EQUITRANS

Equitrans Expansion Project

Docket No. CP16-__-000

Resource Report 8 – Land Use, Recreation and Aesthetics

October 2015

Equitrans Expansion Project
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)). • 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-E
4. Summarize the total acreage of land affected by construction and operation of the project. (§380.12 (j)(1)) • 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)) • 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)) • 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)) • 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)) • 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-M (Privileged)
Provide a site-specific construction plan for residences within 50 feet of construction.	Section 8.2.2 (No such residences)

FERC Data Request No 1 for Resource Report 8 Dated September 28, 2015	
Request	**Location in Resource Report**
1. Resolve or clarify the apparent discrepancies in reported impacts across the following sets of tables: a. table 1.3-1 and table 8.1-3 – acres of reported land requirements for facilities do not match; b. table 3.2-1 and table 8.1-2 – miles of agricultural land crossed by the proposed pipeline sections do not match; c. table 3.2-1 and table 8.1-3 – acres of agricultural land affected do not match; d. table 3.2-5 and table 8.1-2 – miles of Industrial, Commercial, and Residential land crossed by the proposed Project do not match; and e. table 3.2-5 and table 8.1-3 – acres of Industrial, Commercial, and Residential land crossed by the proposed Project do not match.	Tables 8.1-2 and 8.1-3

FERC Data Request No 1 for Resource Report 8 Dated September 28, 2015	
Request	**Location in Resource Report**
2. Update table 8.1-3 to: a. include acreage impacts broken out by county and state; b. combine the temporary access roads and permanent access roads into a single row titled, "Access Roads"; c. ensure that access road impact numbers include all access roads, including those for the right-of-way and aboveground facilities; and d. add all aboveground facilities (such as pipe storage yards and meter stations) to the table and list each facility separately.	Table 8.1-3 Permanent and temporary access roads impact the landscape differently, as discussed in the text, and so these have been left as separate items in the table. All aboveground facilities have been included in Table 8.1-3. Pipe storage yards are included in the Additional Temporary Workspaces (ATWS) and are not called out in a separate line because the ATWSs have multiple uses (e.g., pipe storage yards, staging areas, etc.) Note that there are no meter stations proposed for this Project.
3. Update table 8.1-4 to include the dimensions and a justification for each extra work space along the proposed right-of-way.	Section 8.1.1.3. and Resource Report 1, Appendix 1-A Standard dimensioning of ATWS is not practical because of the terrain and site-specific conditions vary widely throughout the Project.
4. Revise section 8.1.1.6 to also discuss pipe storage yards as identified in RR1.	Section 8.1.1.3
5. Update the *Irrigation and other Equipment* discussion in section 8.1.3.1 to: a. verify that Equitrans would flag any known drain tiles prior to the start of construction; b. include a schedule for when permanent tile repairs would be completed (i.e. within so many days of pipeline installation); and c. verify Equitrans' willingness to hire a local drain tile expert.	To date, Equitrans has not been made aware of the presence of drain tiles in the Project area. If drain tiles are encountered, those locations will be recorded and drain tiles will be replaced during restoration. If the use of a local drain tile expert is requested, Equitrans would consider such a request.
6. Include a discussion of special farming designations such as Pennsylvania and West Virginia's Century Farm Programs and Pennsylvania's Agricultural Land Preservation Program. Identify by MO where the proposed Project would cross special farming designated areas and the construction and operation impact (acres). Describe the program and, if construction or operation of the Project would conflict with requirements of the program, how Equitrans would mitigate impacts.	Section 8.1.3.1.
7. Revise table 8.1-5 to include each existing road that would be crossed by the Project. The table should also include: a. jurisdiction (i.e. state, county, local); b. public or private status; and c. crossing method.	Section 8.1.3.5 and Table 8.1-5
8. Clarify if Equitrans would install safety fencing around roadway crossings at night and on non-construction days.	Section 8.1.3.5

FERC Data Request No 1 for Resource Report 8 Dated September 28, 2015	
Request	**Location in Resource Report**
9. Update table 8.2-1 to include all structures within 50 feet of construction work space. The table should include residences, commercial buildings and secondary structures (e.g., sheds, pools, barns, garages). For those structures within the work space, indicate whether Equitrans plans to relocate or purchase the structures. Include a list and description of any homes that Equitrans proposes to purchase outright. Include a footnote for all Project components which do not have any structures within 50 feet of the construction work space.	Section 8.2.2
10. As required in our *Guidance Manual for Environmental Report Preparation* section 8.2.2, include written landowner agreements for all residences that would be within 10 feet of any construction work space. For each location where a residence is within 10 feet of the construction work space, and the landowner has not yet provided a written agreement to Equitrans, include a discussion on why measures, such as reducing the work space, shifting the working side of the construction right-of-way, or moving or removing extra work spaces to maximize the offset between the residence and construction work areas are not feasible.	Section 8.2.2
11. Equitrans states that it would purchase several parcels and remove the existing structures due to the Project. Include a discussion of the landowner's willingness to sell these residences/parcels to Equitrans. Further, report each landowner's willingness to accommodate all other aboveground facilities, such as pig launchers/receivers, meter stations, and MLVs.	Resource Report 10, Section 10.4.2
12. Create a single table for all access roads (temporary and permanent). The table should include the following information: a. access road name; b. MP at right-of-way connection; c. county and state; d. ownership (federal, state, county, private); e. whether the access road is temporary or permanent; f. whether the access road is existing or new; g. the existing surface type of the road (e.g. dirt, paved, gravel); h. specific modifications that would be made to each access road; i. the dimensions of the access road (length and width); j. acres of impacts (temporary and permanent separately) by land use type for any land disturbance beyond the existing footprint of an existing road; and k. explicit site-specific justification for all permanent access roads. Also include justification for all new temporary and permanent access roads in wetlands, open water, or upland forest.	Response will be provided in a subsequent filing to FERC.

