

# Commercial/Industrial Floodplain Development Permit

## Doddridge County, WV Floodplain Management

This permit has been issued to **EQT Production Company**, and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

### **Permit: #13-085 ~ EQT Production Company ~ Pandora Compressor Station**

**Date Approved: 01/28/2015**

**Expires: 12/02/2015**

**Issued to: EQT Production Company**

**POC: Megan Landfried  
304-841-0061**

**Company Address: 4955 Steubenville Pike STE 305  
Pittsburgh, PA 15205**

**Project Address: Grant District**

**Lat/Long: Approximately 39.361706N/80.705523W to 39.362954N/80.716860W**

**Purpose of development: Compressor Station construction project extension.**

**Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)**

**Date: 01/28/2015**

---

For additional information regarding this permit, please contact  
Doddridge County Floodplain Manager at 304.873.2631, or via email at  
doddridgecountyfpm@gmail.com  
118 East Court Street; West Union, WV 26456

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**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to: #13-085  
 Chestnut Grove Church  
 C/O James E. Williams, Trustee  
 Big Flint Rd  
 Smithburg, WV 26436

2. Article Number (Transfer from service label) 7011 0470 0000 8523 2679

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  Agent  Addressee  
*[Signature]*

B. Received by (Printed Name) *James Williams* C. Date of Delivery *11-15-13*

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

3. Service Type  Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  P.D.

4. Restricted Delivery? (Extra Fee)  Yes

FILED  
 NOV 18 PM 11:15  
 SOUTH A. ROGERS  
 COUNTY CLERK  
 BRIDGEPORT WV

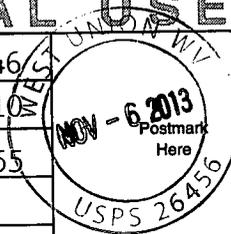
7011 0470 0000 8523 2679

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Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



#13-085

Sent To Chestnut Grove Church  
 c/o James E. Williams, Trustee  
 Street, Apt. No., or PO Box No. Big Flint Rd  
 City, State, ZIP+4 Smithburg, WV 26436

PS Form 3800, August 2006

See Reverse for Instructions

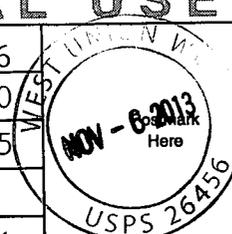
7011 0470 0000 8523 2679

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Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To Dorthella McIntyre #13-085

Street, Apt. No., or PO Box No. HC 67 Box 69 A  
 City, State, ZIP+4 West Union, WV 26456

PS Form 3800, August 2006

See Reverse for Instructions

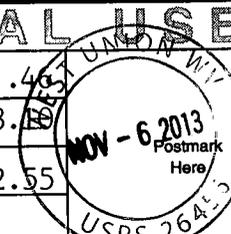
7011 0470 0000 8523 2716

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Postage	\$ .46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



#13-085

Sent To Toby D. Stanley  
 Street, Apt. No., or PO Box No. HC 67 Box 68  
 City, State, ZIP+4 West Union, WV 26456

PS Form 3800, August 2006

See Reverse for Instructions

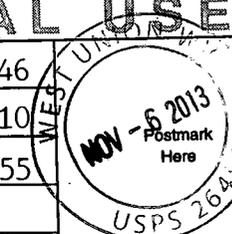
7011 0470 0000 8523 2702

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For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ .46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



#13-085

Sent To Stephen W & Remonda L Trent  
 Street, Apt. No., or PO Box No. 14 Millbrook Rd  
 City, State, ZIP+4 Bridgeport, WV 26330

PS Form 3800, August 2006

See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: #13-085

Toby D. Stanley  
 HC 67 Box 68  
 West Union, WV 26456

2. Article Number  
 (Transfer from service label)

7011 0470 0000 8523 2716

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

*Toby Stanley*

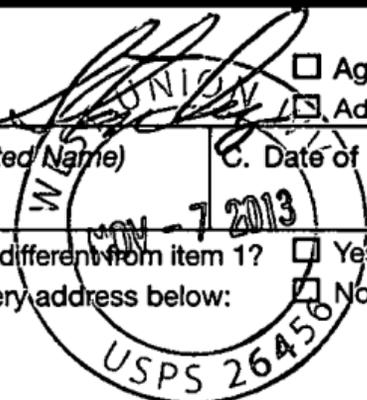
Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

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



3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

BETH A ROGERS  
DODDRIDGE CO CLERK  
118 EAST COURT ST  
ROOM 102  
WEST UNION, WV 26456

BETH A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV  
2013 NOV -8 AM 11:21

FILED



**SENDER: COMPLETE THIS SECTION**

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

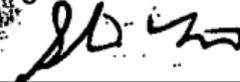
1. Article Addressed to: #13-085  
 Stephen w & Remonda L Trent  
 14 Millbrook Rd  
 Bridgeport, WV 26330

2. Article Number  
 (Transfer from service label)

7011 0470 0000 8523 2709

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

x 

Agent

Addressee

B. Received by (Printed Name)

Steve Trent

C. Date of Delivery

NOV 13 2003

D. Is delivery address different from item 1?

Yes

No

If YES, enter delivery address below:

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

BETH A ROGERS  
DODDRIDGE CO CLERK  
118 EAST COURT ST  
ROOM 102  
WEST UNION, WV 26456

2013 NOV 12 PM 12:51  
BETH A. ROGERS  
DODDRIDGE COUNTY CLERK  
DODDRIDGE COUNTY, WV

FILED



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

1. Article Addressed to: #13-085

Dorthella McIntyre  
 HC 67 Box 69 A  
 West Union, WV 26456

2. Article Number  
 (Transfer from service label)

7011 0470 0000 8523 2693

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

x: 

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

11-9-13

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

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

UNITED STATES POSTAL SERVICE



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Postage & Fees Paid  
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Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

BETH A ROGERS  
DODDRIDGE CO CLERK  
118 EAST COURT ST  
ROOM 102  
WEST UNION, WV 26456

BETH A. ROGERS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

2013 NOV 12 PM 12:51

FILED

56129799



Legal Advertisement:  
Doddridge County  
Floodplain Permit Application

Please take notice that on the 6<sup>th</sup> day of November, 2013

**EQT GATERING LLC PERMIT # 13-085**

filed an

application for a Floodplain Permit to develop land located at or

about: **PROJECT LOCATION: BIG FLINT, GRANT DISTRICT**

**69 AC BRUSH RUN & 59.75 AC BIG FLINT**

**DB 271/53 & 274/721, TM 06-07 & 06-13**

The Application is on file with the Clerk of the County Court and  
may be inspected or copied during regular business hours.

Any interested persons who desire to comment shall present  
the same in writing by **November 26<sup>th</sup>, 2013.**

Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager

\*\*\*\*\*  
\* P. 01 \*  
\* TRANSACTION REPORT \*  
\* NOV-06-2013 WED 03:25 PM \*  
\* FOR: DODDRIDGE CO. CLERK 304 873 1840 \*  
\* SEND \*  
\* DATE START RECEIVER TX TIME PAGES TYPE NOTE M# DP \*  
\* NOV-06 03:25 PM 93048731600 39" 2 FAX TX OK 713 \*  
\* TOTAL : 39S PAGES: 2 \*  
\*\*\*\*\*

Legal Advertisement:

Doddridge County

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Delivered to the:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk

Dan Wellings, Doddridge County Flood Plain Manager

PERMIT NO. 13-085

**DODDRIDGE COUNTY**  
**FLOODPLAIN DEVELOPMENT**  
**PERMIT**

PURPOSE FOR PERMIT: PIPELINE - COMPRESSOR STATION  
PANDORA COMPRESSOR STA. MOPA - D001 +  
3007A  
PIPELINE

ISSUED TO EQT GATHERING LLC  
115 PROFESSIONAL PLACE

ADDRESS: BRIDGEPORT, WV

PROJECT ADDRESS: FLINT RUN NEAR CHESTNUT  
GROVE CHURCH

ISSUED BY: Dan McLaughlin

DATE: 12/02/2013

CONSTRUCTION MUST START WITHIN 180 DAYS FROM ISSUED DATE. PERMIT EXPIRES IN 12 MONTHS FROM ISSUED DATE. IF EXTENTION IS NEEDED A REQUEST MUST BE MADE IN WRITING STATING A REASON FOR THE EXTENTION.

THIS PERMIT MUST BE POSTED ON THE PREMISES IN A CONSPICUOUS PLACE SO AS TO BE CLEARLY VISIBLE FROM THE STREET.



**Engineers and Environmental Consultants**

7012 MacCorkie Avenue, SE, Charleston, WV 25304 - (304) 342-1400 • FAX (304) 343-9031; [www.potesta.com](http://www.potesta.com)

January 6, 2015

Mr. Bo Wriston  
Doddridge County Floodplain Coordinator  
Doddridge County Commission  
118 East Court Street  
West Union, West Virginia 26456

RE: Floodplain Permit Time Extension Request  
EQT Gathering LLC  
Pandora Compressor Station  
Doddridge County, West Virginia  
POTESTA Project No. 0101-13-0461

Dear Mr. Wriston:

Potesta & Associates, Inc. (POTESTA) is pleased to submit this letter on behalf of EQT Gathering LLC (EQT) to request a time extension for the existing floodplain permit for the proposed Pandora Compressor Station (Permit #13-085). EQT would like to extend this permit through the end of December 2015.

If you have any questions, please feel free to contact me at (304) 342-1400 or [jmsmith@potesta.com](mailto:jmsmith@potesta.com), or Megan Landfried-Neylon (EQT) at (304) 848-0061.

Sincerely,

POTESTA & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Jarrett M. Smith".

Jarrett M. Smith, P.E.  
Senior Engineer

JMS/clr

c: Ms. Megan Landfried-Neylon – EQT (via email)

**POTESTA & ASSOCIATES, INC.**

Charleston, West Virginia • Morgantown, West Virginia • Winchester, Virginia • Cambridge, Ohio



AECOM  
 Gulf Tower, 707 Grant Street, 5th Floor  
 Pittsburgh, PA 15219

412.395.8888 tel  
 412.297.5000 fax

13-085

EQT Gathering LLC  
 Pandora Compressor St.  
 MOPA-D001  
 MOPA-S007A

October 24, 2013

Doddridge County Commission  
 118 East Court Street  
 West Union, West Virginia 26456  
 (304) 873-2631  
 Attn: Mr. Dan Wellings

2013 OCT 25 PM 2:10  
 FILED  
 BETH A. ROGERS  
 COUNTY CLERK  
 DODDRIDGE COUNTY, WV

**Subject: Floodplain Development Permit Application  
 Project Review Request  
 EQT Gathering, LLC  
 Pandora Compressor Station, MOPA-D001 Pipeline,  
 & MOPA-S007A Pipeline Project  
 Doddridge County, West Virginia**

Dear Mr. Wellings:

EQT Gathering, LLC (EQT) is currently proposing the Pandora Compressor Station, MOPA-D001 Pipeline and MOPA-S007A Pipeline Projects (Project) located approximately 5.5 miles northwest of Smithburg, Doddridge County, West Virginia in the Grant District (see attached Project Location Map also identified as Figure 1). The Project consists of the installation of approximately 0.20 miles of 12-inch diameter pipeline (MOPA-D001), 0.35 miles of 16-inch diameter natural gas pipeline (MOPA-S007A), 0.64 miles of access road and 32.4 acres for a compressor station, potential fill storage area and workspace. The most western point of the access road is located at 39.361706 latitude / -80.705523 longitude and will terminate at 39.362954 latitude / -80.716860 longitude. The most northern point of the pipeline MOPA-D001 is located at 39.363495 latitude / -80.706092 longitude and terminates at its most southern point of 39.361241 latitude / -80.704506 longitude. The most northern point of the pipeline MOPA-S007A is located at 39.364731 latitude / -80.707469 longitude and terminates at its most southern point of 39.361409 latitude / -80.704146 longitude.

The western portion of project area is located near a stream identified as Flint Run which flows from South to North. Available FEMA floodplain mapping for Flint Run, for the project area, is shown in the attached Figure 2 (Floodplain NWI and Soils Map) and Figure 3 (FEMA FIRM Map). The area is designated with an approximate flood zone (Zone A) on the FEMA FIRM Map. Zone A indicates that Flint Run has not been studied in detail by FEMA and has no established base (100-yr) flood elevations, as a result EQT commissioned a Hydrologic and Hydraulic (H&H) Analysis. The goal of this analysis was to establish existing base (100-yr) flood elevations along Flint Run in the vicinity of the project in order to avoid impact to the 100-year floodplain. Results of the H&H analysis have been provided as an Attachment to this report. Results of the H&H analysis show that placement of fill and other project work in the area of Flint Run will not impact the base flood elevation in that area.

