EQUITRANS

Equitrans Expansion Project

Docket No. CP16-__-000

Resource Report 5 – Socioeconomics

October 2015

Equitrans Expansion Project
Resource Report 5 – Socioeconomics

Resource Report 5 Filing Requirements	
Information	**Location in Resource Report**
Minimum Filing Requirements	
1. Describe socioeconomic conditions within the project area. (§ 380.12(g)(1))	Section 5.1
2. Evaluate impact of any substantial immigration of people on governmental facilities and services and describe plans to reduce the impact on the local infrastructure. (§ 380.12(g)(2))	Sections 5.2.4 and 5.2.5
3. Describe on-site manpower requirements and payroll during construction and operation including number of construction personnel who currently reside within the impact area, would commute daily to the site from outside the impact area, or would relocate temporarily within the impact area. (§ 380.12(g)(3))	Section 5.2.2
4. Determine whether existing housing within the impact area is sufficient to meet the needs of the additional population. (§ 380.12(g)(4))	Sections 5.1.1 and 5.2.3
5. Describe number and types of residences and businesses that would be displaced by the project, procedures to be used to acquire these properties, and types and amounts of relocation assistance payments. (§ 380.12(g)(5))	Sections 5.2.2 and 5.2.3
6. Conduct a fiscal impact analysis evaluating incremental local government expenditures in relation to incremental local government revenues that would result from construction of the project. Incremental expenditures include, but are not limited to, school operating costs, road maintenance and repair, public safety, and public utility costs. (§ 380.12(g)(6))	Sections 5.2.6 and 5.3.3

FERC Environmental Information Request for Resource Report 5	
Request	**Location in Resource Report**
1. Revise section 5.1.1 to include a table of vacant housing units, rental vacancy rates, number of hotel/motel rooms, and number of campgrounds, and recreational vehicle parks for each of the four affected counties. Include sources for all data.	Because neither agencies nor the public have raised any concern with the Project's impacts on available housing supply, the information is not addressed in Resource Report 5.
2. Revise section 5.2.1 to include the most recent estimates for the population (population, population density, per capita income, unemployment rates, civilian workforce, and top three industries) in each of the four affected counties.	Because neither agencies nor the public have raised any concern with the Project's socioeconomic impacts, the information is not addressed in Resource Report 5.
3. Include an estimate of the number of construction workers that would relocate to the area with their families. Estimate the average family size for workers who would relocate, and include those numbers in the population analysis. Estimate the number of school age children who would relocate because of the Project and analyze their enrollment impact on local school districts.	Section 5.2.
4. Include the basis for the estimate that 10 percent of the workforce would be comprised of "local workers."	Section 5.2.

FERC Environmental Information Request for Resource Report 5	
Request	**Location in Resource Report**
Revise section 5.3.1 to also include an estimate of the number of workers that would reside in West Virginia and Pennsylvania (beyond commuting distance), respectively.	
5. Clarify if union labor be used during construction of the Project, and if not explain why.	Section 5.2.
6. Section 5.2.1 (and table 5.2-1) states "overall construction of the pipeline and associated facilities, and demobilization of the Pratt Compressor Station is expected to take 23 months, with a proposed construction start date in February 2017." However, Table 1.4-5 from RR1 indicates construction would commence in January 2017 with a completion date of December 2018 (24 months). Resolve the apparent discrepancies.	Discrepancies throughout the Environment Resource Reports have been corrected.
7. Section 5.2.1 states that "50 percent of the jobs involving timber clearing, paving, radiography, revegetation, and traffic control could be sourced locally," which contradicts the previous statement that only 10 percent of the workforce would be local. Clarify these estimates by proving an estimate of the peak number of local construction workers that would be hired for each Project component.	Table 5.2-1.
8. Revise section 5.2.4 to include the number of police departments (number of officers in each department), fire departments (number of fire fighters in each department), hospitals (number of beds), and schools (enrollment at each district) in each of the affected counties.	Because neither agencies nor the public have raised any concern with the Project's socioeconomic impacts, the information is not addressed in Resource Report 5.
9. Revise section 5.2.4 to discuss the results of any coordination between Equitrans and local police departments, fire departments, and emergency medical services. Detail any arrangements for Equitrans to provide training, funding, or facilities to local first responders. Document that local fire, police, and medical departments confirm that they have enough personnel to care for non-local workers during construction and to handle an emergency during operation of the Project.	Resource Report 11, Section 11.1.2.
10. Include a listing of schools, nursing homes, and hospitals that may be difficult to evacuate located within 0.5 mile of any Project facility.	Response will be provided in a subsequent filing to FERC.
11. Document consultations with state and local road and transportation agencies to develop a Residential Access and Traffic Management Plan. The plan should address: a. identification of existing roads that would be used for Project access; b. current average daily traffic counts and anticipated daily traffic counts during construction on local roads that would be used for Project access;	Section 5.2.5.1.

