APPENDIX W

Cumulative Impacts – Other Projects Table

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Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	nic Scope of Analys Temporal Status	Acres Affected Construction/Operation)	Specific Data for Resources Affected	Water Resources and Market Mar	Vegetation, Wildlife and Fisheries	Land Use, Recreation, ຜີ and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Fishing Creel Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	shed (Wetzel Co MVP and EEP	unty, WV) <u>c/</u> Various active oil and gas wells located in West Virginia.	In service	3,189.0 d <u>/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/ Central West Virginia Intrastate
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	Active	18.4 <u>e/</u>	Not available	X	X	X	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/ Central West Virginia Intrastate

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **Specific AQCRs** Water Data for Associated Project ID / Cumulative Project **Description of** Resources with the Impact Temporal **Project Type** Facility a/ Association **Facilities Status** Affected Watershed FERC-Supply MVP and Approximately 8.9 Application 135.3 / Prime Χ Χ Χ Χ Χ Parkersburg EEP miles (of 36.7 miles filed with Farmland -(West Virginia) jurisdictional Header 54.1 f/ Natural Gas Project (CP total) of 30-inch-FERC in 6.8 ac Marietta Interstate 15-555) (026) diameter natural September (Ohio), **Erodible** 2015. Impacts Transportation gas pipeline loop Soils - 79.0 are expected Proiects and modifications at ac two existing to occur from Waterbodies compressor 2017 - 2019. crossed stations. Owned by Anticipated in-N/A service in late Dominion. Wetlands -2019. 0.9 ac **T&E Species** - yes Forest -119.2 ac g/ FERC-Mountaineer MVP and Approximately 60.6 Application 380.1 / Prime Х Х Χ Х Parkersburgjurisdictional **Xpress** EEP miles (of 170.7 filed with 114.0 <u>r/</u> Farmland -Marietta Project miles total) of 24 FERC in April Interstate Natural Gas 54.4 ac (CP16-357) and 36-inch **AQCR** Interstate 2016. Draft Agricultural Transportation diameter natural EIS issued by (003)- 5.7 ac Projects gas pipeline in West FERC in Wetlands -Virginia. Includes February 2017. 0.07 ac Anticipated inthree new Open Water compressor stations service in - 0.2 ac and two new October 2018. Forested regulator stations. 20.1 ac Owned by Columbia Gas.

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		Other Projects	s in the Geographic	Scope of Analys	is Considere	ed for Cumula		-			Ф.	
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Non- Jurisdictional Gathering Systems	Anderson Dehydration Station (006)	MVP	New dehydration facility operated by Williams Ohio Valley Midstream LLC	In service (2013)	5.0 <u>h/</u>	Not available	Х	Х	Х	X	Х	Parkersburg- Marietta Interstate AQCR
Non- Jurisdictional Gathering Systems	Yoho Station (007)	MVP	Modification to existing dehydration unit operated by Williams Ohio Valley Midstream LLC	In service (2013)	2.5 <u>h/</u>	Not available					Х	Parkersburg- Marietta Interstate AQCR
Non- Jurisdictional Gathering Systems	Winters Station (008)	MVP	Administrative updates operated by Stone Energy Corporation	In service (2014)	3.4 <u>h/</u>	Not available					X	Parkersburg- Marietta Interstate AQCR
Non- Jurisdictional Gathering Systems	Smithfield (012)	MVP	Turbine installation operated by Columbia Gas Transmission	NA	6.5 <u>h/</u>	Not available					X	Parkersburg- Marietta Interstate AQCR
Non- Jurisdictional Gathering Systems	Lemons (014)	MVP	Operated by Stone Energy Corporation	In service	5.0 <u>h/</u>	Not available	X	X	X	X	X	Parkersburg- Marietta Interstate AQCR
Non- Jurisdictional Gathering Systems	Weekley (015)	MVP	Operated by Stone Energy Corporation	Permit issued April 6, 2015	2.2 <u>h/</u>	Not available	Х	Х	Х	X	Х	Parkersburg- Marietta Interstate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Air Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / AQCR's Specific Project ID / Cumulative Data for Associated Project Impact **Description of** Temporal Resources with the **Project Type** Facility a/ Association Facilities Status **Affected** Watershed Mobley MVP Requires a 50-foot Would be 3.2 / 1.1 <u>s/</u> Not available Χ NA Non-Jurisdictional Interconnect long underground reviewed by Facilities service lateral power and local agencies associated telecommunications prior to with MVP service lateral construction MVP Χ NA Non-Bradshaw Requires the Would be 36.5 / 6.3 Not available extension of 9.1 Jurisdictional Compressor reviewed by <u>s/</u> miles of electric/ Facilities Station local agencies service lateral associated telecommunications prior to with MVP and possible construction and substation upgrade of MonPower's upgrade Jacksonburg substation. Also requires 400-foot long electrical line from Bradshaw Compressor Station to MLV2.