Proposed construction plans call for an estimated total Limit of Disturbance (LOD) of 32.4 acres. The western portion of the project site, in proximity to Flint Run and the existing FEMA zone A mapping, is shown in more detail in the attached Figure 4 (Project Site Index Map) and Figure 5 (Project Site Map). The pipeline will be installed utilizing a 120-foot right-of-way (ROW) during construction and will retain a 80-foot permanent ROW upon completion of construction for the pipeline and 50-foot ROW for the

access road. The compressor station itself will be located entirely upon EQT property. Construction is anticipated to begin early November 2013.

Project fill/spoils are proposed to be relocated to the Fill/Staging Area identified in the mapping as Site #1. Preliminary estimates demonstrate that approximately 83,000 CY of fill are proposed to be placed here. The H&H Analysis results yielded that the proposed fill to be relocated to Fill/Staging Area Site #1 is located outside of/above the actual floodplain or actual base (100-yr) flood elevation. The actual floodplain and base (100-yr) flood elevation model results predicted water surface elevations on average 2 feet lower than the approximated (FEMA zone A) base (100-yr) flood elevation, therefore resulting in no floodplain impacts to the site pre or post construction. The Floodplain locations, including the FEMA zone A mapping and the actual 100-yr floodplain limits, estimated as a result of the H&H Analysis (model), are depicted in Figure 5 (Project Site Map). Additional stream, wetland surveys and permitting through the USACE and WVDEP are required in order to address potential impacts within the proposed fill area limits.

In accordance with the Doddridge County, West Virginia Floodplain Development Permit Application, a completed application along with a Spill Prevention Plan has been provided (see attached). EQT is submitting other required permits to their corresponding agencies in conjunction with this permit submittal.

If you have any questions or require additional information, please contact Megan Landfried (EQT) at [MLandfried@EQT.com](mailto:MLandfried@EQT.com).

Thank you for your assistance regarding the Project.

Respectfully Submitted,

*Michael Holbert*

Michael Holbert, PE  
Project Engineer  
[Michael.holbert@aecom.com](mailto:Michael.holbert@aecom.com)  
304-292-8145



*John R. Boulanger*

John R. Boulanger, P.G.  
Project Manager  
[john.boulanger@aecom.com](mailto:john.boulanger@aecom.com)  
412-297-4474

Attachments: Figure 1 Project Location Map  
Figure 2 Floodplain NWI and Soils Map  
Figure 3 FEMA FIRM Map  
Figure 4 Project Site Index Map  
Figure 5 Project Site Map (Page 1 of 1)  
Hydrologic and Hydraulic Analysis  
Spill Prevention Plan  
Doddridge County Floodplain Development Permit Application

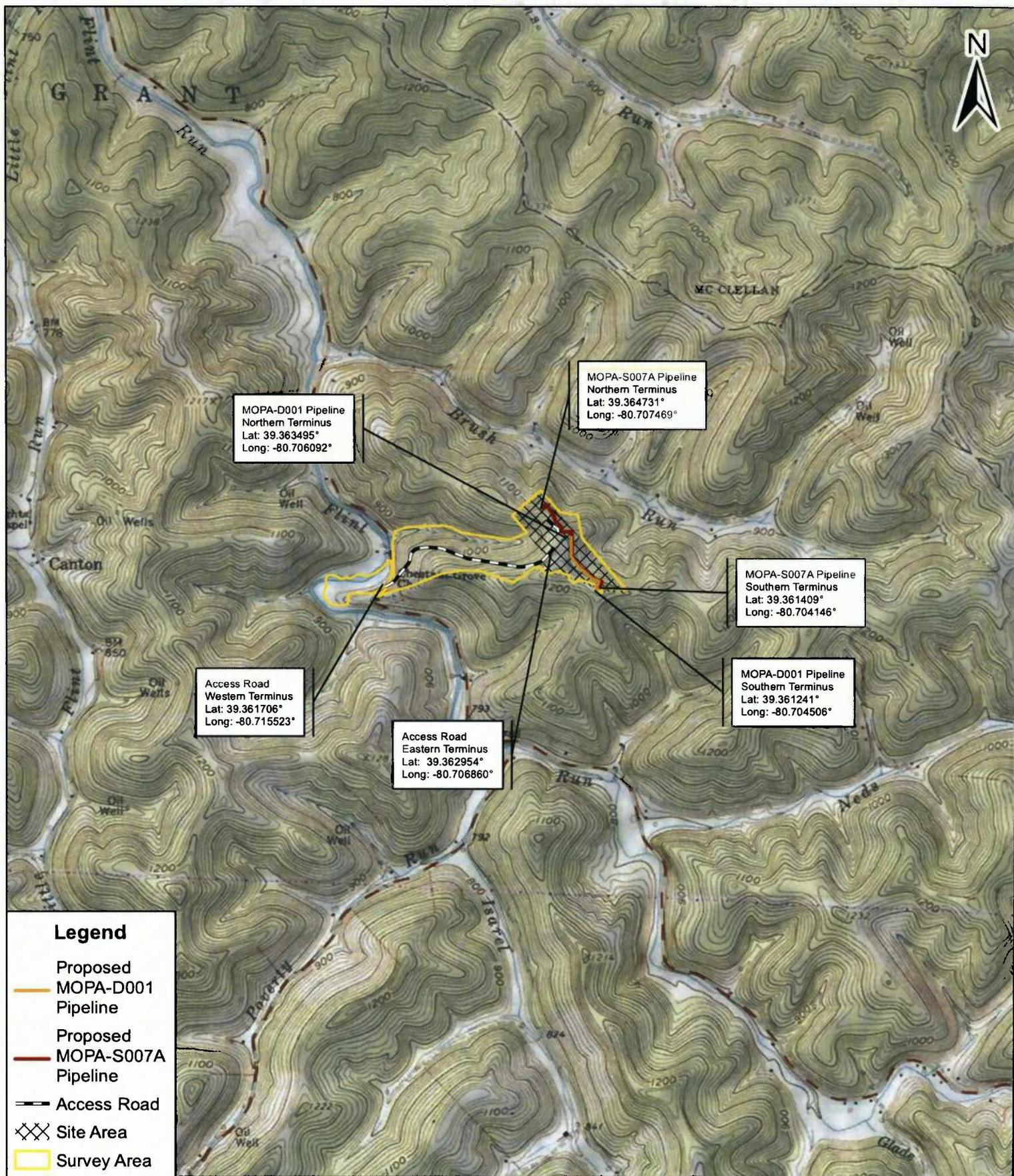
cc: Megan E. Landfried, Environmental Coordinator, EQT Corporation



AECOM  
Gulf Tower, 707 Grant Street, 5th Floor  
Pittsburgh, PA 15219

412.395.8888 tel  
412.297.5000 fax

## Figures



MOPA-D001 Pipeline  
Northern Terminus  
Lat: 39.363495°  
Long: -80.706092°

MOPA-S007A Pipeline  
Northern Terminus  
Lat: 39.364731°  
Long: -80.707469°

MOPA-S007A Pipeline  
Southern Terminus  
Lat: 39.361409°  
Long: -80.704146°

MOPA-D001 Pipeline  
Southern Terminus  
Lat: 39.361241°  
Long: -80.704506°

Access Road  
Western Terminus  
Lat: 39.361706°  
Long: -80.715523°

Access Road  
Eastern Terminus  
Lat: 39.362954°  
Long: -80.706860°

**Legend**

- Proposed MOPA-D001 Pipeline
- Proposed MOPA-S007A Pipeline
- Access Road
- Site Area
- Survey Area



**AECOM**

GULF TOWER  
707 GRANT STREET  
5th FLOOR  
PITTSBURGH, PA 15219  
PHONE: 412-395-8888  
FAX: 412-297-5000  
WWW.AECOM.COM

Reference:  
USGS 7.5' Topographic Quadrangles:  
Center Point (1979), and  
Smithburg, (1977), West Virginia,  
Obtained Through ESRI USA Topo  
Maps, I-Cubed Etopo, and USGS,  
Accessed 10/2013.

0 1,000 2,000 4,000 Feet

**Project Location Map**

EQT Gathering, LLC  
Pandora Compressor Station, MOPA-D001 Pipeline,  
and MOPA-S007A Pipeline Project

Grant District  
Doddridge County, West Virginia

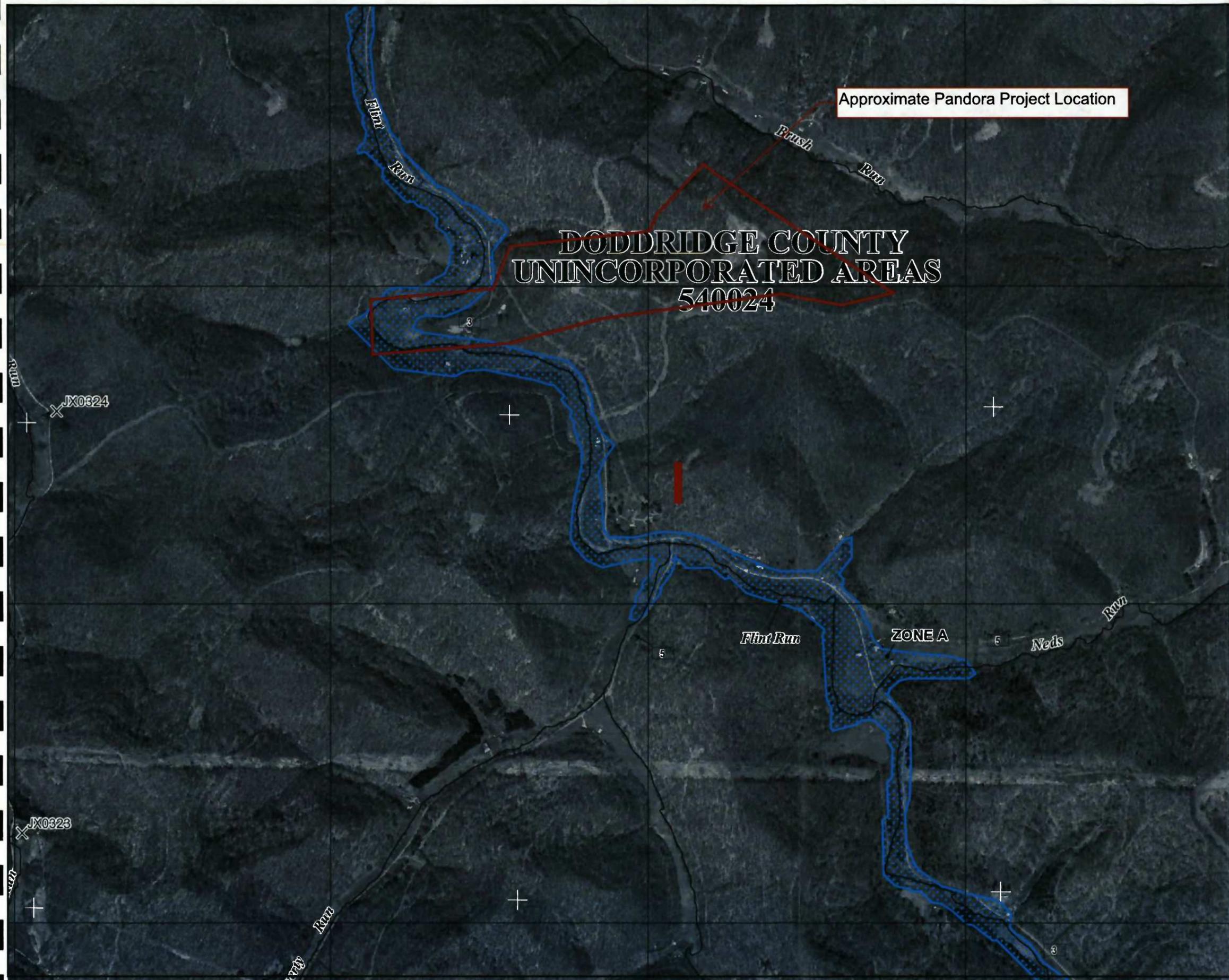
DRAWN BY: SAZ	APPROVED BY:	DATE: 10/24/2013
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**Figure 1**

Page 1 of 1

PROJECT NUMBER: 60302874
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Approximate Pandora Project Location

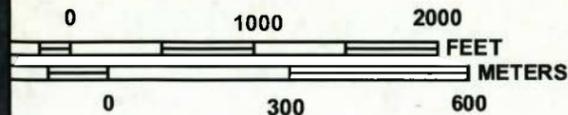
**DODDRIDGE COUNTY  
UNINCORPORATED AREAS  
540024**

Flint Run

ZONE A

Neds Run

MAP SCALE 1" = 1000'



NFIP

PANEL 0130C

**FIRM**

FLOOD INSURANCE RATE MAP  
DODDRIDGE COUNTY,  
WEST VIRGINIA  
AND INCORPORATED AREAS

PANEL 130 OF 325  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0130	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

