations: Complete rig up of frac equipment and start frac operations on the Trader 1H & 2H wells 1 & 2 of 7.

Pad: Grand Pad (2nd visit)

County: Tyler

Frac Fleet: Halliburton #12 (next pad)

Current Operations: Prep pad for frac operations.

Projected Weekly Operations: Run CBL's, complete pad prep and start receiving frac equipment end of the week.

Drillout

Pad: Weekly West

County: Ritchie

Dual Rig: 2 – Deepwell rigs

Current Operations: Clean pad and prep for frac plug drill out equipment.

Projected Weekly Operations: Pre Drill Out meeting scheduled for Monday, complete set up of drill out equipment for Rig #1 and move in and start drilling out.

Thanks,

Cory Knote

Completions Superintendent

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cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 5-29-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 29, 2022 at 8:51 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Journeyman

County: Wetzel

Current Operations: Zipper frac the Trader 1H & Trader 2H. Wells 1 & 2 of 7.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 6

Pad: Grand

County: Tyler

Current Operations: Zipper frac the Toroweap 1H, 2H, 3H. Wells 1,2,3 of 3.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 12

-

Drillout

-

Pad: Weekley West

County: Ritchie

Current Operations: Frac plug drillout on the Maxson 2H & Gander 1H, wells 1 & 2 of 6.

Projected Weekly Operations: Continue frac plug drillout operations.

Rigs: DeepWell WSU x 2

Pad: Thin Air

County: Tyler

Current Operations: MIRU drillout equipment.

Projected Weekly Operations: Start frac plug drillout operations on the Capitol 1H, well 1 of 7 tomorrow.

Rig: Mountain State Pressure Services

Thanks,

Tim Neill

Completions Superintendent

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tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 5-8-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, May 8, 2022 at 6:25 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Weekley West

County: Ritchie

Current Operations: Zipper frac the Earl 1H, Earl 2H, Sandy 1H. Wells 4, 5, 6 of 6.

Projected Weekly Operations: Continue zipper frac operations. Estimated to complete frac operations 5/19.

Frac Crew: Halliburton Fleet #6

Pad: Thin Air

County: Tyler

Current Operations: SIMULFrac operations on 7 of 7 wells.

Projected Weekly Operations: Continue frac operations. Estimated to complete frac operations 5/22.

Frac Crew: Halliburton Fleet #12

Pad: Journeyman

County: Wetzel

Current Operations: Prep pad for upcoming frac fleet move.

Projected Weekly Operations: Install frac stacks, pull cement bond logs, general pad setup for frac fleet move. Estimated to start MIRU frac fleet 5/20.

Frac Crew: Next pad for HES Fleet #6.

-

Drillout

-

No activity.

Thanks,

Tim Neill

Completions Superintendent

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 6-12-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jun 12, 2022 at 8:53 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Journeyman

County: Wetzel

Frac Fleet: Halliburton #6

Current Operations: Zipper frac the Trader 1H & Ryder 1H. Wells 1 & 2 of 7.

Projected Weekly Operations: Continue zipper frac ops on the Trader 1H & Ryder 1H wells, until late in the week when we will move in a standalone snubbing unit to clean out the Trader 2H well.

-

Pad: Grand Pad (2nd visit)

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Zipper frac the Toroweap 1H, 2H, 3H. Wells 1,2,3 of 3.

Projected Weekly Operations: Continue zipper frac operations.

Drillout

Pad: Weekly West

County: Ritchie

Dual Rig: 2 – Deepwell rigs

Current Operations: RDMO all FPDO equipment, cleaning pad

Projected Weekly Operations: Estimated to be handing pad over to production on Wednesday 6/15.

-

Pad: Thin Air

County: Tyler

Single Rig: MSPSI

Current Operations: POOH laying down work string on the Maroon 1H, well 3 of 7

Projected Weekly Operations: Drill out frac plugs on the Maroon 2H and start frac plug drill out on the Purple 1H wells.