RESOURCE REPORT 8
LAND USE, RECREATION AND AESTHETICS
TABLE OF CONTENTS

LIST OF TABLES

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
L/R	launcher and receiver
MP	milepost
MVP	Mountain Valley Pipeline
NLCD	National Land Cover Database
NOP	National Organic Program
Plan	FERC May 2013 version of the *Upland Erosion Control, Revegetation, and Maintenance Plan*
Procedures	FERC May 2013 version of the *Wetland and Waterbody Construction and Mitigation Procedures*
Project	Equitrans Expansion Project
Texas Eastern	Texas Eastern Transmission, LP
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VRM	Visual Resource Management

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 or Commission) pursuant to Section 7(c) of the Natural Gas Act authorizing it to construct and operate the Equitrans Expansion Project (Project) located in three counties in Pennsylvania and one county in West Virginia. Equitrans plans to construct approximately 7.87 miles of pipeline (at multiple separate locations), a new compressor station, an interconnect with the proposed Mountain Valley Pipeline (MVP), and ancillary facilities. In addition, Equitrans is seeking authorization pursuant to Section 7(b) of the Natural Gas Act to abandon an existing compressor station following the construction of the new compressor station.

The Project is designed to transport natural gas from the northern portion of the Equitrans system south to the new interconnect with MVP, as well as to existing interconnects with Texas Eastern Transmission, LP (Texas Eastern), Dominion Transmission, Inc., and Columbia Gas Transmission, LLC. The Project will provide shippers with additional flexibility to transport 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 residential and commercial areas that are planned or existing in the vicinity of the Project. Section 8.3 identifies public lands and designated recreation or other special use areas that may be affected by the Project. Section 8.4 discusses potential visual impacts of the facilities. Section 8.5 summarizes any land use permits required by the Project. Section 8.6 provides a listing of the sources used to prepare this report. 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).

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). Table 1.3-1 provides a summary of overall land required for construction and operation of the Project.

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 rights-of-way for the H-316, H-318, M-80, H-158, H-305, and H-319 segments of the pipelines vary because these pipeline sections have different proposed diameters. Construction and permanent rights-of-way required for each pipeline are provided in Table 8.1-1.

Table 8.1-1

Construction and Permanent Right-of-Way for Pipeline Segments

Pipeline Segment	Pipeline Diameter (inches)	Construction Right-of-Way Required (feet)	Permanent Maintained Right-of-Way Required (feet)
M-80	6	125 a/	50 b/
H-158	12	125 a/	50 b/
H-316	30	125	50
H-318	20	100	50
H-305	24	100	50
H-319	16	85	50

a/ The M-80 and H-158 segments will require a single, collocated 125-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.

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.. Also, the construction right-of-way will be increased for special conditions given consideration of terrain, soils, construction techniques, and other factors that affect construction safety (see Section 8.1.1.3).

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 *Upland Erosion Control, Revegetation and Maintenance Plan* (Plan) (May 2013) and FERC *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) (May 2013), 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. Any specific deviations from the FERC Procedures are described in Section 1.4 of Resource Report 1.

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 28.94 acres (forest/woodland land use type within the permanent right-of-way) or approximately 50 percent of this land use type within the permanent right-of-way. To minimize impacts to vegetation, Equitrans will implement applicable best management practices and mitigation measures specified in the FERC Plan. Equitrans is committed to constructing the proposed Project in accordance with the FERC Plan and Procedures to the maximum extent practical. As described in Section 1.4 of Resource Report 1, Equitrans will request site-specific variances, if necessary, to Section VI.B.1 (location of extra workspaces in wetlands) of the FERC 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-E.

Table 8.1-2

Land Uses Crossed by Proposed Pipeline Sections

Facilities	County	Agricultural Land a/		Forest/ Woodland b/		Open Land c/		Residential Land d/		Industrial/ Commercial Land e/		Open Water f/		Total
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles
H-158 Pipeline	Greene County, PA	0.04	18.5	0.16	65.1	0.04	16.4	0.00	0.0	0.00	0.0	0.00	0.0	0.24
M-80 Pipeline	Greene County, PA	0.04	18.0	0.16	65.3	0.04	16.6	0.00	0.0	0.00	0.0	0.00	0.0	0.24
H-316 Pipeline	Greene County, PA	1.34	44.6	1.47	49.2	0.17	5.6	0.02	0.6	0.00	0.0	0.00	0.0	2.99
H-318 Pipeline	Washington, PA	0.25	20.5	0.59	48.1	0.24	19.1	0.07	5.9	0.02	2.0	0.06	4.5	1.23
H-318 Pipeline	Allegheny, PA	0.97	32.0	1.44	47.6	0.51	16.8	0.02	0.6	0.00	0.0	0.09	2.9	3.03
H-305 Pipeline	Greene County, PA	0.10	100.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.10
H-319 Pipeline	Wetzel County, WV	0.00	0.0	0.04	67.6	0.01	32.4	0.00	0.0	0.00	0.0	0.00	0.0	0.04
All Pipelines	**Total**	**2.75**	34.9	**3.84**	48.8	**1.00**	12.7	**0.11**	1.4	**0.02**	0.3	**0.14**	1.8	**7.87**

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

a/ Cultivated land (NLCD categories Pasture/Hay and Cultivated Crops).

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

c/ 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).

d/ Existing developed residential areas and planed 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).

e/ 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).

