

3.10 SOCIOECONOMICS

This section describes existing socioeconomic conditions that could be affected by the proposed Keystone Project and evaluates the potential socioeconomic impacts that may result from project implementation. The key resource topics addressed in this section include population; housing, including property values; local economic activity, as measured primarily by employment and income parameters; tax revenues; public services; transportation; and environmental justice.

Several key socioeconomic issues have been identified for the proposed Keystone Project. These include: (1) compensation to property owners for conveyance of temporary and permanent ROW easements, in addition to restrictions on land use and damage to property; (2) indirect economic effects from displacing agricultural land uses and related effects on federal farmland protection program payments; (3) construction worker demands on local infrastructure; (4) economic benefits from the purchase of goods and services during construction and operations; and (5) fiscal impacts associated with property, sales and other tax revenues, as well as public service costs generated by the proposed Keystone Project.

3.10.1 Environmental Setting

This section provides a general overview of the socioeconomic resources that could be affected by the Keystone Project and represents existing (or current) socioeconomic conditions in the 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 Keystone Project were evaluated. The data used to establish baseline socioeconomic conditions are based on a variety of federal, state, and local sources. Both text and tables in this section are organized by Keystone Project segment, namely the Mainline Project and the Cushing Extension.

3.10.1.1 Region of Influence

The proposed Keystone Project, including the Cushing Extension, would consist of an approximately 1,378-mile interstate crude oil pipeline and associated ancillary facilities, as described in Section 2.0. From its point of origin in the United States, the Mainline Project route would cross 48 counties in six states (North Dakota, South Dakota, Nebraska, Kansas, Missouri, and Illinois); the Cushing Extension would span an additional nine counties in Nebraska, Kansas, and Oklahoma. Within each county, several local communities are expected to incur most of the direct socioeconomic impacts of the Keystone Project, both positive and negative. For the purposes of this analysis, these are communities located within 2 miles of new pipeline facilities or surface disturbance activities associated with pipeline refurbishment. Potentially affected states, counties, and communities are listed in Table 3.10.1-1, with the communities and counties representing the “region of influence” for this socioeconomic analysis. Table 3.10.1-1 organizes communities based on their general proximity to the pipeline and also reports community-level population figures, which are intended to supplement the population data presented in Section 3.10.1.2.

**TABLE 3.10.1-1
Affected Counties and Communities
along the Keystone Project Route**

State/County	Community (2000 Population)	
	Within 0.5 Mile	Within 2.0 Miles
MAINLINE PROJECT		
North Dakota		
Cavalier	--	--
Pembina	--	Walhalla (1,057)
Walsh	Lankin (131)	--
Nelson	--	--
Steele	--	Sharon (109); Luverne (44)
Barnes	--	Sibley (46)
Ransom	--	Fort Ransom (70)
Sargent	--	--
Dickey	--	--
Grand Forks ^a	--	Niagara (57)
South Dakota		
Brown	--	--
Marshall	--	--
Day	--	--
Clark	Raymond (86)	--
Beadle	--	--
Kingsbury	Iroquois (278)	--
Miner	Roswell (21)	Carthage (187)
Hansen	--	Emery (439)
McCook	--	Spencer (157)
Hutchinson	--	--
Yankton	Yankton (13,528)	--
Nebraska		
Cedar	--	Randolph (955); Fordyce (182)
Wayne	Sholes (24)	Hoskins (283)
Stanton	--	Stanton (1,627)
Platte	--	--
Colfax	Leigh (442); Richland (89)	--
Butler	Garrison (67)	Bellwood (446)
Seward	--	Seward (6,319); Staplehurst (270)
Saline	--	Dorchester (615); Swanton (106)
Jefferson	--	Plymouth (477); Steele City (84); Harbine (56)
Gage	--	--
Kansas		
Marshall	--	Oketo (87)
Nehama	--	Seneca (2,122); Oneida (70)

**TABLE 3.10.1-1
(Continued)**

State/County	Community (2000 Population)	
	Within 0.5 Mile	Within 2 Miles
MAINLINE PROJECT (CONTINUED)		
Kansas (continued)		
Brown	--	Fairview (271)
Doniphan	--	Denton (186); Severance (108)
Missouri		
Buchanan	Agency (599)	St. Joseph (73,990); Gower (1,399)
Clinton	--	Turney (155)
Caldwell	Cowgill (247)	Polo (582)
Carroll	--	Bosworth (382); Tina (193)
Chariton	Salisbury (1,726); Keytesville (533)	Triplett (64)
Randolph	Renick (221)	Moberly (11,945)
Audrain	--	Mexico (11,320)
Montgomery	--	--
Lincoln	Troy (6,737); Moscow Mills (1,742); Chain of Rocks (91)	Old Monroe (250); Fountain N' Lakes (129); Truxton (96); Cave (7)
St. Charles	West Alton (573)	St. Charles (60,321); St. Peters (51,381); St. Paul (1,634); Portage Des Sioux (351)
Illinois		
Madison	Edwardsville (21,491); Highland (8,438); South Roxana (1,888); Roxana (1,547) Hartford (1,545); Grantfork (254)	Granite City (31,301); Alton (30,496); Godfrey (16,286); Wood River (11,296); East Alton (6,830)
Bond	Pocahontas (727)	--
Fayette	--	--
Marion	Vernon (178)	Patoka (633)
CUSHING EXTENSION		
Nebraska		
Jefferson ^b	--	Steele City (84)
Kansas		
Washington	Greenleaf (357); Hollenberg (31)	Washington (1,223)
Clay	--	Wakefield (838); Green (147)
Dickinson	Chapman (1,241)	Hope (372)
Marion	--	Marion (2,110); Ramona (94)
Butler	Townda (1,338); Potwin (457)	Augusta (8,423); Douglass (1,813)
Cowley	--	Winfield (12,206); Arkansas City (11,963)

TABLE 3.10.1-1 (Continued)		
State/County	Community (2000 Population)	
	Within 0.5 Mile	Within 2 Miles
CUSHING EXTENSION (CONTINUED)		
Oklahoma		
Kay	Ponca City (25,919)	Newkirk (2,243)
Noble	--	Morrison (636); Marland (280)
Payne	Cushing (8,371)	--

Notes:

Affected communities include those where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

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

^a The proposed pipeline does not travel through Grand Forks County, although the community of Niagara is located within 2 miles of the pipeline route.

^b Also addressed in the Mainline Project route.

Sources: U.S. Bureau of the Census 2000, ENSR 2006a.

Several types of socioeconomic effects could occur within the region of influence, as described in more detail in the impact analysis presented in Section 3.10.2. Temporary effects during construction of the proposed Keystone 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 Keystone 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.

3.10.1.2 Population

Population-related characteristics in the region of socioeconomic influence are summarized in Table 3.10.1-2. (Population data at the community level is presented in Table 3.10.1-1.) The pipeline route is predominantly rural and sparsely populated, with the population tending to increase from north to south along the route. For the Mainline Project, the total population in the counties comprising the region of influence was nearly 1.3 million in 2005. The comparable figure for the Cushing Extension was approximately 279,200 people. In total, the population in 2005 across all counties was over 1.5 million; however, the average population density was only 34.3 people per square mile, demonstrating the rural nature of the pipeline route.

The least populated areas along the route are in North Dakota, including Steele County with a population of just over 2,000 and population density of 2.81 people per square mile. Relatively urban areas of the route include Buchanan County, Missouri, which contains the St. Joseph metropolitan area; Lincoln and St. Charles counties in Missouri and Madison County in Illinois, which correspond to the St. Louis metropolitan area; and Payne County, Oklahoma, which includes the Stillwater metropolitan area. The most populated county in the Keystone Project area is St. Charles County, Missouri, with nearly 330,000

people and a population density of 557 people per square mile. Similar population patterns are evident at the community level. Many of the potentially-affected communities along the northern portions of the route have populations less than 100, while the largest community of St. Joseph, Missouri has a population of almost 74,000.

The population in the region of influence has increased at a compound rate of 0.7 percent per year since 1990, rising from 1.37 million then to 1.57 million in 2005. As expected, this increase has been mainly in urban areas. Between 2000 and 2005, the highest growth rate occurred in Lincoln County, Missouri, 18.4 percent. Conversely, many rural counties, particularly those in North Dakota, South Dakota, and Kansas, have actually experienced population declines. In fact, three counties have experienced double-digit population declines since 2000—Pembina and Steele Counties in North Dakota and Miner County, South Dakota.

TABLE 3.10.1-2 Population Characteristics in Affected Counties along the Keystone Project Route							
State/County	Population			Population Change (%)			Population Density (Population per Square Mile)
	1990 (April 1)	2000 (April 1)	2005 (July 1 Estimates)	1990–2005	1990–2000	2000–2005	
MAINLINE PROJECT							
North Dakota	638,800	642,200	636,677	-0.16	0.70	-0.87	9.23
Cavalier	6,064	4,831	4,330	-40.05	-25.52	-11.57	2.87
Pembina	9,238	8,585	8,038	-14.93	-7.61	-6.81	7.17
Walsh	13,840	12,389	11,607	-19.24	-11.71	-6.74	8.97
Nelson	4,410	3,715	3,424	-28.80	-18.71	-8.50	3.39
Steele	2,420	2,258	2,007	-20.58	-7.17	-12.51	2.81
Barnes	12,545	11,775	11,075	-13.27	-6.54	-6.32	7.32
Ransom	5,921	5,890	5,810	-1.91	-0.53	-1.38	6.72
Sargent	4,549	4,366	4,150	-9.61	-4.19	-5.20	4.79
Dickey	6,107	5,757	5,487	-11.30	-6.08	-4.92	4.81
South Dakota	697,101	754,844	775,933	10.16	7.65	2.72	10.23
Brown	35,580	35,460	34,706	-2.52	-0.34	-2.17	20.05
Marshall	4,844	4,576	4,418	-9.64	-5.86	-3.58	4.99
Day	6,978	6,267	5,757	-21.21	-11.35	-8.86	5.28
Clark	4,403	4,143	3,799	-15.90	-6.28	-9.06	3.93
Beadle	18,253	17,023	15,896	-14.83	-7.23	-7.09	12.57
Kingsbury	5,925	5,815	5,532	-7.10	-1.89	-5.12	6.41
Miner	3,272	2,884	2,584	-26.63	-13.45	-11.61	4.52
Hanson	2,994	3,139	3,747	20.10	4.62	16.23	8.60
McCook	5,688	5,832	5,930	4.08	2.47	1.65	10.27
Hutchinson	8,262	8,075	7,581	-8.98	-2.32	-6.52	9.31
Yankton	19,252	21,652	21,718	11.35	11.08	0.30	40.78
Nebraska	1,581,660	1,711,263	1,758,787	10.07	7.57	2.70	22.88
Cedar	10,131	9,615	9,066	-11.75	-5.37	-6.06	12.16
Wayne	9,364	9,851	9,211	-1.66	4.94	-6.95	20.77
Stanton	6,244	6,455	6,534	4.44	3.27	1.21	15.16
Platte	29,820	31,662	31,262	4.61	5.82	-1.28	45.37
Colfax	9,139	10,441	10,433	12.40	12.47	-0.08	24.92