			Al	PPENDIX W (cor	tinued)							
		Other Project	s in the Geographic	Scope of Analys	sis Considere	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
		•	rison, Lewis, and Upsh	· · · -	_							
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia.	In service	11,185.1 <u>d/</u>	Not available	×	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Atlantic Coast Pipeline (CP15-554) (024)	MVP	Approximately 20.6 miles (out of 550 total) of new 42-inch natural gas and one new compressor station (out of three). Operated by Dominion Duke Energy, Piedmont Natural Gas and AGL Resources.	Application filed with FERC in September 2015. Draft EIS – December 2016. Construction anticipated for 2017 – 2019. Expected to be in service in late 2019.	311.7 / 124.7 <u>f/</u>	Prime Farmland - 93.5 ac Erodible Soils - 105.0 ac Waterbodies crossed - 30 Wetlands - 40.5 ac T&E Species - yes Forest - 137.1 ac g/ Visual Impacts to the ANST	X	X	X	X	X	81.231 Central West Virginia, 81.234 North Central West Virginia

APPENDIX W (continued)

Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Supply Header Project (CP 15-555) (026)	MVP and EEP	Approximately 0.4 mile (of 36.7 miles total) of 30-inch-diameter natural gas pipeline loop and modifications at two existing compressor stations. Owned by Dominion.	Application filed with FERC in September 2015. Impacts are expected to occur from 2017 - 2019. Anticipated inservice in late 2019.	5.8 / 2.3 <u>f/</u>	Prime Farmland - 0.3 ac Erodible Soils - 3.4 ac Waterbodies crossed - N/A Wetlands - 0.04 ac T&E Species - yes Forest - 5.1 ac	Х	X	X	Х	х	81.231 Central West Virginia, 81.70 Parkersburg (West Virginia) Marietta (Ohio), Southwest Pennsylvania Intrastate
Non- Jurisdictional Gathering Systems	Stonewall Gas Gathering Pipeline (019)	MVP	9.3 miles (of a total of 55 miles) of gathering line consisting of both 24 and 30-inch pipe that will connect to the Momentum Midstream's Appalachian Gathering System. Operated by Momentum Midstream	In service	141.2 / 56.5 <u>f</u> /	Not available	X	X	X	X	X	81.231 Central West Virginia

			Д	PPENDIX W (co	ntinued)							
		Other Project	s in the Geographic	Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
	HUC10 Watershe		- · · —		- 4-4 0 1/	N (211				.,	.,	
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	5,451.0 <u>d/</u> i <u>/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	Active	157.2 <u>e/</u>	Not available	×	X	X	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate
Mining Operations	Prep Plant (036) <u>j/</u>	EEP	Various mining permits owned by various operators located in Greene County, Pennsylvania.	In service	10.0 <u>k/</u>	Not available	Х	X	X	X		Southwest Pennsylvania Intrastate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Resources and Wetlands Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **Specific AQCRs** Water Project ID / Cumulative Data for Associated Project **Description of** Temporal Resources with the Impact **Project Type** Facility a/ Association Facilities Status Affected Watershed Refuse EEP 10.0 k/ Χ Χ Χ Χ Southwest Mining Various mining In service Not available Operations Disposal permits owned by Pennsylvania (038) j/ various operators Intrastate located in Greene AQCR County, Pennsylvania. Refuse EEP 5.0 k/ Southwest Mining Various mining In service Not available Χ Х Х Χ Operations Disposal permits owned by Pennsylvania various operators Intrastate (039) j/ located in AQCR Washington County, Pennsylvania. Mining Refuse EEP Active Bituminous In service 10.0 k/ Not available Χ Χ Х Χ Southwest Operations Processing coal mining permit -Pennsylvania Hawkins 63813210 operated Intrastate by PA Coal AQCR (043) <u>i/</u> Reclamation Inc. Surface -EEP Southwest Mining Five active surface In service 1.0 <u>k/</u> Not available Χ Х Х Х Operations Various (044) mining permits Pennsylvania under various Intrastate AQCR permit numbers and operators. Surface -EEP Four active surface Mining In service 1.0 k/ Not available Χ Х Х Х Southwest Operations Various (045) mining permits Pennsylvania under various Intrastate permit numbers and AQCR operators.

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Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation)	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Supply Header Project (CP 15-555) (026)	MVP and EEP	Approximately 10.1 miles (of 37.5 miles total) of 30-inch-diameter natural gas pipeline loop and modifications at two existing compressor stations. Owned by Dominion.	Application filed with FERC in September 2015. Impacts are expected to occur from 2017 - 2019. Anticipated inservice in late 2019.	152.7 / 61.1 <u>f/</u>	Prime Farmland - 7.6 ac Erodible Soils - 89.1 ac Waterbodies crossed - N/A Wetlands - 1.1 ac T&E Species - yes Forest - 134.5 ac	X	X	Х	X	X	81.231 Central West Virginia, 81.70 Parkersburg (West Virginia) Marietta (Ohio), Southwest Pennsylvania Intrastate
Non- Jurisdictional Facilities associated with MVP	Sherwood Interconnect service lateral	MVP	Requires a 30-foot long power and telecommunications service lateral.	Would be reviewed by local agencies prior to construction	12.0 / 1.1 <u>s/</u>	Not available		X				NA

				APPENDIX W (cor	•							
		Other Projects	s in the Geographic	Scope of Analy	sis Considere	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
			hed (Doddridge and T									
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	11,308.0 <u>d/</u> <u>i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	8.2 <u>l/</u>	Not available	X	X	X	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate

