4.10 SOCIOECONOMICS

4.10.1 Introduction

This section describes potential impacts to socioeconomic resources associated with the construction and operation of the proposed Project and connected actions, and discusses potential mitigation measures that would avoid or minimize the potential impacts. The information, data, methods, and/or analyses used in this discussion are based on information provided in the 2011 Final Environmental Impact Statement (Final EIS) as well as new circumstances or information relevant to environmental concerns that have become available since the publication of the Final EIS, including the proposed reroute in Nebraska. The information that is provided here builds on the information provided in the Final EIS as well as the 2013 Draft Supplemental EIS and, in many instances, replicates that information with relatively minor changes and updates; other information is entirely new or substantially altered.

Specifically, the following information, data, methods, and/or analyses have been substantially updated from the 2011 document:

- Temporary housing in relation to TransCanada Keystone Pipeline, LP (Keystone's) proposal to meet the proposed Project's housing needs through a combination of construction camps and local housing;
- Economic activity expressed in terms of direct, indirect, and induced employment and earnings; these impacts are presented to provide additional detail regarding employment and economic effects of the proposed Project; the impacts are presented for different geographies (i.e., counties, state, and national);
- Economic activity expressed in terms of gross domestic product (GDP); this is provided as it is the most common measure of economic activity in the United States;
- The environmental justice analysis using data from the 2010 United States (U.S.) Census and from the American Community Survey;
- Property tax and sales and use tax analyses; these impacts are presented in response to comments received during scoping for the Supplemental EIS to provide additional detail regarding the tax impacts of the proposed Project; and
- A new section (see Section 4.10.2, Impact Assessment Methodology) was added to describe the impacts used to evaluate potential socioeconomic impacts associated with the proposed Project; detailed explanations of the methodologies used to evaluate each impact are included in the relevant subsections.

The following information, data, methods, and/or analyses have been substantially updated from the 2013 Draft Supplemental EIS:

- A summary of impacts has been added.
- A discussion of measures to control and manage behavior in construction camps has been added.
- The description of economic impacts has been broken down into direct, indirect, and induced earnings and employment components.

- The presentation of the proposed Project jobs numbers impacts has been standardized as *average annual jobs*.
- A reference to Keystone's action plans for employment opportunities for minority and low-income populations has been included.
- The amount of property taxes that would be paid during operations has been revised.
- Appendix O, Socioeconomics, now includes a description of the IMPLAN® model used in the economic impact calculation methodology.

Summary

The proposed Project is expected to take 1 to 2 years to construct and includes approximately 875 miles of pipeline, 20 pump stations, and ancillary facilities (e.g., access roads, pump stations, and construction camps). Construction of the proposed Project would contribute approximately $3.4 billion to the U.S. GDP. This number includes not only earnings by workers, but all other income earned by businesses and individuals engaged in the production of goods and services demanded by the proposed Project, such as profits, rent, interest, and dividends. When compared with the GDP in 2010, the proposed Project's contribution represents approximately 0.02 percent of annual economic activity across the nation. This percentage remains the same if the contribution is compared to the GDP in 2012. Construction contracts, materials, and support purchased in the United States would total approximately $3.1 billion, with another $233 million spent on construction camps. During construction, this spending would support a combined total of approximately 42,100 average annual jobs and approximately $2 billion in earnings throughout the United States. A *job* consists of one position that is filled for 1 year. Of these jobs:

- Approximately 16,100 would be direct jobs at firms that are awarded contracts for goods and services, including construction, directly by Keystone. The other approximately 26,000 jobs would result from indirect and induced spending; this would consist of goods and services purchased by the construction contractors and spending by employees working for either the construction contractor or for any supplier of goods and services required in the construction process.
- About 12,000 jobs, or 29 percent of the 42,100 jobs, would be held by residents of the four proposed Project area states[1]; of these 12,000 jobs, approximately 5,400 would be direct jobs and approximately 6,600 would be indirect and induced jobs (Figure 4.10.1-1).

The proposed Project would temporarily increase the population in the proposed Project area as workers relocate to build the pipeline. Approximately 10,400 construction workers engaged for 4- to 8-month seasonal construction periods would be needed, equating to approximately 3,900 jobs (or 1,950 per year if construction took 2 years). The workforce would be distributed by construction spread (pipeline section), with approximately 900 to 1,300 workers allocated to each spread. Because of the specialized nature of the work, Keystone estimates that only approximately 10 percent of the construction workforce would be hired from the four proposed Project area states.

[1] The proposed Project pipeline would go through Montana, South Dakota, and Nebraska, with two additional pump stations in Kansas. There would also be a pipe yard and rail siding located in North Dakota.

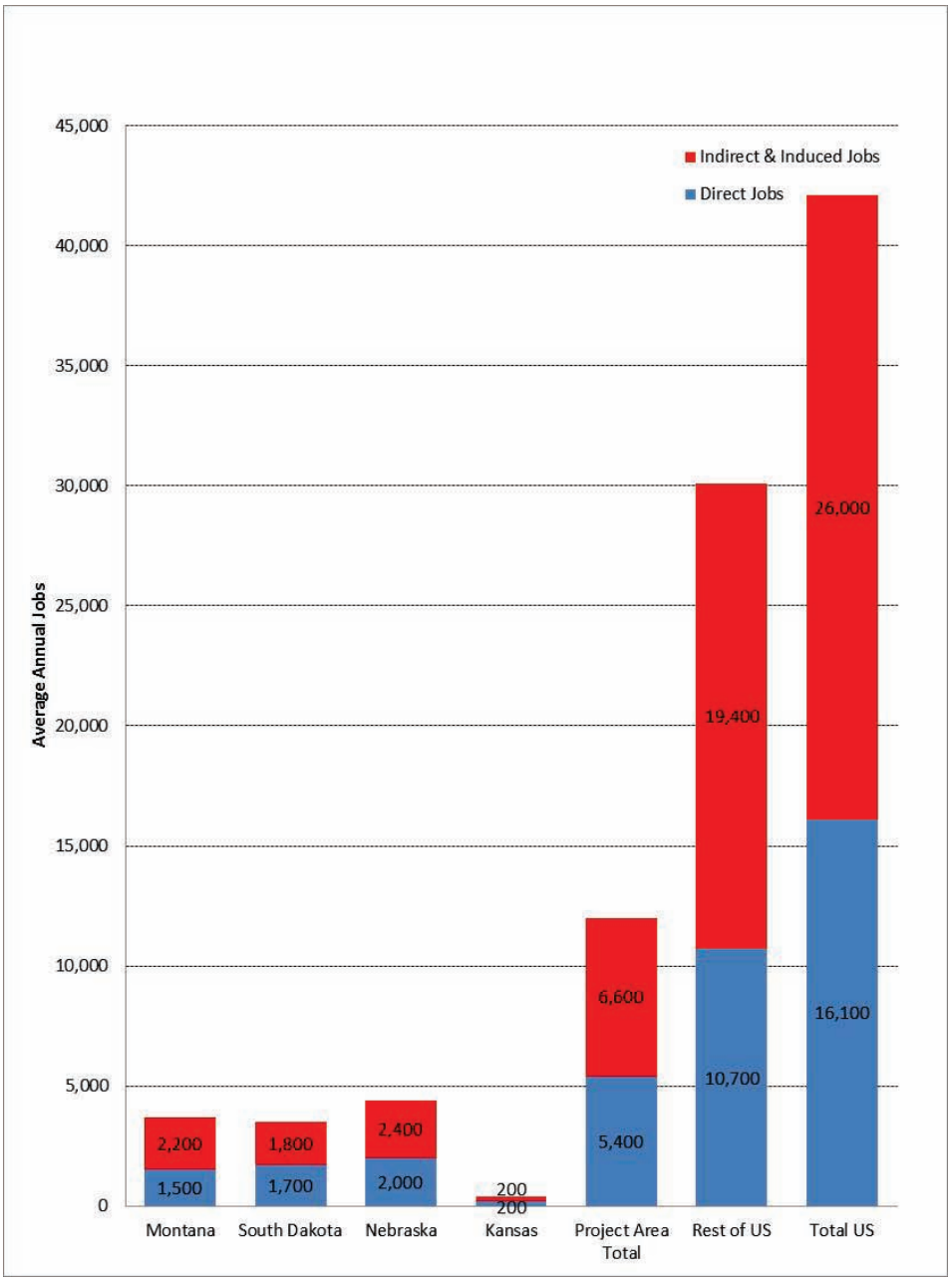

Figure 4.10.1-1 Total Employment Supported by Construction of the Proposed Project

The total direct, indirect, and induced employment in the proposed Project area states (approximately 12,000 average annual jobs) would result in approximately $405 million in total earnings. This accounts for about 20 percent of all earnings supported by the proposed Project. The remaining 80 percent, or $1.6 billion, would occur in other locations around the country. See Figure 4.10.1-2 for earnings and employment by industry.

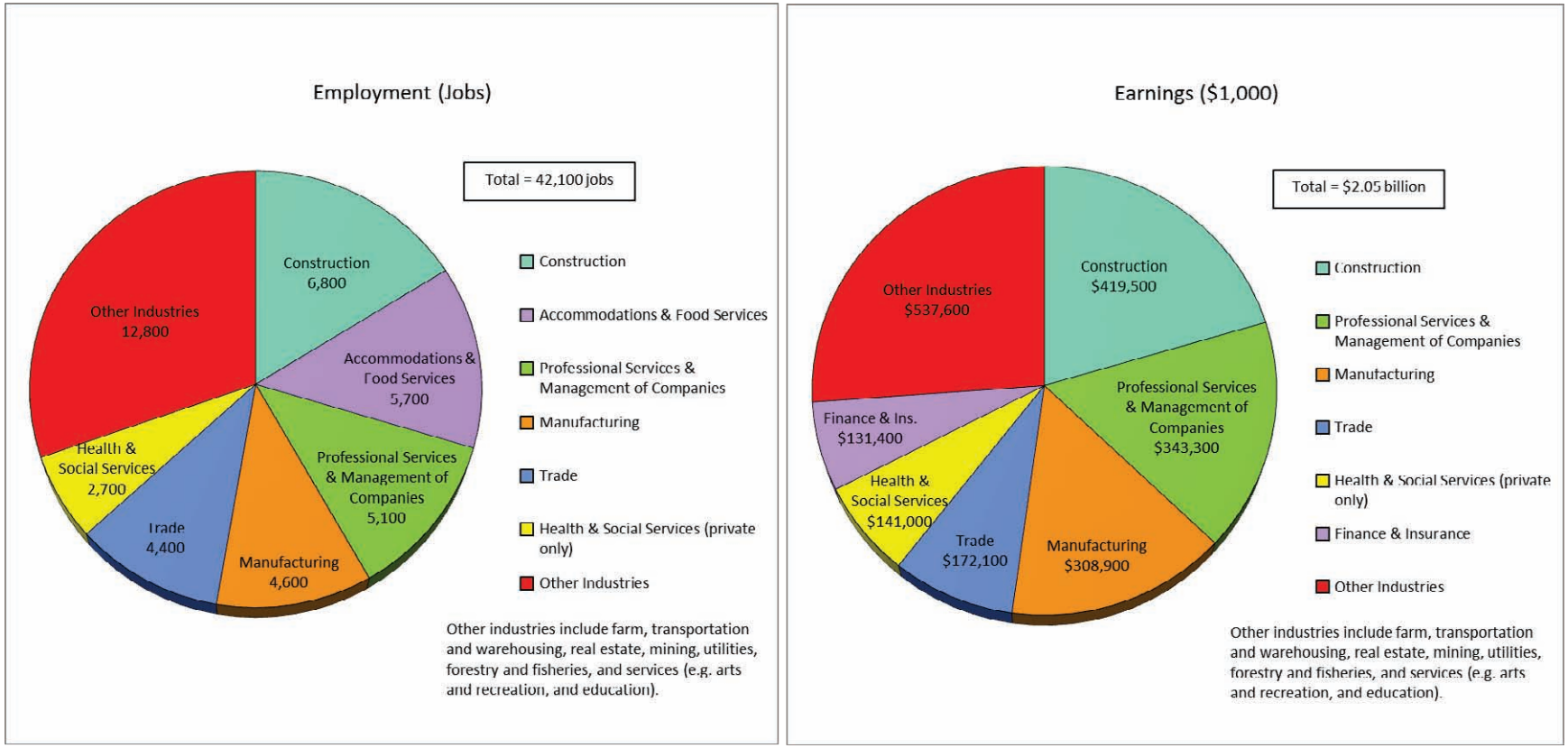

Figure 4.10.1-2 Employment and Earnings by Industry Supported by Construction of the Proposed Project (Total U.S.)

Because of the limited availability of temporary housing in the proposed Project area as well as the likelihood that most of the construction workforce would come from outside the Project area states, additional temporary accommodations would be needed. Keystone proposes to meet the need through a combination of eight temporary construction camps in Montana, South Dakota, and northern Nebraska, and by using local accommodations in central and southern Nebraska and in Kansas.

The eight construction camps are estimated to generate the equivalent of 1 full year of property tax revenue for the seven counties where they would be located, which is a total of about $4 million. Short-term revenues from sources such as sales and use taxes would total approximately $66 million combined in the states that levy such a tax. Yields from fuel and other taxes would provide some additional economic benefit to host counties and states.

Seventeen areas (census tracts or block groups) in the proposed Project area were identified as meeting the minority and/or low-income population criteria established to assess the potential environmental justice effects of the proposed Project. All 17 areas are in counties that are or contain Health Professional Shortage Areas (HPSA) and Medically Underserved Areas/Populations (MUA/P) locations as listed by the U.S. Department of Health and Human Services (see Figure 4.10.1-3; areas with meaningfully greater minority or low income populations are shown in green). Impacts to these populations during construction could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition

In addition to avoidance and mitigation measures that Keystone proposes to minimize negative impacts to all populations in the proposed Project area, specific mitigation for environmental justice communities during construction would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided. Keystone states that it would reach out to Local Emergency Planning Committees (LEPCs) during and after the development of its emergency response plan and produce public awareness materials with special emphasis on considerations of low-income and minority communities in those preparedness efforts.