TABLE 3.10.1-2 (Continued)							
State/County	Population			Population Change (%)			Population Density (Population per Square Mile)
	1990 (April 1)	2000 (April 1)	2005 (July 1 Estimates)	1990–2005	1990–2000	2000–2005	
MAINLINE PROJECT (CONTINUED)							
Nebraska (continued)							
Butler	8,601	8,767	8,720	1.36	1.89	-0.54	14.92
Seward	15,450	16,496	16,739	7.70	6.34	1.45	29.07
Saline	12,715	13,843	14,195	10.43	8.15	2.48	24.64
Jefferson	8,759	8,333	7,925	-10.52	-5.11	-5.15	13.77
Gage	22,794	22,993	23,306	2.20	0.87	1.34	27.10
Kansas	2,481,349	2,688,418	2,744,687	9.59	7.70	2.05	33.55
Marshall	11,705	10,965	10,405	-12.49	-6.75	-5.38	11.51
Nemaha	10,446	10,717	10,443	-0.03	2.53	-2.62	14.52
Brown	11,128	10,724	10,239	-8.68	-3.77	-4.74	17.89
Doniphan	8,134	8,249	7,816	-4.07	1.39	-5.54	19.68
Missouri	5,128,880	5,595,211	5,800,310	11.58	8.33	3.54	84.20
Buchanan	83,083	85,998	84,904	2.14	3.39	-1.29	204.80
Clinton	16,595	18,979	20,715	19.89	12.56	8.38	48.92
Caldwell	8,380	8,969	9,307	9.96	6.57	3.63	21.66
Carroll	10,748	10,285	10,193	-5.44	-4.50	-0.90	14.51
Chariton	9,202	8,438	8,124	-13.27	-9.05	-3.87	10.57
Randolph	24,370	24,663	25,336	3.81	1.19	2.66	51.96
Audrain	23,599	25,853	25,759	8.39	8.72	-0.36	36.97
Montgomery	11,355	12,136	12,166	6.67	6.44	0.25	22.52
Lincoln	28,892	38,944	47,727	39.46	25.81	18.40	74.53
St. Charles	212,907	283,883	329,940	35.47	25.00	13.96	557.00
Illinois	11,453,316	12,419,293	12,763,371	10.26	7.78	2.70	229.62
Madison	249,238	258,941	264,309	5.70	3.75	2.03	357.01
Bond	14,991	17,633	18,027	16.84	14.98	2.19	47.11
Fayette	20,893	21,802	21,713	3.78	4.17	-0.41	29.93
Marion	41,561	41,691	40,144	-3.53	0.31	-3.85	69.73

TABLE 3.10.1-2 (Continued)							
State/County	Population			Population Change (%)			Population Density (Population per Square Mile)
	1990 (April 1)	2000 (April 1)	2005 (July 1 Estimates)	1990–2005	1990–2000	2000–2005	
CUSHING EXTENSION							
Nebraska^a	1,581,660	1,711,263	1,758,787	10.07	7.57	2.70	22.88
Jefferson	8,759	8,333	7,925	-10.52	-5.11	-5.15	13.77
Kansas	2,481,349	2,688,418	2,744,687	9.59	7.70	2.05	33.55
Washington	7,073	6,483	6,009	-17.71	-9.10	-7.89	6.69
Clay	9,158	8,822	8,629	-6.13	-3.81	-2.24	13.17
Dickinson	18,958	19,344	19,209	1.31	2.00	-0.70	22.54
Marion	12,888	13,361	12,952	0.49	3.54	-3.16	13.58
Butler	50,580	59,482	62,354	18.88	14.97	4.61	43.11
Cowley	36,915	36,291	35,298	-4.58	-1.72	-2.81	31.17
Oklahoma	3,148,825	3,450,654	3,547,884	11.25	8.75	2.74	51.67
Kay	48,056	48,080	46,480	-3.39	0.05	-3.44	49.18
Noble	11,045	11,411	11,211	1.48	3.21	-1.78	15.10
Payne	61,507	68,190	69,151	11.05	9.80	1.39	99.19
Mainline Project subtotal	1,110,789	1,211,758	1,262,254	12.00	8.33	4.00	34.69
Cushing Extension subtotal	264,939	279,797	279,218	5.11	5.31	-0.21	31.38
Keystone Project total	1,366,969	1,483,222	1,533,547	10.86	7.84	3.28	34.30

Notes:

Affected counties include those where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

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

^a Also addressed in the Mainline Project route.

Source: U.S. Bureau of the Census 2006.

3.10.1.3 Housing

Available housing to serve the Keystone 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. An overview of the existing housing stock in the region of influence is presented in Table 3.10.1-3. The total number of housing units in the counties crossed by the Keystone Project was estimated at over 655,000 in 2004, with about 535,000 units and 124,000 units in those counties affected by the Mainline Project and the Cushing Extension, respectively. The greatest number of units is found in urban counties in Missouri and Illinois. Most of the existing housing stock is occupied single-family residences that would not be available for use by Keystone Project workers.

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) parks, and related vacancy rates. The total number of rental units located across all affected counties was about 158,500 in 2000. Rental vacancy rates and available rental housing vary considerably across states and counties. The highest vacancy rates for rental units are in North Dakota, ranging from 7.9 to 17.8 percent in the affected counties, compared with a weighted average of nearly 13 percent across the state. The lowest vacancy rates are in Nebraska, with an average vacancy rate of just below 8 percent across affected counties. Based on these data, approximately 14,400 vacant rental units are available in the region of influence. At the county level, the number of available units is smallest in North Dakota and South Dakota counties and largest in counties throughout Missouri and Illinois. Across the entire region of influence, 23 of the 58 counties had less than 100 vacant rental units, and seven counties had less than 50 units vacant.

Alternatives to rental housing are temporary short-term accommodations in hotels/motels, RV and mobile home parks, and campgrounds. In some cases, recreational cabins and seasonal housing for migratory workers also may 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 445 hotels and 285 campgrounds (including RV parks) are located within a 50-mile corridor of the pipeline route (TransCanada 2007b). Based on the average number of accommodations (i.e., rooms or RV/campground spaces) by facility type, there are approximately 41,200 hotel/motel rooms and 35,600 RV and campground spaces throughout the region of influence. The total number of hotels/motels and campgrounds by county is presented in Table 3.10.1-4. 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. Based on national average hotel and RV campground occupancy rates, roughly 34,100 vacant rooms and/or RV and campground spaces are available in the region of influence at any one time.

3.10.1.4 Economic Base

The economic base of an area reflects its major industries. Along the pipeline route, the predominant land use is agriculture, particularly in the northern reaches of the alignment; thus, agricultural production and agricultural support industries represent a major component of the economic base in the region of influence. In addition, local government is typically a substantial economic driver in many rural areas, generating jobs and income for local residents. In more urban areas, such as those larger communities and counties in the region of influence, service, manufacturing, and trade industries tend to generate the most economic activity.

**TABLE 3.10.1-3
Housing Stock in Affected Counties
along the Keystone Project Route**

State/County	Total Housing Units (July 2004 Estimated)	Building Permits (2005)	Total Rental Units (2000)	Rental Vacancy Rate (2000)	Estimated Vacant Rental Units (2000)
MAINLINE PROJECT					
North Dakota	300,815	4,038	--	--	--
Cavalier	2,748	2	454	17.8	81
Pembina	4,100	1	902	15.3	138
Walsh	5,747	6	1,331	12.5	166
Nelson	2,028	2	373	13.7	51
Steele	1,240	11	228	7.9	18
Barnes	5,657	50	1,574	10.5	165
Ransom	2,740	5	641	9.5	61
Sargent	2,049	26	415	13.0	54
Dickey	2,677	1	779	16.4	128
<i>North Dakota subtotal</i>	<i>28,986</i>	<i>104</i>	<i>6,697</i>	<i>12.9^a</i>	<i>862</i>
South Dakota	342,620	5,685	--	--	--
Brown	16,239	130	5,423	9.0	488
Marshall	2,626	26	482	15.1	73
Day	3,689	30	725	14.5	105
Clark	1,888	15	356	11.5	41
Beadle	8,279	57	2,731	15.1	412
Kingsbury	2,796	19	651	10.0	65
Miner	1,425	9	308	8.1	25
Hanson	1,249	6	243	4.1	10
McCook	2,507	30	512	9.4	48
Hutchinson	3,562	11	724	6.5	47
Yankton	9,147	135	2,798	9.7	271
<i>South Dakota subtotal</i>	<i>53,407</i>	<i>468</i>	<i>14,953</i>	<i>10.6^a</i>	<i>1,586</i>
Nebraska	757,743	9,929	--	--	--
Cedar	4,288	19	811	13.4	109
Wayne	3,724	12	1,278	5.5	70
Stanton	2,491	22	483	5.0	24
Platte	13,167	69	3,538	8.8	311
Colfax	4,126	19	999	8.6	86
Butler	4,122	13	917	9.7	89
Seward	6,685	81	1,793	6.2	111
Saline	5,709	47	1,598	4.8	77