f/ 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 8.1-3

Acres Affected by Construction and Operation of Facilities

Facilities	County	State	Agricultural Land a/		Forest/ Woodland b/		Open Land c/		Residential Land d/		Industrial/ Commercial Land e/		Open Water f/		Total	
			Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Pipeline Sections																
H-158 Pipeline	Greene	PA	0.47	0.34	1.37	0.98	0.39	0.24	0.00	0.00	0.00	0.00	0.00	0.00	2.23	1.56
M-80 Pipeline	Greene	PA	0.60	0.72	2.19	2.32	0.90	0.66	0.00	0.00	0.00	0.00	0.00	0.00	3.70	3.70
H-316 Pipeline	Greene	PA	10.11	7.44	7.63	5.70	1.58	0.80	0.66	0.18	0.00	0.00	0.00	0.00	19.98	14.13
H-318 Pipeline	Allegheny	PA	5.63	5.69	8.12	9.31	2.68	3.06	0.06	0.11	0.00	0.00	0.00	0.54	16.48	18.72
	Washington	PA	1.58	1.70	2.37	3.72	0.79	1.23	0.05	0.45	0.00	0.15	0.00	0.33	4.78	7.58
H-305 Pipeline	Greene	PA	0.59	0.62	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.62
H-319 Pipeline	Greene	PA	0.00	0.00	0.16	0.16	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.23
Pipeline Totals			**18.98**	**16.52**	**21.87**	**22.19**	**6.37**	**6.07**	**0.76**	**0.74**	**0.00**	**0.15**	**0.00**	**0.87**	**47.98**	**46.54**
Temporary Access Roads	Greene	PA	1.04	0.00	0.58	0.00	0.52	0.00	0.30	0.00	0.00	0.00	0.00	0.00	2.43	0.00
	Allegheny	PA	0.19	0.00	2.15	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61	0.00
	Washington	PA	0.18	0.00	0.08	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00
	Wetzel	WV	0.00	0.00	0.04	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
New Permanent Access Roads	Greene	PA	0.93	0.70	0.88	0.68	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.85	1.42
	Allegheny	PA	0.00	0.00	0.00	0.95	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
	Washington	PA	0.07	0.12	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.15
	Wetzel	WV	0.00	0.00	0.01	0.05	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07
Additional Temporary Workspace (ATWS)	Greene	PA	15.50	0.00	9.69	0.00	3.54	0.00	0.20	0.00	0.00	0.00	0.00	0.00	28.93	0.00
	Allegheny	PA	18.63	0.00	8.97	0.00	5.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	32.64	0.00
	Washington	PA	3.00	0.00	5.40	0.00	1.85	0.00	3.95	0.00	0.00	0.00	0.00	0.00	14.20	0.00
	Wetzel	WV	0.00	0.00	0.83	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08	0.00
Groundbed	Greene	PA	0.29	0.29	0.00	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56
Redhook Compressor Station	Greene	PA	10.87	10.87	4.55	4.55	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	17.74	17.74
Pratt Compressor Station Abandonment	Greene	PA	6.26	6.26	0.28	0.28	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	7.68	7.68
Mobley Tap	Wetzel	WV	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38

Table 8.1-3

Acres Affected by Construction and Operation of Facilities

Facilities	County	State	Agricultural Land a/		Forest/ Woodland b/		Open Land c/		Residential Land d/		Industrial/ Commercial Land e/		Open Water f/		Total	
			Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Webster Interconnect	Wetzel	WV	0.00	0.00	0.26	0.26	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81
Total by PA County	**Greene**	**PA**	**46.66**	**27.25**	**27.20**	**14.51**	**10.71**	**5.47**	**1.15**	**0.18**	**0.00**	**0.00**	**0.00**	**0.00**	**85.72**	**47.41**
	Allegheny	**PA**	**24.45**	**5.69**	**19.24**	**10.26**	**7.95**	**3.08**	**0.09**	**0.11**	**0.00**	**0.00**	**0.00**	**0.54**	**51.72**	**19.68**
	Washington	**PA**	**4.83**	**1.82**	**7.85**	**3.72**	**2.93**	**1.25**	**4.00**	**0.46**	**0.00**	**0.15**	**0.00**	**0.33**	**19.60**	**7.73**
Total PA	**PA Counties**	**PA**	**75.94**	**34.76**	**54.28**	**28.49**	**21.58**	**9.80**	**5.24**	**0.75**	**0.00**	**0.15**	**0.00**	**0.87**	**157.05**	**74.82**
Total WV	**Wetzel**	**PA**	**0.00**	**0.00**	**1.68**	**0.84**	**1.90**	**0.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.59**	**1.50**
Pipeline and Other Structures Total			**75.94**	**34.76**	**55.96**	**29.33**	**23.49**	**10.45**	**5.24**	**0.75**	**0.00**	**0.15**	**0.00**	**0.87**	**160.63**	**76.32**

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

a/ Cultivated land (NLCD categories Pasture/Hay and Cultivated Crops).
b/ Tracts of upland or wetland forest or woodland (NLCD categories Deciduous Forest and Woody Wetlands).

c/ 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).

d/ Existing developed residential areas and planed 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).

e/ 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).

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

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 2.40 mile (about 31 percent) 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, one is a pipeline owned by Texas Eastern and another is owned by Sunoco. 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 Texas Eastern 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 75.85 acres of additional temporary workspace (ATWS) are required for certain construction activities that require additional space outside of the construction right-of-way (Table 8.1-3 and 8.1-4). These activities include but are not limited to:

- Road and railroad crossings;
- Contractor yards;
- 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 the ATWS were determined on a site-specific basis and are listed in Table 8.1-4. A portion of some of the ATWS will be used temporarily as construction yards for staging or storage during the construction time frame to stockpile pipe and store materials, fabricate facilities, concrete-coat joints, stage construction operations, park equipment and vehicles, and house temporary construction office trailers. 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 FERC Procedures.

8.1.1.4 Groundbed Areas

Groundbeds are used to provide cathodic protection to surface equipment as well as pipelines to prevent the occurrence of corrosion and any form of damage. A groundbed is an electrode array of anodes installed beneath the ground to give off a path with low resistance to ground, which provides a way for protective currents out of anodes into an electrolyte. In terms of cathodic protection, the groundbed refers to the anodes' arrangement in water or ground.

Table 8.1-4

Proposed Additional Temporary Workspace Areas

Pipeline Facility	ATWS Location Description	ATWS Acreage
H-158/M-80	Area at MP 0	0.08
	Area along Strope Road between MP 0 and MP 0.1	0.77
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	0.28
	Area between MP 0.6 and 0.7	0.35
	Area west of Prison Road and between MP 0.7 and 0.8	0.06
	Area east of Prison Road and between MP 0.8 and 0.9	0.59
	Area between MP 1.4 and 1.5	0.97
	Area north and south of pipeline near MP 2.1	3.03
	Area south of Ankrom Road between MP 2.8 and 2.9	13.73
H-318	North of MP 0.0 near Finley-Elrama Road	2.31
	North of MP 0.0 near PA-837	1.36
	North of Rippel Road, between MP 0.4 and 0.7	11.47
	South of Rippel Road, between MP 0.7 and 0.8	0.72
	South of Rippel Road, at MP 1.6	1.96
	Between Raccoon Run Road and Rippel Road, between MP 1.5 and 1.6	0.17
	North of Raccoon Run Road at MP 1.6	1.34
	Area east of Church Hollow Road between MP 1.9 and 2.0	0.44
	Area east of Church Hollow Road between MP 2.0 and 2.3	12.50
	Area south of Bunola River Road between MP 2.7 and 2.8	0.39
	Area north of Bunola River Road near MP 2.8	3.65
	Area off Finley-Elrama Road between MP 3.4 and 4.0	7.65
	Area off Finley-Elrama Road beyond the terminus of route	2.87
H-319	Area north and south of route	0.42
H-305	Area west of route	1.01
Mobley Tap	East of Tap	0.11
Redhook Compressor Station	South of site	6.25
Webster Interconnect	South of site	1.55
	Total ATWS Acreage	**77.85**

Groundbed areas are proposed for the H-316 pipeline. 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 to 15 feet deep). Groundbed installation typically requires disturbance of an approximately 50-foot by 300-foot area. A total of approximately 0.56 acre would be temporarily impacted by groundbed installation. After installation, the groundbed sites would be restored to prior condition as described in the FERC 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 5.68 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 time frame. During construction, these access roads will be approximately 25 feet wide. After construction is complete, temporary access roads will be restored as close as practicable to pre-construction condition.