Construction activities could result in short-term impacts to traffic and transportation infrastructure, but these would be minor and temporary. Keystone would submit a road use plan and coordinate plan implementation with appropriate state and county representatives.

Once the proposed Project enters service, operations would require an estimated 50 total employees: 35 permanent employees and 15 temporary contractors. This small number would result in negligible impacts on population, housing, and public services in the proposed Project area.

The total estimated property tax from the proposed Project in the first full year of operations would be about $55.6 million spread across 27 counties in three states (Figure 4.10.1-4). This impact to local property tax revenue receipts would be substantial for many counties, constituting a revenue impact of 10 percent or more in 17 of the 27 counties that the proposed pipeline would affect. Operation of the proposed Project is not expected to have an impact on residential or agricultural property values.

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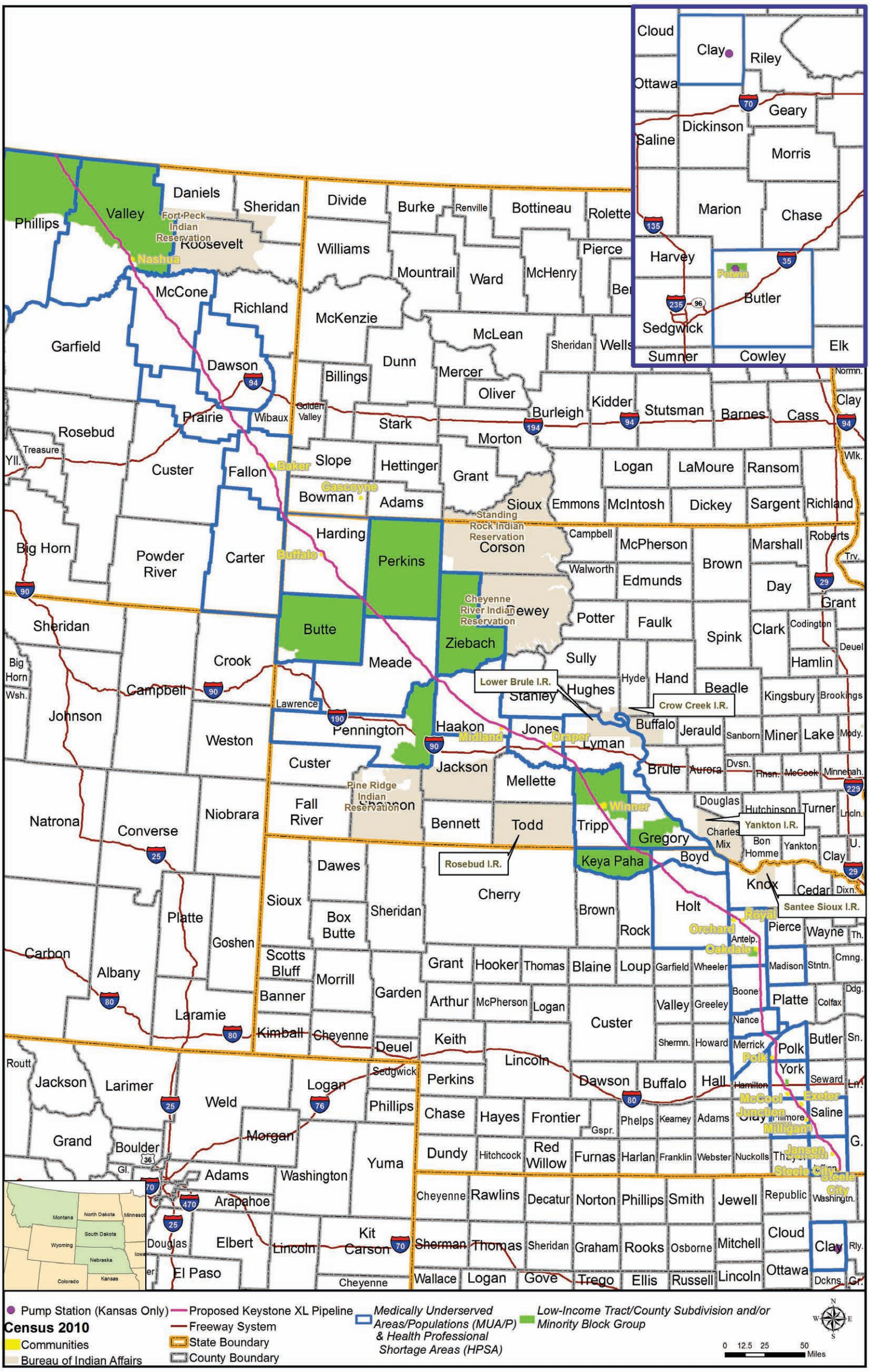

Source: HPSA 2012a, 2012b; Esri 2013

Figure 4.10.1-3 Health Professional Shortage Areas and Medically Underserved Areas/Populations in the Socioeconomic Analysis Area

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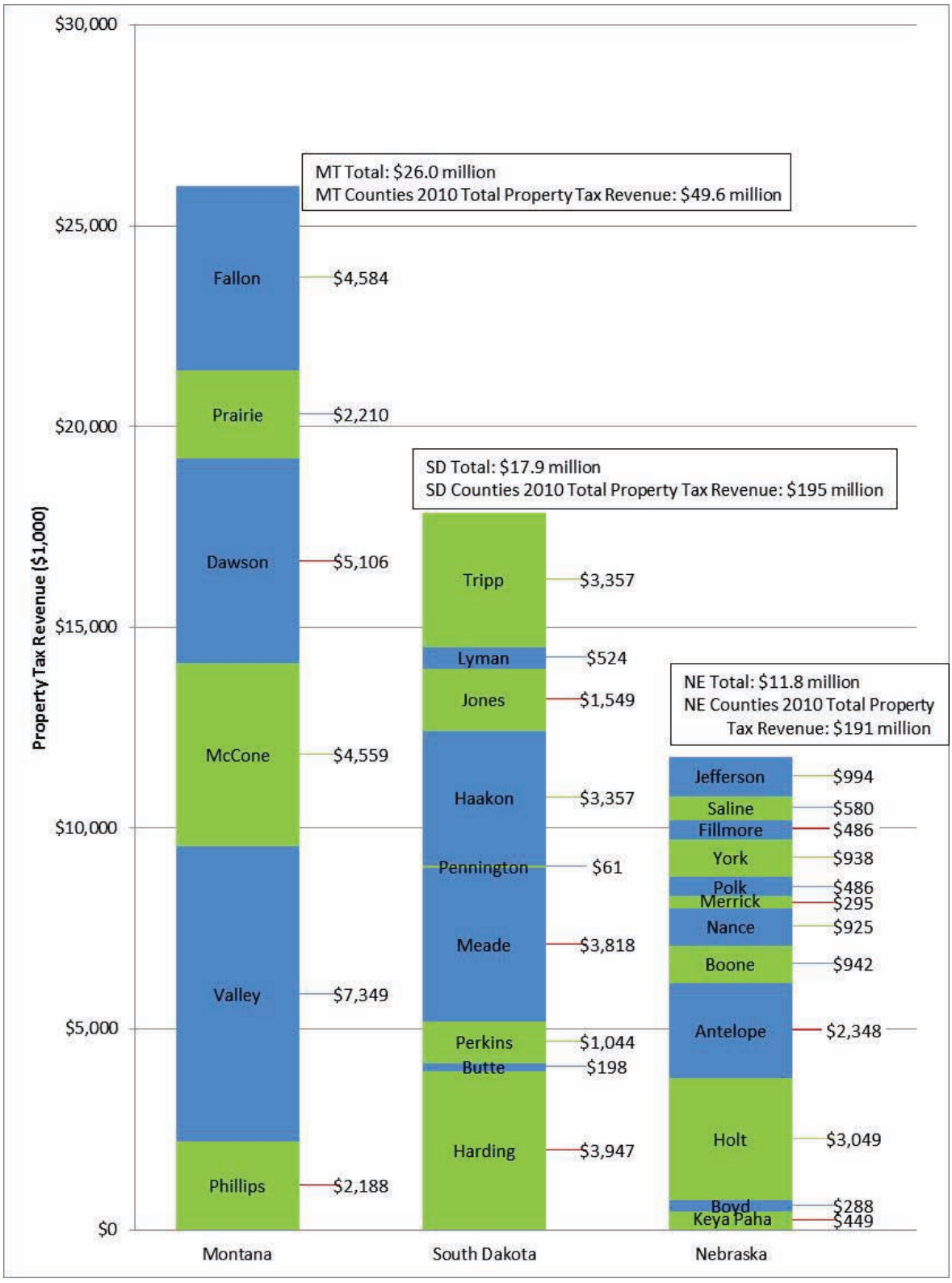

Note: The purpose of the colors used in this figure is to visually separate counties.

Figure 4.10.1-4 Estimated Annual Property Tax Revenue from the Proposed Project

The proposed Project operation is not expected to disproportionately adversely impact minority or low-income populations. In addition, community outreach activities during construction would continue throughout the proposed Project operations.

Operation of the proposed Project would involve infrequent vehicle trips associated with routine monitoring and maintenance of the proposed Project facilities and would not significantly affect traffic or the capacity of roads in the vicinity of the proposed Project. Section 4.13.5, Potential Impacts, discusses the potential impacts of a spill on socioeconomic resources.

There are three connected actions of the proposed Project: the Bakken Marketlink Project, the Big Bend to Witten 230-kilovolt (kV) Transmission Line Project, and electrical distribution lines and substations. Each of the connected actions would create additional direct, indirect, and induced employment and earnings throughout the United States. Construction of the Bakken Marketlink Project would support an estimated 1,000 jobs and $59.4 million in earnings. The Big Bend to Witten 230-kV Transmission Line would support a total of 1,100 jobs and $47.6 million in earnings. The electrical distribution lines and substations would have the largest economic effect, supporting approximately 3,100 jobs and $137 million in earnings across the United States. The impacts of the connected actions on other socioeconomic resources (i.e., population, housing, public services, property taxes, environmental justice, property values, and traffic and transportation) would be similar to those described for the proposed Project.

4.10.2 Impact Assessment Methodology

The following potential social and economic impacts were evaluated in the analysis:

- Overburdening of the local housing stock because of demand generated by the temporary and permanent workforces;
- Substantial burden on public service providers serving the proposed Project area, such that they would need to expand their service capacities to meet those demands;
- Substantial changes to local social or economic activities, including changes in employment and income levels resulting from the proposed Project construction and operations;
- Substantial changes in economic impacts, including output and spending;
- Substantial effects to potential environmental justice populations;
- Substantial changes in fiscal revenues, including tax receipts, of local jurisdictions;
- Substantial changes in private property values; and
- Substantial effects to transportation resources.

Impacts are characterized as positive (beneficial) or negative (adverse) and, where possible, are evaluated relative to regional conditions to help assess the magnitude of socioeconomic effects.

Socioeconomic impacts associated with potential releases are discussed in Section 4.13, Potential Releases.

4.10.3 Impacts

4.10.3.1 Construction

The proposed Project would require construction of approximately 875 miles of pipeline, 20 pump stations, and other ancillary facilities as listed in Table 4.10-1.

Table 4.10-1 Proposed Project Construction by State

	Montana	North Dakota	South Dakota	Nebraska	Kansas
Permanent Facilities					
Pipeline (miles)	285	0	316	274	0
Pump Stations	6	0	7	5	2
Mainline Valves (MLVs)	25	0	15	15[a]	0
Temporary Facilities					
Access Roads	84	0	59	48	0
Pipe Yards	9	1	11	TBD[b]	0
Contractor Yards	5	0	7	TBD[b]	0
Construction Camps	4	0	3	1	0
Railroad Sidings	3	1	3	TBD[b]	0

Sources: Keystone 2012a, 2012b

[a] Locations for four of the MLVs in Nebraska have been determined. It is estimated than an additional 11 MLVs will be required in Nebraska, but locations have not yet been determined.
[b] Construction facilities (e.g., pipe yards, contractor yards, and railroad sidings) for Nebraska have not been determined.

Keystone states that proposed Project construction is expected to take 1 to 2 years. While construction-related activities may occur across all five states concurrently, actual time to complete construction is uncertain. Various factors including weather, workforce constraints, and timing of permits would influence the duration of construction, as would finalization of the number of construction spreads that could be operated concurrently.

Population

The number of residents within the proposed Project area would increase temporarily during construction, primarily as a result of the influx of construction workers. The construction workforce would consist of approximately 5,000 to 6,000 personnel per construction season,[2] including Keystone employees, contractor employees, and environmental inspection staff. This number is equivalent to approximately 2 percent of the population of the counties in the proposed Project area (approximately 263,000, see Table 3.10-5). The workforce would be distributed across the proposed pipeline route by construction spread[3] (see Table 3.10-8 for spread locations), with approximately 900 to 1,300 personnel allocated to each spread. It is assumed that most would be housed in construction camps (see next section).

Population impacts in the proposed Project area would depend upon the composition of the construction workforce in terms of local versus non-local workers and the existing population of the area. Keystone estimates that approximately 10 percent of the total construction workforce could be hired locally (Keystone 2012c). It is assumed that because of the specialized nature of

[2] A total of 10,000 to 11,000 workers would be needed if the entire proposed Project were to be built concurrently.
[3] A *construction spread* is the length of pipeline that would be built under one contract or set of contracts. The proposed Project has 10 spreads (see Section 3.10.2.3, Local Economic Activity).

much of the construction, and because of the relatively small labor force and relatively low unemployment rate in the economic corridor counties (i.e., counties that are likely to experience daily spending by construction workers; see Table 3.10-10), nearly all local hires would be from the *rest of state* area (i.e., counties outside the economic corridor, but within the same state; see geographies definitions in Section 3.10.1, Introduction). It is expected that few workers would be accompanied by their families because of the short duration and mobile nature of the work. Therefore, impacts to the proposed Project area population during construction would be temporary.

