

3.10 SOCIOECONOMICS

This section describes existing socioeconomic conditions and evaluates the potential socioeconomic impacts that may result from the proposed Project. The resource topics used to describe the existing socioeconomic conditions include:

- Population;
- Housing;
- Local economic activity, measured primarily by employment and income;
- Environmental justice;
- Public services, tax revenues, and property values; and
- Traffic and transportation.

The socioeconomic topics identified as potentially impacted, either positively or negatively, by the proposed Project include:

- Social benefits and costs to the United States of increased access to Canadian crude;
- Compensation to property owners for ROW easements, restrictions on land use, and damage to property;
- Creation of local area jobs;
- Economic benefits from the purchase of goods and services during construction and operations;
- Construction worker demands on local infrastructure; and
- Fiscal impacts associated with property, sales, and other tax revenues, as well as public service costs generated by the proposed Project.

The proposed Project in the United States would consist of a 1,384-mile pipeline and ancillary facilities, as described in Section 2.0. From its point of entry into the United States near Morgan, Montana the proposed pipeline would cross 58 counties in six states. From north to south the states are Montana, South Dakota, Nebraska, Kansas, Oklahoma, and Texas (see Table 3.10.1-1).

TABLE 3.10-1 States and Counties within the Proposed Project Area		
Segment/State	Number of Counties	Counties
Steel City Segment		
Montana	6	Phillips, Valley, McCone, Dawson, Prairie, Fallon
South Dakota	9	Harding, Butte, Perkins, Meade, Pennington, Haakon, Jones, Lyman, Tripp
Nebraska	14	Keya Paha, Rock, Holt, Garfield, Wheeler, Greeley, Boone, Nance, Merrick, Hamilton, York, Fillmore, Saline, Jefferson
New Cushing Extension Pump Stations		
Kansas	2	Clay, Butler
Gulf Coast Segment		
Oklahoma	8	Atoka, Bryan, Coal, Creek, Hughes, Lincoln, Okfuskee, Seminole
Texas	16	Angelina, Cherokee, Delta, Fannin, Franklin, Hardin, Hopkins, Jefferson, Lamar, Liberty, Nacogdoches, Polk, Rusk, Smith, Upshur, Wood
Houston Lateral		
Texas	3	Liberty, Chambers, Harris

Within each county, several local communities are expected to incur most of the direct socioeconomic impacts of the proposed Project, both positive and negative. Communities located with 0.5 to 2.0 miles of the proposed pipeline are listed in Table 3.10.1-2. However, for the purposes of the analysis, information to describe the environmental setting is reported at the county versus community level. The determination to develop the analysis at the county versus community level was based on the following factors:

- The rural nature of the majority of the potentially affected environment limits the availability of consistent data below the county level;
- Proposed Project economic impacts may occur in towns further away than 2 miles from the pipeline; and
- In communities that are not predominately rural, such as Houston, located in Harris County, Texas, the economic impacts of building and operating the proposed pipeline would be relatively small.

Several types of socioeconomic effects could occur within the region of influence, as described in more detail in the impact analyses presented in Sections 3.10.1.2, 3.10.2.2, and 3.10.3.2. Temporary effects during construction of the proposed Project could include changes in population levels or local demographics, changes in the demand for housing and public services, disruption of local transportation corridors, increased employment opportunities and related labor income benefits, and increased government revenues associated with sales and payroll taxes. Isolated impacts on individual property owners and economic land use also could occur along the pipeline route. The primary socioeconomic impacts associated with long-term operation of the proposed Project likely would include employment and income benefits resulting from long-term staffing requirements and local operating expenditures, as well as an increased property tax base and associated tax revenues. On a national level, the primary benefit of the proposed Project would be for PADD III refineries (and ultimately U.S. customers) to gain access to a more reliable and steady source of crude oil supply. 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.

TABLE 3.10-2 Communities within 2 Miles of the Proposed Project		
Community	County	Proximity to Proposed Project (miles)
Steele City Segment		
Montana		
Nashua	Valley	2
Circle	McCone	2
Baker	Fallon	2
South Dakota		
Buffalo	Harding	2
Midland	Haakon	2
Draper	Jones	2
Winner	Tripp	2
Nebraska		
Ericson	Wheeler	2
Hordville	Hamilton	2
McCool Junction	York	2
Exeter	Fillmore	2
Milligan	Fillmore	2
Western	Saline	2
Steele City	Jefferson	2
New Cushing Extension Pump Stations		
Kansas		
Towanda	Butler	0.5
Potwin	Butler	0.5
Augusta	Butler	2
Douglass	Butler	2
Wakefield	Clay	2
Green	Clay	2
Gulf Coast Segment		
Oklahoma		
Stroud	Creek	2
Paden	Okfuskee	2
Boley	Okfuskee	2
Wewoka	Seminole	2
Allen	Pontotoc	2
Allen	Hughes	2
Atoka	Atoka	2
Tushka	Atoka	2
Caney	Atoka	2
Texas		
Arp	Smith	0.5
Beaumont	Jefferson	0.5
Port Arthur	Jefferson	0.5
Central Gardens	Jefferson	0.5

TABLE 3.10-2 Communities within 2 Miles of the Proposed Project		
Community	County	Proximity to Proposed Project (miles)
Nederland	Jefferson	0.5
China	Jefferson	2
Port Neches	Jefferson	2
Tira	Hopkins	2
Winnsboro	Franklin	2
Winnsboro	Wood	2
Big Sandy	Upshur	2
Reklaw	Rusk	2
Wells	Cherokee	2
Hudson	Angelina	2
Diboll	Angelina	2
Corrigan	Polk	2
Houston Lateral		
Texas		
Hardin	Liberty	2
Liberty	Chambers	2
Ames	Harris	0.5
Mont Belvieu	Chambers	0.5
Barrett	Harris	0.5
Highlands	Harris	2
Channelview	Harris	2
Sheldon	Harris	2
Houston	Harris	0.5

Note: States and counties are listed geographically from north to south as the proposed Project crosses the area.

3.10.1 Socioeconomics and Environmental Justice

3.10.1.1 Environmental Setting

This section provides a general overview of the socioeconomic resources that could be affected by the proposed Project and represents existing (or current) socioeconomic conditions in the proposed Project area. Further, it provides context to the analysis of socioeconomic impacts and establishes baseline conditions against which the potential socioeconomic impacts of the proposed Project were evaluated. The data used to establish baseline socioeconomic conditions were derived from a variety of federal, state, and local sources. Both text and tables in this section are organized by Project area (e.g., Segment, Pump Station, or Lateral), state, and county.

Population

Population-related characteristics in the region of socioeconomic influence are summarized in Tables 3.10.1-3 and 3.10.1-4. The state populations for those states in which the proposed Project would be constructed are shown in Table 3.10.1-1. For reference the U.S. population is also included in Table 3.10.1-3. The annual average increase in population for the period 2000 to 2007 was 0.9 percent for the nation. Every state except Texas experienced an average annual population growth lower than the federal annual average – ranging from 0.5 to 0.8 percent. Texas’ annual average population growth was 1.9 percent between 2000 and 2007.

TABLE 3.10.1-1 State Populations, 2000 and 2007			
Geographic Area	Population		Annual Average % Change
	2000	2007	
United States	282,171,936	301,290,332	0.9%
States			
Montana	903,283	956,624	0.7%
South Dakota	755,657	795,689	0.8%
Nebraska	1,713,194	1,769,473	0.5%
Kansas	2,688,418	2,777,382	0.5%
Oklahoma	3,453,861	3,608,123	0.6%
Texas	20,946,049	23,843,432	1.9%

Source: U.S. Census Population, Population change and estimated components of population change: April 1, 2000 to July 1, 2008 (NST-EST2008-alldata).

The proposed Project route is predominantly rural and sparsely populated, with the population tending to increase from north to south along the route. The total population in the counties comprising the region of influence was over 5.7 million in 2007 (see Table 3.10.1-4). Texas comprised 5.0 million, with 3.9 million of those people living in Harris County where Houston is located. The remainder of the population was distributed across counties that would be traversed by the proposed Project in the other five states as follows: 23,747 in Montana, 146,320 in South Dakota, 85,207 in Nebraska, 71,570 in Kansas, and 323,738 in Oklahoma. The population densities in these five counties ranged from less than 1 person per square mile to 99 people per square mile. Population densities in Texas were slightly greater, ranging from 10 people per square mile (Angelina County) to 1,967 people per square mile (Harris County). These population figures demonstrate the relatively rural nature of the proposed Project area.

In addition to being rural and sparsely populated, the counties within the proposed Project area have experienced relatively low to negative population growth between 2000 and 2007. Most counties located within the proposed Project area from Montana to Nebraska experienced a reduction in population ranging from 2.5 to 0.1 percent between 2000 and 2007. Some counties along the proposed Project route in Kansas, South Dakota, and Oklahoma experienced an average annual increase in population for the same time period ranging from 0.6 to 0.8 percent. The majority of the average annual population growth occurred in Texas, which experienced a 1.7 percent average annual increase in population between 2000 and 2007 (see Table 3.10.1-2).

**TABLE 3.10.1-2
County Populations and Population Densities, 2000 and 2007**

County	Population		Annual Average % Change	Density (per square mile)
	2000	2007		
Steele City Segment				
Montana				
Phillips	4,601	3,934	-2.2%	<1
Valley	7,675	6,884	-1.5%	2
McCone	1,977	1,716	-2.0%	1
Dawson	9,059	8,554	-0.8%	4
Prairie	1,199	1,043	-2.0%	<1
Fallon	1,695	1,616	-0.7%	2
<i>Subtotal Montana</i>	<i>26,206</i>	<i>23,747</i>	<i>-1.4%</i>	
South Dakota				
Harding	1,353	1,173	-2.0%	<1
Butte	9,094	9,449	0.5%	4
Perkins	3,369	2,907	-2.1%	1
Meade	24,245	24,057	-0.1%	7
Pennington	88,573	96,230	1.2%	32
Haakon	2,196	1,842	-2.5%	1
Jones	1,193	1,047	-1.8%	1
Lyman	3,895	3,882	0.0%	2
Tripp	6,430	5,733	-1.6%	4
<i>Subtotal South Dakota</i>	<i>140,348</i>	<i>146,320</i>	<i>0.6%</i>	
Nebraska				
Keya Paha	983	851	-2.0%	1
Rock	1,756	1,515	-2.1%	2
Holt	11,551	10,310	-1.6%	5
Garfield	1,902	1,714	-1.5%	3
Wheeler	886	806	-1.3%	2
Greeley	2,714	2,312	-2.3%	5
Boone	6,259	5,505	-1.8%	9
Nance	4,038	3,554	-1.8%	9
Merrick	8,204	7,665	-1.0%	17
Hamilton	9,403	9,282	-0.2%	17
York	14,598	14,339	-0.3%	25
Fillmore	6,634	6,026	-1.4%	12
Saline	13,843	13,823	0.0%	24
Jefferson	8,340	7,505	-1.5%	14
<i>Subtotal Nebraska</i>	<i>91,111</i>	<i>85,207</i>	<i>-1.0%</i>	
New Cushing Extension Pump Stations				
Kansas				
Clay	8,822	8,691	-0.2%	14
Butler	59,484	62,879	0.8%	42
<i>Subtotal Kansas</i>	<i>68,306</i>	<i>71,570</i>	<i>0.7%</i>	
Gulf Coast Segment				
Oklahoma				
Atoka	13,879	14,479	0.6%	14
Bryan	36,534	39,298	1.0%	40
Coal	6,031	5,698	-0.8%	12

**TABLE 3.10.1-2
County Populations and Population Densities, 2000 and 2007**

County	Population		Annual Average % Change	Density (per square mile)
	2000	2007		
Creek	67,369	68,940	0.3%	70
Hughes	14,154	13,576	-0.6%	18
Lincoln	32,080	32,211	0.1%	34
Okfuskee	11,814	11,197	-0.8%	19
Payne	68,186	77,724	1.9%	99
Seminole	24,896	24,103	-0.5%	39
Pontotoc	35,143	36,512	0.5%	49
<i>Subtotal Oklahoma</i>	<i>310,086</i>	<i>323,738</i>	<i>0.6%</i>	
Texas				
Angelina	80,130	82,570	0.4%	10
Cherokee	46,663	48,056	0.4%	44
Delta	5,327	5,368	0.1%	19
Fannin	31,242	32,930	0.8%	35
Franklin	9,458	11,104	2.3%	33
Hardin	48,073	51,530	1.0%	54
Hopkins	31,960	33,699	0.8%	41
Jefferson	252,051	242,372	-0.6%	279
Lamar	48,499	49,090	0.2%	53
Liberty	70,159	74,930	0.9%	60
Nacogdoches	59,203	62,221	0.7%	62
Polk	41,139	46,206	1.7%	39
Rusk	47,372	48,452	0.3%	51
Smith	174,706	197,952	1.8%	188
Upshur	35,291	37,881	1.0%	60
Wood	36,752	41,817	1.9%	56
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>1,018,025</i>	<i>1,066,178</i>	<i>0.7%</i>	
Houston Lateral				
Texas				
Liberty (see the Gulf Coast Segment)				
Chambers	26,031	28,740	1.4%	43
Harris	3,400,590	3,912,196	2.0%	1,967
<i>Subtotal Texas - Houston Lateral</i>	<i>3,426,621</i>	<i>3,940,936</i>	<i>2.0%</i>	
<i>Subtotal Texas</i>	<i>4,444,646</i>	<i>5,007,114</i>	<i>1.7%</i>	
Total Counties	5,080,703	5,657,696	1.5%	

Source: U.S. Bureau of the Census. County population, population change and estimated components of population change: April 1, 2000 to July 1, 2008 (CO-EST2008-alldata).

Table 3.10.1-3 shows the communities located within a 2-mile proximity of the proposed Project. The total population of these communities was 2.467 million as of July 1, 2008. Of that 2.467 million, 2.208 million were located in Houston. The remaining 259,000 were distributed along the remainder of the proposed Project area. The total community populations by state were: 2,465 located in three communities in Montana, 3,368 located in four communities in South Dakota, 1,520 located in seven

communities in Nebraska, 13,251 located in six communities in Kansas, 12,167 located in nine communities in Oklahoma, and 214,045 in fifteen communities in Texas, excluding Houston. Many of the potentially-affected communities along the northern portions of the route have experienced an average annual reduction in population between 2000 and 2007, particularly in Montana, South Dakota, Nebraska, and Kansas. As another indication of the relatively sparsely populated nature of the proposed Project area, counties within each state that have no communities within 2 miles of the proposed Project include:

- Phillips, Dawson, and Prairie counties in Montana;
- Butte, Perkins, Meade, Pennington, and Lyman counties in South Dakota;
- Keya Paha, Rock, Holt, Garfield, Greely, Boone, Nance, and Merrick counties in Nebraska;
- Bryan, Coal, Lincoln, and Payne counties in Oklahoma; and
- Delta, Fannin, Hardin, Lamar, Liberty, and Nacogdoches counties in Texas.

Between 2000 and 2007, the highest average annual growth rate occurred along the proposed Houston Lateral in Mont Belvieu and Houston.

TABLE 3.10.1-3 Population of Communities within 2-mile Proximity of the Proposed Project					
County	Communities	Population		Annual Average % Change	
		2000	2007		
Steele City Segment					
Montana					
	Phillips	NA	NA	NA	
	Valley	Nashua	325	291	-1.6%
	McCone	Circle	644	558	-2.0%
	Dawson	NA	NA	NA	NA
	Prairie	NA	NA	NA	NA
	Fallon	Baker	1,695	1,616	-0.7%
	<i>Subtotal Montana</i>		<i>2,664</i>	<i>2,465</i>	<i>-1.1%</i>
South Dakota					
	Harding	Buffalo	380	330	NA
	Butte	NA	NA	NA	NA
	Perkins	NA	NA	NA	NA
	Meade	NA	NA	NA	NA
	Pennington	NA	NA	NA	NA
	Haakon	Midland	179	150	-2.5%
	Jones	Draper	92	83	-1.5%
	Lyman	NA	NA	NA	NA
	Tripp	Winner	3,137	2,805	-1.6%
	<i>Subtotal South Dakota</i>		<i>3,788</i>	<i>3,368</i>	<i>-1.7%</i>
Nebraska					
	Keya Paha	NA	NA	NA	NA
	Rock	NA	NA	NA	NA
	Holt	NA	NA	NA	NA
	Garfield	NA	NA	NA	NA
	Wheeler	Ericson	104	95	-1.3%

**TABLE 3.10.1-3
Population of Communities within 2-mile Proximity of the Proposed Project**

County	Communities	Population		Annual Average % Change
		2000	2007	
Greeley	NA	NA	NA	NA
Boone	NA	NA	NA	NA
Nance	NA	NA	NA	NA
Merrick	NA	NA	NA	NA
Hamilton	Hordville	150	144	-0.6%
York	McCool Junction	385	NA	NA
Fillmore	Exeter	712	647	-1.4%
-	Milligan	315	284	-1.5%
Saline	Western	287	274	-0.7%
Jefferson	Steele City	84	76	-1.4%
<i>Subtotal Nebraska</i>		<i>2,037</i>	<i>1,520</i>	<i>-4.1%</i>
New Cushing Extension Pump Stations				
Kansas				
Clay	Wakefield	838	854	0.3%
-	Green	147	137	-1.0%
Butler	Towanda	1,338	1,354	0.2%
-	Potwin	457	433	-0.8%
-	Douglass	1,813	1,790	-0.2%
-	Augusta	8423	8683	0.4%
<i>Subtotal Kansas</i>		<i>13,016</i>	<i>13,251</i>	<i>0.3%</i>
Gulf Coast Segment				
Oklahoma				
Atoka	Atoka	2,988	3,069	0.4%
-	Tushka	345	366	0.8%
-	Caney	199	210	0.8%
Bryan	NA	NA	NA	NA
Coal	NA	NA	NA	NA
Creek	Stroud	2,758	2,742	-0.1%
Hughes	Allen	2,398	NA	NA
Lincoln	NA	NA	NA	NA
Okfuskee	Paden	446	422	-0.8%
-	Boley	1,126	1,091	-0.5%
Payne	NA	NA	NA	NA
Seminole	Wewoka	3,562	3,326	-1.0%
Pontotoc	Allen	951	941	-0.2%
<i>Subtotal Oklahoma</i>		<i>14,773</i>	<i>12,167</i>	<i>-2.5%</i>
Texas				
Angelina	Hudson	3,792	4,231	1.6%
-	Diboll	5,470	5,541	0.2%
Cherokee	Wells	769	792	0.4%
Delta	NA	NA	NA	NA
Fannin	NA	NA	NA	NA
Franklin/Wood	Winnsboro	3,584	3,909	1.2%
Hardin	NA	NA	NA	NA

TABLE 3.10.1-3 Population of Communities within 2-mile Proximity of the Proposed Project				
County	Communities	Population		Annual Average % Change
		2000	2007	
Hopkins	Tira	248	258	0.6%
Jefferson	Beaumont	113,866	109,579	-0.5%
-	Port Arthur	57,755	55,313	-0.6%
-	Central Gardens	4,106	NA	NA
-	Nederland	17,422	16,178	-1.1%
-	China	1,112	1,042	-0.9%
-	Port Neches	13,301	12,681	-0.7%
Lamar	NA	NA	NA	NA
Liberty	NA	NA	NA	NA
Nacogdoches	NA	NA	NA	NA
Polk	Corrigan	1,721	1,887	1.3%
Rusk	Reklaw	327	336	0.4%
Smith	Arp	901	952	0.8%
Upshur	Big Sandy	1,288	1,346	0.6%
Wood	See Franklin	NA	NA	NA
<i>Subtotal Texas - Gulf Coast Segment</i>		<i>225,662</i>	<i>214,045</i>	<i>-0.8%</i>
Houston Lateral				
Texas				
Liberty	Hardin	755	792	0.7%
Chambers	Liberty	8,033	8,033	0.0%
-	Mont Belvieu	2,324	2,637	1.8%
Harris	Ames	1,079	1,138	0.8%
-	Barrett	2,872	NA	NA
-	Highlands	7,089	NA	NA
-	Channelview	29,685	NA	NA
-	Sheldon	1,831	NA	NA
-	Houston	1,953,631	2,208,180	1.8%
<i>Subtotal Texas - Houston Lateral</i>		<i>2,007,299</i>	<i>2,220,780</i>	<i>1.5%</i>
<i>Subtotal Texas</i>		<i>2,232,961</i>	<i>2,434,825</i>	<i>1.2%</i>
Total All Communities		2,269,239	2,467,596	1.2%

Source: U.S. Bureau of the Census 2009. Population, Population change and estimated components of population change: April 1, 2000 to July 1, 2008 (NST-EST2008-alldata).

Housing

Available housing to serve the proposed Project is a function of the housing stock (mainly rental and short-term accommodations), recent economic and population growth, and demand for housing from other sources. The existing housing units in the proposed Project area and the existing short-term housing resources, such as rentals and hotel and motel rooms, are shown in Tables 3.10.1-4 and 3.10.1-5.

The total number of housing units in the counties that would be crossed by the proposed Project was estimated to be over 2,187,827 in 2007, with 1,557,935 (71.2 percent) of those units in counties that

would be crossed by the proposed Houston Lateral (Table 3.10.1-4). The fewest number of units were found in counties that would be crossed by the proposed Project in Montana, Kansas, and Nebraska with 14,622 units, 29,850 units, and 41,082 units, respectively. Housing stock existing in 2007 was predominantly occupied single-family residential housing that would not be available for use by proposed Project workers.

TABLE 3.10.1-4				
Housing Units for Counties along the Proposed Project				
County	Total Housing Units		Percent of Total	Building Permits
	2000	2007		
Steele City Segment				
Montana				
Phillips	2,502	2,484		0
Valley	4,847	4,807		1
McCone	1,087	1,076		0
Dawson	4,168	4,135		3
Prairie	718	711		0
Fallon	1,410	1,409		0
<i>Subtotal Montana</i>	<i>14,732</i>	<i>14,622</i>	<i>0.7%</i>	<i>4</i>
South Dakota				
Harding	804	804		0
Butte	4,059	4,384		91
Perkins	1,854	1,897		5
Meade	10,149	11,523		118
Pennington	37,249	42,208		838
Haakon	1,002	1,036		3
Jones	614	627		5
Lyman	1,636	1,690		6
Tripp	3,036	3,098		0
<i>Subtotal South Dakota</i>	<i>60,403</i>	<i>67,267</i>	<i>3.1%</i>	<i>1,066</i>
Nebraska				
Keya Paha	548	572		3
Rock	935	947		3
Holt	5,281	5,425		8
Garfield	1,021	1,028		2
Wheeler	561	573		0
Greeley	1,199	1,221		0
Boone	2,733	2,787		11
Nance	1,787	1,771		7
Merrick	3,649	3,770		30
Hamilton	3,850	3,980		28
York	6,172	6,240		22
Fillmore	2,990	2,989		6
Saline	5,611	5,788		62
Jefferson	3,942	3,991		21
<i>Subtotal Nebraska</i>	<i>40,279</i>	<i>41,082</i>	<i>1.9%</i>	<i>203</i>
New Cushing Extension Pump Stations				
Kansas				
Clay	4,084	4,200		20
Butler	23,176	25,650		408

**TABLE 3.10.1-4
Housing Units for Counties along the Proposed Project**

County	Total Housing Units		Percent of Total	Building Permits
	2000	2007		
<i>Subtotal Kansas</i>	27,260	29,850	1.4%	428
Gulf Coast Segment				
Oklahoma				
Payne	29,326	32,906		167
Lincoln	13,712	14,241		24
Creek	27,986	29,603		228
Okfuskee	5,114	5,314		5
Seminole	11,146	11,537		21
Hughes	6,237	6,368		4
Coal	2,744	2,821		1
Atoka	5,673	5,868		7
Bryan	16,715	17,998		415
<i>Subtotal Oklahoma</i>	118,653	126,656	5.8%	872
Texas				
Fannin	12,887	13,568		44
Lamar	21,113	22,130		81
Delta	2,410	2,489		11
Hopkins	14,020	14,651		14
Franklin	5,132	5,410		4
Wood	17,939	18,607		14
Upshur	14,930	15,593		67
Smith	71,701	77,281		679
Cherokee	19,173	19,965		33
Rusk	19,867	20,598		8
Nacogdoches	25,051	26,720		256
Angelina	32,435	34,125		185
Polk	21,177	22,636		460
Liberty	26,359	28,294		293
Hardin	19,836	20,966		129
Jefferson	102,080	104,499		1,576
<i>Subtotal Texas – Gulf Coast Segment</i>	426,110	447,532	20.5%	3,854
Houston Lateral				
Texas				
Chambers	10,336	13,351		368
Harris	1,298,130	1,544,584		46,455
<i>Subtotal Texas – Houston Lateral</i>	1,308,466	1,557,935	71.2%	46,823
<i>Subtotal Texas</i>	1,734,576	2,005,467	91.7%	50,677
Total All Communities	1,908,240	2,187,827	100.0%	

Notes:

States and counties are listed geographically from north to south as proposed Project crosses area.

Housing in counties on the Cushing Extension were analyzed as part of the Keystone Pipeline Project and are included for clarity only. Construction in these counties would be related to pump stations only except in Jefferson County, NE, and Payne County, OK, where some new pipeline construction would occur.

Source: U.S. Bureau of the Census 2000.

More pertinent to the analysis is the number of rental units and short-term accommodations, such as motel and hotel rooms and recreational vehicle (RV) sites, and related vacancy rates (Table 3.10.1-5). The total number of rental units located across all affected counties was about 757,191 in 2000, of which 592,018 (78.2 percent) were located in Chambers and Harris counties in Texas. Montana, Kansas, and Nebraska had the fewest rental units. Rental vacancy rates and available rental housing varied considerably across states and counties. The highest vacancy rates for rental units were in Montana, ranging from 7.9 to 25.8 percent in the affected counties, compared with the lowest weighted average of 8.3 percent in Nebraska. Based on these data, approximately 68,051 vacant rental units were available in the region of influence, of which 51,655 occur in the counties along the Houston Lateral. At the county level, the number of available units was smallest in Wheeler County, Nebraska, with nine units.¹ Of the 58 counties in the proposed Project area, 12 had less than 50 available units. Most of those counties are located in Montana and South Dakota.

Within the spectrum of currently available housing, alternatives to rental housing are temporary short-term accommodations in hotels/motels rooms, and RV sites. In some cases, recreational cabins and seasonal housing for migratory workers also could be available. Short-term accommodations are more flexible and likely would be the preferred form of housing for construction workers. It is estimated that approximately 23,855 hotel/motel rooms were located within a 50-mile corridor of the pipeline route. Of that number, more than half were located in the two-county Houston Lateral portion of the proposed Project. The fewest hotels/motel rooms were in Kansas (356) and Montana (761). The total number of hotels/motel rooms and RV sites by county are presented in Table 3.10.1-5. The availability of short-term accommodations varies throughout the year and depends on a number of factors, including seasonal fluctuations and timing of local events.

TABLE 3.10.1-5 Short-term Housing Assessment for Counties along the Proposed Project							
County	Rentals (2000)			Hotel / Motel			RV Sites
	Units	Vacancy Rate	Percent of Total	Available Units (Calculated)	Rooms	Percent of Total	
Steele City Segment							
Montana							
Phillips	632	14.1		89	126		40
Valley	826	7.9		65	253		44
McCone	240	25.8		62	14		0
Dawson	1,076	12.5		135	277		94
Prairie	143	15.4		22	0		9
Fallon	333	22.5		75	91		18
<i>Subtotal Montana</i>	<i>3,250</i>	<i>13.8</i>	<i>0.4%</i>	<i>448</i>	<i>761</i>	<i>3.2%</i>	<i>205</i>
South Dakota							
Harding	152	8.6		13	20		0
Butte	1,119	15.9		178	222		93
Perkins	396	15.4		61	90		0
Meade	3,105	9.9		307	398		465
Pennington	12,516	6.4		801	4,045		1,895

¹ Available units are calculated by multiplying the rental units by the vacancy rate.