-

Thanks,

-

Cory Knote

Completions Superintendent

535 White Oaks BLVD.

Bridgeport, WV 26330

Office: 304-842-4531

Cell: 303-514-2513

cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 6-19-2022

1 message

Cory Knote <cknote@anteroresources.com> Sun, Jun 19, 2022 at 9:25 AM
To: Caroline Daves <cadaves@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, "Cragin.Blevins@wv.gov" <'Cragin.Blevins@wv.gov'>, Doug Phenix <dphenix@anteroresources.com>, "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, Jason Baker <jbaker@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Jon McEvers <jmcevers@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, Sam Ward <samuel.d.ward@wv.gov>

FRAC

Pad: Journeyman

County: Wetzel

Frac Fleet: Halliburton #6

Current Operations: Cleaning out the Trader 2H well.

Projected Weekly Operations: Complete clean out on the Trader 2H Sunday 6/19. Then rig up to continue zipper frac ops on the Trader 1H, Trader 2H, & Ryder 1H wells, estimated to complete the zipper fracs on the Trader 1H & Ryland 1H wells late in the week.

Pad: Grand Pad (2nd visit)

County: Tyler

Frac Fleet: Halliburton #12

Current Operations: Completing the Zipper frac the Toroweap 2H, 3H. Wells 2,3 of 3.

Projected Weekly Operations: Complete frac operations on Sunday and start rig down. Move off frac equipment, prep pad for drill out operations and start rigging up late in the week.

Pad: Nalley Pad

County: Tyler

Frac Fleet: Halliburton #12 (Next Pad)

Current Operations: Prepping pad for the arrival of Halliburton Crew 12.

Projected Weekly Operations: Run CBL's, complete pad prep, rig up frac equipment, and start zipper set #1 late in the week.

Drillout

Pad: Thin Air

County: Tyler

Single Rig: MSPSI

Current Operations: drilling out frac plugs on the Purple 1H, well 5 of 7

Projected Weekly Operations: Complete frac plug drill outs on the Purple 1H, Purple 2H wells, and start frag plug drill out on the Axtel 1H well.

Thanks,

Cory Knote

Completions Superintendent

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cknote@anteroresources.com



Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 6-26-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jun 26, 2022 at 6:51 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Journeyman

County: Wetzel

Current Operations: Zipper frac the Trader 2H & Ryder 2H, wells 3 & 4 of 7.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 6

Pad: Nalley

County: Tyler

Current Operations: Zipper frac the Jed 1H & Greenwood 1H, wells 1 & 2 of 5.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 12

-

Drillout

-

Pad: Thin Air

County: Tyler

Current Operations: Frac plug drillout on the Axtel 1H, well 7 of 7.

Projected Weekly Operations: Continue frac plug drillout operations through tomorrow. Clean up pad. Handover to Production group late-week.

Rig: Mountain State Pressure Services

Pad: Grand

County: Tyler

Current Operations: Frac plug drillout on the Toroweap 3H, well 1 of 3.

Projected Weekly Operations: Continue frac plug drillout operations.

Rig: Excel

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

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Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 6-5-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jun 5, 2022 at 9:14 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC

Pad: Journeyman

County: Wetzel

Current Operations: Zipper frac the Trader 1H & Ryder 1H. Wells 1 & 2 of 7.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 6

Pad: Grand

County: Tyler

Current Operations: Zipper frac the Toroweap 1H, 2H, 3H. Wells 1,2,3 of 3.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 12

-

Drillout

-

Pad: Weekley West

County: Ritchie

Current Operations: Frac plug drillout on the Earl 2H & Maxson 1H, wells 4 & 5 of 6.

Projected Weekly Operations: Continue frac plug drillout operations.

Rigs: DeepWell WSU x 2

Pad: Thin Air

County: Tyler

Current Operations: Frac plug drillout on the Capitol 2H, well 2 of 7.

Projected Weekly Operations: Continue frac plug drillout operations.