			Al	PPENDIX W (con	tinued)							
		Other Project	s in the Geographic	Scope of Analys	is Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Rover Pipeline Project (CP15-93) (027)	MVP and EEP	There would be 14.5 miles of pipeline within this watershed. The total Rover Pipeline Project would encompass 511 miles of pipeline between West Virginia and Michigan to carry transport 3.3 Bcf/d.	Certificate of Public Convenience and Necessity issued February 2, 2017. Targeted inservice goals: July 2017 (Phase I) and November 2017 (Phase II).	219.7 / 87.7 <u>f/</u>	Prime Farmland - 138.4 ac Erodible Soils - 63.7 ac Waterbodies crossed - 1 Wetlands - 3.7 ac T&E Species - yes Forest - 70.3 ac	X	Х	Х	X	X	81.231 Central West Virginia
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Mountaineer Xpress Project (CP16-357) (003)	MVP and EEP	Approximately 60.6 miles (of 170.7 miles total) of 24 and 36-inch diameter natural gas pipeline in West Virginia. Includes three new compressor stations and two new regulator stations. Owned by Columbia Gas.	Application filed with FERC in April 2016. Draft EIS issued by FERC in February 2017. Anticipated in- service in October 2018.	354.77 / 106.49 <u>r/</u>	Prime Farmland – 51.3 ac Agricultural – 5.3 ac Wetlands – 0.06 ac Open Water – 0.2 ac Forested – 18 ac	X	X	X		X	Central West Virginia Intrastate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / AQCR's **Specific** Project ID / Data for Associated Cumulative Project Impact **Description of** Temporal Resources with the **Project Type** Facility a/ Association Facilities Status Affected Watershed Stonewall MVP 10.2 miles (of a total 155.0 / Not available Χ Χ Χ Χ Χ 81.231 Central Non-In service Jurisdictional Gas of 55 miles) of 62.0 f/ West Virginia. 81.234 North Gathering Gathering gathering line Central West Systems Pipeline (019) consisting of both 24 and 30-inch pipe Virginia that will connect to the Momentum Midstream's Appalachian Gathering System. Operated by Momentum Midstream Janus MVP New compressor March 2016 8.4 h/ Central West Non-Not available Χ Χ Х Jurisdictional Compressor station operated by Virginia Gathering Station (002) EQT Gathering, Intrastate LLC, Doddridge AQCR Systems County, West Virginia. MVP 81.2 h/ Mobley Gas Gas processing Not available Not available Χ Х Χ Х Χ Parkersburg-Non-Jurisdictional Plant (013) expansion operated Marietta by MarkWest Gathering Interstate Liberty Midstream, AQCR Systems Wetzel County, West Virginia.

			A	PPENDIX W (co	ntinued)							
		Other Projects	s in the Geographic	Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Leading Creek	HUC10 Watershe		ewis, and Gilmer Cour	nties, WV) <u>c/</u>								
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	7,287.0 <u>d/</u> <u>i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	2.4 <u>e/</u>	Not available	X	X	Х	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate

			Al	PPENDIX W (con	tinued)							
		Other Projects	s in the Geographic	Scope of Analys	sis Considere	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities is and Upshur Counties	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	6,327.4 <u>d/</u> <u>i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Atlantic Coast Pipeline (CP15-554) (024)	MVP	Approximately 0.9 miles (out of 550 total) of new 42-inch natural gas, and one new compressor station (out of three). Operated by Dominion Duke Energy, Piedmont Natural Gas and AGL Resources.	Application filed with FERC in September 2015. Draft EIS – December 2016. Construction anticipated for 2017 – 2019. Expected to be in service in late 2019.	13.0 / 5.2 <u>f/</u>	Prime Farmland - 3.9 ac Erodible Soils - 4.4 ac Waterbodies crossed - 1 Wetlands - 1.7 ac T&E Species - yes Forest - 5.7 ac g/ Visual Impacts to ANST	X	×	X	X	×	81.231 Central West Virginia

			А	PPENDIX W (co	ntinued)							
		Other Projects	s in the Geographic	Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Non- Jurisdictional Gathering Systems	Stonewall Gas Gathering Pipeline (019)	MVP	5.5 miles (of a total of 55 miles) of gathering line consisting of both 24 and 30-inch pipe that will connect to the Momentum Midstream's Appalachian Gathering System. Operated by Momentum Midstream	In service	82.9 / 32.9 <u>f/</u>	Not available	Х	X	X	X	X	81.231 Central West Virginia, 81.234 North Central West Virginia
Sand Fork HUC Oil and Gas Exploration and Production	C10 Watershed (L Multiple Oil and Gas Wells (001)	ewis and Gilmer MVP and EEP	Counties, WV) <u>cl</u> Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	5,369.0 <u>d/</u> <u>i/</u>	Not available	×	X	X	X	×	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR

			A	PPENDIX W (co	ntinued)							
		Other Project	s in the Geographic	Scope of Analy	rsis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Non- Jurisdictional Gathering Systems	Stonewall Gas Gathering Pipeline (019)	MVP	6.1 miles (of a total of 55 miles) of gathering line consisting of both 24 and 30-inch pipe that will connect to the Momentum Midstream's Appalachian Gathering System. Operated by Momentum Midstream	In service	91.7 / 36.6 <u>f/</u>	Not available	х	X	Х	X	х	81.231 Central West Virginia, 81.234 North Central West Virginia
Upper Little Ka Oil and Gas Exploration and Production	nawha River HU0 Multiple Oil and Gas Wells (001)	C10 Watershed (MVP and EEP	Braxton, Webster, Lew Various active oil and gas wells located in West Virginia and Pennsylvania.	vis , Gilmer and Up In service	oshur Counties, 8,812.0 d <u>/</u> <u>i/</u>	WV) <u>c/</u> Not available	×	X	X	×	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR