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Request	**Location in Resource Report**
c. increased traffic from Project-related activities (including commuting workers, construction equipment, and truck deliveries), including the number of workers cars, equipment, and trucks that would use local roads, and commuting periods; d. workers being bussed from collection points to the right-of-way; e. locations of commuting workers collection points and bus routes; f. detours and road blockages; g. dust suppression; h. impacts on existing roads and measures to repair them; i. prior notification; j. maintaining access to homes and or businesses; k. in-road work relative to peak-traffic periods; l. safety measures (including signage, fencing and assurance of immediate backfill of trenches); m. adherence to road and bridge weight limits; n. noise impacts; and o. tracking of soil and dirt onto paved roads from the right-of-way.	
12. Revise section 5.2.6 to include an estimate of sales tax and income tax revenues generated by direct Project expenditures.	Section 5.2.6.
13. Include a table and discussion of the expected construction and operational payroll by county and state. Where possible, include an estimate of total local worker payroll during construction and operation. Also include a table of expected materials costs by county and state. Where possible, include an estimate of total local material purchases during construction and operation.	Section 5.2.2.
14. Section 5.3.1 states “existing personnel would be responsible for operations and maintenance of the new pipeline and associated facilities.” Clarify if there would be any new permanent jobs as a result of the EEP.	Section 5.3.1.
15. Section 5.3.3 states “Equitrans would compensate landowners at fair market value for any adverse impacts on property values resulting from the Project.” Describe the specific methods that would be employed to determine the fair market value of the adverse impacts and outline Equitrans’ proposed compensation package. Clarify if Equitrans would evaluate impacts in property values over the life of the Project or as a one-time assessment. Include an analysis of potential impacts the presence of an interstate natural gas pipeline may have on property values that reference the latest relevant studies on the subject.	Section 5.3.3.

FERC Environmental Information Request for Resource Report 5	
Request	**Location in Resource Report**
16. Include the results of research and interviews with major financial lenders regarding any observed changes in the ability of persons to obtain a mortgage for a property crossed by an interstate natural gas pipeline. Include full citations for all discussions.	Section 5.3.4.1.
17. Include the results of research and interviews with major insurers regarding any observed changes in the ability of persons to obtain property or home insurance in situations where the property is crossed by an interstate natural gas pipeline. Include full citations for all discussions.	Section 5.3.4.2.
18. Revise section 5.4 to include a table with the population listed by race, people living in poverty, elderly, children, disabled, and non-English speakers for each county and census tract crossed by the proposed Project compared to percentages for the state as a whole. Illustrate the location of census blocks with high percentages of minorities, or people below the poverty line, in relation to Project components.	Because neither agencies nor the public have raised any concern with the Project's socioeconomic impacts, the information is not addressed in Resource Report 5.

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SOCIOECONOMICS
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SOCIOECONOMICS

LIST OF ACRONYMS AND ABBREVIATIONS

ATWS	additional temporary workspace
EO	Executive Order
Equitrans	Equitrans, L.P.
FERC or Commission	Federal Energy Regulatory Commission
MVP	Mountain Valley Pipeline
PADEP	Pennsylvania Department of Environmental Protection
Project	Equitrans Expansion Project

RESOURCE REPORT 5
SOCIOECONOMICS

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 5 is prepared and organized according to the FERC *Guidance Manual for Environmental Report Preparation* (August 2002). This report is organized into four major sections and a final section listing the sources used to prepare this report. Section 5.1 describes the existing socioeconomic conditions. Section 5.2 describes how the existing socioeconomic conditions (including employment in the community, temporary housing, public services infrastructure, transportation, and tax revenues) could be affected during construction of the Project. Section 5.3 describes how existing socioeconomic conditions could be affected during the operation of the Project. Section 5.4 includes an environmental justice analysis indicating whether the Project is expected to have a disproportionate adverse effect to minority and low-income communities. References used in the development of Resource Report 5 are listed in Section 5.5.

5.1 EXISTING SOCIOECONOMIC CONDITIONS

5.1.1 Housing

There were a total of 706,335 housing units (e.g., house, apartment, mobile home, single room, or group of rooms) in the Project vicinity in 2013, with an average vacancy rate of 12 percent across the four affected counties (U.S. Census Bureau 2014a–d). Although there are relatively limited hotel and motel rooms available in the vicinity of the Project in Greene County, Pennsylvania (381 rooms), and Wetzel County, West Virginia (267 rooms), there are many more hotel/motel options in Washington and Allegheny Counties, Pennsylvania (20,695 total rooms), particularly in areas closer to Pittsburgh (STR 2015). Additional housing resources within daily commuting distance are available in adjacent and nearby communities along parts of the pipeline routes.