Housing

The proposed Project would require 5,000 to 6,000 construction workers each year of the construction phase, or 900 to 1,300 workers within any one construction spread (10 spreads total). Proposed Project construction would require temporary housing for almost all of these workers.

The availability of short-term housing varies across the proposed pipeline route. As of 2012, there were approximately 2,000 available rental properties, 3,300 hotel/motel rooms, and 2,000 recreational vehicle (RV) sites (for a total of approximately 7,300 separate potential accommodations) within reasonable proximity (commuting distance) to the pipeline route (see Section 3.10.2.2, Housing). Actual vacancy rates vary by year and season, with the spring and fall seasons having the lowest vacancy rates. Therefore, the actual availability of temporary housing at any given time could be lower.

The proposed Project-related demand for housing (6,000 seasonal workers) would take up approximately 82 percent (6,000 divided by 7,300) of the estimated available temporary housing along the pipeline route, leaving only 18 percent to meet non-Project related needs. Therefore, the temporary housing available along the proposed pipeline route would likely be insufficient to meet the demand for housing resulting from construction activities. More urban areas, such as the central/south Nebraska spreads, have more short-term housing available, particularly hotel and motel rooms.

Keystone proposes to meet the housing need through a combination of construction camps and local housing.

Construction Camps

As discussed above, most of the proposed Project area counties do not have sufficient temporary housing to house all the necessary construction personnel. Keystone proposes to construct eight temporary construction camps to meet the housing needs in Montana, South Dakota, and northern Nebraska (see Table 4.10-2); approximately one camp per spread for construction spreads 1 through 8.

Table 4.10-2 Proposed Construction Camp Locations

County	State	Number of Construction Camps
Valley	Montana	2
McCone	Montana	1
Fallon	Montana	1
Harding	South Dakota	1
Meade	South Dakota	1
Tripp	South Dakota	1
Holt	Nebraska	1

Source: Keystone 2012d

Keystone states that each of the construction camps would typically house approximately 900 to 1,300 workers, including sleeping areas with shared or private baths. Approximately 100 of the workers would use on-site RVs, and the remainder would be housed in camp buildings. The camps would have recreation facilities, media rooms, kitchen/dining facilities, laundry facilities, a security/infirmary unit, offices, and wastewater treatment facilities. These temporary construction camps would be permitted, constructed, and operated consistent with applicable county, state, and federal regulations.

Keystone states that it has established a camp *Code of Conduct* to control and manage behavior in all proposed Project camps. All camp residents must agree to abide by the conditions of the *Code of Conduct* or risk losing their camp residency status. The *Code of Conduct* addresses camp access control procedures, bringing weapons into the camp, disruptive or abusive behavior, alcohol use, and criminal/illegal activities.

Keystone states that each camp site would be fully fenced and have a guard house at a single entrance. A contract security officer manning the guard house would be provided on a 24/7 basis. In addition, at all times there would be at least one additional roving security officer supplemented with off-duty law enforcement personnel, as needed. Local law enforcement agencies would also respond to violent, criminal, or illegal activities.

Other Temporary Housing

In central/south Nebraska where no construction camps are planned, there are approximately 936 rental units, 839 hotel/motel rooms, and 740 RV sites (see Section 3.10.2.2, Housing). Additional temporary housing is available in surrounding counties that are in reasonable proximity. This temporary housing would be sufficient to accommodate the estimated 1,800 seasonal workers needed for spreads 9 and 10 in central/southern Nebraska.

Keystone estimates that approximately 200 workers over 34 weeks would be needed for the two pump stations in Kansas. Clay and Butler counties, with over 500 hotel/motel rooms, as well as the nearby metropolitan areas of Wichita and Manhattan, would have sufficient short-term housing to meet the needs of this workforce.

Local Economic Activity

Economic activity is defined as the production of goods and services required to meet the demand for construction of the proposed Project. Funds spent by Keystone would trigger production activity, which could be expressed in terms of employment and earnings. Employment is expressed as annual average jobs, including both full-time and part-time

employment. An *average annual job* consists of one position that is filled for 1 year. An average annual job could consist of two positions filled for a period of 6 months each, three positions filled for 4 months each, or any combination that sums to a year of employment. The modifier average annual is intended to communicate that a job that lasts only 1 month is not counted as one job, but rather one-twelfth of an average annual job. *Earnings* is the value of all compensation paid to employees, or alternatively the cost of payroll to the employer; in addition to wages and salaries, it includes such things as benefits, payroll taxes, bonuses, and retirement contributions.

The impacts discussed here include three distinct components of economic activity: direct, indirect, and induced. Direct economic activity associated with construction includes all jobs and earnings at firms that would be awarded construction contracts for the proposed Project. Indirect activity includes all goods and services that would be purchased by these construction contractors in the conduct of their services to the proposed Project. Examples of these types of activities related to pipeline construction include the goods and services that would be purchased to produce inputs such as concrete, fuel, surveying, welding materials, and earth-moving equipment. Induced activity includes the spending of earnings that would be received by employees working for either the construction contractor or for any supplier of goods and services required in the construction process. Examples of induced activities include spending by access road construction crews, welders, employees of pipe manufacturers, and ranchers providing beef for restaurants and construction camps. This section presents the sum of employment and earnings from all three types of effects.

Impacts were estimated using IMPLAN® (MIG, Inc. 2011), a proprietary input-output modeling system founded on data available from the U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, U.S. Census Bureau, and other sources. IMPLAN® is regarded by government agencies and academic institutions as a highly credible economic modeling system. The most recent IMPLAN® data (2010) were used for the analysis. Additional information regarding the IMPLAN® modeling system and its application in this Final Supplemental EIS analysis is in Appendix O, Socioeconomics.

Construction activities in Montana, South Dakota, and Nebraska were modeled at three geographic levels: at the economic corridor counties level within each state (see Table 3.10-8), at the state level, and at the national level. Some expenditures were modeled at the economic corridor level and then linked to the remaining area of each state to capture effects occurring outside the economic corridor. Some expenditures were only modeled at the state level when it was clear that the economic corridor was unlikely or unable to provide goods and services required for construction. Impacts modeled at the state level were linked to all remaining states in the country to capture national consequences of statewide spending. Expenditures on the two pump stations in Kansas were evaluated in the context of the Kansas economy as a whole due to the proximity of Clay and Butler counties to interstate highway corridors and to large, economically dominant, metropolitan areas. Therefore, Kansas was modeled at the state level with links to the rest of the United States. Finally, some construction spending would occur only at unspecified locations nationally, and thus a single U.S. model was used to estimate these impacts. A total of 19 models were used in the analysis.

Table 4.10-3 presents a summary of construction activities that would occur in various locations. Construction contracts, materials, and support purchased in the United States would total approximately $3.1 billion (approximately $1.53 billion in construction plus $0.75 billion for

material and $0.86 billion in support).[4] Support includes such items as construction management, inspections, and engineering. Another $233 million would be spent on camps for workers in remote locations of Montana, South Dakota, and northern Nebraska[5].

Table 4.10-3 Selected Characteristics of Proposed Project Construction Activity Occurring Within the United States

Characteristic		Location					
Description	Units	Montana	South Dakota	Nebraska	Kansas	Rest of United States	Total United States
Construction cost	$ million	$494	$539	$464	$35	NA[a]	$1,532
Materials cost	$ million	NA	NA	NA	NA	$750	$750
Support cost	$ million	$273	$271	$275	$38	NA	$857
Construction workers	number	4,000	3,500	2,700	200	NA	10,400
Construction period (per spread)	weeks	17-21	19-21	19-20	32-35	NA	17-35
Construction camps	number	4	3	1	NA	NA	8
Construction camp development and operations[b]	$ million	NA	NA	NA	NA	NA	$233

[a] NA = not applicable
[b] Construction camp development and operations estimates are not presented by state because they include confidential business information.

Approximately 10,400 seasonal construction worker positions, engaged for 4- to 8-month construction periods, would be required to complete the proposed Project. When expressed as average annual jobs, this equates to approximately 3,900 average annual jobs (3,900 over 1 year of construction, or 1,950 per year over 2 years)[6]. Thus, if built over a 2-year period consistent with the explanation provided above, the proposed Project would likely generate 1,950 construction jobs per year.

In response to comments and to provide greater clarity, this Final Supplemental EIS has standardized the presentation of jobs numbers as average annual jobs. The definition of *average annual job* above is the same as the definition of *job* provided on page 4.10-4 in the Draft Supplemental EIS. This Final Supplemental EIS has also replaced the undefined term *average annual employment* that had been used in some places of the Draft Supplemental EIS with *average annual jobs*. The projected number of construction jobs is the same as was presented in the Draft Supplemental EIS. A *worker* is a person working full or part time in a job.

[4] More detailed estimates were used in the models, but these are not included in this Final Supplemental EIS because they include confidential business information.
[5] In addition to the $3.1 billion in spending in the United States, Keystone would purchase some goods and materials outside the United States. This socioeconomics section of the Final Supplemental EIS focuses on the effects of spending within the United States. Section PC.2.14, Socioeconomics, of the Theme Statements and Thematic Responses in the Volumes V and VI of this Final Supplemental EIS, Summary of Public Comments and Responses to the Keystone XL Project Draft Environmental Impact Statement, discusses the amount and sources of some of the goods and materials from outside the United States.
[6] This is based on the total number of construction positions for all spreads multiplied by the average construction period per spread in weeks divided by 52 weeks in a year (10,400 workers × 19.5 [average] construction weeks / 52 weeks = 3,900 average annual jobs).

The economic analysis treats construction contracts, major material purchases, construction camps, and worker expenditures as distinct triggers of economic effects. Important assumptions used in the analysis include the following:

- National firms would be awarded construction contracts. Contractors would use local sub-contractors and state sources for common goods and services where available. The balance would be obtained from national sources.
- Approximately 10 percent of the workforce in each state would come from locations within that state. Because the proposed pipeline corridor includes primarily rural and sparsely populated areas, the 10 percent would likely reside in other parts of each state. The remaining 90 percent of the workforce would come from other United States locations outside the state. This share of the workforce accounts for a unique national labor force that is highly specialized in pipeline construction techniques.
- Where construction camps are provided, all workers (including any in-state workers) would reside in the camps during construction. Because the proposed construction is concentrated over 4- to 8-month periods over 1 to 2 years and the locations are remote, no commuting for in-state workers is assumed. Camps would accommodate both workers staying within built housing as well as those living in personal RVs. Because the work week would be 6 days and each workday would be long, all workers would be expected to eat in camp dining facilities.
- Construction camps would be built, assembled, operated, and decommissioned by U.S. firms located outside the pipeline corridor states. In-state firms would complete the site work for camp development (Morgan 2012, Olmsted 2012). For the purpose of this analysis, it is assumed that camp operations would hire half of the service personnel from within the state and half from other parts of the United States.
- Commercial lodging and accommodations (not construction camps) would house the construction workforce in central and southern Nebraska (construction spreads 9 and 10) as well as in Kansas.
- Worker expenditures during construction would primarily go toward lodging (for those not staying in construction camps), meals, and minor retail purchases. Worker compensation would be spent primarily in their states of residence.
- Major material purchases (e.g., pipe, pumps, valves, instrumentation) would be provided by national firms located throughout the United States. The manufacture and procurement for construction inputs for the proposed project may have started prior to the finalization of the analysis.
- Most major support costs, such as construction management, inspections, engineering, and environmental services, are primarily provided in the United States either through contracts with U.S. firms or by proponent personnel residing in the United States.

Table 4.10-4 shows the total predicted impacts of the proposed Project on employment across all geographies. A total of 42,100 jobs throughout the United States would be supported by construction of the proposed Project. About 12,000 jobs, or 29 percent, would be held by residents of the four proposed Project area states.[7] The remaining 71 percent of all jobs would occur in other states across the country. Of the 42,100 jobs that would support the proposed Project, about 16,100 would be direct. Most of the direct jobs would be filled by workers from outside the project area. These jobs would be located in firms that provide goods, such as pipe, or services, such as construction management, directly to Keystone. About 26,000 jobs would be supported by either supply chains to Keystone suppliers or by employee spending of income generated by the proposed Project. A detailed breakdown of jobs by sector for each state (see tables in Appendix O, Socioeconomics) indicates that most jobs in the economic corridor states would occur in construction, trade, professional services, lodging, and food services. This mix of industry effects stems from both local suppliers to pipeline construction activity as well as household spending of worker income. In southern Nebraska, this pattern is supplemented by the anticipated use of commercial lodging and food service during pipeline construction.

Table 4.10-4 Total Employment Supported by Construction of the Proposed Project (average annual jobs)

	Total Jobs				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Jobs As a Share of 2010 State or U.S. Jobs (percent)
Project Area	4,211,000	5,400	6,600	12,000	0.28%
Montana[b]	623,600	1,500	2,200	3,700	0.59%
South Dakota[b]	556,500	1,700	1,800	3,500	0.62%
Nebraska[b]	1,225,700	2,000	2,400	4,400	0.36%
Kansas[a]	1,805,200	200	200	400	0.02%
Rest of U.S.	169,556,400	10,700	19,400	30,100	0.02%
Total U.S.	173,767,400	16,100	26,000	42,100	0.02%

[a] Time period for realizing all effects is uncertain.
[b] Excludes jobs held by non-residents of the state as part of a temporary construction workforce (these jobs are assigned to Rest of United States).