**TABLE 3.10.1-3
(Continued)**

State/County	Total Housing Units (July 2004 Estimated)	Building Permits (2005)	Total Rental Units (2000)	Rental Vacancy Rate (2000)	Estimated Vacant Rental Units (2000)
MAINLINE PROJECT (CONTINUED)					
Nebraska (continued)					
Jefferson	3,975	20	932	9.4	88
Gage	10,441	47	2,941	8.7	256
<i>Nebraska subtotal</i>	<i>58,728</i>	<i>349</i>	<i>15,290</i>	<i>8.0^a</i>	<i>1,221</i>
Kansas	1,185,114	14,048	--	--	--
Marshall	5,074	9	1,047	12.7	133
Nemaha	4,445	25	821	7.6	62
Brown	4,914	6	1,342	8.0	107
Doniphan	3,540	15	886	8.8	78
<i>Kansas subtotal</i>	<i>17,973</i>	<i>55</i>	<i>4,096</i>	<i>9.3^a</i>	<i>381</i>
Missouri	2,564,340	33,114	--	--	--
Buchanan	37,292	204	11,745	7.4	869
Clinton	8,550	206	1,627	7.4	120
Caldwell	4,607	206	853	6.3	54
Carroll	4,984	36	1,215	10.8	131
Chariton	4,384	0	817	17.7	145
Randolph	10,997	34	3,141	18.3	575
Audrain	11,087	34	2,849	10.5	299
Montgomery	6,021	65	1,147	10.5	120
Lincoln	16,704	65	3,010	11.2	337
St. Charles	122,829	4,112	19,489	6.1	1,189
<i>Missouri subtotal</i>	<i>227,455</i>	<i>4,962</i>	<i>45,893</i>	<i>8.4^a</i>	<i>3,839</i>
Illinois	5,094,186	66,942	--	--	--
Madison	113,914	1,519	29,223	8.6	2,513
Bond	6,973	112	1,342	7.1	95
Fayette	9,274	13	1,805	8.7	157
Marion	18,405	45	4,195	7.4	310
<i>Illinois subtotal</i>	<i>148,566</i>	<i>1,689</i>	<i>36,566</i>	<i>8.4^a</i>	<i>3,076</i>
CUSHING EXTENSION					
Nebraska^b	757,743	9,929	--	--	--
Jefferson	3,975	20	932	9.4	88
<i>Nebraska subtotal</i>	<i>3,975</i>	<i>20</i>	<i>932</i>	<i>9.4^a</i>	<i>88</i>

TABLE 3.10.1-3 (Continued)					
State/County	Total Housing Units (July 2004 Estimated)	Building Permits (2005)	Total Rental Units (2000)	Rental Vacancy Rate (2000)	Estimated Vacant Rental Units (2000)
CUSHING EXTENSION (CONTINUED)					
Kansas	1,185,114	14,048	--	--	--
Washington	3,204	0	631	13.0	82
Clay	4,150	14,048	973	13.6	132
Dickinson	8,841	58	2,214	9.9	219
Marion	6,049	50	1,153	10.9	126
Butler	24,844	50	5,327	9.8	522
Cowley	16,081	79	4,689	12.6	591
<i>Kansas subtotal</i>	<i>63,169</i>	<i>14,285</i>	<i>14,987</i>	<i>11.2^a</i>	<i>1,672</i>
Oklahoma	1,572,756	18,362	--	--	--
Kay	21,955	12	6,117	11.4	697
Noble	5,157	8	1,268	12.2	155
Payne	30,283	338	12,680	7.3	926
<i>Oklahoma subtotal</i>	<i>57,395</i>	<i>358</i>	<i>20,065</i>	<i>8.93^a</i>	<i>1,778</i>
Mainline Project total	535,115	7,627	123,496	8.9^a	10,965
Cushing Extension total	124,539	14,663	35,984	9.8^a	3,537
Keystone Project total	655,679	22,270	158,548	9.1^a	14,415

Notes:

Affected counties include those where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

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

^a Average.

^b Also addressed in the Mainline Project route.

Sources: U.S. Bureau of the Census 2000, 2006.

**TABLE 3.10.1-4
Number of Hotels/Motels and Campgrounds by County
along the Keystone Project Route**

County	Hotels/Motels	Campgrounds
MAINLINE PROJECT		
North Dakota		
Pembina	4	4
Cavalier	4	1
Walsh	5	4
Nelson	3	1
Grand Forks	1	3
Traill	1	1
Ramsey	0	2
Griggs	4	1
Barnes	6	5
Cass	0	2
Ransom	5	3
Lemoure	1	1
Sargent	2	2
Dickey	4	3
South Dakota		
Marshall	4	2
Brown	7	1
Day	5	0
Clark	2	1
Spink	2	0
Hamlin	1	0
Kingsbury	5	2
Beadle	8	1
Sanborn	1	0
Miner	1	0
Davison	11	7
McCook	7	2
Hutchinson	3	0
Clay	1	0
Bon Homme	1	0
Yankton	8	9
Clay	3	0
Nebraska		
Knox	3	1
Cedar	4	1
Pierce	2	2
Wayne	3	1
Madison	16	1
Cuming	2	0
Colfax	2	0
Platte	13	2
Butler	2	0
Polk	1	0
Seward	4	1
York	0	2
Lancaster	9	7

**TABLE 3.10.1-4
(Continued)**

County	Hotels/Motels	Campgrounds
MAINLINE PROJECT (continued)		
Nebraska (continued)		
Saline	6	0
Gage	8	2
Jefferson	2	0
Pawnee	1	2
Richardson	2	1
Kansas		
Marshall	6	0
Nemaha	3	1
Brown	7	5
Jackson	3	0
Atchison	5	1
Doniphan	1	1
Missouri		
Atchison	1	2
Holt	0	2
Buchanan	7	1
Andrew	0	2
Platte	4	1
Clay	3	3
Clinton	2	3
Dekalb	5	1
Ray	1	2
Livingston	2	1
Carroll	6	0
Saline	3	1
Linn	6	1
Howard	2	0
Chariton	1	0
Macon	0	1
Randolf	4	2
Boone	14	2
Callaway	5	1
Monroe	0	2
Audrain	7	0
Ralls	2	2
Montgomery	7	4
Gasconade	1	0
Pike	3	1
Warren	4	2
Lincoln	4	2
St. Charles	16	5
St. Louis	10	2

TABLE 3.10.1-4 (Continued)		
County	Hotels/Motels	Campgrounds
MAINLINE PROJECT (continued)		
Illinois		
Calhoun	1	0
Jersey	5	0
Madison	31	13
Macoupin	1	2
Bond	9	2
Clinton	3	10
Fayette	4	3
Marian	5	1
CUSHING EXTENSION		
Kansas		
Washington	2	2
Clay	4	1
Riley	1	3
Geary	11	4
Dickinson	9	3
Marion	5	0
Harvey	6	2
Butler	12	3
Sedgwick	16	4
Sumner	4	4
Cowley	12	5
Oklahoma		
Kay	16	10
Osage	1	0
Noble	6	2
Pawnee	2	0
Payne	13	5
Logan	1	0
Creek	1	2
Lincoln	6	3

Source: TransCanada 2007c.

Employment and income patterns also provide insight into local economic conditions, including the strength of the local economy and well being of its residents. Summary statistics covering these economic parameters are shown in Table 3.10.1-5. Average income levels vary throughout the region. In 2004, per-capita income ranged from approximately \$22,900 in Steele County, North Dakota to \$36,200 in Sargent County, North Dakota; this variation within the same state shows the diversity in socioeconomic conditions along the pipeline route. At the household level, median income levels varied from \$30,600 in Miner County, South Dakota to nearly \$63,200 in St. Charles County, Missouri.

The civilian labor force within the region of influence totals about 815,600 individuals, and unemployment in the region ranged from about 2 to 7 percent in 2005. The lowest unemployment rates, about 2.7 percent, were in Sargent and Dickey Counties in North Dakota and Cedar County, Nebraska. Conversely, the highest unemployment rates, about 6.5 percent, were in Fayette and Marion Counties in Illinois and Pembina County, North Dakota. Based on the size of the labor force and unemployment rates, it is estimated that about 38,100 unemployed people reside in the region of influence.

3.10.1.5 Tax Revenue

The proposed Keystone 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 Keystone Project facilities and applicable tax rates. Generally, states assess the value of pipelines in order to facilitate consistent valuation among counties crossed within the state. Table 3.10.1-6 reports the total government revenue, property tax mill levy values, and effective¹ property tax rates for all of the counties within the region of influence.

Effective property tax rates in the region of influence for the Mainline Project range from 0 percent in Illinois to between 3 and 4 percent in Kansas. The highest rate is in Marshall County, Kansas, at 4.08 percent. Property tax rates in North Dakota, South Dakota, Nebraska, and Missouri range between approximately 1.50 and 2.25 percent. On the Cushing Extension, property tax rates are relatively higher. Rates in Kansas vary between 3.85 and 4.70 percent, which are higher than most jurisdictions along the Mainline Project. In Oklahoma, the effective rate is 2.40 percent in all affected counties.

Other fiscal revenues that may be generated by the proposed Keystone Project include sales and use taxes, which are based on the value of goods and materials purchased for the Keystone Project and by construction workers, as well as income taxes levied on labor earnings. In addition, federal agencies assess fees for use of public lands for activities such as pipelines and transmission ROWs. Applicable sales and income tax rates vary across counties.

¹ The effective property tax rate is defined as the percentage of total assessed value that is levied as a property tax.