Approximately 2.61 acres of permanent impacts associated with 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.

8.1.2 Aboveground Facilities

Proposed aboveground facilities include the Redhook Compressor Station, the Webster Interconnect, the Mobley Tap, and pig launcher/receiver (L/R) facilities 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 0.24) for the H-158 and M-80 pipelines and the start (MP 0.00) of the H-305 and H-316 pipelines. 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 17.74-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. The existing Pratt Compressor Station will be decommissioned after the Redhook Compressor Station is operational, but the site will continue to be used by Equitrans as a ware yard and for aboveground appurtenances that would remain in place.

The proposed Mobley Tap will be located in Wetzel County, West Virginia. The installation of ancillary facilities between the Project and MVP will consist of two taps, a riser, and associated piping and valving both into MVP's proposed Mobley Interconnect and into the H-302 pipeline. The Mobley Tap will be located in a graded, stoned, and fenced and gated area as close as practical to the actual intersection of the Equitrans' H-302 and MVP H-600 pipelines in order to keep the length of the interconnecting piping to a minimum. The station location is in the Grant District, Wetzel County, West Virginia. See Appendix 1-C of Resource Report 1 for a plot plan of the proposed Mobley Tap.

The proposed Webster Interconnect will be located on approximately 0.81 acre in Wetzel County, West Virginia. This area includes the footprint of the facilities. All construction activities and storage of construction equipment and materials will be limited to the area boundary. The current land use is categorized as Forest/Woodland and Open Land (Table 8.1-3). The proposed Webster Interconnect Station

will be graded, stoned, and 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 sites will be entirely contained within the pipeline right-of-way and will not require any additional land disturbance. Pig launching and receiving facilities will be installed at the beginning and at the end of the H-316 and H-318 pipelines, and at certain other points as identified in Resource Report 1, Table 1.2-2. The L/R stations will be designed to accommodate smart pigs for periodic internal inspections of the pipeline during operations.

Construction practices for all aboveground facilities are described in Section 1.4.2 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 as well as those measures required by Equitrans' state earth disturbance permits.

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, and in the ATWS. 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 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 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 or any other specialty crops (such as nurseries or vineyards) within the right-of-way that will require avoidance measures or measures to minimize impacts. Actively cultivated cropland that is disturbed during construction may be left unseeded at the request of the landowner, and pastures 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 10.87 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.

The Pennsylvania Agricultural Land Preservation Program is a state-run program devoted to the preservation of small farms by the purchase of conservation easements. The holder of the easement has the right to prevent development or improvements to the land for purposes other than agricultural production. Allegheny, Greene and Washington counties all have county boards and administrators that run this program within the county. One farm in Washington County along the H-318 pipeline is enrolled in this program and the state has purchased an easement for the surface area of the entire property. This farm is also designated as an Agricultural Security Area by Forward Township. Temporary impacts to the farm will occur during the construction of the H-318 pipeline; however, no permanent impacts are anticipated and Equitrans will restore any disturbance to the property as described above.

West Virginia's Century Farms program was initiated in 2011 to recognize land that has been farmed by the same family for at least 100 years. No land in Wetzel County has been identified as being part of the Century Farms program.

Equitrans will continue to consult with owners of lands crossed by the proposed pipelines, temporary construction right-of-way, and other Project features to determine if other agricultural protection or conservation programs are in place.

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 pipelines and associated facilities. There are no known drain tiles or irrigation systems crossed by the Project. If drain tiles and irrigation systems are identified, construction will be conducted in accordance with the FERC 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, 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 of 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 Plan; herbicides and pesticides may be used as necessary to control nuisance or noxious species.

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 provides additional detail regarding existing and planned residences within the Project area. 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 time frame, 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.

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 3 feet below road surfaces and 10 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 roads and 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 and safety fencing will be installed around roadway crossings at night and on non-construction days.

Table 8.1-5

Public Roadways and Railroads Crossed by the Project a/ b/

Facility	County	Roadway Name	Road Surface	Milepost	Road Jurisdiction
M-80/H-158	Greene County, PA	Braden Run Road (T588)	Asphalt	0.15	Local
H-316	Greene County, PA	Jefferson Road/Pennsylvania Route 188 (PA 188)	Asphalt	0.09	State
H-316	Greene County, PA	Prison Road	Asphalt	0.80	Local
H-316	Greene County, PA	Monongahela Railway	N/A	2.25	-
H-316	Greene County, PA	Creek Road (T555)	Asphalt	2.29	Local
H-316	Greene County, PA	McNeely Road (T543)	Asphalt	2.75	Local
H-318	Allegheny County, PA	Rippel Road	Asphalt	0.70	Local
H-318	Allegheny County, PA	Rippel Road	Asphalt	1.63	Local
H-318	Allegheny County, PA	Raccoon Run Road	Asphalt	1.70	State
H-318	Allegheny County, PA	Bunola River Road	Asphalt	2.76	State
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	5th Street/Pennsylvania Route 837 (PA 837)	Asphalt	3.15	State
H-318	Washington County, PA	Seneca Drive	Asphalt	3.70	Local
H-318	Washington County, PA	Finleyville-Elrama Road	Asphalt	4.16	State
H-319	Wetzel County, WV	County Road 80	Asphalt	0.03	County

a/ H-305 does not cross any public roadways or railroads. The Mobley Tap, Redhook Compressor Station and Webster Interconnect are adjacent to but do not cross any roads.
b/ It is assumed that all roads are public.

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.

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.

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.