As noted above in Section 4.10.3.1, Construction, the time to complete construction is uncertain, ranging from estimates of 1 to 2 years. Throughout this section, the direct impacts of construction and subsequent indirect and induced impacts throughout the economy are summed and compared with annual totals for 2010. This comparison provides a context for understanding the magnitude of total impacts.

Table 4.10-5 provides an industry breakdown of employment nationally. Construction and accommodations and food service would be the largest beneficiaries of the proposed Project, followed by professional services, manufacturing, and trade. Other industries with estimated impacts exceeding 2,000 jobs include health and social services, administrative and waste services, finance and insurance, and transportation and warehousing. Total estimated

[7] This number reflects the *total* effects (direct, indirect, and induced) of the proposed Project and therefore exceeds the 3,900 direct construction jobs cited above.

employment impacts triggered by the proposed Project would sum to about 0.02 percent of national employment in 2010.

Table 4.10-5 Total U.S. Employment and Earnings by Industry Supported by Construction of the Proposed Project

	Employment (average annual jobs)			Earnings (thousands of 2010 dollars)[a]		
	Current (2010)	Total Effects of Proposed Project[a]		Current (2010)	Total Effects of Proposed Project[a]	
Industry	Jobs[b]	Jobs[b]	Share of 2010 Total	$1,000[c]	$1,000[c]	Share of 2010 Total
Farm	2,665,000	300	0.01%	77,215,000	7,400	0.01%
Forestry, Fisheries, & Support, including Farm Support	835,800	100	0.01%	22,548,000	3,800	0.02%
Mining	1,185,500	300	0.02%	83,081,000	28,300	0.03%
Utilities	579,000	100	0.02%	73,306,000	18,400	0.03%
Construction	8,914,200	6,800	0.08%	479,541,000	419,500	0.09%
Manufacturing	12,206,900	4,600	0.04%	891,607,000	308,900	0.03%
Trade	23,808,200	4,400	0.02%	1,009,713,000	172,100	0.02%
Transportation & Warehousing	5,504,400	2,000	0.04%	295,408,000	110,400	0.04%
Information	3,210,700	600	0.02%	294,252,000	40,100	0.01%
Finance & Insurance	9,651,300	2,200	0.02%	647,655,000	131,400	0.02%
Real Estate & Rental	7,459,200	1,600	0.02%	148,119,000	31,200	0.02%
Professional Services & Management of Companies	13,765,700	5,100	0.04%	1,110,322,000	343,300	0.03%
Administrative & Waste Services (private only)	10,478,800	2,300	0.02%	353,648,000	71,100	0.02%
Educational Services (private only)	4,076,600	500	0.01%	146,724,000	18,000	0.01%
Health & Social Services (private only)	19,062,300	2,700	0.01%	1,000,258,000	141,000	0.01%
Arts, Entertainment & Recreation Services	3,777,100	600	0.02%	100,953,000	13,600	0.01%
Accommodations & Food Services	12,048,000	5,700	0.05%	278,844,000	103,300	0.04%
Other Services	9,858,700	1,800	0.02%	330,361,000	62,100	0.02%
Government & Government Enterprises	24,680,000	400	< 0.01%	1,642,674,000	29,900	< 0.01%
Total	173,767,400	42,100	0.02%	8,986,229,000	2,053,800	0.02%

[a] Time period for realizing all effects is uncertain.
[b] Includes direct, indirect, and induced full-time and part-time jobs by place of work.
[c] Labor earnings by place of work

Impacts on earnings follow a similar pattern as those for employment, but with some difference in percent shares between geographies (see Table 4.10-6). For comparability with baseline estimates, these are shown in 2010 dollars. About 20 percent of all earnings, or $405 million, would occur in the proposed Project area states of Montana, South Dakota, Nebraska, and Kansas. This compares with 29 percent of all jobs (12,000/42,100 per Table 4.10-4). A smaller share of earnings (compared to the share of jobs) for these states suggests that the largest impacts would occur in industries paying lower wages, such as trade and personal services, that are commonly associated with household spending. The remaining 80 percent of all earnings, or $1.6 billion, would occur in other locations around the country. These effects are primarily attributed to the manufacturers of major materials and construction support services for the Project plus their supply chains. Over $0.8 billion of earnings would be received by employees in firms directly supplying Keystone with materials and services. Another $1.2 billion would be received by employees of firms in the proposed Project supply chains or firms selling to employees that are receiving income resulting from the proposed Project.

Table 4.10-6 Total Earnings Supported by Construction of the Proposed Project (thousands of 2010 dollars)

	Total Earnings				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Earnings as a Share of 2010 State or U.S. Earnings (percent)
Project Area	183,429,300	145,400	259,800	405,200	0.22%
Montana[a]	23,390,300	44,500	82,700	127,200	0.54%
South Dakota[b]	22,968,300	46,800	67,800	114,600	0.50%
Nebraska[a]	55,527,800	49,000	100,400	149,400	0.27%
Kansas[a]	81,542,900	5,100	8,900	14,000	0.02%
Rest of U.S.	8,802,799,700	678,200	970,400	1,648,600	0.02%
Total U.S.	8,986,229,000	823,600	1,230,200	2,053,800	0.02%

[a] Time period for realizing all effects is uncertain.
[b] Excludes labor earnings by non-residents of the state as part of a temporary construction workforce (these earnings are assigned to Rest of U.S).

As seen in Table 4.10-5, the distribution of earnings by industry in the United States shows construction, manufacturing, and professional services as the largest beneficiaries of the proposed Project. Earnings that exceed $100 million also would occur with trade, health and social services, finance and insurance, transportation and warehousing, lodging, and the food service industries. Total earnings impacts triggered by the proposed Project would amount to about 0.02 percent of national earnings in 2010.

National Economic Indicators

For purposes of this environmental analysis, the economic effects of the proposed pipeline were compared with a national standard, the GDP. GDP is the most common measure of economic

activity in the United States.[8] GDP can be derived in three ways: 1) by the sale of final goods and services to persons, businesses, governments, and foreigners; 2) by the income received by owners of labor (workers), land, and capital in the production of these goods and services; and 3) by the value that is added at every stage of production when goods and services are produced. Earnings by workers, as presented in this Final EIS, are the largest share of income included in GDP. It provides a strong indicator of the contributions made by any set of actions towards the economic activity of a state or the nation. It is also a measure commonly reported by the media, and therefore familiar to many readers.

A complete measure of contributions to GDP by the proposed Project would include all changes in production during both construction and operations. It would also include changes in production by other firms prompted by market dynamics should the proposed Project be implemented. Market dynamics are addressed in Section 1.4, Market Analysis, but in qualitative terms only. Estimates of GDP provided here include construction impacts only.

In 2010, the base year of this analysis, the GDP of the United States was approximately $14.5 trillion. Construction of the proposed Project would contribute approximately $3.4 billion to GDP if implemented (see Table 4.10-7). This figure includes not only earnings by workers, but all other income earned by businesses and individuals engaged in the production of goods and services demanded by the proposed Project, such as profits, rent, interest, and dividends. When compared with the GDP in 2010, the proposed Project's contribution represents about 0.02 percent of annual economic activity across the nation. If the proposed Project's contribution was compared to the GDP in 2012 ($16.2 trillion), the percent contribution would remain at 0.02 percent.

Table 4.10-7 Gross State Product and Gross Domestic Product Supported by Construction of the Proposed Project (millions of 2010 dollars)

	Gross State Product/Gross Domestic Product		
	Current (2010)	Total Impacts of Proposed Project[a]	Share of 2010 Total (Percent)[b]
Montana	36,540	212.2	0.58
South Dakota	38,215	191.5	0.50
Nebraska	90,072	244.3	0.27
Kansas	126,074	18.3	0.01
Rest of U.S.	14,207,999	2,735.9	0.02
Total U.S.	14,498,900	3,402.3	0.02

Source: U.S. Bureau of Economic Analysis 2010.

[a] Time period for realizing all effects is uncertain.
[b] Totals may not be exact due to rounding.

[8] There are a variety of measures that can be used to gauge the level of economic activity in a geographic area. Production output, or sales, is a measure that is commonly found in economic studies. This measure sums the expected sale of all goods and services, whether they are sold as inputs for making a product or as a completed product to the final user. For example, the sale of wheat grown by the farmer to the miller, the sale of flour by the miller to the baker, and finally the sale of bread by the baker to the consumer would all be counted in the sum of output or sales. Other measures of economic activity, such as GDP, count only the value added at each step in the production process. To continue the example, the value added by the miller is grinding the wheat, and the value added by the baker is mixing wheat with other ingredients and baking it to produce bread. The sum of value added will always be smaller than the sum of total sales.

Effects of the proposed Project in the State of Nebraska have been a concern expressed in public comments. In response to these concerns, the Nebraska Department of Environmental Quality (NDEQ) measured the economic activity of the proposed Project in a separate analysis (NDEQ 2012). Because Nebraska sought to understand the sum of all sales occurring in the state triggered by the proposed Project, it reported production output as an appropriate measure of economic activity.

Previous Analysis of Economic Impacts

In 2010, The Perryman Group (TPG) released its analysis of impacts that the previously proposed Keystone project would have on business activity of the United States (TPG 2010). The TPG study considered the entire project from the Canadian border in Montana to the Gulf Coast, and it was summarized and reviewed in the Final EIS. The proposed Project is smaller than the project analyzed by the TPG report (i.e., primarily the portion in Montana, South Dakota, and Nebraska).

Two measures common to the TPG analysis and the analysis in this Final Supplemental EIS are GSP and employment. Table 4.10-8 presents findings for pipeline construction and development by state.

Table 4.10-8 Comparison of Gross State Product and Employment Supported by Construction of the Proposed Project in The Perryman Group and in this Final Supplemental EIS

	Gross State Product (millions of 2010 dollars)		Employment (average annual jobs during construction)	
State	TPG[a,b]	Final Supplemental EIS[b]	TPG[b,c]	Final Supplemental EIS[b]
Montana	$353.2	$212.2	5,232	3,700
South Dakota	$394.0	$191.5	4,826	3,500
Nebraska	$394.9	$244.3	7,143	4,400

[a] TPG results were originally expressed in 2009 dollars. To facilitate comparisons, they have been adjusted in this table using the GDP Implicit Price Deflator of 101.15.
[b] Time period for realizing all effects is uncertain.
[c] TPG analysis reported employment in terms of full-time equivalents. One job equals approximately 0.946 full-time equivalents (MIG, Inc. 2011).

The TPG impact estimates range from 1.4 to 2.0 times larger than those presented in this Final Supplemental EIS. Based on the description of the TPG model provided in its report (U.S. Multi-Regional Impact Assessment System), foundational elements appear to be similar to IMPLAN®, the modeling system used for analysis in the Final Supplemental EIS. Descriptions of the model, assumptions, and inputs used in the analysis were not provided in detail in the TPG report, making it difficult to interpret the differences. However, the Final EIS noted that the TPG Report did not appear to separately calculate potential impacts for construction and operation; further, the TPG study assessed benefits over an assumed 100-year project lifetime.

Environmental Justice

As discussed in Section 3.10.2.4, Environmental Justice, within the socioeconomic analysis area, 16 census block groups were identified with minority populations that were meaningfully greater than their respective reference areas[9], and five census tracts were identified with low-income populations that were meaningfully greater than their respective reference areas. Of these 21 areas, four were duplicates (i.e., areas identified for both the meaningfully greater minority and low-income population sets). Accordingly, it was concluded that a total of 17 separate areas with environmental justice populations could potentially be affected by construction or operation of the proposed pipeline.[10] Table 4.10-9 lists these areas and specifies the following:

- If the proposed pipeline route intersects an area;
- Whether an ancillary facility is proposed to be located within an area; and
- Whether there is a minority population and/or a low-income population in the area.

Table 4.10-9 Locations of Construction Facilities Relative to Meaningfully Greater Populations[a]

Geographic Area	Intersects with Pipeline Route	Ancillary Construction Facilities in Area[b]	Minority Population	Low-Income Population
Montana				
Phillips				
Block Group 4, Census Tract 602	Yes	1 Pipe Yard	Yes	No
Valley				
Block Group 1, Census Tract 1001	Yes	1 Pipe Yard, 1 Contractor Yard	Yes	No
Block Group 1, Census Tract 9406	Yes	1 Pipe Yard	Yes	No
Block Group 2, Census Tract 9406	No	NA	Yes	No
Fallon				
Block Group 3, Census Tract 1	No	NA	Yes	No
South Dakota				
Butte				
Block Group 1, Census Tract 9676	Yes	1 Pipe Yard	Yes	Yes
Perkins				
Block Group 2, Census Tract 9683	Yes	NA	Yes	Yes
Ziebach				
Block Group 1, Census Tract 9416	No	NA	Yes	Yes

[9] Reference areas were block groups, census tracts, or states as appropriate (see Section 3.10.2.4, Environmental Justice).
[10] As noted in Section 3.10.2.4, Environmental Justice, NDEQ, using a different methodology, also identified a low-income population in Oakdale Township, Antelope County.

Geographic Area	Intersects with Pipeline Route	Ancillary Construction Facilities in Area[b]	Minority Population	Low-Income Population
Pennington				
Block Group 1, Census Tract 116	Yes	NA	Yes	No
Tripp				
Block Group 2, Census Tract 9716	Yes	1 Pipe Yard, 2 Contractor Yards	Yes	No
Block Group 1, Census Tract 9717	Yes	NA	Yes	Yes
Block Group 2, Census Tract 9717	Yes	NA	Yes	
Block Group 3, Census Tract 9717	Yes	NA	Yes	
Gregory				
Block Group 2, Census Tract 9712	Yes	NA	Yes	No
Nebraska				
Keya Paha				
Census Tract 9754	Yes	TBD	No	Yes
York				
Block Group 2, Census Tract 9698	Yes	TBD	Yes	No
Kansas				
Butler				
Block Group 2, Census Tract 206	No	NA	Yes	No

Source: Keystone 2012b

Note: Access roads, which are located throughout the proposed Project area, may also impact minority and/or low-income populations.
[a] Construction facilities for Nebraska have not yet been determined.
[b] NA = not applicable, TBD = to be determined

Impacts to minority and low-income populations during construction could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services in underserved populations. Positive impacts could include direct, indirect, and induced employment and earnings from construction spending.