**TABLE 3.10.1-5
Existing Income and Employment Conditions in Affected
Counties and States along the Keystone Project Route**

State/County	Per Capita Personal Income (\$ (2004))	Median Household Income (\$ (2003))	Labor Force (2005)	Unemployment Rate (%) (2005)
MAINLINE PROJECT				
North Dakota	29,494	38,223	358,960	3.4
Cavalier	30,334	36,869	2,179	3.8
Pembina	27,294	39,001	4,220	6.5
Walsh	26,792	35,833	5,977	4.9
Nelson	23,837	32,365	1,723	4.1
Steele	22,879	44,213	1,168	2.8
Barnes	27,683	36,372	6,134	3.5
Ransom	28,455	42,103	3,139	3.1
Sargent	36,217	42,570	2,477	2.7
Dickey	29,592	33,951	2,994	2.7
South Dakota	30,209	38,008	432,032	3.9
Brown	34,640	39,863	20,964	3.4
Marshall	28,515	32,393	2,130	4.8
Day	27,958	31,998	3,043	6.1
Clark	28,721	30,968	1,881	5.1
Beadle	30,995	33,631	8,892	4.5
Kingsbury	30,924	34,312	3,109	3.9
Miner	25,608	30,627	1,221	5.0
Hanson	26,047	39,381	2,024	3.1
McCook	29,783	37,902	3,016	3.5
Hutchinson	30,216	33,329	4,489	4.0
Yankton	27,765	37,021	11,953	3.6
Nebraska	32,341	41,984	986,296	3.8
Cedar	31,981	38,865	5,108	2.7
Wayne	27,366	35,091	5,616	3.0
Stanton	26,175	39,195	3,771	3.0
Platte	28,325	41,425	17,336	3.7
Colfax	27,697	37,186	5,993	2.8
Butler	27,371	38,113	4,758	3.6
Seward	30,464	45,149	9,428	3.1
Saline	27,695	39,633	8,426	3.2
Jefferson	28,959	34,640	4,423	3.8
Gage	30,561	36,770	13,112	4.3
Kansas	31,078	43,113	1,475,791	5.1
Marshall	31,522	34,648	6,009	3.7
Nemaha	28,432	35,677	5,457	3.6
Brown	27,097	33,478	5,619	4.9
Doniphan	22,501	33,729	4,546	6.2

**TABLE 3.10.1-5
Continued**

State/County	Per Capita Personal Income (\$ (2004)	Median Household Income (2003)	Labor Force (2005)	Unemployment Rate (%) (2005)
MAINLINE PROJECT (CONTINUED)				
Missouri	30,475	40,870	3,024,478	5.4
Buchanan	27,368	35,344	46,008	5.9
Clinton	26,486	44,459	10,586	5.2
Caldwell	24,485	34,722	4,479	5.8
Carroll	24,124	32,352	4,964	5.5
Chariton	25,304	33,661	4,226	5.5
Randolph	23,462	32,154	12,707	5.3
Audrain	23,694	32,586	11,359	5.6
Montgomery	24,806	34,690	6,286	5.7
Lincoln	24,504	46,925	24,047	5.2
St. Charles	32,686	63,178	185,066	4.0
Illinois	34,721	47,367	6,469,338	5.7
Madison	29,979	43,747	137,300	5.4
Bond	25,990	38,358	8,605	5.8
Fayette	21,067	32,549	10,399	6.5
Marion	25,330	34,641	18,239	6.5
CUSHING EXTENSION				
Nebraska^a	32,341	41,984	986,296	3.8
Jefferson	28,959	34,640	4,423	3.8
Kansas	31,078	43,113	1,475,791	5.1
Washington	24,309	30,564	3,504	3.7
Clay	29,018	35,015	4,911	4.1
Dickinson	25,724	37,097	10,595	4.5
Marion	23,095	35,106	6,843	4.1
Butler	29,503	48,096	31,832	5.6
Cowley	25,487	35,945	17,411	5.8
Oklahoma	27,840	35,634	1,741,753	4.4
Kay	26,865	33,032	21,877	5.5
Noble	23,371	23,227	5,637	3.8
Payne	23,399	30,898	36,339	3.7

Notes:

Affected counties include those where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

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

^a Also addressed in the Mainline Project route.

Source: U.S. Bureau of the Census 2006.

**TABLE 3.10.1-6
Property Mill Levies and Tax Rates
for the Keystone Project**

State/County	Portion of Pipeline through State (%)	Government Revenue (Existing) (\$)	Property Tax Mill Levy (mills)	Effective Property Tax Rate (%)	Tax Revenue per County (\$)	Capital Cost of Project (\$)
MAINLINE PROJECT						
North Dakota (2006 Total Ad Valorem Property Taxes)						
Cavalier	0.43	6,295,726	324.33	1.620	19,457	1,199,826
Pembina	14.57	10,212,016	354.14	1.770	713,843	40,314,170
Walsh	11.34	12,382,781	395.51	1.980	620,070	31,355,466
Nelson	16.89	4,364,556	401.15	2.010	936,951	46,713,245
Steele	14.00	3,814,357	356.84	1.780	690,742	38,714,401
Barnes	19.90	13,006,449	370.65	1.850	1,019,881	55,032,042
Ransom	11.36	6,607,588	413.04	2.070	649,205	31,435,454
Sargent	11.51	6,040,508	406.01	2.030	646,274	31,835,396
South Dakota (2006 Total Revenue from All Sources)						
Marshall	11.07	1,806,615	21.50	2.150	719,444	33,462,489
Day	13.93	3,390,223	21.50	2.150	905,346	42,109,127
Clark	16.65	3,013,792	21.50	2.150	1,081,954	50,323,433
Beadle	7.18	7,188,817	21.50	2.150	466,616	21,703,062
Kingsbury	7.12	1,924,014	21.50	2.150	462,898	21,530,129
Miner	11.36	2,882,361	21.50	2.150	738,034	34,327,153
Hanson	6.24	1,807,719	21.50	2.150	405,268	18,849,671
McCook	5.21	2,663,670	21.50	2.150	338,343	15,736,881
Hutchinson	10.90	3,463,049	21.50	2.150	708,289	32,943,391
Yankton	10.33	28,120,617	21.50	2.150	671,109	31,214,363
Nebraska (Department of Revenue, Property Assessment and Taxation Department, Taxes Levied in 2006)						
Cedar	17.14	14,373,607	17.42	1.742	848,105	48,685,714
Wayne	8.72	12,999,096	18.66	1.866	461,839	24,756,851
Stanton	11.40	10,581,066	18.37	1.837	594,587	32,374,344
Platte	1.46	39,424,920	16.50	1.650	68,326	4,139,942
Colfax	10.67	14,080,472	17.90	1.790	542,448	30,304,373
Butler	11.08	15,539,120	17.43	1.743	548,347	31,463,557
Seward	11.84	23,915,026	17.73	1.773	596,017	33,616,327
Saline	11.57	19,624,429	19.82	1.982	651,342	32,817,137
Jefferson	12.42	13,079,964	19.62	1.962	692,043	35,272,303
Gage	3.70	27,964,647	19.32	1.932	203,148	10,515,452
Kansas (2006 Total All Property Tax Dollars)						
Marshall	29.34	11,772,795	123.49	4.080	1,395,178	34,236,909
Nemaha	25.55	9,482,614	116.84	3.860	1,149,747	29,819,243
Brown	25.11	10,209,742	118.30	3.900	1,143,945	29,303,849
Doniphan	20.00	7,299,226	103.64	3.420	798,217	23,340,000

**TABLE 3.10.1-6
(Continued)**

State/County	Portion of Pipeline through State (%)	Government Revenue (Existing) (\$)	Property Tax Mill Levy (mills)	Effective Property Tax Rate (%)	Tax Revenue per County (\$)	Capital Cost of Project (\$)
MAINLINE PROJECT (CONTINUED)						
Missouri (2006 Assessed Valuations)						
Buchanan	7.20	1,061,552,284	70.00	2.240	628,976	28,079,289
Clinton	7.88	227,936,441	70.00	2.240	688,689	30,745,044
Caldwell	9.00	94,313,724	70.00	2.240	786,220	35,099,111
Carroll	9.66	133,562,042	70.00	2.240	843,943	37,676,008
Chariton	11.62	115,832,051	70.00	2.240	1,015,120	45,317,840
Randolph	8.07	304,867,379	70.00	2.240	704,612	31,455,913
Audrian	14.10	271,818,136	70.00	2.240	1,232,077	55,003,418
Montgomery	7.72	168,475,439	70.00	2.240	674,756	30,123,035
Lincoln	9.98	558,363,794	70.00	2.240	871,809	38,920,027
St. Charles	14.76	6,609,549,616	70.00	2.240	1,289,799	57,580,314
Illinois (Most Recently Available/Published 2002 Equalized Assessed Values)						
Madison	49.51	2,404,001	0.00	0.000	0	49,262,786
Bond	34.39	108,000	0.00	0.000	0	34,213,275
Fayette	11.21	133,000	0.00	0.000	0	11,151,795
Marion	4.90	217,001	0.00	0.000	0	4,872,144
CUSHING EXTENSION						
Nebraska ^a (Department of Revenue, Property Assessment and Taxation Department, Taxes Levied in 2006)						
Jefferson	100.00	13,079,964	19.62	1.962	72,594	3,700,000
Kansas (2006 Total All Property Tax Dollars)						
Washington	14.46	8,435,597	142.43	4.700	2,096,285	44,600,000
Clay	14.37	9,041,595	140.63	4.640	2,060,555	44,400,000
Dickinson	17.43	16,579,757	116.80	3.850	2,073,703	53,800,000
Marion	17.34	13,669,639	125.70	4.150	2,219,216	53,500,000
Butler	20.40	65,397,029	135.28	4.460	2,808,048	62,900,000
Cowley	16.00	31,923,989	143.69	4.740	2,342,500	49,400,000
Oklahoma (Tax Revenue Information Provided by the Oklahoma Tax Commission, Ad Valorem Department)						
Kay	35.99	23,853,655	105.00	2.400	1,014,883	1,014,883
Noble	31.15	8,943,669	105.00	2.400	878,126	878,126
Payne	32.86	32,315,508	105.00	2.400	926,111	926,111

TABLE 3.10.1-6 (Continued)

Notes:

Affected counties include counties where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

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

^a Also addressed in the Mainline Project route.

Source: Information was based on discussions with the counties in January 2005 to obtain the current local tax rates and valuation methodology (from ENSR 2006a).

3.10.1.6 Public Services

The region of influence is served by a range of public services and service providers. Public services most pertinent to the proposed Keystone Project include police and fire protection and medical facilities.² Table 3.10.1-7 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 relative to 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 support to other agencies in emergencies. On average, from one to 10 law enforcement agencies serve any one given county. In the region of influence, the exception is Madison County, Illinois, which is served by 24 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 3.10.1-7 also shows the nearest medical facilities to the proposed Keystone 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 on their likelihood of serving Keystone 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.