Table 8.1-6

Special Land Uses within 1 Mile of Project Facilities a/

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 b/	Less than 0.2 mile
H-316/ Redhook Compression Station	Greene County, PA	State Correctional Institute – Greene	Active prison c/	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

Table 8.1-6

Special Land Uses within 1 Mile of Project Facilities a/

Facility	County	Special Land Use	Description	Approximate Distance from Project Facilities
Webster Interconnect	Wetzel County, WV	Kilcoyne Cemetery	Cemetery	0.3 mile

a/ No special land uses were identified within 1 mile of pipelines H-305 or H-319.

b/ 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).

c/ 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).

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 developments[1] 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-L Agency Correspondence of Resource Report 1).

The Greene County Comprehensive Plan (Greene County 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.

[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."

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.

There are four residences located within the boundary of the Redhook Compressor Station that Equitrans has or is in the process of acquiring through negotiations from willing sellers. Resource Report 10, Table 10.4-2 summarizes the status of landowner negotiations and Figure 10.4-1 shows the location of each residence. These residences will be demolished to accommodate the compressor station.

Table 8.2-1

Residences and Buildings within 50 feet of the Proposed Pipeline Construction Work Area a/

Pipeline Segment	County	Building Type	Milepost	Direction	Distance		Occupied
					From Edge of Workspace	From Pipeline Centerline	
H-158/M-80 b/	Greene County, PA	Residence	0.18	West	25 feet	80 feet	Yes
H-316	Greene County, PA	Outbuilding	0.03	Northeast	Inside temporary right-of-way	20 feet	No
H-316	Greene County, PA	Garage and Outbuilding	0.1	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

a/ The H-305, H-318, H-319 pipelines, Redhook Compressor Station, Pratt Compressor Station, Mobley Tap, and Webster Interconnect do not have any structures within 50 feet of the construction workspace.

b/ This residence is located on the Redhook Compressor Station site and Equitrans is currently negotiating with the landowner to purchase the property.

While there are no residences within 50 feet of the Project, the following construction measures will be taken for all residences to minimize noise, dust, traffic, and access disruption if necessary:

- 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 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.

The Project construction workspace is a minimum of 25 feet from any residence. There are no privately-owned residences within 25 feet of any workspace and, as such, site-specific residential mitigation plans are not necessary. In addition, there are no residences within 10 feet of any construction workspace; therefore, no written landowner agreements are required.

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. There are two recreation resources crossed by the Project. 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.

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. Note that Farm Conservation Land is discussed in Section 8.1.3.1 of this Resource Report. Resource Report 1 lists all agencies that have been contacted regarding the Project thus far.

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. In addition, 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 and Scoping Comments

Sections 1.7 and 1.8 of Resource Report 1 provide details of the agency and landowner consultations that have occurred to date. No agency correspondence related to land issues has been received to date. Any future responses received from these agencies will be reviewed for relevance to public land, recreation resources, and other designated areas. During public scoping, two stakeholders requested consideration of variations related to the H-318 pipeline in Forward Township, Allegheny County between MPs 0.0 and 1.8 of the proposed route. Resource Report 10, Figure 10.3-5 shows the applicable parcels and variations evaluated.

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.

8.4 VISUAL RESOURCES

This section describes the affected environment and assesses the visual impacts of the Project on the surrounding landscape, which is defined as visible features of the landscape (e.g., land, water, vegetation, animals, structures, and other features) (BLM 1984).

8.4.1 Affected Environment

The Project is located within the Western Allegheny Plateau Level III ecoregion and is characterized by dissected plateaus, rounded hills, ridges and broad valleys (EPA 2011). There is a high density of perennial streams in this ecoregion; however, lakes are not typical. Elevations typically range between 650 to 1,300 feet above mean sea level. Vegetation types found within this ecoregion include chestnut oak, red maple, white oak, black oak, beech, yellow-poplar, sugar maple, ash, basswood, buckeye, and hemlock. This ecoregion is mostly forested, and land uses in the region include some logging, areas of livestock, dairy farming and croplands. Other cultural modifications common to this ecoregion include natural gas facilities, including pipelines, coal mining facilities, distribution and high-voltage transmission lines, paved and unpaved roadways, scattered rural residences, and farms and associated appurtenances.

8.4.2 Methodology

The FERC does not have existing guidelines for conducting visual resource assessments; however, according to the FERC (2002) *Guidance Manual for Environmental Report Preparation*:

> "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.

The BLM VRM system provides a systematic approach for evaluating the potential changes to visual resources that may result from construction, operation and/or maintenance of the Project. The BLM VRM (BLM 1984) provided the primary guidance for evaluating landscape character and visual impact assessment.

The visual resource inventory considered visual resources potentially affected by the construction and operation of the Project. Equitrans evaluated a visual resources analysis area generally defined as 0.25 mile from the Project components (i.e., pipeline, compressor stations, interconnect station, and tap sites). This distance corresponds with the FERC requirements of reviewing natural, recreational, and scenic areas. To inventory and characterize the project-level affected environment for visual resources, the following visual components were considered: landscape scenery and sensitive viewers. Landscape scenery is the aggregate features that give character to the landscape (BLM 1984). Typically, every landscape comprises varying levels of landform, vegetation, existence of water, color, scarcity, adjacent scenery, and cultural modifications; all of which combine to exhibit landscape character (BLM 1984). Existing conditions were evaluated by means of aerial photography to determine where modifications have affected natural settings.

The term "sensitive viewers" refers to specific user groups associated with various land uses that have a sensitivity to landscape change, and therefore could be adversely affected by the construction and operation of the proposed Project. In this regard, viewing locations are typically associated with travel routes, recreation areas, and residences. Typically key observation points are selected to represent a critical or typical viewpoint within, or along, an identified viewing location and are used to assess visual impacts. However, given the relatively low density of viewers within this primarily rural landscape setting, sensitive viewers (referred to in this assessment as visual receptors) within the visual resource analysis area for Project components were identified and used to assess visual impacts.

Existing conditions and visual receptors identified during the inventory processes are described in Section 8.4.3.

Due to the variation in terrain and large, dense forested areas, the analysis area and number of visual receptors were anticipated to be primarily low; therefore, the Project did not warrant conducting field investigations. Instead desktop studies were performed to assess if a field effort would be needed. After the initial desktop study was conducted, it was concluded that the level of effort was sufficient to identify potential visual impacts.

