



Equitrans Expansion Project

Docket No. PF15-22

**Resource Report 8 – Land Use, Recreation
and Aesthetics**

Draft

July 2015

Equitrans Expansion Project Draft Resource Report 8 – Land Use, Recreation and Aesthetics

Resource Report 8 Filing Requirements	
Information	Location in Resource Report
Minimum Filing Requirements	
1. Classify and quantify land use affected by: (§380.12(j)(1))	Section 8.1
a. Pipeline construction and permanent right-of-way (§380.12(j)(1));	Table 8.1-3, Section 8.1.1.1
b. Extra work/staging areas (§380.12(j)(1));	Table 8.1-3, Section 8.1.1.3
c. Access roads (§380.12(j)(1));	Table 8.1-3, Section 8.1.1.5
d. Pipe and contractor yards (§380.12(j)(1)); and	Table 8.1-3, Section 8.1.1.6
e. Aboveground facilities (§380.12(j)(1)). <ul style="list-style-type: none"> • For aboveground facilities, provide the acreage affected by construction and operation, and the acreage leased or purchased; and describe the use of the land not required for operation. 	Table 8.1-3, Section 8.1.2
2. Identify by milepost all locations where the pipeline right-of-way would at least partially coincide with existing right-of-way, where it would be adjacent to existing right-of-way, and where it would be outside of existing right-of-way. (§380.12 (j)(1))	Section 8.1.1.2, Resource Report 1 Table 1.3-2
3. Provide detailed typical construction right-of-way cross-section diagrams showing information such as widths and relative locations of existing right-of-way, new permanent right-of-way, and temporary construction right-of-way. (§380.12 (j)(1))	Resource Report 1, Appendix 1-C
4. Summarize the total acreage of land affected by construction and operation of the project. (§380.12 (j)(1)) <ul style="list-style-type: none"> • This applies to offshore as well. 	Table 8.1-3
5. Identify by milepost all planned residential or commercial/business development and the time frame for construction. (§380.12 (j)(3)) <ul style="list-style-type: none"> • Identify all planned development crossed or within 0.25 mile of proposed facilities. 	Section 8.2.1
6. Identify by milepost special land uses (e.g., maple sugar stands, specialty crops, natural areas, national and state forests, conservation land, etc.). (§380.12 (j)(4)) <ul style="list-style-type: none"> • This applies to the offshore as well, where it may include oyster and other shellfish beds, special anchoring or lightering areas, and shipping lanes. 	Section 8.1.3.6
7. Identify by beginning milepost and length of crossing all land administered by Federal, state, or local agencies, or private conservation organizations. (§380.12(j)(4)) <ul style="list-style-type: none"> • This applies to the offshore as well. 	Section 8.3
8. Identify by milepost all natural, recreational, or scenic areas and all registered natural landmarks crossed by the project. (§380.12(j)(4&6)) <ul style="list-style-type: none"> • This applies to the offshore as well. • Identify areas within 0.25 mile of any proposed facility. 	Section 8.3

Resource Report 8 Filing Requirements	
Information	Location in Resource Report
9. Identify all facilities that would be within designated coastal zone management areas. Provide a consistency determination or evidence that a request for a consistency determination has been filed with the appropriate state agency. (§380.12(j)(4&7))	Section 8.3.3
10. Identify by milepost all residence that would be within 50 feet of the construction right-of-way or extra work area. (§380.12(j)(5))	Table 8.2-1, Section 8.2.2
11. Identify all designated or proposed candidate National or State Wild and Scenic Rivers crossed by the project. (§380.12(j)(6))	Section 8.3
12. Describe any measures to visually screen aboveground facilities, such as compressor stations. (§380.12(j)(11))	Section 8.4
13. Demonstrate that applications for right-of-way or other proposed land use have been or soon will be filed with Federal land-managing agencies with jurisdiction over land that would be affected by the project. (§380.12 (j)(12))	Section 8.5
Additional Information Often Missing and Resulting in Data Requests	
Identify all buildings within 50 feet of the construction right-of-way or extra work areas.	Table 8.2-1, Section 8.2.2
Describe the management and use of all public lands that would be crossed.	Section 8.3
Provide a list of landowners by milepost or tract number that corresponds to information on alignment sheets.	Resource Report 1, Appendix 1-H (Privileged)
Provide a site-specific construction plan for residences within 50 feet of construction.	Will be provided in final Resource Report 8

**DRAFT RESOURCE REPORT 8
 LAND USE, RECREATION AND AESTHETICS
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**DRAFT RESOURCE REPORT 8
 LAND USE, RECREATION AND AESTHETICS
 LIST OF ACRONYMS AND ABBREVIATIONS**

ATWS	additional temporary workspace
BLM	Bureau of Land Management
CRP	Conservation Reserve Program
Dominion	Dominion Transmission, Inc.
ESCGP-2	Erosion and Sediment Control General Permit
Equitrans	Equitrans, L.P.
FERC	Federal Energy Regulatory Commission
FSA	Farm Service Agency
GIS	Geographic Information Systems
HDD	horizontal directional drilling
INGAA	Interstate Natural Gas Association of America
MLV	mainline valve
MP	milepost
MVP	Mountain Valley Pipeline
NLCD	National Land Cover Database
NOP	National Organic Program
Plan	FERC's May 2013 version of the <i>Upland Erosion Control, Revegetation, and Maintenance Plan</i>
Procedures	FERC's May 2013 version of the <i>Wetland and Waterbody Construction and Mitigation Procedures</i>
Project	Equitrans Expansion Project
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VRM	Visual Resource Management

DRAFT RESOURCE REPORT 8 LAND USE, RECREATION AND AESTHETICS

Introduction

Equitrans, L.P. (Equitrans) is seeking a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act authorizing it to construct and operate the proposed Equitrans Expansion Project (Project) located in three counties in Pennsylvania and one county in West Virginia. In addition, Equitrans is seeking authorization to abandon an existing compressor station (which will be replaced by a new compressor station) pursuant to Section 7(b) of the Natural Gas Act. Equitrans plans to construct approximately 7.4 miles of pipeline (at two separate locations), a new compressor station, an interconnect with the proposed Mountain Valley Pipeline (MVP), and ancillary facilities to provide timely, cost-effective access to the growing demand for natural gas for use by local distribution companies, industrial users, and power generation in northeastern, Mid-Atlantic, and southeastern markets, as well as potential markets in the Appalachian region.

The Project is designed to transport natural gas from the northern portion of the Equitrans system south to the interconnection with MVP, as well as to existing interconnects with Texas Eastern Transmission, LP (Texas Eastern) and Dominion Transmission, Inc. (Dominion). The Project will provide shippers with the flexibility to transport additional natural gas produced in the central Appalachian Basin to meet the growing demand by local distribution companies, industrial users, and power generation facilities located in local, northeastern, Mid-Atlantic, and southeastern regions of the United States. The Project will also increase system reliability, efficiency, and operational flexibility for the benefit of all Equitrans customers. The Project is designed to add up to 600,000 dekatherms per day of north-south firm capacity on the Equitrans system.

Resource Report 1 provides a complete summary of the Project facilities (see Tables 1.2-1 and 1.2-2) and a general location map of the Project facilities (Figure 1.2-1).

Environmental Resource Report Organization

Resource Report 8 was prepared according to the FERC *Guidance Manual for Environmental Report Preparation* (August 2002). Section 8.1 characterizes the existing land uses affected by the Project, and quantifies and describes potential impacts from the Project. Section 8.2 identifies public lands and designated recreation or other special use areas that may be affected by the Project. Section 8.3 discusses potential visual impacts of the facilities. Section 8.4 provides a listing of the sources used to prepare this report. Section 8.5 summarizes any land use permits required by the Project. Consultations and contacts with federal, state, and local agencies are discussed in Resource Report 1, General Project Description.