Impacts to traffic patterns and medical or health services are discussed in this Section (i.e., 4.10, Socioeconomics). Dust, noise, and greenhouse gas emissions impacts are discussed in Section 4.14, Greenhouse Gases and Climate Change. To assess the potential impacts on minority and low-income populations in areas that could be underserved by health professionals, medical facilities, or other health services, the 17 areas with minority and/or low-income populations were compared to HPSA and MUA/P locations that are listed by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA 2012a, 2012b). Any additional disruptions to medical service availability in these areas could impact these populations during the construction period. All 17 areas with minority and/or low-income populations are in counties that are or contain HPSAs and/or MUA/Ps.

Table 4.10-10 provides information about the HPSAs and MUA/Ps, and they are shown spatially on Figure 4.10.1-3 in relation to areas with minority and/or low-income populations.[11] For reference, Figure 4.10.1-3 shows all HPSAs and MUA/Ps in the socioeconomic analysis area. Areas with meaningfully greater minority or low income populations are shown in green.

At any given location along the proposed pipeline route, the duration of the construction period would typically range from 20 to 30 working days. In areas in Montana, South Dakota, and Nebraska, where construction camps would be provided, minor medical needs of workers would be handled in these camps, thus reducing the potential need for medical services from the surrounding communities. As a result, the impact of increased demand for medical services on local minority and low-income populations would be minor and short term.

The Final EIS acknowledged concern about impacts on environmental justice communities and described mitigation for these impacts. In addition to avoidance and mitigation measures that Keystone proposes to minimize negative impacts to populations in the proposed Project area, specific mitigation for environmental justice communities would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided. Materials would be in appropriate languages and would contain information on how to seek needed services in the event of a health or other social service disruption related to construction activities.

As noted below under Public Services, Keystone states that it would reach out to LEPCs during and after the development of its emergency response plan and produce public awareness materials with special emphasis on considerations of low-income and minority communities in those preparedness efforts.

The Final EIS noted that a series of consultation meetings were conducted as part of the Section 106 National Historic Preservation Act consultation process to facilitate participation by consulting Indian tribes. Opportunities were provided at these consultation meetings to discuss issues associated with proposed Project construction and operation. Additional consultations continued as part of the proposed Project. During consultations to date, some Indian tribes expressed concerns about the proposed Project's possible impacts on the environment, specifically water resources, wildlife, climate change, and on cultural resources. Other Indian tribes expressed an interest in the possible employment opportunities that the proposed Project may offer. For many Indian residents of the general proposed Project area, hunting, fishing, trapping, and gathering activities are a significant activity. Individuals participate in these activities for numerous reasons, including food supply, personal income, and the continuance of cultural customs and traditions. Indian tribes could be disproportionately negatively impacted by the proposed Project because they could have a greater dependence on natural resources; therefore, a potential spill could more heavily impact their way of life. A good faith effort was made on the part of the U.S. Department of State (the Department) to consult with various Indian tribes to hear their concerns regarding the proposed Project; however, those efforts resulted in insufficient information to enable a detailed effects analysis on American Indian natural resource use within the proposed Project area.

[11] Spatial information for HPSAs and MUA/Ps is only available at the county level. For reference, Figure 4.10.1-3 also shows Oakdale Township, Antelope County, Nebraska, a low-income population area identified by NDEQ (2012), see prior footnote. Figure 4.10.1-3 shows more medical shortage and underserved areas than shown by NDEQ (NDEQ 2012) because the figure shows primary medical care, dental, and mental health areas, whereas NDEQ (2012) shows primary medical care shortage areas only, and only for entire counties.

Table 4.10-10 Health Professional Shortage Areas and Medically Underserved Areas/ Populations in the Socioeconomic Analysis Area

County	Census Block Groups Containing One or More Identified Minority Populations	Census Tracts Containing One or More Identified Low-Income Populations	Health Professional Shortage Areas (HPSA)[a]		Medically Underserved Areas/Populations (MUA/P)[d]
			Designation Name/ Facility Location[b]	Geographic Area or Facility Type[c] (P=Primary Medical Care; D=Dental; M=Mental Health)	Designation Name
Montana					
Phillips	1	0	Phillips Eastern Montana	Single County (P, D) Geographical Area (M)	Phillips Service Area
Valley	3	0	Low-Income—Valley Eastern Montana	Population Group (P) Geographical Area (M)	Valley Service Area
Fallon	1	0	Low-Income—Fallon Fallon/Ekalaka Eastern Montana	Population Group (P) Geographical Area (D) Geographical Area (M)	Baker Service Area
Subtotal Montana	*5*	*0*			
South Dakota					
Butte	1	1	Newell Butte	Geographical Area (P) Single County (M)	Butte Service Area
Perkins	1	1	Faith Lemmon (SD/ND) Perkins Catchment Area 8	Geographical Area (P) Single County (D) Geographical Area (M)	Perkins County
Ziebach	1	1	Ziebach Catchment Area 8	Single County (P,D,M) Geographical Area (M)	Ziebach Service Area
Pennington	1	0	Community Health Center of Black Hill Rapid City HS Indian Health Hospital Wall Service Area	Comprehensive Health Center (P,D,M) Indian Health Service Facility (P,D,M) Geographical Area (P)	New Underwood Service Area Pennington Service Area

County	Census Block Groups Containing One or More Identified Minority Populations	Census Tracts Containing One or More Identified Low-Income Populations	Health Professional Shortage Areas (HPSA)[a]		Medically Underserved Areas/Populations (MUA/P)[d]
			Designation Name/ Facility Location[b]	Geographic Area or Facility Type[c] (P=Primary Medical Care; D=Dental; M=Mental Health)	Designation Name
Tripp	4	1	Low-Income—Tripp County Tripp Catchment Area 10	Population Group (P) Single County (D) Geographical Area (M)	Tripp Service Area
Gregory	1	0	Fairfax Service Area Bonesteel Medical Clinic Burke Medical Clinic Low-Income—Gregory County Catchment Area 10	Geographical Area (P) Rural Health Clinic (P) Rural Health Clinic (P) Population Group (D) Geographical Area (M)	Gregory Service Area
Subtotal South Dakota	*9*	*4*			
Nebraska					
Keya Paha	0	1	Keya Paha Catchment Area 4	Single County (P) Geographical Area (M)	Keya Paha Service Area
York	1	0	Mental Health Catchment Area 5	Geographical Area (M)	NA
Subtotal Nebraska	*1*	*1*			

County	Census Block Groups Containing One or More Identified Minority Populations	Census Tracts Containing One or More Identified Low-Income Populations	Health Professional Shortage Areas (HPSA)[a]		Medically Underserved Areas/Populations (MUA/P)[d]
			Designation Name/ Facility Location[b]	Geographic Area or Facility Type[c] (P=Primary Medical Care; D=Dental; M=Mental Health)	Designation Name
Kansas					
Butler	1	0	El Dorado Clinic August Family Practice El Dorado Correctional Facility Mental Health Catchment Area 17—Butler County	Rural Health Clinic (P) Rural Health Clinic (P, D, M) Correctional Facility (P,D,M) Geographical Area (M)	Butler Service Area
Subtotal Kansas	*1*	*0*			

Sources: Race (U.S. Census Bureau, American FactFinder. 2012a, 2012b, 2012c); HPSA and MUA/P Areas (HRSA 2012a, 2012b)

[a] HPSAs are designated by HRSA as having shortages of primary medical care, dental, or mental health providers and may be geographic (a county or service area), demographic (low-income population), or institutional (comprehensive health center, federally qualified health center, or other public facility). See Figure 4.10.1-3.
[b] Satellite sites of Comprehensive Health Centers automatically assume the HPSA score of the affiliated grantee. They are not listed separately.
[c] Geographic Single County is defined as a whole county designated as HPSA; Geographic Service Areas are portions of a county, or portions of multiple counties, designated as a geographic HPSA; Population Groups are defined as a population within an area that is designated as an HPSA; Correctional Institutions are federal and state prisons and youth detention facilities; Rural Health Clinics are certified as Rural Health Clinics by the Centers for Medicare and Medicaid Services; Indian Health Service sites serve federally recognized tribes.
[d] MUA/Ps are areas or populations designated by HRSA as having: too few primary care providers, high infant mortality, high poverty, and/or high elderly population (see Figure 4.10.1-3).

The Department also requested that Keystone provide information on its commitment at the corporate level to addressing environmental justice concerns. In response, Keystone provided the following information relative to its commitment to corporate social responsibility for environmental justice communities.

With respect to employment opportunities for all minority and low-income populations, Keystone is committed to employee and supplier diversity; has in place continuing Affirmative Action plans for females, minorities, individuals with disabilities and covered veterans; and supports a policy of equal opportunity for Minority and Women-Owned Business Enterprises (M/WBEs) and Historically Underutilized Businesses (HUBs).

In addition, Keystone has worked with Hispanic leaders, communities, and organizations in order to keep minority and other special interest communities informed about the proposed Project and to seek the input of these communities. The relationship among Keystone, community leaders, and interest groups facilitates community education on the proposed Project and its potential relevance to members; and establishes communications so that proposed Project contractors can quickly and efficiently communicate available jobs. Specific outreach efforts to Hispanic communities to date have included publishing and circulating a proposed Project brochure and other materials in Spanish and English, and steps are being taken to publish information in the media through relationships with the National Association of Hispanic Publications and other primarily Hispanic media. In addition, the Keystone U.S. Landowner Operations Hotline is staffed with bilingual personnel, the Integrated Public Awareness program would utilize bilingual English/Spanish print materials, and the design package would utilize bilingual warning signage in appropriate locations.

Public Services

The Final EIS discussed impacts to public services. It noted that the influx of construction workers into local communities has the potential to generate additional demands on local public services (e.g., emergency response, medical, police, and fire protection services). The Department understands that Keystone would work with local law enforcement, fire departments, and emergency service providers, including medical aid facilities, to establish appropriate and effective emergency response measures. This information would be included in the emergency response plan developed prior to implementation of the proposed Project with special emphasis on considerations of low-income and minority communities in those preparedness efforts. Keystone states that it would:

- Reach out to LEPCs during and after the development of its emergency response plan and produce public awareness materials with special emphasis on considerations of low-income and minority communities in those preparedness efforts.
- Ensure that existing underground and overhead utilities services would be uninterrupted and that Keystone would avoid contact and damage during construction.[12]
- Ensure that contractors have Site-Specific Safety Plans in place before commencing work, and that these plans would address locating, avoiding, and protecting utilities.

[12] While it is Keystone's stated intent to ensure utilities would be avoided, it is possible that inadvertent contact and damage to some utilities may occur.

The need for public services would be reduced due to the eight construction camps. As described above under Housing, the camps would provide many of the necessary services to workers, thereby reducing the demand on public services in communities in the proposed Project area.

Tax Revenues

Property Tax

During construction of the proposed Project, situs taxing entities such as county governments, school districts, and special districts would be able to assess and tax the taxable property of the eight construction camps. The term *situs* means locations actually containing proposed Project facilities within their legal boundary.

Spreadsheet models were developed to estimate property taxes for situs counties in each state, reflecting the basic characteristics of the state's property tax system and effective rates in each county in 2010. However, the models necessarily stylize and simplify the values and calculations that state and local governments would take to value and tax real property in actual practice. The actual tax revenue that the proposed Project could generate from construction camps may differ from the estimates because of the many factors that determine the timing of assessments, the valuation of property, and tax rates in force in a given year.

Based on these models, it is estimated that the eight camps could generate the equivalent of 1 full year of property tax revenue for seven situs counties, a total of about $4 million, distributed as follows: $1.4 million in Valley County (two camps), $246,000 McCone County (one camp), and $501,000 in Fallon County (one camp), Montana; $522,000 in Harding County (one camp), $383,000 in Meade County (one camp), and $420,000 in Tripp County (one camp), South Dakota; and $490,000 in Holt County (one camp), Nebraska.

Other Taxes

The Final EIS states that other revenues generated by the proposed Project during construction would be sales/use and fuel taxes levied on goods and services purchased during the construction period. This would include, for example, taxes from construction materials and construction worker spending in the local economy for basic living expenses such as food, housing, gasoline, and entertainment. This type of tax revenue would last only as long as the seasonal construction was in progress, or for up to 2 years. The following estimates use data on taxable items provided by Keystone (Keystone 2012e).[13]

In South Dakota the combination of a sales or use tax on all materials, equipment, and services, plus the contractors' excise tax on amounts received by contractors for work done in the state, would generate an estimated $46.5 million for state government over 2 years of construction on the proposed Project. This tax equates to an additional 2 percent per year when compared to South Dakota's annual revenue of this type of $1.08 billion in 2009, or about 0.6 percent per year, when compared to state government's total general revenue resources in 2009 (see Table 3.10-17).

[13] Montana does not have a general sales and use tax.

In Nebraska the sales or use tax on materials would generate an estimated $16.5 million for state government over 2 years of construction on the proposed Project. This equates to 0.8 percent of additional revenue when compared to Nebraska's annual revenue of this type of $2.02 billion in 2009 and less than 0.2 percent when compared to state government's total general revenue resources in 2009 (see Table 3.10-17).