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 (i.e., landforms, water bodies, vegetation, structures). 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 waterbodies), 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 that 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 Resource 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.

Visual impacts are discussed in further detail in subsequent sections.

8.4.3 Inventory Results

8.4.3.1 Pipeline Facilities

The H-316 pipeline will be constructed in Greene County, Pennsylvania, and the H-318 pipeline will be constructed in Washington and Allegheny Counties, Pennsylvania. The existing landscape that will be crossed by the proposed pipeline rights-of-way is characterized by rolling hills covered with a patchwork of open grass fields and croplands and dense wooded areas. The H-318 pipeline will cross the Monongahela River, approximately 1.3 miles southwest of Elrama, Pennsylvania. The land uses that will be crossed by the pipeline facilities are discussed in Section 8.1.1. Other cultural modifications that occur within the area include paved and unpaved roadways, distribution and high-voltage transmission lines, and existing natural gas facilities, including a number of existing pipeline rights-of-way. To the extent practicable, the pipeline routes were collocated with or adjacent to existing utility corridors. Existing corridors adjacent to the Project are noted in Table 1.3-2 in Resource Report 1.

Visual receptors within the visual resource analysis area for the proposed pipeline rights-of-way includes primarily rural residences and travelers along local roadways.

8.4.3.2 Aboveground Facilities

The Project includes the construction and operation of one compressor station, one interconnect station, L/R facilities, and other ancillary facilities, and the decommissioning of a compressor station. These facilities are described in detail in Section 1.2.2 of Resource Report 1. The existing landscape setting and visual receptors identified within the visual resource analysis area for each of the aboveground facilities is described below.

Redhook Compressor Station

The Redhook Compressor Station will be constructed at MP 0 of the H-316 pipeline in Greene County, Pennsylvania. The Redhook Compressor Station is located near the intersection of Braden Run Road and Jefferson Road. The compressor station site has been previously developed for residential use and there are approximately four existing residential structures and several out structures located along the proposed compressor station's southern boundary. Much of the vegetation surrounding the residences has been cleared with the exception of scattered stands of trees located to the north of the residences. An existing pipeline right-of-way traverses the northern and eastern boundaries of the proposed site. Recent development adjacent to the compressor station site includes an existing pipeline right-of-way and ancillary facilities, and an existing compressor station (owned by others) located north and northeast, respectively. In addition to the existing pipeline right-of-way adjacent to the compressor station site, there are approximately four other pipeline rights-of-way associated with the existing Pratt Compressor Station which are located north and east of the site. The existing Pratt Compressor Station is located approximately 650 feet to the south. Equitrans will purchase the parcels within the Redhook Compressor Station site boundary and remove residential structures prior to the construction of the Project. The site will be graded to accommodate a level pad for the proposed facilities. The pad, which all facilities would be located on, will be approximately 40 feet above the public roads. The compressor station will be enclosed by an 8-foot-

high chain link fence topped with three strands of barbed wire. The slopes of the pad and area surrounding the site will be vegetated. Security lighting will be installed at building entrances and along the site's perimeter fence.

Visual receptors within the visual resource analysis area for the Redhook Compressor Station site include three residences located approximately 0.2 mile northwest; one residence approximately 0.1 mile southeast of the site; and travelers along Jefferson Road. The residential structure that is located on the eastern side of Jefferson Road directly across from the site is owned by Equitrans.

Pratt Compressor Station

The Pratt Compressor Station is an existing facility located approximately 650 feet south of the proposed Redhook Compressor Station along the southern side of Jefferson Road. The existing compressor station is bounded by Jefferson Road to the north and a railroad located approximately 190 feet south of the site. The site is surrounded by hilly terrain and dense wooded areas to the north and east. 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.

Visual receptors within the visual resource analysis area for the compressor station include a residence located approximately 0.15 mile north of the site; and travelers along Jefferson Road. Existing residential structures located approximately 0.15 mile north are located on the proposed Redhook Compressor Station site, and as previously noted, will be removed prior to construction of the Project and were therefore, not identified as visual receptors. The residential structure located across from the proposed Redhook Compressor Station on Jefferson Road, as previously noted, is owned by Equitrans and was therefore not identified as a visual receptor.

Webster Interconnect Station

The Webster Interconnect Station will be constructed in Wetzel County, West Virginia. The proposed interconnect station is located near the intersection of County Road 80 and County Road 15/17. The proposed site has been previously cleared and developed for residential use. There is an existing residential structure and out structure located on the site. The interconnect station site is adjacent to an existing pipeline facility (owned and operated by others) located to the north. County Road 80 parallels the sites eastern boundary, and the area to the south and west consists of hilly terrain that is heavily forested. An existing pipeline right-of-way and other natural gas facilities are located approximately 0.25 mile and 0.6 mile west of the proposed site, respectively. Equitrans will purchase the parcel and remove the residential structure prior to the construction of the Project. The footprint of the interconnect station site will be approximately twice the size of the existing facility to the north and it will be enclosed by an 8-foot-high chain link fence topped with three strands of barbed wire. A security light will be installed within the site's perimeter fence.

Visual receptors within the visual resource analysis area for the interconnect station includes a residence located on the eastern side of County Road 80 directly adjacent to the tap site; two residences located approximately 0.25 mile south and 900 feet northeast of the proposed interconnect station; and travelers along County Road 80 and County Road 15/17.

Mobley Tap

The Mobley Tap will be constructed in Wetzel County, West Virginia. The proposed tap will be located along County Road 15/3 approximately 0.5 mile northeast of the County Road 15/3 and County Road 15/17

intersection. The tap site will be located in an existing pipeline right-of-way that has been previously cleared of vegetation. The tap site is located in a narrow valley surrounded by dense forested hills. County Road 15/3 parallels the sites' eastern boundary. An existing transmission line right-of-way is located approximately 175 feet south of the proposed tap site and other natural gas facilities are located approximately 0.4 mile southwest. Aboveground facilities associated with the Mobley Tap will be between 4 to 6 feet high and the site will be enclosed by an 8-foot-high chain link fence topped with three strands of barbed wire. At least one yard light will be located within the site for security.

Visual receptors within the visual resource analysis area for the Mobley Tap include residences located approximately 0.2 mile and 0.15 mile to the north and southwest of the proposed site, respectively; several residences located to the east, with the closest two located 50 feet and 130 feet from the southeast boundary of the proposed site; and travelers along County Road 15/3.