8.1 LAND USE

All proposed facilities are shown on U.S. Geological Survey (USGS) topographic maps in Resource Report 1 (Appendix 1-B). Land uses were classified along the Project routes and in locations designated for associated facilities using interpretation of aerial photography, USGS quadrangle maps, and Geographic Information Systems (GIS) data. GIS data from the National Land Cover Database (NLCD) (Jin et al. 2013) were used to classify land types along the Project route and in locations designated for associated facilities into the following categories based on predominant land uses:

- Agricultural Land – cultivated land (NLCD categories Pasture/Hay and Cultivated Crops);
- Forest/Woodland – tracts of upland or wetland forest or woodland (NLCD categories Deciduous Forest and Woody Wetlands);
- Open Land – non-forested lands used for open space or pasture. May include utility right-of-ways, open fields, vacant lands, herbaceous and scrub upland, non-forested wetlands, emergent wetland, scrub-shrub wetlands, golf courses, and municipal land (NLCD categories Developed/Open Space and Grassland/Herbaceous);
- Residential Land – existing developed residential areas and planned residential developments. This may include large developments, low, medium, and high density residential neighborhoods, urban/suburban residential, multi-family residences, ethnic villages, residentially zoned areas that have been developed or short segments of the route at road crossings with homes near the route alignment (NLCD categories Developed/Low-Intensity and Developed/Medium-Intensity);
- Industrial/Commercial Land – manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas facilities, developed areas, roads, railroads and railroad yards, and commercial or retail facilities (NLCD category Developed/High-Intensity); and
- Open Water – water crossings greater than 100 feet wide and streams visible on aerial photography but less than 100 feet in width (NLCD category Open Water).

Table 1.3-1 in Resource Report 1, General Project Description, provides a summary of overall land impacts that will be affected by construction and operation of the proposed facilities.

8.1.1 Pipeline Facilities

8.1.1.1 Construction Right-of-Way and Permanent Right-of-Way

A construction right-of-way and permanent right-of-way are required to ensure safety during construction and operation of the pipeline. Construction and permanent right-of-ways for the H-316, H-318, M-80, and H-158 segments of the pipeline vary because these pipeline sections have different proposed diameters. Details for the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8. Construction and permanent right-of-ways required for each pipeline section are provided in Table 8.1-1.

Pipeline Segment	Pipeline Diameter (inches)	Construction Right-of-Way Required (feet)	Permanent Maintained Right-of-Way Required (feet)
M-80	6	100 <u>a/</u>	50 <u>b/</u>
H-158	12	100 <u>a/</u>	50 <u>b/</u>
H-316	30	110 <u>c/</u>	50
H-318	20	100	50
H-305 <u>d/</u>	24	TBD	TBD
H-319 <u>d/</u>	16	TBD	TBD

a/ The M-80 and H-158 segments will require a single, collocated 100-foot-wide construction right-of-way
b/ The M-80 and H-158 segments will require a single, collocated, 50-foot-wide permanent right-of-way
c/ Equitrans will be requesting a 125-foot construction right-of-way.
d/ Details for the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8.

During the construction phase, the additional width provided by the construction right-of-way will allow for the safe travel of vehicles and equipment, stockpiling of materials excavated during trenching, and topsoil segregation in agricultural areas. These construction right-of-way widths are consistent with recommendations provided by the Interstate Natural Gas Association of America (INGAA) for these pipeline diameters. Also per INGAA recommendations, the construction right-of-way may be increased or decreased for special conditions given consideration of terrain, soils, construction techniques, and other factors that affect construction safety (Gulf Interstate Engineering 1999).

Land uses crossed by the proposed pipeline sections are provided in Table 8.1-2. Based on the right-of-way widths provided in Table 8.1-1, temporary and permanent land use impacts were calculated in Table 8.1-3 for all sections of pipeline and other aboveground facilities.

The construction right-of-way will be cleared of all vegetation to facilitate movement of construction vehicles and to provide enough space for construction activities and stockpiling. Impacts to construction right-of-way areas excluded from the permanent right-of-way are considered temporary (short-term) in nature. After construction, the remainder of the construction right-of-way that is not included in the permanent right-of-way will be allowed to return to pre-construction conditions. Such impacts in most construction right-of-way areas will recover within one year, whereas some impacts will take several years to fully recover. Equitrans will implement applicable best management practices and mitigation measures specified in the FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (May 2013) (Procedures), including reduction of the construction right-of-way through wetland areas to 75 feet to minimize impacts. Wetland locations were identified in the field and are discussed in Section 2.3.1 of Resource Report 2.

Table 8.1-2

Land Uses Crossed by Proposed Pipeline Sections a/

Facilities	County	Agricultural Land <u>b/</u>		Forest/Woodland <u>c/</u>		Open Land <u>d/</u>		Residential Land <u>e/</u>		Industrial/Commercial Land <u>f/</u>		Open Water <u>g/</u>		Total
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles
M-80/H-158 Pipelines	Greene County, PA	0.05	20.69	0.13	59.28	0.04	20.02	0.00	0.00	0.00	0.00	0.00	0.00	0.22
H-316 Pipeline	Greene County, PA	1.44	48.19	1.29	43.24	0.23	7.80	0.02	0.77	0.00	0.00	0.00	0.00	2.99
H-318 Pipeline	Washington, PA	0.28	23.02	0.53	43.48	0.25	20.54	0.07	5.94	0.02	1.82	0.06	5.20	1.21
H-318 Pipeline	Allegheny, PA	0.85	28.20	1.55	51.57	0.46	15.39	0.04	1.30	0.00	0.00	0.11	3.54	3.00
H-305 Pipeline	Greene County, PA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
H-319 Pipeline	Wetzel County, WV	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
All Pipeline	Total	2.61	35.17	3.49	47.12	0.99	13.33	0.13	1.81	0.02	0.30	0.17	2.28	7.42

Source: USGS NLCD data (Jin et al. 2013)

a/ Details for the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8.

b/ Cultivated land (NLCD categories Pasture/Hay and Cultivated Crops);

c/ Tracts of upland or wetland forest or woodland (NLCD categories Deciduous Forest and Woody Wetlands)

d/ Non-forested lands used for open space or pasture. May include utility right-of-ways, open fields, vacant lands, herbaceous and scrub upland, non-forested wetlands, emergent wetland, scrub-shrub wetlands, golf courses, and municipal land (NLCD categories Developed/Open Space and Grassland/Herbaceous)

e/ Existing developed residential areas and planned residential developments. This may include large developments; low-, medium-, and high-density residential neighborhoods; urban/suburban residential; multi-family residences; ethnic villages; residentially zoned areas that have been developed; or short segments of the route at road crossings with homes near the route alignment (NLCD categories Developed/Low-Intensity and Developed/Medium-Intensity).

f/ Manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas facilities, developed areas, roads, railroads and railroad yards, and commercial or retail facilities (NLCD category Developed/High-Intensity)

g/ Water crossings greater than 100 feet wide and streams visible on aerial photography but less than 100 feet in width (NLCD category Open Water)

TBD=to be determined based on ongoing analysis. Will be provided in final Resource Report 8 to FERC.

Table 8.1-3

Acres Affected by Construction and Operation of Facilities ^{a/}

Facilities	Agricultural Land ^{b/}		Forest/ Woodland ^{c/}		Open Land ^{d/}		Residential Land ^{e/}		Industrial/ Commercial Land ^{f/}		Open Water ^{g/}		Total	
	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Pipeline Sections														
M-80/H-158 Pipeline	0.33	0.13	1.61	0.79	0.93	0.48	0.00	0.00	0.00	0.00	0.00	0.00	2.87	1.39
H-316 Pipeline	18.35	8.64	18.09	7.95	3.08	1.38	0.47	0.16	0.00	0.00	0.00	0.00	39.98	18.12
H-318 Pipeline	14.40	6.95	24.68	12.48	8.44	4.29	1.25	0.64	0.27	0.13	2.05	1.03	51.09	25.52
H-305 Pipeline	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
H-319 Pipeline	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Pipeline Totals	33.09	15.72	44.38	21.21	12.44	6.15	1.72	0.80	0.27	0.13	2.05	1.03	93.95	45.03
Contractor Yards	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A
Temporary Access Roads	2.64	N/A	3.14	N/A	1.99	N/A	0.51	N/A	0.00	N/A	0.00	N/A	8.28	N/A
New Permanent Access Roads	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD	N/A	TBD
Additional Temporary Workspace (ATWS)	36.40	N/A	29.52	N/A	14.21	N/A	3.87	N/A	0.00	N/A	0.07	N/A	84.07	N/A
Groundbed	0.30	N/A	0.00	N/A	0.91	N/A	0.10	N/A	0.00	N/A	0.00	N/A	1.31	N/A
Redhook Compressor Station	N/A	10.66	N/A	4.52	N/A	2.55	N/A	0.00	N/A	0.00	N/A	0.00	N/A	17.73
Mobley Tap	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Webster Interconnect	N/A	0.00	N/A	1.30	N/A	0.06	N/A	0.00	N/A	0.00	N/A	0.00	-	1.37
Total	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Source: USGS NLCD data (Jin et al. 2013)

^{a/} Details for the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8.