			AF	PPENDIX W (con	tinued)							
		Other Project	s in the Geographic	Scope of Analys	is Consider	ed for Cumula	tive Ir	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Columbia WB Xpress Project (CP15-38) (021)	MVP	Construction of about 5 miles (out of 29 total) of various diameter pipelines, two new compressor stations, and modifications at seven existing compressor stations along Columbia's WB natural gas pipeline system.	Application filed with FERC December 2015. Construction projected to begin in the winter of 2017. Anticipated inservice in 2018.	75.8 <u>m/</u>	Upland forest - 6.5 ac Wetlands - 2.0 ac g <u>/</u>	Х	Х	X	X	Х	81.231 Central West Virginia
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Columbia Smithfield III Expansion Project (CP13-477) (032)	MVP	Construction of a new compressor station in PA, two compressor units and other facilities in WV. Operated by Columbia Gas Transmission.	In service	17.4 <u>V</u>	Developed Land - 13.3 ac Open Land - 4.1 ac	X	X	X	X	Х	81.231 Central West Virginia
Non- Jurisdictional Gathering Systems	Stonewall Gas Gathering Pipeline (019)	MVP	16.9 miles (of a total of 55 miles) of gathering line consisting of both 24 and 30-inch pipe that will connect to the Momentum Midstream's Appalachian Gathering System. Operated by Momentum Midstream	In service	255.6 / 102.2 <u>f</u> /	Not available	X	X	X	X	X	Central West Virginia Intrastate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **Specific AQCRs** Project ID / Data for Associated Cumulative Project **Description of** Temporal Resources with the Impact **Project Type** Facility a/ Association Facilities Status Affected Watershed Hastings MVP Dehydration unit In service 5.2 h/ Χ Parkersburg-Non-Not available Jurisdictional Compressor replacement (2012)Marietta Gathering Station (005) operated by Interstate Systems Dominion AQCR Transmission. MVP 5.2 h/ Non-Burnsville Flare modification/ Permit issued Not available Central West Virginia Jurisdictional (009)Emergency August 2015 Intrastate Gathering generator AQCR Systems replacement operated by Equitrans, L.P. MVP 9.9 / 1.2 s/ WB Would be Not available Х NA Non-Installation of Jurisdictional Interconnect transformer pole at reviewed by Facilities and MLV 9 MLV 9 and WB local agencies associated service lateral Interconnect and prior to 30-foot long service construction with MVP lateral Harris MVP 16.5 / 5.6 Χ NA Installation of Would be Not available Non-Jurisdictional Compressor underground reviewed by <u>s/</u> Facilities Station 240/120 volt electric local agencies associated service lateral and prior to with MVP telecommunications construction

service lateral

			,	APPENDIX W (co	ntinued)							
		Other Project	s in the Geographi	c Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
•	•		er, and Randolph Cou	· · · -								
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	69.8 <u>d/</u> i <u>/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Middle Elk Rive		shed (Braxton, W MVP and	/ebster, Nicholas, and	I Clay Counties, W In service	- -	Not available	Х	Х	Х	Х	Х	North Central
Exploration and Production	Multiple Oil and Gas Wells (001)	EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	III SEIVICE	965.4 <u>d/ i/</u>	nut avallable	^	^	^	^	^	West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Land Use, Recreation, and Visual Resources Water Resources and Wetlands Air Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / AQCRs **Specific** Data for Project ID / Cumulative **Associated** Project **Description of** Impact Temporal Resources with the Facility <u>a/</u> **Project Type** Association Facilities Status Affected Watershed Multiple MVP and New and renewed 12.0 <u>e/</u> Not available Χ Χ Χ Χ North Central Mining In service West Virginia Operations active mining EEP mining permits in permits (034) various counties in Intrastate West Virginia. AQCR/ Parkersburg-Marietta Interstate AQCR/Central West Virginia Intrastate

				PPENDIX W (cor	,							
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	s in the Geographic Description of Facilities	Temporal Status	Acres Affected Oo Sis (Construction / Operation)	Specific Data for Resources Affected	Water Resources and 60 Arithmetic Notion 11 Arithmetic Notion 11 Arithmetic Notion 11 Arithmetic Notice Not	Vegetation, Wildlife and ed Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Laurel Creek Hi Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	(Braxton and W MVP and EEP	Vebster Counties, WV) Various active oil and gas wells located in West Virginia and Pennsylvania.	<u>c/</u> In service	4.9 <u>d/</u> <u>i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	333.5 <u>e/</u>	Not available	X	X	X	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Air Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **AQCRs Specific** Project ID / Data for Associated Cumulative Project Impact **Description of** Temporal Resources with the **Project Type** Facility a/ **Association** Facilities **Status** Affected Watershed Birch River HUC10 Watershed (Braxton, Nicholas, and Webster Counties, WV) c/ Oil and Gas Multiple Oil MVP and Various active oil In service 469.7 d/ i/ Not available Х Х Χ Х North Central Exploration and Gas EEP and gas wells West Virginia Wells (001) located in West Intrastate and Production Virginia and AQCR/ Pennsylvania. Parkersburg-Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR Multiple MVP and 478.5 e/ Not available Χ Х Х Χ North Central Mining New and renewed In service Operations active mining EEP mining permits in West Virginia permits (034) various counties in Intrastate AQCR/ West Virginia. Parkersburg-Marietta Interstate AQCR/Central West Virginia Intrastate