5.1.2 Tax Revenues

5.1.2.1 Sales and Use Taxes

The general sales and use tax rate for Pennsylvania is 6 percent. Allegheny County, Pennsylvania, levies an additional 1 percent sales tax, for a total of 7 percent. None of the municipalities in Greene or Washington Counties, Pennsylvania, levies additional sales and use tax (Pennsylvania Department of Revenue 2015).

The state of West Virginia levies a 6 percent sales and use tax on all retail and rental sales. Municipalities have the option to levy additional sales and use taxes. None of the areas that will be crossed by the Project levies additional sales and use taxes (West Virginia State Tax Department 2015).

5.1.2.2 Ad Valorem Taxes

Property or ad valorem taxes are a critical source of general revenue for counties and municipalities in Pennsylvania and West Virginia, typically providing a large share of general fund revenues. General fund revenues are presented by county in Table 5.1-1.

Table 5.1-1

General Revenues by County

County/State	General Fund Total Revenues ($1,000s)
Allegheny, PA a/	694,383
Greene, PA a/	17,808
Washington, PA b/	79,429
Wetzel, WV b/	13,499

a/ Data for fiscal year 2013 (most recent available)
b/ Data for fiscal year 2015 (estimated)
Sources: County of Allegheny 2015; County of Greene 2014; Washington County 2015; West Virginia State Auditor's Office 2015

5.2 ENVIRONMENTAL EFFECTS OF PROJECT CONSTRUCTION

5.2.1 Population

Overall construction of the pipeline and associated facilities and demobilization of the Pratt Compressor Station is expected to take 24 months, with clearing and grading starting in December 2017 and a proposed construction start date in February 2017. The majority of the Project work will be completed in less than

one year. Given the short duration of the construction period, population effects are expected to be negligible, especially when viewed statewide in both Pennsylvania and West Virginia.

Because of the specialized nature of the gas pipeline construction, construction personnel will be hired by one or more general pipeline contractors. The Project will be bid competitively upon Certification, so Equitrans, therefore, cannot provide information regarding who the successful bidder/contractor may be at this time.

While most of the Pennsylvania personnel will be part of the contractor's regular crews and hired from outside the Project area, it is anticipated that approximately 25 to 30 percent will come from the local workforce, of which half will be skilled labor and the remainder unskilled labor; West Virginia personnel are anticipated to be 100 percent local workers. Local workers are those who normally reside within commuting distance of the work sites. Non-local workers will temporarily relocate to the Project vicinity for the duration of their employment; some workers will possibly commute home on weekends, depending on the location of their primary residence. Individual non-local workers also may relocate along the length of the Project and between segments depending on their assignment. Equitrans does not expect the non-local workers employed during the construction phase of each segment to permanently relocate to the affected areas, especially given the relatively short construction phase.

Regarding the local workforce, it is anticipated that approximately 50 percent of the jobs involving timber clearing, paving, radiography, revegetation, and traffic control could be sourced locally. It is assumed that local hires will be proportional to the facility construction that will occur in each county. In addition, a small increase in local employment is anticipated to provide lodging and services to the non-local workforce. Thus, the Project will provide an increase in the amount of employment during the construction phase, with the existing local workforce accommodating the manpower requirements.

5.2.2 Economic and Employment Conditions

Table 5.2-1 presents construction spreads, schedule, and workforce information for construction-related activities associated with the Project. The order in which each facility will be constructed may differ from the schedule outlined in Table 5.2-1 depending upon the capabilities of each contractor, available workforce, and optimized logistics. The proposed pipelines and associated facilities will be constructed in spreads, with overall construction expected to take 15 months (i.e., February 2017 through April 2018) plus an additional eight (8) months (May 2018 through December 2018) for the Pratt Compressor abandonment. Pipeline construction is expected to commence in February 2017 with a December 2017 in-service target date for certain of the pipelines associated with the Project. Assuming that the M-80, H-305, H-158, H-316, H-318, and H-319 pipeline Project components are all under construction at the same time, the Project's peak workforce will be approximately 400 (see Table 5.2-1), plus additional workforce associated with the demolition of the Pratt Compressor Station (30 workers at peak) as well as clearing and grading, restoration, and hydrostatic testing activities.

Table 5.2-1

Project Construction Schedule and Workforce

Spread/Project Component	Approximate Start Date	Approximate Completion Date a/	Estimated Peak Workforce	Estimated Peak Local Workforce b/
H-316 Pipeline construction	February 2017	November 2017	150	40
H-318 Pipeline construction	February 2017	November 2017	100	25
Redhook Compressor Station construction and commissioning (includes M-80, H-158, and H-305 pipelines)	February 2017	April 2018	90	27
Pratt Compressor Station demolition	May 2018	December 2018	30	9
Webster Interconnect, H-319 pipeline and Mobley Tap c/	February 2017	November 2017	30	30

Source: Equitrans

a/ Dates presented are estimates. Actual construction start and completion dates are dependent on the dates of receipt of FERC authorization, other permits, and weather.

b/ The pipeline construction peak occurs in May through October 2017, the Redhook Compressor Station construction peak occurs in August through November 2017, the Webster Interconnect and Mobley Tap installation peak occurs in July through September 2017, and the Pratt Compressor Station demolition peak occurs in June to September 2018.

c/ Construction of these facilities is expected to be completed by the same spread.