^{b/} Cultivated land (NLCD categories Pasture/Hay and Cultivated Crops);

^{c/} Tracts of upland or wetland forest or woodland (NLCD categories Deciduous Forest and Woody Wetlands)

^{d/} Non-forested lands used for open space or pasture. May include utility right-of-ways, open fields, vacant lands, herbaceous and scrub upland, non-forested wetlands, emergent wetland, scrub-shrub wetlands, golf courses, and municipal land (NLCD categories Developed/Open Space and Grassland/Herbaceous)

^{e/} Existing developed residential areas and planned residential developments. This may include large developments; low-, medium-, and high-density residential neighborhoods; urban/suburban residential; multi-family residences; ethnic villages; residentially zoned areas that have been developed; or short segments of the route at road crossings with homes near the route alignment (NLCD categories Developed/Low-Intensity and Developed/Medium-Intensity).

^{f/} Manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas facilities, developed areas, roads, railroads and railroad yards, and commercial or retail facilities (NLCD category Developed/High-Intensity)

^{g/} Water crossings greater than 100 feet wide and streams visible on aerial photography but less than 100 feet in width (NLCD category Open Water)

TBD=to be determined based on ongoing analysis. Will be provided in final Resource Report 8 to FERC.

Permanent land use changes associated with the pipeline will be limited to the permanent right-of-way where a change of land use is necessary due to safety. Permanent conversion of agricultural land uses are not anticipated because farming activities (including utilization of pasture, production of hayfields, and row crop production) may continue over the permanent right-of-way. After construction, the permanent right-of-way will be managed to maintain herbaceous vegetation only and to exclude woody vegetation, except in wetlands and adjacent to perennial waterbodies. In wetlands and adjacent to perennial waterbodies, clearance of woody vegetation will be limited to approximately 5 feet on either side of the pipeline, and some selective tree removal may be required within the permanent right-of-way to prevent root growth from compromising pipeline safety. The permanent clearing of woody vegetation and maintenance of herbaceous vegetation constitutes a conversion of approximately 21.21 acres (Forest/Woodland land use type within the permanent right-of-way) or approximately 47 percent of the permanent right-of-way. To minimize impacts to vegetation, Equitrans will implement applicable best management practices and mitigation measures specified in the FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (May 2013) (Plan). Equitrans is committed to constructing the proposed Project in accordance with the FERC's Plan and Procedures to the maximum extent practical. As described in Section 2.3.3 of Resource Report 2, Equitrans will request site-specific variances, if necessary, to Section VI.B.1 (location of extra workspaces in wetlands) of the FERC's Procedures providing a location-specific justification for each requested variance.

Alignment sheets showing pipeline right-of-way configurations and dimensions and typical right-of-way configuration drawings are included in Resource Report 1, Appendix 1-A.

8.1.1.2 Existing Right-of-Way

Proposed pipeline routes were collocated with or adjacent to existing utility corridors to the maximum extent practicable for a total of approximately XX miles of the proposed routes in four locations (see Table 1.3-2 in Resource Report 1 for a listing of locations by milepost [MP]). These existing utility corridors are all existing pipelines. Three are pipelines owned and operated by Equitrans, and one is a pipeline owned by Dominion. Where collocation is proposed, the proposed permanent right-of-way has been identified to maximize shared space between the facilities and to minimize the new amount of right-of-way required. Equitrans will work internally and with Dominion to finalize design of collocated corridors and will provide supplemental information to FERC when final design is complete.

8.1.1.3 Additional Temporary Workspace

Approximately 84.07 acres of additional temporary workspace (ATWS) are required for certain construction activities that require additional space outside of the construction right-of-way. These activities include but are not limited to:

- Road and railroad crossings;
- Wetland and waterbody crossings;
- Foreign pipeline crossings and interconnects;
- Foreign utility crossings;
- Areas requiring full-width topsoil segregation;
- Specific request of the landowner or land management agency;
- Areas with steep side slopes, rock, or other difficult terrain;
- Pipeline access and truck turnarounds;
- Fabrication and staging areas;

- Hydrostatic test water withdrawal and discharge locations; and
- Horizontal directional drilling (HDD) sites, footprint and pull back area.

The size and locations of ATWS were determined on a site-specific basis, and are listed in Table 8.1-4. The ATWS will be restricted to the minimum size necessary to safely construct the pipeline based on the existing conditions anticipated at the time of construction. In the case of wetlands and waterbodies, the ATWS will be located in accordance with the setback requirements described in the May 2013 version of the FERC’s Procedures.

Table 8.1-4		
Proposed Additional Temporary Workspace Areas <u>a/</u>		
Pipeline Facility	ATWS Location Description	ATWS Acreage
H-158/M-80	Area at MP 0	7.32
	Area along Strope Road between MP 0 and MP 0.1	0.11
H-316	Approximately 4 miles northwest of MP 0	1.82
	North of intersection of Braden Run Road and PA-188 between MP 0.0 and 0.1	0.26
	East of intersection of Braden Run Road and PA-188 between MP 0.1 and 0.2	0.63
	Area at MP 0.4	0.94
	Area between MP 0.6 and 0.7	0.65
	Area west of Prison Road and between MP 0.7 and 0.8	0.28
	Area east of Prison Road and between MP 0.8 and 0.9	0.23
	Area between MP 0.9 and 1.0	0.57
	Area between MP 1.4 and 1.5	0.57
	Area north and south of pipeline near MP 2.1	4.11
	Area north of Ankrom Road between MP 2.8 and 2.9	0.50
	H-318	North of MP 0.0 near Finley-Elrama Road
North of MP 0.0 near PA-837		2.54
North of Rippel Road, between MP 0.4 and 0.7		15.90
South of Rippel Road, between MP 0.7 and 0.8		1.11
South of Rippel Road, at MP 1.6		1.20
Between Raccoon Run Road and Rippel Road, between MP 1.5 and 1.6		1.73
North of Raccoon Run Road at MP 1.6		1.53
Area east of Church Hollow Road between MP 1.9 and 2.0		2.69
Area east of Church Hollow Road between MP 2.0 and 2.3		14.02
Area south of Bunola River Road between MP 2.7 and 2.8		0.76
Area north of Bunola River Road near MP 2.8		4.76
Area north of Bunola River Road between MP 2.8 and 2.9		1.13
Area off Finley-Elrama Road between MP 3.4 and 4.0		14.87
Area off Finley-Elrama Road beyond the terminus of route		2.89
TOTAL ATWS ACREAGE		84.35 <u>b/</u>
<u>a/</u> Any proposed ATWS associated with the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8.		
<u>b/</u> Variation in total ATWS acreage in Tables 8.1-3 and 8.1-4 is due to small amounts of overlap between ATWS sites when measured individually versus in the aggregate.		

8.1.1.4 Groundbed Areas

A groundbed is an electrode array that is installed beneath the ground to give off a path with low resistance to ground. It is a vital component of the grounding system. In terms of cathodic protection, this groundbed refers to the anodes' arrangement in water or ground, which provides a way for protective currents out of anodes into an electrolyte. The application of a groundbed serves the purpose of cathodic protection. Different groundbeds have been successfully used to provide cathodic protection to surface equipment as well as pipelines to prevent the occurrence of corrosion and any form of damage.