Applegate Launcher and Receiver

The Applegate L/R site will be constructed at MP 0 of the H-318 pipeline in Allegheny County, Pennsylvania. The Applegate L/R site will be located within an existing natural gas facility located approximately 0.3 mile west of the Pangburn Hollow Road and Saddler's Hollow Road intersection. The site has been previously cleared and leveled for the existing pipeline facilities. There is an existing perimeter fence and lighting within the site. The site is situated on top of a hill in an open area that is surrounded primarily by forested hills. An existing gas facility is located approximately 400 feet to the northeast of the L/R site, and a high-voltage transmission line corridor is located approximately 100 feet to the north.

Visual receptors within the visual resource analysis area for the Applegate L/R site include local roads located approximately 0.2 mile west and north of the site.

Hartson Launcher and Receiver

The Hartson L/R site will be constructed at MP 4.26 of the H-318 pipeline in Washington County, Pennsylvania. The L/R site is located on the western side of Finleyville Elrama Road approximately 0.15 mile south of Lobbs Run Road. The site was previously developed for residential use, but the residences have since been demolished. The site is adjacent to an existing Equitrans facility located approximately 250 feet to the northwest of the L/R site. A large wooded area borders the L/R site to the west and Finleyville Elrama Road is located approximately 300 feet to the south. The L/R site will be graded to accommodate a level pad for the proposed facilities. Perimeter fencing and security lighting are not proposed for this facility.

Visual receptors within the visual resource analysis area for the Hartson L/R site include a residence located approximately 260 feet southwest of the L/R site; residences located approximately 500 or more feet along the southern side of Finleyville Elrama Road; and travelers along Finleyville Elrama Road, which passes within approximately 300 feet south of the L/R site.

H-302 Tap Launcher and Receiver

The H-302 Tap L/R site will be constructed at MP 2.99 of the H-316 pipeline in Greene County, Pennsylvania. The L/R site will be located on a hill at the edge of an open field adjacent to an existing pipeline right-of-way. The L/R site is currently not developed. The south side of the L/R site is surrounded by a large dense wooded area, except for where the vegetation has been cleared for the existing pipeline right-of-way. The area north of the L/R site consists of open grassy fields and scattered rural residences

surrounded by patches of wooded areas. The L/R site will be graded to accommodate a level pad for the proposed facilities and will be enclosed by a 6-foot-high chain link fence. Lighting is not proposed as part of this facility.

Visual receptors within the visual resource analysis area for the H-302 Tap L/R includes residences located along Ridge Road located approximately 0.25 mile south of the site; residences along Ankrom Road and Crayne School Road located approximately 0.2 mile north and east of the L/R site; and travelers along local roadways.

8.4.3.3 Natural, Recreational, and Scenic Areas

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

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 pipeline will not cross the golf course property but will pass within approximately 300 feet (at its closest point) to Hole 12 of the course. The proposed pipeline will parallel an existing pipeline right-of-way for approximately 0.3 mile, where it passes near the golf course.

The proposed H-318 pipeline will 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 will 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 will be crossed by the proposed pipeline is not part of the designated water trail, boats still travel that portion of the river. 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.

8.4.4 Impacts and Mitigation

8.4.4.1 Pipeline Facilities

Visual impacts associated with construction and operation of the pipelines may result from the removal of vegetation, particularly in forested areas. The removal of vegetation associated with the proposed pipeline rights-of-way would repeat the same form, line, and color within the landscape as existing pipelines within the landscape setting; thus, impacts in areas where the pipeline right-of-way is observable are expected to be primarily low to moderate. It is anticipated that higher impacts will occur where these changes to the landscape are most observable (or create higher contrast), such as where the pipeline parallels or crosses roads and where vegetation is removed between the right-of-way and residences. Views of the proposed pipeline rights-of-way from areas not directly adjacent to it will generally be screened (either partially or completely) by topography and/or vegetation, resulting in lower impacts.

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 or by the landowner. Where the pipeline traverses forested areas, visual impacts will be long-term due to vegetation maintenance within the 50-foot-wide permanent easement.

8.4.4.2 Aboveground Facilities

Construction of the aboveground facilities will result in the short-term visual intrusion of construction vehicles, equipment, materials, and a work force in temporary work areas and aboveground facility sites. Vehicles, heavy equipment, structure components, ancillary facility components and materials, and workers will be visible during construction and modification, clearing and grading, facility installation, and cleanup and restoration and will create short-term and local contrast within the areas where construction is taking place. It should also be noted that lighting of construction yards and work areas will create temporary visual impacts to night skies where construction is taking place. Long-term visual impacts for each of the aboveground facilities are described below.

Redhook Compressor Station

Visual impacts for visual receptors associated with the Redhook Compressor Station will vary between moderate and no impact. Views of the compression station from residences located approximately 0.2 mile northwest and 0.1 mile southeast would be completely screened by existing vegetation and topography; therefore, no visual impacts are anticipated. Travelers along a segment of Jefferson Road adjacent to the compressor station may have views of the compressor station as they pass the site. However, the compressor station would be seen in the context of other natural gas facilities and would be similar in form, line, and color as the existing facilities and would appear co-dominant; therefore, impacts are anticipated to be moderate. Security lighting will be directed downward and shielded to avoid light trespass and night pollution impacts. The amount of light generated by the security lights would 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. As noted in Section 8.4.3.2, the slopes surrounding the compressor station will be re-vegetated, which will provide some visual buffer between the facility and the residence and travelers along Jefferson Road. Equitrans does not propose any specialized mitigation for visual resources at this location.

Pratt Compressor Station

Visual impacts for visual receptors associated with the Pratt Compressor Station will vary between low and no impacts. Views of the compression station from the residence located to the north will be completely screened by vegetation and topography surrounding both the residential structure and compressor station; therefore, no visual impacts are anticipated. Visual impacts will be limited to travelers along Jefferson Road. During deconstruction of the existing compressor station, visual impacts will 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 Pratt Compressor Station and the perimeter fencing will remain after the compressor station has been deconstructed, visual impacts will be low since most aboveground (vertical) facilities will be removed from the landscape. Equitrans does not propose any specialized mitigation for visual resources at this location.