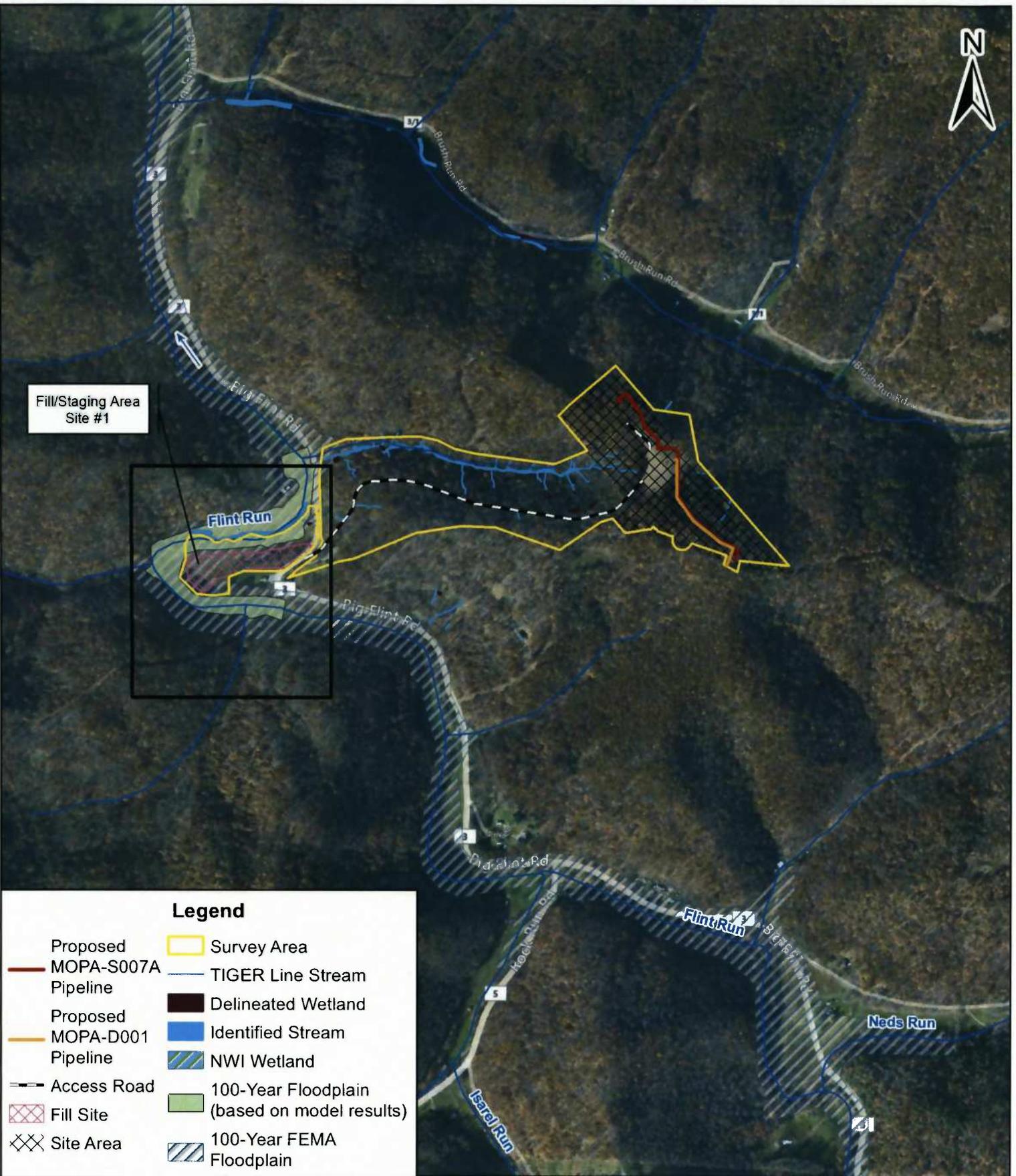


MAP NUMBER  
54017C0130C  
MAP REVISED  
OCTOBER 4, 2011

Federal Emergency Management Agency

**Figure 3  
FEMA FIRM Map**

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



Fill/Staging Area  
Site #1

**Legend**

- Proposed MOPA-S007A Pipeline —
- Proposed MOPA-D001 Pipeline —
- Access Road
- Fill Site
- Site Area
- Survey Area
- TIGER Line Stream —
- Delineated Wetland
- Identified Stream
- NWI Wetland
- 100-Year Floodplain (based on model results)
- 100-Year FEMA Floodplain

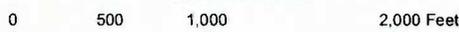
MAP LOCATION



**AECOM**

GULF TOWER  
707 GRANT STREET  
5th FLOOR  
PITTSBURGH, PA 15219  
PHONE: 412-395-8888  
FAX: 412-297-5000  
WWW.AECOM.COM

References:  
Tiger Line Stream, USCG Geography Division, 2012. Soil Survey Geographic (SSURGO) Database for Doddridge County, West Virginia, USDA/NRCS, 2009. 100-Year Floodplain, WV GIS Technical Center, 2010. National Wetland Inventory (NWI) Wetlands for West Virginia, USFWS, 2009. World Imagery, UC-G, 2011. Obtained Via Esri World Imagery, Microsoft, Accessed 10/2013.



**Project Site Index Map**

EQT Gathering, LLC  
Pandora Compressor Station, MOPA-D001 Pipeline,  
and MOPA-S007A Pipeline Project

Grant District  
Doddridge County, West Virginia

**Figure 4**

Page 1 of 1

DRAWN BY: SAZ	APPROVED BY:	DATE: 10/24/2013	PROJECT NUMBER: 60302874
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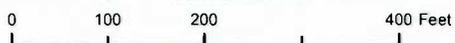


Legend	
	Survey Area
	Access Road
	Fill Site
	Delineated Wetland
	Identified Stream
	TIGER Line Stream
	NWI Wetland
	100-Year Floodplain (based on model results)
	100-Year FEMA Floodplain



**AECOM**  
 GULF TOWER  
 707 GRANT STREET  
 5th FLOOR  
 PITTSBURGH, PA 15219  
 PHONE: 412-395-8888  
 FAX: 412-297-5000  
 WWW.AECOM.COM

References:  
 Tiger Line Stream, USCG Geography Division, 2012. Soil Survey Geographic (SSURGO) Database for Doddridge County, West Virginia, USDA/NRCS, 2009. 100-Year Floodplain, WV GIS Technical Center, 2010. National Wetland Inventory (NWI) Wetlands for West Virginia, USFWS, 2009. World Imagery, UC-G, 2011, Obtained Via Esri World Imagery, Microsoft, Accessed 10/2013.



Project Site Map			
EQT Gathering, LLC Pandora Compressor Station, MOPA-D001 Pipeline, and MOPA-S007A Pipeline Project			
Grant District Doddridge County, West Virginia			
DRAWN BY:	APPROVED BY:	DATE:	PROJECT NUMBER:
SAZ		10/24/2013	60302874

**Figure 5**

Page 1 of 1



AECOM  
Gulf Tower, 707 Grant Street, 5th Floor  
Pittsburgh, PA 15219

412.395.8888 tel  
412.297.5000 fax

# Hydrologic and Hydraulic Analysis



---

### **Hydrologic and Hydraulic Analysis Along Flint Run- Existing Conditions**

*EQT- Pandora Compressor Station, MOPA-S007A Pipeline and MOPA-D001 Pipeline Project-  
Doddridge County, WV*

The project is located along Flint Run. Flint Run has not been studied in detail by FEMA and has no established base (100-yr) flood elevations. The area is designated with an approximate flood zone (Zone A) on the FEMA's flood map. The goal of this study is to establish existing base (100-yr) flood elevations along Flint Run in the vicinity of the project in order to avoid impact to the 100-year floodplain. The results (HEC-RAS output table) are shown on page 2. A map showing locations of HEC-RAS cross sections is shown on page 3.

#### **Hydrologic Analysis**

The hydrologic analysis calculation package is included under **Attachment A**. The 100-yr flood peak discharge was calculated using the USGS National Streamflow Statistics (NSS) Program version 6.0, which includes regression equations for West Virginia. As indicated in the NSS manual, the regression equation may result in a 33% standard error; therefore, in order to be conservative, the result from the USGS NSS program was increased by 33% and is used in the final hydraulic analysis.

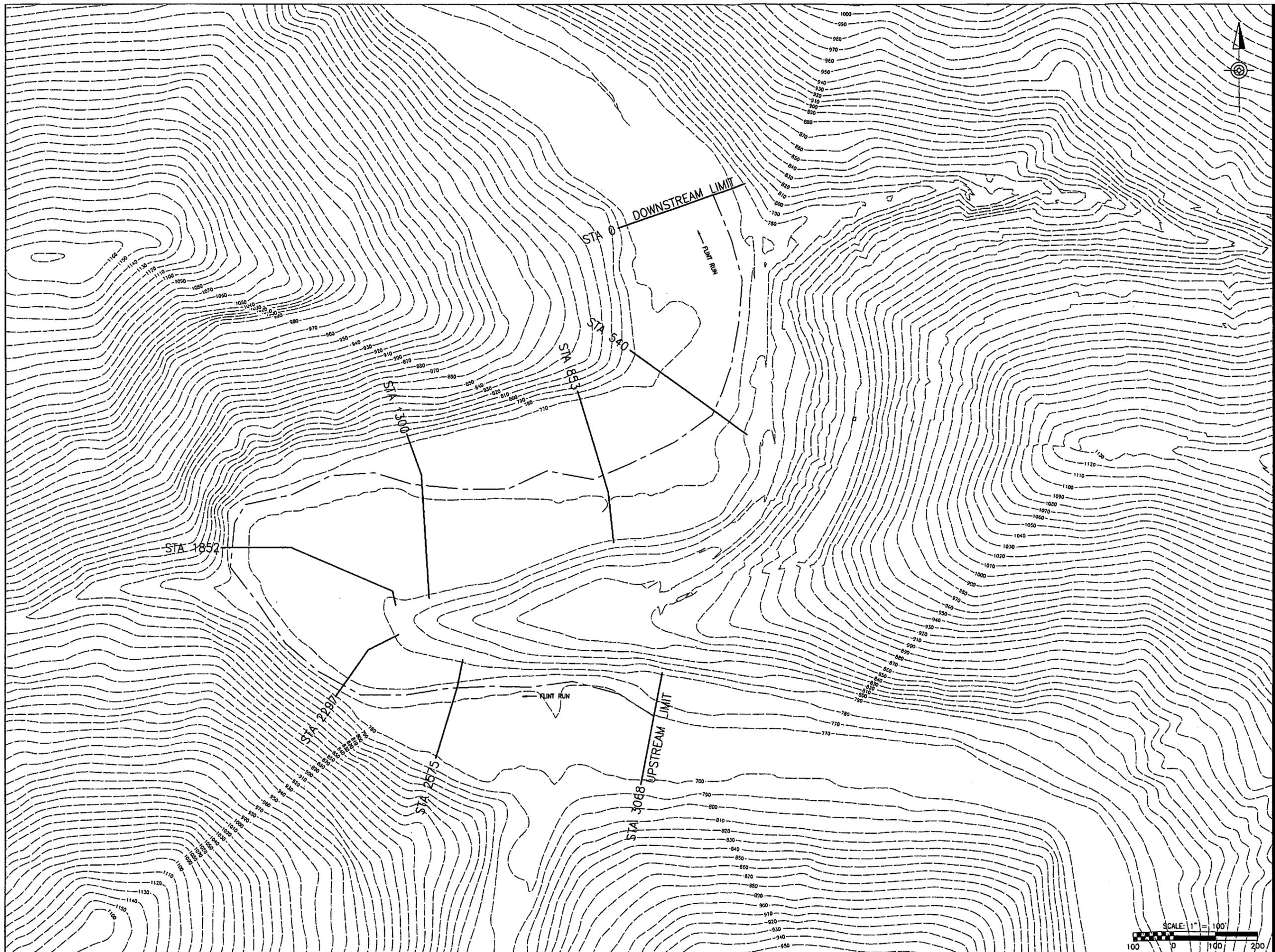
#### **Hydraulic Analysis**

HEC-RAS detailed report and a compact disk with the electronic files of the HEC-RAS model will be made available upon written request to AECOM's address noted in the cover letter header, attn: John Boulanger.