3.10.1.7 Transportation and Traffic

Mainline Project

Highways and Rural Roads

Many utility crossings (roadways, railroads, and other pipelines) would be required for the Keystone Project. The Mainline Project route would cross the following interstates and major U.S. highways:

- Interstate (I)-94 and U.S. Highway (US)-2 in North Dakota;
- I-90, US-12, US-212, US-14, US-81, and US-16 in South Dakota;
- I-80, US-20, US-275, US-30, US-34, US-6, and US-136 in Nebraska;
- US-35, US-77, US-75, US-73, and US-59 in Kansas;
- I-29, I-35, , US-59, US-169, US-69, US-65, US-24, US-63, US-54, and US-61 In Missouri; and
- I-55 and I-70 in Illinois.

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.

TABLE 3.10.1-7 Existing Public Service Facilities along the Keystone Project Route			
State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT			
North Dakota			
Cavalier	2	4	Cavalier County Memorial Hospital (Langdon)
Pembina	5	8	Pembina County Memorial Hospital (Cavalier)
Walsh	3	10	First Care Health Center (Park River) Unity Medical Center & Grafton Family Clinic (Grafton) Mercy Hospital (Devils Lake)
Nelson	2	5	Nelson County Health Systems (McVile) Northwood Deaconess Health Center (Northwood) * Altru Hospital (Grand Forks)
Steele	1	2	Cooperstown Medical Center (Cooperstown) Union Hospital (Mayville) Hillsboro Medical Center (Hillsboro)
Barnes	3	8	Mercy Hospital (Valley City) Jamestown Hospital (Jamestown) * Dakota Clinic at Innovis Health (Fargo) * MeritCare Hospital (Fargo) * MeritCare South University (Fargo)
Ransom	2	3	Lisbon Area Health Services (Lisbon)
Sargent	4	4	Lisbon Area Health Services (Lisbon) Oaks Community Hospital (Oakes)
Dickey	2	5	Oakes Community Hospital (Oakes)
South Dakota			
Brown	3	10	* Avera Saint Lukes (Aberdeen) * Marshall County Healthcare Center / Avera Health (Britton) Coteau Des Prairies Hospital (Sisseton)
Marshall	1	5	* Marshall County Healthcare Center / Avera Health (Britton) * Avera Saint Lukes (Aberdeen) Coteau Des Prairies Hospital (Sisseton)
Day	4	5	Lake Area Hospital (Webster)

**TABLE 3.10.1-7
(Continued)**

State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT (CONTINUED)			
South Dakota (continued)			
Clark	2	3	* Prairie Lakes Healthcare Systems – Hospital (Watertown) Community Memorial Hospital (Redfield)
Beadle	3	4	* Huron Regional Medical Center (Huron)
Kingsbury	4	5	De Smet Memorial Hospital (De Smet) * Brookings Hospital (Brookings)
Miner	2	2	Madison Community Hospital (Madison) Avera Weskota Memorial Medical Center (Wessington Springs)
Hanson	1	2	* Avera Queen of Peace Hospital (Mitchell)
McCook	2	3	* Sioux Valley USD Medical Center (Sioux Falls) * Avera McKennan Hospital & University Health Center (Sioux Falls)
Hutchinson	6	4	Dell Area Health Center (Dell Rapids) Freeman Community Hospital & Nursing Home (Freeman) Avera Saint Benedict Health Center (Parkston) Douglas County Memorial Hospital (Armour) Pioneer Memorial Hospital (Viborg) Canton-Inwood Memorial Hospital (Canton)
Yankton	2	5	Landemann-Jungmann Memorial Hospital (Scotland) Saint Michael's Hospital & Nursing Home (Tyndall) * Avera Sacred Heart Hospital (Yankton) South Dakota Human Services Center (Yankton) * Sioux Valley Vermilion Medical Center (Vermilion) Wagner Community Memorial Hospital (Wagner)

**TABLE 3.10.1-7
(Continued)**

State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT (CONTINUED)			
Nebraska			
Cedar	4	8	* Avera Sacred Heart Hospital (Yankton, SD) * Sioux Valley Vermilion Medical Center (Vermilion, SD) * Lundberg Memorial Hospital (Creighton) * Mercy Medical Center (Sioux City, IA) * Saint Luke's Regional Medical Center
Wayne	2	3	Providence Medical Center (Wayne) Plainview Public Hospital (Plainview) Osmond General Hospital (Osmond) Pender Community Hospital (Pender)
Stanton	2	2	* Faith Regional Health Services (Norfolk) Norfolk Regional Center (Norfolk) Saint Francis Memorial Hospital (West Point)
Platte	3	5	* Columbus Community Hospital (Columbus)
Colfax	5	3	Memorial Hospital (Schuyler) Saint Francis Memorial Hospital (West Point)
Butler	2	7	Annie Jeffrey Memorial County Health Center (Osceola) Butler County Health Care Center (David City)
Seward	3	5	* Bryan LGH Medical Center East/West (Lincoln) * Saint Elizabeth Regional Medical Center (Lincoln) Memorial Hospital (Seward) York General Hospital (York)
Saline	4	5	Warren Memorial Hospital (Friend) Crete Area Medical Center (Crete) Fillmore County Hospital (Geneva)
Jefferson	3	5	Jefferson Community Health Center (Fairbury) Thayer County Health Services (Hebron)
Gage	3	6	* Beatrice Community Hospital (Beatrice)

TABLE 3.10.1-7 (Continued)			
State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT (CONTINUED)			
Kansas			
Marshall	6	6	Washington County Hospital (Washington) Community Memorial Healthcare, Inc. (Marysville)
Nemaha	3	5	Sabetha Community Hospital (Sabetha) Nemaha Valley Community Hospital (Seneca) * Community Hospital Onaga, Inc. (Onaga) Humboldt Health Care Inc. (Humboldt, NE) Pawnee County Medical Center (Pawnee City, NE)
Brown	4	5	Hiawatha Community Hospital (Hiawatha) Holton Community Hospital (Holton) Community Medical Center Inc. (Falls City, NE)
Doniphan	4	4	* Atchison Hospital (Atchison) Jefferson County Memorial Hospital (Winchester)
Missouri			
Buchanan	5	4	* Heartland Regional medical Center (St. Joseph) * Saint Francis Hospital & Health Services (Maryville) * Saint Luke's Hospital (Kansas City) * Truman Medical Center (Kansas City) * North Kansas City Hospital (North Kansas City) * Baptist-Lutheran Medical Center (Kansas City) * Saint Joseph Medical Center (Kansas City) Kindred Hospital (Kansas City)
Clinton	6	2	* Cameron Regional Medical Center (Cameron) * Saint Luke's Northland Hospital (Smithville) * Excelsior Springs Medical Center (Excelsior Springs) * Liberty Hospital (Liberty) * Independence Regional Health Center (Independence) * Medical Center of Independence (Independence)
Caldwell	6	4	* Hedrick Medical Center (Chillicothe) * Ray County Memorial Hospital (Richmond) Wright Memorial Hospital (Trenton)

**TABLE 3.10.1-7
(Continued)**

State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT (CONTINUED)			
Missouri (continued)			
Carroll	4	4	* Carroll County Memorial Hospital (Carrollton) * Fitzgibbon Hospital (Marshall) * Lafayette Regional Health Center (Lexington)
Chariton	4	6	Pershing Memorial Hospital (Brookfield)
Randolph	5	5	* Moberly Regional Medical Center (Moberly) * Cooper County Memorial Hospital (Boonville) Samaritan Hospital (Macon)
Audrain	4	5	* Audrain Medical Center (Mexico) * Boone Hospital Center (Columbia) * Columbia Regional Hospital (Columbia) * University of Missouri Hospital (Columbia)
Montgomery	6	8	Hermann Area District Hospital (Hermann)
Lincoln	9	6	Lincoln County Medical Center (Troy) * Pike County Memorial Hospital
St. Charles	8	11	* Saint Luke Hospital (Chesterfield) * Northwest Healthcare (Florissant) CenterPointe Hospital (St. Charles) * Barnes-Jewish Hospital (St. Louis) * Christian Hospital (St. Louis) * Des Peres Hospital (St. Louis) * Forest Park Hospital (St. Louis) * Missouri Baptist Medical Center (St. Louis) * Saint Alexius Hospital (St. Louis) * Saint Anthony Medical Center (St. Louis) * Saint John Mercy Hospital (St. Louis) * Saint Louis University Hospital (St. Louis) * SSM DePaul Health Center (St. Louis) * SSM Saint Joseph Health Center (St. Charles / Wentzville)

TABLE 3.10.1-7 (Continued)			
State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
MAINLINE PROJECT (CONTINUED)			
Missouri (continued)			
St. Charles (continued)	8	11	* SSM Saint Joseph Health Center (St. Louis / Lake St. Louis) * SSM Saint Mary Hospital (St. Charles) Kindred Hospital (St. Louis)
Illinois			
Madison	24	38	* Saint Anthony's Health Center (Alton) * Alton Memorial Hospital (Alton) * Memorial Hospital (Belleville) * Touchette Regional Hospital (Centreville) * Gateway Regional Medical Center (Granite City) * Jersey Community Hospital (Jerseyville) * Saint Elizabeth Hospital (Belleville) * Saint Joseph Hospital (Highland) * St. Francis Hospital (Litchfield) * Anderson Hospital (Maryville) Community Memorial Hospital (Staunton) Thomas H. Boyd Memorial Hospital (Carrollton) <i>Also see St. Charles County, Missouri (St. Louis)</i>
Bond	4	5	* Saint Joseph Hospital (Breese) Edward A. Utlaut Memorial Hospital (Greenville)
Fayette	6	6	* Fayette County Hospital (Vandalia) Hillsboro Area Hospital (Hillsboro) Washington County Hospital (Nashville)
Marion	9	8	* Saint Mary's Hospital (Centralia) * Good Samaritan Regional health Center (Mount Vernon) * Crossroads Community Hospital (Mount Vernon) * Clay County Hospital (Flora) * St. Anthony's Memorial Hospital (Effingham) Pana Community Hospital (Pana) Salem Township Hospital (Salem)