The Project will not result in business relocations or displacements and will therefore have no known negative effects to business income or employment; nor will relocation assistance be required. The number of commercial businesses affected will be minimal given the rural nature of the majority of the Project area. Possible short-term impacts on existing businesses could include street closures during construction that will inconvenience employees and customers of affected businesses. Reasonable accommodations, such as maintenance of access to an adjacent property, will be implemented to minimize the inconvenience to persons attempting to access affected businesses during the construction phase.

Equitrans estimates that it will spend a total of approximately $167.9 million on labor, equipment, materials, and services in Pennsylvania ($158.9 million) and West Virginia ($9.0 million) during Project construction. These expenditures will generate direct and indirect economic activity by supporting employment and income elsewhere in the economy through the multiplier effect. There will be increased local economic activity in the leisure and hospitality (which would cater to the small influx of temporary workers) and transportation sectors due to construction activity. However, these impacts are expected to be temporary in nature and predominantly limited to the timeframe when construction is ongoing. The unemployment rate suggests that any employment in these sectors could be accommodated within the existing unemployed workforce. The Project is not expected to significantly contribute to long-term employment in the Project area.

5.2.3 Housing

There is adequate available housing to support the small influx of construction personnel associated with this Project. No significant direct or indirect impacts are anticipated on housing stock during construction of the Project. An estimated 25 to 35 percent of the construction workforce in Pennsylvania will be hired and/or contracted locally (i.e., within commuting distance) and will likely commute to and from their homes

to work each day (construction workers, particularly those working in less populated areas, often commute relatively long distances to job sites depending on the cost and availability of housing and community amenities/services within the vicinity). The remaining construction workforce will largely consist of non-local contract workers assumed to permanently reside farther than commuting distance from the Project sites, and they will therefore be expected to temporarily relocate to the Project vicinity for the duration of their employment.

Because the majority of the Project work will be completed in less than one year, non-local contract workers will likely utilize existing temporary housing facilities such as hotels/motels, rental housing (apartments, houses, or mobile homes), mobile homes, and camping facilities (e.g., recreational vehicles). Rental housing will likely involve a limited number of units given the fairly short duration of construction. A number of non-local workers could possibly return to their out-of-area homes on some weekends and holidays depending on the location of their primary residences, and thus the demand for these individuals will likely focus on hotels/motels. Many contract construction workers could use travel trailers and will therefore require campsite or trailer park spaces. This is supported by past evaluations of pipeline construction projects that have estimated that 30 percent of workers temporarily relocating will provide their own housing (FERC 2014a).

The degree of workforce housing impact will vary among communities depending on the number of non-local workers that temporarily reside in each community, the duration of their stay, and the size of the community. Although these factors are too indeterminate and variable to accurately predict the scale of impact, the effects will be short-term and are consequently not expected to be significant. Except in the vicinity of the proposed minor facility construction of the Webster Interconnect and Mobley Tap related to MVP, no other utility projects in the vicinity of the Project have been identified at this time. Equitrans is not aware of any other major construction projects within the Project area that might compete for temporary housing units during the anticipated construction phase. Additionally, because of the short duration of the construction phase, no new housing construction is likely to occur as a direct result of the Project.

Construction of the Redhook Compressor Station will result in removal of several residences. Equitrans has completed, or is currently engaged in, negotiations with the existing owners to acquire these residences on a willing seller basis well in advance of construction. Except for agreements that will be reached with these owners, the Project will not result in residential relocations or displacements, and will therefore not impact housing. Possible short-term impacts to existing residences could include road closures during construction that will inconvenience affected homeowners. Reasonable accommodations, such as maintenance of access to an adjacent property, will be implemented to minimize the inconvenience to persons trying to access these residences during the construction phase. No significant impacts are anticipated.

5.2.4 Public Services

Minor temporary impacts on public services and facilities are anticipated during construction of the Project, which could result in increased demand for emergency services. However, any incremental costs to the local communities in terms of providing any additional public services and facilities during the short construction duration will likely be more than offset by the increased tax revenue that will result. The temporary addition of construction workers and family members to local communities is not expected to affect the levels of service provided by existing law and fire protection personnel, and construction of the Project is not expected to have significant adverse impacts on local and regional medical facilities and services. Local police assistance will likely be required to facilitate traffic flows during construction at

some road crossings; permits may be required for vehicle load and width limits for some of the vehicles delivering Project materials and supplies; and emergency medical services may be needed to treat injuries resulting from construction accidents. Equitrans will work directly with local law enforcement, fire departments, and emergency medical services to coordinate for effective emergency response.