HEC-RAS Plan: Existing River Alignment - Flin Reach: Flint Run Profile: 100-YR

Reach	River Sta	Profile	Q Total (cfs)	Min Ch E (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Flint Run	3068	100-YR	4935.00	762.39	775.57		776.87	0.001950	9.69	769.83	158.00	0.50
Flint Run	2575	100-YR	4935.00	762.71	774.99		775.96	0.001390	8.09	784.93	141.76	0.44
Flint Run	2297	100-YR	4935.00	762.80	773.41		775.29	0.003503	11.11	494.45	93.58	0.65
Flint Run	1852	100-YR	4935.00	762.10	773.13		773.96	0.001834	7.94	956.55	248.30	0.49
Flint Run	1300	100-YR	4935.00	761.05	772.80		773.23	0.000986	6.57	966.72	203.78	0.36
Flint Run	853	100-YR	4935.00	757.87	771.28	767.24	772.55	0.002092	8.41	780.14	280.96	0.49
Flint Run	540	100-YR	4935.00	758.52	770.68	766.58	771.91	0.001929	8.97	649.23	212.78	0.48
Flint Run	0	100-YR	4935.00	756.03	767.88	766.01	770.27	0.004601	12.41	397.73	42.90	0.72

ARCH D 24-38  
Approved: [Signature]  
Checked: [Signature]  
Designer: [Signature]  
Project Management: [Signature]



**AECOM**

PROJECT  
PANDORA COMPRESSOR  
STATION, MOPA-D001  
PIPELINE AND  
MOPA-S007A PIPELINE  
PROJECT  
DODDRIDGE COUNTY, WEST VIRGINIA

CLIENT  
EQT GATHERING, LLC  
BRIDGEPORT, WEST VIRGINIA

CONSULTANT  
AECOM TECHNICAL SERVICES, INC.  
150 CLAY STREET, SUITE 430  
MORGANTOWN, WV 26501  
304.292.8145 tel 304.292.8148 fax  
www.aecom.com

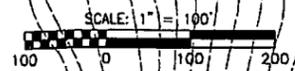
REGISTRATION

KEY PLAN

PROJECT NUMBER  
60302874

SHEET TITLE  
H&H EXHIBIT - FLINT RUN  
100-YR ANALYSIS

SHEET NUMBER



**ATTACHMENT A**

By: JLT 9/24/2013  
Chk: PPT 9/24/2013

A1/5

NSS - Pandora.txt  
National Streamflow Statistics Program  
Version 5  
Based on Techniques and Methods Book 4-A6  
Equations from database C:\Program Files (x86)\NSS\data\NSS\_v6\_2013-08-28.mdb  
Updated by tkoenig 8/28/2013 at 04:10:29 PM Add 2 new params for AR 2008-5065

Site: Pandora, West\_Virginia  
User:  
Date: Wednesday, September 25, 2013 01:51 PM

Equations for West\_Virginia developed using English units

Rural Estimate: Rural 1  
~~Basin Drainage Area: 16.7 square miles~~  
1 Region  
Region: Peak\_Flow\_Western\_Plateaus\_Region\_2010\_5033  
Drainage\_Area = 16.7 square miles  
Crippen & Bue Region 4

Results for: Rural 1

Equations used:  
PK1\_5 = 97.8\*DRNAREA^0.741  
PK2 = 129\*DRNAREA^0.730  
PK5 = 221\*DRNAREA^0.710  
PK10 = 292\*DRNAREA^0.699  
PK25 = 391\*DRNAREA^0.688  
PK50 = 472\*DRNAREA^0.681  
PK100 = 557\*DRNAREA^0.674  
PK200 = 647\*DRNAREA^0.668  
PK500 = 775\*DRNAREA^0.661

Statistic	Value, cfs	Standard Error, %	Equivalent Years
PK1_5	787	34	2.8
PK2	1010	32	2.8
PK5	1630	30	4.4
PK10	2090	30	5.9
PK25	2710	30	7.9
PK50	3210	31	9.1
<b>PK100</b>	<b>3710</b>	<b>33</b>	10
PK200	4240	34	11
PK500	4980	36	11

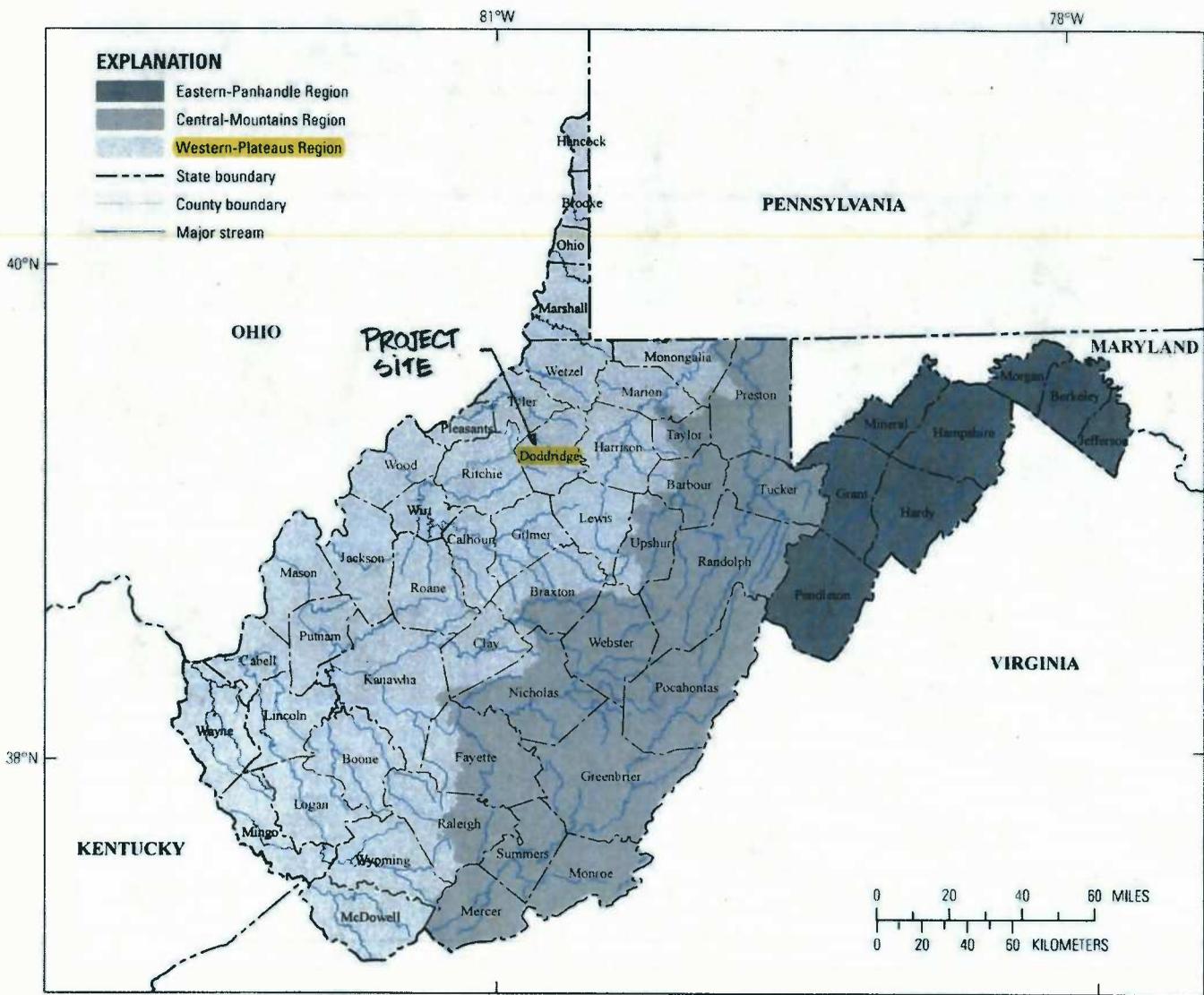
maximum: 31900 (for C&B region 4)

FOR CONSERVATIVE Q<sub>100</sub>, CALCULATED VALUE ADJUSTED WITH STANDARD ERROR ∴

$(3710 \text{ cfs})(1.33) = 4934.3 \approx \boxed{4935 \text{ cfs}}$

↑  
USE IN HEC-RAS  
MODEL

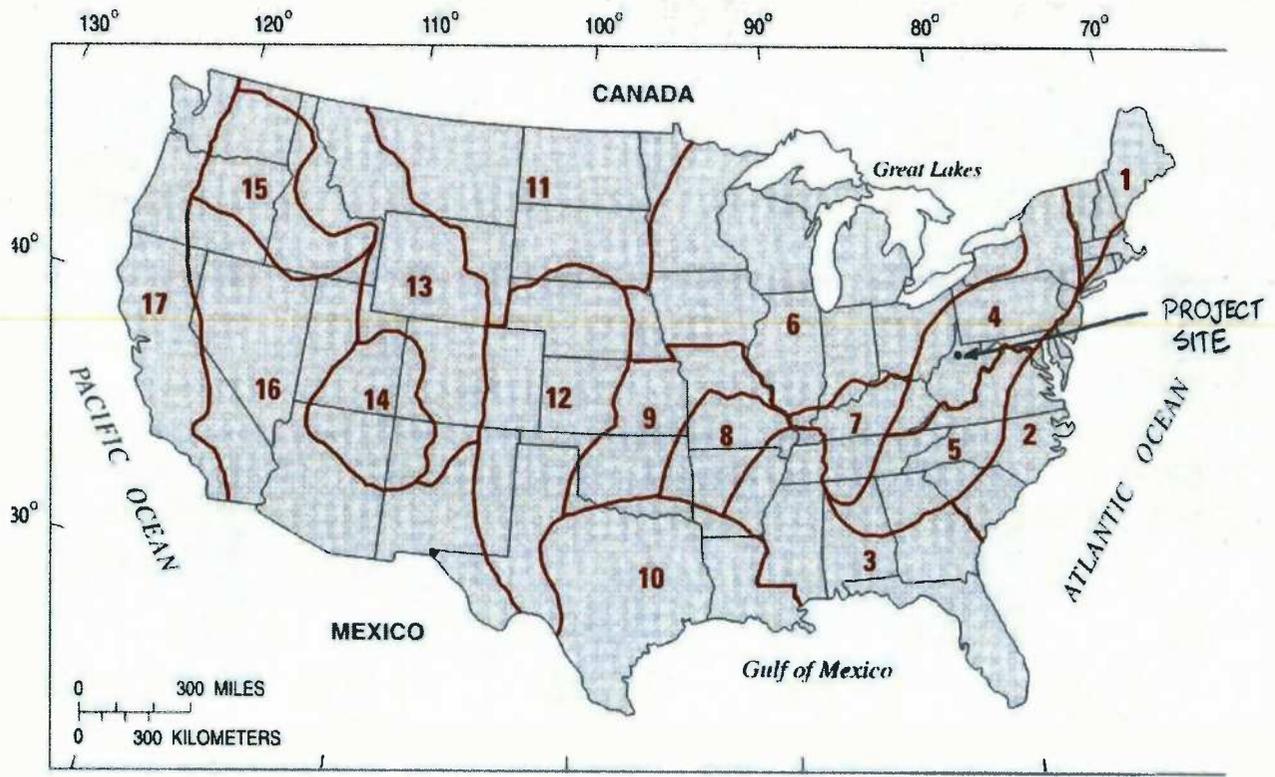
A2/5



Base from U.S. Geological Survey 1:100,000 digital line graphics for state boundaries and streams and from the West Virginia Department of Environmental Protection 1:24,000 digital data for county boundaries. Universal Transverse Mercator projection, zone 17, NAD 83.

**Figure 4.** The Eastern Panhandle, Central Mountains, and Western Plateaus Regions of West Virginia for which equations for estimation of flood frequency discharges were developed in this study.

A3/5



**EXPLANATION**

— REGIONAL BOUNDARY      17 REGION NUMBER

**Figure 3.** Map of the conterminous United States showing flood-region boundaries (modified from Crippen and Bue, 1977).

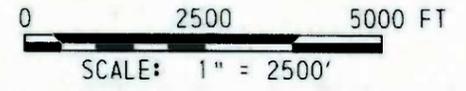
**Table 4.** Equations used to estimate selected flood-frequency discharges for streams in the Eastern Panhandle, Central Mountains, and Western Plateaus Regions of West Virginia.