In Kansas the sales or use tax on materials would generate an estimated $2.7 million for state government over 2 years of construction and a combined $360,000 for the county governments within whose taxing jurisdiction the construction would occur[14]. These amounts equate to a small percentage of total state and local government revenues of this type, when compared to the data in Table 3.10-17. However, the effect of additional sales tax revenue though small and temporary may be noticeable during the time of construction in Kansas, especially in Clay and Butler counties.

This Final Supplemental EIS does not estimate the amount of other short-term tax revenue that the proposed Project could generate incidental to construction, including taxes on construction worker spending, because so many variables are involved that the results would be uncertain. Depending on the laws of each state, the additional short-term revenues could come from specific excise taxes on accommodations, rental vehicles, tobacco products, and alcohol in Montana (which does not have a general sales and use tax as do South Dakota, Nebraska, and Kansas); retail sales and motor fuel taxes in South Dakota; and retail sales, motor fuel, and cigarette taxes in Nebraska.

Property Values

As noted in the Final EIS, temporary effects during construction of the proposed Project could include isolated impacts on individual property owners and economic land use along the pipeline route. Potential damages to private property during proposed Project construction would be concentrated along the right-of-way (ROW) and appurtenant facilities. Land disturbed by the proposed Project would be restored to the extent practicable; Keystone would repair or restore drain tiles, fences, and land productivity damaged or adversely affected during construction; and would compensate property owners for any additional damages caused by proposed Project construction. Construction of the proposed Project could lead to short-term impacts to property values due to short-term visual, noise, and land disturbance effects.

Traffic and Transportation

Construction activities would involve the movement of people, equipment, and materials on existing public and private roadways throughout the proposed Project area. Each state has various road construction projects planned or underway. However, because specific construction dates for the proposed Project are unknown, potential conflicts with state construction projects are uncertain.

As discussed in the Final EIS, Keystone would identify and document routes that would be used for moving materials and equipment. After construction of the proposed Project is complete, Keystone would restore the roads to their preconstruction conditions or better. During

[14] Note that while Kansas has a county-level sales tax, no such tax exists in South Dakota or Nebraska. Montana has no general sales tax at the state or local level.

construction, Keystone and the pipeline contractor would maintain roads used for construction in a condition that is safe for both the public and the workforce.

Construction would require crossing small unpaved roads. Open-cut methods would be used, requiring temporary closure of the road to traffic and use of detours; closures would typically last 1 to 2 days per crossing. Keystone would cross paved roads and railroads by boring beneath the roads, allowing traffic activity to continue. In some cases, construction could increase the demands for permits for oversize or wide vehicles. Some temporary traffic delays would be likely as a result of these movements.

Construction activities could result in short-term impacts to traffic and transportation infrastructure. Traffic volumes along roads proximate to the pipeline route could increase with movements of construction-related employees, equipment, and materials. Bored roadway crossings would reduce or eliminate the need for road closures, although temporary road closures could be required in some cases. Impacts to local traffic would be minor and temporary.

Keystone's construction contractors would be required to submit a road use plan prior to mobilization and to coordinate with the appropriate state and county representatives to develop a mutually acceptable plan. This plan, along with monitoring of road activity related to the proposed Project, would establish measures to reduce or avoid traffic and transportation impacts on local communities.

To mitigate potential impacts, Keystone has committed to implement the procedures included in its Construction, Mitigation, and Reclamation Plan (CMRP) (see Appendix G) to reduce potential construction and operation impacts on traffic and transportation. As detailed in the CMRP, specific landowner requirements could occasionally supersede the procedures in the CMRP; however, the conditions of applicable federal, state, and local permits would apply in all cases.

Keystone has committed to a program that would include inspection of roadways and roadway structures, repair of damage that may occur to those facilities, establishment of an approved Traffic Management Plan, and coordination with state and local transportation agencies. Keystone states that before construction begins, its contractors would develop detailed traffic plans that address all applicable laws, regulations, and ordinances. Keystone states it would take into account minimizing impacts to school bus routes in developing these traffic plans.

4.10.3.2 Operations

Population

Keystone states that there would be an estimated 50 total employees during the operational phase of the proposed Project. Of these, 35 would be permanent employees and 15 would be temporary contractors. These employees would be distributed along the proposed pipeline route through Montana, South Dakota, and Nebraska, except for approximately 10 permanent employees in the Omaha, Nebraska office. Keystone states that contractors would provide additional specialized support for operations. Compared to the pipeline corridor population of approximately 263,000 (see Table 3.10-5), the 35 new permanent employees associated with the proposed Project in these states would result in negligible impacts on population.

Housing

The 35 new permanent employees associated with the proposed Project would have a negligible impact on housing in the Project area, which includes approximately 154,000 total housing units and a 9 percent rental unit vacancy rate, equivalent to approximately 3,600 available rental units (see Table 3.10-7).

Local Economic Activity

The largest economic impacts of pipelines occur during construction rather than operations. Once in place, the labor requirements for pipeline operations are relatively small. Keystone states that 35 to 50 jobs, some of which may be located in Canada, would be required for annual operations, including routine inspections, maintenance, and repair (exp Energy Services Inc. 2012). Most of the U.S. jobs would be located along or near the proposed pipeline route. Based on the estimate of 35 to 50 total operational jobs, the employment and earnings impacts in the United States stemming from operations of the proposed Project would be negligible.

The economic effects of potential pipeline spills are beyond the scope of this operations assessment. The economic effects of pipeline oil spills historically have included impacts to agriculture, tourism, and a variety of other industries (Skinner and Sweeney 2012). Depending on the size and location of spills, various U.S. firms would be engaged in cleanup and restoration. Section 4.13.5, Potential Impacts, discusses the potential impacts of a spill on socioeconomic resources.

Environmental Justice

The Final EIS discussed the potential effects of the proposed Project on minority and low-income populations. It concluded that it was not likely that proposed Project operation would disproportionately adversely impact such populations during normal operation of the proposed Project. Section 4.13, Potential Releases, of this Final Supplemental EIS concludes that the spill impact risk to residential areas would be low based on the spill frequency analysis. There is no evidence that such risks would be disproportionately borne by minority or low-income populations. For example, of the total land area in the 4-mile-wide corridor along the proposed pipeline route, approximately 17 percent intersects minority or low-income communities. Nonetheless, the Final EIS does state that the community outreach activities described in the environmental justice construction impacts discussion above would also continue throughout the proposed Project operations. The revised environmental justice analysis in this Final Supplemental EIS does not change the conclusions in the Final EIS.

Potential impacts to environmental justice populations associated with potential releases are discussed in Section 4.13, Potential Releases.

Public Services

The operational workforce in the proposed Project area would comprise approximately 35 full-time employees. This small number would result in negligible impacts on public services based on the law enforcement agencies, fire departments, and medical facilities in the proposed Project area. In addition, there is at least one acute care facility within every county along the proposed pipeline route, or nearby in a neighboring county. Therefore, impacts on public services associated with operation of the proposed Project would be negligible.

Tax Revenues

The largest tax revenue generated by the proposed Project during operations would be property taxes levied on proposed Project facilities by county governments, school districts, and other taxing entities in situs counties. Table 4.10-11 presents estimates of the amount of property taxes that could go to situs counties in the first full year that facilities are fully in place and on the local tax roll. The estimates in the table are the sum total of the property taxes that could be collected by all of the taxing entities in each county, based on the valuation of the proposed Project prorated to the taxing entities and using effective tax rates derived from actual data in 2010. The total estimated property tax from the proposed Project in the first full year of operations would be about $55.6 million, spread across 27 counties in three states.[15] On a per capita basis for all situs counties, this equates to approximately $211.

Table 4.10-11 Estimated Property Tax from Proposed Project in Situs Counties Compared to Total County Property Tax Revenue in 2010 (in thousands of 2010 dollars)[a]

County	Actual Total Property Tax Revenue in 2010 from All Sources	Estimated Property Tax from Proposed Project in First Full Year of Operations	Impact as % of Total Property Tax Revenue in 2010 (rounded to the nearest percentage point)
Montana			
Phillips	$8,062	$2,188	27%
Valley	$14,706	$7,349	50%
McCone	$3,892	$4,559	117%
Dawson	$13,204	$5,106	39%
Prairie	$2,613	$2,210	85%
Fallon	$7,123	$4,584	64%
Montana Subtotal[b]	*$49,602*	*$25,996*	*52%*
South Dakota			
Harding	$2,731	$3,947	145%
Butte	$9,498	$198	2%
Perkins	$4,468	$1,044	23%
Meade	$28,166	$3,818	14%
Pennington	$133,409	$61	< 0.1%
Haakon	$3,049	$3,357	110%
Jones	$1,982	$1,549	78%
Lyman	$4,240	$524	12%
Tripp	$7,413	$3,357	45%
South Dakota Subtotal[b]	*$194,956*	*$17,855*	*9%*
Nebraska			
Keya Paha	$3,170	$449	14%
Boyd	$4,281	$288	7%
Holt	$25,510	$3,049	12%
Antelope	$17,676	$2,348	13%
Boone	$16,562	$942	6%
Nance	$9,021	$925	10%
Merrick	$16,488	$295	2%

[15] See table note regarding the pump stations in Kansas.

County	Actual Total Property Tax Revenue in 2010 from All Sources	Estimated Property Tax from Proposed Project in First Full Year of Operations	Impact as % of Total Property Tax Revenue in 2010 (rounded to the nearest percentage point)
Polk	$14,458	$486	3%
York	$27,568	$938	3%
Fillmore	$16,955	$486	3%
Saline	$23,050	$580	3%
Jefferson	$16,698	$994	6%
Nebraska Subtotal[b]	*$191,442*	*$11,780*	*6%*
Pipeline Corridor Total[b]	$436,000	$55,630	13%

Sources: Nebraska Department of Revenue 2012; Montana actual total property tax revenue—Montana Department of Revenue 2010; South Dakota actual total property tax revenue—South Dakota Department of Revenue 2010a and South Dakota Department of Revenue 2010b; Nebraska actual total property tax revenue—Nebraska Department of Revenue 2010

Note: Per Capita Calculation: $55,630,000 / 263,298 persons = $211

[a] Property tax estimates in the table for Montana and South Dakota use an estimate of the total valuation of the proposed Project of $3.751 billion, provided by Keystone (see Keystone's Response to Data Request 39.0, September 21, 2012 [Keystone 2012]). Property tax estimates in the table for Nebraska use an estimate of the valuation of the proposed Project in Nebraska extrapolated from the valuation of the existing Keystone pipeline (Nebraska Department of Revenue 2012). The total valuation was allocated to each county roughly in proportion to pipeline length. The Final EIS states that Keystone has applied for a property tax exemption in the state of Kansas, so the table omits an estimate of property taxes for two pump stations in Clay and Butler counties in Kansas.

[b] Totals may not be exact due to rounding cents to the nearest dollar.

The impact to local property tax revenue receipts would be substantial for many counties. The estimated property tax from the proposed Project in the first full year of operations, as a percent of actual property tax revenue in 2010, would range from 27 percent in Phillips County, Montana to 117 percent in McCone County, Montana. In South Dakota, the range would be from less than 0.1 percent in Pennington County to 145 percent in Harding County. In Nebraska, the range would be from 2 percent in Merrick County to 14 percent in Keya Paha County. The proposed Project would generate a property tax revenue impact of 10 percent or more in 17 of 27 situs counties for which there are estimates of expected property taxes.

The estimates in Table 4.10-11 also roughly approximate the property tax amount that could be generated annually by the proposed Project. However, the amount of property tax revenue that the proposed Project would generate during operations would likely vary year over year because of the many factors that determine how much a pipeline company must pay in local property taxes in any given year. In Nebraska, the amount of property tax revenue that the proposed Project could generate would likely decline year over year because more than 98 percent of the valuation is classified as personal property eligible for annual depreciation allowances.

The spreadsheet models used to estimate property taxes for situs counties in each state reflect the basic characteristics of the property tax system in each state. However, the models necessarily generalize the values and calculations that state and local governments would do to value and tax pipeline property in actual practice.

Property Values

As stated in the Final EIS, long-term impacts could include impacts to property owners if there was any decrease in land value or usefulness as a result of the pipeline. However, tilled agricultural land would still be useable after construction.

Although the permanent ROW would be restored after construction, continued access to the proposed Project ROW would be required to support surface and aerial inspections and any necessary repairs or maintenance for the useful life of the proposed Project. Potential damages to private property during proposed Project operation would likely be concentrated along the permanent ROW and at appurtenant facilities.

The Final EIS discussed the results of a literature search conducted to assess impacts upon residential and agricultural property values associated with similar projects constructed in the recent past. Based on the literature search, the Final EIS stated that residential and agricultural properties located on or adjacent to pipeline easements could have property values worth more or less than comparable nearby properties that were not encumbered by pipeline easements. However, those differences generally were statistically insignificant and the absolute dollars involved were not significant relative to the overall property value and sales prices. The Final EIS concluded it did not appear that operation of the proposed Project would have a major impact on residential and agricultural property values. The analysis in this Final Supplemental EIS does not change this conclusion. As stated in Section 4.13, Potential Releases, a negative effect on residential property would be expected to occur as long as the noxious effect of the facility exists. Assuming noxious effects lead to negative impacts to property values for as long as they exist, the long-term effect of spills would likely depend on the resolution of these incidents[16] in terms of remediation, compensation, and management of future risk.

Traffic and Transportation

Operation of the proposed Project would involve infrequent vehicle trips associated with routine monitoring and maintenance of the Project facilities. These trips would not significantly affect traffic or the capacity of roads in the vicinity of the proposed Project and its ancillary facilities. Permanent access roads constructed as part of the proposed Project would not change traffic patterns on public roads. Operation of the proposed Project would not impact railroads.

Long-distance (i.e., multi-state) transportation of crude oil and similar products by trucking is uncommon. As a result, the proposed Project, a multi-state pipeline, is not expected to affect long-distance trucking activity in the United States.