5.2.5 Transportation

5.2.5.1 Road and Railroad Crossings

Short-term impacts on roads, highways, and railroads are anticipated during construction of the Project. The proposed pipelines will cross numerous streets and roads and several state highways but no federal interstates or highways (preliminary road and railroad crossing locations are listed in Appendix 1-I to Resource Report 1).

Railroads and most hard surface public roadways will be crossed by boring beneath the road or railroad, which typically requires additional temporary workspaces (ATWS) on both sides of the crossing while the road or railroad remains in operation. Little or no disruption of traffic is expected at road or railroad crossings where boring takes place. Smaller roadways and drives will be crossed by open-trenching where permitted by local authorities or landowners. Open-cut crossings of roads will typically be completed in one to two days, though Equitrans will attempt to complete construction across high-traffic roads within 24 hours. The open-cut crossing method may require temporary closure of a road, establishment of detours, or other measures to allow safe traffic flow during construction. Smaller unpaved roads and driveways crossed by open-cutting will be restored as closely as practical to pre-construction conditions. Typical details of bored and open cut road and railroad crossings are provided in Appendix 1-E to Resource Report 1.

Equitrans will incorporate measures to maintain safety, minimize traffic disruption, and ensure that construction activities do not prevent the passage of emergency vehicles. Traffic lanes and residential access will be maintained, except for the temporary periods essential for pipeline installation. Provisions will be made to allow passage of emergency vehicles at all times. Equitrans will obtain all necessary permits for public road crossings or work within public road rights-of-way, including those from the Pennsylvania Department of Transportation and the West Virginia Department of Transportation. Additionally, the contractor awarded the Project will develop and implement its traffic control plan consistent with state permits and DOT requirements.

5.2.5.2 Additional Traffic on Local Roads

In addition to the traffic impacts caused by road crossings, the temporary movement of construction equipment and materials and the daily commuting of employees to and from construction work areas will add to existing traffic volumes on local roads, but this impact is not expected to be significant (construction activities are more fully described in Resource Report 1). Construction activities will be spaced over construction spreads, with each spread responsible for all construction activities within a specific milepost range along the pipeline. The movement of construction equipment and materials from laydown areas and storage yards to the construction work areas will result in additional short-term impacts on local and regional transportation networks. Most construction equipment will remain on site during construction, but several construction-related trips (to and from the job site) will be made each day, typically during the early morning hours (before 7:00 a.m.) and evening hours (after 6:00 p.m.).

Minor road congestion caused by construction workers commuting to the job site could occur during the peak months of construction when work crews will be traveling between their lodgings and the job sites. Workers will be deployed in various locations along each spread, and most workers will commute to and from the construction right-of-way during off-peak hours, thereby reducing the potential for congestion in any one area. Because construction will move sequentially along the pipeline route, traffic flow impacts that do arise will be temporary on any given section of roadway.

5.2.6 Tax Expenditures and Revenues

Sales and use tax revenue will be generated during the construction period. Local spending by construction workers also will generate sales tax revenues, but the amount and distribution of this type of spending is difficult to forecast accurately. These revenues are not estimated here, but will likely be considerable. In addition to direct sales and use tax revenues, the Project will result in increases in state and local tax revenues as a result of the economic ripple effect of construction expenditures throughout the affected state and local economies.

5.3 ENVIRONMENTAL EFFECTS OF PROJECT OPERATION

5.3.1 Housing

During Project operation, existing personnel will be responsible for operations and maintenance of the new pipeline and associated facilities. Consequently, no new housing construction will occur as a direct result of the Project and no significant direct or indirect impacts are anticipated on housing stock during operation of the Project.

5.3.2 Tax Expenditures and Revenues

Tax revenues from several sources will accrue to state and local governments during the operation of the Project. Once the Project is completed, property taxes will be assessed on the value of the pipeline and related facilities.

5.3.2.1 Property Tax Revenues

Estimated property taxes that will be paid once the pipeline is in service are presented by county and state in Table 5.3-1. Estimated property tax revenues as a share of general fund total revenues in the affected counties will range from no revenues (Allegheny County) to 0.008 percent (Wetzel County) (the estimated Project costs are included in the resource reports as well as the FERC application).