**TABLE 3.10.1-7
(Continued)**

State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
CUSHING EXTENSION			
Nebraska			
Jefferson ^d	<i>See above</i>	<i>See above</i>	<i>See above</i>
Kansas			
Washington	2	10	Washington County Hospital (Washington) Community Memorial Healthcare, Inc. (Marysville) Republic County Hospital (Belleville)
Clay	4	3	Clay County Medical Center (Clay Center) * Mercy Regional Health Center (Manhattan)
Dickinson	6	8	* Morris County Hospital (Council Grove) * Salina Regional Health Center (Salina)
Marion	5	9	* Augusta Regional Medical Center (Augusta) * Mercy Hospital, Inc. (Moundridge) * Newman Regional Health (Emporia)
Butler	8	12	* Newton Medical Center (Newton) * Susan B. Allen Memorial Hospital (El Dorado) * Via Christie Riverside Medical Center (Wichita) * Wesley Medical Center (Wichita)
Cowley	6	7	* South Central Kansas Regional Medical Center (Arkansas City) * William Newton Memorial Hospital (Winfield) * Sumner Regional Medical Center (Wellington)
Oklahoma			
Kay	5	11	* Integris Blackwell Regional Hospital (Blackwell) * Via Christi Oklahoma Regional Medical Center (Ponca City)
Noble	3	5	* Integris Bass Baptist Health Center (Enid) * Perry Memorial Hospital (Perry) * Saint Mary's Regional Medical Center (Enid)

**TABLE 3.10.1-7
(Continued)**

State/County	Police/Sheriff Departments ^a (Number)	Fire Departments ^b (Number)	Nearest Medical Facilities ^c
CUSHING EXTENSION (CONTINUED)			
Oklahoma (continued)			
Payne	7	5	* Cushing Regional Hospital (Cushing) * Bristow Medical Center (Bristow) * Hillcrest Medical Center (Tulsa) * Saint Francis Hospital (Tulsa) * Saint John Medical Center (Tulsa) * Stillwater Medical Center (Stillwater) * Tulsa Regional Medical Center (Tulsa) Saint John Sapulpa (Sapulpa) Prague Municipal Hospital (Prague) Logan Hospital & Medical Center (Guthrie) Cleveland Area Hospital (Cleveland) * Pawnee Municipal Hospital (Pawnee)

Note:

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

- ^a Police/sheriff departments include special law enforcement units for universities.
- ^b Fire departments include volunteer, district, city, and town fire departments.
- ^c Medical facilities include critical access facilities within approximately 50 miles of the Project.
- ^d Addressed in the Mainline Project route.
- * Facilities marked with an asterisk (*) are non-federal, short-term, acute care facilities.

Sources: Capitol Impact 2006, American Hospital Directory 2006.

The rural road network is well developed across all the states that would be traversed by the pipeline. In addition to the major highways, numerous smaller state, county, and municipal roads and rural routes would be crossed by the pipeline or used by contractors during construction.

The proposed ROW for the Mainline Project would parallel or possibly share the ROW with highways and rural routes. In particular, the Mainline Project would parallel US-81 for a short distance near Yankton, South Dakota, as well as in Nebraska just past its border with South Dakota. The Mainline Project route also parallels I-70 near St Louis; the route also parallels and then crosses US-169 in western Missouri.

Railroads

The Burlington Northern Santa Fe (BNSF) railway has numerous main and branch tracks and smaller spur lines in the states affected by the Mainline Project route. The Twin Cities Division of BNSF has track concentrated in the eastern portion of North Dakota and South Dakota, and it is likely that the pipeline corridor would cross several main tracks of this division. The BNSF Kansas and Nebraska divisions have main, branch, and spur tracks in the vicinity of the Keystone pipeline ROW, and the Springfield division covers territory in Missouri and Illinois that coincides with the Keystone Project. For more information on BNSF divisions and routes, see <http://www.bnsf.com/tools/reference/division_maps/>.

The Union Pacific Railroad has main, branch, and spur track lines across Nebraska, Kansas, Missouri, and Illinois (<<http://www.uprr.com/aboutup/maps/sysmap/index.shtml>>). These lines connect many of the larger cities in these states, such as St. Louis in Missouri, Kansas City and Topeka in Kansas, and Omaha and North Platte in Nebraska, with Chicago to the east and California cities to the west. It is likely that the Mainline Project route would intersect track owned by the Union Pacific Railroad.

Several other railroad corporations operate in the vicinity of the Mainline Project ROW. CSX Railroad Corporation has a line connecting Salem and East St. Louis, Illinois that may run in the vicinity of the pipeline as the corridor nears the proposed terminals at Wood River and Patoka, Illinois (<http://www.csx.com/share/general/fastfacts/docs/Ill_Fact_Sheets_0506-11-REF21841.pdf>). Amtrak has numerous regional routes running south and west from Chicago (<http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/Page/Browse_Routes_Page&c=Page&cid=1081256321432&ssid=133>). Many of these routes interconnect states that would be crossed by the Mainline Project route and could intersect the pipeline ROW.

Cushing Extension

Highways and Rural Roads

The Cushing Extension begins in lower Nebraska near the Nebraska/Kansas border, crosses into into Kansas, and then into Oklahoma. This route would intersect the following interstates and major US highways:

- I-70, I-35, US-35, US-24, US-56, US-50, US-54 US-160, and US-166 in Kansas; and
- US-64 and US-412 in Oklahoma.

The rural road network is also well developed in Kansas and Oklahoma. In addition to these major highways, numerous smaller state, county, and municipal roads and rural routes would be crossed by the ROW or used by contractors during construction. The Cushing Extension parallels and crosses US-77 in

Oklahoma in the vicinity of Ponca City; it also parallels that highway near the Oklahoma/Kansas border in the vicinity of Arkansas City, Kansas.

Railroads

The Kansas, Springfield, and Texas Divisions of BNSF all have mainline, branch, and spur tracks that could be affected by the pipeline crossings for the Cushing Extension (http://www.bnsf.com/tools/reference/division_maps/). The Union Pacific Railroad main, branch, and spur tracks cross Kansas and run south through Oklahoma to Texas (<http://www.uprr.com/aboutup/maps/sysmap/index.shtml>). The Cushing Extension may intersect track owned by the Union Pacific Railroad.

3.10.1.8 Environmental Justice

Other demographic characteristics of the local population are important to consider when evaluating potential environmental justice impacts of the Keystone Project. 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.” An analysis of potential environmental justice effects is included in this section pursuant to EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994). Related guidance—Environmental Justice: Guidance under the National Environmental Policy Act (1997)—also has been prepared by the CEQ. The key socioeconomic data pertinent for environmental justice are the racial/ethnic composition and income status of affected communities, which are summarized in Table 3.10.1-8.

Minority Populations

In accordance with the CEQ Guidance, minority populations should be identified where either (a) the minority population in the affected area exceeds 50 percent; or (b) the minority population of the affected area is meaningfully greater than the minority population in the general population of the surrounding area. For the purposes of this analysis, the “affected area” is defined as local communities, the “general population” refers to the state within which the community is located, and “meaningfully greater” means at least 1.5 times the corresponding measure for the general population.

The 2000 Census shows that minority groups do not exceed 50 percent of the population in any community in the region. However, some minority populations are “meaningfully greater” than the corresponding minority population at the state level, which are identified with an asterisk (*) in the relevant racial/ethnic category columns of Table 3.10.1-8. Along the Mainline Project, the areas with a minority population that is meaningfully greater than the corresponding state population include three communities in South Dakota (Yankton, Iroquois, and Raymond); one community in Nebraska (Garrison); five communities in Missouri (Renick, Turney, Fountain N’ Lakes, Truxton, and Triplett); and five communities in Illinois (South Roxana, Grantfork, Vernon, Granite City, and Alton). There are no affected communities in North Dakota or Kansas with minority populations that meet the environmental justice criteria outlined above. Of the 14 communities, eight are located within 0.5 mile of the proposed Keystone Project route and six are located within 0.5 to 2 miles. Along the Cushing Extension, six communities have notable minority populations. They are Potwin, Winfield, Arkansas City, Douglass, and Green in Kansas, and Marland in Oklahoma. Of these, only Potwin is located within 0.5 mile of the Keystone Project route.

TABLE 3.10.1-8									
Environmental Justice Statistics in Affected Communities along the Keystone Project Route									
State/County	Relative Proximity to Route (miles)	Racial/Ethnic Categories (as Percent of Total Population) – 2000							Families with Income below the Poverty Level (1999)
		White	Black	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Hispanic or Latino	
MAINLINE PROJECT									
North Dakota	--	92.4	0.6	4.9	0.6	0.4	1.2	1.2	8.3
Lankin	0.5	96.9	0.0	2.3	0.0	0.0	0.8	0.0	0.0
Walhalla	2	89.8	0.0	6.0	0.0	0.1	4.2	0.9	9.7*
Sharon	2	94.5	0.0	1.8	0.0	0.0	3.7	0.0	0.0
Fort Ransom	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8*
Niagara	2	94.7	0.0	1.8	0.0	0.0	3.5	0.0	0.0
Sibley	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3*
Luverne	2	97.7	0.0	2.3	0.0	0.0	0.0	0.0	0.0
South Dakota	--	88.7	0.6	8.3	0.6	0.5	1.3	1.4	9.3
Yankton	0.5	94.4	1.6*	1.6	0.5	0.9	1.0	2.5*	6.2
Iroquois	0.5	95.7	0.0	0.4	0.4	1.4	2.2	2.5*	18.8*
Raymond	0.5	96.5	0.0	0.0	0.0	3.5	0.0	4.7*	13.6*
Roswell	0.5	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Emery	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Carthage	2	98.9	0.0	0.0	0.0	0.0	1.1	0.0	13.2*
Spencer	2	98.7	0.0	0.6	0.6	0.0	0.0	0.0	7.0
Nebraska	--	89.6	4.0	0.9	1.3	2.8	1.4	5.5	6.7
Leigh	0.5	99.5	0.0	0.0	0.0	0.0	0.5	1.8	4.5
Richland	0.5	97.8	1.1	1.1	0.0	0.0	0.0	1.1	0.0
Garrison	0.5	95.5	0.0	4.5*	0.0	0.0	0.0	0.0	0.0
Sholes	0.5	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seward	2	98.0	0.5	0.1	0.5	0.4	0.6	1.0	4.1
Stanton	2	97.2	0.2	0.6	0.3	1.1	0.7	2.4	5.8
Randolph	2	99.0	0.1	0.3	0.3	0.2	0.1	0.2	4.9