4.10.4 Additional Mitigation

No additional mitigation measures for socioeconomic resource impacts have been required by regulatory agencies to date. However, additional mitigation measures may be identified and required by regulatory agencies during the permitting process.

[16] The terms *incident* and *accident* can be used interchangeably or with specified definitions in various agency reports and databases. For the purposes of this report, the term incident has been selected for consistency.

4.10.5 Connected Actions[17]

Table 4.10-12 presents a summary of construction activities for the connected actions associated with the proposed Project. The estimated total direct construction contracts and materials that would be purchased within the United States for connected actions sums to $499 million, and the actions would require approximately 940 direct construction jobs. As noted in the following sections, the indirect and induced impacts of this spending would be greater. Pipeline operations could not commence until the electrical lines and substations were in place. The Bakken Marketlink Project could not commence until the proposed pipeline was operational.

Table 4.10-12 Selected Characteristics of Connected Actions Construction Activity Occurring Within the United States

Connected Action	State	Construction and Materials Cost (millions of dollars)	Direct Construction Jobs[a]
Bakken Marketlink Project	Montana	$56	20
	Rest of U.S.	$33	200
	Total U.S.	*$89*	*220*
Big Bend to Witten 230-kV Transmission Line	South Dakota	$130	270
	Total U.S.	*$130*	*270*
Electrical Distribution Lines and Substations	Montana	$122	200
	South Dakota	$138	230
	Nebraska	TBD[b]	TBD[b]
	Kansas	$20	20
	Total U.S.	*$280*	*450*
Total (all Connected Actions)	Total U.S.	$499	940

[a] Average annual employment including full- and part-time jobs
[b] Information is not available at this time.

4.10.5.1 Bakken Marketlink

Construction

Population

Construction would take place in Fallon County, Montana (see Section 3.10.3, Connected Actions) and require approximately 20 jobs. Therefore, impacts to the population in Fallon County during construction would be negligible.

Housing

As with population, because of the small demand for local housing during construction, impacts to housing in Montana during construction would be negligible.

[17] Connected actions are those that 1) automatically trigger other actions which may require environmental impact statements, 2) cannot or will not proceed unless other actions are taken previously or simultaneously, 3) are interdependent parts of a larger action and depend on the larger action for their justification.

Local Economic Activity

Definitions of employment and earnings as well as a description of modeling techniques are the same as described in Section 4.10.3.1, Construction. Assumptions particular to the Bakken Marketlink Project include the following:

- National firms would be awarded construction contracts. Contractors would use local subcontractors and state sources for common goods and services where available. The balance would be obtained from national sources.
- Workforce requirements are based on national output per employee relationships for non-residential construction in the 2010 IMPLAN® data (MIG, Inc. 2011). Approximately 10 percent of the workforce would come from locations within Montana. The remaining 90 percent of the workforce would come from other U.S. locations outside the state. This share of the workforce accounts for a unique national labor force that is highly specialized in pipeline and pump station construction techniques.
- Worker compensation would be spent primarily in workers' state of residence.
- Major material purchases (e.g., pipe, pumps, valves, instrumentation) and construction support (e.g. engineering, inspections, and construction management) would be provided primarily by national firms located throughout the United States.

Table 4.10-13 shows the total predicted impacts of the Bakken Marketlink Project on employment in Montana and the entire United States. It is estimated that a total of 1,000 jobs throughout the United States would be supported by construction of this proposed Project. Of that total, only about 200 jobs, or 20 percent of all jobs from all impacts, would occur in Montana. Nationally, approximately 400 jobs would be supported directly by Keystone expenditures on the Bakken Marketlink, with another 600 jobs supported by supply chains and employee spending. Jobs in Montana would occur mostly in professional service, construction, and trade industries. Nationally, the same industries would most benefit from these expenditures. Appendix O, Socioeconomics, contains detailed tables.

Table 4.10-13 Total Employment Supported by Construction of the Bakken Marketlink Project (average annual jobs)

	Total Jobs				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Jobs as a Share of 2010 State or U.S. Jobs (percent)
Montana[b]	623,600	100	100	200	0.04%
Rest of U.S.	171,008,500	300	500	800	<0.04%
Total U.S.	173,767,400	400	600	1,000	<0.04%

[a] Time period for realizing all effects is uncertain.
[b] Excludes jobs held by non-residents of the state as part of a temporary construction workforce (these jobs are assigned to Rest of U.S.).

Table 4.10-14 shows the total estimated impacts on earnings for the Bakken Marketlink Project. Impacts on earnings follow a similar pattern as those for employment. For comparability with baseline estimates, these are shown in 2010 dollars. About 17 percent of all earnings, or $10.3 million, would occur in Montana. The remaining 83 percent of all earnings, or $49.1 million, would occur in other locations around the country. Nationally, $23.6 million of earnings would be supported directly by Keystone expenditures on the Bakken Marketlink, with another $35.8 million supported by supply chains and employee spending. These effects would be primarily realized in the construction and professional services industries as well as manufacturers of major materials for the Bakken Marketlink Project.

Table 4.10-14 Total Earnings Supported by Construction of the Bakken Marketlink Project (thousands of 2010 dollars)

	Total Earnings				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Earnings as a Share of 2010 State or U.S. Earnings (percent)
Montana[b]	23,390,300	3,200	7,100	10,300	0.04%
Rest of U.S.	8,869,710,400	20,400	28,700	49,100	<0.04%
Total U.S.	8,986,229,000	23,600	35,800	59,400	<0.04%

[a] Time period for realizing all effects is uncertain.
[b] Excludes labor earnings by non-residents of the state as part of a temporary construction workforce (these earnings are assigned to Rest of U.S.).

Environmental Justice

Fallon County, Montana, contains minority and/or low-income populations meeting the meaningfully greater criteria established in this Final Supplemental EIS. Also, the county contains HPSAs and MUA/Ps. As with the proposed Project, in addition to avoidance and mitigation measures that Keystone proposes to minimize negative impacts to all populations near construction areas, specific mitigation for environmental justice communities would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided.

Public Services

Impacts on public services associated with construction of the Bakken Marketlink Project would be similar to the type of impacts associated with the proposed Project.

Tax Revenues

The Bakken Marketlink Project would be a large construction project representing a total investment of approximately $90 million in Montana. Montana does not have a sales and use tax to apply to materials purchases. However, the Bakken Marketlink Project could generate revenue in Montana during the construction period from contractor and construction worker spending through specific excise taxes on accommodations, rental vehicles, tobacco products, and alcohol.

This analysis does not estimate these revenues because the amounts are likely to be relatively small, the calculations would require many assumptions, and the results would be uncertain.

Property Values

Temporary impacts during construction of the Bakken Marketlink Project could include isolated impacts on individual property owners from visual, noise, and land disturbance effects in developed areas along the proposed pipeline construction ROW. Approximately 0.1 mile of the Bakken Marketlink Project pipeline would cross developed land (see Table 3.9-8). Therefore, any impacts to property values due to temporary visual, noise, and land disturbance effects would be small.

Traffic and Transportation

Impacts on traffic and transportation associated with construction of the Bakken Marketlink Project would be similar to the type of impacts associated with the proposed Project.

Operations

Population and Housing

Based on projected employment for the proposed Project, the Department anticipates that operations employment associated with the Bakken Marketlink Project would be small and would have a negligible impact on population and housing in Montana.

Local Economic Activity

The Department anticipates that operations employment associated with the Bakken Marketlink Project would be small and would have a negligible effect on employment or earnings.

Environmental Justice

As with the proposed Project, operation of the Bakken Marketlink Project is not likely to disproportionately adversely impact minority or low-income populations during normal operation. As with the proposed Project, community outreach activities described in the environmental justice operations impacts discussion above should also continue throughout the Bakken Marketlink Project operations.

Public Services

As noted above, the Department anticipates that operations employment associated with the Bakken Marketlink Project would be small, and, as a result, would have a negligible impact on public services in Fallon County, Montana.

Tax Revenues

It is estimated that approximately $1.5 million in property taxes could go to Fallon County, Montana, the pipeline situs county, in the first full year that pipeline facilities of the Bakken Marketlink Project would be in place and on the local tax roll. The estimate is the sum total of the property taxes that could be collected by all of the taxing entities in Fallon County, using the effective tax rates derived from actual data in 2010. This represents a substantial impact to

property tax revenue, amounting to about 21 percent of total property tax revenue collected by the county in 2010.

These amounts are also roughly the amount of property tax revenue that could be generated annually by the Bakken Marketlink Project in Montana. However, the actual amount that this connected action would generate during operations would likely vary year over year from the estimate because of the many factors that determine how much a pipeline company must pay in local property taxes in any given year.

Property Values

As noted in Section 4.10.3.2, Operations, the Final EIS concluded, based on a literature search, that the proposed Project would not have a major impact on residential and agricultural property values during operations. For the same reasons, the Bakken Marketlink Project pipeline would not be expected to have a major impact on residential and agricultural property values during operations.

Traffic and Transportation

Crude from the Bakken Formation is predominately transported to refineries by rail due to the lack of existing pipeline infrastructure. Within the Bakken extraction area (generally, western North Dakota and eastern Montana) trucks transport most of the extracted crude oil to rail terminals, which are typically approximately 50 miles from the extraction site (Micsak 2013).

The Bakken Marketlink connected action would enable transport of crude oil from Baker, Montana to Cushing, Oklahoma via a link to the proposed pipeline. Operation of the proposed Project and this connected action is expected to eliminate 300 to 500 truck trips daily from the Bakken region (Ritter, Personal Communication, May 28, 2013).

Impacts on traffic and transportation associated with operation of the Bakken Marketlink Project would be similar to the type of impacts associated with the proposed Project (see Section 4.10.3.2, Operations). However, local communities could experience reduced traffic impacts as a result of the elimination of some truck trips in the Bakken region.

4.10.5.2 Big Bend to Witten 230-kV Transmission Line

Construction

Population

Construction of the Big Bend to Witten 230-kV Transmission Line would take place in Lyman and Tripp counties, South Dakota (see Section 3.10.3, Connected Actions). Tripp County would contain 41.4 miles (55 percent) of the transmission line, with the remaining 34.3 miles in Lyman County. Construction would require approximately 270 jobs; therefore, impacts to the population in these counties during construction would be negligible.

Housing

As with population, because of the small demand for local housing during construction, impacts to housing in South Dakota during construction would likely be negligible. While Lyman and Tripp counties have limited temporary housing (approximately 800 rooms and RV sites per

Table 3.10-7), one of the proposed construction camps would be located in Tripp County and could possibly be available for the Big Bend to Witten 230-kV Transmission Line workforce (though the transmission line would not be constructed by Keystone).

Local Economic Activity

Definitions of employment and earnings as well as a description of modeling techniques are the same as described in Section 4.10.3.1, Construction. Assumptions particular to the Big Bend-Witten Transmission Line include the following:

- Local firms would be awarded the construction contracts. Contractors would use local subcontractors and state sources for common goods and services where available. The balance would be obtained from national sources.
- Total costs of the transmission line and substations were estimated using an average of costs for similar lines and substations obtained from several power providers across the United States (see Appendix O, Socioeconomics, for an electrical cost estimate memorandum).
- A recent study of transmission lines by the Montana Department of Labor and Industry (Wagner 2010) was used to establish both the number of direct construction jobs and input requirements.
- Worker compensation was based on national data for nonresidential construction in IMPLAN® (MIG, Inc. 2011). All workers would be residents of South Dakota.

Table 4.10-15 shows the total effects of the Big Bend to Witten 230-kV Transmission Line on employment in South Dakota and the entire United States. A total of 1,100 jobs throughout the United States would be supported by construction of this project. Of these, approximately 800 jobs, or 70 percent of all jobs, would occur in South Dakota. Approximately 400 jobs would be supported directly by expenditures on the transmission line, all within South Dakota. Another 700 jobs would be supported in South Dakota and nationally by supply chains and employee spending. Both nationally and in South Dakota, most employment effects would be realized in the construction and professional services industries. Appendix O, Socioeconomics, contains detailed tables.

Table 4.10-15 Total Employment Supported by Construction of the Big Bend to Witten 230-kV Transmission Line (average annual jobs)

	Total Jobs				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Jobs as a Share of 2010 State or U.S. Jobs (percent)
South Dakota	556,500	400	400	800	0.14%
Rest of U.S.	173,210,900	0	300	300	<0.10%
Total U.S.	173,767,400	400	700	1,100	<0.10%

[a] Time period for realizing all effects is uncertain.

Table 4.10-16 shows the total impacts on earnings for the transmission line. Impacts on earnings follow a similar pattern as those for employment. For comparability with baseline estimates, these are shown in 2010 dollars. Nearly 70 percent of all earnings, or $33 million, would occur in South Dakota. The remaining 30 percent of earnings, or $14 million, would occur in other locations around the country. About $20.2 million of earnings would be supported directly by expenditures on the transmission line, all within South Dakota. Another $27.4 million of earnings would be supported in South Dakota and nationally by supply chains and employee spending. These impacts would be primarily realized in construction and professional services industries.

Table 4.10-16 Total Earnings Supported by Construction of the Big Bend to Witten 230-kV Transmission Line (thousands of 2010 dollars)

	Total Earnings				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Earnings as a Share of 2010 State or U.S. Earnings (percent)
South Dakota	22,968,300	20,200	13,100	33,300	0.14%
Rest of U.S.	8,963,260,700	0	14,300	14,300	<0.10%
Total U.S.	8,986,229,000	20,200	27,400	47,600	<0.10%

[a] Time period for realizing all effects is uncertain.

Environmental Justice

Tripp County contains environmental justice populations and there is potential for impacts to these populations from construction of the Big Bend to Witten 230-kV Transmission Line. Approximately 40 miles of the 76-mile transmission line route would pass through one of the areas with a meaningfully greater American Indian population (Block Group 2, Census Tract 9716). The route would also pass through a portion of the Lower Brule Indian Reservation.