Groundbed areas are proposed for the H-316 and H-318 pipelines. Conventional groundbeds are located approximately 300 feet from the pipeline with anodes buried 10 to 15 feet deep for another 200 feet. The cathodic protection is buried much like a pipeline, and is connected to the pipeline by a wire buried at a similar depth (approximately 10-15 feet deep). Groundbed installation typically requires disturbance of an approximately 50-foot by 300-foot area. A total of approximately 1.31 acres would be temporarily impacted by groundbed installation. After installation, the groundbed sites would be restored to prior condition as described in the FERC's Plan as well as the Project erosion and sediment control plan.

8.1.1.5 Access Roads

Equitrans has identified temporary and permanent access roads for the proposed pipeline and associated facilities. Equitrans has maximized the use of existing public and private roads to the extent practicable to minimize creation of new temporary and permanent access roads. Existing access roads may require minor improvements such as vegetation removal or tree trimming, addition of gravel, and blading to allow for safe passage of construction and maintenance vehicles. Approximately 8.28 acres of temporary impacts associated with temporary access roads are anticipated (Table 8.1-3). Where new temporary access roads are required, land uses will be modified temporarily to accommodate the access road during the construction timeframe. After construction is complete, temporary access roads will be restored as close as practicable to pre-construction condition.

Approximately X acres of permanent impacts associated with construction and maintenance of permanent access roads are anticipated (Table 8.1-3). Permanent access roads will be up to 15 feet wide once restored for permanent use. During construction, these access roads will be approximately 25 feet wide.

8.1.1.6 Contractor Yards

Contractor yards will be required to be used temporarily as staging or storage areas during the construction timeframe to stockpile pipe and store materials, fabricate facilities, concrete-coat joints, stage construction operations, park equipment and vehicles, and house temporary construction office trailers. Contractor yard locations have not been identified at this time, but will be selected to avoid forested areas, wetlands, and other sensitive habitats wherever practicable. Surface grading, drainage improvements, installation of surface material (such as gravel or crushed rock), and roadway construction may be required in contractor yards. After construction, contractor yard areas would be restored and allowed to return to their previous uses and condition.

8.1.2 Aboveground Facilities

Proposed aboveground facilities include the Redhook Compressor Station, the Webster Interconnect, the Mobley Tap, pig launcher/receiver facilities, and meter stations constructed along the pipeline route. The existing Pratt Compressor station will be decommissioned and replaced with the Redhook Compressor

Station. These facilities are described in detail in Section 1.2.2 of Resource Report 1, General Project Description and shown in Figure 1.2-1.

The proposed Redhook Compressor Station will be located in Greene County, Pennsylvania, northeast of Waynesburg and Morrisville. The area identified for the Redhook Compressor Station is shown in Figure 1.2-1 and serves as the terminus (MP 0.22) for the H-158 and MP-80 pipelines, and the start (MP 0.00) of the H-316 pipeline. This area includes the footprint of the compressor station, and all construction activities and storage of construction equipment and materials will be limited to the area boundary. Current land use within the 17.73-acre site boundary is a combination of Agricultural Land, Forest/Woodland, and Open Land (Table 8.1-3). Buildings located within the site boundary include residences and outbuildings. Equitrans is in the process of working with landowners within the site boundary regarding site planning. The existing Pratt Compressor Station will be decommissioned after the Redhook Compressor Station is operational but will continue to be used by Equitrans as a ware yard.

The proposed Mobley Tap will be located in Wetzel County, West Virginia. Details regarding the Mobley Tap will be provided in the final version of Resource Report 8.

The proposed Webster Interconnect will be located on approximately 1.37 acres in Wetzel County, West Virginia. This area includes the footprint of the facilities, and all construction activities and storage of construction equipment and materials will be limited to the area boundary. The current land use is categorized as Developed/Open Space and Deciduous Forest (Table 8.1-3). The proposed Webster Interconnect station will be fenced and gated. An existing facility is located adjacent to the Webster Interconnect site to the east and will not be disturbed by construction or operation of the proposed facility.

Mainline valve (MLV) sites will be entirely contained within the pipeline right-of-way and will not require any additional land disturbance. Meter stations will be located along the pipeline and may require additional land beyond the right-of-way for construction and operation. These locations will be identified in the final version of Resource Report 8.

Pig launching and receiving facilities will be installed at the beginning and at the end of each of the lines at the Project, and at certain other points as identified in Resource Report 1, Table 1.2-2. The launcher and receiver stations will be designed to accommodate smart pigs for periodic internal inspections of the pipeline during operations. These facilities will meet the same standards and regulatory requirements established for the pipelines.

Construction practices for all aboveground facilities are described in Section 1.4 of Resource Report 1. Generally, woody vegetation will be cleared. Disturbed surface areas will be restored to their original condition and grades to the extent practicable. Aboveground facilities will be fenced and converted to the industrial use. Restoration activities will follow the FERC Plan and Procedures or will follow those measures described in the Project Erosion and Sediment Control General Permit.

8.1.3 Land Use Impact and Mitigation

Impacts to existing land uses will be temporary during the construction period, and permanent conversions of land uses will be limited. After construction and restoration is complete, most existing land uses will be allowed to continue within the construction and permanent right-of-way for the pipeline, within temporary access roads, ATWS, and in contractor yards and storage yards. To ensure safety and allow for maintenance activities, the permanent right-of-way will be maintained in an herbaceous state by mowing, cutting, and

trimming. No structures will be allowed within the permanent right-of-way. Large brush and trees growing within the permanent right-of-way will be removed in accordance with the FERC's Plan and Procedures to prevent damage to the pipelines' protective coating by trees or deep-rooted shrubs, facilitate monitoring of the right-of-way, and facilitate repairs. Vegetation management will generally not be required in agricultural areas other than maintaining the permanent right-of-way clear of trees and shrubs.

The following sections discuss potential impacts associated with the various land types that will be crossed by the Project. Potential impacts by land use type are provided in Table 8.1-3.

8.1.3.1 Agricultural Land

Agricultural land was identified using NLCD GIS data, and includes NLCD land use categories cultivated crops and pasture/hay. Table 8.1-2 provides the linear distance (miles) of agricultural land crossed by the pipeline sections. Table 8.1-3 provides the acreage of agricultural land that will be impacted by construction and operation of the pipeline and associated facilities. Anticipated construction techniques within agricultural lands are described in Resource Report 1.

Temporary impacts will be limited to the growing season during which construction is active. Equitrans will compensate landowners for any product loss or damages caused during construction activities, and will work with any production contracts to move production or grazing areas outside of the construction corridor if practicable. Equitrans will maintain the landowner's access to fields and agricultural facilities during construction, and irrigation and drainage systems that cross the right-of-way will be maintained to the extent practicable. Temporary fencing will be utilized to protect livestock and provide for livestock movement through the construction area.

After construction, agricultural lands will be restored to pre-construction conditions according to FERC's Plan, any agreements with landowners, or in compliance with requirements identified by state or federal agencies with regard to agricultural lands. Permanent conversion of agricultural land is not anticipated in the permanent right-of-way for the pipeline, as agricultural activities may continue above the pipeline, except for tree crops within the permanent right-of-way. Equitrans has not identified any tree crops within the pipeline right-of-ways. Any other specialty crops (such as nurseries or vineyards) within the right-of-way will be identified prior to construction, and avoidance measures or measures to minimize impacts will be coordinated with the landowner. Actively cultivated cropland that is disturbed during construction may be left unseeded at the request of the landowner, and pasture may be reseeded with a similar species or mixture. Pasture restoration will be considered complete when density and cover are restored to a similar condition to adjacent undisturbed portions of the same pasture. Equitrans will work with landowners to understand any restrictions involved with post-construction agricultural activities, such as movement of heavy machinery.

Permanent conversion of agricultural land will occur where aboveground facilities are located. Because the aboveground facilities will be fenced, they will no longer be available for agricultural use. As shown in Table 8.1-3, approximately 10.7 acres of agricultural land within the footprint of the proposed Redhook Compressor Station will be permanently converted to an industrial use. According to the NLCD GIS data, this land is considered pasture/hay.