**TABLE 3.10.1-5
Short-term Housing Assessment for Counties along the Proposed Project**

County	Rentals (2000)			Hotel / Motel			
	Units	Vacancy Rate	Percent of Total	Available Units (Calculated)	Rooms	Percent of Total	RV Sites
Haakon	233	13.3		31	29		21
Jones	159	11.9		19	189		200
Lyman	477	10.1		48	390		166
Tripp	736	12.4		91	194		20
<i>Subtotal South Dakota</i>	<i>18,893</i>	<i>8.2</i>	<i>2.5%</i>	<i>1,550</i>	<i>5,577</i>	<i>23.4%</i>	<i>2,860</i>
Nebraska							
Keya Paha	124	8.1		10	0		20
Rock	216	4.6		10	36		0
Holt	1,376	11.6		160	198		19
Garfield	257	13.2		34	28		25
Wheeler	117	7.7		9	0		0
Greeley	244	5.3		13	0		0
Boone	676	9.8		66	34		0
Nance	440	9.3		41	16		0
Merrick	896	7.4		66	33		0
Hamilton	956	8.8		84	10		45
York	1,905	8.3		158	575		4
Fillmore	742	7.5		56	26		0
Saline	1,598	4.8		77	77		48
Jefferson	932	9.4		88	45		0
<i>Subtotal Nebraska</i>	<i>10,479</i>	<i>8.3</i>	<i>1.4%</i>	<i>871</i>	<i>1,078</i>	<i>4.5%</i>	<i>161</i>
New Cushing Extension Pump Stations							
Kansas							
Clay	973	13.6		132	55		0
Butler	5,327	9.8		522	301		36
<i>Subtotal Kansas</i>	<i>6,300</i>	<i>10.4</i>	<i>0.8%</i>	<i>654</i>	<i>356</i>	<i>1.5%</i>	<i>36</i>
Gulf Coast Segment							
Oklahoma							
Payne	12,680	7.3		926	650		0
Lincoln	2,738	10.9		298	145		29
Creek	6,182	10.1		624	142		0
Okfuskee	1,138	10.6		121	47		0
Seminole	2,991	12		359	141		0
Hughes	1,403	8.2		115	13		0
Coal	653	9.6		63	27		0
Atoka	1,354	12.9		175	54		0
Bryan	4,887	9.7		474	203		159
<i>Subtotal Oklahoma</i>	<i>34,026</i>	<i>9.3</i>	<i>4.5%</i>	<i>3,154</i>	<i>1,422</i>	<i>6.0%</i>	<i>188</i>

TABLE 3.10.1-5 Short-term Housing Assessment for Counties along the Proposed Project							
County	Rentals (2000)			Hotel / Motel			
	Units	Vacancy Rate	Percent of Total	Available Units (Calculated)	Rooms	Percent of Total	RV Sites
Texas							
Fannin	3,167	11.5		364	53		0
Lamar	6,902	9.4		649	621		0
Delta	506	5.9		30	0		0
Hopkins	4,034	12.7		512	466		0
Franklin	907	13		118	44		0
Wood	3,003	9.7		291	61		0
Upshur	2,745	11.7		321	74		0
Smith	22,065	9.8		2,162	1,937		180
Cherokee	4,895	10		490	222		0
Rusk	3,891	10.3		401	240		0
Nacogdoches	9,334	9.4		877	106		24
Angelina	8,810	10.1		890	920		0
Polk	3,212	13.9		446	281		215
Liberty	5,405	9.6		519	168		0
Hardin	3,545	12.9		457	108		0
Jefferson	34,997	9.7		3,395	2,911		144
<i>Subtotal Texas – Gulf Coast Segment</i>	<i>117,418</i>	<i>10.2</i>	<i>15.5%</i>	<i>11,923</i>	<i>8,212</i>	<i>34.4%</i>	<i>563</i>
Houston Lateral							
Texas							
Chambers	1,804	17		307	202		110
Harris	590,214	8.7		51,349	12,180		501
<i>Subtotal Texas – Houston Lateral</i>	<i>592,018</i>	<i>8.7</i>	<i>78.2%</i>	<i>51,655</i>	<i>12,382</i>	<i>51.9%</i>	<i>611</i>
<i>Subtotal Texas</i>	<i>709,436</i>	<i>8.9</i>	<i>93.7%</i>	<i>63,140</i>	<i>20,594</i>	<i>86.3%</i>	<i>1,174</i>
Total All Communities	757,191	9.3	100.0%	68,051	23,855	100.0%	1,7281,17

Notes:

States and counties are listed geographically from north to south as proposed Project crosses area.

Housing in counties on the Cushing Extension were analyzed as part of the Keystone Pipeline Project and are included for clarity only. Construction in these counties would be related to pump stations only except in Jefferson County, NE, and Payne County, OK, where some new pipeline construction would occur.

Source: Rentals (U.S. Bureau of the Census 2000); RV sites (Delorme Gazetteers); Total hotel and motel rooms (www.travelpost.com/hotels.aspx, www.aaacolorado.com/travel/, www.tripadvisor.com/).

Local Economic Activity

Employment and income patterns provide insight into local economic conditions, including the strength of the local economy and the well-being of its residents. Statistics summarizing these economic parameters are shown in Table 3.10.1-6. The most recent per capita income, median household income, unemployment rates, and work force statistics for each county are shown in Table 3.10.1-6 along with one historical data point. For reference, data are included for each state and the U.S. In every state along the proposed Project route, both the 2007 per capita income and the 2007 median household income were less

than the U.S. levels. In nearly every county, the 2007 per capita income and median household income were less than their respective state levels. Despite the relatively lower level of income, the most recent unemployment rate (June 2009) in each state was lower than the U.S. level for the same time period. The county unemployment rates were generally less than their respective state unemployment rates, except in Oklahoma and Texas. Each statistic is discussed below in more detail.

The state with the lowest 2007 per capita income was Montana with \$33,225, or \$5,390 less than the national average. The state with the highest 2007 per capita income was Texas with \$37,083, or \$1,532 less than the national average. The county with the lowest per capita income in 2007 was Keya Paha, Nebraska with \$21,254, or \$15,118 less than the per capita income for Nebraska. The county with the highest per capita income was Harris, Texas (where Houston is located) with \$49,634, or \$12,551 greater than the state level. The range of county-level per capita incomes (\$21,254 to \$49,634) shows the diversity of economic conditions along the proposed Project corridor.

The state with the lowest 2007 median household income was Oklahoma with \$41,551, or \$9,189 less than the national level. The state with the highest 2007 median household income was Texas with \$47,563, or \$3,177 less than the national average. The county with the lowest median household income in 2007 was Hughes, Oklahoma with \$28,689, or \$12,862 less than Oklahoma's median household income. The county with the lowest median income relative to the state level was Keya Paha, Nebraska, with a difference of \$16,067 from the state level. Chambers County, Texas had the highest median household income with \$62,164, or \$14,601 higher than Texas. This range of county-level median household income (\$28,689 to \$62,124) also demonstrates the diversity of economic conditions along the proposed Project corridor.

The state with the highest unemployment rate in 2008 was Texas with 4.9 percent, or 0.9 percent lower than the national level of 5.8 percent. The state with the lowest unemployment rate in 2008 was South Dakota with 3.1 percent, or 2.7 percent less than the national average. The county with the highest unemployment rate was Jefferson, Texas at 6.8 percent, or 1.0 percent higher than the state level. The lowest unemployment rates were in Fallon County, Montana and Wheeler County, Nebraska with 2.3 percent, or 3.5 percent less than the national average. The relatively lower unemployment rates along most of the proposed Project corridor shows the diversity of economic conditions and the dependence on agriculture in many of the counties, because the unemployment statistic is for non-farm payroll employment.

The number of individuals in the work force by county ranges from a low of 377 in Keya Paha, Nebraska to a high of 1,928,223 in Harris, Texas. The work force numbers represent all individuals either employed or unemployed and looking for employment.

TABLE 3.10.1-6 Per Capita Income, Median Household Income and Unemployment Rates by County (nominal dollars)										
	Per Capita Income ^a			Median Household Income ^b			Unemployment Rate ^c			Labor Force
	2007	1999	2007 higher (+) lower (-) than State ^d	2007	2004	2007 higher (+) lower (-) than State ^d	Number 2008	% 2008	2008 higher (+) lower (-) than State ^d	2008 ^e
Steele City Segment										
Montana										
Phillips	\$26,876	\$17,288	-6,349	\$33,798	\$31,742	-9,202	102	4.7	+0.1	2,192
Valley	\$31,556	\$23,247	-1,669	\$37,019	\$34,514	-5,981	142	3.9	-0.7	3,666
McCone	\$24,857	\$20,499	-8,368	\$38,535	\$29,746	-4,465	26	2.5	-2.1	1,036
Dawson	\$29,268	\$20,307	-3,957	\$43,678	\$35,740	678	147	3.3	-1.3	4,411
Prairie	\$28,874	\$21,524	-4,351	\$32,857	\$31,221	-10,143	23	3.9	-0.7	597
Fallon	\$35,405	\$20,281	2,180	\$42,408	\$37,822	-592	43	2.3	-2.3	1,831
<i>State of Montana</i>	<i>\$33,225</i>	<i>\$21,585</i>	<i>-5,390</i>	<i>\$43,000</i>	<i>\$35,574</i>	<i>-7,740</i>	<i>23,311</i>	<i>4.6</i>	<i>-1.2</i>	<i>510,260</i>
South Dakota										
Harding	\$26,439	\$17,807	-9,321	\$34,729	\$32,895	-8,778	21	2.7	-0.4	784
Butte	\$29,497	\$18,341	-6,263	\$38,513	\$33,286	-4,994	152	2.8	-0.3	5,479
Perkins	\$28,636	\$22,162	-7,124	\$34,085	\$30,730	-9,422	50	3.1	0.0	1,619
Meade	\$35,599	\$22,237	-161	\$46,063	\$44,516	2,556	386	3.1	0.0	12,373
Pennington	\$36,425	\$25,099	665	\$44,296	\$40,624	789	1,618	2.9	-0.2	55,184
Haakon	\$42,511	\$28,797	6,751	\$40,461	\$33,470	-3,046	30	2.6	-0.5	1,159
Jones	\$31,324	\$26,213	-4,436	\$36,106	\$31,281	-7,401	17	2.5	-0.6	691
Lyman	\$26,024	\$21,419	-9,736	\$32,330	\$30,035	-11,177	90	4.5	+1.4	1,985
Tripp	\$30,384	\$21,180	-5,376	\$35,631	\$32,606	-7,876	89	3.0	-0.1	2,973
<i>State of South Dakota</i>	<i>\$35,760</i>	<i>\$24,475</i>	<i>-2,855</i>	<i>\$43,507</i>	<i>\$39,265</i>	<i>-7,233</i>	<i>13,674</i>	<i>3.1</i>	<i>-2.7</i>	<i>446,351</i>
Nebraska										
Keya Paha	\$21,254	\$13,813	-15,118	\$31,005	\$32,279	-16,067	18	4.8	+1.5	377
Rock	\$23,001	\$19,493	-13,371	\$32,257	\$27,512	-14,815	24	2.8	-0.5	850
Holt	\$31,910	\$21,025	-4,462	\$37,354	\$35,139	-9,718	163	2.6	-0.7	6,159
Garfield	\$28,712	\$22,361	-7,660	\$32,967	\$30,568	-14,105	27	2.6	-0.7	1,058
Wheeler	\$26,742	\$21,715	-9,630	\$34,173	\$33,834	-12,899	11	2.3	-1.0	488
Greeley	\$29,263	\$19,654	-7,109	\$34,812	\$32,241	-12,260	38	2.9	-0.4	1,308
Boone	\$30,930	\$21,047	-5,442	\$37,466	\$35,655	-9,606	84	2.6	-0.7	3,267
Nance	\$31,190	\$20,466	-5,182	\$38,372	\$35,011	-8,700	60	2.9	-0.4	2,063

TABLE 3.10.1-6 Per Capita Income, Median Household Income and Unemployment Rates by County (nominal dollars)										
	Per Capita Income ^a			Median Household Income ^b			Unemployment Rate ^c			Labor Force
	2007	1999	2007 higher (+) lower (-) than State ^d	2007	2004	2007 higher (+) lower (-) than State ^d	Number 2008	% 2008	2008 higher (+) lower (-) than State ^d	2008 ^e
Merrick	\$29,338	\$21,476	-7,034	\$41,711	\$38,222	-5,361	130	3.1	-0.2	4,238
Hamilton	\$30,294	\$22,302	-6,078	\$49,655	\$45,934	2,583	142	2.4	-0.9	5,905
York	\$32,536	\$24,966	-3,836	\$48,369	\$41,098	1,297	259	3.7	+0.4	7,076
Fillmore	\$33,949	\$25,850	-2,423	\$41,162	\$38,911	-5,910	93	2.9	-0.4	3,192
Saline	\$30,142	\$21,541	-6,230	\$45,645	\$41,876	-1,427	284	3.4	+0.1	8,432
Jefferson	\$32,691	\$22,183	-3,681	\$39,914	\$37,559	-7,158	165	3.8	+0.5	4,336
<i>State of Nebraska</i>	<i>\$36,372</i>	<i>\$26,465</i>	<i>-2,243</i>	<i>\$47,072</i>	<i>\$42,166</i>	<i>-3,668</i>	<i>32,634</i>	<i>3.3</i>	<i>-2.5</i>	<i>993,286</i>
New Cushing Extension Pump Stations										
Kansas										
Clay	\$34,076	\$23,697	-2,449	\$42,035	\$37,306	-5,306	169	3.3	-1.1	5,152
Butler	\$34,739	\$25,351	-1,786	\$56,372	\$49,599	9,031	1,378	4.2	-0.2	32,614
<i>State of Kansas</i>	<i>\$36,525</i>	<i>\$26,195</i>	<i>-2,090</i>	<i>\$47,341</i>	<i>\$41,664</i>	<i>-3,399</i>	<i>65,884</i>	<i>4.4</i>	<i>-1.4</i>	<i>1,493,746</i>
Gulf Coast Segment										
Oklahoma										
Payne	\$27,050	\$19,244	-7,947	\$33,840	\$31,259	-7,711	1,353	3.8	+0.1	35,159
Lincoln	\$26,316	\$18,280	-8,681	\$38,204	\$33,820	-3,347	540	3.9	+0.2	13,872
Creek	\$27,585	\$19,779	-7,412	\$41,745	\$36,134	194	1,300	4.2	+0.5	31,295
Okfuskee	\$22,415	\$14,343	-12,582	\$29,516	\$26,340	-12,035	187	4.1	+0.4	4,607
Seminole	\$26,460	\$15,974	-8,537	\$33,207	\$27,124	-8,344	486	4.4	+0.7	11,061
Hughes	\$22,449	\$14,774	-12,548	\$28,689	\$25,324	-12,862	269	5.3	+1.6	5,104
Coal	\$21,426	\$14,230	-13,571	\$30,241	\$25,525	-11,310	120	4.8	+1.1	2,500
Atoka	\$21,348	\$14,713	-13,649	\$29,810	\$27,211	-11,741	274	4.5	+0.8	6,060
Bryan	\$27,361	\$18,106	-7,636	\$33,584	\$29,055	-7,967	688	3.4	-0.3	20,398
<i>State of Oklahoma</i>	<i>\$34,997</i>	<i>\$22,567</i>	<i>-3,618</i>	<i>\$41,551</i>	<i>\$37,109</i>	<i>-9,189</i>	<i>64,083</i>	<i>3.7</i>	<i>-2.1</i>	<i>1,751,090</i>
Texas										
Fannin	\$25,258	\$19,465	-11,825	\$40,840	\$35,434	-6,723	796	5.9	+1.0	13,406
Lamar	\$27,500	\$21,730	-9,583	\$38,110	\$32,581	-9,453	1,288	5.5	+0.6	2,434
Delta	\$25,066	\$18,721	-12,017	\$34,975	\$31,122	-12,588	126	5.5	+0.6	2,291
Hopkins	\$27,843	\$22,168	-9,240	\$39,105	\$33,267	-8,458	735	4.2	-0.7	17,490

	Per Capita Income ^a			Median Household Income ^b			Unemployment Rate ^c			Labor Force
	2007	1999	2007 higher (+) lower (-) than State ^d	2007	2004	2007 higher (+) lower (-) than State ^d	Number 2008	% 2008	2008 higher (+) lower (-) than State ^d	2008 ^e
Franklin	\$28,517	\$22,126	-8,566	\$40,152	\$35,830	-7,411	228	4.3	-0.6	5,287
Wood	\$26,537	\$19,143	-10,546	\$40,592	\$34,843	-6,971	932	5.2	+0.3	18,010
Upshur	\$28,164	\$19,918	-8,919	\$40,616	\$34,690	-6,947	852	4.3	-0.6	19,728
Smith	\$34,713	\$25,543	-2,370	\$44,699	\$39,665	-2,864	4,888	5.0	+0.1	98,405
Cherokee	\$27,439	\$21,562	-9,644	\$35,413	\$30,223	-12,150	1,218	6.0	+1.1	20,281
Rusk	\$28,081	\$19,140	-9,002	\$41,906	\$35,343	-5,657	1,051	4.4	-0.5	24,004
Nacogdoches	\$24,491	\$19,056	-12,592	\$32,774	\$29,952	-14,789	1,361	4.4	-0.5	30,726
Angelina	\$32,627	\$20,944	-4,456	\$37,953	\$35,749	-9,610	1,899	4.9	0.0	38,983
Polk	\$31,832	\$22,873	-5,251	\$37,152	\$36,368	-10,411	1,060	6.3	+1.4	16,732
Liberty	\$30,638	\$19,958	-6,445	\$46,159	\$39,120	-1,404	1,863	6.1	+1.2	30,773
Hardin	\$32,380	\$21,307	-4,703	\$52,798	\$41,677	5,235	1,409	5.4	+0.5	26,066
Jefferson	\$33,795	\$22,894	-3,288	\$39,499	\$35,110	-8,064	7,669	6.8	+1.9	113,554
<i>State of Texas – Gulf Coast Segment</i>	\$37,083	\$26,250	-1,532	\$47,563	\$41,645	-3,177	575,797	4.9	-0.9	11,635,095
Houston Lateral										
Texas										
Chambers	\$38,856	\$25,883	1,773	\$62,164	\$54,474	14,601	829	5.8	+0.9	14,238
Harris	\$49,634	\$32,633	12,551	\$49,977	\$41,922	2,414	93,142	4.8	-0.1	1,928,223
<i>State of Texas – Houston Lateral</i>	\$37,083	\$26,250	-1,532	\$47,563	\$41,645	-3,177	575,797	4.9	-0.9	11,635,095
United States	\$38,615	\$27,939	NA	\$50,740	\$44,334	NA	9,055,824	5.8	NA	155,253,908

^a U.S. Bureau of Economic Analysis, Regional Economic Accounts, Local Area Personal Income, Table CA1-3: Per capita personal income, <http://bea.gov/regional/reis/>.

^b U.S. Bureau of the Census, Small Area Income & Poverty Estimates, State and County Interactive Table, <http://www.census.gov/did/www/saipe/data/statecounty/index.html>.

^c U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics 2008, <http://www.bls.gov/lau/>.

^d For each state the difference is reported as the difference between the United States and the state.

^e U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics 2008, County Data. <http://www.bls.gov/lua>.

Note: States and counties are listed geographically from north to south as proposed Project crosses area.

Note: Housing in counties on the Cushing Extension was analyzed as part of the Keystone Pipeline Project and is included for clarity only. Construction in these counties would be related to pump stations only except in Jefferson County, NE, and Payne County, OK, where some new pipeline construction would occur.

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* directs Federal agencies to identify and address, as appropriate, disproportionately high and adverse health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Environmental justice refers to the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (EPA 2007). The Council on Environmental Quality (CEQ) has provided guidance for addressing environmental justice (CEQ 1997).

In the draft EIS, minority and low-income populations along the proposed Project corridor were screened at the county level for the 58 counties in six states that would be crossed by the proposed Project. Several commenters on the draft EIS requested additional detailed analyses about minority and low-income populations that could be impacted by the proposed Project. In response, DOS has evaluated census block groups within a 4-mile-wide analysis area centered on the pipeline and associated pump stations.

Methodology to Identify and Locate Minority and Low-Income Populations

Minority populations are members of one of the following racial groups: African-Americans, American Indians or Alaskan Natives, Asians, Native Hawaiians or other Pacific Islanders, “Other” races, or multi-racial (CEQ 1997). The racial population is expressed in terms of the number and/or percentage of people that are minorities in an area. The sum of these racial minority populations is referred to as the aggregate racial minority population for counties and census block groups. Minority populations were determined using U.S. Census Summary File 1 Category P6: Race. Persons of Hispanic/Latino origin are referred to as an ethnic minority, may be of any race including the identified racial populations, and thus are identified as a separate subcategory. Hispanic or Latino population was determined using U.S. Census Summary File 1 Category P7: Hispanic or Latino by Race. Low-income populations were determined using U.S. Census Summary File 3 Category P87: Poverty Status in 1999 by Age.

Census Geographic Unit Criteria

Determination of Potentially Affected Area for Analysis

To assess the potential impacts to minority and low-income populations from construction and operation of the proposed Project as well as from potential discharge incidents, DOS considered the types of effects and the areal distribution of these effects as a function of distance from the proposed Project pipeline centerline to establish a potentially affected area for analysis. Effects considered included potential dust and noise generated by construction, disruption to traffic patterns associated with the movement of construction materials and equipment, and potential health impacts in the unlikely event of a substantial discharge from the proposed Project during operation.

The determination of the precise distance from the proposed Project centerline where these effects could impact minority or low-income populations is problematic given the length of the proposed Project, the diversity of terrain that the proposed Project would cross, and the variation in population density along the proposed Project corridor. Of particular concern would be any potential health effects to minority or low-income populations resulting from a crude oil discharge. The potential effects of a crude oil discharge are addressed in detail in Section 3.13. As discussed in Section 3.13, a 1979 pipeline crude oil release near Bemidji, Minnesota can be used as an example of possible terrestrial and subsurface crude oil distribution in the unlikely event of a substantial crude oil discharge. In that release, a substantial quantity of crude oil (approximately 10,700 bbl) was released to the environment. It affected the ground surface over an area that extended approximately 1,200 feet northwest to southeast and 900 feet northeast

to southwest. In the subsurface groundwater, the dissolved contaminant plume extended downgradient approximately 650 feet over time. Using these dimensions as a surrogate for a potential substantial discharge along the proposed Project corridor and considering that the distribution of volatile organic compounds in the air would potentially extend beyond these dimensions depending on climatic conditions at the time of the discharge, DOS defined a 4-mile-wide affected analysis area that extends a distance of 2 miles on either side of the proposed Project centerline. This conservative affected area should adequately address the uncertainty inherent in the analysis, given that actual discharge volumes and the actual release location in the unlikely event of a substantial discharge from the proposed Project are not known.

Population within County

Minority or low-income populations at the county level were assessed using an EPA Mapping Tool to identify areas of environmental justice concern within a state. The key socioeconomic demographic data pertinent for environmental justice are the racial/ethnic composition and income status of affected counties. The proposed Project corridor would cross 58 counties in six states. However, DOS analyzed county population data within a 4-mile-wide analysis area, and as a result an additional county (Payne County, Oklahoma) was added to this analysis resulting in an evaluation of 59 counties.

Population within Census Block Groups

A census block group is the smallest geographic area for which the Census Bureau provides consistent sample data and generally contains a population between 600 and 3,000 individuals. These data are summarized in Table 3.10.1-7 from north to south along the proposed alignment. The U.S. Census Bureau's 2000 census block groups were identified within the 4-mile-wide analysis area.

Geographic Information Systems (GIS) and U.S. Census Bureau's 2000 census block group data were then used to determine the minority and low-income characteristics. As indicated in Table 3.10.1-8, the 4-mile-wide analysis area for the proposed Project encompasses or intersects 287 census block groups across six states. Of the 287 census block groups identified, 63 are along the proposed Steele City Segment, five are near the proposed new pump stations on the Cushing Extension in Kansas, 180 are along the proposed Gulf Coast Segment, and 43 are along the proposed Houston Lateral. Four census block groups in Liberty County, Texas, fall within the 4-mile-wide analysis area for both the proposed Gulf Coast Segment and the proposed Houston Lateral, but are counted only once in the totals.

A census block group was included in the 4-mile-wide analysis area if its boundaries were fully contained in the area, or if any part of the census block group was contained in the area. Fully contained census block groups are shown in parentheses and with a footnote in Table 3.10.1-8. There were no fully contained census block groups in any states in the proposed Steele City Segment or pump stations in Kansas. On the proposed Gulf Coast Segment, one fully contained group was identified in Lincoln County, Oklahoma at Stroud and Angelina County, Texas at Diboll, and 14 were identified in Jefferson County, Texas at Beaumont, Port Neches, Nederland, and Central Gardens. For the proposed Houston Lateral, two fully contained groups were identified in Harris County at Channelview and Highlands. All of the remaining census block groups east of Houston on the proposed Houston Lateral are only partially within the proposed Project analysis area. As stated previously, the analysis is likely to be conservative since portions of most of the census block groups analyzed are outside of the 4-mile-wide analysis area.

Population Percentage Criteria

To assess potential environmental justice concerns related to the proposed Project in accordance with CEQ Guidance, DOS performed two separate proximity based analyses within the 4-mile-wide analysis area. These two separate analyses included:

- A *50 percent criterion* population analysis to determine those counties and census block groups along the proposed Project corridor where minority and/or low-income individuals were equal to or exceeded 50 percent of the population of the census block group.
- A *meaningfully greater criterion* population analysis in which minority and/or low-income population percentages within counties and individual census block groups were compared to state-wide reference populations. A meaningfully greater population was defined as a minority and/or low-income population within an individual county or census block group that was equal to or greater than 120 percent (1.2 times) of the state-wide reference population. This criterion level was selected based upon a suggestion from the U.S. Environmental Protection Agency and because it is commonly used for NEPA compliance by other federal agencies. DOS considers comparisons to the state-wide percentage a much more appropriate comparison than comparisons to nation-wide percentages for determining potential environmental justice concerns for linear energy projects. Comparisons to nationwide percentages are more appropriate for assessing impacts associated with facility siting where alternatives to the proposed facility are very widely dispersed geographically.

If a census block group within the proposed Project analysis area met either of these criteria, DOS assumed that there was a potential for environmental justice populations to experience disproportionate effects.

Populations within Census Block Groups, Meaningfully Greater Criterion, Proposed Project Summary

Of the 287 total census block groups occurring along the proposed Project corridor, 90 census block groups had no exceedances for any minority or low-income populations. Of the 197 census block groups that did show exceedances, 115 showed exceedances for one or more minority populations, 25 showed exceedances for only low-income populations, and 57 showed exceedances for one or more minority populations along with a low-income population.