The property tax revenues generated by the Project facilities will be based on the annual assessment multiplied by the local property tax rate. The annual assessment will be determined by the Pennsylvania Public Utility Realty Tax and the West Virginia Board of Public Works, and the Project facilities will be valued at their fair market value as of December 31 (Pennsylvania) and July 1 (West Virginia). To approximate the annual property tax revenues accruing to the counties, Equitrans has assumed that, at least initially, construction costs will approximate fair market value of the real and personal property. Other assumptions include the following:

- The cost of the Project, excluding the cost of the Redhook Compressor Station and other aboveground facilities, will be proportional to the percentage of the pipeline right-of-way located in that particular county.

- A uniform millage rate will apply across all counties within each state.
- The total Project cost is estimated to be $167.9 million.
- The Redhook Compressor Station construction in Greene County, Pennsylvania, is estimated to cost $77.8 million.
- The Webster Interconnect and Mobley Tap construction in Wetzel County, West Virginia, is estimated to cost $9 million.
- The demolition of the Pratt Compressor Station will likely cause a decline in property taxes at that location.
- A range of property tax revenue is supplied for Pennsylvania purposes. Only real estate is subject to property taxation in Pennsylvania.

Using the above assumptions, the estimated property tax revenues accruing to each county are presented in Table 5.3-1. It should be noted that these values represent general estimates of the actual revenues that will be received by the counties during the first year after the Project goes into full service. In summary, once the Project is completed, property tax revenues are estimated to total approximately $85,000 thousand in Pennsylvania and $107,000 million in West Virginia annually.

Table 5.3-1

Estimate of Property Tax Revenues During Operation by County

County/State	General Fund Total Revenues (dollars) a/	Annual Property Taxes (dollars) a/, b/	Percent of General Fund Total Revenues
Allegheny, PA	694,383	0	0.0000
Greene, PA	17,808	85	0.0048
Washington, PA	79,429	0	0.0000
Subtotal PA	791,620	85	0.0001
Wetzel, WV	13,499	107	0.0079
Subtotal WV	13,499	107	0.0079
Total	**805,119**	**192**	**0.0002**

a/ Numbers are presented in 1,000s.
b/ Compressor stations are generally treated as personal property in Pennsylvania; therefore, no value is assigned to the real estate for property taxation purposes.

5.3.3 Property Values

Resource Report 8 addresses the number of acres of developed land that the Project will permanently impact, with the remainder being in agriculture, forested areas, open land, and open water uses. Property owners whose lands are traversed by easements may see minor reductions in property taxes as certain property rights within the easement will be restricted. Equitrans will compensate landowners at fair market value for any adverse impacts on property values resulting from the Project.

For private and non-federal public lands, Equitrans will negotiate in good faith with property owners to obtain the required easements using valuations based on comparable property transactions and with reference to the particular characteristics and type of property. The agreement between Equitrans and the landowner will specify compensation for the easement, compensation for damage to property and loss of use during construction, and loss of renewable and nonrenewable or other resources. The agreement will

also specify uses of the permanent right-of-way after construction. In situations where Equitrans is unable to reach an agreement with a landowner and the Project is authorized by FERC, Equitrans will be granted the right of eminent domain under Section 7(h) of the Natural Gas Act and the procedures set forth under the Federal Rules of Civil Procedure (Rule 71A). Under these circumstances, the court determines compensation received by the landowner. Equitrans is committed to working with landowners to the maximum extent possible to negotiate easement agreements. Only after all avenues of negotiation have been exhausted and as a last resort will Equitrans utilize the eminent domain process. Equitrans has elected to initiate the easement acquisition process with various property owners and assumes the risk of the Project authorization. Should FERC decline the Project Certificate, landowners that have executed easements will retain the agreed upon compensation, and Equitrans will absorb all expended costs.

The impact a pipeline may have on the value of a tract of land depends on many factors, including the size of the tract, the values of adjacent properties, the presence of other utilities, the current value of the land, and the current land use. Subjective valuation is generally not considered in appraisals, but may affect individual decisions when a property is offered for sale, thus impacting the potential resale value. Purchase decisions are often based on the purchaser's plans for the property, such as use for agriculture, future residential development, a second home, or commercial/industrial development. If the presence of a pipeline interferes with those future plans, the potential buyer may decide against acquiring the property with a pipeline easement. However, each potential purchaser has different criteria and differing capabilities to purchase land.

Initial public comments received on the Project included concerns about the potential impact of the pipeline on property values. The Interstate Natural Gas Association of America conducted a national case study to determine whether the presence of a pipeline on a piece of property affected the property value or sales price of the property (Allen, Williford & Seale, Inc. 2001). The study employed paired sales, descriptive statistics, and linear regression analysis to assess impacts to four separate geographically diverse case study areas. The study found that there was no significant impact on the sales price of properties located along natural gas pipelines. They further determined that neither the size of the pipeline (diameter) nor the product carried by a pipeline had any significant impact on sales price. The study also concluded that the presence of a pipeline did not impede the development of surrounding properties.