**TABLE 3.10.1-8
(Continued)**

State/County	Relative Proximity to Route (miles)	Racial/Ethnic Categories (as percent of total population) – 2000							Families with Income below the Poverty Level (1999)
		White	Black	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Hispanic or Latino	
MAINLINE PROJECT (CONTINUED)									
Nebraska (continued)									
Dorchester	2	97.2	0.0	0.0	0.0	2.6	0.2	4.1	4.1
Plymouth	2	99.4	0.0	0.0	0.0	0.4	0.2	0.8	1.5
Bellwood	2	100.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6
Hoskins	2	99.6	0.0	0.0	0.0	0.0	0.4	0.4	5.3
Staplehurst	2	97.4	0.0	0.0	0.4	0.0	2.2	0.4	7.4*
Fordyce	2	100.0	0.0	0.0	0.0	0.0	0.0	4.9	2.4
Swanton	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Steele City	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3*
Harbine	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	--	86.1	5.7	0.9	1.7	3.4	2.1	7.0	6.7
Seneca	2	98.8	0.4	0.0	0.0	0.0	0.6	0.7	4.4
Fairview	2	95.2	3.3	0.0	0.0	0.0	1.5	1.1	11.0*
Denton	2	99.58	0.0	0.0	0.0	0.0	0.5	0.5	0.0
Severance	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4*
Oketo	2	95.4	0.0	0.0	0.0	0.0	4.6	0.0	8.7*
Oneida	2	94.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Missouri	--	84.9	11.2	0.4	1.2	0.8	1.5	2.1	8.6
Troy	0.5	93.9	2.9	0.4	0.1	0.8	1.9	1.7	7.6
Moscow Mills	0.5	94.3	3.2	0.3	0.1	0.3	1.8	0.9	5.3
Salisbury	0.5	94.8	4.2	0.2	0.2	0.1	0.5	0.6	7.1
Agency	0.5	98.5	0.0	0.0	0.5	0.5	0.5	1.7	3.7
West Alton	0.5	99.1	0.0	0.2	0.2	0.5	0.0	0.5	4.5

TABLE 3.10.1-8 (Continued)									
State/County	Relative Proximity to Route (miles)	Racial/Ethnic Categories (as percent of total population) – 2000							Families with Income below the Poverty Level (1999)
		White	Black	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Hispanic or Latino	
MAINLINE PROJECT (CONTINUED)									
Illinois	--	73.5	15.1	0.2	3.4	5.8	1.9	12.3	7.8
Edwardsville	0.5	87.7	8.7	0.3	1.7	0.3	1.4	1.0	5.0
Highland	0.5	98.6	0.1	0.1	0.5	0.3	0.5	1.3	3.6
South Roxana	0.5	97.7	0.3	0.4*	0.3	0.3	1.0	0.8	17.4*
Roxana	0.5	98.5	0.1	0.3	0.3	0.4	0.5	0.6	2.5
Hartford	0.5	98.4	0.1	0.2	0.4	0.3	0.5	0.7	10.3*
Pocahontas	0.5	98.6	0.1	0.3	0.3	0.0	0.7	0.0	12.5*
Grantfork	0.5	99.2	0.0	0.4*	0.0	0.0	0.4	0.4	3.1
Vernon	0.5	98.3	0.0	0.6*	0.0	0.0	1.1	1.7	17.9*
Granite City	2	94.7	2.0	0.5*	0.5	0.9	1.4	2.9	8.8*
Alton	2	72.3	24.7*	0.2	0.4	0.7	1.7	1.5	14.7*
Godfrey	2	94.1	4.0	0.3	0.7	0.2	0.7	1.0	3.2
Wood River	2	97.6	0.6	0.3	0.5	0.4	0.7	1.2	13.2*
East Alton	2	96.7	0.9	0.2	0.4	0.2	1.5	1.0	7.8
Patoka	2	98.9	0.0	0.0	0.2	0.0	0.9	1.3	11.6*
CUSHING EXTENSION									
Nebraska ^a									
Kansas	--	86.1	5.7	0.9	1.7	3.4	2.1	7.0	6.7
Towanda	0.5	96.8	0.4	0.4	0.2	0.2	2.0	0.7	5.1
Chapman	0.5	94.8	0.5	1.0	0.4	0.7	2.7	3.0	4.3
Potwin	0.5	95.4	0.0	1.5*	0.2	0.0	2.8	0.9	4.7
Greenleaf	0.5	99.4	0.0	0.0	0.0	0.3	0.3	0.8	8.3*
Hollenberg	0.5	96.8	0.0	0.0	0.0	3.2	0.0	3.2	0.0

TABLE 3.10.1-8 (Continued)									
State/County	Relative Proximity to Route (miles)	Racial/Ethnic Categories (as percent of total population) – 2000							Families with Income below the Poverty Level (1999)
		White	Black	Native American or Alaskan Native	Asian or Pacific Islander	Other	Two or More Races	Hispanic or Latino	
Kansas (continued)									
Winfield	2	88.1	3.3	1.1	3.7*	1.7	2.1	4.7	8.9*
Arkansas City	2	87.2	4.5	2.7*	0.6	1.9	3.0	4.5	12.4*
Augusta	2	96.1	0.2	0.8	0.4	0.7	1.9	2.6	4.1
Marion	2	97.6	0.0	0.8	0.1	0.2	1.2	1.4	5.3
Douglass	2	96.2	0.3	1.6*	0.2	0.5	1.2	1.7	4.5
Washington	2	98.9	0.1	0.2	0.0	0.2	0.5	0.6	8.6*
Wakefield	2	95.9	0.8	1.1	0.1	0.6	1.4	1.2	4.2
Hope	2	98.1	0.8	0.5	0.3	0.0	0.3	0.3	4.8
Green	2	96.6	0.7	2.7*	0.0	0.0	0.0	1.4	5.3
Ramona	2	95.7	0.0	0.0	0.0	4.3	0.0	6.4	0.0
Oklahoma	--	76.2	7.6	7.9	1.5	2.4	4.5	5.2	11.2
Ponca City	0.5	84.2	3.0	6.3	0.7	2.1	3.8	4.4	12.7*
Cushing	0.5	79.7	7.0	8.0	0.1	0.9	4.3	2.7	15.1*
Newkirk	2	83.7	1.2	8.7	0.1	0.8	5.4	2.1	11.0
Morrison	2	89.2	0.3	2.8	0.5	2.7	4.6	4.2	13.5*
Marland	2	48.9	0.0	38.6*	0.0	3.2	9.3	10.0*	31.0*

Notes:

Affected areas are those where existing facilities exist or communities where new pipeline facilities or surface disturbance activities associated with pipeline refurbishment are proposed.

Communities are listed in order by state as the proposed Keystone Project crosses from north to south, proximity to the proposed Keystone Project centerline, and descending size based on year 2000 population.

Minority populations—defined as black, Native American or Alaskan Native, Asian or Pacific Islander, or Hispanic with percentages meaningfully greater than 1.5 times that of the minority population percentage in the general population of the surrounding area (i.e., corresponding state)—are identified with an asterisk (*).

**TABLE 3.10.1-8
(Continued)**

Notes (continued):

Persons of Hispanic origin may be of any race, and for census-gathering purposes, Hispanic is a self-identified category. In this table, individuals may have reported themselves as only Hispanic or in combination with one or more of the other races listed. This may result in the sum of percentages for all ethnic categories to be greater than 100 percent for any community.

The poverty threshold is defined as the average threshold for a family of three and is not adjusted for regional, state, or local variations in the cost of living.

The percent of families with income below the poverty threshold in 2000, as defined by the Bureau of the Census for federal statistical purposes, based on a family of three. Communities with a higher percent of the population below the poverty level than occurring in the respective state are identified with an asterisk (*).

^a Addressed in the Mainline Project route.

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

Low-Income Populations

Low-income populations are defined as those individuals or groups living below the established poverty threshold. In 2000, the poverty threshold for a family of three was \$13,290. Low-income populations in the region of influence were identified using income data and poverty statistics from the U.S. Census. For the purposes of this analysis, low-income populations were evaluated at the community level. If the percentage of population living below the threshold was greater in a local community relative to the state in which it is located, it was considered to be a low-income population; these communities are noted with an asterisk (*) in the far right column of Table 3.10.1-8.

Although the income characteristics of the communities along the proposed pipeline route vary, affected communities in every state have low-income populations as defined here. In total, 28 communities along the Mainline Project and eight communities along the Cushing Extension are classified as low-income populations along the Mainline Project and the Cushing Extension, respectively. Along the Mainline Project, these are Walhalla, Fort Ransom, and Sibley in North Dakota; Iroquois, Raymond, and Carthage in South Dakota; Staplehurst and Steele City in Nebraska; Fairview, Severance, Oketo, Keytesville, Cowgill, Renick, St. Joseph, Moberly, Mexico, Bosworth, Fountain N' Lakes, and Triplett in Missouri; and South Roxana, Hartford, Pocahontas, Vernon, Granite City, Alton, Wood River, and Patoka in Illinois. Additional low-income populations located along the Cushing Extension include Greenleaf, Winfield, Arkansas City, and Washington in Kansas, and Ponca City, Cushing, Morrison, and Marland in Oklahoma. The highest poverty rates are found in Triplett, Missouri (30.8 percent) and Marland, Oklahoma (31.0 percent).

3.10.2 Potential Impacts and Mitigation

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

- Substantial disruption of local social or economic activities, including changes in employment and income levels, resulting from the proposed pipeline construction and operations.
- Overburdening of the local housing stock because of demand generated by the temporary and permanent workforce.
- Substantial changes in private property values.
- Substantial changes in fiscal revenues, including tax receipts, of local jurisdictions.
- Substantial burden on public service providers serving the Keystone Project area such that they would need to expand their service capacities in order to meet those demands.