TABLE 3.10.1-7 Minority and Low-Income Populations as a Percentage of Total County Populations in Affected Counties within 4-Mile-Wide Analysis Area										
County	Total Population	Low- Income Populations	Minority Populations						Aggregate (Total) of Racial Minorities	Hispanic or Latino
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races			
Steele City Segment										
Montana										
Phillips	4,601	828 (18.0%*)	4 (0.1%)	379 (8.2%*)	34 (0.7%*)	2 (0.04%)	96 (2.1%*)	515 (11.2%)	24 (0.5%)	
Valley	7,675	1,026 (13.4%)	7 (0.1%)	634 (9.4%*)	11 (0.2%)	40 (0.3%)	168 (1.8%)	860 (11.2%)	118 (1.5%)	
McCone	1,977	331 (16.7%)	11 (0.6%*)	27 (1.4%)	2 (0.1%)	4 (0.2%)	30 (1.5%)	74 (3.7%)	24 (1.2%)	
Dawson	9,059	1,285 (14.2%)	46 (0.5%*)	87 (1.0%)	5 (0.1%)	2 (0.02%)	54 (0.6%)	194 (2.1%)	69 (0.8%)	
Prairie	1,199	202 (16.8%)	0 (0.0%)	11 (0.9%)	2 (0.2%)	0 (0.0%)	4 (0.3%)	17 (1.4%)	4 (0.3%)	
Fallon	2,837	349 (12.3%)	9 (0.3%)	12 (0.4%)	4 (0.1%)	0 (0.0%)	7 (0.2%)	32 (1.1%)	17 (0.6%)	
<i>Subtotal Montana</i>	<i>27,348</i>	<i>4,021 (14.7%)</i>	<i>77 (0.3%)</i>	<i>1,150 (4.2%)</i>	<i>58 (0.2%)</i>	<i>48 (0.2%)</i>	<i>359 (1.3%)</i>	<i>1,692 (6.2%)</i>	<i>256 (0.9%)</i>	
Montana Exceedance Criteria ^b	-	17.5%	0.4%	7.4%	0.7%	0.7%	2.1%	11.4%	2.4%	
South Dakota										
Harding	1,353	277 (20.5%*)	7 (0.5%)	20 (1.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	27 (2.0%)	7 (0.5%)	
Butte	9,094	1,147 (12.6%)	2 (0.02%)	86 (0.9%)	48 (0.5%)	76 (0.8%*)	127 (1.4%)	339 (3.7%)	309 (3.4%*)	
Perkins	3,363	561 (16.7%*)	3 (0.1%)	70 (2.1%)	13 (0.4%)	4 (0.1%)	34 (1.0%)	124 (3.7%)	3 (0.1%)	
Meade	24,253	2,195 (9.1%)	331 (1.4%*)	549 (2.3%)	178 (0.7%*)	173 (0.7%*)	573 (2.4%*)	1,804 (7.4%)	435 (1.8%*)	
Pennington	88,656	9,967 (11.3%)	677 (0.8%*)	6,748 (7.6%)	954 (1.1%*)	665 (0.8%*)	2,707 (3.1%*)	11,751 (13.3%)	2,335 (2.6%*)	
Haakon	2,196	298 (13.6%)	0 (0.0%)	57 (2.6%)	14 (0.6%)	0 (0.0%)	8 (0.4%)	79 (3.6%)	3 (0.1%)	

TABLE 3.10.1-7
Minority and Low-Income Populations as a Percentage of Total County Populations
in Affected Counties within 4-Mile-Wide Analysis Area

County	Total Population	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Jones	1,193	188 (15.8%*)	7 (0.6%)	18 (1.5%)	0 (0.0%)	0 (0.0%)	27 (2.3%*)	52 (4.4%)	0 (0.0%)
Lyman	3,895	941 (24.2%*)	2 (0.1%)	1,249 (32.1%*)	8 (0.2%)	0 (0.0%)	85 (2.2%*)	1,344 (34.5%*)	1 (0.03%)
Tripp	6,430	1,254 (18.4%*)	0 (0.0%)	671 (11.2%*)	19 (0.1%)	0 (0.0%)	89 (1.2%)	779 (12.1%)	46 (0.9%)
<i>Subtotal South Dakota</i>	<i>140,433</i>	<i>16,828 (12.0%*)</i>	<i>1,029 (0.7%)</i>	<i>9,468 (6.7%)</i>	<i>1,234 (0.9%)</i>	<i>918 (0.7%)</i>	<i>3,650 (2.6%)</i>	<i>16,299 (11.6%)</i>	<i>3,139 (2.2%)</i>
South Dakota Exceedance Criteria ^b	-	15.8%	0.7%	10.0%	0.7%	0.6%	1.6%	13.6%	1.7%
Nebraska									
Keya Paha	983	264 (26.9%*)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (0.5%)	5 (0.5%)	24 (2.4%)
Rock	1,756	375 (21.4%*)	0 (0.0%)	26 (1.5%*)	5 (0.3%)	0 (0.0%)	8 (0.5%)	39 (2.2%)	11 (0.6%)
Holt	11,551	1,477 (12.8%*)	2 (0.02%)	34 (0.3%)	11 (0.1%)	51 (0.4%)	19 (0.2%)	117 (1.0%)	72 (0.6%)
Garfield	1,902	232 (12.2%*)	0 (0.0%)	3 (0.1%)	2 (0.1%)	2 (0.1%)	9 (0.5%)	16 (0.8%)	20 (1.1%)
Wheeler	886	183 (20.7%*)	2 (0.2%)	5 (0.6%)	0 (0.0%)	7 (0.8%)	2 (0.2%)	16 (1.8%)	7 (0.8%)
Greeley	2,714	387 (14.3%*)	8 (0.3%)	0 (0.0%)	3 (0.1%)	14 (0.5%)	2 (0.1%)	27 (1.0%)	16 (0.6%)
Boone	6,259	638 (10.2%)	0 (0.0%)	7 (0.1%)	8 (0.1%)	19 (0.3%)	29 (0.5%)	63 (1.0%)	59 (0.9%)
Nance	4,038	518 (12.8%*)	0 (0.0%)	6 (0.1%)	8 (0.2%)	3 (0.1%)	37 (0.9%)	54 (1.3%)	49 (1.2%)
Merrick	8,204	713 (8.7%)	7 (0.1%)	6 (0.1%)	28 (0.3%)	33 (0.4%)	27 (0.3%)	101 (1.2%)	158 (1.9%)
Hamilton	9,403	690 (7.3%)	19 (0.2%)	0 (0.0%)	1 (0.01%)	27 (0.3%)	32 (0.3%)	79 (0.8%)	66 (0.7%)

TABLE 3.10.1-7 Minority and Low-Income Populations as a Percentage of Total County Populations in Affected Counties within 4-Mile-Wide Analysis Area									
County	Total Population	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
York	14,598	1,170 (8.0%)	93 (0.6%)	30 (0.2%)	62 (0.4%)	149 (1.0%)	99 (0.7%)	433 (3.0%)	258 (1.8%)
Fillmore	6,634	498 (7.5%)	2 (0.03%)	33 (0.5%)	10 (0.2%)	63 (0.9%)	46 (0.7%)	154 (2.3%)	76 (1.1%)
Saline	13,843	1,213 (8.8%)	49 (0.4%)	120 (0.9%)	158 (1.1%)	498 (3.6%*)	89 (0.6%)	914 (6.6%)	879 (6.3%)
Jefferson	8,333	733 (8.8%)	3 (0.04%)	38 (0.5%)	8 (0.1%)	17 (0.2%)	57 (0.7%)	123 (1.5%)	74 (0.9%)
<i>Subtotal Nebraska</i>	<i>91,104</i>	<i>9,091 (10.0%)</i>	<i>185 (0.2%)</i>	<i>308 (0.3%)</i>	<i>304 (0.3%)</i>	<i>883 (1.0%)</i>	<i>461 (0.5%)</i>	<i>2,141 (2.4%)</i>	<i>1,769 (1.9%)</i>
Nebraska Exceedance Criteria ^b	-	11.7%	4.8%	1.1%	1.6%	3.4%	1.7%	12.5%	6.6%
New Cushing Extension Pump Stations									
Kansas									
Clay	8,822	867 (9.8%)	20 (0.2%)	16 (0.2%)	12 (0.1%)	30 (0.3%)	163 (1.8%)	241 (2.7%)	92 (1.0%)
Butler	59,482	4,187 (7.0%)	806 (1.4%)	709 (1.2%*)	212 (0.4%)	455 (0.8%)	1,031 (1.7%)	3,213 (5.4%)	1,140 (1.9%)
<i>Subtotal Kansas</i>	<i>68,304</i>	<i>5,054 (7.4%)</i>	<i>826 (1.2%)</i>	<i>725 (1.1%)</i>	<i>224 (0.3%)</i>	<i>485 (0.7%)</i>	<i>1,194 (1.7%)</i>	<i>3,454 (5.1%)</i>	<i>1,232 (1.8%)</i>
Kansas Exceedance Criteria ^b	-	11.9%	6.9%	1.1%	2.1%	4.2%	2.6%	16.6%	8.4%
Gulf Coast Segment									
Oklahoma									
Payne	68,186	12,431 (18.2%*)	2,550 (3.7%)	3,000 (4.4%)	1,906 (2.8%*)	629 (0.9%)	2,580 (3.8%)	10,665 (15.6%)	1,640 (2.4%)
Creek	67,367	8,924 (13.2%)	1,953 (2.9%)	5,757 (8.5%)	123 (0.2%)	462 (0.7%)	3,874 (5.8%*)	12,169 (18.1%)	1,390 (2.1%)

TABLE 3.10.1-7										
Minority and Low-Income Populations as a Percentage of Total County Populations in Affected Counties within 4-Mile-Wide Analysis Area										
County	Total Population	Low- Income Populations	Minority Populations						Aggregate (Total) of Racial Minorities	Hispanic or Latino
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races			
Lincoln	32,080	4,591 (14.3%)	636 (2.0%)	2,086 (6.5%)	103 (0.3%)	124 (0.4%)	1,448 (4.5%)	4,397 (13.7%)	334 (1.0%)	
Okfuskee	11,814	2,508 (21.2%*)	1,194 (10.1%*)	2,160 (18.3%*)	15 (0.1%)	102 (0.9%)	602 (5.1%)	4,073 (34.5%*)	215 (1.8%)	
Seminole	24,894	5,055 (20.3%*)	1,454 (5.8%)	4,213 (16.9%*)	104 (0.4%)	212 (0.9%)	1,340 (5.4%*)	7,323 (29.4%*)	562 (2.3%)	
Hughes	14,154	2,822 (19.9%*)	645 (4.6%)	2,230 (15.8%*)	16 (0.1%)	82 (0.6%)	851 (6.0%*)	3,824 (27.0%)	310 (2.2%)	
Pontotoc	35,143	5,601 (15.9%)	835 (2.4%)	5,469 (15.6%*)	122 (0.3%)	186 (0.5%)	1,949 (5.5%*)	8,561 (24.4%)	637 (1.8%)	
Coal	6,031	1,366 (22.6%*)	22 (0.4%)	1,019 (16.9%*)	18 (0.3%)	80 (1.3%)	353 (5.9%*)	1,492 (24.7%)	183 (3.0%)	
Atoka	13,879	2,426 (17.5%)	813 (5.9%)	1,613 (11.6%*)	8 (0.1%)	59 (0.4%)	881 (6.3%*)	3,374 (24.3%)	139 (1.0%)	
Bryan	36,534	6,529 (17.9%*)	536 (1.5%)	4,694 (12.8%*)	128 (0.4%)	399 (1.1%)	1,610 (4.4%)	7,367 (20.2%)	823 (2.3%)	
<i>Subtotal Oklahoma</i>	<i>310,082</i>	<i>52,253 (16.9%)</i>	<i>10,638 (3.4%)</i>	<i>32,241 (10.4%)</i>	<i>2,543 (0.8%)</i>	<i>2,335 (0.8%)</i>	<i>15,488 (5.0%)</i>	<i>63,245 (20.4%)</i>	<i>6,233 (2.0%)</i>	
Oklahoma Exceedance Criteria ^b	-	17.6%	9.1%	9.5%	1.6%	2.9%	5.4%	28.5%	6.2%	
Texas										
Fannin	31,242	3,878 (12.4%)	2,451 (7.8%)	285 (0.9%*)	85 (0.3%)	929 (3.0%)	445 (1.4%)	4,195 (13.4%)	1,769 (5.7%)	
Lamar	48,499	7,737 (16.2%)	6,257 (13.5%)	530 (1.1%*)	164 (0.4%)	689 (1.2%)	770 (1.4%)	8,410 (17.3%)	1,715 (3.3%)	
Delta	5,327	911 (17.1%)	503 (9.4%)	31 (0.6%)	20 (0.4%)	4 (0.1%)	142 (2.7%)	700 (13.1%)	43 (0.8%)	
Hopkins	31,960	4,580 (14.6%)	2,415 (8.0%)	233 (0.7%*)	117 (0.2%)	1,523 (4.6%)	498 (1.4%)	4,836 (15.1%)	2,960 (9.3%)	

TABLE 3.10.1-7
Minority and Low-Income Populations as a Percentage of Total County Populations
in Affected Counties within 4-Mile-Wide Analysis Area

County	Total Population	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Franklin	9,458	1,448 (15.3%)	380 (4.0%)	73 (0.8%*)	8 (0.1%)	501 (5.3%)	61 (0.6%)	1,023 (10.8%)	830 (8.8%)
Wood	36,752	5,051 (11.9%)	2,261 (6.1%)	140 (0.6%)	110 (0.2%)	963 (2.9%)	488 (1.1%)	3,962 (10.8%)	1,977 (5.7%)
Upshur	35,291	5,167 (14.6%)	3,529 (10.0%)	150 (0.4%)	104 (0.3%)	846 (2.4%)	394 (1.1%)	5,023 (14.2%)	1,336 (3.8%)
Smith	174,706	23,543 (13.5%)	33,296 (19.1%*)	726 (0.4%)	1159 (0.7%)	10,066 (5.8%)	2,288 (1.3%)	47,535 (27.2%)	19,395 (11.1%)
Rusk	47,372	6,526 (13.8%)	9,175 (19.4%*)	174 (0.4%)	130 (0.3%)	1,735 (3.7%)	476 (1.0%)	11,690 (24.7%)	3,934 (8.3%)
Cherokee	46,659	7,823 (16.8%)	7,689 (16.5%*)	126 (0.3%)	88 (0.2%)	3,493 (7.5%)	462 (1.0%)	11,858 (25.4%)	6,183 (13.3%)
Nacogdoches	59,203	12,743 (21.5%*)	9,827 (16.6%*)	249 (0.4%)	478 (0.6%)	3,174 (5.4%)	1,093 (1.8%)	14,821 (25.0%)	6,700 (11.3%)
Angelina	80,130	12,241 (15.3%)	11,851 (14.8%*)	277 (0.3%)	548 (0.7%)	5,945 (7.4%)	1,245 (1.6%)	19,866 (24.8%)	11,282 (14.1%)
Polk	41,133	6,540 (17.5%)	5,270 (13.2%)	706 (1.7%*)	253 (0.6%)	1,631 (3.7%)	609 (1.3%)	8,469 (20.6%)	3,970 (9.4%)
Liberty	70,154	9,296 (13.3%)	8,884 (12.7%)	341 (0.5%)	241 (0.3%)	4,098 (5.8%)	1,102 (1.6%)	14,666 (20.9%)	7,661 (10.9%)
Hardin	48,073	5,314 (11.1%)	3,328 (6.9%)	119 (0.2%)	278 (0.6%)	304 (0.6%)	548 (1.1%)	4,577 (9.5%)	1,176 (2.4%)
Jefferson	252,051	41,142 (16.3%)	84,970 (33.7%*)	996 (0.4%)	7,159 (2.8%)	10,648 (4.2%)	3,707 (1.5%)	107,480 (42.6%*)	26,664 (10.6%)
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>1,018,010</i>	<i>153,940 (15.1%)</i>	<i>192,086 (18.9%)</i>	<i>5,206 (0.5%)</i>	<i>10,942 (1.1%)</i>	<i>46,549 (4.6%)</i>	<i>14,328 (1.4%)</i>	<i>77,025 (7.6%)</i>	<i>97,595 (9.6%)</i>
Texas Exceedance Criteria ^b	-	18.5%	13.8%	0.7%	3.4%	14.1%	3.0%	35.0%	38.4%

**TABLE 3.10.1-7
Minority and Low-Income Populations as a Percentage of Total County Populations
in Affected Counties within 4-Mile-Wide Analysis Area**

County	Total Population	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other ^a	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Houston Lateral									
Texas									
Liberty	70,154	9,296 (13.3%)	8,884 (12.7%)	341 (0.5%)	241 (0.3%)	4,098 (5.8%)	1,102 (1.6%)	14,666 (20.9%)	7,661 (10.9%)
Chambers	26,031	2,833 (10.9%)	2,508 (9.6%)	94 (0.4%)	89 (0.3%)	1,619 (6.2%)	355 (1.4%)	4,665 (17.9%)	2,836 (10.9%)
Harris	3,400,578	503,234 (14.8%)	627,111 (18.4%*)	14,670 (0.4%)	173,491 (5.1%*)	488,480 (14.4%*)	102,669 (3.0%*)	1,406,421 (41.4%*)	1,120,625 (32.9%)
<i>Subtotal Texas - Houston Lateral</i>	<i>3,496,763</i>	<i>515,363 (14.7%)</i>	<i>638,503 (18.3%)</i>	<i>15,105 (0.4%)</i>	<i>173,821 (5.0%)</i>	<i>494,197 (14.1%)</i>	<i>104,126 (3.0%)</i>	<i>1,425,752 (40.8%)</i>	<i>1,131,122 (32.4%)</i>
Texas Exceedance Criteria ^b	-	18.5%	13.8%	0.7%	3.4%	14.1%	3.0%	35.0%	38.4%
<i>Subtotal Texas</i>	<i>4,444,619</i>	<i>660,007 (14.8%)</i>	<i>821,705 (18.5%)</i>	<i>19,970 (0.4%)</i>	<i>184,522 (4.2%)</i>	<i>536,648 (12.1%)</i>	<i>117,352 (2.6%)</i>	<i>1,488,111 (33.5%)</i>	<i>1,221,056 (27.5%)</i>
Project Total	5,081,890	747,254 (14.7%)	834,460 (16.4%)	63,862 (1.3%)	188,885 (3.7%)	541,317 (10.7%)	138,504 (2.7%)	1,574,942 (31.0%)	1,233,685 (24.3%)

^a The "Other" racial category accounts for those individuals who marked "Some other race", a category included in the 2000 Census for respondents who were unable to identify with the five Office of Management and Budget's race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, or a Hispanic origin (for example, Mexican, Puerto Rican, or Cuban) are included in the "Other" race category. (<http://www.census.gov/prod/2001pubs/c2kbr01-1.pdf>).

^b State-wide exceedance criteria percentages are 1.2 times the actual Environmental Justice group population percentages for each state.

* Denotes Minority populations and low-income individuals that were meaningfully greater than the corresponding minority population or low-income individual at the state level in the relevant racial/ethnic or low-income category columns.

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.

U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.

TABLE 3.10.1-8									
Minority and Low-Income Populations as a Percentage of Census Block Group Populations within 4-Mile-Wide Analysis Area									
County	Total Number of Census Block Groups	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Steele City Segment									
Montana									
Phillips	1	314 (24.4%)	0 (0%)	85 (6.6%)	5 (0.4%)	2 (0.2%)	23 (1.8%)	115 (9.0%)	10 (0.8%)
Valley	6	593 (15.3%)	7 (0.2%)	550 (14.2%)	11 (0.3%)	19 (0.5%)	74 (1.9%)	661 (17.1%)	28 (0.1%)
McCone	3	331 (16.7%)	11 (0.6%)	27 (1.4%)	2 (0.1%)	4 (0.2%)	30 (1.5%)	74 (3.7)	24 (1.2%)
Dawson	2	186 (18.0%)	0 (0%)	2 (0.2%)	0 (0%)	0 (0%)	6 (0.6%)	8 (0.8%)	2 (0.2%)
Prairie	1	152 (26.5%)	0 (0%)	3 (0.5%)	0 (0%)	0 (0%)	4 (0.7%)	7 (1.2%)	2 (0.3%)
Fallon	3	349 (12.3%)	9 (0.3%)	12 (0.4%)	4 (0.1%)	0 (0%)	7 (0.3%)	32 (1.1%)	17 (0.6%)
Carter	1	130 (14.9%)	4 (0.5%)	3 (0.3%)	0 (0%)	0 (0%)	2 (0.2%)	9 (1.0%)	0 (0%)
<i>Subtotal Montana</i>	17	2,055 (16.5%)	31 (0.2%)	682 (5.5%)	22 (0.2%)	25 (0.2%)	146 (1.2%)	906 (7.3%)	83 (0.7%)
South Dakota									
Harding	2	277 (20.5%)	7 (0.5%)	20 (1.5%)	0 (0%)	0 (0%)	0 (0%)	27 (2.0%)	7 (0.5%)
Butte	1	167 (13.9%)	0 (0%)	0 (0%)	0 (0%)	2 (0.2%)	12 (1.0%)	14 (1.2%)	10 (0.8%)
Perkins	1	239 (21.8%)	0 (0%)	6 (0.5%)	0 (0%)	0 (0%)	13 (1.2%)	19 (1.7%)	3 (0.3%)
Meade	2	261 (16.5%)	0 (0%)	56 (3.5%)	6 (0.4%)	0 (0%)	10 (0.6%)	72 (4.5%)	12 (0.8%)
Ziebach	1	392 (59.8%)	0 (0%)	591 (90.2%)	2 (0.3%)	3 (0.5%)	3 (0.5%)	599 (91.5%)	7 (1.1%)
Pennington	1	91 (17.6%)	0 (0%)	9 (1.7%)	0 (0%)	0 (0%)	9 (1.7%)	18 (3.4%)	0 (0%)
Haakon	2	202 (18.0%)	0 (0%)	20 (1.8%)	9 (0.8%)	0 (0%)	1 (0.1%)	30 (2.7%)	0 (0%)
Jones	1	188 (15.8%)	7 (0.6%)	18 (1.5%)	0 (0%)	0 (0%)	27 (2.3%)	52 (4.4%)	0 (0%)
Lyman	1	149 (14.0%)	0 (0%)	8 (0.7%)	0 (0%)	0 (0%)	23 (2.2%)	31 (2.9%)	0 (0%)
Tripp	8	1,254 (19.5%)	0 (0%)	671 (10.4%)	19 (0.3%)	0 (0%)	89 (1.4%)	779 (12.1%)	46 (0.7%)
Gregory	1	188 (25.6%)	5 (0.7%)	44 (6.0%)	0 (0%)	0 (0%)	4 (0.5%)	53 (7.2%)	3 (0.4%)

TABLE 3.10.1-8									
Minority and Low-Income Populations as a Percentage of Census Block Group Populations within 4-Mile-Wide Analysis Area									
County	Total Number of Census Block Groups	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
<i>Subtotal South Dakota</i>	21	3,408 (20.1%)	19 (0.1%)	1,443 (8.5%)	36 (0.2%)	5 (0.1%)	191 (1.1%)	1,694 (10.0%)	88 (0.5%)
Nebraska									
Keya Paha	1	264 (26.9%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (0.5%)	5 (0.5%)	24 (2.4%)
Rock	1	217 (25.8%)	0 (0%)	7 (0.8%)	0 (0%)	0 (0%)	0 (0%)	7 (0.8%)	4 (0.5%)
Holt	2	318 (15.5%)	0 (0%)	24 (1.2%)	0 (0%)	5 (0.2%)	4 (0.2%)	33 (1.6%)	7 (0.3%)
Garfield	1	67 (10.9%)	0 (0%)	0 (0%)	2 (0.3%)	0 (0%)	0 (0%)	2 (0.3%)	7 (1.1%)
Wheeler	1	183 (20.7%)	2 (0.2%)	5 (0.6%)	0 (0%)	7 (0.8%)	2 (0.2%)	16 (0.2%)	7 (0.8%)
Greeley	2	387 (14.3%)	8 (0.3%)	0 (0%)	3 (0.1%)	14 (0.5%)	2 (0.1%)	27 (1.0%)	16 (0.6%)
Boone	2	194 (13.3%)	0 (0%)	0 (0%)	4 (0.3%)	0 (0%)	4 (0.3%)	8 (0.6%)	13 (0.9%)
Nance	1	118 (17.1%)	0 (0%)	0 (0%)	4 (0.6%)	0 (0%)	5 (0.7%)	9 (1.3%)	0 (0%)
Merrick	2	145 (7.1%)	4 (0.2%)	0 (0%)	0 (0%)	8 (0.4%)	6 (0.3%)	18 (0.9%)	17 (0.8%)
Hamilton	1	46 (4.4%)	4 (0.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (0.4%)	0 (0%)
Polk	1	28 (3.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
York	3	432 (9.2%)	50 (1.1%)	11 (0.2%)	0 (0%)	72 (1.5%)	21 (0.5%)	154 (3.3%)	100 (2.1%)
Fillmore	2	297 (10.8%)	0 (0%)	8 (0.3%)	7 (0.3%)	11 (0.4%)	35 (1.3%)	61 (2.3%)	15 (0.5%)
Saline	2	145 (7.9%)	2 (0.1%)	2 (0.1%)	2 (0.1%)	0 (0%)	9 (0.5%)	15 (0.8%)	4 (0.2%)
Jefferson	3	306 (8.2%)	0 (0%)	0 (0%)	8 (0.2%)	10 (0.3%)	46 (1.2%)	64 (1.7%)	25 (0.7%)
<i>Subtotal Nebraska</i>	25	3,147 (11.6%)	70 (0.3%)	57 (0.2%)	30 (0.1%)	127 (0.5%)	139 (0.5%)	423 (1.6%)	239 (0.9%)
New Cushing Extension Pump Stations									
Kansas									
Clay	4	456 (11.2%)	16 (0.4%)	7 (0.2%)	7 (0.2%)	7 (0.2%)	71 (1.7%)	108 (2.7%)	42 (1%)
Butler	1	37 (5.4%)	0 (0%)	5 (0.7%)	2 (0.3%)	0 (0%)	11 (1.6%)	18 (2.6%)	0 (0%)

TABLE 3.10.1-8									
Minority and Low-Income Populations as a Percentage of Census Block Group Populations within 4-Mile-Wide Analysis Area									
County	Total Number of Census Block Groups	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
<i>Subtotal Kansas</i>	5	493 (10.3%)	16 (0.3%)	12 (0.3%)	9 (0.2%)	7 (0.1%)	82 (1.7%)	126 (2.6%)	42 (0.9%)
Gulf Coast Segment									
Oklahoma									
Payne	2	322 (12.2%)	423 (16.0%)	102 (3.9%)	13 (0.5%)	24 (0.9%)	107 (4.0%)	669 (25.3%)	72 (2.7%)
Creek	2	312 (14.7%)	90 (4.3%)	202 (9.5%)	3 (0.1%)	6 (0.3%)	128 (6.0%)	429 (20.2%)	17 (0.8%)
Lincoln	6 (1) ^a	1,020 (16.0%)	108 (1.7%)	533 (8.3%)	14 (0.2%)	30 (0.5%)	258 (4.0%)	943 (14.7%)	48 (0.7%)
Okfuskee	5	795 (19.9%)	962 (24.0%)	451 (11.3%)	3 (0.1%)	16 (0.4%)	176 (4.4%)	1,608 (40.2%)	33 (0.8%)
Seminole	5	778 (18.8%)	326 (7.9%)	761 (18.4%)	2 (0.1%)	15 (0.3%)	211 (5.1%)	1,315 (31.8%)	46 (1.1%)
Hughes	9	1,992 (19.3%)	597 (5.8%)	1,631 (15.8%)	5 (0.1%)	73 (0.7%)	590 (5.7%)	2,896 (28.1%)	245 (2.4%)
Pontotoc	3	440 (14.4%)	13 (0.4%)	583 (19.0%)	3 (0.1%)	11 (0.4%)	171 (5.6%)	781 (25.5%)	26 (0.8%)
Coal	3	695 (20.6%)	20 (0.6%)	559 (16.6%)	7 (0.2%)	21 (0.6%)	170 (5.1%)	777 (23.1%)	63 (1.9%)
Atoka	6	1,091 (17.1%)	203 (3.2%)	825 (12.9%)	2 (0.1%)	13 (0.2%)	237 (3.7%)	1,280 (20.1%)	30 (0.5%)
Bryan	3	735 (18.8%)	10 (0.3%)	620 (15.9%)	5 (0.1%)	103 (2.6%)	121 (3.1%)	859 (22.0%)	136 (3.5%)
Choctaw	1	112 (16.5%)	0 (0%)	164 (24.1%)	0 (0%)	5 (0.8%)	43 (6.3%)	212 (31.2%)	27 (4.0%)
<i>Subtotal Oklahoma</i>	45 (1) ^a	8,292 (17.6%)	2,752 (5.8%)	6,431 (13.7%)	57 (0.1%)	317 (0.7%)	2,212 (4.7%)	11,769 (25%)	743 (1.6%)
Texas									
Fannin	2	173 (9.7%)	1,755 (98.1%)	0 (0%)	5 (0.3%)	0 (0%)	24 (1.3%)	5 (0.3%)	42 (2.3%)
Lamar	6	987 (15.0%)	361 (5.5%)	49 (0.7%)	8 (0.1%)	101 (1.6%)	98 (1.5%)	617 (9.4%)	236 (3.6%)
Delta	1	279 (18.5%)	9 (0.6%)	18 (1.2%)	16 (1.0%)	0 (0%)	45 (3.0%)	88 (5.8%)	0 (0%)