Farmland Conservation Programs and Easements

Equitrans has initiated consultation with the U.S. Department of Agriculture (USDA) in Pennsylvania to identify potential impacts to important farmland categories, easements, and other agricultural resources (Table 1.7-1 in Resource Report 1). The USDA Farm Service Agency (FSA) administers the Conservation Reserve Program (CRP). In Pennsylvania, farmland enrolled in the CRP in 2014 includes 91 acres in Allegheny County, Pennsylvania; 400 acres in Greene County, Pennsylvania; and 2,968 acres in Washington County, Pennsylvania (USDA 2014). No acres were reported enrolled in Wetzel County, West Virginia (USDA 2014). FSA does not distribute the location of CRP lands without written authorization from landowners. No known CRP lands are crossed by any pipeline segments or facilities. Equitrans would consult with owners of lands crossed by the proposed pipeline, temporary construction right-of-way, and other Project features to check if they are enrolled in this program or any other easement or conservation programs. Because there are no known impacts at this time, mitigation is not proposed. Equitrans will continue to consult with local, state, and federal agencies with agricultural interests to identify any farmland conservation programs and easements that may be affected by the Project.

Irrigation and other Equipment

To avoid or minimize impact to surface or subsurface drainage systems (such as drain tiles and irrigation systems), Equitrans will work with landowners to identify locations of such systems prior to construction of the pipeline and associated facilities. There are no known drain tiles or irrigations systems crossed by the Project. If drain tiles and irrigation systems are identified, construction will be conducted in accordance with the FERC's Plan and Procedures. The pipeline will be installed below the drainage tiles or irrigation lines wherever practicable. Drainage features will be restored to pre-construction conditions wherever practicable, or moved if necessary to accommodate drainage conditions. Equitrans will repair or restore any drainage tiles or irrigation systems damaged during construction with equipment of the same size and quality as the original systems, or in such a way to prevent a loss of function. After construction, the pipeline will have no impact on the operation of drainage and irrigation systems.

Other agricultural equipment that may be affected by construction, such as watering systems for livestock or other structures, will be identified prior to construction. Equitrans will work with landowners to avoid, or minimize impacts to or compensate for such equipment or structures whenever practicable.

Certified Organic Farms

No known organic farms are crossed by the Project. Equitrans has worked to identify organic farms through discussions with landowners and review of the National Organic Program (NOP) listing for USDA Certified Organic Farms for the state Pennsylvania (NOP 2014). The term "organic" is a labelling term used to indicate that a food or other agricultural product has been produced through approved methods and standards established by the USDA. If certified organic farms are identified that will be affected by the Project, Equitrans will work with landowners and any regulatory or certifying agencies to avoid or minimize impact on the enrollment of the affected properties in organic certification programs.

8.1.3.2 Forest/Woodland

Forest/woodland was identified using NLCD GIS data, and includes NLCD land use categories deciduous forest and woody wetlands. Table 8.1-2 provides the linear distance (miles) of forest/woodland crossed by the pipeline sections. Table 8.1-3 provides the acreage of forest/woodland that will be impacted by construction and operation of the pipeline and associated facilities. Forest/woodland areas within the

construction right-of-way only will be temporarily impacted during construction, but will be allowed to return to a forested state after construction. Forested areas within the permanent pipeline right-of-way and within fenced areas of associated facilities will be permanently converted to either open land (pipeline right-of-way) or industrial land (fenced areas of associated facilities) uses, because the permanent right-of-way will be maintained in an herbaceous state with no trees or shrubs. Right-of-way maintenance will be accomplished by mechanical means as described in the FERC's Plan, and herbicides and pesticides will generally not be utilized unless requested.

8.1.3.3 Open Land

Open land was identified using NLCD GIS data and includes NLCD land use categories Developed/Open Space and Grassland/Herbaceous. Table 8.1-2 provides the linear distance (miles) of open land crossed by the pipeline sections. Table 8.1-3 provides the acreage of open land that will be impacted by construction and operation of the pipeline and associated facilities. Impacts to open land are anticipated to be temporary, because any disturbed areas will be restored and allowed to return to pre-construction conditions after the construction period. Trees and shrubs may be removed from the permanent right-of-way, but no conversion to a different land use is anticipated.

8.1.3.4 Residential Land

Residential land was identified using NLCD GIS data and includes NLCD land use categories Developed/Low Intensity and Developed/Medium Intensity. Table 8.1-2 provides the linear distance (miles) of residential land crossed by the pipeline sections. Table 8.1-3 provides the acreage of residential land that will be impacted by construction and operation of the pipeline and associated facilities. The Project area is rural, and residences tend to be larger rural residences associated with farms and larger properties. No existing or planned housing developments or subdivisions are crossed by the pipeline facilities. Section 8.2.1 below provides additional detail regarding existing and planned residences within the Project area. The final Resource Report 8 of the Project application to the FERC will include Residential Construction Plans for any residences located within 50 feet of the proposed workspace, and will identify any safety measures to be implemented, as discussed in Section 8.2.3 below. Typical construction practices in residential areas are described in Section 1.4.1.1 of Resource Report 1.

8.1.3.5 Industrial/Commercial Land

Industrial/commercial land was identified using NLCD GIS data, and includes NLCD land use category Developed/High Intensity. Table 8.1-2 provides the linear distance (miles) of industrial/commercial land crossed by the pipeline sections. Table 8.1-3 provides the acreage of industrial/commercial land that will be impacted by construction and operation of the pipeline and associated facilities. Equitrans will work with landowners of industrial/commercial areas to develop avoidance or minimization measures that may include (but will not be limited to) timing construction to avoid peak use periods, maintaining access to businesses, and expediting construction through these areas. Typical construction practices in industrial/commercial areas are described in Section 1.4.1.1 of Resource Report 1.

Table 8.1-5 provides a list of public roadways and railroads crossed by the Project by county. Potential temporary impacts to these roadways will be limited to the construction timeframe, and may include disruption of traffic flow and disturbance of the roadway substrate. Several private driveways or access roads will also be crossed. Permanent impacts to roadways or existing use of roadways are not anticipated.

Table 8.1-5
Public Roadways and Railroads crossed by the Project

Facility	County	Roadway Name	Road Surface	Milepost
M-80/H-158	Greene County, PA	Braden Run Road (T588)	Asphalt	0.15
H-316	Greene County, PA	Jefferson Road/Pennsylvania Route 188 (PA 188)	Asphalt	0.09
H-316	Greene County, PA	Prison Road	Asphalt	0.80
H-316	Greene County, PA	Monongahela Railway	N/A	2.25
H-316	Greene County, PA	Creek Road (T555)	Asphalt	2.29
H-316	Greene County, PA	McNeely Road (T543)	Asphalt	2.75
H-318	Allegheny County, PA	Rippel Road	Asphalt	0.70
H-318	Allegheny County, PA	Rippel Road	Asphalt	1.63
H-318	Allegheny County, PA	Raccoon Run Road	Asphalt	1.70
H-318	Allegheny County, PA	Bunola River Road	Asphalt	2.76
H-318	Allegheny County, PA	Conrail/CSXT Railroad	N/A	2.85
H-318	Washington County, PA	Federal Railroad Administration Railroad	N/A	3.09
H-318	Washington County, PA	Conrail Railroad	N/A	3.10
H-318	Washington County, PA	Conrail Railroad	N/A	3.14
H-318	Washington County, PA	5 th Street/Pennsylvania Route 837 (PA 837)	Asphalt	3.15
H-318	Washington County, PA	Seneca Drive	Asphalt	3.70
H-318	Washington County, PA	Finleyville-Elrama Road	Asphalt	4.16

a/ Details for the H-305 and H-319 pipeline segments will be provided in the final version of Resource Report 8.

Typical construction practices across roads and railroads are described in Section 1.4.1.1 of Resource Report 1. The pipeline will be placed a minimum of three feet below road surfaces and ten feet below railroad rails and will be designed to withstand anticipated external loads. Pipeline construction across hard surface roads and railroads will typically be accomplished by boring, with boring pits located on either side of the road or railroad. This construction method will avoid direct impact to the surface of the road or railroad track. Pipeline construction across smaller, unpaved road sand driveways will be accomplished by open trenching. All areas disturbed by construction activities in and around roads and railroads (including bore pits) will be restored to pre-construction conditions or better after construction is complete.