[PK(n,n), peak discharge in cubic feet per second for the (n,n)-year recurrence interval; PK(n), peak discharge in cubic feet per second for the (n)-year recurrence interval; %, percent; AOP, annual-occurrence probability; DRNAREA, drainage area in square miles]

Equation	Standard error of the model, in percent	Average standard error of sampling, in percent	Average prediction error, in percent	Equivalent years of record, unitless
Eastern Panhandle Region (Range in DRNAREA from 0.21 to 1,461 for 57 streamgage stations)				
PK1_1(90%AOP) = 29.6 DRNAREA <sup>0.818</sup>	43.4	10.3	44.8	3.4
PK1_5(67%AOP) = 46.4 DRNAREA <sup>0.828</sup>	35.7	8.9	36.9	3.3
PK2(50%AOP) = 59.8 DRNAREA <sup>0.832</sup>	32.1	8.6	33.4	4.1
PK5(20%AOP) = 105 DRNAREA <sup>0.838</sup>	25.6	8.9	27.2	10.6
PK10(10%AOP) = 145 DRNAREA <sup>0.842</sup>	22.5	9.5	24.5	19.1
PK25(4%AOP) = 204 DRNAREA <sup>0.848</sup>	19.7	10.3	22.4	34.1
PK50(2%AOP) = 254 DRNAREA <sup>0.852</sup>	18.6	11.1	21.7	46.1
PK100(1%AOP) = 307 DRNAREA <sup>0.855</sup>	18.3	11.6	21.7	56.7
PK200(0.5%AOP) = 365 DRNAREA <sup>0.859</sup>	18.4	12.4	22.4	64.7
PK500(0.2%AOP) = 447 DRNAREA <sup>0.864</sup>	19.4	13.5	23.8	70.9
Central Mountains Region (Range in DRNAREA from 0.10 to 1,619 for 83 streamgage stations)				
PK1_1(90%AOP) = 33.4 DRNAREA <sup>0.914</sup>	40.0	8.3	41.0	2.4
PK1_5(67%AOP) = 53.8 DRNAREA <sup>0.887</sup>	34.6	7.3	35.4	2.0
PK2(50%AOP) = 69.4 DRNAREA <sup>0.873</sup>	33.4	7.3	34.2	2.1
PK5(20%AOP) = 116 DRNAREA <sup>0.845</sup>	34.1	8.0	35.1	3.2
PK10(10%AOP) = 153 DRNAREA <sup>0.831</sup>	36.3	8.6	37.4	4.0
PK25(4%AOP) = 206 DRNAREA <sup>0.816</sup>	39.9	9.8	41.2	4.8
PK50(2%AOP) = 250 DRNAREA <sup>0.807</sup>	42.9	10.6	44.4	5.3
PK100(1%AOP) = 297 DRNAREA <sup>0.800</sup>	46.2	11.3	47.9	5.6
PK200(0.5%AOP) = 347 DRNAREA <sup>0.793</sup>	49.7	12.0	51.5	5.9
PK500(0.2%AOP) = 420 DRNAREA <sup>0.785</sup>	54.3	13.1	56.3	6.1
Western Plateaus Region (Range in DRNAREA from 0.13 to 1,516 for 106 streamgage stations)				
PK1_1(90%AOP) = 56.9 DRNAREA <sup>0.763</sup>	38.2	7.6	39.1	3.8
PK1_5(67%AOP) = 97.8 DRNAREA <sup>0.741</sup>	33.4	6.5	34.1	2.8
PK2(50%AOP) = 129 DRNAREA <sup>0.730</sup>	31.6	6.1	32.2	2.8
PK5(20%AOP) = 221 DRNAREA <sup>0.710</sup>	29.3	6.5	30.0	4.4
PK10(10%AOP) = 292 DRNAREA <sup>0.699</sup>	28.9	6.5	29.7	5.9
PK25(4%AOP) = 391 DRNAREA <sup>0.688</sup>	29.4	7.3	30.3	7.9
PK50(2%AOP) = 472 DRNAREA <sup>0.681</sup>	30.2	7.6	31.3	9.1
<b>PK100(1%AOP) = 557 DRNAREA<sup>0.672</sup></b>	<b>31.4</b>	<b>8.0</b>	<b>32.5</b>	<b>10.1</b>
PK200(0.5%AOP) = 647 DRNAREA <sup>0.668</sup>	32.7	8.3	33.9	10.8
PK500(0.2%AOP) = 775 DRNAREA <sup>0.661</sup>	34.8	8.9	36.1	11.4

EQT-PANDORA  
FLOODPLAIN ANALYSIS  
HYDROLOGY - FLINT RUN

DOWNSTREAM FLOW AREA = 16.7 mi<sup>2</sup>



FlintRun.rep

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

X X XXXXXX XXXX XXXX XX XXXX
X X X X X X X X
X X X X X X X X
XXXXXXXX XXXX X XXX XXXX XXXXXX XXXX
X X X X X X X X X
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\*\*\*\*\*

PROJECT DATA
Project Title: Flint Run
Project File : FlintRun.prj
Run Date and Time: 9/26/2013 11:33:27 AM

Project in English units

\*\*\*\*\*

PLAN DATA

Plan Title: Existing Conditions
Plan File : p:\Environment\Prvfiles\COMMON\EQT Corporation\Pandora\Floodplain Permit\H&H Analysis\HEC-RAS\FlintRun.p03

Geometry Title: Flint Run-Combined
Geometry File : p:\Environment\Prvfiles\COMMON\EQT Corporation\Pandora\Floodplain Permit\H&H Analysis\HEC-RAS\FlintRun.g01

Flow Title : Flow 01
Flow File : p:\Environment\Prvfiles\COMMON\EQT Corporation\Pandora\Floodplain Permit\H&H Analysis\HEC-RAS\FlintRun.f01

Plan Summary Information:
Number of: Cross Sections = 8 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

\*\*\*\*\*

FLOW DATA

Flow Title: Flow 01
Flow File : p:\Environment\Prvfiles\COMMON\EQT Corporation\Pandora\Floodplain Permit\H&H Analysis\HEC-RAS\FlintRun.f01

Flow Data (cfs)
\* River Reach RS \* 100-YR \*
\* Alignment - FlinFlint Run 3068 \* 4935 \*

Boundary Conditions
\* River Reach Profile \* Upstream Downstream \*
\* Alignment - FlinFlint Run 100-YR \* Normal s = 0.0046 \*

\*\*\*\*\*

GEOMETRY DATA

Geometry Title: Flint Run-Combined
Geometry File : p:\Environment\Prvfiles\COMMON\EQT Corporation\Pandora\Floodplain Permit\H&H Analysis\HEC-RAS\FlintRun.g01

CROSS SECTION

RIVER: Alignment - Flin

By: JLT 9/26/2013
Check DDT 09/26/2013

B2/4

REACH: Flint Run RS: 3068

INPUT

Description:

Station Elevation Data num= 19									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-165.3	782.81	-155	780	-4.5	770.49	-4.5	766.72	-4.3	764.88
-4.3	764.77	-3.9	764.7	0	762.39	27.6	764.85	28.2	764.9
28.3	764.91	32.5	765.82	34.5	768.5	34.5	770	37.4	770
73.4	775.61	101.9	780	104.3	781.64	105.6	782.49		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-165.3	.06	-4.5	.03	34.5	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-4.5	34.5		506	493.1		.1	.3

CROSS SECTION

RIVER: Alignment - Flin REACH: Flint Run RS: 2575

INPUT

Description:

Station Elevation Data num= 25									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-175.5	781.58	-170.3	780	-170	779.99	-141.6	777.8	-35.7	770
-35.1	770	-35.1	768.75	-33.8	767.94	-29.6	764.8	-23	764.3
0	762.71	1.4	763.98	2.8	764.21	6.4	764.83	8.3	764.92
11.8	765.11	14.8	765.53	18.5	766.73	20.3	768.7	21.5	768.69
21.5	771.5	51.9	777.8	62.8	780	66.7	781.09	68.9	781.72

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-175.5	.1	-35.1	.03	21.5	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-35.1	21.5		285	278.48		.1	.3

CROSS SECTION

RIVER: Alignment - Flin REACH: Flint Run RS: 2297

INPUT

Description:

Station Elevation Data num= 24									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-32.1	780.29	-31.6	780	-28.2	777.73	-18.4	771.26	-18.4	764.89
-14.9	764.39	0	762.8	5.4	763.4	19.6	764.84	20.9	765.26
22	766.36	29.5	767.77	30.1	767.62	30.1	770.75	43.1	771.57
50.9	772.04	100.3	775.26	103.6	775.44	110.2	775.86	139.9	777.58
173.8	779.83	174.4	779.87	176.2	780	184.8	781.51		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-32.1	.1	-18.4	.03	30.1	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-18.4	30.1		477	444.48		.1	.3

CROSS SECTION

RIVER: Alignment - Flin REACH: Flint Run RS: 1852

INPUT

Description:

Station Elevation Data num= 65									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-26.1	783.22	-22.5	780	-12.3	771.07	-11.1	770	-9.7	770
-9.7	763.66	-8.7	763.15	-7.9	763.04	0	762.1	1.2	762.22
9.2	763.16	13.1	763.78	31	766.71	42.8	766.51	49.5	766.34
53.2	768.81	53.2	770	87.6	770.18	89.5	770.18	90.4	770.19
91.2	770.19	111.7	770.22	112.9	770.23	114.1	770.23	115.2	770.24
140.7	770.24	153.7	770.3	158	770.3	158.8	770.31	166.9	770.32
353.5	778.18	355.2	778.22	358.2	778.33	362	778.42	365.3	778.51
366	778.52	369.3	778.63	374.5	778.76	375	778.77	377.4	778.85
382.3	778.96	385	779.03	385.3	779.04	387.3	779.09	389.1	779.13
390.8	779.17	391.3	779.18	394.4	779.25	401	779.33	403.8	779.37

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
404.5	779.37	405.2	779.38	410.1	779.57	414	779.71	414.8	779.74
421.1	779.99	421.4	779.99	422.2	780	428.3	780.09	429.9	780.1
431.1	780.11	432.9	780.15	436.9	780.21	437.9	780.22	440	780.25

FlintRun.rep

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-26.1	.1	-9.7	.03	53.2	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-9.7	53.2		583	551.79		.1	.3

CROSS SECTION

RIVER: Alignment - Flin  
REACH: Flint Run RS: 1300

INPUT

Description:

Station Elevation Data num= 26

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-128.8	783.16	-125.3	780.8	-124.2	780	-122.4	778.94	-107.2	770
-52.6	770	-52.6	763.97	-52	763.98	-47.5	762.6	-34.6	762.32
-24.8	762.19	-7.5	762	-7	761.89	-5.6	761.61	-3.8	761.37
-1	761.05	2.8	761.28	5	761.43	5.4	762.04	9.5	762.92
14.2	764.35	15.4	764.36	15.4	770	31.6	770	264.1	780
272.5	782.78								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-128.8	.06	-52.6	.03	15.4	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-52.6	15.4		421	447.36		.1	.3

CROSS SECTION

RIVER: Alignment - Flin  
REACH: Flint Run RS: 853

INPUT

Description:

Station Elevation Data num= 26

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-211.1	782.59	-207.5	780	-193.7	771.46	-191.3	770	-26.9	770
-26.9	764.22	-25.3	763.06	-23.4	759.93	-20.4	759.55	0	757.87
4.3	759.5	9.7	759.91	13.2	763.24	14.7	764.75	14.7	770
65.5	770	68.3	770.02	75.5	770.02	98.2	772.39	102.3	772.74
122	775.26	129.2	776.04	135.6	776.7	137	776.86	159.3	780
164.4	782.75								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-211.1	.06	-26.9	.03	14.7	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-26.9	14.7		170	313.02		.1	.3

CROSS SECTION

RIVER: Alignment - Flin  
REACH: Flint Run RS: 540

INPUT

Description:

Station Elevation Data num= 32

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-248.5	783.77	-243.5	782.38	-237.9	781.02	-234.2	780.02	-234.1	780
-234	780	-228.8	779.36	-224.6	778.8	-214.4	777.48	-197.2	775.1
-188.3	773.91	-162.4	770.32	-160.6	770.07	-160	770	-36	770
-36	764.36	-31.1	759.98	-30.2	759.86	-29.8	759.83	0	758.52
2	758.67	5.6	759.63	7.6	760.03	14	764.25	14	770
44.9	770	47.7	770.67	74.1	776.45	87.2	779.35	87.8	779.49
90.4	780	98.2	781.67						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-248.5	.06	-36	.03	14	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	-36	14		295	539.94		.1	.3

CROSS SECTION

RIVER: Alignment - Flin  
REACH: Flint Run RS: 0

INPUT

Description:

Station Elevation Data		num= 22		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-241.4	781.11	-239.3	780	-237.8	779.29	-219.3	770	-85	769.65		
-21.7	769.65	-21.7	761.72	-21.4	761.64	-12.7	757.87	-12.2	757.8		
0	756.03	1.1	756.17	9.7	757.89	9.8	757.91	10.6	758.34		
19.5	763.13	21.2	763.33	21.2	770	49.2	770	52.4	771.09		
79.7	780	82.6	781.92								

Manning's n Values		num= 3		Sta n Val		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
-241.4	.06	-21.7	.03	21.2	.1		

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	-21.7	21.2	.1	.3	

SUMMARY OF MANNING'S N VALUES

River: Alignment - Flin						
* Reach	* River Sta.	* n1	* n2	* n3		
*Flint Run	* 3068	* .06*	* .03*	* .1*		
*Flint Run	* 2575	* .1*	* .03*	* .06*		
*Flint Run	* 2297	* .1*	* .03*	* .06*		
*Flint Run	* 1852	* .1*	* .03*	* .06*		
*Flint Run	* 1300	* .06*	* .03*	* .06*		
*Flint Run	* 853	* .06*	* .03*	* .06*		
*Flint Run	* 540	* .06*	* .03*	* .1*		
*Flint Run	* 0	* .06*	* .03*	* .1*		