TABLE 3.10.1-8
Minority and Low-Income Populations as a Percentage of
Census Block Group Populations within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Hopkins	5	659 (13.2%)	70 (1.4%)	48 (1.0%)	0 (0%)	143 (2.9%)	47 (0.9%)	308 (6.2%)	387 (7.8%)
Franklin	3	482 (14.2%)	65 (1.9%)	20 (0.6%)	0 (0%)	204 (6.0%)	27 (0.8%)	316 (9.3%)	392 (11.5%)
Wood	8	1,374 (13.2%)	795 (7.7%)	24 (0.2%)	14 (0.1%)	89 (0.9%)	190 (1.8%)	1,112 (10.7%)	408 (4.0%)
Upshur	6	1,006 (13.9%)	550 (7.6%)	15 (0.2%)	11 (0.2%)	200 (2.7%)	61 (0.8%)	837 (11.5%)	244 (3.4%)
Smith	12	1,646 (10.3%)	3,920 (24.4%)	33 (0.2%)	9 (0.1%)	45 (0.3%)	108 (0.7%)	4,115 (25.7%)	504 (3.1%)
Rusk	4	877 (19.7%)	1,011 (22.7%)	24 (0.6%)	0 (0%)	270 (6.1%)	90 (2.0%)	1,395 (31.4%)	572 (12.9%)
Cherokee	5	1,201 (15.1%)	1,125 (14.1%)	48 (0.6%)	3 (0.1%)	506 (6.4%)	124 (1.5%)	1,806 (22.7%)	766 (9.6%)
Nacogdoches	5	972 (14.8%)	335 (5.1%)	15 (0.2%)	46 (0.7%)	381 (5.8%)	108 (1.6%)	885 (13.4%)	705 (10.7%)
Angelina	11 (1) ^a	2,986 (13.6%)	1,599 (7.3%)	59 (0.3%)	26 (0.1%)	2,032 (9.3%)	466 (2.1%)	4,182 (19.1%)	4,211 (19.2%)
Trinity	2	290 (17.4%)	263 (15.8%)	2 (0.1%)	0 (0%)	20 (1.2%)	12 (0.7%)	297 (17.8%)	27 (1.6%)
Polk	9	2,208 (15.0%)	1,025 (7.0%)	86 (0.6%)	35 (0.2%)	718 (4.9%)	227 (1.5%)	2,091 (14.2%)	1,449 (9.9%)
San Jacinto	1	393 (17.4%)	296 (13.1%)	0 (0%)	0 (0%)	45 (2.0%)	24 (1.0%)	365 (16.1%)	129 (5.7%)
Liberty	6	1,172 (20.1%)	314 (5.4%)	62 (1.0%)	27 (0.5%)	185 (3.2%)	91 (1.5%)	679 (11.6%)	363 (6.2%)
Hardin	5	852 (11.5%)	124 (1.7%)	34 (0.5%)	7 (0.1%)	85 (1.1%)	90 (1.2%)	340 (19.9%)	251 (3.4%)
Jefferson	43 (14) ^a	3,583 (5.7%)	10,697 (17%)	290 (0.5%)	1,026 (1.6%)	1,023 (1.6%)	790 (1.3%)	13,826 (22%)	5,978 (9.5%)
Orange	1	109 (4.8%)	0 (0%)	58 (2.6%)	0 (0%)	27 (1.2%)	43 (1.9%)	128 (5.7%)	84 (3.7%)
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>135 (15)^a</i>	<i>21,249 (11.2%)</i>	<i>22,559 (11.9%)</i>	<i>890 (0.5%)</i>	<i>1,228 (0.6%)</i>	<i>6,098 (3.2%)</i>	<i>2,646 (1.4%)</i>	<i>33,421 (17.6%)</i>	<i>16,748 (8.8%)</i>

TABLE 3.10.1-8									
Minority and Low-Income Populations as a Percentage of Census Block Group Populations within 4-Mile-Wide Analysis Area									
County	Total Number of Census Block Groups	Low-Income Populations	Minority Populations						
			African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino
Houston Lateral									
Texas									
Liberty	17	2,700 (12.9%)	3,100 (14.8%)	60 (0.3%)	93 (0.4%)	868 (4.2%)	301 (1.4%)	4,422 (21.1%)	1,541 (7.4%)
Chambers	2	283 (6.8%)	72 (1.7%)	14 (0.4%)	0 (0%)	111 (2.7%)	38 (0.9%)	235 (5.7%)	243 (5.8%)
Harris	24	5,536 (11.0%)	11,317 (22.5%)	160 (0.3%)	1,134 (2.3%)	6,738 (13.4%)	1,326 (2.6%)	20,675 (41.1%)	13,643 (27.1%)
<i>Subtotal Texas - Houston Lateral</i>	<i>43 (2)^a</i>	<i>8,519 (11.3%)</i>	<i>14,489 (19.2%)</i>	<i>234 (0.3%)</i>	<i>1,227 (1.7%)</i>	<i>7,717 (10.2%)</i>	<i>1,665 (2.2%)</i>	<i>25,332 (33.6%)</i>	<i>15,427 (20.5%)</i>
<i>Subtotal Texas^b</i>	<i>174 (17)^a</i>	<i>29,154 (11.2%)</i>	<i>36,770 (14.1%)</i>	<i>1,122 (0.4%)</i>	<i>2,428 (1.0%)</i>	<i>13,683 (5.2%)</i>	<i>4,238 (1.6%)</i>	<i>58,241 (22.3%)</i>	<i>31,912 (12.2%)</i>
Project Total	287 (18)	46,549 (12.6%)	39,658 (10.7%)	9,747 (2.7%)	2,582 (0.7%)	14,164 (3.8%)	7,008 (1.9%)	73,159 (19.8%)	33,107 (9.0%)

^a Numbers in parentheses indicate number of census block groups fully contained within the 4-mile-wide analysis area.

^b Four census block groups in Liberty County (CT 7006 BG 3, CT 7007 BG 1, CT 7013 BG 1, BG 3) affected by both the Gulf Coast Segment and Houston Lateral were only counted once in the Texas subtotal.

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.
U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.
See <http://factfinder.census.gov/home>.

Minority Populations

This section describes the minority populations along the proposed Project corridor, using the methodology previously described. Minority populations are members of one of the following racial groups: African-Americans, American Indians or Alaskan Natives, Asians, Native Hawaiians or other Pacific Islanders, “Other” races, or multi-racial (CEQ 1997).

Populations within Counties

The percent of minority populations by county within the proposed Project area are listed in Table 3.10.1-7.

50 Percent Criterion

The 2000 Census showed that no minority populations exceeded 50 percent of the total county population in any county along the proposed Project route.

Meaningfully Greater Criterion

Minority populations that were meaningfully greater than the corresponding minority population at the state level are identified with an asterisk (*) in the relevant racial/ethnic category columns in Table 3.10.1-9 and are also listed in Table 3.10.1-9. These minority populations were identified in 34 of the 59 counties in the proposed Project area.

Along the proposed Steele City Segment, 12 counties had minority populations that were meaningfully greater than their corresponding state populations. African American populations were identified in McCone and Dawson counties in Montana, and Meade and Pennington counties in South Dakota. The Native American/Alaska Native populations in Montana residing in Phillips County were partially located in the Fort Belknap Indian Reservation, while Valley County populations were partially located in the Fort Peck Indian Reservation. In South Dakota, Native American/Alaska Native populations in Lyman County were partially located in the Lower Brule Indian Reservation, while Tripp County abuts the Rosebud Indian Reservation. A Native American/Alaska Native population was also identified in Rock County, Nebraska. Phillips County, Montana and Meade and Pennington counties in South Dakota had populations of Asians or Pacific Islanders. Butte, Meade, and Pennington counties in South Dakota and Saline County in Nebraska were identified as containing populations of “Other” races. Phillips County, Montana and Meade and Jones counties in South Dakota contained multi-racial populations. South Dakota also had people identifying themselves as Hispanic or Latino in Butte, Meade, and Pennington counties; and an aggregate minority population in Lyman County, primarily comprised of Native Americans or Alaskan Natives.

In Kansas, for the two new proposed pump stations, Butler County contained a Native American/Alaska Native population that was meaningfully greater than the corresponding state population.

Along the Gulf Coast Segment, 20 counties had minority populations that were meaningfully greater than their corresponding state populations. Oklahoma had nine counties with those minority populations, which were comprised of one county with an African American population (Okfuskee County), seven counties with Native Americans or Alaska Natives (Okfuskee, Seminole, Hughes, Pontotoc, Coal, Atoka, and Bryan counties), Payne County had an Asian/Pacific Islander population, six counties with multi-racial populations (Creek, Seminole, Hughes, Pontotoc, Coal, and Atoka counties), and two aggregate minority populations (Okfuskee and Seminole counties). The remaining 11 county minority populations were in Texas, and included six counties with African American populations (Smith, Rusk, Cherokee, Nacogdoches, Angelina, and Jefferson counties), five counties with Native Americans or Alaska Natives

(Fannin, Lamar, Hopkins, Franklin, and Polk counties), and an aggregate minority population in Jefferson County.

Along the Houston Lateral, Harris County had African American, Asian or Pacific Islander, “Other,” multi-racial, and aggregate minority populations that were meaningfully greater than the corresponding Texas population.

Populations within Census Block Groups

For each of the 287 census block groups located within the 4-mile-wide analysis area (2 miles on each side of the centerline), the percentage of each census block group’s population represented by each minority classification (each race, aggregate race minority population, and Hispanic/Latino ethnic origin) was calculated and compared to the two criteria described above. Tables 3.10.1-10 and 3.10.1-11 identify the minority populations that are represented graphically in Figures 3.10.1-1 through 3.10.1-6. These figures also identify towns and cities that occur along the proposed pipeline corridor, in relation to the census block groups with minority and low-income populations meaningfully greater than state-wide averages.

50 Percent Criterion

Proposed Project Summary

Within the comparative geographic area, a total of 25 census block groups had individual racial minority populations or aggregate minority populations that exceeded the 50 percent criterion. Along the proposed Steele City Segment, one population in Valley County, Montana and another in Ziebach County, South Dakota exceeded 50 percent for Native Americans or Alaskan Natives. The Valley County population is part of the Fort Peck Indian Reservation and the Ziebach County population is part of the Cheyenne River Indian Reservation. No census block groups with minority populations exceeding 50 percent of the total population were identified in the Nebraska portion of the Steele City Segment or in Kansas for the pump stations.

The Oklahoma section of the proposed Gulf Coast Segment contained one African American population and one aggregate minority population in Okfuskee County. These populations were within Boley, a community with 1,126 (55 percent) African American residents in 2000. In Texas, along the proposed Gulf Coast Segment, there were 13 populations that met the 50 percent criterion. Of the nine African American populations, one was in Wood County near Hawkins, two were in Smith County east of Tyler, one was in Angelina County at Diboll, and five were in Jefferson County in or near Beaumont. Aggregate minority populations comprising 50 percent or more of the population included two in Jefferson County near Beaumont and one in Rusk County west of Mount Enterprise. One Hispanic population was located in Diboll in Angelina County.

For the proposed Houston Lateral, Liberty County and Harris County each had two populations that met the 50 percent criterion for African Americans. The African American populations in Liberty County were located near Liberty, Ames, and Devers and in Harris County near Barrett. Four aggregate minority populations were in Harris County, near Cloverleaf and east of Houston.

Meaningfully Greater Criterion

Proposed Project Summary

Minority populations are members of one of the following racial groups: African-Americans, American Indians or Alaskan Natives, Asians, Native Hawaiians or other Pacific Islanders, “Other” races, or multi-racial (CEQ 1997). There were 297 meaningfully greater minority populations that occurred within 172

individual census block groups (see Table 3.10.1-11) along the proposed Project analysis corridor. Of the 297 meaningfully greater minority populations, 36 were identified along the proposed Steele City Segment, one was found in proximity to the Kansas pump stations, 195 were identified along the proposed Gulf Coast Segment, and 69 were identified along the proposed Houston Lateral (four are common to both the Gulf Coast Segment and Houston Lateral).

Proposed Steele City Segment

For the proposed Steele City Segment, there were 15 meaningfully greater minority populations that occurred within eight individual census block groups in Montana. Four African American populations were in Montana, one each in Valley County (within St. Marie), McCone County (in Circle), Fallon County (in Baker), and Carter County. Two Native American/Alaskan Native populations and one Asian/Pacific Islander population were in Valley County on the Fort Peck Indian Reservation. Two “Other” populations also were in Valley County, one in the Fort Peck Indian Reservation and one east of Glasgow. Multi-racial populations in Montana were identified in both Valley County and McCone County. Two aggregate minority populations were also identified in Valley County, primarily comprised of Native Americans or Alaskan Natives. One Hispanic/Latino population also was located in Valley County east of Glasgow.

South Dakota had 18 meaningfully greater minority populations that occurred within 12 individual census block groups. One African American population was identified in Harding County within Buffalo. One Native American/Alaskan Native population was in Ziebach County on the Cheyenne River Indian Reservation; and three were in Tripp County within Winner and New Witten northeast of the Rosebud Indian Reservation. One Asian/Pacific Islander population was identified in both Haakon County and in Tripp County (at Winner). Multi-racial populations included one each in Pennington, Jones, and Lyman counties; and three in Tripp County. One Hispanic/Latino population also was located in each of Meade County and Tripp County, near Winner. One aggregate minority population was identified in Ziebach County and two were identified in Tripp County, primarily comprised of Native Americans or Alaskan Natives.

Nebraska contained two Native American/Alaskan Native populations in Holt County and one multi-racial population in Jefferson County.

New Cushing Extension Pump Stations

Kansas had one meaningfully greater multi-racial population in Clay County within Clay Center.

Proposed Gulf Coast Segment

For the proposed Gulf Coast Segment in Oklahoma, there were 73 meaningfully greater minority populations that occurred within 39 individual census block groups. African American populations were in Payne County (at Cushing) and Lincoln County (at Stroud). Two African American populations each were in Okfuskee County (within Boley), Seminole County (at Cromwell), Hughes County (at Holdenville), and Atoka County (at Atoka). Of the 30 Native American/Alaskan Native populations, one was in each of Creek, Lincoln, and Choctaw counties; two were in Okfuskee County; three were in each of Pontotoc, Coal, and Bryan counties; four were in Seminole County; and six populations were in each of Hughes and Atoka counties. One Asian/Pacific Islander population was in Lincoln County (near Stroud) and one “Other” population was identified in Bryan County. Individual multi-racial populations were in Atoka and Choctaw counties; two populations were in each of Creek, Okfuskee, Seminole, Pontotoc, and Coal counties; and four were identified in Hughes County. Aggregate minority populations were identified in Payne, Bryan, and Choctaw counties; three populations were in Okfuskee County; and four were each in Seminole and Hughes counties. These aggregate minority populations were primarily

comprised of African American and Native American/Alaskan Native populations. One Hispanic/Latino population was also identified in Hughes County (within Holdenville).

In Texas, there were 122 meaningfully greater minority populations that occurred within 82 individual census block groups. Of the 37 African American populations, one each was in Lamar, Angelina, Trinity, Polk, and Liberty counties; two were in Cherokee County (at Reklaw and Gallatin); three each were in Wood County (near Hawkins and Winnsboro) and Rusk County (west of Mount Enterprise and Henderson); 10 were in Smith County (east of Tyler); and 14 were in Jefferson County (near Beaumont). Native American/Alaskan Native populations included one each in Delta, Franklin, Upshur, Smith, Rusk, Nacogdoches, Angelina, and Orange counties; two were identified in each of Lamar, Cherokee, Liberty, and Hardin counties; three were in Polk County (within or near the Alabama-Coushatta Indian Reservation); four were identified in Hopkins County; and 11 populations were in Jefferson County. Six Asian/Pacific Islander populations were in Jefferson County (within Beaumont and Nederland). “Other” populations identified included three in Angelina County (within Diboll) and one in Polk County. Seventeen multi-racial populations were identified, including one each in Lamar, Wood, Rusk, and Polk counties; two each in Liberty and Hardin counties; four were in Angelina County (at Diboll and Hudson); and five were in Jefferson County (at Port Neches and Nederland). Of the 21 aggregate minority populations, one each was identified in Wood, Trinity, Polk, and Liberty counties; two were in Rusk County (primarily African American); three each were in Smith County (primarily African American) and Angelina County (primarily Hispanic or Latino); and nine populations were identified in Jefferson County (primarily African American). Three Hispanic/Latino populations were located in Angelina County (near Diboll).

Proposed Houston Lateral

The proposed Houston Lateral contained 69 meaningfully greater minority populations that occurred within 29 individual census block groups. Seven African American populations were identified in Liberty County (near Liberty, Dayton, Devers, and Ames) and 11 were identified in Harris County (surrounding Barrett and Channelview). Of the five Native American/Alaskan Native populations identified, two were in Liberty County and three were in Harris County (near Sheldon and Highlands). Four Asian/Pacific Islander populations were in Harris County (near Channelview and Cloverleaf). One “Other” population was identified in Chambers County and eight populations were identified in Harris County (within Channelview). Five multi-race populations were identified in Liberty County (near Dayton and Devers), and eight were identified in Harris County (surrounding Barrett and Channelview). Of the 14 aggregate minority populations, five were in Liberty County and nine were in Harris County, primarily comprised of African American and Hispanic/Latino populations. Six Hispanic/Latino populations were along the proposed Houston Lateral in Harris County (within Channelview and Sheldon).

**TABLE 3.10.1-9
County-Level Minority Populations Meaningfully Greater than
Corresponding States' Minority Population**

Minority Population	County	State
Steele City Segment		
African American	McCone	Montana
	Dawson	Montana
	Meade	South Dakota
	Pennington	South Dakota
Native American or Alaska Native	Phillips	Montana
	Valley	Montana
	Lyman	South Dakota
	Tripp	South Dakota
	Rock	Nebraska
Asian or Pacific Islander	Phillips	Montana
	Meade	South Dakota
	Pennington	South Dakota
Other	Butte	South Dakota
	Meade	South Dakota
	Pennington	South Dakota
	Saline	Nebraska
Two or More Races	Phillips	Montana
	Meade	South Dakota
	Pennington	South Dakota
	Jones	South Dakota
	Lyman	South Dakota
Aggregate of Racial Minorities	Lyman	South Dakota
Hispanic	Butte	South Dakota
	Meade	South Dakota
	Pennington	South Dakota
New Cushing Extension Pump Stations		
Native American or Alaska Native	Butler	Kansas
Gulf Coast Segment		
African American	Okfuskee	Oklahoma
	Smith	Texas
	Rusk	Texas
	Cherokee	Texas
	Nacogdoches	Texas
	Angelina	Texas
	Jefferson	Texas
Native American or Alaska Native	Okfuskee	Oklahoma
	Seminole	Oklahoma

**TABLE 3.10.1-9
County-Level Minority Populations Meaningfully Greater than
Corresponding States' Minority Population**

Minority Population	County	State
	Hughes	Oklahoma
	Pontotoc	Oklahoma
	Coal	Oklahoma
	Atoka	Oklahoma
	Bryan	Oklahoma
	Fannin	Texas
	Lamar	Texas
	Hopkins	Texas
	Franklin	Texas
	Polk	Texas
Asian or Pacific Islander	Payne	Oklahoma
Two or More Races	Creek	Oklahoma
	Seminole	Oklahoma
	Hughes	Oklahoma
	Pontotoc	Oklahoma
	Coal	Oklahoma
	Atoka	Oklahoma
Aggregate of Racial Minorities	Okfuskee	Oklahoma
	Seminole	Oklahoma
	Jefferson	Texas
Houston Lateral		
African American	Harris	Texas
Asian or Pacific Islander	Harris	Texas
Other	Harris	Texas
Two or More Races	Harris	Texas
Aggregate of Racial Minorities	Harris	Texas

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 - Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.

U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.

Low-Income Populations

Low-income populations in the region of influence were identified and evaluated using poverty data from the United States Census Bureau. As with minority populations, low-income populations were evaluated using the absolute 50 percent and the relative 120 percent greater criteria, first for counties and then for potentially affected census block groups within the counties. If the percentage of low-income individuals was 120 percent greater in a county than the corresponding state in which it was located, it was considered to be a low-income population. These counties are noted with an asterisk (*) in the third column of Table 3.10.1-9. Also, low-income individuals in each census block group were divided by the total individuals for that census block group to obtain the percentage of low-income individuals per census block group. If any census block group percentage exceeded the corresponding state percentage

by more than 120 percent, then the census block group was identified as containing a low-income population.

Four states, Montana (14.6 percent), South Dakota (13.2 percent), Oklahoma (14.7 percent), and Texas (15.4 percent) had greater rates of low-income residents in 1999 than the United States rate of 12.4 percent. In comparison, 9.9 percent of Kansas residents were considered low-income in 1999 and 9.7 percent of Nebraska residents were considered low-income, noticeably less than for the United States percentage. Thus, for comparative purposes, the 120-percent exceedance criterion for each state would be 17.5 percent for Montana, 15.8 percent for South Dakota, 11.7 percent for Nebraska, 11.9 percent for Kansas, 17.6 percent for Oklahoma, and 18.5 percent for Texas.

Populations within Counties

As shown in Table 3.10.1-7, no counties had 50 percent or more of low-income individuals. In total, 20 of the 59 counties that would comprise the proposed Project area met the 120 percent meaningfully greater criterion for low-income populations.

In the proposed Steele City Segment, 13 out of 29 counties had meaningfully greater low-income populations, including Phillips County in Montana; Harding, Perkins, Jones, Lyman, and Tripp counties in South Dakota; and Keya Paha, Rock, Holt, Garfield, Wheeler, Greeley, and Nance counties in Nebraska. None of the counties in Kansas were classified as low-income. Seven of the 27 counties in the proposed Gulf Coast Segment met the meaningfully greater criteria of 17.6 percent in Oklahoma or 18.5 percent in Texas. These low-income populations included Payne, Okfuskee, Seminole, Hughes, Coal, and Bryan counties in Oklahoma; and Nacogdoches County in Texas. The three counties along the proposed Houston Lateral did not have low-income populations.

Populations within Census Block Groups

Populations within census block groups meeting either of the absolute 50 percent or 120 percent meaningfully greater criteria are described in this section. Of the 287 census block groups assessed along the proposed Project analysis corridor, 82 contained low-income populations. Tables 3.10.1-10 and 3.10.1-11 and Figures 3.10.1-1 through 3.10.1-6 identify these low-income populations within census block groups.

50 Percent Criterion

Proposed Project Summary

Only one low-income population within census block groups along the 4-mile-wide analysis corridor exceeded the 50 percent criterion. This population also exceeded the 120-percent criterion, as described in the following section. The population was located in Ziebach County, South Dakota on part of the Cheyenne River Indian Reservation.

Meaningfully Greater Criterion

Proposed Project Summary

A total of 83 populations within individual census block groups along the 4-mile-wide analysis corridor had 120 percent more than the percentage of low-income individuals for each corresponding state. Table 3.10.1-11 indicates that of these 83 low-income populations, 29 were located along the Steele City Segment, one was at the pump stations in Kansas, 48 were along the Gulf Coast Segment, and five were along the Houston Lateral. One low-income population was identified in Liberty County, Texas for both the Gulf Coast Segment and the Houston Lateral.

For Montana, one low-income population was in each of Phillips, Valley, McCone, Dawson, and Prairie counties. Of the 13 low-income populations in South Dakota, one was in each of Harding, Perkins, Meade, Ziebach, Pennington, and Gregory counties; two were in Haakon County; and five were in Tripp County, surrounding Winner. Nebraska contained 11 low-income populations, one was in each of Keya Paha, Rock, Wheeler, Nance, and Fillmore counties; and two were in each of Holt, Greeley, and Boone counties.

At the proposed Pump Station 29 in Kansas, one low-income population was identified in Clay County, near Clay Center.

In the Gulf Coast Segment, of the 23 low-income populations in Oklahoma, one was in each of Payne and Pontotoc counties; two were in each of Seminole, Coal, Atoka, and Bryan counties; three were in each of Lincoln and Okfuskee counties; and seven were in Hughes County. Hughes County had the most low-income populations identified in any state affected by the proposed Project. The Gulf Coast Segment in Texas contained 25 low-income populations, one was in each of Delta, Hopkins, Upshur, Cherokee, Nacogdoches, Angelina, and Polk counties; two were in each of Lamar, Smith, and Hardin counties; and three were in each of Wood, Rusk, Liberty, and Jefferson counties.

For the Houston Lateral in Texas, four low-income populations were in Liberty County and one was in Harris County.

TABLE 3.10.1-10
Number of Minority and Low-Income Populations Exceeding 50% within Census Block Groups by County
within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations								
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations	
Tripp	8	0	0	0	0	0	0	0	0	0	0	
Gregory	1	0	0	0	0	0	0	0	0	0	0	
<i>Subtotal South Dakota</i>	<i>21</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	
Nebraska												
Keya Paha	1	0	0	0	0	0	0	0	0	0	0	
Rock	1	0	0	0	0	0	0	0	0	0	0	
Holt	2	0	0	0	0	0	0	0	0	0	0	
Garfield	1	0	0	0	0	0	0	0	0	0	0	
Wheeler	1	0	0	0	0	0	0	0	0	0	0	
Greeley	2	0	0	0	0	0	0	0	0	0	0	
Boone	2	0	0	0	0	0	0	0	0	0	0	
Nance	1	0	0	0	0	0	0	0	0	0	0	
Merrick	2	0	0	0	0	0	0	0	0	0	0	
Hamilton	1	0	0	0	0	0	0	0	0	0	0	
Polk	1	0	0	0	0	0	0	0	0	0	0	
York	3	0	0	0	0	0	0	0	0	0	0	
Fillmore	2	0	0	0	0	0	0	0	0	0	0	
Saline	2	0	0	0	0	0	0	0	0	0	0	
Jefferson	3	0	0	0	0	0	0	0	0	0	0	
<i>Subtotal Nebraska</i>	<i>25</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	

TABLE 3.10.1-10
Number of Minority and Low-Income Populations Exceeding 50% within Census Block Groups by County
within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations								
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations	
New Cushing Extension Pump Stations												
Kansas												
Clay	4	0	0	0	0	0	0	0	0	0	0	0
Butler	1	0	0	0	0	0	0	0	0	0	0	0
<i>Subtotal Kansas</i>	5	0	0	0	0	0	0	0	0	0	0	0
Gulf Coast Segment												
Oklahoma												
Payne	2	0	0	0	0	0	0	0	0	0	0	0
Creek	2	0	0	0	0	0	0	0	0	0	0	0
Lincoln	6 (1) ^a	0	0	0	0	0	0	0	0	0	0	0
Okfuskee	5	0	2	1	0	0	0	0	1	0	0	2
Seminole	5	0	0	0	0	0	0	0	0	0	0	0
Hughes	9	0	0	0	0	0	0	0	0	0	0	0
Pontotoc	3	0	0	0	0	0	0	0	0	0	0	0
Coal	3	0	0	0	0	0	0	0	0	0	0	0
Atoka	6	0	0	0	0	0	0	0	0	0	0	0
Bryan	3	0	0	0	0	0	0	0	0	0	0	0
Choctaw	1	0	0	0	0	0	0	0	0	0	0	0
<i>Subtotal Oklahoma</i>	45 (1) ^a	0	2	1	0	0	0	0	1	0	0	2

**TABLE 3.10.1-10
Number of Minority and Low-Income Populations Exceeding 50% within Census Block Groups by County
within 4-Mile-Wide Analysis Area**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low- Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations								
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations	
Texas												
Fannin	2	0	0	0	0	0	0	0	0	0	0	0
Lamar	6	0	0	0	0	0	0	0	0	0	0	0
Delta	1	0	0	0	0	0	0	0	0	0	0	0
Hopkins	5	0	0	0	0	0	0	0	0	0	0	0
Franklin	3	0	0	0	0	0	0	0	0	0	0	0
Wood	8	0	1	1	0	0	0	0	0	0	0	1
Upshur	6	0	0	0	0	0	0	0	0	0	0	0
Smith	12	0	2	2	0	0	0	0	0	0	0	2
Rusk	4	0	1	0	0	0	0	0	0	1	0	1
Cherokee	5	0	0	0	0	0	0	0	0	0	0	0
Nacogdoches	5	0	0	0	0	0	0	0	0	0	0	0
Angelina	11 (1) ^a	0	2	1	0	0	0	0	0	0	1	2
Trinity	2	0	0	0	0	0	0	0	0	0	0	0
Polk	9	0	0	0	0	0	0	0	0	0	0	0
Hardin	5	0	0	0	0	0	0	0	0	0	0	0
Jefferson	43 (14) ^a	0	7	5	0	0	0	0	0	2	0	7
Orange	1	0	0	0	0	0	0	0	0	0	0	0
<i>Subtotal</i>												
<i>Texas - Gulf Coast Segment</i>	<i>135 (15)^a</i>	<i>0</i>	<i>13</i>	<i>9</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>1</i>	<i>13</i>

**TABLE 3.10.1-10
Number of Minority and Low-Income Populations Exceeding 50% within Census Block Groups by County
within 4-Mile-Wide Analysis Area**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low- Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations
Houston Lateral											
Texas											
Liberty	17	0	2	2	0	0	0	0	0	0	2
Chambers	2	0	0	0	0	0	0	0	0	0	0
Harris	24	0	6	2	0	0	0	0	4	0	6
<i>Subtotal Texas - Houston Lateral)</i>	<i>43 (2)^a</i>	<i>0</i>	<i>8</i>	<i>4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>8</i>
<i>Subtotal Texas^b</i>	<i>174 (17)^a</i>	<i>0</i>	<i>21</i>	<i>13</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7</i>	<i>1</i>	<i>21</i>
Project Total	287 (18)^a	1	25	14	2	0	0	0	8	1	25

^a Numbers in parentheses indicate number of census block groups fully contained within the 4-mile-wide analysis area.