During construction, road and railroad crossings will be maintained continuously via steel plates or alternate access during construction to avoid disrupting traffic flow. Temporary detours or other safe traffic practices will be utilized if necessary. Residential and commercial access will be maintained. Passage for emergency vehicles will be provided for at all times.

8.1.3.6 Special Land Uses

Special land uses include areas associated with public facilities such as prisons, schools, parks, places of worship, cemeteries, sports facilities, campgrounds, golf courses, and recreational fields. Some special land uses, such as golf courses, are included in land use cover types identified by the NLCD (e.g., golf courses are included within the open land category). Public land and designated recreational areas are discussed in detail in Section 8.3 below.

Census landmark data were reviewed in GIS to identify any special land uses within a mile from the Project facilities. Google Earth maps were also reviewed. Table 8.1-6 lists special land uses identified within approximately one mile of the proposed Project facilities.

Facility	County	Special Land Use	Description	Approximate Distance from Project Facilities
H-316/ Redhook Compression Station	Greene County, PA	Greene County Airport	Airport facility	1 mile
H-316	Greene County, PA	Youth Development Center (Closed)	Closed prison/youth development center <u>a/</u>	Less than 0.2 mile
H-316/ Redhook Compression Station	Greene County, PA	State Correctional Institute – Greene	Active prison <u>b/</u>	0.6 mile
H-316/ Redhook Compression Station	Greene County, PA	Smith Cemetery	Cemetery	0.3 mile south of H-316, 0.6 mile southeast of Redhook Compressor Station
H-316/ Redhook Compression Station	Greene County, PA	Captain Hook Cemetery	Cemetery	0.10 mile south of Redhook Compressor Station
H-316/ Redhook Compression Station	Greene County, PA	Pollock Cemetery	Cemetery	0.70 mile south of the eastern endpoint of H-316
H-318	Allegheny County, PA	Wallace Station (Railroad Station)	Active railroad station	0.9 mile
H-318	Allegheny County, PA	Bunola Marina (Private)	Active private recreational marina	0.4 mile
H-318	Allegheny County, PA	Castaway Keys Marina (Private)	Active private recreational marina with camping	0.5 mile
H-318	Allegheny County, PA	Riverview Golf Course	Active golf course	0.2 mile
H-318	Washington County, PA	James Chapel	Chapel and cemetery	0.7 mile
H-318	Washington County, PA	Pleasant View Church	Church	0.6 mile
H-318	Washington County, PA	Taylor Cemetery	Cemetery	0.6 mile
Webster Interconnect	Wetzel County, WV	Kilcoyne Cemetery	Cemetery	0.3 mile
Webster Interconnect	Wetzel County, WV	Hostuttler Cemetery	Cemetery	0.8 mile

a/ The Youth Development Center was also known as State Corrections Institute – Waynesburg (Greene County), which was closed in 2005 and ownership transferred to Basalt Trap Rock Company (State of Pennsylvania Department of Corrections 2015).

b/ The State Correctional Institute-Greene opened in November 1993 houses male offenders, and also houses a majority of the state's male capital case inmates (State of Pennsylvania Department of Corrections 2015).

No special land uses would be crossed by the Project. At areas near special land uses, Equitrans will coordinate with landowners and managers to identify areas of concern, and minimize impacts on the property and its use during construction. Impacts would be temporary in nature and limited to the construction time period, and may include noise, visual disturbance, and temporary limitations on access.

8.2 RESIDENTIAL AND COMMERCIAL AREAS

8.2.1 Planned Residential and Commercial Areas

The area within 0.25 mile of all Project facilities is largely rural, and land use is predominantly agricultural, forested, or comprised of open land. In order to identify any planned residential or commercial developments¹ that would be crossed by or located within 0.25 mile of project facilities, a desktop review of available information from county websites was conducted. In addition, Equitrans has contacted county planning commissions and development authorities for information regarding concerns or conflicts with the Project of which county officials may be aware (letters included in Appendix 1-G Agency Correspondence of Resource Report 1).

The Greene County Comprehensive Plan (2008) identified the EverGreene Technology Park as a Key Investment Zone and Key Opportunity Zone, and identified the land use as “light industrial.” The EverGreene Technology Park is located approximately 0.25 mile south of the access roads associated with the M-80 and H-158 pipelines and would not be crossed. No other planned residential or commercial areas have been identified that would be crossed by or located within 0.25 mile of the Project facilities.

Because the EverGreene Technology Park would not be crossed or otherwise impacted by construction or operation of the Project facilities, no mitigation is required. No impacts on planned residential areas or commercial areas is anticipated.

8.2.2 Existing Residences and Buildings

In siting the proposed pipeline and associated facilities, Equitrans has attempted to avoid populated areas, neighborhoods, and individual residences as much as possible. The pipeline is sited in proximity to residences in limited locations. Aerial photography was used to identify residences and buildings in proximity to the Project facilities. Table 8.2-1 lists those residences and buildings within 50 feet of the proposed pipeline construction work area (temporary right-of-way). These residences and buildings were identified using aerial imagery.

Where residences are located in close proximity to the end of the construction right-of-way, Equitrans will attempt to reduce the construction workspace areas as much as practicable to minimize inconvenience to property owners. If private property structures such as gates or fences need to be removed to accommodate construction, Equitrans will work with the landowner prior to construction to notify the landowner and develop an agreement for restoration of the property.

¹ According to FERC, “planned development” means “any development that is included in a master plan or is on file with the local planning board or the county.”

Pipeline Segment	County	Building Type	Milepost	Direction	Distance		Occupied
					From Edge of Workspace	From Pipeline Centerline	
M-80/H-158	Greene County, PA	Residence	0.18	West	7 feet	57 feet	Yes
H-316	Greene County, PA	Outbuilding	0.05	Northeast	Inside temporary right-of-way	7 feet	No
H-316	Greene County, PA	Residence	0.11	North	15 feet	75 feet	Yes
H-316	Greene County, PA	Garage and Outbuilding	0.10	Inside ATWS Area	Inside ATWS Area	Inside ATWS Area	No
H-316	Greene County, PA	Outbuilding	0.95	North	Inside temporary right-of-way	20 feet	No
H-316	Greene County, PA	Outbuilding	1.00	North	11 feet	61 feet	No
H-316	Greene County, PA	Outbuilding	1.00	North	21 feet	71 feet	No
H-316	Greene County, PA	Outbuilding	1.00	North	46 feet	96 feet	No
H-318	Allegheny County, PA	Residence	2.82	West	17 feet	67 feet	Yes

There are seven residences located within the boundary of the Redhook Compressor Station. Equitrans is in the process of purchasing these residences, which will be demolished to accommodate the compressor station.

The following construction measures will be taken for all residences within 50 feet of the Project to minimize noise, dust, traffic, and access disruption:

- Local residents will be notified two weeks in advance of construction activities;
- Typical work hours will take place between the hours of 7:00 A.M. and 7:00 P.M., Monday through Saturday.
- The boundary to the construction work area will be fenced for a distance of 100 feet on either side of the residence to ensure construction equipment, materials and spoil remain in the construction right-of-way;
- Trees and landscaping will be preserved to the extent practicable;
- Flaggers will be used to maintain safe flow of traffic ;
- Light plants, signage and barricades or guardrails around open trenches will be installed, and areas of open trench marked with reflectors;
- Ingress and egress will be maintained for residents at all times. If an open trench crosses a resident’s access, Equitrans will install steel plates to bridge the trench to provide access;
- Spoil, construction materials, and construction equipment will not be staged in an area that provides access for residents;
- Water or approved dust palliative will be applied as necessary to the disturbed right-of-way to minimize fugitive dust;
- Topsoil segregation procedures will be utilized, as required, in accordance with the FERC’s Plan;

- If the trench must be left open overnight, pipe will be capped and the trench will be enclosed with safety fences and posted signage;
- Piping will be welded and installed as quickly as reasonably possible consistent with prudent pipeline construction practices to minimize construction time affecting a neighborhood;
- The trench will be backfilled and cleanup completed as soon as the pipe is laid or the trench will be steel plated temporarily;
- Cleanup (including grading) and installation of permanent erosion control measures will be completed within 10 days after the trench is backfilled, weather conditions permitting;
- Lawns and landscaping will be restored as soon as practical following final cleanup, or as specified in landowner agreements, weather conditions permitting; and
- If weather conditions prevent timely restoration of these areas, temporary erosion controls will be maintained and monitored until restoration is completed.