			Α	APPENDIX W (cor	ntinued)							
		Other Projects	s in the Geographic	Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Headwaters Ga	uley River HUC1	0 Watershed (W	ebster, Nicholas, and	Pocahontas Count	ies, WV) <u>c/</u>							
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	5.0 <u>d/ i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	19.1 <u>e/</u>	Not available	X	X	Х	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Air Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **AQCRs Specific** Project ID / Data for Associated Cumulative Project Impact **Description of** Temporal Resources with the **Project Type** Facility a/ Association **Facilities Status** Affected Watershed Outlet Gauley River HUC10 Watershed (Webster, Nicholas, and Fayette Counties, WV) c/ Oil and Gas Multiple Oil MVP and Various active oil In service 1,660.1 d/ Not available Х Х Х North Central Exploration and Gas EEP and gas wells West Virginia Wells (001) located in West Intrastate and Production Virginia and AQCR/ Pennsylvania. Parkersburg-Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR Multiple MVP and 1,644.4 e/ Not available Χ Х Χ North Central Mining New and renewed In service Operations active mining EEP mining permits in West Virginia permits (034) various counties in Intrastate AQCR/ West Virginia. Parkersburg-Marietta Interstate AQCR/Central West Virginia Intrastate

			Д	PPENDIX W (cor	ntinued)							
		Other Project	s in the Geographic	Scope of Analy	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Hominy Creek	HUC10 Watershe	•	Greenbrier Counties,	WV <u>) c/</u>								
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	71.7 <u>e/</u>	Not available	X	X	Х	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate
		•	ette, Greenbrier, and		· · · · · —	Not ovelleble	V	V	V	V	V	Namba Cambual
Oil and Gas Exploration and Production	Multiple Oil and Gas Wells (001)	MVP and EEP	Various active oil and gas wells located in West Virginia and Pennsylvania.	In service	5.0 <u>d/ i/</u>	Not available	X	X	X	X	X	North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate/ Southwest Pennsylvania Intrastate AQCR

			A	PPENDIX W (cor	ntinued)							
		Other Projects	s in the Geographic	Scope of Analy	sis Considere	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Mining Operations Glade Creek-N	Multiple active mining permits (034)	MVP and EEP Watershed (Fave	New and renewed mining permits in various counties in West Virginia.	In service	1,671.8 e <u>/</u> V) c /	Not available	Х	Х	X	Х		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate
Mining Operations	Multiple active mining permits (034)	MVP and EEP	New and renewed mining permits in various counties in West Virginia.	In service	8.8 <u>e/</u>	Not available	X	X	X	X		North Central West Virginia Intrastate AQCR/ Parkersburg- Marietta Interstate AQCR/Central West Virginia Intrastate
No other project	ts identified IUC10 Watershed		(Greenbrier, Summer		unties, WV <u>) c/</u>							
No other project												
		atershed (Monro	e County, WV and Gil	es and Mercer Cou	ınties, WV) <u>c/</u>							
No other project			o									
_		0 Watershed (Mo	onroe County, WV and	Giles and Craig (counties, VA) <u>c/</u>							
No other project	ts identified											

			Al	PPENDIX W (con	tinued)							
		Other Projects	s in the Geographic	Scope of Analys	is Considere	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
		rshed (Craig, Ro	panoke, and Montgome	ery Counties, VA) <u>c</u>	<u>:/</u>							
No other projects												
North Fork Roa	noke River HUC	10 Watershed (N	lontgomery and Roand	oke Counties, VA)	<u>c/</u>							
Transportation / Roadway Projects	Elliston/ Ironto Connector (048)	MVP	Resurfacing of Route 603.	Construction completed Summer 2016.	6.1 n <u>/</u>	Not available						Valley of Virginia Intrastate AQCR
Mason Creek-R	oanoke River HU	JC10 Watershed	(Montgomery, Roanol	ke, Salem, and Roa	noke City Cou	nties, VA) c/						
No other projects	s identified				•	· / _						
South Fork Roa	anoke River HUC	10 Watershed (N	Montgomery, Roanoke,	and Floyd Countie	es, VA) c/							
Transportation / Roadway Projects	Elliston/ Ironto Connector (048)	MVP	Resurfacing of Route 603.	Construction completed Summer 2016.	6.1 n <u>/</u>	Not available						Valley of Virginia Intrastate AQCR
Transportation / Roadway Projects	I-81 Bridge Replacement Montgomery/ Pulaski County Line (047)	MVP	Replacement of I-81 bridges over the New River and the Route 232 bridge over I-81.	Construction anticipated to begin in early 2017 and completed in late 2020.	0.2 n <u>/</u>	Not available	Х	X	Х	X		Valley of Virginia Intrastate AQCR
Upper Blackwa	ter River HUC10	Watershed (Fran	nklin County, VA) <u>c/</u>									
No other projects	s identified											
Lower Blackwa	ter River HUC10	Watershed (Frai	nklin and Pittsylvania C	Counties, VA) <u>c/</u>								
Other Energy Projects	Smith Mountain Lakes/ Leesville Project (P- 2210) (096)	MVP	Existing hydro- power facility operated by Appalachian Power	In service. Relicensed by FERC in 2009.	7,043.0 o <u>/</u>	Not available	Х	X	Х	X		Central Virginia Intrastate AQCR