As stated in Section 2.1.12, Connected Actions, the U.S. Department of Agriculture's Rural Utility Service is responsible for compliance with National Environmental Policy Act and related statutes for the Big Bend to Witten 230-kV Transmission Line. An Environmental Assessment with Scoping (EA) is being prepared to assess potential impacts of this action on the human and natural environment in accordance with 7 Code of Federal Regulations §1794.24. Since the Big Bend to Witten 230-kV Transmission Line would be constructed partly on the Lower Brule Sioux Tribe's Reservation, the Lower Brule Sioux Tribe and the Bureau of Indian Affairs are cooperating agencies on the development of the EA. The Department of Energy's Western Area Power Administration will be constructing a substation on the reservation, and therefore the Western Area Power Administration is also a cooperating agency in the development of the EA for the Big Bend to Witten project.

The construction of the Big Bend to Witten 230-kV Transmission Line could create temporary impacts to American Indian populations in the transmission line project vicinity. The impacts to these populations could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services. These areas contain HPSAs

and MUA/Ps. Further, the influx of construction workers into local communities has the potential to generate demands on local public services (e.g. emergency response, medical, police, and fire protection).In addition to avoidance and mitigation measures that Keystone proposes to minimize negative impacts to all populations near construction areas for the proposed project, Basin Electric Power Cooperative (BEPC) proposes to minimize impacts on all populations in the specific to the construction of their proposed transmission line project. BEPC's mitigation measures would include providing public awareness materials regarding the construction schedule and construction activities as well as using best management practices to minimize construction dust and noise.

Public Services

Impacts on public services associated with construction of the Big Bend to Witten 230-kV Transmission Line would be similar to the type of impacts associated with the proposed Project.

Tax Revenues

The Big Bend to Witten 230-kV Transmission Line Project would be a large construction project representing a total investment of about $130 million in South Dakota. Tax revenues from construction of the Big Bend to Witten 230-kV Transmission Line could not be reliably estimated due to the high number of variables involved. However, the principal taxes that could generate short-term revenues to the state of South Dakota include sales, use, contractors' excise, and fuel taxes that would be assessed on materials, contractor receipts in the state of South Dakota, and contractor and construction worker spending.

Property Values

Temporary impacts to property values could occur during construction of the transmission line. Impacts could include isolated impacts on individual property owners from visual, noise, and land disturbance effects in developed areas along the power line construction ROW. Approximately 7 miles of the lines required by the Big Bend to Witten 230-kV Transmission Line would cross developed land. Impacts to property values due to temporary visual, noise, and land disturbance effects are possible but would be temporary during construction.

Traffic and Transportation

Stringing of electrical transmission lines would create temporary disruptions of traffic on roads and railroads that these lines cross; however, such disruptions would be temporary.

Operations

Population and Housing

The Department expects that the number of workers needed to operate the Big Bend to Witten 230-kV Transmission Line would be small and would have a negligible impact on population and housing in South Dakota.

Local Economic Activity

The Department expects that the number of workers needed to operate the Big Bend to Witten 230-kV Transmission Line would be small and would have a negligible impact on employment and earnings.

Environmental Justice

As noted above under Construction, Lyman and Tripp counties, South Dakota, contain environmental justice populations, and there is potential for impacts to these populations from operation of the Big Bend to Witten 230-kV Transmission Line. Operation of the Big Bend to Witten 230-kV Transmission Line would not likely disproportionately adversely impact minority or low-income populations during normal operation.

Public Services

As noted above, the Department anticipates that operations employment associated with the transmission line would be small, and, as a result, would have a negligible impact on public services in Fallon County, Montana, and in Lyman and Tripp counties, South Dakota.

Tax Revenues

The Big Bend to Witten 230-kV Transmission Line would be a large project, representing an investment of approximately $130 million. In South Dakota, the assets of rural electric cooperatives like BEPC, the prospective owner of the Big Bend to Witten facilities once they are built, are taxed in two ways. Real property (i.e., land, buildings, and land and ROW leases) is assessed and taxed like other real property in a county. Personal property, which includes all wires, lines transformers, meters, machinery, fixtures, and all attachments and appurtenances, is subject to a 2 percent gross receipts tax instead of a property tax. In the case of a power line, the taxable value of the real property would likely be very small compared to the value of the personal property, which is exempted from the property tax and taxed instead by the gross receipts method.

This Final Supplemental EIS does not estimate the amount of revenue from gross receipts taxes the Big Bend to Witten 230-kV Transmission Line project might generate because so many variables are involved that the results would be uncertain. It is likely that the revenue would go to Tripp County, South Dakota, which would contain 41.4 miles of the transmission line, and Lyman County, South Dakota, which would contain the remaining 34.3 miles.

BEPC would pay taxes annually on a completed transmission line for as long as it is in operation. The timing of this potential long-term revenue is uncertain because construction of the transmission line is not associated with the initial operation of the pump stations of the proposed Project. Cooperatives like BEPC file annual reports of gross receipts, tax liability, and the counties due the proceeds. South Dakota law commits the proceeds to the school districts within the situs county.

Property Values

The Final EIS concluded that based on a literature search, the power lines required to support the proposed Project would have a minor impact on property values due to the following factors: many of the power line ROWs would be located in rural areas; many of the power lines would be

located more than 300 feet from residences; and most properties that would be crossed by power line ROWs are relatively large parcels/tracts. This Final Supplemental EIS concurs with this conclusion in relation to the Big Bend to Witten 230-kV Transmission Line.

Traffic and Transportation

Operation of the Big Bend to Witten 230-kV Transmission Line would have no impacts on traffic and transportation.

4.10.5.3 Electrical Distribution Lines and Substations

Construction

Population

Construction of the electrical distribution lines and substations would take place in approximately 21 counties in Montana, South Dakota, Nebraska, and Kansas (see Table 3.10-28). Construction would require approximately 450 jobs. Therefore, impacts to the population in these counties during construction would be negligible. The locations of electrical lines and substations in Nebraska have not been determined; therefore the number of construction workers in Nebraska has not been determined.

Housing

As with population, because of the small demand for local housing during construction, impacts to housing in Montana, South Dakota, Nebraska, and Kansas would be negligible.

Local Economic Activity

Definitions of employment and earnings as well as a description of modeling techniques are described in Section 4.10.3.1, Construction. Assumptions particular to the electrical distribution lines and substations include the following:

- Local firms would be awarded the construction contracts. Contractors would use local subcontractors and state sources for common goods and services where available. The balance would be obtained from national sources.
- Total cost of the transmission line and substations were estimated using an average of costs for similar lines and substations obtained from several power providers across the United States (see Appendix O, Socioeconomics, for an electrical cost estimate memorandum).
- A recent study of transmission lines by the Montana Department of Labor and Industry (Wagner 2010) was used to establish both the number of direct construction jobs and input requirements for the distribution lines.
- Worker compensation was based on national data for nonresidential construction in IMPLAN® (MIG, Inc. 2011). All workers would be residents of the state in which the lines or substations are located.
- Data on proposed electrical distribution lines and substations were not available for Nebraska.

Table 4.10-17 shows the total effects of electrical distribution lines and substations on employment by state and by the entire United States. A total of 3,100 jobs throughout the United States would be supported by construction of this power infrastructure. Of that total, about 2,200 jobs or just over 70 percent of all jobs would occur in Montana, South Dakota, and Kansas. About 1,200 jobs, all within the three states, would be supported directly by expenditures on the distribution lines and substations. Another 1,900 jobs would be supported in these states and nationally by supply chains and employee spending. Both nationally and in each state, most employment effects would be realized in the construction and professional services industries. Appendix O, Socioeconomics, contains detailed tables.

Table 4.10-17 Total Employment Supported by Construction of Electrical Distribution Lines and Substations (average annual jobs)

	Total Jobs				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Jobs as a Share of 2010 State or U.S. Jobs (percent)
Montana	623,600	500	500	1,000	0.20%
South Dakota	556,500	600	400	1,000	0.20%
Kansas	1,805,200	100	100	200	0.01%
Rest of U.S.	170,782,000	0	900	900	< 0.01%
Total U.S.	173,767,400	1,200	1,900	3,100	< 0.01%

[a] Time period for realizing all effects is uncertain.

Table 4.10-18 shows the total predicted impacts on earnings for electrical distribution lines and substations. Impacts on earnings follow a similar pattern as those for employment. For comparability with baseline estimates, these are shown in 2010 dollars. About two-thirds of all earnings, or $91 million, would occur in Montana, South Dakota, and Kansas. The remaining third of earnings, or $46 million, would occur in other locations around the country. About $52.9 million of earnings, all within the three states, would be supported directly by expenditures on the distribution lines and substations. Another $84.1 million would be supported in these states and nationally by supply chains and employee spending. These impacts would be primarily realized in construction and professional services industries.

Table 4.10-18 Total Earnings Supported by Construction of Electrical Distribution Lines and Substations (thousands of 2010 dollars)

	Total Earnings				
		Effects of Proposed Project[a]			
	Current (2010)	Direct	Indirect & Induced	Total	Total Project Earnings as a Share of 2010 State or U.S. Earnings (percent)
Montana	23,390,300	23,100	19,400	42,500	0.20%
South Dakota	22,968,300	24,800	15,100	39,900	0.20%
Kansas	81,542,900	5,000	3,800	8,800	0.01%
Rest of U.S.	8,858,327,500	0	45,700	45,700	< 0.01%
Total U.S.	8,986,229,000	52,900	84,100	137,000	< 0.01%

[a] Time period for realizing all effects is uncertain.

Environmental Justice

Many of the counties with electrical distribution lines and substations contain minority and/or low-income populations. There is the potential for temporary impacts to these populations from the construction of the electrical distribution lines and substations. The impacts to these populations could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services. These areas contain HPSAs and MUA/Ps. Further, the influx of construction workers into local communities has the potential to generate demands on local public services (e.g. emergency response, medical, police, and fire protection).

As with the proposed Project, in addition to avoidance and mitigation measures that Keystone proposes to minimize negative impacts to all populations near construction areas, specific mitigation for environmental justice communities for the transmission line would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided.

Public Services

Impacts on public services associated with construction of electrical distribution lines and substations would be similar to the type of impacts associated with the proposed Project.

Tax Revenues

Construction of the electrical distribution lines would be a large project representing a total investment of about $280 million (not counting the lines in Nebraska that have yet to be determined). During the construction period, it would generate primarily sales/use and fuel taxes levied on goods and services purchased by contractors and construction workers, according to tax laws in each state. These kinds of tax revenue would last only as long as construction was in progress.

Tax revenues from electrical distribution lines and substations construction could not be reliably estimated due to the high number of variables involved. However, these are the principal taxes that could generate short-term revenues: specific excise taxes on lodging facilities, accommodations, rental vehicles, cigarettes and other tobacco products, and alcohol in Montana

(which does not levy a general sales tax); sales, use, contractors' excise and fuel taxes in South Dakota; sales, use, motor fuels and cigarette taxes in Nebraska; general sales, motor fuel, and cigarette and tobacco products taxes in Kansas.

Property Values

Temporary impacts to property values could occur during construction of the electrical distribution lines and substations. Impacts could include isolated impacts on individual property owners from visual, noise, and land disturbance effects in developed areas. Such impacts are expected to be small.

Traffic and Transportation

Stringing of electrical distribution lines would create disruptions of traffic on roads and railroads that these lines cross; however, such disruptions would be temporary.

Operations

Population and Housing

The Department expects that the number of workers needed to operate the electrical distribution lines and substations would be small and would have a negligible impact on population and housing in the affected counties.

Local Economic Activity

The Department anticipates that operations employment associated with the electrical distribution lines and substations would be small and would have a negligible effect on employment or earnings.

Environmental Justice

Operation of the electrical distribution lines and substations would not likely disproportionately adversely impact minority or low-income populations during normal operation.

Public Services

As noted above, the Department anticipates that operations employment associated with electrical distribution lines and substations would be small and, as a result, would have a negligible impact on public services in the affected counties.

Tax Revenues

Local power providers in Montana, South Dakota, Nebraska, and Kansas would build the electrical distribution lines and substations required by the proposed Project. These facilities represent new investment ranging from about $20 million in Kansas to about $138 million in South Dakota. The method of taxing these power lines would differ from state to state, and those in Nebraska likely would be tax-exempt because the owners would be public power districts.

The amount of taxes that the owners of the electrical distribution lines and substations would pay could not be reliably estimated because so many variables are involved that the results would be unreliable. However, the applicable tax rules of each of the states involved are summarized as follows:

- Montana—the state of Montana centrally assesses the non-generating property of electric utilities if it crosses county boundaries; state law sets the taxable value at 12 percent of the market value of the transmission line; local entities levy their taxes on the taxable value;
- South Dakota—electric cooperatives, which are non-profits, would own the electrical distribution lines and substations in South Dakota; South Dakota taxes electric cooperatives as described in the previous section, Big Bend to Witten 230-kV Transmission Line;
- Nebraska—several public power districts would own the electrical distribution lines and substations in Nebraska; public power districts are political subdivisions of the state of Nebraska, so their property is tax-exempt; and
- Kansas—a municipal public utility would own one power line in Kansas, so the line would be tax exempt; an investor-owned utility would own the other line, so the state would appraise the property and apportion the value to taxing units, generally in proportion to original cost and miles of line.

Property Values

The Final EIS concluded that based on a literature search, the power lines required to support the proposed Project would have a minor impact on property values due to the following factors: many of the power line ROWs would be located in rural areas; many of the power lines would be located more than 300 feet from residences; and most properties that would be crossed by power line ROWs are relatively large parcels/tracts. This Final Supplemental EIS concurs with this conclusion.

Traffic and Transportation

Operation of the electrical distribution lines and substations would have no impacts on traffic and transportation.

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