In locations where a minimum of 25 feet cannot be maintained between a residence and the construction workspace, a site-specific construction plan will be developed and submitted to the FERC (in the final version of Resource Report 8). The construction plan will show the location of the residence in relation to the new pipeline, the edge of the construction right-of-way, the edge of the permanent right-of-way, and other nearby construction constraints (such as other residences, structures, roads, wetlands, or waterbodies). While Equitrans has engineered the proposed alignment to avoid the removal of existing structures, if removal of a structure or septic system is required, Equitrans will negotiate with the landowner for compensation for relocation or removal. Equitrans will also identify drinking water wells within 150 feet of the construction work area and work with the landowners to establish baseline pre-construction water quality. Monitoring of drinking water wells is discussed in Resource Report 2.

8.3 PUBLIC LAND, RECREATION, AND OTHER DESIGNATED AREAS

Public lands, recreational lands, and designated areas are generally not crossed by the Project. The only recreation resources identified within 0.25 mile of the Project facilities are the Riverview Golf Course and the Monongahela River. A discussion of these resources is provided below. Methods used to identify public lands, recreational lands, and other designated areas included review of GIS data, USGS topographic maps, and aerial photography. Resources searched but not identified within 0.25 mile of the Project facilities include national parks, state parks, local parks, trails, water trails, state or federal scenic byways or scenic areas, National or State Wild and Scenic Rivers, and registered landmarks. As consultation with federal, state, and local agencies continues, any public lands, recreational lands, or designated areas identified will be incorporated into the final version of this report.

8.3.1 Public or Conservation Land

Equitrans has initiated consultation with federal, state, and local agencies to identify any public or conservation land that would be crossed or located within 0.25 mile of the Project. Such lands have not been identified to date. Resource Report 1 lists all agencies that have been contacted regarding the Project thus far. As field review of the pipeline routes and consultation with federal, state, and local agencies continues, any public lands, recreational lands, or designated areas identified will be incorporated into the final version of this report.

8.3.2 Natural, Recreational, or Scenic Areas

The only recreation resources identified within 0.25 mile of the Project facilities are the Riverview Golf Course and the Monongahela River. Riverview Golf Course is located within 0.25 mile of the H-318 pipeline, but the pipeline right-of-way or Project features do not cross into the Riverview Golf Course and the access road to the golf course would not be impeded by access to the pipeline corridor. Therefore, no physical impacts to the golf course or its operation are anticipated and no mitigation measures are proposed.

The H-318 pipeline would cross the Monongahela River southwest of the town of Elrama, Pennsylvania. This portion of the Monongahela River is not part of a designated water trail; the Three Rivers Water Trail begins over 0.25 mile downstream of the proposed pipeline crossing. Recreational boats do access this section of river. According to the Mid-Monongahela River Access Sites map, the Carousel Marina in Bunola is identified as a river access site (River Town Program 2015). The Carousel Marina is located approximately 0.5 mile upstream (southwest) of the proposed H-318 pipeline crossing. The Castaway Keys Marina is located approximately 0.5 mile downstream (east) of the proposed H-318 pipeline crossing. Camping is also available at the Castaway Keys Marina, according to its website (Castaway Keys Marina 2015). Construction of the pipeline crossing would be achieved using HDD technology, and recreational boating along the Monongahela River or access to the Carousel Marina or the Castaway Keys Marina would not be affected by construction or operation of the pipeline. Therefore, no mitigation is proposed.

The pipeline corridor and construction activities may be visible from certain vantage points in the golf course and along the Monongahela River. Potential visual impacts are discussed in Section 8.4 of this Resource Report.

8.3.3 Coastal Zone Management Areas

The Project is not located within any Coastal Zone Management Areas.

8.3.4 Agency and Landowner Consultation

Sections 1.7 and 1.8 of Resource Report 1 provide details of the agency and landowner consultations that have occurred to date. Any responses received from these agencies will be reviewed for relevance to public land, recreation resources, and other designated areas. That information will be included in the final Resource Report 8 that is submitted with the certificate application to the FERC.

8.3.5 Public Land, Recreation, and Other Designated Areas Impact and Mitigation

Because potential impacts to the recreation resources identified thus far would be primarily visual in nature, any mitigation measures will be discussed and identified in Section 8.4 below. No mitigation is proposed for the Riverview Golf Course or the Monongahela River because no impacts to the use of or access to these resources is anticipated. As stated in Section 8.3.4, if public land, recreation resources, or other designated areas are identified in the future through agency and landowner consultation, mitigation measures will be incorporated into the final Resource Report 8 that is submitted with the certificate application to the FERC.

8.4 VISUAL RESOURCES

The proposed pipelines cross state, local, and private lands supporting a wide variety of land uses and natural landscape settings. Private lands that would be crossed by the Project are not subject to federal or

state visual management standards. Visual resources on private lands are a function of geology, climate, and historical processes, and are influenced by topographic relief, vegetation, water, wildlife, land use, human uses, and development.

The visual resource impact assessment considered visual resources potentially affected by the construction and operation of the Project. The FERC does not have existing guidelines for conducting visual resource assessments; however, according to the FERC's Guidance Manual for Environmental Report Preparation (August 2002):

“Visual classification systems have been developed at the federal level by the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) and at some state levels to rank the scenic quality of various landscapes. Use these systems where appropriate to quantify the potential visual impact of pipeline or aboveground facility construction on a given scenic area.”

In addition, state or local guidelines for conducting visual assessments were not identified. Therefore, the methodology used to identify and assess the potential impacts of the Project on visual resources is based on the BLM Visual Resource Management (VRM) inventory and contrast rating systems, although the Project does not cross lands administered by the BLM.

8.4.1 Methodology

The BLM VRM system provides a systematic approach for evaluating the potential changes to visual resources that may result from the Project. The BLM VRM (BLM 1984) provided the primary guidance for evaluating landscape character and impact assessment. Visual impacts were identified based on visual contrast created between the existing landscapes without the Project and the same landscape after the Project has been implemented (BLM 1986). The level of project contrast is based upon the level of modification to the existing landscape features. In the context of the Project, existing landscape scenery is defined by the visual characteristics (form, line, color, and texture) associated with the landform (including water), vegetation, and existing facilities within and adjacent to the Project. By using the basic design elements of form, line, color, and texture to describe and evaluate landscapes and project components, objectively and consistency in assessing scenic values can be increased. Project modifications that repeat the same basic design elements currently found in the landscape are typically considered in harmony with the surrounding landscape. Project modifications which do not harmonize with the surrounding landscape tend to look out of place and are said to contrast or stand out in unpleasing ways (BLM 1984). This visual assessment is based on the methodologies prescribed by the BLM to identify the general visual impacts that may be expected from the Project; however, this report does not include a full-scale visual resource inventory or contrast ratings.

Visual impacts for the Project were assessed by measuring the amount of contrast that will likely be evident once the Project has been constructed. The degree of alteration, measured in terms of visual

contrast with the surrounding natural landscape, is typically expressed in terms of high, moderate and low impacts which are described below:

- **High Impacts**—Where Project components are dominant or readily apparent from a viewing location. Project components would introduce form, line, color, and texture changes that are inconsistent with the existing landscape.

- Moderate Impacts—Where Project components are co-dominant with existing landscape features, and moderately apparent from viewing locations. Project components would mimic form, line, color, and texture of similar features within the existing landscape.
- Low Impacts—Project components are subordinate in the landscape and not readily apparent from viewing locations. Project components would parallel existing linear energy facilities (i.e., underground pipeline or overhead transmission lines) or features with similar form, line, color, and texture.

To evaluate potential visual impacts, Equitrans evaluated a visual resources analysis area generally defined as 0.25 mile from the Project components (i.e., pipeline, compressor stations, and interconnect station). This distance corresponds with the FERC's requirements of reviewing natural, recreational, and scenic areas. Visual impacts are discussed in further detail in Sections 8.4.2, 8.4.3, and 8.4.4 below.