SUMMARY OF REACH LENGTHS

River: Alignment - Flin					
* Reach	* River Sta.	* Left	* Channel	* Right	
*Flint Run	* 3068	* 506*	* 493.1*	* 482*	
*Flint Run	* 2575	* 285*	* 278.48*	* 171*	
*Flint Run	* 2297	* 477*	* 444.48*	* 80*	
*Flint Run	* 1852	* 583*	* 551.79*	* 81*	
*Flint Run	* 1300	* 421*	* 447.36*	* 463*	
*Flint Run	* 853	* 170*	* 313.02*	* 492*	
*Flint Run	* 540	* 295*	* 539.94*	* 618*	
*Flint Run	* 0	* *	* *	* *	

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Alignment - Flin				
* Reach	* River Sta.	* Contr.	* Expan.	
*Flint Run	* 3068	* .1*	* .3*	
*Flint Run	* 2575	* .1*	* .3*	
*Flint Run	* 2297	* .1*	* .3*	
*Flint Run	* 1852	* .1*	* .3*	
*Flint Run	* 1300	* .1*	* .3*	
*Flint Run	* 853	* .1*	* .3*	
*Flint Run	* 540	* .1*	* .3*	
*Flint Run	* 0	* .1*	* .3*	



AECOM  
Gulf Tower, 707 Grant Street, 5th Floor  
Pittsburgh, PA 15219

412.395.8888 tel  
412.297.5000 fax

# Spill Prevention Plan

## **SPILL PREPAREDNESS, PREVENTION, AND COUNTERMEASURES PLAN FOR CONSTRUCTION ACTIVITIES**

### **1.1 SPILL PREVENTION METHODS**

Construction activities related to natural gas pipelines, well pads and aboveground facilities sometimes require storage of hazardous and non-hazardous products and wastes. All efforts will be made to prevent spills of any amount of these products. The scope of this plan is intended to cover activities related to construction of aboveground facilities, associated pipelines and appurtenances. The following items will be followed to help avoid spills and minimize the impact of spills that accidentally occur:

- All employees handling fuels and other hazardous materials will be properly trained. All equipment is in good operating order and inspected on a regular basis.
- Fuel trucks transporting fuel to on-site equipment travel only on approved access roads; Concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use.
- Bulk quantities of both diesel fuel and gasoline may be stored at the work area in aboveground tanks, which will be diked or be of double-wall secondary containment design, or smaller containers. No underground tanks will be used. A Material Safety Data Sheet for each hazardous material will be on site.
- Fuel will be stored at the equipment staging area within secondary containment and as much as practical all equipment will be refueled there. Any equipment that must be refueled in the field will be fueled from tanks carried to the work area and returned to secondary containment when refueling is complete.
- Lesser quantities of fuel and solvents and lubricants (i.e., motor oils, hydraulic fluid) may be stored at the work area as necessary to service equipment provided that this storage does not conflict with other parts of this plan. Secondary containment will be provided for these storage areas.
- All fuel storage areas will be located at least 200 feet from active private water wells, and at least 400 feet from municipal water wells. Equipment servicing, lubricating, and refueling will also be in accordance with these requirements whenever possible.
- Use of hazardous materials for vehicle maintenance will follow the same requirements mentioned above for equipment refueling. Impervious or sorbent materials will be placed under the work area before the work begins. Additional sorbent materials will also be readily available. Waste materials created during maintenance (i.e., used oil) will be collected for proper disposal. The work site and the vehicle will be inspected after the maintenance work is complete to ensure that all hazardous materials are properly contained. All waste material, including partially used or empty containers, discarded parts, dirty rags, and used sorbent material, as well as discarded hazardous materials containers (i.e., oil cans, grease tubes) will be collected and placed in open-top drums for proper disposal.

- All motor fuel, lube oil, chemicals, and other polluting substances will be tightly sealed and clearly labeled during transportation and storage.
- Fuel trucks, pumps, mechanics' vehicles, and contractor personnel vehicles will be equipped with spill kits containing absorbent materials approved for petroleum products.
- Runoff resulting from construction equipment washing operations will not be permitted to directly enter any waterbody or wetland area.
- Construction equipment, vehicles, materials, hazardous materials, chemicals, fuels, lubricating oils, and petroleum products will be parked, stored, or serviced 100 feet from all waterbodies and wetlands when not in use and when possible.

**1.2 MITIGATION AND CLEANUP METHODS**

In the event of a spill, the following will occur:

- the source will be immediately stopped;
- the spill will be contained by placing sorbent booms or constructing dikes;
- the spill will be collected with sorbent materials, skimmed off water surfaces with booms, and/or the contaminated soil will be excavated; and the waste materials will be properly disposed in accordance with EQT's policy and agency-approved facilities, as required;
- after completing cleanup as coordinated with the necessary contacts, the affected areas will be restored as close as possible to their previous conditions.

**1.3 NOTIFICATION**

Any spill must be reported immediately to one of the following EQT employees, who will then report the spill to the spill hotline:

Name	Office (7 am-5 pm; M-F)	Evenings and Weekends
Megan Landfried	304-848-0061	304-841-2086

**For spills in West Virginia:**

- In the event of an emergency, a spill or an accidental discharge, an EQT employee listed above should call immediately : **800.642.3074**

**For all spills:**

The following information will be provided to the applicable spill reporting hotline:

- Latitude and longitude of spill - degrees/minutes/seconds format is preferred
- Description of where the spill occurred – district and county, nearest roadway intersection
- Time the spill was first identified
- The amount of the spill
- The name of the affected water resource if known (if applicable)

- Description of containment measures and cleanup measures

#### **1.4 STATE AND FEDERAL AGENCY CONTACT INFORMATION**

##### **West Virginia**

- WVDEP Central Office (Charleston): 304.926.0470 or 0495
- WVDEP Report a Spill or Accidental Discharge 800.642.3074 (Available 24 hours a day, seven days per week)
- WVDEP Fairmont Office: 304.368.3960

##### **Doddridge County**

- Emergency Management Coordinator: 304.844.7390

##### **Federal**

- National Response Center: 800.424.8802



AECOM  
Gulf Tower, 707 Grant Street, 5th Floor  
Pittsburgh, PA 15219

412.395.8888 tel  
412.297.5000 fax

# **Doddridge County Floodplain Development Permit Application**

# DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

## SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
8. **I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.**

APPLICANT'S SIGNATURE M. E. Jaroff

DATE 10/21/13

## SECTION 2: PROPOSE DEVELOPMENT (TO BE COMPLETED BY APPLICANT).

**IF THE APPLICANT IS NOT A NATURAL PERSON, THE NAME, ADDRESS, AND TELEPHONE NUMBER OF A NATURAL PERSON WHO SHALL BE APPOINTED BY THE APPLICANT TO RECEIVE NOTICE PURSUANT TO ANY PROVISION OF THE CURRENT DODDRIDGE COUNTY FLOODPLAIN ORDINANCE.**

**APPLICANT'S NAME: EQT GATHERING LLC  
ADDRESS: 115 Professional Place, Bridgeport, WV, 26330  
TELEPHONE NUMBER: 304-848-0061**

**BUILDER'S NAME: EQT Gathering, LLC**  
**ADDRESS: 115 Professional Place, Bridgeport, WV 26330**  
**TELEPHONE NUMBER: 304-848-0061**

**ENGINEER'S NAME: AECOM**  
**ADDRESS: 707 Grant Street, 5<sup>th</sup> Floor, Pittsburgh, PA 15219**  
**TELEPHONE NUMBER: 412-297-4474**

**PROJECT LOCATION: Big Flint**

**NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) \_\_\_\_\_**

**ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) \_\_\_\_\_**

**DISTRICT: GRANT**

**DATE/FROM WHOM PROPERTY PURCHASED: July 18, 2013 Juanita Krafft et al & July 18, 2013 Willaims, Mark D. & Eileen J.**

**LAND BOOK DESCRIPTION: BRUSH RUN 69 AC & BIG FLINT 59.75 AC**

**DEED BOOK REFERENCE: DB 271 x 53 & DB 274 x 721**

**TAX MAP REFERENCE: P/O TMP 06-07 and P/O TMP 06-13**

**EXISTING BUILDINGS/USES OF PROPERTY: NONE ON PURCHASED PROPERTY**

**NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY: N/A**

**ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY: N/A**

To avoid delay in processing the application, please provide enough information to easily identify the project location. Please see the project location map.

**DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)**

**A. STRUCTURAL DEVELOPMENT**

ACTIVITY

STRUCTURAL TYPE

- |                                     |                         |                                     |                                  |
|-------------------------------------|-------------------------|-------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | New Structure           | <input type="checkbox"/>            | Residential (1 – 4 Family)       |
| <input type="checkbox"/>            | Addition                | <input type="checkbox"/>            | Residential (more than 4 Family) |
| <input type="checkbox"/>            | Alteration              | <input checked="" type="checkbox"/> | Non-residential (floodproofing)  |
| <input type="checkbox"/>            | Relocation              | <input type="checkbox"/>            | Combined Use (res. & com.)       |
| <input type="checkbox"/>            | Demolition              | <input type="checkbox"/>            | Replacement                      |
| <input type="checkbox"/>            | Manufactured/Mobil Home |                                     |                                  |

**B. OTHER DEVELOPMENT ACTIVITIES:**

- |                                     |   |                          |        |                          |          |                          |            |
|-------------------------------------|---|--------------------------|--------|--------------------------|----------|--------------------------|------------|
| <input checked="" type="checkbox"/> | Fill  | <input type="checkbox"/> | Mining | <input type="checkbox"/> | Drilling | <input type="checkbox"/> | Pipelining |
| <input checked="" type="checkbox"/> | Grading   |                          |        |                          |          |                          |            |
| <input checked="" type="checkbox"/> | Excavation (except for STRUCTURAL DEVELOPMENT checked above)          |                          |        |                          |          |                          |            |
| <input checked="" type="checkbox"/> | Watercourse Altercation (including dredging and channel modification) |                          |        |                          |          |                          |            |
| <input checked="" type="checkbox"/> | Drainage Improvements (including culvert work)                        |                          |        |                          |          |                          |            |
| <input checked="" type="checkbox"/> | Road, Street, or Bridge Construction                                  |                          |        |                          |          |                          |            |
| <input type="checkbox"/>            | Subdivision (including new expansion)                                 |                          |        |                          |          |                          |            |
| <input type="checkbox"/>            | Individual Water or Sewer System                                      |                          |        |                          |          |                          |            |
| <input type="checkbox"/>            | Other (please specify)  |                          |        |                          |          |                          |            |
- 

**C. STANDARD SITE PLAN OR SKETCH**

1. **SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.**
2. **IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:**  
 SKETCH ON A SEPARATE 8 ½ X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
3. **SIGN AND DATE THE SKETCH.**

**ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$ 300,000.00**

**D. ADJACENT AND/OR AFFECTED LANDOWNERS:**

1. **NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA**

**OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED  
ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM)  
WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED  
BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED).**

**NAME:** Williams, Mark & Eileen  
**ADDRESS:** 8134 Big Flint  
West Union, WV 26456

**NAME:** Herschel Thomas  
**ADDRESS:** 114 Appie Way  
West Union, WV 26456

**NAME:** Cecil Radcliff  
**ADDRESS:** Rt 2 Box 211  
West Union, WV 26456

**NAME:** Elizabeth Connor  
**ADDRESS:** 501 Brush Run  
West Union, WV 26456

**NAME:** Connie Sue Martin  
**ADDRESS:** HC 67 Box 80  
West Union, WV 26456

**NAME:** Juanita M. Krafft et al  
**ADDRESS:** 726 Brush Run  
West Union, WV 26456

**NAME:** Wilson, Monty & Pamela  
**ADDRESS:** 2290 Union School Road  
McBee, SC 29101

**NAME:** McIntyre, Dorthella \*  
**ADDRESS:** HC 67 Box 69 A  
West Union, WV 26456

**NAME:** Chestnut Grove Church \*  
**C/O:** James E. Williams, Trustee  
**ADDRESS:** Big Flint Road  
Smithburg, WV 26436

**NAME:** Stephen W & Remonda L Trent \*  
**ADDRESS:** 14 Millbrook Road  
Bridgeport, WV 26330

*Toby D. Stanley  
HC 67, Box 68  
West Union, WV 26456*

- 1. NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE  
LOCATED UPON ANY ADJACENT PROPERTY AT THE TIME THE FLOODPLAIN PERMIT  
APPLICATION IS FILED AND THE NAME AND ADDRESS OF AT LEAST ONE ADULT  
RESIDING IN ANY HOME ON ANY PROPERTY THAT MAY BE AFFECTED BY FLOODING AS  
IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY.**

**NAME:** Williams, Mark & Eileen  
**ADDRESS:** 8134 Big Flint  
West Union, WV 26456

**NAME:** Herschel Thomas  
**ADDRESS:** 114 Appie Way  
West Union, WV 26456

**NAME:** Cecil Radcliff

**NAME:** Elizabeth Connor

**ADDRESS:** Rt 2 Box 211  
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**C/O:** James E. Williams, Trustee  
**ADDRESS:** Big Flint Road  
Smithburg, WV 26436

**NAME:** Stephen W & Remonda L Trent  
**ADDRESS:** 14 Millbrook Road  
Bridgeport, WV 26330

#### **E. CONFIRMATION FORM**

**THE APPLICANT ACKNOWLEDGES, AGREES, AND CONFIRMS THAT HE/IT WILL PAY WITHIN 30 DAYS OF RECEIPT OF INVOICE BY THE COUNTY FOR ALL EXPENSES RELATIVE TO THE PERMIT APPLICATION PROCESS GREATER THAN THE REQUIRED DEPOSIT FOR EXPENSES INCLUDING:**

- (A) PERSONAL SERVICE OF PROCESS BY THE DODDRIDGE COUNTY SHERIFF AT THE RATES PERMITTED BY LAW FOR SUCH SERVICE.
- (B) SERVICE BY CERTIFIED MAIL RETURN RECEIPT REQUESTED.
- (C) PUBLICATION.
- (D) COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT.
- (E) CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY FLOODPLAIN ADMINISTRATOR/MANAGER OR FLOODPLAIN APPEALS BOARD FOR REVIEW OF MATERIALS AND/OR TESTIMONY REGARDING THE EFFICACY OF GRANTING OR DENYING THE APPLICANT'S FLOODPLAIN PERMIT.