			AF	PPENDIX W (con	tinued)							
		Other Projects	s in the Geographic	Scope of Analys	is Consider	ed for Cumula	tive Ir	npact	ts			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Utility Projects	West Virginia Water Authority	MVP	Design work underway for a water pipeline that will connect the Western Virginia Water Authority System to the Rocky Mount Water System	Not available (planning stages – may coincide with the timing of MVP)	Not available	Not available	X	X				Not available
Upper Pigg Riv	er HUC10 Waters	shed (Franklin ar	d Pittsylvania Countie	s, VA) <u>c/</u>								
No other project	s identified											
Lower Pigg Riv	er HUC10 Water	shed (Franklin ar	nd Pittsylvania Countie	s, VA) <u>c/</u>								
Other Energy Projects	Smith Mountain Lakes/ Leesville Project (P-2210) (096)	MVP	Existing hydro- power facility operated by Appalachian Power	In service. Relicensed by FERC in 2009.	158.0 <u>o/</u>	Not available	X	X	Х	X		Central Virginia Intrastate AQCR

			Al	PPENDIX W (con	tinued)							
		Other Projects	s in the Geographic	Scope of Analys	is Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Stinking River-	Banister River HI		I (Pittsylvania and Hali	fax Counties, VA) <u>c</u>	_							
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Virginia Southside Expansion (CP13-30) (033)	MVP	Approximately 10 miles (out of 100 miles total) of new 24-inch diameter pipeline from Transco mainline in Pittsylvania County, Virginia and into Halifax, Charlotte, and Mecklenburg. Terminates in Brunswick County, Virginia. Operated by Transco.	In service	75.8 <u>p/</u>	Agricultural land - 8.63 ac Forested - 24.1 ac Open Land - 35.2 ac Wetlands - 2.6 Open Water - 0.2 ac g/	X	X	X	X	X	81.143 Central Virginia Intrastate
Transportation / Roadway Projects	U.S. Route 29 South (049)	MVP	Replacement of structurally deficient bridge.	Started in April 2016. Estimated completion date: late June 2017.	4.1 <u>f/</u>	Not available	X	X	X	X		Central Virginia Intrastate AQCR
Cherrystone Cr	eek-Banister Riv	er HUC10 Water	shed (Pittsylvania Coເ	unty, VA) <u>c/</u>								
Non- Jurisdictional Facilities associated with MVP	Transco Interconnect and MLV 36	Requires a 1100-foot long abovegroun d telecommuni cations service lateral	MVP	Would be reviewed by local agencies prior to construction	41.0 / 2.5 <u>s/</u>	Not available		X				NA

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Water Resources and Wetlands Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **Specific AQCRs** Data for Associated Project ID / Cumulative Project **Description of** Resources with the Impact Temporal **Project Type** Facility a/ Association Facilities **Status** Affected Watershed South Fork Tenmile Creek HUC10 Watershed (Greene County, PA) c/ Transportation 12-15-GR2 EEP Guardrail Completed 1.0 <u>k/</u> Not available Southwest / Roadway Greene (082) Pennsylvania improvements at Intrastate Proiects various locations AQCR U.S. 19 EEP Transportation Intersection Under 1.0 <u>k/</u> Not available Southwest Pennsylvania / Roadway Safety improvements Construction Projects Improvement Intrastate s (083) AQCR EEP Transportation 14-14-DIST-Resurfacing Completed 1.0 k/ Not available Southwest / Roadway SI12 (084) Pennsylvania Intrastate Projects AQCR EEP 1214-DIST-Southwest Transportation Resurfacing Completed 0.5 <u>k/</u> Not available / Roadway SI12 (092) Pennsylvania Intrastate Projects **AQCR** FERC-EEP Upgrade of Crayne Southwest Supply Application Not Not available jurisdictional Header Compressor filed with applicable Pennsylvania Natural Gas Project (CP Station. Owned by FERC in Intrastate Interstate 15-555) (026) Dominion. September AQCR 2015. Impacts Transportation Projects are expected to occur from 2017 - 2019. Anticipated inservice in late 2019.

			A	PPENDIX W (cor	tinued)							
		Other Project	s in the Geographic	Scope of Analys	sis Consider	ed for Cumula	tive In	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
ŭ		, ,	eny, Washington, West	, ,	•	<i>′</i> —						
Mining Operations	Government Funded Construction Contracts (GFCC) - McHugh Res Estates (035)	EEP	Active Bituminous coal mining permit - 02-03-02 operated by Collier Land and Coal Development LP	In service	50.0 <u>k/</u>	Not available	X	X	X	X		Southwest Pennsylvania Intrastate AQCR
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Supply Header Project (CP 15-555) (026)	EEP	Upgrade of JB Tonkin Compressor Station. Owned by Dominion.	Application filed with FERC in September 2015. Impacts are expected to occur from 2017 - 2019. Anticipated inservice in late 2019.	Not applicable	Not available					X	Southwest Pennsylvania Intrastate AQCR
Mining Operations	Prep Plant - Champion/C RD Prep Site (037) j/	EEP	Active Bituminous coal mining permit - 63831306 operated by Champion Proc Inc.	In service	10.0 <u>k/</u>	Not available	X	X	X	X		Southwest Pennsylvania Intrastate AQCR
Mining Operations	Refuse Disposal (039) <u>i/</u>	EEP	Various mining permits owned by various operators located in Washington County, Pennsylvania.	In service	5.0 <u>k/</u>	Not available	Х	X	X	X		Southwest Pennsylvania Intrastate AQCR

APPENDIX W (continued)

Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Mining Operations	Refuse Processing - Harmar Site (040) <u>i/</u>	EEP	Active Bituminous coal mining permit - 02860201 operated by IP Harmar Holdings LLC	In service	10.0 <u>k/</u>	Not available	Х	Х	Х	X		Southwest Pennsylvania Intrastate AQCR
Mining Operations	Refuse Processing - Retention Pile (041) <u>i/</u>	EEP	Active Bituminous coal mining permit - 02020201 operated by Robindale Energy SVC Inc.	In service	10.0 <u>k/</u>	Not available	Х	X	X	X		Southwest Pennsylvania Intrastate AQCR
Mining Operations	Refuse Processing - Phoenix (042) j/	EEP	Active Bituminous coal mining permit - 63070202, operated by Boca Coal Inc.	In service	10.0 <u>k/</u>	Not available	X	X	Х	X		Southwest Pennsylvania Intrastate AQCR
Mining Operations	Surface - Various (044) <u>j/</u>	EEP	Five active surface mining permits under various permit numbers	In service	1.0 <u>k/</u>	Not available	X	X	Х	X		Southwest Pennsylvania Intrastate AQCR
Mining Operations	Surface - Various (046) j <u>/</u>	EEP	Eighteen active surface mining permits under various permit numbers	In service	1.0 <u>k/</u>	Not available	Х	X	X	X		Southwest Pennsylvania Intrastate AQCR
Non- Jurisdictional Gathering Systems	Applegate Gathering System (0017)	EEP	Expansion of existing system, which could include construction of gathering pipelines and compression stations.	Preliminary planning stages	48.0 <u>q/</u>	Not available	X	Х	X	X	X	Southwest Pennsylvania Intrastate AQCR

			Al	PPENDIX W (con	tinued)							
		Other Project	s in the Geographic	Scope of Analys	sis Consider	ed for Cumula	tive Ir	npact	s			
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Non- Jurisdictional Gathering Systems	Mariner East Pipeline (017)	EEP	Delivery system designed to deliver from Western Pennsylvania to the Marcus Hook facility. Current capacity is 70,000 barrels per day.	In service	309.0 <u>q/</u>	Not available	X	X	X	X	X	Southwest Pennsylvania Intrastate AQCR
Non- Jurisdictional Gathering Systems	Mariner East 2 Pipeline (018)	EEP	Expansion of existing system to increase capacity to 354,000 barrels per day (350 miles).	Expected to begin early spring 2017 and completed by the end of the third quarter of 2017.	2,121.0 <u>q/</u>	Not available	X	X	X	X	X	Southwest Pennsylvania Intrastate AQCR
Transportation / Roadway Projects	Bridge Demand Mtc 7, 2015 (072)	EEP	Bridge preservation activities	Completed	1.0 <u>k/</u>	Not available						Southwest Pennsylvania Intrastate AQCR
Transportation / Roadway Projects	Bridge Wash 2016 (075)	EEP	Bridge preservation activities	Completed	1.0 <u>k/</u>	Not available						Southwest Pennsylvania Intrastate AQCR
Transportation / Roadway Projects	SR3098/Glas s Run Bridge (076)	EEP	Bridge replacement	Under construction - estimated completion date December 2019	1.0 <u>k/</u>	Not available	Х	X	Х	X		Southwest Pennsylvania Intrastate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts Vegetation, Wildlife and Fisheries Resources and Wetlands Land Use, Recreation, and Visual Resources Quality and Noise **Cultural Resources** Acres Affected (Construction / Operation) <u>b/</u> Airshed(s) / **Specific AQCRs** Water Data for Associated Project ID / Cumulative Project Description of Resources with the Impact Temporal **Project Type** Facility a/ Association Facilities **Status** Affected Watershed Glenwood EEP Bridge rehabilitation 1.0 k/ Χ Χ Χ Χ Transportation Under Not available Southwest / Roadway Bridge construction -Pennsylvania Ramps (077) Projects estimated Intrastate completion AQCR date December 2017 1.0 <u>k/</u> Transportation Homeville EEP Bridge rehabilitation Under Not available Χ Χ Х Χ Southwest / Roadway Road Viaduct construction Pennsylvania Intrastate Projects TS05 (079) AQCR EEP Transportation WashCo Resurfacing Under 1.0 k/ Not available Southwest / Roadway Surface construction Pennsylvania **Projects** Impvmt-14 Intrastate (086)AQCR EEP PΑ Southwest Transportation Bridge replacement Under 1.0 <u>k/</u> Not available Х Χ Х Х / Roadway 481/Pigeon construction Pennsylvania Creek Bridge Intrastate Projects (089)AQCR 12-15-S14 EEP Transportation Resurfacing Completed 1.0 k/ Not available Southwest / Roadway SIP Pennsylvania Intrastate **Projects** Washington (090)AQCR Transportation 12-15-GR4 EEP Guardrail Under 1.0 k/ Southwest Not available / Roadway Washington improvements at construction Pennsylvania Projects (091)various locations Intrastate AQCR Transportation 1214-DIST-EEP Southwest Resurfacing Completed 0.5 <u>k/</u> Not available / Roadway SI12 (092) Pennsylvania Intrastate Projects