8.4.2 Pipeline Facilities

Visual impacts associated with construction and operation of the pipeline may result from the removal of vegetation, particularly in forested areas. It is anticipated that higher impacts would occur where these changes to the landscape are most observable, such as where the pipeline parallels or crosses roads and where vegetation is removed between the right-of-way and residences. The existing landscape, which is characterized by rolling hills and is largely covered with uniform vegetation, has been previously modified by the removal of vegetation for the construction and maintenance of other existing pipeline right-of-way in the Project area. These previous modifications have created long, narrow strips within the existing landscape. The removal of vegetation associated with the pipeline right-of-way would repeat the same form, line, and color within the landscape; thus, impacts in areas where the pipeline right-of-way is observable are anticipated to be primarily moderate. Due to the rolling terrain and the largely uniform vegetation coverage of the existing landscape, views of the proposed pipeline right-of-way from areas not directly adjacent to it would generally be screened (either partially or completely) by topography and vegetation.

Potential impact mitigation measures may include minimizing the removal of vegetation (which provides a visual screen) along the roadways and in residential areas. The Project will not change the topographical landscape from its current profile. Following construction, Equitrans will plant disturbed areas in non-agricultural lands with native grasses and plants as specified in the Erosion and Sediment Control General Permit (ESCGP-2) or by the land owner. Where the pipeline traverses forested areas, visual impacts will be long term due to vegetation maintenance within the 50-foot-wide permanent easement.

The proposed pipeline will not cross any designated scenic sites, vistas, roads, or corridors.

8.4.3 Aboveground Facilities

The Project includes the construction and operation of one compressor station, one interconnect station, ancillary facilities, and the decommissioning of a compressor station, as described in Resource Report 1.

The Redhook Compressor Station will be constructed at MP 0 of the H-316 pipeline in Greene County, Pennsylvania. The proposed site of the Redhook Compressor Station is located near the intersection of Braden Run Road and Jefferson Road. Recent development adjacent to this site includes other natural gas facilities, existing pipeline facilities (owned and operated by others), and an existing pipeline right-of-way traverses the northern and eastern boundaries of the proposed compressor station site. Much of this site has been previously developed for residential use. Equitrans will purchase these parcels and will remove

residential structures prior to the construction of the proposed Project. The site will be graded to accommodate a level pad for the proposed facilities. The pad which all facilities will be located on will be approximately 40 feet above the public roads. The slopes of the pad and area surrounding the site will be vegetated. Views of the compression station site from residences located approximately 0.2 mile northwest and 0.1 mile southeast would be completely screened by vegetation and topography. Travelers along a segment of Jefferson Road adjacent to the compressor station site may have views of the compressor station; however, the compressor station would be seen in the context of an existing pipeline right-of-way and ancillary facilities and an existing compressor station located north and northeast of the proposed compressor station site, respectively. The Redhook Compressor Station would be similar in form, line, and color as the existing facility, therefore, impacts are anticipated to be moderate. Security lighting will be installed at building entrances and along the site's perimeter fence. Lighting will be directed downward and shielded to avoid light trespass. The amount of light generated by the security lights will be consistent with existing sources produced by man-made structures in close proximity to the proposed compressor station site, including the existing compressor station to the north-northeast, SCI Greene County Correctional Facility, residences, and roadway lights.

The Pratt Compressor Station is an existing facility located approximately 650 feet south of the proposed Redhook Compressor Station site along the southern side of Jefferson Road. The Pratt Compressor Station will be abandoned (other than limited facilities in the yard that will remain in service) once the Redhook Compressor Station is in service. Since the Pratt Compressor Station is surrounded by hilly terrain and wooded areas, visual impacts would be limited to travelers along Jefferson Road. During deconstruction of the existing compressor station, visual impacts would be similar to those from construction activities, with the increased presence of construction equipment and construction crews. Although the existing concrete/gravel footprint of the compressor station will remain after the compressor station has been deconstructed, visual impacts would be low since most aboveground (vertical) facilities will be removed from the landscape.

The Webster Interconnect (interconnect station) will be constructed in Wetzel County, West Virginia. The proposed site of the interconnect station is located in a remote heavily wooded area; however, there are two residences located within 0.25 mile of the site. The parcel just south of the proposed interconnect station site contains a residential structure and outbuildings. Equitrans will purchase the parcel and will remove the structures prior to construction of the proposed Project. The other residence is located approximately 900 feet west of the proposed interconnect station site. The interconnect station site design and layout and extent of vegetation clearing is still being evaluated, however, the interconnect station is located in a wooded area and would be adjacent to an existing aboveground pipeline facility. Vegetation surrounding the interconnect station and the residence would provide a visual buffer. Portions of the interconnect station that may be seen would be viewed in the context of an existing aboveground pipeline facility that has introduced similar vertical features into the landscape setting; therefore, it is anticipated that visual impacts would be low.

The Mobley Tap (tap) will be constructed in Wetzel County, West Virginia, and will be located near the Webster Interconnect site. However, the location of the tap and layout is still being evaluated; therefore, visual impacts associated with this aboveground facility will be provided in the final version of Resource Report 8.

MLV sites will be entirely contained within the pipeline right-of-way. In addition, meter stations will be located along the pipeline and may require additional land disturbance, including vegetation removal, beyond the right-of-way for construction and operation. The locations of the MLV sites and meter stations are still being evaluated; therefore, visual impacts associated with these aboveground facilities will be provided in the final version of Resource Report 8.

8.4.4 Natural, Recreational, and Scenic Areas Impact and Mitigation

The only natural, recreational, or scenic areas identified within 0.25 mile of Project facilities are the Riverview Golf Course and the Monongahela River. The Riverview Golf Course is located between MP 1.6 and MP 2.0 of the proposed H-318 pipeline. The proposed pipeline would not cross the golf course property but would pass within approximately 300 feet (at its closest point) to Hole 12 of the course. Short-term visual impacts are anticipated during construction of the proposed pipeline, which would include the presence of construction equipment and construction crews. Long-term visual impacts are not expected to visual receptors associated with the golf course due to the hilly terrain and vegetation within and surrounding the golf course property, especially vegetation along the western property boundary between the golf course and the proposed pipeline.

The proposed H-318 pipeline would cross the Monongahela River between MPs 2.8 and 3.1, approximately 1.3 miles southwest of the Town of Elrama, Pennsylvania. As noted in Section 8.3.2, the portion of the Monongahela River that would be crossed by the proposed pipeline is not part of the Three Rivers Water Trail, which is a U.S. Department of the Interior designated National Recreation Trail (Friends of the River, no date). Although the portion of the river that would be crossed by the proposed pipeline is not part of the designated water trail, boats still travel that portion of the river. Due to the rolling terrain and the largely uniform vegetation coverage along the banks of the river, views of the proposed pipeline right-of-way from areas not directly adjacent to it would generally be screened (either partially or completely) by topography and vegetation. Visual impacts for viewers on the river adjacent to the right-of-way are anticipated to be higher; however, these higher impacts would be short-term as viewers would only be parallel or near the pipeline right-of-way for a limited time. Also, as noted in Section 8.3.2, the closest public river access point to the proposed pipeline crossing is the Carousel Marina, approximately 0.5 mile to the west. A private marina, Castaway Keys Marina, is approximately 0.5 mile to the east. No impacts for viewers associated with either marina are anticipated because views would be screened by topography and vegetation at this distance.

8.5 APPLICATIONS FOR RIGHT-OF-WAY AND OTHER LAND USES

Resource Report 1, Table 1.7-1 provides a comprehensive list of agencies with major permit or consultation requirements for the Project. Of these, the following can be considered an application for “right-of-way” or other land or road access:

- Pennsylvania Department of Transportation, Highway Occupancy Permit (H-318 and H-316 pipelines);
- West Virginia Department of Transportation, Right-of-Way Use and Permit/Encroachment Permit (Webster Interconnect); and
- Wetzel County Flood Plan Development Permit (Webster Interconnect).

No federal or state lands are crossed by the Project facilities; therefore, no right-of-way permits are required from federal or state entities.

8.6 REFERENCES

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