**NAME (PRINT):** Megan E. Landfried

**SIGNATURE:** Megan E. Landfried **DATE:** 10/21/13

After completing SECTION 2, APPLICANT should submit form to Floodplain Administrator/Manager or his/her representative for review.

**SECTION 3: FLOODPLAIN DETERMINATION (to be completed by Floodplain Administrator/Manager or his/her representative)**

**THE PROPOSED DEVELOPMENT:**

THE PROPOSED DEVELOPMENT IS LOCATED ON:

FIRM Panel: \_\_\_\_\_ 130  
Dated: \_\_\_\_\_ 10/04/2011

Is **NOT** located in a Specific Flood Hazard Area (Notify applicant that the application review is complete and **NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED**).

Is located in Special Flood Hazard Area.  
FIRM zone designation \_\_\_\_\_ A  
100-Year flood elevation is: SEE ATTACHMENTS NGVD ~~(MSE)~~

Unavailable

The proposed development is located in a floodway.  
FBFM Panel No. \_\_\_\_\_ Dated \_\_\_\_\_

See section 4 for additional instructions.

SIGNED Dan Wellings DATE 12/02/2013

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.

- A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
- Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proffing of utilities located below the first floor and details of enclosures below the first floor. Also \_\_\_\_\_  
\_\_\_\_\_
- Subdivision or other development plans (If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
- Plans showing the extent of watercourse relocation and/or landform alterations.
- Top of new fill elevation \_\_\_\_\_ Ft. NGVD (MSL).  
For floodproofing structures applicant must attach certification from registered engineer or architect.
- Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.
- Manufactured homes located in a floodplain area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).
- Other:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION 5: PERMIT DETERMINATION (To be completed by Floodplain Administrator/Manager or his/her representative)**

I have determined that the proposed activity (type is or is not) in conformance with provisions of the Floodplain Ordinance adopted by the County Commission of Doddridge County on May 21, 2013. The permit is issued subject to the conditions attached to and made part of this permit.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

If the Floodplain Administrator/Manager found that the above was not in conformance with the provisions of the Doddridge County Floodplain Ordinance and/or denied that application, the applicant may complete an appealing process below.

APPEALS: Appealed to the County Commission of Doddridge County?  Yes  No

Hearing Date: \_\_\_\_\_

County Commission Decision - Approved  Yes  No

CONDITIONS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued).**

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application).

COMPLETE 1 OR 2 BELOW:

- 1 Actual (As-Built) Elevation of the top of the lowest floor (including basement or crawl space is \_\_\_\_\_ FT. NGVD (MSL)
- 2 Actual (As Built) elevation of floodproofing is \_\_\_\_\_ FT. NGVD (MSL)

**Note: Any work performed prior to submittal of the above information is at risk of the applicant.**

**SECTION 7: COMPLIANCE ACTION (To be completed by the Floodplain Administrator/Manager or his/her representative).**

The Floodplain Administrator/Manager or his/her representative will complete this section as applicable based on inspection of the project to ensure compliance with the Doddridge County Floodplain Ordinance.

**INSPECTIONS:**

DATE: 12/05/13 BY: Dan Wellis  
DEFICIENCIES? Y/N

COMMENTS Const. yet to begin  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain Administrator/Manager or his/her representative).**

Certificate of Compliance issued: DATE: \_\_\_\_\_ BY: \_\_\_\_\_

**CERTIFICATE OF COMPLIANCE  
FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA  
(OWNER MUST RETAIN)**

PERMIT NUMBER: \_\_\_\_\_

PERMIT DATE: \_\_\_\_\_

**PURPOSE –**

**CONSTRUCTION LOCATION:** \_\_\_\_\_

**OWNER'S ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THE FOLLOWING MUST BE COMPLETED BY THE FLOODPLAIN  
ADMINISTRATOR/MANAGER OR HIS/HER AGENT.**

**COMPLIANCE IS HEREBY CERTIFIED WITH THE REQUIREMENT OF THE  
FLOODPLAIN ORDINANCE ADOPTED BY THE COUNTY COMMISSION OF  
DODDRIDGE COUNTY ON MAY 21, 2013.**

**SIGNED** \_\_\_\_\_ **DATE** \_\_\_\_\_

EQT 13-085 12/05/2013



15  
M.P.H.

Handwritten text on a white sign attached to a wooden post. The text is illegible due to blurring and distance.



Big Flint near Chestnut Grove church

KEQT

13-085

12/05/2013

DJW



Big Flint near Chestnut Grove church.



FILED

2015 APR 17 AM 9:54

LEON A. MULLINS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

April 14, 2015

Edwin Wriston  
Doddridge County Floodplain Manager  
118 East Court Street  
West Union, West Virginia 26456

#13-085

**RE: EQT Gathering, LLC  
Pandora Compressor Station – Floodplain Concurrence;**

Dear Mr. Wriston,

Per your request on Friday April 10, 2015 EQT has reviewed our plans for the Pandora Compressor Station and have confirmed that our project does not impact the floodplain. Attached for your reference is the Floodplain Development Permit Application and original approval letter from Doddridge County. On April 10, 2015 you also provided Mark Byrer of EQT with the permit for the project.

EQT is continuously monitoring the location and making the necessary field adjustments to maintain compliance with all local, state, and federal permits. If you have any questions or need additional information, please do not hesitate to contact Matt Hoover at 724 873-3009.

Sincerely,

Matthew Hoover  
Sr. Environmental Coordinator  
EQT

Attachments

PERMIT NO. 13-08

**DODDRIDGE COUNTY  
FLOODPLAIN DEVELOPMENT  
PERMIT**

PURPOSE FOR PERMIT: PIPELINE - COMPRESSOR STATION  
PANDORA COMPRESSOR STA. MOCA - D001 +

ISSUED TO EQT GATHERING LLC 5007A  
115 PROFESSIONAL PLACE PIPELINE

ADDRESS: BRIDGE PORT, WV

PROJECT ADDRESS: FLINT RUN NEAR CHESTNUT  
GROVE CHURCH

ISSUED BY: Dan Hollings

DATE: 12/02/2013

CONSTRUCTION MUST START WITHIN 180 DAYS FROM ISSUED DATE. PERMIT EXPIRES IN 12 MONTHS FROM ISSUED DATE. IF EXTENTION IS NEEDED A REQUEST MUST BE MADE IN WRITING STATING A REASON FOR THE EXTENTION.

THIS PERMIT MUST BE POSTED ON THE PREMISES IN A CONSPICUOUS PLACE SO AS TO BE CLEARLY VISIBLE FROM THE STREET.

**DODDRIDGE COUNTY  
FLOODPLAIN DEVELOPMENT PERMIT APPLICATION**

**SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)**

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
8. **I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.**

APPLICANT'S SIGNATURE M. E. Jaroff

DATE 10/21/13

**SECTION 2: PROPOSE DEVELOPMENT (TO BE COMPLETED BY APPLICANT).**

**IF THE APPLICANT IS NOT A NATURAL PERSON, THE NAME, ADDRESS, AND TELEPHONE NUMBER OF A NATURAL PERSON WHO SHALL BE APPOINTED BY THE APPLICANT TO RECEIVE NOTICE PURSUANT TO ANY PROVISION OF THE CURRENT DODDRIDGE COUNTY FLOODPLAIN ORDINANCE.**

**APPLICANT'S NAME: EQT GATHERING LLC  
ADDRESS: 115 Professional Place, Bridgeport, WV, 26330  
TELEPHONE NUMBER: 304-848-0061**

**BUILDER'S NAME:** EQT Gathering, LLC  
**ADDRESS:** 115 Professional Place, Bridgeport, WV 26330  
**TELEPHONE NUMBER:** 304-848-0061

**ENGINEER'S NAME:** AECOM  
**ADDRESS:** 707 Grant Street, 5<sup>th</sup> Floor, Pittsburgh, PA 15219  
**TELEPHONE NUMBER:** 412-297-4474

**PROJECT LOCATION:** Big Flint

**NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** \_\_\_\_\_

**ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** \_\_\_\_\_

**DISTRICT:** GRANT

**DATE/FROM WHOM PROPERTY PURCHASED:** July 18, 2013 Juanita Krafft et al & July 18, 2013 Willaims, Mark D. & Eileen J.

**LAND BOOK DESCRIPTION:** BRUSH RUN 69 AC & BIG FLINT 59.75 AC

**DEED BOOK REFERENCE:** DB 271 x 53 & DB 274 x 721

**TAX MAP REFERENCE:** P/O TMP 06-07 and P/O TMP 06-13

**EXISTING BUILDINGS/USES OF PROPERTY:** NONE ON PURCHASED PROPERTY

**NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY:** N/A

**ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY:** N/A

To avoid delay in processing the application, please provide enough information to easily identify the project location. Please see the project location map.

**DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)**

**A. STRUCTURAL DEVELOPMENT**

ACTIVITY

STRUCTURAL TYPE

- |                                     |                         |                                     |                                  |
|-------------------------------------|-------------------------|-------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | New Structure           | <input type="checkbox"/>            | Residential (1 - 4 Family)       |
| <input type="checkbox"/>            | Addition                | <input type="checkbox"/>            | Residential (more than 4 Family) |
| <input type="checkbox"/>            | Alteration              | <input checked="" type="checkbox"/> | Non-residential (floodproofing)  |
| <input type="checkbox"/>            | Relocation              | <input type="checkbox"/>            | Combined Use (res. & com.)       |
| <input type="checkbox"/>            | Demolition              | <input type="checkbox"/>            | Replacement                      |
| <input type="checkbox"/>            | Manufactured/Mobil Home |                                     |                                  |

**B. OTHER DEVELOPMENT ACTIVITIES:**

- Fill                       Mining                       Drilling                       Pipelining  
 Grading  
 Excavation (except for STRUCTURAL DEVELOPMENT checked above)  
 Watercourse Altercation (including dredging and channel modification)  
 Drainage Improvements (including culvert work)  
 Road, Street, or Bridge Construction  
 Subdivision (including new expansion)  
 Individual Water or Sewer System  
 Other (please specify)

**C. STANDARD SITE PLAN OR SKETCH**

1. SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.
2. IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:  
 SKETCH ON A SEPARATE 8 1/2 X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
3. SIGN AND DATE THE SKETCH.

**ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$ 300,000.00**

**D. ADJACENT AND/OR AFFECTED LANDOWNERS:**

1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA

**OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED  
ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM)  
WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED  
BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED).**

**NAME:** Williams, Mark & Eileen  
**ADDRESS:** 8134 Big Flint  
West Union, WV 26456

**NAME:** Herschel Thomas  
**ADDRESS:** 114 Appie Way  
West Union, WV 26456

**NAME:** Cecil Radcliff  
**ADDRESS:** Rt 2 Box 211  
West Union, WV 26456

**NAME:** Elizabeth Connor  
**ADDRESS:** 501 Brush Run  
West Union, WV 26456

**NAME:** Connie Sue Martin  
**ADDRESS:** HC 67 Box 80  
West Union, WV 26456

**NAME:** Juanita M. Krafft et al  
**ADDRESS:** 726 Brush Run  
West Union, WV 26456

**NAME:** Wilson, Monty & Pamela  
**ADDRESS:** 2290 Union School Road  
McBee, SC 29101

**NAME:** McIntyre, Dorthella \*  
**ADDRESS:** HC 67 Box 69 A  
West Union, WV 26456

**NAME:** Chestnut Grove Church \*  
**C/O:** James E. Williams, Trustee  
**ADDRESS:** Big Flint Road  
Smithburg, WV 26436

**NAME:** Stephen W & Remonda L Trent \*  
**ADDRESS:** 14 Millbrook Road  
Bridgeport, WV 26330

*Toby D. Stanley*  
*HC 67, Box 68*  
*West Union, WV 26456*

- 1. NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE  
LOCATED UPON ANY ADJACENT PROPERTY AT THE TIME THE FLOODPLAIN PERMIT  
APPLICATION IS FILED AND THE NAME AND ADDRESS OF AT LEAST ONE ADULT  
RESIDING IN ANY HOME ON ANY PROPERTY THAT MAY BE AFFECTED BY FLOODING AS  
IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY.**

**NAME:** Williams, Mark & Eileen  
**ADDRESS:** 8134 Big Flint  
West Union, WV 26456

**NAME:** Herschel Thomas  
**ADDRESS:** 114 Appie Way  
West Union, WV 26456

**NAME:** Cecil Radcliff

**NAME:** Elizabeth Connor

ADDRESS: Rt 2 Box 211  
West Union, WV 26456

NAME: Connie Sue Martin  
ADDRESS: HC 67 Box 80  
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McBee, SC 29101

NAME: Chestnut Grove Church  
C/O: James E. Williams, Trustee  
ADDRESS: Big Flint Road  
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NAME: Juanita M. Krafft et al  
ADDRESS: 726 Brush Run  
West Union, WV 26456

NAME: McIntyre, Dorthella  
ADDRESS: HC 67 Box 69 A  
West Union, WV 26456

NAME: Stephen W & Remonda L Trent  
ADDRESS: 14 Millbrook Road  
Bridgeport, WV 26330

### E. CONFIRMATION FORM

THE APPLICANT ACKNOWLEDGES, AGREES, AND CONFIRMS THAT HE/IT WILL PAY WITHIN 30 DAYS OF RECEIPT OF INVOICE BY THE COUNTY FOR ALL EXPENSES RELATIVE TO THE PERMIT APPLICATION PROCESS GREATER THAN THE REQUIRED DEPOSIT FOR EXPENSES INCLUDING:

- (A) PERSONAL SERVICE OF PROCESS BY THE DODDRIDGE COUNTY SHERIFF AT THE RATES PERMITTED BY LAW FOR SUCH SERVICE.
- (B) SERVICE BY CERTIFIED MAIL RETURN RECEIPT REQUESTED.
- (C) PUBLICATION.
- (D) COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT.
- (E) CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY FLOODPLAIN ADMINISTRATOR/MANAGER OR FLOODPLAIN APPEALS BOARD FOR REVIEW OF MATERIALS AND/OR TESTIMONY REGARDING THE EFFICACY OF GRANTING OR DENYING THE APPLICANT'S FLOODPLAIN PERMIT.

NAME (PRINT): Megan E. Landfried

SIGNATURE: Megan E. Landfried DATE: 10/21/13

After completing SECTION 2, APPLICANT should submit form to Floodplain Administrator/Manager or his/her representative for review.

**SECTION 3: FLOODPLAIN DETERMINATION (to be completed by Floodplain Administrator/Manager or his/her representative)**

**THE PROPOSED DEVELOPMENT:**

THE PROPOSED DEVELOPMENT IS LOCATED ON:

FIRM Panel: 130  
Dated: 10/04/2011

Is **NOT** located in a Specific Flood Hazard Area (Notify applicant that the application review is complete and **NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED**).

Is located in Special Flood Hazard Area.  
FIRM zone designation A  
100-Year flood elevation is: SEE ATTACHMENTS NGVD (MSL)

Unavailable

The proposed development is located in a floodway.  
BFM Panel No. \_\_\_\_\_ Dated \_\_\_\_\_

See section 4 for additional instructions.

SIGNED Don Wellings DATE 12/02/2013

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.



Chase Tower, Eighth Floor  
P.O. Box 1588  
Charleston, WV 25326-1588  
(304) 353-8000 (304) 353-8180 Fax  
www.steptoel-johnson.com

Writer's Contact Information  
304-353-8130  
Jason.Foster@steptoel-johnson.com

June 18, 2014

**FREEDOM OF INFORMATION ACT REQUEST**

**Please Expedite Response**

**Via U.S. Mail**

Doddridge County Commission  
ATTN: RECORDS CUSTODIAN  
118 East Court Street  
West Union, WV 26456

**Re: Appeal of Issuance of Floodplain Permit No. 14-123**

FILED  
JUN 19 PM 12:17  
BETH A. HUBBARD  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

Dear Sir or Madam:

This firm represents MarkWest Liberty Midstream & Resources, LLC ("MarkWest") in the appeal filed against floodplain Permit No. 14-123 on May 19, 2014 (the "Appeal"). Pursuant to 5 U.S.C. § 552(b) and West Virginia Code § 29B-1-1, *et. seq.*, we respectfully request copies of all communications and other documents that the Doddridge County Commission has received regarding the Appeal, excluding any communications or documents originating from MarkWest. We will be glad to reimburse your office for any costs associated with the reproduction of the requested information.

Thank you for your assistance. Please call me at (304) 353-8130 with questions or comments.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Jason P. Foster', written over a printed name.

Jason P. Foster

Cc: Donald Tennant, Jr. Esq (via Electronic Mail)

522000/00001



Edwin Wriston <doddridgecountyfpm@gmail.com>

---

**EQT - Pandora Compressor Station Time Extension Letter**

1 message

---

**Jarrett M. Smith** <JMSmith@potesta.com>

Wed, Jan 21, 2015 at 10:50 AM

To: "doddridgecountyfpm@gmail.com" <doddridgecountyfpm@gmail.com>

Bo,

I was just wanting to check on the status of this time extension request letter. Also we sent several permit termination letters in. I also wanted to see if those letters we on par with what you were expecting. If you have any question please feel free to call or email me using the below information.

Thank you,

Jarrett M. Smith, P.E.

Senior Engineer

Potesta & Associates, Inc.

7012 MacCorkle Avenue, SE

Charleston, WV 25304

Phone: (304) 342-1400

Fax: (304) 343-9031

This electronic communication and attachments may contain confidential information. The recommendation and/or design data included herein are provided as a matter of convenience and should not be used for final design or ultimate decision-making. Rely on the final copy materials bearing the consultant's original signature and/or seal. If you have received this information in error, please notify the sender immediately.



Edwin Wriston <doddridgecountyfpm@gmail.com>

---

**EQT - Pandora Compressor Station Time Extension Letter**

3 messages

---

**Jarrett M. Smith** <JMSmith@potesta.com>

Wed, Jan 21, 2015 at 10:50 AM

To: "doddridgecountyfpm@gmail.com" <doddridgecountyfpm@gmail.com>

Bo,

I was just wanting to check on the status of this time extension request letter. Also we sent several permit termination letters in. I also wanted to see if those letters we on par with what you were expecting. If you have any question please feel free to call or email me using the below information.

Thank you,

Jarrett M. Smith, P.E.

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---

**Edwin Wriston** <doddridgecountyfpm@gmail.com>

Wed, Jan 28, 2015 at 9:51 AM

To: "Jarrett M. Smith" <JMSmith@potesta.com>

Cc: Megan Landfried <MLandfried@eqt.com>

Jarrett,

Sorry for the delay... Yes, we did recieve the request for extension. Please accept this email as official

authorization for said extension. I will have a new copy of the required permit to you later today before COB.

V/R,  
[Quoted text hidden]

---  
Edwin L. "Bo" Wriston, Floodplain Manager  
Doddridge County Commission  
118 East Court Street  
West Union, WV 26456  
Work Phone: 1-304-873-2631  
Mobile Phone: 1-304-629-3735  
Fax: 1-304-873-1840  
doddridgecountyfpm@gmail.com  
www.doddridgecounty.wv.gov

---  
CONFIDENTIALITY NOTE: This email message is for the sole use of the intended recipient(s) and may contain confidential, privileged, or sensitive information. Any unauthorized review, use, disclosure, or distribution is strictly prohibited and may be legally accountable.

---

**Neylon, Megan** <MNeylon@eqt.com>  
To: "doddridgecountyfpm@gmail.com" <doddridgecountyfpm@gmail.com>

Mon, Mar 2, 2015 at 3:57 PM

Bo,

Per our conversation, we are working on the Pandora Compressor Station site per this email from you. Please let me know if you need additional information from me.

Thanks,  
Megan

**From:** Edwin Wriston [mailto:doddridgecountyfpm@gmail.com]  
**Sent:** Wednesday, January 28, 2015 9:52 AM  
**To:** Jarrett M. Smith  
**Cc:** Neylon, Megan  
**Subject:** Re: EQT - Pandora Compressor Station Time Extension Letter

[Quoted text hidden]

**EQT** Where energy meets innovation.

[www.eqt.com](http://www.eqt.com)

v1.e



Edwin Wriston &lt;doddridgecountyfpm@gmail.com&gt;

---

**Pandora Compressor Station**

2 messages

---

**Edwin Wriston** <doddridgecountyfpm@gmail.com>

Thu, Jun 19, 2014 at 2:51 PM

To: MLandfried@eqt.com

Cc: brett slater &lt;blslater.4774@yahoo.com&gt;

Megan,

We are trying to track down data on the EQT Pandora Compressor Station project... MOPA-D001 & MOPA-S007A, located near the Chestnut Grove Church.

Can you give any details on that project?

The main issue is that it seems all of the material taken off the hillside has been dumped as a fill project into an area that is in the floodplain. Further, there is a ton of debris, equipment, etc. that is in the field between the fill area and the stream.

We need to know what permits were issued, especially for the fill, and we cannot find any reference to Pandora Compressor Station in our files.

Thanks!

V/R,

--

Edwin L. "Bo" Wriston, Floodplain Manager  
Doddridge County Commission  
118 East Court Street  
West Union, WV 26456  
Work Phone: 1-304-873-2631  
Mobile Phone: 1-304-629-3735  
Fax: 1-304-873-1840  
doddridgecountyfpm@gmail.com  
www.doddridgecounty.wv.gov

--

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---

**Landfried, Megan** <MLandfried@eqt.com>

Mon, Jun 23, 2014 at 10:06 AM

To: Edwin Wriston &lt;doddridgecountyfpm@gmail.com&gt;

Cc: brett slater &lt;blslater.4774@yahoo.com&gt;

Hi Bo,

I just wanted to make sure that you received my voicemail from last Thursday.

The Pandora Compressor Station approval is number 2013 -085 and was approved on 12/02 /13.

The material that was taken off the hill and placed in the floodplain was part of the permit application that was approved by Mr. Wellings. I would like to discuss the debris that you are referring to. The land owner has left a lot of material (concrete, timber, etc) including his equipment in the back corner of the stockpile area by the ball field. We should not have any equipment in that area as of now. We do however, have a parking/turn around area next to the church, all work is done in that lower section. Let me know what saw and I will be happy to address any issues that are related to our construction.

Also, I wanted to touch base on the Neely Floodplain permit. I know that area was brought up in the commissioners meeting on Tuesday. What was the outcome?

I hope you had a nice weekend!

Thank you,

Megan

**From:** Edwin Wriston [mailto:doddridgecountyfpm@gmail.com]  
**Sent:** Thursday, June 19, 2014 2:52 PM  
**To:** Landfried, Megan  
**Cc:** brett slater  
**Subject:** Pandora Compressor Station

[Quoted text hidden]

**EQT** Where energy meets innovation.

[www.eqt.com](http://www.eqt.com)

v1.e

STATE OF WEST VIRGINIA,  
COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE  
HERALD RECORD, a weekly newspaper  
published regularly, in Doddridge County,  
West Virginia, Do Hereby Certify Upon  
Oath That the Accompanying Legal Notice  
Entitled:

Floodplain Permit Application  
Permit # 13-085

was published in said paper for ..... 1  
successive weeks beginning with the issue  
of November 12 ..... 2013 and  
ending with the issue of

November 12 ..... 2013 and

that said notice contains ..... 189

WORD SPACE at ..... 115 cents a word

amounts to the sum of \$ 21.74

FOR FIRST PUBLICATION, SECOND  
PUBLICATION IS 75% OF THE FIRST  
PUBLICATION

\$ ..... 0  
and each publication thereafter

\$ ..... 21.74 TOTAL

EDITOR

Virginia Nicholson

SWORN TO AND SUBSCRIBED

BEFORE ME THIS THE 12<sup>th</sup> DAY  
OF November ..... 2013

NOTARY PUBLIC

Laura J Adams

**LEGAL ADVERTISEMENT**  
Doddridge County  
Floodplain Permit Application

Please take notice that on the 6<sup>th</sup> day of November, 2013  
EQT GATERING LLC PERMIT #13-085 filed an  
application for a Floodplain Permit to develop land  
located at or about: PROJECT LOCATION: BIG FLINT,  
GRANT DISTRICT 69 AC BRUSH RUN & 59.75 AC  
BIG FLINT DB 271/53 & 274/721; TM 06-07 & 06-13

The Application is on file with the Clerk of the County  
Court and may be inspected or copied during regular  
business hours. Any interested persons who desire to  
comment shall present the same in writing by November  
26th, 2013.

Delivered to the  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager  
11-12-21b