AQCR

			AF	PPENDIX W (co	ntinued)							
Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts												
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Commercial/ Residential and Other Development Projects	Cool Valley Mixed Use Development (093)	EEP	911-acre mixed use development in Cecil township – 1,400 new homes, 2.3 million square feet of office and retail space.	Permitting in process	911.0 <u>f/</u>	Not available	Х	Х	Х	Х		Southwest Pennsylvania Intrastate AQCR
Commercial/ Residential and Other Development Projects	Park Place at the Meadowlands , Phase II (094)	EEP	44 acres of mixed use property in North and South Strabane townships	Completed	44.0 <u>f/</u>	Not available	X	X	X	X		Southwest Pennsylvania Intrastate AQCR
Steubenville-W	eirton-Wheeling	Interstate AQCF	R (West Virginia and Oh	io) <u>c/</u>								
Other Energy Projects	ESC Brooke County Power I power plant	MVP and EEP	ESC proposes to construct, install, and operate a new natural gas and ethane fueled combined-cycle combustion turbine electric power plant.	Air permit application filed with WVDEP in March 2016.	Not applicable (not in common HUC 10 watershed)	Not available					X	Steubenville- Weirton- Wheeling Interstate AQCR
Non- Jurisdictional Gathering Systems	Sunoco Pipeline Follansbee Station (Mariner East 2)	MVP and EEP	Sunoco is proposing to construct, operate, and support a maintenance station in Brooke County, WV	Air permit application filed with WVDEP in December 2015.	Not applicable (not in common HUC 10 watershed)	Not available					X	Steubenville- Weirton- Wheeling Interstate AQCR

APPENDIX W (continued) Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed
Industrial	Arcelor Mittal Weirton LLC Steel Finishing Facility	MVP and EEP	Arcelor Mittal Weirton, LLC proposes the installation of a new hydrochloric acid tank at their steel finishing facility and hydrogen plan.	Application for modification to December 2014 Title V permit filed in April 2015.	Not applicable (not in common HUC10 watershed)	Not available					X	Steubenville- Weirton- Wheeling Interstate AQCR
Other Energy Projects	Moundsville Power LLC	MVP and EEP	Moundsville Power LLC proposes the construction of a 549 MW natural gas fired combined cycle power plant.	Permit issued by WVDEP November 2014	Not applicable (not in common HUC10 watershed)	Not available					X	Steubenville- Weirton- Wheeling Interstate AQCR
FERC- jurisdictional Natural Gas Interstate Transportation Projects	Nexus Gas Transmission Project (CP16-22) - Hanoverton Compressor Station	MVP and EEP	Nexus and Texas Eastern request authorization to construct, own, and operate a new natural gas pipeline system in Ohio and Michigan. Construction of Hanoverton Compressor Station in Columbiana County, OH.	Draft EIS issued by FERC July 2016. Estimated completion by 2017.	Not applicable (not in common HUC10 watershed)	52,000 hp new compressor station					X	Steubenville- Weirton- Wheeling Interstate AQCR

APPENDIX W (continued)													
	Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts												
Project Type	Project ID / Project Facility <u>a/</u>	Cumulative Impact Association	Description of Facilities	Temporal Status	Acres Affected (Construction / Operation) <u>b/</u>	Specific Data for Resources Affected	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources Air Quality and Noise	Airshed(s) / AQCRs Associated with the Watershed		

- Contains ID related to projects illustrated on Figures 4.13-1 and 4.13-2.
- b/ Acres affected includes the acreage of project that occurs within the watershed and not just the county shared with the MVP Project.
- c/ Counties/states identified in bold indicate counties that either the MVP Project or the EEP would cross. County/state names that are not bolded are located within the subject watershed or AQCR, but are not crossed by the MVP Project or the EEP.
- d/ Includes all active wells located in the listed watershed as of June 22, 2016 according to WVDEP Office of Oil and Gas (http://tagis.dep.wv.gov/ooq/).
- e/ Includes coal (underground and surface), prospect, and quarry permits in West Virginia as of December 2015 (https://apps.dep.wv.gov/WebApp/ dep/search/Permits/OMR/Permit details).
- f/ Affected acres based on CP16-10 and CP16-13.
- g/ Terrestrial and aquatic impacts estimated based on scaling which assumes that subject project resources and impacts are evenly distributed within the affected watershed.
- h/ Estimated acreage based on use of Google Earth and an assumed 50-ft right-of-way for gathering systems.
- i/ Includes new and renewed permits for gas, oil, combined gas and oil, and coalbed methane wells from January 1, 2010 December 14, 2015 (http://www.depreportingservices.state.pa.us/ReportServer/Pages/ReportViewer.aspx?/Oil Gas/Permits Issued Detail).
- Pennsylvania Active Bituminous Coal Mining Permits December 2015 information obtained from PADEP Bureau of Mining Programs Bituminous Coal Mining Reports (http://www.dep.pa.gov/Business/Land/Mining/BureauofMiningPrograms/Reports/BituminousCoal/Pages/default.aspx).
- k/ Assumed acreage based on historical knowledge of the typical size of similar projects.
- <u>I/</u> Acreage obtained from EA (CP13-477; Accession No. 20131029-4012).
- m/ Estimated acreage based on CP15-38 filing (Accession No. 20151230-5391).
- n/ Affected acreages obtained from VADOT website (http://www.virginiadot.org/projects/).
- O/ Acreages occurring in watershed obtained from Google Earth using coordinate data obtained from Smith Mountain Project website (http://www.smithmtn.com/about/LeesvilleLake.aspx). This is the area of surface water located in the watershed. The project does not contribute to ground disturbance, therefore not counted as an impact to the watershed.
- p/ Estimated acreage based on CP13-30 filing.
- q/ Estimated acreage based on assumed 50-ft right-of-way for gathering systems.
- r/ Affected acres based on CP16-357.
- / Acreage reported is for the entire above-ground facility and includes the impact acreages of the non-jurisdictional facilities.

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