Webster Interconnect Station

Visual impacts for visual receptors associated with the Webster Interconnect Station will vary between high and low. The residence located on the eastern side of County Road 80 adjacent to interconnect station will have unobstructed views in the immediate foreground. Due to the close proximity of the interconnect station to the residence, the proposed facility will appear dominant in the view; therefore, visual impacts are

anticipated to be high. Views of the interconnect station for the residence to the northeast will be partially screened by an existing out structure and vegetation located between the residence and the interconnect station site. Although the proposed interconnect station site will be larger than the existing gas facility site, only a portion of the interconnect station will be visible, and because it will be seen in the context of the existing pipeline facility, it will appear co-dominant; therefore, visual impacts are anticipated to be moderate. Views of the interconnect station from the residence located to the south would be mostly screened by the hilly terrain and densely vegetated hills of the surrounding area, and the interconnect station will not be readily apparent to the viewer; therefore, impacts are anticipated to be low. Travelers along a segment of County Road 80 and County Road 15/17 adjacent to the interconnect station will have unobstructed views of the interconnect station as they pass the site. The interconnect station would be seen in the context of the existing gas facility; however, the interconnect station site is approximately twice the size of the existing facility, and will appear as a dominant feature for travelers immediately adjacent to the site; therefore, impacts are anticipated to be high. However, these higher impacts will be short-term as visual receptors will only be parallel or be near the interconnect site for a limited time. The amount of light generated by the security light will be consistent with existing sources produced by man-made structures within 0.3 mile of the proposed interconnect site. However, incremental visual impacts may occur for residences within close proximity to the interconnect station. Equitrans does not propose any specialized mitigation for visual resources at this location.

Mobley Tap

Visual impacts for visual receptors associated with the Mobley Tap would vary between high and low. The two closest residences to the proposed tap would have unobstructed views of the facility in the immediate foreground. The proposed tap would introduce new low vertical and horizontal elements into the existing landscape setting and the facility would appear as a dominant feature; therefore, visual impacts are anticipated to be high. The proposed tap would become less apparent to residential viewers located further to the east (between 500 feet and 880 feet), where it would be partially to completely screened by hilly terrain and dense vegetation; therefore, visual impacts are anticipated to range from moderate to low as the viewing distance increases. Views of the proposed tap from residences located to the north and southwest would be mostly screened by vegetation, and the proposed tap would not be readily apparent to those viewers; therefore, visual impacts are anticipated to be low. Travelers along a segment of County Road 15/3 adjacent to the proposed tap would have unobstructed views of the tap as they pass the site. The proposed tap would appear as a dominant feature for travelers immediately adjacent to the site' therefore, impacts are anticipated to be high. However, these higher impacts would be short-term as visual receptors would only be parallel or be near the tap site for a limited time. Although the amount of light generated by the security light will be consistent with existing sources produced by man-made structures located to the west of the proposed tap, incremental visual impacts may occur for residences within close proximity to the proposed site. Equitrans does not propose any specialized mitigation for visual resources at this location.

Applegate Launcher and Receiver

Visual impacts are not anticipated for visual receptors associated with local roads to the west and north of the Applegate L/R site because it will be completely screened by the hilly terrain and dense wooded areas surrounding the L/R site. Therefore, Equitrans does not propose any specialized mitigation for visual resources at this location.

Hartson Launcher and Receiver

Visual impacts for visual receptors associated with the Hartson L/R will vary between moderate and no impact. Views from a residence located approximately 260 feet southwest of the Hartson L/R site will be partially screened by vegetation surrounding the residence. The aboveground piping, valves and other vertical features associated with the Hartson L/R will be similar to the existing Equitrans facility located to the northeast. The L/R site will be seen in the context of the larger Equitrans facility, but because the L/R site is located closer to the viewer, it will appear co-dominant; therefore, impacts are anticipated to be moderate. Moderate impacts are also anticipated for travelers along a segment of Finleyville Elrama Road adjacent to the L/R site where travelers will have unobstructed views of the site, which will appear co-dominant with the existing Equitrans facility. These impacts will be short-term as visual receptors will only be parallel or be near the L/R site for a limited time. Visual impacts are not anticipated for residences located 0.1 mile or greater from the site along the southern side of Finleyville Elrama Road or from along Finleyville Elrama Road (where the road is not directly adjacent to the site) because the L/R site will be completely screened by dense wooded areas. Equitrans does not propose any specialized mitigation for visual resources at this location.

H-302 Tap Launcher and Receiver

Visual impacts for visual receptors associated with the H-302 Tap L/R will vary between high and no impact. Due to the hilly terrain and scattered patches of wooded areas surrounding the L/R site, views from residences and Ankrom Road and Crayne School Road to the north and east will vary from completely screened to unobstructed. High visual impacts are anticipated for viewers with unobstructed views of the L/R site where it will introduce new form, line, color and texture into a primarily natural landscape setting with rolling terrain and wooded areas. High impacts for travelers along local roads would be short-term as visual receptors will only be parallel to or near the L/R site for a limited time. Impacts will be reduced where the L/R site is partially to completely screened by topography and/or vegetation, where the Project features will become less apparent. Visual impacts are not anticipated for residences or travelers along Ridge Road because the L/R site will be completely screened by a large densely wooded area. Equitrans does not propose any specialized mitigation for visual resources at this location.

8.4.4.3 Natural, Recreational, and Scenic Areas

Visual impacts for visual receptors associated with the Riverview Golf Course and the Monongahela River would vary between high to no impact.

Visual receptors associated with the Riverview Golf Course are anticipated to experience short-term visual impacts during construction of the proposed pipeline. Visual impacts will include the presence of construction equipment and construction crews. Long-term visual impacts are not expected for visual receptors 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. Therefore, Equitrans does not propose any specialized mitigation for visual resources at this location.

Due to the rolling terrain and the largely uniform vegetation coverage along the banks of the Monongahela 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; therefore, visual impacts are anticipated to be low and incremental. Visual impacts for visual receptors on the river adjacent to the right-of-way are anticipated to be high where the Project would be more apparent due to the removal of vegetation

for the pipeline right-of-way and introduction of straight lines along the edge of the cleared right-of-way. However, these higher impacts would be short-term as visual receptors will only be parallel or be near the pipeline right-of-way for a limited time. Therefore, Equitrans does not propose any specialized mitigation for visual resources at this crossing. No impacts for viewers associated with either marina are anticipated because views will 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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