More recent studies investigating property values near natural gas pipelines are consistent with the findings of this earlier work. Fruits (2008) evaluated the impact of the South Mist Pipeline Extension on residential sales in Clackamas and Washington Counties, Oregon, using a hedonic price modeling approach. Based on sales price data for 10,642 single family residential properties located within one mile of the pipeline, the study found that proximity to the pipeline had no statistically or economically significant impact on residential property values. Fruits (2008) noted that these results are consistent with previous studies and suggested that the positive amenity potential associated with pipeline proximity (i.e., the function of the pipeline easement as a greenbelt or buffer) may exceed any perceived costs associated with potential safety or environmental risks (Fruits 2008).

A 2008 market study conducted by PGP Valuation on behalf of Palomar Gas Transmission LLC also assessed the impacts of the South Mist Pipeline Extension on property values (Palmer 2008). Using a sales comparison methodology, the study evaluated sales data for a total of 18 properties encumbered by South Mist Pipeline Extension right-of-way easements and compared these with sales of other comparable unencumbered properties. Based on this analysis, PGP Valuation concluded that high-pressure natural gas

pipelines had no measurable long-term impact on property values. The study also concluded that variations in short-term values were either not substantial or non-existent and that residential properties were not impacted by the pipeline easement any more or less than other property types (Palmer 2008).

A third more recent study analyzed sales data from approximately 1,000 residential properties in Arizona to test whether proximity to a natural gas pipeline had an effect on real estate sales prices (Diskin et al. 2011). Using sales price information, the study compared sales prices for properties encumbered by or adjacent to a natural gas transmission pipeline with comparable properties not along a pipeline right-of-way. The study was unable to identify a systematic relationship between proximity to a pipeline and sales price or property value. The researchers cautioned that these results are limited to the dataset examined and should not be generalized to all geographic regions (Diskin et al. 2011).

Stakeholders have referenced several newspaper articles and reports that discuss and address the potential impacts of oil and gas development and pipelines on property values (Dyer 2012, Conversations for Responsible Economic Development [CRED] 2013). The first reference, Dyer (2012), is to a newspaper article that discusses the potential impacts of fracking on property values and references several studies that are primarily related to oil and gas shale development and do not directly relate to the Project. The second reference, CRED (2013), provides an overview of eight case studies that consider the impacts of pipeline spills, explosions, and fires on property values. One of the case studies referenced in the CRED report is the 2010 BP Deepwater Horizon Mobile Offshore Drilling Unit explosion; another involved the "largest-ever U.S. diluted bitumen spill," which involved more than 20,000 barrels of oil leaking into the Kalamazoo River in Michigan in 2010. These and the other case studies directly address the property value effects following a significant incident, such as a spill, explosion, and fire, and do not address the potential effects of the presence of a pipeline in the absence of a major event. Further, just one of the case studies summarized in the CRED report addresses a natural gas pipeline-related incident.

A newspaper editorial in the Roanoke Times (Quesenberry 2015), which cited the above article and report, also referenced a recent case from the Court of Appeals of the State of California: *Gaviota Holdings LLC vs. Chicago Title Insurance Company*, which found in favor of an earlier trial court finding that the presence of an undisclosed gas and petroleum easement resulted in an 8 percent decline in value of a 38-acre oceanfront property in Santa Barbara, California. The loss estimated by an expert witness consisted of (1) a 4 percent reduction due to the presence of a sign-posted natural gas transfer and metering facility on the property and a perceived negative market impact; and (2) a 4 percent reduction due to a loss of privacy caused by regular maintenance access by the easement holder.

Considering the diverse and credible research that concludes there is no long-term correlation between a loss of property value and the existence of natural gas transmission pipelines, Equitrans believes that it is reasonable to assert that there will be a minimal, if any, impact on long-term property values along the Project route.

5.3.4 Mortgages and Insurance

5.3.4.1 Mortgages

There have been concerns raised during the scoping process of other, similar pipeline projects that the presence of a pipeline may hinder the ability for a prospective buyer to obtain a mortgage or result in banks calling in existing mortgages because of the pipeline. FERC (2014b) has attempted to investigate this issue in the past by contacting national banks, including Wells Fargo, Citizens Bank, Bank of America, and Chase

Bank, to ask them if the presence of a pipeline would affect their decision to provide a mortgage. None of these banks was willing to formally respond to the FERC's questions and asked that their correspondence not be cited. As a result, FERC (2014b) was unable to use the results of these contacts to determine whether the presence of a pipeline easement would affect the ability of a prospective homebuyer to obtain a mortgage.