^b Four census block groups in Liberty County (CT 7006 BG 3, CT 7007 BG 1, CT 7013 BG 1, BG 3) affected by both the Gulf Coast Segment and Houston Lateral were only counted once in the Texas subtotal.

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.

U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.

See <http://factfinder.census.gov/home>

**TABLE 3.10.1-11
Minority and Low-Income (Environmental Justice) Populations Exceeding 120% of State Levels
within Census Block Groups by County within 4-Mile-Wide Analysis Area**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							Total Number of Minority Populations
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	
Steele City Segment											
Montana											
Phillips	1	1	0	0	0	0	0	0	0	0	0
Valley	6	1	4	1	2	1	2	2	2	1	11
McCone	3	1	2	1	0	0	0	1	0	0	2
Dawson	2	1	0	0	0	0	0	0	0	0	0
Prairie	1	1	0	0	0	0	0	0	0	0	0
Fallon	3	0	1	1	0	0	0	0	0	0	1
Carter	1	0	1	1	0	0	0	0	0	0	1
<i>Subtotal Montana</i>	<i>17</i>	<i>5</i>	<i>8</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>15</i>
Montana Exceedance Criteria ^a	-	17.5%	-	0.4%	7.4%	0.7%	0.7%	2.1%	11.4%	2.4%	-
South Dakota											
Harding	2	1	1	1	0	0	0	0	0	0	1
Butte	1	0	0	0	0	0	0	0	0	0	0
Perkins	1	1	0	0	0	0	0	0	0	0	0
Meade	2	1	1	0	0	0	0	0	0	1	1
Ziebach	1	1	1	0	1	0	0	0	1	0	2
Pennington	1	1	1	0	0	0	0	1	0	0	1
Haakon	2	2	1	0	0	1	0	0	0	0	1

TABLE 3.10.1-11
Minority and Low-Income (Environmental Justice) Populations Exceeding 120% of State Levels
within Census Block Groups by County within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							Total Number of Minority Populations
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	
Saline	2	0	0	0	0	0	0	0	0	0	0
Jefferson	3	0	1	0	0	0	0	1	0	0	1
<i>Subtotal Nebraska</i>	25	11	3	0	2	0	0	1	0	0	3
Nebraska Exceedance Criteria ^a	-	11.7%	-	4.8%	1.1%	1.6%	3.4%	1.7%	12.5%	6.6%	-
New Cushing Extension Pump Stations											
Kansas											
Clay	4	1	1	0	0	0	0	1	0	0	1
Butler	1	0	0	0	0	0	0	0	0	0	0
<i>Subtotal Kansas</i>	5	1	1	0	0	0	0	1	0	0	1
Kansas Exceedance Criteria ^a	-	11.9%	-	6.9%	1.1%	2.1%	4.2%	2.6%	16.6%	8.4%	-
Gulf Coast Segment											
Oklahoma											
Payne	2	1	1	1	0	0	0	0	1	0	2
Creek	2	0	2	0	1	0	0	2	0	0	3
Lincoln	6 (1) ^b	3(1) ^b	2	1	1	1	0	0	0	0	3
Okfuskee	5	3	4	2	2	0	0	2	3	0	9
Seminole	5	2	5	2	4	0	0	2	4	0	12
Hughes	9	7	9	2	6	0	0	4	4	1	17

TABLE 3.10.1-11
Minority and Low-Income (Environmental Justice) Populations Exceeding 120% of State Levels
within Census Block Groups by County within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations
Pontotoc	3	1	3	0	3	0	0	2	0	0	5
Coal	3	2	3	0	3	0	0	2	0	0	5
Atoka	6	2	6	2	6	0	0	1	0	0	9
Bryan	3	2	3	0	3	0	1	0	1	0	5
Choctaw	1	0	1	0	1	0	0	1	1	0	3
<i>Subtotal Oklahoma</i>	<i>45 (1)^p</i>	<i>23 (1)^b</i>	<i>39</i>	<i>10</i>	<i>30</i>	<i>1</i>	<i>1</i>	<i>16</i>	<i>14</i>	<i>1</i>	<i>73</i>
Oklahoma Exceedance Criteria ^a	-	17.6%	-	9.1%	9.5%	1.6%	2.9%	5.4%	28.5%	6.2%	-
Texas											
Fannin	2	0	0	0	0	0	0	0	0	0	0
Lamar	6	2	3	1	2	0	0	1	0	0	4
Delta	1	1	1	0	1	0	0	0	0	0	1
Hopkins	5	1	4	0	4	0	0	0	0	0	4
Franklin	3	0	1	0	1	0	0	0	0	0	1
Wood	8	3	4	3	0	0	0	1	1	0	5
Upshur	6	1	1	0	1	0	0	0	0	0	1
Smith	12	2	10	10	1	0	0	0	3	0	14
Rusk	4	3	4	3	1	0	0	1	2	0	7
Cherokee	5	1	4	2	2	0	0	0	0	0	4
Nacogdoches	5	1	1	0	1	0	0	0	0	0	1
Angelina	11 (1) ^b	1 (1) ^b	8 (1) ^b	1	1	0	3	4	3	3	15

**TABLE 3.10.1-11
Minority and Low-Income (Environmental Justice) Populations Exceeding 120% of State Levels
within Census Block Groups by County within 4-Mile-Wide Analysis Area**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	Total Number of Minority Populations
Trinity	2	0	1	1	0	0	0	0	1	0	2
Polk	9	1	6	1	3	0	1	1	1	0	7
San Jacinto	1	0	0	0	0	0	0	0	0	0	0
Liberty	6	3	4	1	2	0	0	2	1	0	6
Hardin	5	2	4	0	2	0	0	2	0	0	4
Jefferson	43 (14) ^b	3	25 (8) ^b	14	11	6	0	5	9	0	45
Orange	1	0	1	0	1	0	0	0	0	0	1
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>135 (15)^b</i>	<i>25 (1)^b</i>	<i>82 (9)^b</i>	<i>37</i>	<i>34</i>	<i>6</i>	<i>4</i>	<i>17</i>	<i>21</i>	<i>3</i>	<i>122</i>
Texas Exceedance Criteria ^a	-	18.5%	-	13.8%	0.7%	3.4%	14.1%	3.0%	35.0%	38.4%	-
Houston Lateral											
Texas											
Liberty	17	4	10	7	2	0	0	5	5	0	19
Chambers	2	0	1	0	0	0	1	0	0	0	1
Harris	24	1	18 (1) ^b	11	3	4	8	8	9	6	49
<i>Subtotal Texas - Houston Lateral)</i>	<i>43 (2)^b</i>	<i>5</i>	<i>29 (1)^b</i>	<i>18</i>	<i>5</i>	<i>4</i>	<i>9</i>	<i>13</i>	<i>14</i>	<i>6</i>	<i>69</i>

TABLE 3.10.1-11
Minority and Low-Income (Environmental Justice) Populations Exceeding 120% of State Levels
within Census Block Groups by County within 4-Mile-Wide Analysis Area

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing Low-Income Populations	Census Block Groups Containing One or More Minority Populations	Minority Populations							Total Number of Minority Populations
				African American	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Aggregate (Total) of Racial Minorities	Hispanic or Latino	
Texas Exceedance Criteria ^a	-	18.5%	-	13.8%	0.7%	3.4%	14.1%	3.0%	35.0%	38.4%	-
<i>Subtotal Texas^c</i>	<i>174 (17)^b</i>	<i>29 (1)^b</i>	<i>109 (10)^b</i>	<i>54</i>	<i>39</i>	<i>10</i>	<i>13</i>	<i>28</i>	<i>34</i>	<i>9</i>	<i>187</i>
Project Total	287 (18)^b	83 (2)^b	172 (10)^b	69	77	14	16	55	53	13	297

^a State-wide exceedance criteria percentages are 1.2 times the actual Environmental Justice group population percentages for each state.

^b Numbers in parentheses indicate number of census block groups fully contained within the 4-mile-wide analysis area.

^c Four census block groups in Liberty County (CT 7006 BG 3, CT 7007 BG 1, CT 7013 BG 1, BG 3) affected by both the Gulf Coast Segment and Houston Lateral were only counted once in the Texas subtotal.

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.

U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.

See <http://factfinder.census.gov/home>.

3.10.1.2 Potential Impacts

The socioeconomic consequences of constructing and operating the proposed Project would vary in duration and magnitude. From a temporal perspective, impacts are characterized as temporary, short-term, long-term, or permanent. Impacts are considered in the context of duration, magnitude (relative to baseline conditions), and any proposed measures or activities that would be implemented as part of the proposed Project. The following impact thresholds for potential social and economic impacts were used in the analysis:

- Changes to local social or economic activities, including changes in employment and income levels, resulting from the proposed Project construction and operations;
- Overburdening of the local housing stock because of demand generated by the temporary and permanent work force;
- 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 in fiscal revenues, including tax receipts, of local jurisdictions; and
- Substantial changes in private property values.

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.

Construction Impacts

The proposed Project would require construction of approximately 1,384 miles of new pipeline, 30 pump stations, and other ancillary facilities, as listed in Table 3.10.1-12. Construction activities would involve the movement of people, equipment, and materials on roadways throughout the proposed Project area. In some cases, construction could increase the demands for permits for vehicle load and width limits. Some temporary traffic delays would be likely. However, vehicle access and assistance with traffic flows in construction areas including emergency vehicles would be provided (Appendix B, CMR Plan).

TABLE 3.10.1-12 Proposed Project Construction by State		
Segment/State	New Construction Pipeline Miles	Ancillary Facilities
Steele City Segment		
Montana	282.7	6 new pump stations, 21 main line valves (MLVs), 50 access roads
South Dakota	314.2	7 new pump stations, 17 MLVs, 18 access roads
Nebraska	254.7	5 new pump stations, 19 MLVs, 12 access roads
New Cushing Extension Pump Stations		
Kansas	0	2 new pump stations, 1 access road
Gulf Coast Segment		
Oklahoma	155.7	Cushing Tank Farm, 4 new pump stations, 15 MLVs, 76 access roads
Texas	328.1	6 new pump stations, 32 MLVs, 157 access roads, 1 delivery site
Houston Lateral		
Texas	48.6	8 MLVs, 31 access roads, 1 delivery site
Total	1,383.9	

Construction of the pipeline is planned to occur in 17 construction spreads or completed lengths (Table 3.10.1-13). Ten spreads are planned along the proposed Steele City Segment, six spreads along the proposed Gulf Coast Segment, and one spread along the proposed Houston Lateral. Final spread configurations and construction schedules could result in shorter spreads.

Approximately 500 to 600 construction and inspection personnel would work on each spread, except for the proposed Houston Lateral which would require approximately 250 workers. Each spread would require 6 to 9 months to complete. Construction of new pump stations would require 20 to 30 additional workers at each site. Construction of all pump stations would be completed in 18 to 24 months. Tank farm construction would require approximately 30 to 40 construction personnel over a period of 15 to 18 months.

Within each state, additional jobs and income would go to workers who would leave the area upon proposed Project completion. In the long-term, a small number of people would be needed to maintain the line in each state. Unemployment rates in the proposed Project study area would probably not be affected in the long-term, although there could be a short-term lowering of unemployment during construction in the more rural areas.

Efforts would be made to hire temporary construction staff from the local population through construction contractors and subcontractors. Provided qualified personnel are available, approximately 10 to 15 percent (50 to 100 people) could be hired from the local work force for each spread. This may not be possible in more rural areas. The number of individuals in the work force for each county where a base for construction is planned is listed in Table 3.10.1-13.

TABLE 3.10.1-13 Pipeline Construction Spreads of the Proposed Project				
Spread Number	Location	Approximate Length of Construction Spread (miles)	Base(s) for Construction ^a	Work Force in Respective Counties ^b(2008)
Steele City Segment				
Spread 1	MP 0 to 64	64	Hinsdale, Montana, and Glasgow, Montana (both in Valley County)	3,649
Spread 2	MP 64 to 164	100	Glasgow, Montana (Valley County), and Circle, Montana (McCone County)	3,649 (Valley, County); 1,015 (McCone County)
Spread 3	MP 164 to 273	109	Glendive, Montana (Dawson County), and Baker, Montana (Fallon County)	4,386 (Dawson County); 1,824 (Fallon County)
Spread 4	MP 273 to 345	72	Buffalo, South Dakota (Harding County)	762
Spread 5	MP 345 to 448	104	Faith, South Dakota, and Union Center, South Dakota (both in Meade County)	12,579
Spread 6	MP 448 to 513	65	Phillip, South Dakota (Haakon County)	1,154
Spread 7	MP 513 to 616	103	Murdo, South Dakota (Jones County), and Winner, South Dakota (Tripp County)	694 (Jones County); 2,935 Tripp County)
Spread 8	MP 616 to 679	63	Fairfax, Nebraska (Custer, Nebraska) Stuart, Nebraska, and O'Neill, Nebraska (both in Holt County)	6,092 (Custer County); 6,092 (Holt County)

**TABLE 3.10.1-13
Pipeline Construction Spreads of the Proposed Project**

Spread Number	Location	Approximate Length of Construction Spread (miles)	Base(s) for Construction ^a	Work Force in Respective Counties ^b(2008)
Spread 9	MP 679 to 789	109	Greeley, Nebraska (Greeley County), and Central City, Nebraska (Merrick County)	1,298 (Greeley County); 4,296 (Merrick County)
Spread 10	MP 789 to 852	63	York (York County), Nebraska, Beatrice, Nebraska (Gage County), and Fairbury, Nebraska (Jefferson County)	7,115 (York County); 4,394 (Jefferson County)
Gulf Coast Segment				
Spread 1	MP 0 to 95	95	Holdenville, Oklahoma (Hughes County)	5,046
Spread 2	MP 95 to 185	90	Paris, Texas (Lamar County)	23,811 (Lamar County)
Spread 3	MP 185 to 285	100	Mt. Pleasant, Texas (Titus County)	617
Spread 4	MP 285 to 371	86	Henderson, Texas (Rusk County), Nacogdoches, Texas (Nacogdoches County) Crockett, Texas Houston County), Jacksonville, Texas (Cherokee County)	24,081 (Rusk County); 30,614 (Nacogdoches County)
Spread 5	MP 371 to 435	64	Lufkin, Texas (Angelina County)	38,987 (Angelina County)
Spread 6	MP 435 to 484	49	Sour Lake, Texas (Hardin County)	25,947 (Hardin County)
Houston Lateral				
Spread 7	MP 0 to 49	49	Sour Lake, Texas, Liberty, Texas (Chambers County), Dayton, Texas (Liberty County)	14,254 (Chambers County); 31,455 (Liberty County)

^a Some of the communities listed above were not included in Table 3.10.2 because they are located more than 2 miles from the proposed pipeline.

^b Source: Bureau of Labor Statistics, Local Area Unemployment Statistics, County Data. <http://www.bls.gov/lau/#tables>.

Population

The number of residents within the region of influence would increase temporarily during construction with the influx of construction workers and proposed Project staff. The construction work force would consist of approximately 5,000 to 6,000 workers, including Keystone employees, contractor employees, and construction and environmental inspection staff. These workers would be distributed across the pipeline route by construction spread, with approximately 500 to 600 construction personnel allocated to each spread. Construction of the pump stations and delivery facilities would require additional staff. It is anticipated that an additional 20 to 30 workers per station would be required. Tank farm construction would involve approximately 30 to 40 construction personnel over a period of 15 to 18 months concurrent with the proposed Gulf Coast Segment construction.

Population impacts in the region of influence would depend upon the composition of the construction work force in terms of local versus non-local workers and the existing population of the area. Temporary local construction labor would be utilized where possible. It is estimated that 10 to 15 percent of the total construction work force could be hired from local communities, with the remaining workers (85 to 90

percent) from outside the local area. Few non-local workers would likely be accompanied by their children or other family members because of the mobile nature of the work force along the pipeline route during construction.

Housing

Construction Work Camps

Some more rural areas within Montana and South Dakota do not have sufficient temporary housing in the vicinity of the proposed route to house all construction personnel working on spreads in those areas. In those areas, four temporary work camps would be constructed to meet the housing needs of the construction work force. The two Montana camps would be located near Nashua in Valley County and near Baker in Fallon County. The two South Dakota camps would be located near Union Center in Meade County and near Winner in Tripp County. These temporary camps would supplement local housing in remote areas of Montana and South Dakota for the duration of construction in the area.

Each construction camp would be capable of housing up to 600 workers. However, the number and size of camps would be determined based upon the time available to complete construction and to meet Keystone's commercial commitments. Camps would typically include sleeping areas with shared and private baths, craft rooms, recreation facilities, media rooms, kitchen/dining facilities, laundry facilities, a security/infirmity unit, offices, and wastewater treatment facilities. These temporary construction camps would be permitted, constructed, and operated consistent with applicable county, state, and federal regulations. These construction camps would likely reduce but not eliminate impacts on nearby towns and public services.

Other Temporary Construction Housing

Non-local construction workers temporarily residing in other areas in the region of influence would require short-term accommodations. Because workers would not likely relocate with their families and their stay in any one community would be temporary, most workers would likely use temporary housing, such as hotels/motels, RV sites, and campgrounds. Most workers likely would prefer short-term accommodations, primarily hotels and motels, in the more populated, service-oriented communities located within a reasonable commuting distance from the work site. As local accommodations filled, workers would be forced to seek alternative accommodations, including RV parks and campgrounds, in smaller, more distant communities. Further, some employees could elect to utilize furnished apartments and rental homes due to the constrained availability of other accommodations, although this would likely be limited based upon extended-period lease requirements. Depending upon the location and available accommodations, workers could elect to reside temporarily in one location during the construction period or relocate within each spread as needed as construction proceeded along the pipeline route.

The construction work force could require nearly 2,900 housing units throughout the region of influence, or 450 to 510 housing units within any one construction spread, assuming that each worker would require his/her own unit. In total, there are approximately 91,000 vacant rentals, 30,000 hotel/motel rooms, and 4,700 RV sites available to serve the housing needs of the proposed Project. The anticipated proposed Project-related demand for housing would account for about 5 percent of all available temporary housing in the region of influence, or 17.0 percent of hotel/motel rooms plus RV sites. At a regional scale, therefore, it appears that the temporary housing available within the region of influence would be sufficient to meet the temporary and moderately increased demand for housing resulting from construction activities.

The availability of short-term housing varies across the pipeline route. In 2000, counties in Montana that would be crossed by the proposed Project had 1,414 available rental properties, hotel/motel rooms, and

RV sites, South Dakota had 9,987 units, Nebraska had 2,110 units, Kansas had 1,056 units, Oklahoma had 4,764 units, and Texas had 84,908 units available (see Table 3.10.1-7). Actual vacancy rates vary by year and season, with the spring through fall seasons having the lowest vacancy rates, so these numbers are only a representation of the housing that could be available and actual availability at any given time could be noticeably less. Also, it should be noted that additional units would be available in the counties surrounding those crossed by the proposed Project. More urban areas have more short-term housing available, particularly hotel and motel rooms.

Local Economic Activity

The proposed Project has the potential to generate substantial direct and indirect economic benefits for local and regional economies along the pipeline route. During construction, these benefits are derived from the construction labor requirements of the proposed Project and spending on construction goods and services that would not otherwise have occurred if the pipeline were not built. At the local level, these benefits would be in the form of employment of local labor as part of the construction work force and related income benefits from wage earnings, construction expenditures made at local businesses, and construction worker spending in the local economy. However, if a person were to leave an existing job to take a job building the proposed Project, only the additional income earned by that person would be considered a benefit of the proposed Project. The proposed Project job obtained by the local worker would become a local proposed Project-related benefit when the job that was left was filled by another worker.

Employment and Income

Construction of the proposed Project, including the pipeline and pump stations, would result in hiring approximately 5,000 to 6,000 workers over the three year construction period. As indicated above, it is expected that roughly 10 to 15 percent of the construction work force would be hired from local labor markets, thus 500 to 900 local workers would be hired throughout the entire region of influence, or 50 to 90 local workers per construction spread. As shown in Table 3.10.1-8, in 2008 within the counties crossed by the proposed Project, the average annual unemployed work force was 483 in Montana, 2,453 in South Dakota, 1,498 in Nebraska, 1,547 in Kansas, 5,217 in Oklahoma, and 121,346 in Texas. Thus, this total of 132,544 unemployed people in 2008 would exceed the proposed Project's local work force needs of up to 900 people as well as the total work force needs. Some short-term shifting in local job distribution could occur in all areas as a result of the proposed Project, but vacated jobs could be filled by other unemployed people.

Related income benefits would be substantial. The mean annual income (excluding benefits, estimated to be an additional 33 percent for workers' total compensation) for construction and extraction occupations in 2008 (BLS) was \$38,310 in Montana, \$31,860 in South Dakota, \$36,910 in Nebraska, \$39,030 in Kansas, \$34,940 in Oklahoma, and \$33,580 in Texas. Using \$34,940 as an average annual income (the lower end of the mid-point as a conservative estimate of income benefits) for a total of 5,000 construction workers over a 24 month period, it is estimated that the proposed Project would generate \$349.4 million in total wages. If the maximum construction work force were 6,000 people, a total of \$419.28 million in wages would be generated. On a per spread basis, if it took a maximum of 9 months to construct each spread, construction income would range from an estimated \$13.10 million for 500 workers/spread to \$15.72 million for 600 workers/spread.

As noted in a recent news article (Dow Jones Newswires, September 14, 2010), a number of the jobs created by construction of the pipeline would be filled with union employees. As of that date, six unions had signed a Project Labor Agreement with Keystone, including:

- Laborers International Union of North American;
- International Brotherhood of Teamsters;
- AFL-CIO;
- United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada;
- Internal Union of Operating Engineers; and
- Pipeline Contractors Association.

Spending and Expenditures

In addition to payroll spending, construction would generate substantial expenditures on construction materials (e.g., pipe, valves, and pump stations), equipment and equipment rentals (see Table 2.3.2-1), and goods and services, both inside and outside of the region of influence. It is estimated that it would cost a total of \$7.0 billion to construct the proposed Project. If one subtracts the above labor costs from this total, an estimated \$6.58 to \$6.65 billion would be spent on materials and supplies, easements, engineering, permitting, and other costs. Typically, spending on goods and services would include outlays for fuel supplies, hardware needs, and parts/equipment and could be spent more at the local level. Overall, construction of the proposed Project would result in a positive impact on the local economies in the region of influence.

Construction also would generate indirect local economic benefits from secondary activity spurred by the direct effects described above. This would include short-term benefits of increased business to local and statewide businesses providing supplies and services to proposed Project workers. Such businesses would include equipment suppliers, restaurants, gas stations and hotels. Spending by the non-local construction work force within local economies during the construction period could include expenditures on food, clothing, lodging, gasoline, and entertainment. The extent of local spending by non-local workers would be tied to labor earnings and individual spending patterns. Construction worker spending, in conjunction with outlays for construction goods and services, also would generate indirect economic benefits as these monetary flows circulated throughout the economy, based upon economic linkages among industries. These “ripple” effects, commonly referred to as “multiplier effects,” would result from businesses buying from other businesses and could generate additional economic benefits within the region of influence. These impacts, however, have not been quantified for this analysis.

Labor and income benefits also would extend outside of the region of influence, based upon the employment of non-local labor for the proposed Project and expenditures on construction materials and services that would be imported into the area. Although these benefits would not be realized locally, they would represent a positive economic impact at the national level.

Environmental Justice

As described in Section 3.10.1.1, portions of the proposed pipeline and proposed pump stations would be located in areas with minority and low-income populations. Populations of concern from an environmental justice perspective were assessed at both the county and census block group level.

Minority and Low-Income Populations within Counties

The proposed Project would not cross within 2 miles of counties that had greater than 50 percent of the state-wide average for minority or low-income populations at the time of census data collection. However, 34 of the 59 counties were identified as having a meaningfully greater minority population than the state-wide average and 20 counties were identified as having a meaningfully greater low-income population than the state-wide average.

Table 3.10.1-14 provides a list of the counties within the proposed Project area and specifies:

- Whether a pipe yard (PY), a construction camp (CY), a contractors camp (CC), or a railroad siding facility (RRS/PY) is planned to be located within that county;
- Whether there is at least one minority population meaningfully greater than the overall state minority population in that county; and
- Whether the number of low-income individuals in that county is meaningfully greater than the state average.

These types of facilities are planned in 33 counties within the proposed Project area and 23 of those counties have one or more environmental justice percentages meaningfully greater than the state-wide averages.

These data suggest that potential impacts to minority and low-income populations during construction within counties crossed by the proposed Project corridor would be minor and would not disproportionately affect these populations when considered at the county population level.

TABLE 3.10.1-14			
Location of Construction Facilities Relative to County Environmental Justice Statistics			
County	Construction Facility^a	Statistic Meaningfully Greater than Respective State (2000)	
		Minority Population	Low-Income
Steele City Segment			
Montana			
Phillips	PY	Yes	Yes
Valley	2 PY, 1 CY, 1 CC	Yes	No
McCone	2 PY, 1 CY	Yes	No
Dawson	2 PY, 1 CY	Yes	No
Prairie	No	No	No
Fallon	2 PY, 1 CC	No	No
South Dakota			
Harding	3 PY, 1 CY	No	Yes
Butte	No	Yes	No
Perkins	No	No	Yes
Meade	2 PY, 1 CY, 1 CC	Yes	No
Pennington	No	Yes	No
Haakon	2 PY, 1 CY	No	No

TABLE 3.10.1-14				
Location of Construction Facilities Relative to County Environmental Justice Statistics				
Statistic Meaningfully Greater than Respective State (2000)				
County	Construction Facility^a	Minority Population	Low-Income	
Jones	2 PY, 1 CY	Yes	Yes	
Lyman	No	Yes	Yes	
Tripp	2 PY, 1 CY, 1 CC	Yes	Yes	
Nebraska				
Keya Paha	1 PY	No	Yes	
Rock	No	Yes	Yes	
Holt	2 PY, 2 CY	No	Yes	
Garfield	No	No	Yes	
Wheeler	No	No	Yes	
Greeley	1 PY, 1 CY	No	Yes	
Boone	No	No	No	
Nance	1 PY	No	Yes	
Merrick	1 CY	No	No	
Hamilton	1 PY	No	No	
York	1 CY	No	No	
Fillmore	1 PY	No	No	
Saline	No	Yes	No	
Jefferson	1 PY, 1 CY	No	No	
New Cushing Extension Pump Stations				
Kansas				
Clay	No	No	No	
Butler	No	Yes	No	
Gulf Coast Segment				
Oklahoma				
Payne	No	Yes	Yes	
Creek	No	Yes	No	
Lincoln	1 PY, 1 CY	No	No	
Okfuskee	No	Yes	Yes	
Seminole	No	Yes	Yes	
Hughes	1 PY, 1 CY, 1 PY/RS	Yes	Yes	
Pontotoc	No	Yes	No	
Coal	No	Yes	Yes	
Atoka	No	Yes	No	
Bryan	1 PY, 1 CY	Yes	Yes	

TABLE 3.10.1-14			
Location of Construction Facilities Relative to County Environmental Justice Statistics			
County	Construction Facility^a	Statistic Meaningfully Greater than Respective State (2000)	
		Minority Population	Low-Income
Texas			
Fannin	1 PY/RS	Yes	No
Lamar	1 PY, 1 CY, 1 RS, 1 PY/CY	Yes	No
Delta	No	No	No
Hopkins	No	Yes	No
Franklin	1 RS	Yes	No
Wood	No	No	No
Upshur	No	No	No
Smith	No	Yes	No
Rusk	1 CY	Yes	No
Cherokee	1 CY	Yes	No
Nacogdoches	1 CY	Yes	Yes
Angelina	1 CY, 1 RS, 1 PY/CY	Yes	No
Polk	2 PY	Yes	No
Liberty	1 CY	No	No
Hardin	1 RS	No	No
Jefferson	1 PY	Yes	No
Houston Lateral			
Texas			
Liberty	1 CY	No	No
Chambers	No	No	No
Harris	No	Yes	No

^a Abbreviations: Pipe Yard (PY), Construction Camp (CC) and Contractor Yards (CY) Railroad Siding and or a Pipe Yard (RRS/PY).

