Mountain Valley Pipeline Project

Docket No. CP16-10-000

Attachment DR5 Water Resources 2

March 2017

TABLE 4.3.1-2
(~~Updated February 2017~~, March 2017)

Springs and Swallets Identified within 150 feet (500 feet in karst terrain) of the Mountain Valley Project Construction Work Area a/

State / County	Name	MP	Direction / Location	Geologic Occurrence / Karst Influence? a/, b/
Mountain Valley Pipeline				
West Virginia				
Lewis c/	Unnamed spring	45.8	20 feet east	Uniontown Sandstone / No
Lewis c/	Unnamed spring	58.6	130 feet northeast	Uniontown Sandstone / No
Webster c/	Unnamed spring	81.6	132 feet west	Kanawha Sandstone / No
Webster c/	Unnamed spring	81.7	90 feet west of access road	Kanawha Sandstone / No
Webster c/	Unnamed spring	81.7	46 feet west	Kanawha Sandstone / No
Webster c/	Unnamed spring	82.4	32 feet west	Kanawha Sandstone / No
Webster c/	Unnamed spring	82.4	72 feet west	Kanawha Sandstone / No
Nicholas c/	Unnamed spring	122.9	98 feet east	Kanawha Sandstone / No
Nicholas c/	Unnamed spring	132.2	38 feet north	New River Sandstone / No
Greenbrier c/	Unnamed spring	155.3	45 feet east	Bluestone Shale / No
Summers /c	Unnamed spring	161.3	located in access road	Bluestone Shale / No
Summers d/	Unnamed Spring	173.2	215 Feet southwest; 30 feet from workspace	Pickaway Limestone / Yes
Summers d/	Swallet	173.6	425 feet southwest of workspace	Pickaway Limestone / Yes
Summers d/	Unnamed spring	173.7	260 feet south	Pickaway Limestone / Yes
Monroe d/	Unnamed spring	185.4	58 feet southwest	Bluefield Shale / No
Monroe d/	Swallet (very small)	191.9	170 feet northwest	Union Limestone / Yes
Monroe d/	Unnamed Spring	192.0	370 feet southeast of access road; 700 feet southeast of route	Union Limestone / Yes
Virginia				
Giles d/	Swallet or losing stream (dye traced to ~~Doe Creek~~Bell Spring ~~on New River~~ by the VADCR, 2002)	207.8	330+ feet south (not found during field work)	Undivided Limestone~~Martinsburg / Eggleston / Moccasin~~ / Yes

TABLE 4.3.1-2
(~~Updated February 2017~~, March 2017)

Springs and Swallets Identified within 150 feet (500 feet in karst terrain) of the Mountain Valley Project Construction Work Area a/

State / County	Name	MP	Direction / Location	Geologic Occurrence / Karst Influence? a/, b/
Giles d/	Tawneys Spring	211.1	530 feet northeast (upgradient, across creek from workspace)	Undivided limestone / Yes
Giles d/	Unnamed Spring	214.2	100 feet northwest	Knox dolostone / Yes
Giles d/	Large unnamed spring near Canoe Cave	214.9	360 feet southeast (upgradient)	Knox dolostone / Yes
Giles d/	Stream insurgence	216.2	240 feet southeast (uphill)	Undivided limestone / Yes
Giles d/	Stream insurgence	216.5	660 feet north; 150 from access road	Knox dolomite or Undivided limestone (contact zone) / Yes
Giles d/	Steele Acres Road Spring	216.6	810 feet north; 230 feet from access road	Knox dolomite or Undivided limestone (contact zone) / Yes
Giles d/	Swallet (small, in sink)	216.6	450 feet north, 95 feet from access road	Undivided limestone / Yes
Craig d/	Stream insurgence in open throat sinkhole	218.2	140 feet east	Undivided limestone / Yes
Montgomery d/	Stream insurgence	~~218.2~~221.9	~~140 feet east~~150 feet northwest	~~Undivided limestone~~Elbrook dolomite / Yes
Montgomery d/	~~Swallet~~ Sinkhole (wet weather ~~only~~swallet)	223.4	220 feet north	Elbrook dolomite / Yes
~~Montgomery d/~~	~~Unnamed spring used for cattle~~	~~225.0~~	~~within 150 feet south~~	~~Knox dolostone / Yes~~
~~Montgomery d/~~	~~Unnamed spring~~	~~225.4~~	~~500 feet south~~	~~Stones River limestone / Yes~~
~~Montgomery d/~~	~~Johnsons Cave Spring~~	~~225.5~~	~~300 feet south~~	~~Stones River limestone / Yes~~
Montgomery d/	Swallet (wet weather)	227.6	80 feet southwest	Edinburg limestone / Yes
Montgomery d/	Swallet (very small)	234.4	140 feet southwest	Elbrook dolomite / Yes
Franklin c/	Unnamed spring	248.9	80 feet north	Biotite, Granulite, Gneiss / No
Franklin c/	Unnamed spring	248.9	78 feet north	Biotite, Granulite, Gneiss / No
Franklin c/	Unnamed spring	252.9	102 feet south	Granitic Gneiss / No
Franklin c/	Unnamed spring	256.5	28 feet north	Alluvium / No

TABLE 4.3.1-2
(~~Updated February 2017~~, March 2017)

Springs and Swallets Identified within 150 feet (500 feet in karst terrain) of the Mountain Valley Project Construction Work Area a/

State / County	Name	MP	Direction / Location	Geologic Occurrence / Karst Influence? a/, b/

a/ Information on privately owned springs is not publically available for West Virginia and Virginia. Therefore, springs on private property may not be represented in this table. However, Mountain Valley is conducting direct outreach to property owners within 150 feet (500 feet in karst) of the proposed alignment to identify springs (and swallets in karst) as part of the Mountain Valley *Water Supply Identification and Testing Plan*.

b/ Specific groundwater direction and velocity information is not available for springs (or related to swallets in the karst areas). Mountain Valley's *Karst Mitigation Plan* and *Water Resources Identification and Testing Plan* include measures to identify springs and swallets from direct observation and direct property owner outreach, to ensure the protection of water resources (including those in karst terrain), and to implement additional field studies if necessary (see table 2.3-2 for the location of these plans).

c/ Holland, 2015

d/ Draper Aden Associates, 2015c and 2017

e/ McColloch, 1986

VADCR = Virginia Department of Conservation and Recreation