Rig: Mountain State Pressure Services

Thanks,

Tim Neill

Completions Superintendent

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tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 7-25-2021

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jul 25, 2021 at 9:31 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Haught, Derek M" <Derek.M.Haught@wv.gov>, "Kenneth.L.Greynolds@wv.gov" <'Kenneth.L.Greynolds@wv.gov'>, "michael.d.goff@wv.gov" <'michael.d.goff@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
Cc: Jon McEvers <jmcevers@anteroresources.com>, Ryan Estrada <restrada@anteroresources.com>, John Shepard <jshepard@anteroresources.com>, Joseph Eberhardt <jeberhardt@anteroresources.com>, Doug Phenix <dphenix@anteroresources.com>, Jason Baker <jbaker@anteroresources.com>, Ross Steffy <rsteffy@anteroresources.com>, Caroline Daves <cadaves@anteroresources.com>, Peter Herrin <pherrin@anteroresources.com>, Joe Honeycutt <jhoneycutt@anteroresources.com>, Jola Suitter <jsuitter@anteroresources.com>, Luke Hare <lhare@anteroresources.com>, Chad Daves <cdaves@anteroresources.com>, Zane Scott <zscott@anteroresources.com>, Jonah Fryman <jfryman@anteroresources.com>, Tom Waltz <twaltz@anteroresources.com>, Brandon Jeffcoat <bjeffcoat@anteroresources.com>, Cory Knote <cknote@anteroresources.com>

FRAC:

Pad: Roma Lou

County: Tyler

Current Operations: Frac operations on 6 of 6 wells.

Projected Weekly Operations: Continue frac operations on 6 of 6 wells.

Frac Crew: Halliburton Fleet #12

Pad: Blizzard

County: Tyler

Current Operations: Prep pad to receive HES fleet #6.

Projected Weekly Operations: Continue to prep pad to receive fleet mid-week.

Frac Crew: Halliburton Fleet #6

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Frac Plug Drillout Operations:

Pad: Grand

County: Tyler

Current Operations: Frac plug drillout on the Vishnu 1H, well 5 of 5.

Projected Weekly Operations: Continue frac plug drillout through mid-week. Start pad cleanup and Handover to Production late-week.

Rig: DeepWell SAU

Cement Bond Logs:

Pad: Blizzard

County: Tyler

Current Operations: Prep to start pulling CBL's on 6 of 6 wells today.

Toe Prep:

No activity.

Thanks,

Tim Neill

Completions Superintendent

Antero Resources Corporation

Marcellus/Utica

535 White Oaks Blvd

Bridgeport, WV 26330

Mobile: (304) 989-4028

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tneill@anteroresources.com





Ward, Samuel D <samuel.d.ward@wv.gov>

WVDEP Antero Completions Weekly Update, Week of 7-3-2022

1 message

Tim Neill <tneill@anteroresources.com> Sun, Jul 3, 2022 at 10:07 AM
To: "douglas.c.newlon@wv.gov" <'douglas.c.newlon@wv.gov'>, "Cragin.Blevins@wv.gov" <Cragin.Blevins@wv.gov>, "Sam Ward (samuel.d.ward@wv.gov)" <samuel.d.ward@wv.gov>
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FRAC

Pad: Journeyman

County: Wetzel

Current Operations: Zipper frac the Trader 2H & Ryder 2H, wells 3 & 4 of 7.

Projected Weekly Operations: Continue zipper frac operations. Wells swaps to zipper set #3 (Ryland 3H, Welder 1H, Welder 2H) mid-week.

Frac Crew: HES 6

Pad: Nalley

County: Tyler

Current Operations: Zipper frac the Jed 1H & Jed 2H, wells 1 & 2 of 5.

Projected Weekly Operations: Continue zipper frac operations.

Frac Crew: HES 12

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Drillout

Pad: Grand

County: Tyler

Current Operations: Frac plug drillout on the Toroweap 2H, well 2 of 3.

Projected Weekly Operations: Continue frac plug drillout operations. Should finish drillout operations late-week.

Rig: Excel

Thanks,

Tim Neill

Completions Superintendent

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Zero harm
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