Minority and Low-Income Populations within Census Block Groups

A total of 287 census block groups were assessed along the 4-mile-wide analysis corridor. Within these census block groups, 297 minority populations that were meaningfully greater than the state-wide average were identified, and 83 low-income populations that were meaningfully greater than the state-wide average were also identified. Of the 287 total census block groups occurring along the proposed Project corridor, 90 census block groups had no exceedances for any minority or low-income populations. Of the 197 census block groups that did show exceedances, 115 showed exceedances for one or more minority populations, 25 showed exceedances for only low-income populations, and 57 showed exceedances for one or more minority populations along with a low-income population.

These data suggest that potential impacts to the minority and low-income populations identified in this assessment within the 4-mile wide analysis area could occur. The analysis of minority and low-income populations along the proposed Project corridor, as previously stated, is inherently conservative since 269 of the census block groups analyzed were only partially within the analysis area and it is therefore likely

that the percentages of minority and low-income populations that actually occur within the 4-mile-wide analysis area are less than the percentages derived from the analysis. Only 18 of the census block groups analyzed fall entirely within the 4-mile-wide analysis area. These 18 census block groups occur for the most part in Harris, Jefferson, and Angelina counties in Texas (17 census block groups), and the remaining census block group occurs in Lincoln County, Oklahoma. These 18 census block groups occur within more populated areas along the proposed pipeline corridor. Of these, 11 census block groups show that one or more minority and/or low-income populations are greater than their state-wide averages (see Table 3.10.1-15).

Total Number of Census Block Groups	County, State	Nearest City or Town	Meaningfully Greater Minority Census Block Groups	Meaningfully Greater Low-Income Census Block Groups	Total Number of Census Block Groups Containing One or More EJ Group Exceedances ^a
1	Lincoln County, OK	Stroud	-	Yes	1
1	Angelina County, TX	Diboll	African American; Aggregate	Yes	1
1	Jefferson County, TX	Beaumont	African American; Aggregate	-	1
2	Jefferson County, TX	Port Neches	-	-	0
7	Jefferson County, TX	Nederland	Native American or Alaskan Native; Two or More Races	-	4
2	Jefferson County, TX	Central Gardens	Native American or Alaskan Native	-	1
2	Jefferson County, TX	Beaumont and Central Gardens	African American; Native American or Alaskan Native; Two or More Races; Aggregate	-	2
1	Harris County, TX	Channelview	African American; Other; Hispanic or Latino; Aggregate	-	1
1	Harris County, TX	Highlands	-	-	0
18	Project Total				11

^a Exceedance criteria are 1.2 times the actual environmental justice (EJ) minority or low-income group population for each state. Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. See <http://factfinder.census.gov/home>.

Impacts to minority and low-income populations during construction would include exposure to construction dust and noise, potential disruption to traffic patterns, and increased competition for social services in underserved populations. Construction dust and noise would be restricted to working hours during the construction period along each segment of the proposed Project route and impacts would diminish once construction activities ended. At any given location along the proposed pipeline route, the duration of the construction period would typically range from 20 to 30 working days.

To assess the potential impacts on minority and low-income populations in areas that could be underserved by health professionals, available medical facilities, or other health services, the minority and low-income populations identified in this analysis were compared to locations along the proposed Project

corridor that are listed on the Health and Human Services (HHS) Health Resource Services Administration (HRSA) website. Areas designated as Health Professional Shortage Areas (HPSA) and Medically Underserved Areas/Populations (MUA/P) in counties that contain census block groups with one or more minority and/or low-income population identified in this assessment are presented in Table 3.10.1-16 and Figures 3.10.1-7 through 3.10.1-13.

Based upon these data, any additional disruptions to medical service availability in areas with minority or low-income populations that are designated as either HPSA and/or MUA/P areas could lead to short-term impacts to these populations during the construction period. However, in areas in Montana and South Dakota 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. In any case, given the transient nature of the workforce, the impact of increased demand for medical services on local minority and low-income populations would be minor and short-term.

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
Steele City Segment						
Montana						
Phillips	1	1	Eastern Montana	County	Phillips Service Area	County
Valley	6	4	Eastern Montana	County	Valley Service Area	County
McCone	3	2	Eastern Montana	County	McCone Service Area	County
Dawson	2	0	NA*	NA	NA	NA
Prairie	1	1	Eastern Montana	County	Miles City Service Area	County
Fallon	3	1	-	-	-	-
Carter	1	0	NA	NA	NA	NA
<i>Subtotal Montana</i>	<i>17</i>	<i>9</i>	<i>4</i>	<i>-</i>	<i>4</i>	<i>-</i>
South Dakota						
Harding	2	2	Harding	County	Harding Service Area	County
Butte	1	0	NA	NA	NA	NA
Perkins	1	1	Catchment Area 8	County	Perkins Service Area	County
Meade	2	0	NA	NA	NA	NA
Ziebach	1	1	-	-	-	-
Pennington	1	0	NA	NA	NA	NA
Haakon	2	1	Catchment Area 2	County	West Haakon Service Area	Minor Civil Division

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Philip Clinic 503 W. Pine St. Philip, SD 57567	Rural Health Center	-	-
Jones	1	1	Catchment Area 2	County	Jones Service Area	County
Lyman	1	1	Catchment Area 2	County	Lyman Service Area	County
			Lower Brule Sioux Tribe Clinic 601 Gall St. Lower Brule, SD 57548	Indian Reservation	-	-
Tripp	8	7	Catchment Area 10	County	Tripp Service Area	County
Gregory	1	1	Catchment Area 10	County	Gregory Service Area	County
<i>Subtotal South Dakota</i>	<i>21</i>	<i>15</i>	<i>9</i>	<i>-</i>	<i>7</i>	<i>-</i>
Nebraska						
Keya Paha	1	1	Catchment Area 4	County	Keya Paha Service Area	County
Rock	1	1	Catchment Area 4	County	Rock Service Area	County
			Greater Sandhills Family Healthcare 101 E. South St. Bassett, NE 68714	Rural Health Center	-	-
Holt	2	2	Catchment Area 4	County	Holt Service Area	County
			West Holt Medical Clinic 405 W. Pearl St. Atkinson, NE 68713	Rural Health Center	-	-

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Greater Sandhills Family Healthcare 418 E. 5th St. Atkinson, NE 68713	Rural Health Center	-	-
			Greater Sandhills Family Healthcare 110 W. 2nd St. Stuart, NE 68780	Rural Health Center	-	-
			Avera Family Medicine 403 E. Hynes Ave. O'Neill, NE 68763	Rural Health Center	-	-
			Avera Holt County Medicine Clinic 555 E. John St. O'Neill, NE 68763	Rural Health Center	-	-
Garfield	1	0	NA	NA	NA	NA
Wheeler	1	1	Catchment Area 3	County	Wheeler Service Area	County
Greeley	2	0	NA	NA	NA	NA
Boone	2	0	NA	NA	NA	NA
Nance	1	1	Catchment Area 4	County	Genoa Service Area	County
			Lone Tree Medical Associates 901 Broadway St. Fullerton, NE 68638	Rural Health Center	-	-
			Park Street Medical Clinic 505 S. Park St. Genoa, NE 68640	Rural Health Center	-	-
Merrick	2	0	NA	NA	NA	NA
Hamilton	1	0	NA	NA	NA	NA

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor							
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}		
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area	
Polk	1	0	NA	NA	NA	NA	
York	3	0	NA	NA	NA	NA	
Fillmore	2	0	NA	NA	NA	NA	
Saline	2	0	NA	NA	NA	NA	
Jefferson	3	1	-	-	-	-	
<i>Subtotal Nebraska</i>	25	7	13	-	5	-	
New Cushing Extension Pump Stations							
Kansas							
Clay	4	1	Mental Health Area 14	County	Low Income - Clay County ^d	County	
			Clay Center Family Physicians 609 Liberty St. Clay Center, KS 67432	Rural Health Center	-	-	
Butler	1	0	NA	NA	NA	NA	
<i>Subtotal Kansas</i>	5	1	2	-	1	-	
Gulf Coast Segment							
Oklahoma							
Payne	2	1	Catchment Area 11	County	-	-	
			Iowa Tribe of Oklahoma: Perkins Family Clinic 335588 E. 750 Rd. Perkins, OK 74059	Native American Tribal Population	-	-	
Creek	2	0	NA	NA	NA	NA	

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
Lincoln	6 (1) ^f	2 (1) ^f	Black Hawk Health Center 356110 East 930 Rd. Stroud, Ok 74079	Native American Tribal Population	Lincoln Service Area	County
Okfuskee	5	4	Low Income Catchment Area 13	County	Okfuskee Service Area	County
Seminole	5	4	Okemah Indian Health Center 309 N. 14th St. Okemah, OK 74859	Native American Tribal Population	-	-
			Catchment Area 7	County	Seminole Service Area	County
			Central Oklahoma Family Medical Center 527 W. 3rd St. Konawa, OK 74849	Comprehensive Health Center	-	-
Hughes	9	8	Seminal Nation of Oklahoma – Wewoka Indian Health Clinic S. Hwy. 56 & U.S. Hwy. 270 Junction Wewoka, OK 74884	Native American Tribal Population	-	-
			Catchment Area 6	County	Hughes Service Area	County
Pontotoc	3	3	East Central Oklahoma Family Health Center 401 S. Washita St. Wetumka, OK 74883	Comprehensive Health Center	-	-
			Catchment Area 7	County	Pontotoc Northeast Service Area	Minor Civil Division
			-	-	Pontotoc Northwest Service Area	Minor Civil Division

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			-	-	Pontotoc Southwest Service Area	Minor Civil Division
			Carl Albert Indian Hospital 1001 N. Country Club Rd. Ada, OK 74820	Indian Health Service Facility	-	-
Coal	3	3	Catchment Area 6	County	Coal Service Area	County
Atoka	6	4	Catchment Area 6	County	Atoka Service Area	County
			ABC Medical Clinic 1508 S. Virginia Ave. Atoka, OK, 74525	Rural Health Center	-	-
			Mack Alford Correctional Center 1151 N. U.S. Hwy. 69 Stringtown, OK 74569	Correctional Facility	-	-
Bryan	3	3	Catchment Area 7	County	-	-
			Choctaw Nation of Oklahoma - Durant Family Medicine Clinic 1600 W. University Blvd. Durant, OK 74701	Native American Tribal Population	-	-
			Choctaw Nation of Oklahoma - Durant Health Center 1600 N. Washington Ave. Durant, OK 74701	Native American Tribal Population	-	-
Choctaw	1	1	Catchment Area 6	County	Choctaw Service Area	County
			Choctaw Nation Health Clinic 410 N. M St. Hugo, OK 74743	Native American Tribal Population	-	-

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected
Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
<i>Subtotal Oklahoma</i>	<i>45 (1)^f</i>	<i>33 (1)^f</i>	<i>21</i>	<i>-</i>	<i>10</i>	<i>-</i>
Texas						
Fannin	2	0	NA	NA	NA	NA
Lamar	6	3	-	-	Lamar Service Area	County
Delta	1	1	-	-	Delta Service Area	County
Hopkins	5	3	-	-	Hopkins Service Area	County
Franklin	3	1	-	-	Franklin Service Area	County
Wood	8	3	Wood	County	Wood Service Area	County
			ETMC First Physician Health Clinic 5875 S. Hwy. 37 Mineola, TX 75773	Rural Health Clinic	-	-
Upshur	6	1	-	-	Upshur Service Area	County
Smith	12	8	Community Health Clinic of Northeast Texas 928 N. Glenwood Blvd. Tyler, TX 75702	Comprehensive Health Center	Northern Tyler Service Area	CTs** 1, 2.01, 2.02, 3, 4, 6
			-	-	Troup Service Area	CT 21
			-	-	Smith Service Area	CTs 5, 7
Rusk	4	4	Rusk	County	Rusk Service Area	County
			Mount Enterprise Community Health Clinic 106 W. Rusk St. Mount Enterprise, TX 75681	Federally Qualified Health Center	-	-

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected
Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
Cherokee	5	2	Cherokee	County	South Cherokee County	CTs 9508, 9509, 9510, 9511
			Rusk State Hospital 1601 S. Dickinson Dr. Rusk, TX 75785	State Mental Hospital	-	-
Nacogdoches	5	2	East Texas Community Health Services 1401 S. University Dr. Nacogdoches, TX 75961	Comprehensive Health Center	Nacogdoches Service Area ^{de}	County
Angelina	11 (1) ^f	7 (1) ^f	Duncan Prison 1502 S. 1 st St. Diboll, TX 75941	Correctional Facility	Huntington Division Service Area	Huntington, Zavalia Minor Civil Division
			Lufkin State School 6844 U.S. Hwy. Pollok, TX 75969	State Mental Hospital	-	-
Trinity	2	1	Trinity	County	Trinity Service Area	County
Polk	9	5	Polunsky Prison 3872 F.M. Rd. 350 Livingston, TX 77351	Correctional Facility	Polk Service Area	County
San Jacinto	1	0	NA	NA	NA	NA
Liberty	6	4	Health Center of Southeast Texas 401 E. Crockett St. Cleveland, TX 77327	Comprehensive Health Center	Liberty Service Area	County
Hardin	5	2	Hardin	County	Hardin Service Area	County
Jefferson	43 (14) ^f	21 (7) ^f	Gulf Coast Health Center	Comprehensive	Port Arthur/Jefferson Service Area	CTs 51, 53, 54, 59, 59, 61, 62, 63, 69, 71

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			2548 Memorial Blvd. Port Arthur, TX 77640	Health Center		
			Federal Corrections Complex 5830 Knauth Rd. Beaumont, TX 77715	Correctional Facility	Low Income - Jefferson Service Area ^d	CTs 113.01, 114, 115, 116
			-	-	Low Income - Inner City Beaumont ^d	CTs 1.03, 6, 7, 9, 10, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26
Orange	1	1	-	-	Orange Service Area	CTs 202, 203, 208
			-	-	Vidor Service Area ^{de}	CTs 207, 214, 215, 216, 217, 218, 219, 220, 222
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>135 (15)^f</i>	<i>69 (8)^f</i>	<i>16</i>	<i>-</i>	<i>22</i>	<i>-</i>
Houston Lateral						
Texas						
Liberty	17	10	Health Center of Southeast Texas 401 E. Crockett St. Cleveland, TX 77327	Comprehensive Health Center	Liberty Service Area	County
Chambers	2	0	NA	NA	NA	NA

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
Harris	24	16 (1) ^f	Third Ward Service Area	CTs 3122, 3123, 3124, 3125, 3128	Harris Service Area	CTs 4101, 4102, 4103, 4104, 4105, 4106
			East Central Service Area	CTs 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122	Southern Third Ward Service Area	CTs 3122, 3123, 3124, 3127, 3128, 3129, 3130, 3132, 3133, 3134, 3135, 3136, 3137, 3138
			Casa De Amigos Catchment Area	CTs 2103, 2104, 2105, 2106, 2107, 5102, 5103, 5104, 5105, 5106, 5107, 5113, 5114, 5116	West Pasadena	CTs 3219, 3220, 3220, 3223, 3224, 3229, 3230, 3231, 3232
			Northeast Harris Service Area	CTs 2201, 2208, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2319, 2320	South Service Area	CTs 3311, 3312

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected
Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Acres Home Service Area	CTs 5308, 5318, 5319, 5320, 5326, 5327, 5328, 5329, 5330, 5331, 5332, 5333, 5334	Northeast Central Service Area	CTs 3110, 3111
			Aldine Service Area	CTs 2218, 2219, 2220, 2221, 2222, 2223, 2229, 2230, 2231, 2317	Central Harris Service Area	CTs 2102, 2113, 2114, 5101
			Low Income – Ripley Service Area	CTs 3104, 3105, 3106, 3108, 3109, 3110, 3111, 3112, 3113, 3114, 3115, 3116, 3117, 3118, 3119, 3202, 3203, 3329	North Forest Service Area	CTs 2312, 2313, 2314, 2315, 2316, 2318, 2319, 2320, 2321, 2322, 2323
			South Central Houston Service Area	CTs 3308, 3311, 3312, 3313, 3314, 3315, 3316, 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3326, 3327, 3328,	East Central Houston Service Area	CTs 2112, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122

TABLE 3.10.1-16 Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor						
County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Houston Healthcare for the Homeless <i>2505 Fannin St. Houston, TX 77002</i>	Comprehensive Health Center	Ripley Service Area	CTs 3101, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3112, 3113, 3114, 3115, 3117, 3118, 3119
			Harris County Hospital District <i>2525 Holly Hall St. Houston, TX 77054</i>	Comprehensive Health Center	South Central Harris County Service Area	CTs 3308, 3314, 3315, 3316, 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3326, 3327, 3328
			South Central Houston Community Health Center <i>8610 Martin Luther King Blvd. Houston, TX 77033</i>	Comprehensive Health Center	Casa De Amigos Service Area	CTs 2103, 2104, 2105, 2106, 2107, 5102, 5103, 5104, 5105, 5106, 5107, 5113, 5114, 5116
			Spring Branch Community Health Center <i>1615 Hillendahl Blvd. Houston, TX 77055</i>	Comprehensive Health Center	Baytown Service Area	CTs 2534, 2541, 2542, 2543, 2544, 2545, 2546
			Pasadena Health Center <i>524 Pasadena Blvd. Pasadena, TX 77506</i>	Comprehensive Health Center	Galena Park/Jacinto City Service Area	CTs 2333, 2335, 2336, 2337

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected
Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Fourth Ward Clinic 277 W. Gray St. Houston, TX 77019	Comprehensive Health Center	Acres Home Service Area	CTs 5308, 5318, 5319, 5327, 5331, 5333, 5334
			Legacy Community Health Systems 215 Westheimer Rd. Houston, TX 77006	Comprehensive Health Center	Settegast Service Area	CTs 2201, 2207, 2208, 2209, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311
			El Centro De Corazon 5001 Navigation Blvd. Houston, TX 77011	Comprehensive Health Center	Aldine Settegast Service Area	CTs 2218, 2219, 2221, 2222, 2229, 2317
			Houston Community Health Center 424 Hahlo St. Houston, TX 77020	Comprehensive Health Center	North Central Service Area	CTs 2217, 2224, 2225, 2228, 2401, 2402, 2405
			Hope Clinic 7001 Corporate Dr. Houston, TX 77036	Federally Qualified Health Center	Independence Heights Service Area	CTs 2202, 2203, 2204, 2205, 2206, 5303, 5304, 5305
			Immigration and Customs Enforcement 15850 Export Plaza Dr. Houston, TX 77032	Correctional Facility	Trinity Gardens Service Area	CTs 2108, 2109, 2110, 2111

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected
Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
			Houston Area Community Services 3730 Kirby Dr. Houston, TX 77098	Comprehensive Health Center	Low Income - Spring Branch Service Area ^d	CTs 5201, 5202, 5203, 5204, 5205, 5206, 5207, 5210, 5211, 5212, 5213, 5214, 5215, 5216, 5217, 5218, 5219, 5220, 5221, 5222, 5223, 5224, 5401
			Motherland 4040 Yale St. Houston, TX 77018	Comprehensive Health Center	Low Income - Alief Service Area ^d	CTs 4330, 4332, 4334
			Federal Detention Center Houston 1200 Texas St. Houston, TX 77002	Correctional Facility	Poverty/Spanish Speaking/Immigration Population - Southwest Houston ^{de}	CTs 4211, 4213, 4214, 4215, 4216, 4319, 4325, 4327, 4328, 4329
			-	-	Governor's Low Income - Southwest Harris County ^{de}	CTs 4336, 4532, 4533, 4534, 4535, 4536, 4537, 4538
			-	-	Low Income - Northwest Harris County ^{de}	CTs 2226, 2401, 2405, 2406, 5501, 5502, 5503, 5504, 5505,

**TABLE 3.10.1-16
Designated HPSAs and MUA/Ps with Identified Minority and/or Low-Income Populations within Census Block Groups in Affected Counties along the Proposed Project Corridor**

County	Total Number of Census Block Groups Assessed	Census Block Groups Containing One or More Identified Minority and/or Low-Income Populations ^a	HPSA ^b		MUA/P ^{c,d}	
			Designation Name / Facility Address	Geographic Area or Facility Type	Designation Name	Geographic Area
<i>Subtotal Texas - Houston Lateral</i>	43 (2) ^f	26 (1) ^f	23	-	25	5506, 5511, 5532, 5533 -
<i>Subtotal Texas^g</i>	174 (17) ^f	93 (9) ^f	38	-	46	-
Project Total	287 (18)^f	158^a (10)^f	87	-	73	-

*NA = Not Applicable

**CT = Census Tract

^a Of the 158 census block groups that did show state-wide exceedances for minority and/or low-income populations, 136 showed exceedances for one or more minority populations, 22 showed exceedances for only low-income populations, and 26 showed exceedances for one or more minority populations along with a low-income population.

^b Health Professional Shortage Areas (HPSAs) were assessed in counties where minority and/or low-income populations were identified. HPSAs may be designated as having a shortage of primary medical care, dental or mental health providers. They may be urban or rural areas, population groups, medical facilities or other public facilities. Addresses are listed for medical and other public facilities. See Figures 3.10.1-7 through 3.10.1-13 for locations of HPSA areas.

^c Medically Underserved Areas/Populations (MUA/Ps) were assessed in counties where minority and/or low-income populations were identified. MUAs may be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. MUPs may include groups of persons who face economic, cultural or linguistic barriers to health care. See Figures 3.10.1-7 through 3.10.1-13 for locations of MUA/P areas.

^d Medically Underserved Population (MUP) designation.

^e MUP designated at request of State Governor based on documented unusual local conditions and barriers to assessing personal health services.

^f Numbers in parentheses indicate number of census block groups fully contained within the 4-mile-wide analysis area.

^g Four census block groups in Liberty County (CT 7006 BG 3, CT 7007 BG 1, CT 7013 BG 1, BG 3) affected by both the Gulf Coast Segment and Houston Lateral were only counted once in the Texas subtotal. Liberty County was only counted once for HPSAs and MUA/Ps.

Sources: U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P6 – Race. Table P7 – Hispanic or Latino by Race. Washington, D.C.

U.S. Census Bureau. 2002. Census Block Group SF3: 2000. Table P87 – Poverty Status in 1999 by Age. Washington, D.C.

See <http://factfinder.census.gov/home>. U.S. Department of Health and Human Services. Health Resources and Services Administration. HPSAs and MUA/Ps data warehouse.

See <http://datawarehouse.hrsa.gov/datadownload.aspx>.

Several commenters have expressed concern about any impact on environmental justice communities and enquired about potential mitigation for these impacts. As stated previously, impacts to minority and low-income populations during construction would include exposure to construction dust and noise, potential disruption to traffic patterns, and increased competition for social services in underserved populations. Mitigation for these impacts to environmental justice communities would involve ensuring that adequate communication regarding the construction schedule and construction activities is provided to these communities in appropriate languages and with information on how to seek needed social services in the event of health or other social service disruption related to construction activities. In response to these concerns regarding mitigation, DOS determined that Keystone would develop public awareness materials with special emphasis on considerations of low income and minority communities. DOS 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, as a subsidiary of TransCanada, 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 between Keystone and 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 (IAP) program will utilize bilingual English/Spanish print materials and the design package would utilize bilingual warning signage in appropriate locations.

With regard to Native American populations, in 2008, Keystone hosted three meetings in Pierre, South Dakota, with approximately 17 Native American tribes attending to introduce Keystone and its tribal engagement approach. Keystone also coordinated tribal involvement in the cultural survey process and to date 25 tribal members, representing 12 tribes, have participated in cultural surveys. In 2009, Keystone established a position of Tribal Liaison in its Omaha, NE, office, in order to sustain the development of long term relationships with tribes. The Tribal Liaison has worked actively with the dozens of tribes located in proximity to the proposed Project on various initiatives of mutual interest, such as facilitating enhanced awareness of pipeline construction via “Pipeline 101” sessions, facilitating employment and business opportunities and community investment, as well as involving the tribes in Keystone’s Integrated Public Awareness Program. The Tribal Liaison continues to maintain regular contact with the tribes and would continue to do so throughout proposed Project construction.

Operations Impacts

Housing

The limited number of permanent employees associated with the proposed Project would result in minor long-term impacts on housing. If all 20 operational employees were newly hired for the proposed Project

and moved into the proposed Project area, they would require a maximum of 20 housing units. The existing vacant housing in the proposed Project area could easily meet this housing need.

Local Economic Activity

The 20 permanent employees hired to operate the proposed Project would result in minor long-term positive impacts on employment levels in the counties crossed by the proposed Project.

During operation, the proposed Project would generate a demand for goods and services, including electrical power, which would result in economic benefits to the region. Two studies have been conducted about the broad economic benefits of the proposed Project on individual state and national economies. The summaries of the Perryman Group (2010) and Canadian Energy Research Institute (CERI 2009) studies are provided below.

Perryman Group Study

The draft EIS analyzed and described the number of construction jobs and associated economic activity that would be generated by the proposed Project. After publication of the draft EIS, DOS reviewed the Perryman Group study commissioned by Keystone to further assess potential economic benefits from the proposed Project. The results of the Perryman Group study vary from those within the draft EIS for several reasons. The draft EIS assessed proposed Project economic benefits over an assumed 50-year project lifetime whereas the Perryman study assessed benefits over an assumed 100-year project lifetime. It appears that the calculation of the multiplier (i.e., indirect and induced) impacts in the Perryman study were also based upon the assumed 100-year project lifetime. The potential impacts do not appear to be separately calculated for construction and operation. Additionally, the Perryman study included direct construction expenditures as well as multiplier (indirect and induced) effects, and it also provided estimates of person-years of employment (i.e., the number of jobs multiplied by the assumed project life [100 years]) (see Table 3.10.1-17). In contrast the draft EIS described the employment benefits in terms of the number of jobs generated and estimated that a total of 5,000 to 6,000 workers would be employed during the construction phase of the proposed Project, comprised of 500 to 600 workers per construction spread. An estimated 10 to 15 percent of the total work force (500 to 900) would be hired locally. The estimated number of construction jobs as presented in the draft EIS can be easily compared to the number of unemployed or underemployed people within a particular jurisdiction, and provided a convenient base of comparison between the affected environment and potential Project impacts. The draft EIS also assumed, consistent with the consensus in the economic literature, that the petroleum transported by the pipeline would replace dwindling and/or less reliable heavy crude oil supplies from Venezuela, Mexico, and other sources. Thus, there would be limited additional economic benefit associated with crude oil refining, although the more secure crude oil supply would reduce the potential for reductions in future economic activity. In contrast, the Perryman study (see Table 3.10.1-18) appeared to treat the petroleum originating from Canada as a new source and then calculated additional economic activity generated from the refining and sale of that petroleum.

The Perryman study suggested that: expenditures associated with the proposed Project would range from \$421.8 million in Montana to \$2.3 billion in Texas; personal income from the proposed Project would range from \$286.5 million in Montana to \$1.62 billion in Texas; and employment associated with the proposed Project would range from 5,102 person-years in South Dakota to 50,365 person-years in Texas.

TABLE 3.10.1-17				
The Impact of Construction and Development of the Proposed Project on Business Activity in the United States, Results by State (in constant 2009 Dollars)				
Area	Expenditures ^a	Gross Product	Personal Income	Person-Years of Employment
Montana	\$421,781,495	\$349,209,504	\$286,493,336	5,531
South Dakota	\$470,452,678	\$389,475,130	\$319,432,745	5,102
Nebraska	\$467,918,488	\$390,354,998	\$314,522,511	7,551
Kansas	\$683,162,244	\$486,486,146	\$376,570,636	6,721
Oklahoma	\$1,224,379,199	\$1,072,117,568	\$874,286,846	14,440
Texas	\$2,320,486,782	\$1,986,265,640	\$1,616,408,490	50,365
Rest of U.S.	\$15,342,458,878	\$4,931,526,907	\$2,713,265,333	29,226
United States Total	\$20,930,639,765	\$9,605,435,892	\$6,500,979,897	118,935

^a Expenditures include direct expenditures for construction of the proposed Project, and also the multiplier (indirect and induced) effects from those direct expenditures.

Source: Perryman Group 2010.

TABLE 3.10.1-18		
Ongoing Annual Gains in U.S. Business Activity Stemming from the Permanent Increase in Stable Oil Supplies Associated with the Implementation of the Proposed Project (billions of constant 2009 Dollars)		
	“Normal” Oil Price Scenario	“High” Oil Price Scenario
Total Expenditures	\$100.144	\$221.305
Gross Product	\$29.048	\$64.193
Personal Income	\$16.044	\$35.455
Retail Sales	\$5.869	\$12.969
Person-Years of Employment ^a	250,348	553,235

^a Please note that the table in the Perryman report defines this row as “Permanent Jobs”, but Appendix B of the report indicates that these are actually “person-years of employment.” Assuming that the detailed appendix is accurate, and that similar units of measure were used for this and the construction impact evaluation, we have taken the liberty to put the assumed appropriate label in this row.