Lenders consider many factors when assessing whether to offer a mortgage for a property. Most of these are directly related to the lender's evaluation of the prospective borrower's ability to repay the loan. A property value assessment and appraisal is also taken into consideration. As discussed in the Property Values section (Section 5.3.3), there is no conclusive evidence that the mere presence of a pipeline would negatively affect the value of a property. Furthermore, based on its experience in reviewing natural gas pipelines across the United States, the FERC has never documented an instance where a FERC-jurisdictional pipeline project has affected the ability of a prospective buyer to obtain a mortgage (FERC 2014b). As a result, the FERC (2014b) concluded that the presence of a pipeline would be unlikely to affect the ability of a prospective or existing buyer to obtain a mortgage for an affected property.

In summary, lending institutions review mortgage applications on an individual case-by-case basis and there are no standard guidelines in the review process that relate specifically to natural gas pipelines; therefore, reviewing and approving a mortgage application for a property with a gas pipeline is the same as it is for other energy infrastructure (i.e. electric transmission lines) that may be on or near a property, which does not typically impede a bank from completing a loan. This conclusion is further supported by the tens of thousands of mortgages that are granted throughout the country, from a variety of lending sources, which involve properties that are located in proximity to natural gas pipelines and/or pipeline easements.

5.3.4.2 Insurance

There have been concerns raised during the scoping process of other similar pipeline projects that the presence of a pipeline easement could result in increased insurance rates for residential properties. The FERC (2014b) has attempted to investigate this issue in the past by contacting insurance agencies and asking whether the presence of a utility crossing would change the terms of an existing or new residential insurance policy, which types of utilities may cause a change, how a policy might change, and what factors would influence a change in the policy terms, including the potential for a policy to be dropped completely. Initial results of these enquiries suggested that the potential for a residential insurance policy to be affected could exist, but the extent of any action and corresponding corrective action would depend upon several factors including the terms of the individual landowner's policy and the terms of the Project applicant's own policy. The FERC's (2014b) attempts to confirm these findings and obtain more definitive information on conditions under which a policy may be modified or dropped, specific factors used to evaluate the action, and what corrective action could be undertaken by the landowner or Project applicant to mitigate any change in a policy were unsuccessful. Despite repeated attempts at follow-up, only one of the major insurance agencies contacted responded stating that it was unable to provide the requested information (FERC 2014b).

In summary, it appears that natural gas pipelines are not an issue during the insurance underwriting process and the presence of energy infrastructure, such as pipelines, has not historically affected rates or eligibility for residential insurance applications. Based on these conversations, there is no evidence that property insurers view properties that are located in proximity to natural gas pipelines any differently than those located in other areas.

5.4 ENVIRONMENTAL JUSTICE

In accordance with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations (11 February 1994), federal agencies are required to identify and address the potential for disproportionately high and adverse health or environmental effects of its programs, policies, and activities on minority and low-income populations. Under EO 12898, a potential environmental justice area of concern is where the percentage of minorities in any given census tract/block exceed 50 percent, or where minorities are "meaningfully greater" (i.e., greater than two times) than the general population of the respective county. Additionally, any census tract/block group with an income level below the United States Department of Health and Human Services Poverty Guidelines is identified as a potential environmental justice area of concern. In Pennsylvania, the Pennsylvania Department of Environmental Protection (PADEP) defines environmental justice areas as any census tract where 30 percent or more of the population is minority and/or 20 percent or more individuals live in poverty based on federal poverty guidelines (PADEP 2015).

Of the four counties along the Project route, Allegheny County, Pennsylvania, had the largest minority population in 2010 (16 percent), followed by Washington and Greene Counties, Pennsylvania (both 5 percent), and Wetzel County, West Virginia (1 percent). All six census tract/blocks that are affected by the Project have Caucasian population concentrations of greater than 97 percent (U.S. Census Bureau 2014e–h); therefore, under both EO 12898 and PADEP standards, there are no environmental justice areas of concern in the Project area. Based on the median household income data for the census tracts/block groups and the corresponding four counties along the Project route, none of the census tracts/block groups qualifies for low-income status under EO 12898, and none of the census tracts in the Pennsylvania Project area has poverty levels that met the PADEP's definition of an environmental justice area (U.S. Census Bureau 2014i–l).

Consequently, the construction and operation of the Project are not expected to have disproportionately high and adverse human health and environmental effects to minority and/or low-income populations. However, since minority and low-income populations are present in the census tracts/block groups along the Project route, EO 12898 directs FERC to determine whether the Project could subject these populations to disproportionate adverse impacts. The impacts of the Project are not directed at any one particular group or geographic area and are dispersed over the entire length of the Project. The Project route has been designed to minimize adverse human health or environmental effects by avoiding population centers and sensitive environmental resources and by paralleling existing pipeline systems or linear corridors where possible. Further, the pipeline will primarily be constructed below ground. Therefore, the effects to minority and/or low-income populations are considered to be low. In addition, the Project is expected to result in economic benefits for local communities, regardless of race or income group, by generating employment opportunities, local expenditures by workers, and compensation for Project-related easements to local landowners.

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