Source: Perryman Group 2010.

Environmental Justice

Based upon an analysis of minority and low-income populations at the county and census block group level along the proposed Project corridor, it is not likely that proposed Project operation would disproportionately adversely impact minority and low-income populations. Nonetheless, it is important that the presence of populations that are meaningfully greater than state-wide averages at the county and census block group level be recognized and that communications during proposed Project operations appropriately target these populations for the common good.

The public review and comment process that DOS implemented during NEPA environmental review provided multiple opportunities at locations along the proposed Project corridor for public input. Meeting locations were selected to limit transportation distances for attendees to the degree practicable, irrespective of attendee minority or income status. Additionally, a series of consultation meetings conducted as part of the Section 106 NHPA consultation process occurred to facilitate participation by

consulting Indian tribes for both the Steele City Segment and the Gulf Coast Segment (including the Houston Lateral). Opportunities were provided at these consultation meetings to discuss issues associated with proposed Project construction and operation (see Section 3.11 for more information on the Section 106 NHPA process). Proposed Project-related spending and tax revenues (see Section 3.10.2.2) would result in economic benefits in the region of influence, which could positively affect low-income and minority populations through increased employment opportunities (and income benefits) and improved public service levels.

There would likely be no impacts to medical service availability in areas with minority or low-income populations that are designated as either HPSA and/or MUA/P areas during normal operation of the proposed Project due to the very small number of permanent employees along the proposed Project alignment. Potential impacts to minority and low-income populations resulting from an accidental release of crude oil from the proposed Project are addressed in Section 3.13.6.7.

As a result of the stringent safety and integrity measures incorporated into the design, construction, and operation of the proposed Project, as well as governing PHMSA pipeline safety regulations, the proposed Project would not likely pose a significant risk to residents along the route, whether in rural or urban areas. Further, there is no evidence that such risks would be disproportionately borne by minority or low-income populations identified within potentially affected communities in proximity to the proposed Project. Nonetheless, the community outreach activities described in the environmental justice construction impacts discussion above would also continue throughout the proposed Project operations.

Section 3.13 addresses the risks and associated impacts to public health and safety that would result from a pipeline crude oil release and also describes how applicable safety regulations and standards would minimize the potential risk of such releases. Section 3.14 addresses cumulative impacts potentially associated with proposed Project construction and operation. This section also considers impacts associated with refinery operations, including potential environmental justice implications relative to air emissions from the refining of WCSB crude oil.

In summary, the proposed Project would not likely result in disproportionate adverse impacts to minority or low-income populations in the region of influence.

3.10.2 Public Services, Tax Revenues, and Property Values

3.10.2.1 Environmental Setting

Public Services

The region of influence is served by a range of public services and service providers. Public services most pertinent to the proposed Project include police and fire protection and medical facilities.² Table 3.10.2-1 shows selected information for relevant public services in the region of influence. Generally, the extent of public service resources in a region is a function of its size, population, and number of established communities. Accordingly, public service infrastructure is typically not as developed in remote rural areas as in urban areas.

There are multiple law enforcement service providers in the region of influence, including state patrols, county sheriff departments, local police departments, and special law enforcement agencies such as university police. In many cases, mutual aid or cooperative agreements allow one agency to provide

² Education facilities are not addressed in the section because most construction workers are not expected to relocate with school-aged children; therefore, impacts on schools would be negligible.

support to other agencies in emergencies. On average, from 1 to 10 law enforcement agencies serve any given county. In the region of influence, the exception is Harris County, Texas, which is served by 36 law enforcement agencies.

A network of fire departments and districts provides fire protection and suppression services throughout the region of influence. Many of these organizations are staffed by volunteers, particularly in rural areas. In larger urban areas, fire protection staff typically is housed in fire stations. At the county level, the number of fire departments is approximately the same as the number of law enforcement agencies.

Table 3.10.2-1 also shows the nearest medical facilities to the proposed Project; specifically all critical access facilities that are located within 50 miles of the pipeline route. Non-federal, short-term, acute care facilities nearest the route are distinguished in the table based upon their likelihood of serving Project-related medical needs. In every county along the pipeline route, there is at least one acute care facility within the county or nearby in a neighboring county. These facilities would provide emergency medical care and, in some cases, would serve as the base for local emergency medical response and transport services for construction accidents or operating concerns.

TABLE 3.10.2-1 Existing Public Services and Facilities along the Proposed Project Route			
State/County^a	Police/Sheriff Departments^b	Fire Departments^b	Nearest Medical Facilities^c
Steele City Segment			
Montana			
Phillips	1	2	Phillips County Hospital (Malta)
Valley	4	3	Frances Mahon Deaconess Hospital (Glasgow)
McCone	2	1	McCone County Health Center (Circle)
Dawson	2	4	Glendive Medical Center (Glendive)
Prairie	2	1	Prairie Community Health Center (Terry)
Fallon	2	2	Fallon Medical Complex (Baker)
South Dakota			
Harding	2	3	
Butte	2	3	
Perkins	3	2	
Meade	4	6	Sturgis Regional Hospital (Sturgis)
Pennington	5	14	Rapid City Regional Hospital (Rapid City)
Haakon	2	3	Hans P. Peterson Memorial Hospital (Philip)
Jones	2	1	
Lyman	1	3	
Tripp	2	1	Winner Regional Healthcare Center (Winner)
Nebraska			
Keya Paha	1	2	
Rock	1	0	Rock County Hospital (Bassett)
Holt	5	2	Avera St. Anthony's Hospital (O'Neil)
Garfield	3	0	Valley County Hospital: Burwell Medical Clinic (Burwell)

**TABLE 3.10.2-1
Existing Public Services and Facilities along the Proposed Project Route**

State/County^a	Police/Sheriff Departments^b	Fire Departments^b	Nearest Medical Facilities^c
Wheeler	1	0	
Greeley	2	3	
Boone	4	3	Boone County Health Center (Albion)
Nance	1	2	
Merrick	4	3	Litzenberg Memorial County Hospital (Central City)
Hamilton	2	4	Memorial Hospital (Aurora)
York	2	3	York General Hospital (York)
Fillmore	3	6	Fillmore County Hospital (Geneva)
Saline	4	5	
Jefferson	3	5	Jefferson Community Health Center (Fairbury); Thayer County Health Services (Hebron)
New Cushing Extension Pump Stations			
Kansas			
Clay ^d	4	3	Clay County Medical Center (Clay Center); *Mercy Regional Health Center (Manhattan)
Butler ^d	8	12	*Newton Medical Center (Newton); *Susan B. Allen Memorial Hospital (El Dorado); *Via Christi Riverside Medical Center (Wichita); *Wesley Medical Center (Wichita)
Gulf Coast Segment			
Oklahoma			
Lincoln	9	6	Prague Municipal Hospital (Prague); Stroud Regional Medical Center (Stroud)
Creek	10	10	Bristow Medical Center (Bristow); Sapulpa Hospital (Sapulpa); Saint John Sapulpa (Sapulpa)
Okfuskee	4	6	Creek Nation Community Hospital (Okemah)
Seminole	5	6	Seminole Medical Center (Seminole)
Hughes	3	4	Holdenville General Hospital (Holdenville)
Coal	3	4	Mary Hurley Hospital (Coalgate)
Atoka	3	7	Atoka Memorial Hospital (Atoka)
Bryan	8	12	Medical Center of Southeastern Oklahoma (Durant)
Lincoln	9	6	Prague Municipal Hospital (Prague); Stroud Regional Medical Center (Stroud)
Texas			
Fannin	8	6	Northeast Medical Center (Bonham)
Lamar	7	12	Saint Joseph's (Paris); Dubuis Hospital of Paris (Paris); Paris Regional Medical Center (Paris)
Delta	5	2	Wintermute Memorial Hospital (Klondike)
Hopkins	5	8	Hopkins County Memorial Hospital (Sulphur Springs)

**TABLE 3.10.2-1
Existing Public Services and Facilities along the Proposed Project Route**

State/County^a	Police/Sheriff Departments^b	Fire Departments^b	Nearest Medical Facilities^c
Franklin	2	3	East Texas Medical Center (Mt. Vernon)
Wood	6	6	Presbyterian Hospital of Winnsboro (Winnsboro)
Upshur	4	7	
Smith	8	9	East Texas Medical Center (Tyler); Mother Frances Hospital (Tyler); University of Texas Health Center (Tyler)
Cherokee	5	6	Mother Frances Hospital (Jacksonville); Rusk State Hospital (Rusk)
Rusk	6	6	Henderson Memorial Hospital (Henderson)
Nacogdoches	4	11	Nacogdoches Medical Center (Nacogdoches)
Angelina	6	8	Woodland Heights Medical Center (Lufkin)
Polk	4	8	Memorial Medical Center (Livingston)
Liberty	6	11	Cleveland Regional Medical Center (Cleveland); Kersting Hospital (Liberty); Leggett Memorial Hospital (Cleveland); Liberty-Dayton Hospital (Liberty)
Hardin	6	4	
Jefferson	10	8	Saint Elizabeth Hospital (Beaumont); Debuis Hospital of Beaumont (Beaumont); Memorial Herman Baptist (Beaumont) Saint Mary Hospital (Port Arthur); Promise Specialty Hospital of Southeast Texas (Port Arthur); Mid-Jefferson Hospital (Nederland)
Houston Lateral			
Texas			
Liberty			<i>See Liberty County in Gulf Coast Segment, above</i>
Chambers	4	5	Bayside Community Hospital & Clinic (Anahuac)
Harris	36	41	Bay Area Surgicare Center (Webster); Bayshore Medical Center (Pasadena); Bayou City Medical Center (Houston); Ben Taub General Hospital (Houston); Children's Memorial Hermann Hospital (Houston); Saint Catherine Hospital (Katy); Saint John Hospital (Nassau Bay); Saint Joseph Hospital (Houston); Clear Lake Regional Medical Center (Webster); Cypress Creek Hospital (Houston); Cypress Fairbanks Medical Center (Houston); Dubuis Hospital of Houston (Houston); East Houston Regional Medical Center (Houston); Lyndon B. Johnson General Hospital (Houston); Quentin Mease Community Hospital (Houston); Kingwood Medical Center (Kingwood); Spring Branch Medical Center (Houston); West Houston Medical Center (Houston); Women's Hospital of Texas (Houston) Hermann Hospital (Houston); Kindred Hospital Bay Area (Pasadena); Kindred Hospital Houston (Houston); Kindred Hospital Houston Northwest (Houston); Memorial Hermann Northwest Hospital (Houston); Memorial Hermann Katy Hospital (Katy); Memorial Hermann Southeast Hospital (Houston); Memorial Hermann

**TABLE 3.10.2-1
Existing Public Services and Facilities along the Proposed Project Route**

State/County ^a	Police/Sheriff Departments ^b	Fire Departments ^b	Nearest Medical Facilities ^c
			Southwest Hospital (Houston); Methodist Hospital (Houston); Methodist Willowbrook Hospital (Houston); San Jacinto Methodist Hospital (Houston); Michael E. Debakey VA Medical Center (Houston); Park Plaza Hospital (Houston); Parkview Community Hospital (Houston) Saint Joseph Hospital (Houston); Saint Luke's Episcopal Hospital (Houston); Twelve Oaks Medical Center (Houston); West Houston Medical Center (Houston); West Oaks Hospital (Houston)

^a States and counties are listed geographically from north to south as proposed project crosses the area.

^b Includes special law enforcement units for universities. Includes volunteer, district, city, and town fire departments (Capitol Impact 2006).

^c All facilities listed are critical access facilities within approximately 50 miles of the project; those marked with an asterisk (*) are non-federal, short-term, acute care facilities (AHD 2006).

^d Construction in these counties will be related to pump stations only.

There are multiple Local Emergency Planning Committees (LEPCs) established under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 along the proposed pipeline corridor (see Table 3.13.5-7). These committees exist in cities and counties along the proposed Project corridor where the handling of hazardous or toxic materials in existing facilities or the transport of these materials through the committee areas of responsibility are known to occur based on reporting requirements included within EPCRA and the Superfund Amendments and Reauthorization Act (SARA) of 1986. Should the proposed Project be implemented, Keystone would reach out to LEPCs during and after the development of its Emergency Response Plan (ERP) and public awareness materials with special emphasis on considerations of low income and minority communities in those preparedness efforts.

Tax Revenues

The 2007 property taxes levied by county, the assessed value of property, and the implied effective tax rate by county for the proposed Project area of influence are presented in Table 3.10.2-2. Effective property tax rates in the area of influence ranged from a low of 1.05 percent of property value in Harding County, South Dakota to a high of 10.00 percent in Creek County, Oklahoma. In general, most of the property tax rates are between 1.00 and 3.00 percent, with an average of 2.06 percent. The property tax rates in Oklahoma are greater than the other counties within the area of influence, averaging 9.14 percent.

Various jurisdictions crossed by the proposed Project also assess sales and use taxes, which are based upon the value of goods and materials purchased, as well as income taxes levied on labor earnings. Applicable sales and income tax rates vary across counties. In some states, there also can be corporate taxes at both a state and local level. In addition, federal agencies assess fees for use of public lands for activities such as pipeline ROWs and electrical transmission line or electrical distribution line ROWs.

**TABLE 3.10.2-2
2007 Property Tax Levy and Assessed Valuation by County**

State/County	Taxes Levied (\$)	Assessed Value (\$)	Effective Tax Rate (%)
Steele City Segment			
Montana			
Phillips	5,365,348	321,173,215	1.67%
Valley	10,664,457	485,988,933	2.19%
McCone	3,164,719	191,888,122	1.65%
Dawson	9,655,689	389,463,999	2.48%
Prairie	1,653,199	94,403,567	1.75%
Fallon	4,841,377	334,310,467	1.45%
<i>Subtotal Montana</i>	<i>35,344,789</i>	<i>1,817,228,303</i>	<i>1.94%</i>
South Dakota			
Harding	2,226,716	212,834,056	1.05%
Butte	(a)	431,961,877	(a)
Perkins	3,264,315	242,943,061	1.34%
Meade	21,100,792	1,283,587,876	1.64%
Pennington	95,055,282	5,844,272,499	1.63%
Haakon	(a)	238,038,114	(a)
Jones	1,698,003	159,781,297	1.06%
Lyman	4,006,951	366,472,296	1.09%
Tripp	6,353,944	477,303,334	1.33%
<i>Subtotal South Dakota</i>	<i>133,706,003</i>	<i>9,257,194,410</i>	<i>1.44%</i>
Nebraska			
Keya Paha	2,973,340	197,869,109	1.50%
Rock	4,312,550	252,048,909	1.71%
Holt	20,636,815	1,207,224,347	1.71%
Garfield	2,820,969	167,106,798	1.69%
Wheeler	2,759,762	211,131,099	1.31%
Greeley	5,476,377	316,644,025	1.73%
Boone	11,719,719	692,307,733	1.69%
Nance	6,523,215	351,882,579	1.85%
Merrick	12,719,873	677,474,809	1.88%
Hamilton	18,045,995	1,087,894,709	1.66%
York	23,513,215	1,323,917,546	1.78%
Fillmore	13,731,263	753,036,314	1.82%
Saline	20,727,020	1,058,221,220	1.96%
Jefferson	13,245,717	717,959,001	1.84%
<i>Subtotal Nebraska</i>	<i>159,205,830</i>	<i>9,014,718,198</i>	<i>1.77%</i>

**TABLE 3.10.2-2
2007 Property Tax Levy and Assessed Valuation by County**

State/County	Taxes Levied (\$)	Assessed Value (\$)	Effective Tax Rate (%)
New Cushing Extension Pump Stations			
Kansas			
Clay	9,547,982	706,839,030	1.35%
Butler	79,382,164	5,849,633,370	1.36%
<i>Subtotal Kansas</i>	<i>88,930,146</i>	<i>6,556,472,400</i>	<i>1.36%</i>
Gulf Coast Segment			
Oklahoma			
Atoka	2,498,917	30,238,520	8.26%
Bryan	11,413,199	136,416,335	8.37%
Coal	958,960	11,798,330	8.13%
Creek	22,517,818	225,072,546	10.00%
Hughes	2,522,911	33,385,804	7.56%
Lincoln	7,058,488	78,055,230	9.04%
Okfuskee	1,959,761	23,543,168	8.32%
Payne	28,349,366	293,459,900	9.66%
Seminole	4,357,597	48,614,451	8.96%
Pontotoc	7,918,904	98,800,803	8.02%
<i>Subtotal Oklahoma</i>	<i>89,555,921</i>	<i>979,385,087</i>	<i>9.14%</i>
Texas			
Angelina	60,969,218	3,052,256,882	2.00%
Cherokee	34,338,336	1,812,810,085	1.89%
Delta	4,534,214	310,482,390	1.46%
Fannin	22,818,196	1,219,567,614	1.87%
Franklin	12,764,553	1,201,312,450	1.06%
Hardin	\$45,760,882	2,061,986,220	2.22%
Hopkins	29,938,733	1,471,649,558	2.03%
Jefferson	506,643,329	18,574,203,161	2.73%
Lamar	47,442,151	2,229,909,021	2.13%
Liberty	81,305,222	4,153,229,220	1.96%
Nacogdoches	52,297,618	2,837,250,144	1.84%
Polk	36,050,016	2,111,521,453	1.71%
Rusk	67,211,423	4,444,332,830	1.51%
Smith	212,734,763	12,541,361,198	1.70%
Upshur	33,340,080	1,911,716,646	1.74%
Wood	41,862,352	2,910,033,737	1.44%
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>1,290,011,086</i>	<i>62,843,622,609</i>	<i>2.05%</i>

TABLE 3.10.2-2			
2007 Property Tax Levy and Assessed Valuation by County			
State/County	Taxes Levied (\$)	Assessed Value (\$)	Effective Tax Rate (%)
Houston Lateral			
Texas			
Liberty	<i>see above</i>	<i>see above</i>	<i>see above</i>
Chambers	126,062,105	6,078,153,460	2.07%
Harris	6,333,806,178	304,029,290,532	2.08%
<i>Subtotal Texas - Houston Lateral</i>	<i>6,459,868,283</i>	<i>310,107,443,992</i>	<i>2.08%</i>
<i>Subtotal Texas</i>	<i>7,749,879,369</i>	<i>372,951,066,601</i>	<i>2.08%</i>
Total Counties	8,248,703,154	400,477,264,196	2.06%

^a County did not report.

Sources: South Dakota Property Tax Division - Equalized Valuations and Property Taxes Collected from All Sources, <http://www.state.sd.us/drr2/prospectax/property/publications.htm>; Nebraska Department of Revenue, Property Assessment Division, 2007 and 2008 Comparison, December 2008, <http://pat.ne.gov/researchReports/map/index.html>; Oklahoma - Personal Communication with Teresa Strawther, Ad Valorem Division, Oklahoma Tax Commission, July 27, 2009; Kansas Department of Revenue - <http://www.ksrevenue.org/pdf/forms/08arcomplete.pdf>; Texas Comptroller of Public Accounts - Taxes by County, <http://www.window.state.tx.us/taxinfo/proptax/07taxrates/>, Includes County, School and Special District Taxes on the County Valuation.

3.10.2.2 Potential Impacts

Construction Impacts

Public Services

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). Various types of emergency events that required medical response could occur during construction (e.g. worker accidents). The magnitude of public service impacts would vary by community, depending upon the number of non-local workers and accompanying families, the size of the community, and duration of stay. Few non-local workers would likely be accompanied by family members because of the short construction period and transient nature of the work. Therefore, potential overall public service impacts associated with temporary increases in population would be short-term and minor in much of the proposed Project area.

The need for emergency response during construction in more urban areas would not likely impact existing overall emergency response capability based upon the proximity of existing public service facilities to the proposed Project ROW. However, the potential effects could be greater in rural areas where there are dispersed small towns and fewer services, and in these areas the response needs of up to 600 workers per spread could lead to short-term impacts on response services and providers. In Montana and South Dakota, the need for public services would be ameliorated by construction of the work camps, which would reduce the demand on public services in small towns and counties in the general area of the work camps.

DOS 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 (ERP) developed prior to the implementation of the proposed Project.

Tax Revenues and Fiscal Resources

The fiscal benefits during construction of the proposed Project would include short-term sales and income tax revenues. These new revenues should meet or exceed the funding required to provide project-related needs for most jurisdictions, because the proposed Project would not likely require substantial new government expenditures for public service impacts. The range of potential tax revenues during construction is described below.

In the short-term, the predominant source of tax revenues would be sales/use and fuel taxes levied on goods and services purchased during the construction period. This would include, for example, construction materials and construction worker spending in the local economy for basic living expenses such as food, housing, gasoline, and entertainment. It is difficult to quantify these short-term tax benefits because they would be dependent upon construction spending levels, the ability of local businesses to meet the demand for required materials and services, and the variability of applicable taxes and tax rates across jurisdictions affected by the proposed Project.

For employee-generated purchases, tax revenues would depend upon the proportion of the work force originating from the local area, the behavior of individual workers, and the duration of non-local worker residency. Some portion of the construction payroll would be retained and spent within the region of influence by the work force during the construction period. The resulting tax revenues generated by this spending would represent additional fiscal benefits resulting from the proposed Project.

Short-term fiscal benefits could also arise from fees assessed by federal agencies for the use of public land for pipeline and electrical transmission line or distribution line ROWs, as well as from local, state, and federal income taxes paid by corporations and employees serving the proposed Project. These taxes and fees would vary by region and were not quantified for this analysis.

Property Damages and Values

Potential damages to private property during proposed Project construction would be concentrated along the ROW and appurtenant facilities. Land disturbed by the proposed Project would be restored to the extent practicable; to repair or restore drain tiles, fences, and land productivity damaged or adversely affected during construction; and to 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.

Operations Impacts

Public Services

No new housing would likely be needed for the 20 employees comprising the operational work force and there would be no long-term impacts associated with the proposed Project on public services and utilities.

Tax Revenue and Fiscal Resources

The proposed Project would generate varied tax revenues for local and state jurisdictions, as well as the federal government. The major incremental tax revenue at the state and local levels would be property taxes, which are based on the assessed value of proposed Project facilities and applicable tax rates. Generally, states assess the value of pipelines to facilitate consistent valuation among counties crossed by the facility within the state.

Once the proposed Project was constructed, it would generate long-term property tax revenues for the states and counties traversed by the pipeline, in accordance with applicable tax structures. Estimates of property taxes by state were developed based upon the value and/or length of pipe in the ground and quantity of aboveground facilities (see Table 3.10.2-3). The estimated tax data for Montana was developed by the Montana Department of Revenue (e-mail correspondence with Vern Fogle). An estimated \$140.5 million in annual property tax revenues would be generated by the proposed Project in the region of influence. This estimate was based upon 2006 tax rates and an estimated \$7.0 billion of capital costs. The estimate implies an average 2.0 percent effective tax rate on \$7.0 billion. Most of these revenues, about \$100.3 million, would be attributed to the Steele City Segment. The pump stations in Kansas would generate \$2.0 million, the Gulf Coast Segment would generate \$37.3 million, and the remaining \$0.875 million would be generated in the Houston Lateral.

Annual property taxes for the proposed Project that would be paid by Keystone would represent 9.16 percent of the total annual property taxes assessed in 2006 in all counties that would be crossed by the proposed Project. This would represent a major fiscal benefit to the affected counties. The greatest percent increase over 2006 taxes, 42.7 percent, would occur along the proposed Steele City Segment. There would be an estimated 151 percent increase in property tax revenues in Montana compared to 2006, based upon an implied effective tax rate of 4.3 percent on the estimated capital costs of the proposed Project in Montana. This tax rate would be twice that of the proposed Project average tax rate across all counties.

If all estimated property taxes were paid for the new proposed Cushing Extension pump stations in Kansas, Keystone would pay \$2 million in annual property taxes that would represent a 2.7 percent increase in annual property taxes for affected Kansas counties, compared to 2006 levels. However, Keystone has applied for a property tax exemption in the state of Kansas.

Along the proposed Gulf Coast Segment, there would be an 11.9 percent increase in annual property taxes, compared to 2006 levels, if the proposed Project was implemented. The increase in annual property taxes along the proposed Houston Lateral would be 0.1 percent above 2006 levels. Local counties would be the primary beneficiaries of these property tax benefits. Depending upon the size of the existing tax base of each county and assuming that the 2006 tax rates would remain in effect if the proposed Project was implemented, these revenues would represent a moderate to major long-term fiscal benefit.

County	2006 Property Taxes Levied (\$)	Estimated Property Tax for Proposed Project (\$)	Estimated Proposed Project Property Tax as Percent of 2006 Property Taxes
Steele City Segment			
Montana			
Phillips	6,891,579	4,367,060	63.37%
Valley	12,731,805	14,860,604	116.72%
McCone	3,161,702	18,038,389	570.53%
Dawson	12,141,019	14,126,149	116.35%
Prairie	2,106,988	5,869,630	278.58%
Fallon	4,663,545	5,695,963	122.14%
<i>Subtotal Montana</i>	<i>41,696,638</i>	<i>62,957,795</i>	<i>150.99%</i>

**TABLE 3.10.2-3
2006 Tax Levy and Estimated Proposed Project Property Tax by County**

County	2006 Property Taxes Levied (\$)	Estimated Property Tax for Proposed Project (\$)	Estimated Proposed Project Property Tax as Percent of 2006 Property Taxes
South Dakota			
Harding	876,254	3,346,244	381.88%
Butte	1,811,097	134,730	7.44%
Perkins	1,290,869	624,306	48.36%
Meade	6,773,987	2,608,096	38.50%
Pennington	25,958,625	41,365	0.16%
Haakon	825,951	2,818,539	341.25%
Jones	612,854	2,044,666	333.63%
Lyman	1,057,054	489,057	46.27%
Tripp	2,197,509	3,298,393	150.10%
<i>Subtotal South Dakota</i>	<i>41,404,200</i>	<i>15,405,396</i>	<i>37.21%</i>
Nebraska			
Keya Paha	2,429,603	1,133,796	46.67%
Rock	4,031,120	649,588	16.11%
Holt	19,720,255	3,548,059	17.99%
Garfield	2,613,263	659,714	25.24%
Wheeler	2,699,567	1,328,431	49.21%
Greeley	5,144,809	1,714,863	33.33%
Boone	11,109,437	222,867	2.01%
Nance	6,195,427	1,280,136	20.66%
Merrick	12,327,924	1,581,338	12.83%
Hamilton	16,950,108	499,036	2.94%
York	22,800,935	2,175,921	9.54%
Fillmore	13,129,028	1,577,037	12.01%
Saline	19,624,429	1,339,885	6.83%
Jefferson	13,079,964	4,184,344	31.99%
<i>Subtotal Nebraska</i>	<i>151,855,869</i>	<i>21,895,015</i>	<i>14.42%</i>
New Cushing Extension Pump Stations			
Kansas			
Clay	9,037,940	1,542,806	17.07%
Butler	65,068,063	453,949	0.70%
<i>Subtotal Kansas</i>	<i>74,106,003</i>	<i>1,996,755</i>	<i>2.69%</i>
Gulf Coast Segment			
Oklahoma			
Lincoln	2,311,059	1,620,262	70.11%
Creek	31,369,794	411,919	1.31%
Okfuskee	3,409,877	1,239,748	36.36%
Seminole	9,064,881	2,169,785	23.94%
Hughes	6,340,078	2,188,917	34.53%
Coal	3,733,358	2,604,589	69.77%
Atoka	4,059,497	1,568,644	38.64%
Bryan	15,568,464	2,494,487	16.02%
<i>Subtotal Oklahoma</i>	<i>75,857,008</i>	<i>14,298,351</i>	<i>18.85%</i>

**TABLE 3.10.2-3
2006 Tax Levy and Estimated Proposed Project Property Tax by County**

County	2006 Property Taxes Levied (\$)	Estimated Property Tax for Proposed Project (\$)	Estimated Proposed Project Property Tax as Percent of 2006 Property Taxes
Texas			
Fannin	6,861,098	415,734	6.06%
Lamar	9,288,471	1,514,314	16.30%
Delta	1,457,836	1,550,784	106.38%
Hopkins	7,451,377	573,610	7.70%
Franklin	3,831,662	1,098,306	28.66%
Wood	10,396,712	1,863,930	17.93%
Upshur	8,345,374	348,966	4.18%
Smith	30,868,384	1,645,008	5.33%
Cherokee	10,459,552	1,393,088	13.32%
Rusk	13,641,514	646,068	4.74%
Nacogdoches	10,942,646	1,139,530	10.41%
Angelina	12,421,410	1,470,148	11.84%
Polk	12,316,738	3,015,148	24.48%
Hardin	10,863,453	593,311	5.46%
Liberty	21,705,512	4,156,875	19.15%
Jefferson	66,382,570	1,618,688	2.44%
<i>Subtotal Texas - Gulf Coast Segment</i>	<i>237,234,309</i>	<i>23,043,508</i>	<i>9.71%</i>
Houston Lateral			
Texas			
Liberty	see above	see above	see above
Chambers	26,053,006	207,106	0.79%
Harris	885,849,380	667,702	0.08%
<i>Subtotal Texas - Houston Lateral</i>	<i>911,902,386</i>	<i>874,808</i>	<i>0.10%</i>
<i>Subtotal Texas</i>	<i>1,149,136,695</i>	<i>23,918,316</i>	<i>2.08%</i>
Project Totals	1,534,056,413	140,471,628	9.16%

Sources: South Dakota Property Tax Division, Equalized Valuations and Property Taxes Collected from All Sources, <http://www.state.sd.gov/applications/DLASearches/countymenu.aspx>; Nebraska Department of Revenue, Property Assessment Division, 2007 and 2008 Comparison, December 2008. <http://pat.ne.gov/researchReports/annual/pdf/2006/NE%20PA&T%20Annrpt2006%20part%201%20of%204%20Text%20%20Tables%201-18.pdf.html> ; Kansas Department of Revenue (KDOR) <http://www.ksrevenue.org/pdf/forms/07arcomplete.pdf>; Oklahoma, Personal Communication with Teresa Strawther, Ad Valorem Division, Oklahoma Tax Commission, July 27, 2009; Texas Comptroller of Public Accounts, taxes by County <http://www.window.state.tx.us/taxinfo/proptax/annual06/table18.pdf>

The Perryman study (2010) also found that significant local and state property tax revenues would be generated by the proposed Project, as shown in Table 3.10.2-4. These additional tax revenues could be used for a variety of purposes by each jurisdiction, including reducing potential impacts from the proposed Project, and improving existing services or providing new services to residents.

TABLE 3.10.2-4 Local and State Government Property Tax Revenues Associated with Development of the Proposed Project (millions of constant 2009 Dollars)		
State	Local Government Revenues	State Government Revenues
Montana	\$1.410	\$7.493
South Dakota	\$1.596	\$8.466
Nebraska	\$1.814	\$9.484
Kansas	\$2.948	\$15.013
Oklahoma	\$3.959	\$21.293
Texas	\$7.699	\$41.140
U.S. Total	\$99.095	\$486.359

Source: Perryman Group 2010.

Property Damages and Values

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.

An indication of the potential impacts of the proposed Project on property values can be gained from the study of property value impacts from previous pipeline projects. A literature search was therefore conducted to assess impacts upon residential and agricultural property values associated with similar projects constructed in the recent past. Three relevant studies were reviewed, including INGAA (2001), Fruits (2008), and Palmer (2008). Key findings from these studies are summarized briefly below.

The INGAA Foundation (2001) conducted analyses of the effects of natural gas and products pipelines on property values in:

- A residential subdivision in Katy, Texas;
- Four residential subdivisions including vacant land in Medford, Oregon;
- A master planned commercial neighborhood in Irving, Texas; and
- A residential subdivision in Newtown, Connecticut.

The study analyzed paired sale comparisons and statistical analyses for:

- March 1996 through November 2000 in Katy, Texas;
- June 1992 through December 2000 in Medford, Oregon;
- February 1997 through September 2000 in Irving, Texas; and
- June 1993 through October 2000 in Newtown, Connecticut.

The study determined that construction and operation of the pipelines through these areas had no noticeable impact on property sales prices. The minor positive and negative price differences found were less than 5 percent, and most were positive. The study also concluded that there was no relationship to

the size of the pipeline (they studied 6, 10, 12, 20, 24, and 30-inch diameter pipelines), the products transported, or pipeline age (from 6 to 56 years old). In some cases, pipeline easements were “transformed into an amenity to the community, such as landscaped greenbelts, walking/jogging paths, and golf courses.” The market demand (i.e., the number of days on the market) for properties was not apparently affected by a property’s location relative to a nearby pipeline, although the market demand may have been positively influenced by the amenities developed along some of the pipeline easements. Further development of properties was not apparently affected by the presence of the pipelines.

Fruits (2008) evaluated the effects of the high-pressure, 24-inch natural gas South Mist Pipeline Expansion Project on the values of more than 10,000 residential properties located within 1 mile of the pipeline in Clackamas and Washington counties (in Oregon). The study determined that the presence of the pipeline had no economically significant effect on residential property values within 1 mile of the pipeline.

Palmer (2008) also evaluated the effects of the high-pressure, 24-inch natural gas South Mist Pipeline Expansion Project on the values of 18 properties, primarily residential and agricultural, sold from January 2004 to January 2008 in Clackamas and Washington counties in Oregon. Construction of that pipeline was completed in September 2004. The study found no measurable impacts to property values attributable to the presence of the pipeline. The differential prices ranged from -5.60 percent (i.e., price reduction) to +13.50 percent (i.e., price increase), with an average difference of +2.58 percent. In addition, buyers reported that they “felt the pipeline had little to no impact on their decisions to purchase the properties and did not perceive a long-term impact on [the] value of their property.”

Thus, as shown by the above studies, 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. Thus, it does not appear that the proposed Project would have a major impact on residential and agricultural property values.

For a review of potential impacts to land values associated with oil spills and releases, see Section 3.13.5.8.

3.10.3 Traffic and Transportation

3.10.3.1 Environmental Setting

Highways, Major Roads, and Rural Roads

The proposed Project would meet or intersect many local, state, federal, and interstate roads and highways along its length. This section uses GIS data, which is accurate to plus or minus (+/-) 167 feet (ESRI 2008), to provide information about these roads and highways. Consequently, while the data are not intended for survey positional accuracy, they nonetheless provide adequate information to describe the roads and highways crossed. The roads and highways have been classified into four categories, based upon the U.S. Census Feature Class Codes:

- Category I: Local, Neighborhood, Rural or City roads;
- Category II: Secondary State and County Highways;
- Category III: Primary US and State Highways; and
- Category IV: Primary Limited Access or Interstate.

The roads in rural areas are well developed within the states the proposed Project would cross. Construction contractors would be required to submit a road use plan prior to mobilization, to coordinate with the appropriate state and county representatives to develop a mutually acceptable plan, and to obtain all necessary road permits. Inspection personnel would ensure that the construction contractor complied with these road-use plans and road-use permits.

Steele City Segment

The proposed Steele City Segment would extend from the border crossing near Morgan, Montana to Steele City, Nebraska. The proposed Steele City Segment would pass through Montana, South Dakota, and extend to the southern border of Nebraska. This segment of the proposed Project would cross three Interstate Highways, I-94, I-90, and I-80 (see Figure 3.10.3-1).

The proposed Steele City Segment would meet or intersect with a total of 722 roads in Categories I, II, III, and IV (Table 3.10.3-1), with the largest number of crossings in Montana (269), followed by Nebraska (260) and South Dakota (193).

TABLE 3.10.3-1 Intersections of Steele City Segment with Roads, by State			
State	Road Category	Road Name	Number of Road Intersections
Montana	Category I		254
	Category II	Marsh Rd	1
		Old Us Hwy 10	1
		River Rd	1
		Rock Creek Rd	1
		SR 117	1
		SR 24	1
		SR 243	1
		SR 7	1
		Weldon Rd	1
		Category III	SR 13
	SR 200		2
	US 12		1
	Category IV	US 2	1
		I 94	1
<i>Subtotal Montana</i>			269
Nebraska	Category I		238
	Category II	SR 11	1
		SR 12	1
		SR 137	1
		SR 14	1
		SR 15	1
		SR 22	1
		SR 4	1
		SR 41	1
		SR 56	1
		SR 66	1
		SR 70	1
		SR 74	1

**TABLE 3.10.3-1
Intersections of Steele City Segment with Roads, by State**

State	Road Category	Road Name	Number of Road Intersections
	Category III	SR 8	1
		SR 92	1
		US 136	1
		US 20	1
		US 281	1
		US 30	1
		US 34	1
		US 6	1
		US 81	1
	Category IV	I 80	1
<i>Subtotal Nebraska</i>			260
South Dakota	Category I		174
	Category II	Bad River Rd	1
		CR 35	1
		CR 797	1
		CR 867	1
		CR S6 Jones	1
		CR S9 Jones	1
		SR 16	1
		SR 20	1
		SR 34	1
		SR 53	1
		SR 73	1
		SR 79	1
		Category III	US 14
	US 18		1
	US 183		2
	US 212		1
Category IV	US 85	1	
	I 90	1	
<i>Subtotal South Dakota</i>			193
Total Steele City Segment Intersections			722

Notes: SR = State Route; US = U.S. Highway; I = Interstate; CR = County Road

Source: ESRI Data & Maps 9.3 [DVD]. 2008. Environmental Systems Research Institute, Redlands, California, USA.

Gulf Coast Segment

The proposed Gulf Coast Segment would pass through Oklahoma and Texas, starting from Cushing, Oklahoma and extending to Nederland in Jefferson County, Texas. This segment would cross Interstate Highways I-44, I-40, I-30, I-20, and I-10. It would also parallel SR 146 in Texas for approximately 7.5 miles (see Figure 3.10.3-2). The proposed Gulf Coast Segment would meet or intersect with 488 roads in Categories I, II, III, and IV (Table 3.10.3-2). This total would include 339 roads in Texas and 149 roads in Oklahoma.

**TABLE 3.10.3-2
Intersections of Gulf Coast Segment with Roads, by State**

State	Road Category	Road Name	Number of Road Intersections
Oklahoma	Category I		134
	Category II	SR 1	1
		SR 3	1
		SR 31	1
		SR 56	1
		SR 7	1
		SR 9	1
		SR 99	1
		SR 99a	1
	Category III	SR 66	1
		US 270	1
		US 62	1
		US 69	1
		US 70	1
	Category IV	I 40	1
I 44		1	
<i>Subtotal Oklahoma</i>			<i>149</i>
Texas	Category I		271
	Category II	Berard	1
		E Fm 852	1
		Fm 137	1
		Fm 16	1
		Fm 1911	1
		Fm 2122	1
		Fm 225	2
		Fm 2352	1
		Fm 2869	1
		Fm 3357	1
		Fm 343	1
		Fm 38	2
		Fm 62	1
		Fm 71	1
		Fm 770	1
		Fm 787	1
		Fm 79	1
		Fm 839	1
		Fm 900	1
		Fm 942	2
Fm 943	1		
Fm Road 2088	1		
Fm Road 69	1		
Hillebrandt Rd	1		
HWY 1448	1		

**TABLE 3.10.3-2
Intersections of Gulf Coast Segment with Roads, by State**

State	Road Category	Road Name	Number of Road Intersections
		S Major Dr	1
		S Pine Island Rd	1
		SE Fm 13	1
		SR 103	1
		SR 105	1
		SR 11	1
		SR 124	1
		SR 135	1
		SR 146	2
		SR 154	1
		SR 155	1
		SR 19	1
		SR 204	1
		SR 21	1
		SR 31	1
		SR 326	1
		SR 347	1
		SR 37	1
		SR 64	1
		SR 7	1
		SR 94	1
		Tyrrell Park Rd	1
		W Port Arthur Rd	1
		Walden Rd	1
	Category III	US 190	1
		US 271	1
		US 287	1
		US 59	1
		US 67	1
		US 69	2
		US 79	1
		US 80	1
		US 82	1
		US 84	1
		US 90	1
	Category IV	I 10	1
		I 20	1
		I 30	1
<i>Subtotal Texas</i>			339
Total Gulf Coast Segment Intersections			488

Source: ESRI Data & Maps 9.3 [DVD]. 2008. Environmental Systems Research Institute, Redlands, California, USA.

Houston Lateral

The proposed Houston Lateral would extend from the proposed Gulf Coast Segment in Liberty County, Texas, for approximately 49 miles to Harris County, Texas. This segment would intersect U.S. Highway 90 (see Figure 3.10.3-3). The proposed Houston Lateral would meet or intersect 51 roads (see Table 3.10.3-3), within Categories I, II, and III.

TABLE 3.10.3-3 Intersections of Houston Lateral with Roads			
State	Road Category	Road Name	Number of Road Intersections
Texas	Category I		43
	Category II	Fm 1409	1
		Fm 160	1
		Fm 1942 Rd	1
		Fm 563	1
		Sheldon Rd	1
		SR 134	1
		SR 146	1
	Category III	US 90	1
	Total Houston Lateral Intersections		

Source: ESRI Data & Maps 9.3 [DVD]. 2008. Environmental Systems Research Institute, Redlands, California, USA.

Railroads

The proposed Project would also cross several railway service tracks. Table 3.10.3-4 lists the railroad names and owners. As shown, there would be 43 total intersections, including seven in Montana, five in Nebraska, five in Oklahoma, two in South Dakota, and 24 in Texas.

The Burlington Northern Santa Fe (BNSF) has main, branch, and spur tracks in the states that would be traversed by the pipeline.³ The proposed Project route would cross the BNSF main tracks in the Montana Operating Division, running between Snowden and Shelby and between Snowden and Jones Junction. In Nebraska, the proposed Project would cross the BNSF main track in the Nebraska Operating Division, between Lincoln and Hastings. In the BNSF Kansas Operating Division, the proposed Project would cross two main tracks, one between Newton and Los Animas Junction and the other between Wichita and Amarillo (Texas). The proposed Project route would also cross several branch tracks, spurs, and short line tracks throughout the BNSF system area.

The Union Pacific Railroad (UPRR) has main, branch, and spur tracks throughout Nebraska and Kansas⁴. In Nebraska, the proposed route would cross a UPRR main track between Omaha and North Platte. In Kansas, the proposed Project would cross several main tracks connecting Topeka, Wichita, and other cities. In Oklahoma and Texas, the proposed Project route would cross UPRR main tracks running between Dallas and Houston and other cities in Texas and Louisiana.

³ See the BNSF system map at http://www.bnsf.com/tools/reference/division_maps, accessed August 3, 2009.

⁴ See the UPRR system map at <http://www.uprr.com/aboutup/maps/sysmap/index.shtml>, accessed August 3, 2009.

Other railroads would also be crossed by the proposed Project route in South Dakota, Nebraska, Oklahoma, and Texas, including the Southern Kansas and Oklahoma; United States Gypsum; Nebraska Central Railroad; Stillwater Central Railroad; Kiamichi Railroad; Dakota, Minnesota and Eastern Railroad; Dakota Southern Railway; Dallas, Garland, and Northeastern Railroad; Moscow Camden and San Augustine Railroad; Kansas City Southern Railroad; Texas Southeast Railway; and Port Terminal Railroad Association.

TABLE 3.10.3-4 Intersection of Proposed Project with Railroads, by Segment and State			
Segment	Railroad Name	Railroad Owner (Reporting Mark)	Number of Rail Intersections
Steele City Segment			
Montana			
	Burlington Northern Railroad	BNSF (Burlington Northern Santa Fe)	7
	<i>Subtotal Montana</i>		7
South Dakota			
	Dakota, Minnesota & Eastern Railroad	DME (Dakota Minnesota & Eastern Railroad Corporation)	1
	South Dakota State Railroad	DSRC (Dakota Southern Railway Company)	1
	<i>Subtotal South Dakota</i>		2
Nebraska			
	Burlington Northern Railroad	BNSF (Burlington Northern Santa Fe)	2
	Union Pacific Railroad	Union Pacific (UP)	3
	<i>Subtotal Nebraska</i>		5
Gulf Coast Segment			
Oklahoma			
	Burlington Northern Railroad	BNSF (Burlington Northern Santa Fe)	2
	Burlington Northern Railroad	St. Louis-San Francisco Railway Company	1
	Union Pacific Railroad	UP (Union Pacific)	2
	<i>Subtotal Oklahoma</i>		5
Texas			
	AT and SF Railway	BNSF (Burlington Northern Santa Fe)	1
	Missouri Pacific Railroad	DGNO (Dallas, Garland & Northeastern Railroad, Inc.)	1
	<i>Unnamed</i>	UP (Union Pacific)	10
	Moscow Camden San Augustine RR	MCSA (Moscow Camden San Augustine RR)	1
	Northeast Texas Rural Rail	Northeast Texas Rural Rail Transportation District	1
	Kansas City Southern Railway	KCS (Kansas City Southern Railway)	2
	Texas Southeastern Railroad	TSE (Texas Southeast Railway)	2
	<i>Subtotal Texas – Gulf Coast Segment</i>		18

TABLE 3.10.3-4 Intersection of Proposed Project with Railroads, by Segment and State			
Segment	Railroad Name	Railroad Owner (Reporting Mark)	Number of Rail Intersections
Houston Lateral			
Texas			
	Missouri Pacific Railroad	PTRA (Port Terminal Railroad Association)	1
	Railroad	UP (Union Pacific)	2
	Southern Pacific Railroad	UP (Union Pacific)	1
	<i>Unnamed</i>	UP (Union Pacific)	2
<i>Subtotal Texas – Houston Lateral</i>			6
Total Intersections			43

Source: ESRI Data & Maps 9.3 [DVD]. 2008. Environmental Systems Research Institute, Redlands, California, USA.

3.10.3.2 Potential Impacts

Construction Impacts

Public and existing private roads to access most of the construction ROW would be utilized. Each state has various road construction projects planned or underway. However, because specific construction dates for the proposed Project are unknown, potential conflicts with roadway construction are uncertain. Nonetheless, construction across roads and highways would comply with the requirements of the road crossing permits and approvals (Appendix B, CMR Plan).

Construction, mitigation, and reclamation actions presented in the proposed Project CMR Plan (Appendix B) would be implemented, except where those actions would conflict with federal, state, or local rules and regulations or other permits or approvals. It is unlikely that any improvement or maintenance would be required for paved roads before or during construction, while some gravel and dirt roads could require upgrades and maintenance. Construction across paved roads, highways, and rail routes would concur with the requirements stipulated in the road and railroad crossing permits and approvals obtained prior to construction. Generally, all roads and railroads would be traversed by borings that would involve excavation of a pit on each side of the roadway, placing required equipment into the pits, and boring a hole with a diameter as large as the pipeline itself.

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. However, impacts to local traffic would be minor and temporary.

Use of open-cut methods, where permitted by local authorities and private owners, would be employed to traverse mostly smaller unpaved roads and driveways. This method would require temporary closure of the feature to traffic and use of detours. If such detours were not feasible, at least one lane of traffic would be kept open other than when it would be necessary to close the road completely to install the pipeline. In general, open-cut road crossings would be finished and the subject roads resurfaced within two days. At each such crossing, signs would be posted and other measures as required by federal, state, and local transportation agencies would be utilized to minimize traffic disturbances and ensure safety.

Many commenters expressed concern about the potential for damage to roads and roadway structures during construction of the proposed Project and safety along roadways in the vicinity of the proposed route during construction. 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.

Condition of Roads and Roadway Structures

If the proposed Project receives all permits and approvals, Keystone would work with state and local road officials, the pipeline construction contractor, and a third-party road consultant to identify routes that would be used for moving materials and equipment between storage and work yards to the pipeline, valve, and pump station construction sites. When these routes are mutually agreed upon, the road consultant would document the existing conditions of roads, including a video record. When construction is completed, the same parties would review the road conditions, and Keystone would restore the roads to their preconstruction condition or better. This restoration would be paid for by Keystone.

Keystone would also perform a preliminary evaluation to determine the design-rated capacity of bridges anticipated to be used during construction. Keystone's pipeline contractor would inspect all bridges it intends to use prior to construction and confirm that the capacity of the bridges is adequate for the anticipated weights. In cases where the bridges are not adequate to handle the maximum weight, an alternate route would be used. The pipeline contractor would also inspect cattle guard crossings prior to their use. If they are determined to be inadequate to handle anticipated construction traffic, the cattle crossing may be matted, or Keystone would establish an alternate crossing, enhance existing structures, and, if needed, install new infrastructure with the landowner's approval. All such actions would be paid for by Keystone.

During construction, Keystone and the pipeline contractor would maintain roads used for construction in a condition that is safe for both the public and the work force. Local road officials would be actively engaged in the routine assessment of current road conditions.

Traffic Safety

Keystone would follow all federal, state, and local safety plans and signage as set forth in current Manuals of Uniform Traffic Control for streets and highways, or in similar documents issued by regulatory agencies along the proposed route. This would include compliance with all state and local permits pertaining to road and crossing infrastructure usage.

Keystone would require that each construction contractor submit a road use plan prior to mobilization, coordinate with the appropriate state and county representatives to develop a mutually acceptable plan, and obtain all necessary road use permits. The road use plans would identify potential scenarios that may occur during construction based on surrounding land use, known recreational activities, and seasonal influences (such as farming), and would establish measures to reduce or avoid effects to the local communities. Keystone would also have inspection personnel monitor road use activities to ensure that the construction contractors comply with the road use plans and stipulations of the road use permits.

Operations Impacts

No substantive ongoing impacts to roads and railroads from operation and maintenance of the proposed Project would be expected. Operation and maintenance activities could require occasional use of roads to access the proposed Project ROW. Typically, these activities would use less equipment and personnel than would be used during construction.

3.10.4 Connected Actions

3.10.4.1 Power Distribution Lines and Substations

Construction of the substations, transformers, and necessary electrical power distribution lines would impact local economies by creating temporary employment, and potentially through the purchase of goods and services, and taxes on those goods. The magnitude of the positive economic impact is not known because an estimate of the construction costs for the substations, transformers, and electrical power distribution lines from the various local power providers is not available. The economic impact would be distributed throughout the proposed Project area. Table 3.10.4-1 shows the geographic distribution of the planned improvements to power infrastructure, as a proxy for estimating the geographic distribution of the economic impact. In general, relatively more transformers and miles of electrical power distribution lines would be required for the proposed Steele City Segment. Also included in Table 3.10.4-1 are the number and names of the local power providers.

TABLE 3.10.4-1 Summary of Power Supply Requirements for Proposed Project Pump Stations and Tank Farm				
Segment	Number of Transformers	Miles of Power Distribution lines	Number of Power Providers	Power Provider
Steele City Segment				
Montana	6	135.8	5	Big Flat Electric Cooperative, NorVal Electric Cooperative, McCone Electric Cooperative, Tongue River Electric Cooperative, Montana-Dakota Utilities Company
South Dakota	7	159.1	3	Grand Electric Cooperative, West Central Electric Cooperative, Rosebud Electric Cooperative
Nebraska	5	69.6	5	Niobrara Valley Electric, Loup Valleys Rural PPD, Southern Power District, Perennial PPD, Norris PPD
New Cushing Extension Pump Stations				
Kansas	2	13.5	2	Clay Center Public Utility, Westar Energy
Gulf Coast Segment				
Oklahoma	4	12.7	4	Oklahoma Gas and Electric Company, Canadian Valley Electric Cooperative/PSO, People's Electric Cooperative/PSO, Southeastern Electric Cooperative
Texas	6	17.9	4	Lamar Electric Cooperative, Wood County Electric Cooperative, Cherokee County Electric Cooperative, Sam Houston Electric Cooperative

Property Damages and Values

The power distribution permanent ROW would be restored after construction and access would be required to the ROW for the life of the proposed Project pump stations and tank farm. Each power provider would develop detailed power line construction and operation procedures to address site specific conditions (see Section 2.5.1 for details). The potential impacts of the proposed Project power distribution lines on property values are examined below.

Three early studies (Blinder 1979) (Brown 1976) (Kinnard et al. 1984; as cited by Delaney and Timmons 1992) found that tall electrical transmission lines did not affect nearby residential or agricultural property

values. A 1978 study of agricultural land in west-central Minnesota found that the landowners were inconvenienced by the presence of a transmission line, but had not paid less for their land (Kroll and Priestly, 1992). However, a similar west-central Minnesota study in 1982 found that landowners experienced a 0 to 20 percent reduction in property values, depending upon the amount of disruption to their farm operations (Kroll and Priestly 1992).

Later studies (Colwell and Foley 1979; as cited by Delaney and Timmons 1992) showed that electrical transmission lines had a negative effect on property values. The most common reason given by one study was the visual impact of the transmission line, followed by the perceived health risk (Delaney and Timmons 1992). One study (Colwell 1990) showed that over time the negative impacts to property values decreased, indicating a reduced concern about the facilities. In the mid-1990s, a study of the effects of high-voltage transmission lines on upper-priced residential and vacant lot property values in urban, suburban, and rural areas of western Wisconsin showed that very minor positive and negative impacts occurred, indicating that there was virtually no impact (Solum 1995).

In 1996, an evaluation of the effects of transmission lines on residential property values in Seattle and Vancouver, Washington found little impact (Cowger et al. 1996). The literature review completed for that study also indicated the following:

- Overhead transmission lines can reduce the value of residential and agricultural property. The impact is usually small (0 to 10 percent) for single-family residential properties.
- Other factors such as location, improvements, and lot size are more likely to be major determinants of sale price.
- Impacts on sales are most likely to occur on property crossed or immediately adjacent to the lines.
- In areas where the ROW has been landscaped or developed for recreational use, positive impacts have been measured.
- Impacts may be greater for small properties than for larger properties.
- Impacts are more pronounced immediately after construction of a new line and diminish over time.

The Public Service Commission of Wisconsin reviewed, as part of a transmission line EIS, approximately 30 papers, articles, and court cases from 1987 through 1999 concerning property value impacts (PSCW 2000). That literature review found that the average decrease in property values appeared to be 4 to 7 percent in Minnesota, Wisconsin, and the Upper Peninsula of Michigan. That analysis provided six additional observations:

- A potential reduction in sale price for single family homes may range from 0 to 14 percent.
- Adverse effects on the sale price of smaller properties could be greater than the effects on the sale price of larger properties.
- Other amenities, such as proximity to schools or jobs, lot size, square footage of a house, and neighborhood characteristics, often have a much greater effect on sale price than the presence of a power line.
- Adverse effects created by the presence of a transmission line appear to diminish over time.
- Effects on the sale price of property most often are observed for property crossed by or immediately adjacent to a transmission line.

- The value of agricultural property is likely to decrease if the transmission line poles are placed in an area that inhibits farm operations.

Based upon a review of the literature, it appears that the power distribution lines required for the proposed Project would have a minor impact on property values due to the following factors:

- Many of the power distribution ROWs would be located in rural areas;
- Many of the power distribution lines would be located more than 300 feet from residences; and
- Most properties that would be crossed by power distribution ROWs are relatively large parcels/tracts.

3.10.4.2 Big Bend to Witten 230-kV Transmission Line

Construction of the proposed Big Bend to Witten 230-kV transmission line and the new proposed Big Bend Substation would impact local economies by creating temporary employment, and potentially through the purchase of goods and services, and taxes on those goods. The magnitude of the positive economic impacts could not be determined because an estimate of construction costs for this connected action was not available. The economic impacts would likely be concentrated in Lyman and Tripp counties in south-central South Dakota. The currently proposed alternative alignments for the Big Bend to Witten 230-kV Transmission Line would cross the Lower Brule Indian Reservation.

3.10.4.3 Bakken Marketlink and Cushing Marketlink Projects

Construction and operation of the Bakken Marketlink Project would include metering systems, three new storage tanks near Baker, Montana, and two new storage tanks within the boundaries of the proposed Cushing tank farm. Keystone reported that the property proposed for the Bakken Marketlink facilities near Pump Station 14 is currently used as pastureland and hayfields and that a survey of the property indicated that there were no waterbodies or wetlands on the property. DOS reviewed aerial photographs of the area and confirmed the current use of the land and that there are no waterbodies or wetlands associated with the site. A site inspection by the DOS third-party contractor confirmed these findings. As a result, the potential socioeconomic impacts associated with expansion of the pump station site to include the Bakken Marketlink facilities would likely be similar to those described above for the proposed Project pump station and pipeline ROW in that area.

The Cushing Marketlink project would be located within the boundaries of the proposed Cushing tank farm of the Keystone XL Project and would include metering systems and two storage tanks. As a result, the socioeconomic impacts of construction and operation of the Cushing Marketlink Project would be the same as potential impacts associated with construction and operation of the proposed Cushing tank farm described in this section.

Currently there is insufficient information to complete an environmental review of the Marketlink projects. The permit applications for these projects would be reviewed and acted on by other agencies. Those agencies would conduct more detailed environmental reviews of the Marketlink projects. Potential socioeconomic impacts would be evaluated during the environmental reviews for these projects and would be evaluated and avoided, minimized, or mitigated in accordance with applicable regulations.

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