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 and to determine the significance of identified impacts based on established significance criteria. The analysis of socioeconomic impacts is organized into two parts: Section 3.10.2.1 addresses the anticipated socioeconomic effects during Keystone Project construction, and Section 3.10.2.2 addresses operations-related impacts.

3.10.2.1 Construction Impacts

Keystone would construct the pipeline in 11 construction spreads or completed lengths, with eight spreads along the Mainline Project and three spreads along the Cushing Extension (see Section 2.2.4 and Table 3.10.2-1). Each spread would require 6 months to complete. Keystone proposes to initiate construction of the Mainline Project's aboveground facilities in April 2008. Construction of each pump station would require approximately 20 to 30 additional workers. Construction of pump stations would be completed in 18 months.

TABLE 3.10.2-1 Construction Spreads Associated with the Keystone Project		
Spread Number	Location	Approximate Distance within Construction Spread (miles)
Mainline Project		
Spread 1	U.S./Canada Border to MP 129.9 in North Dakota	130
Spread 2	Through North Dakota into South Dakota to PS-20 at MP263.2	133
Spread 3	Through South Dakota to MP 403.8	141
Spread 4	Through South Dakota into Nebraska to MP 534.47	131
Spread 5	Through Nebraska into Kansas to MP 657.1	141
Spread 6	Through Kansas into Missouri to MP 779.6	105
Spread 7	Through Missouri to MP 905.9	126
Spread 8	Through Missouri into Illinois to end of line at Patoka IL (MP 1081.7)	176
Cushing Extension		
Spread 9	PS- 28 in Jefferson, Nebraska to Marion, Kansas at MP 107.6	108
Spread 10	Marion, Kansas to Crowley, Kansas at MP 211.9	105
Spread 11	Crowley, Kansas to Kansas/End of line at Cushing Oklahoma (MP 295.5)	83.3

Source: TransCanada 2007d.

Population

The number of residents within the region of influence would increase temporarily during construction with the influx of construction workers and Keystone Project staff. The construction workforce would consist of approximately 2,500 to 3,000 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 workers per station would be required, for 150 to 200 additional workers during peak periods (because not all pump stations would be constructed simultaneously).

Population impacts in the region of influence would depend on the composition of the construction workforce in terms of local versus non-local workers. Keystone is expected to utilize temporary local construction labor where possible. It is estimated that 10 to 15 percent of the total construction workforce could be hired from local communities, with the remaining workers (85 to 90 percent) from outside the local area. It is anticipated that approximately 25 percent of non-local construction workers would temporarily reside in the Keystone Project area with their spouses; however, few non-local workers are expected to be accompanied by their children or other family members because of the mobile nature of

the workforce along the pipeline route during construction. Based on these data and assumptions, it is estimated that 2,800 to 3,600 non-local residents would temporarily move into the region of influence, resulting in short-term population increases during the construction period. Overall, the estimated increase in population is less than 1 percent in the region of influence.

These workers would be distributed throughout the region of influence according to construction spread, thereby potentially affecting isolated communities along the pipeline route. At the local level, construction workers and their spouses would account for about 560 to 720 temporary new residents per construction spread. Construction workers would be working concurrently in multiple locations within each construction spread; however, they would work from a single contractor yard. Therefore, all 560 to 720 temporary residents could reside in any one community at a given point in time, although it is more likely that they would be dispersed across several communities. Depending on the size of the local community and duration of stay, these influxes of construction workers may result in a range of short-term socioeconomic effects. The significance of these potential temporary increases in local population levels is addressed in the analysis of related resource topics in this section, including housing and public services.

Housing

Non-local construction workers moving into the region of influence would require short-term accommodations. Because workers are not expected to relocate with their families and their stay in any one community would be temporary, it is expected that most workers would use temporary housing, such as hotels/motels, RV parks, 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 fill, workers would be forced to seek alternative accommodations, including RV parks and campgrounds, in smaller, more distant communities. Further, some employees may elect to utilize furnished apartments and rental homes due to the constrained availability of other accommodations, although this is expected to be limited based on extended-period lease requirements. Depending on location and available accommodations, workers may elect to temporarily reside in one location during the construction period or relocate within each spread as needed as construction proceeds along the pipeline route.

There could be a need for nearly 2,900 housing units throughout the region of influence, or 450 to 575 housing units within any one construction spread, assuming that each worker would require his/her own unit, which would be shared with a spouse accompanying the worker. The availability of short-term housing varies across the pipeline route. In total, there are approximately 14,400 rental units and 34,100 hotel/motel rooms and campground spaces available to serve the housing needs of the Keystone Project. The anticipated project-related demand for housing would account for about 6 percent of all available temporary housing in the region of influence. 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.

In the northern, more rural portions of the pipeline route, particularly North Dakota and most areas in South Dakota, Nebraska, and Kansas, it may be difficult to meet the local housing needs based on the limited amount of short-term accommodations in proximity to the Keystone Project. In these areas, it is more likely that construction workers would drive extended distances to find accommodations in small towns, or rely more extensively on RV parks and campgrounds. Conversely, in more urban areas, such as most of Missouri and Illinois, short-term housing is more abundant, particularly hotels and motels; therefore, it is more likely that the available housing stock in proximity to the Keystone Project would be sufficient to meet the increased housing demands generated by the Keystone Project.

Local Economic Activity

The proposed pipeline 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 Keystone Project and spending on construction goods and services. At the local level, these benefits would be in the form of employment of local labor as part of the construction workforce and related income benefits from wage earnings, construction expenditures made at local businesses, and construction worker spending in the local economy.

Construction of the proposed Keystone Project, including the pipeline and pump stations, would result in hiring approximately 2,650 to 3,200 workers over the 18-month construction period. As indicated above, Keystone expects that roughly 10 to 15 percent of the construction workforce would be hired from local labor markets, thus 265 to 480 local workers throughout the entire region of influence, or 50 to 100 local workers per construction spread. Related income benefits would be substantial. Keystone estimates that the total construction payroll for the Keystone Project would be between \$280 and \$320 million; at the local level, construction income benefits are expected to total \$28 to \$48 million.

In addition to payroll spending, construction would generate substantial expenditures on goods and services, both inside and outside of the region of influence. Typical construction spending includes expenditures on fuel supplies, hardware needs, and parts/equipment. In total, the cost of construction goods and services for the Keystone Project is estimated at \$110 to \$130 million. Of this amount, approximately 40 percent, or \$44 to \$52 million, would be spent locally in the region of influence, thereby providing economic benefits to local businesses and service providers—primarily equipment suppliers, aggregate and concrete suppliers, and industrial supply depots.

Construction also would generate indirect local economic benefits from secondary activity spurred by the direct effects described above. This includes spending by the non-local construction workforce within local economies during the construction period, including 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 circulate throughout the economy based on economic linkages among industries. These “ripple” effects, commonly referred to as “multiplier effects,” result from businesses buying from other businesses and can generate additional economic benefits within the region of influence.

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

Overall, construction of the proposed Keystone Project would result in a substantial positive impact on the local economies in the region of influence. While subsequent operation and maintenance of the project also would require some labor, most of the construction-related impacts would be temporary and would conclude with the end of construction in approximately 18 months.

Agriculture

Unlike the construction spending benefits to the local economy described above, Keystone Project construction has the potential to both temporarily and permanently displace land uses, primarily agriculture, and result in adverse economic impacts on the agricultural sector. For purposes of this

analysis, agriculture consists of cropland, grassland/rangeland, and forestland—and includes activities associated with harvested crops, timber production, livestock grazing, and/or dairy production.

Agriculture is the predominant land use along the pipeline corridor, comprising about 94 percent of land crossed by the Keystone Project. Based on the size of the construction ROW, approximately 13,007 acres of agricultural land would be temporarily removed from production during portions of the 18-month construction period. This would result in lost agricultural production values and any related indirect economic activity that is associated with agricultural production. The direct effect of lost production values on individual landowners would be offset by compensation paid by Keystone for pipeline easements, which theoretically would reflect lost production values and agricultural income. Construction-related effects on displacement of most agricultural uses would be temporary, lasting only through the construction period. (Refer to Section 3.9 for a discussion of easement acquisition.)

Tax Revenue and Fiscal Resources

The fiscal benefits of the Keystone Project include short-term tax revenues generated during construction and long-term tax revenues associated with property tax payments. The proposed project is not expected to require substantial new government expenditures. 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 includes, 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 tax rates and their applicability vary by region and jurisdiction.

For construction-related purchases, tax benefits would be dependent on construction spending levels and the ability of local businesses to meet the demand for required materials and services. The total cost of construction goods and services is estimated at between \$110 and \$130 million, of which about 40 percent (or \$44 to \$52 million) would be spent locally in the region of influence. To the extent that these expenditures are taxed, local governments would benefit.

For employee-generated purchases, tax revenues would depend on the proportion of the workforce that is local, the behavior of individual workers, and the duration of their stay. The magnitude of these tax benefits would be related to the construction worker payroll, which is estimated at between \$280 and \$320 million. Some portion of the construction payroll would be retained and spent within the region of influence by the construction workforce over the approximate 18-month construction period. The resulting tax revenues generated by this spending represent additional fiscal benefits of the proposed Keystone Project.

Short-term fiscal benefits also may be derived from fees assessed by federal agencies for the use of public land for pipeline and transmission ROWs, as well as from local, state, and federal income taxes paid by corporations and employees serving the Project. These taxes and fees vary by region and have not been quantified for this analysis.

Some increases in spending by local jurisdictions may be associated with increases in public service levels. However, these expenditures are expected to be minor due to the temporary nature of construction activities.

Public Services

Various types of emergency events may occur during construction, such as worker accidents requiring medical attention. As a result, the proposed Keystone Project could temporarily increase the demand for emergency response, medical, police, and fire protection services during the construction period. Table 3.10.1-7 lists the public service providers located in the region of influence. Emergency response in more urban areas likely would be quick, based on the proximity of public service facilities to the pipeline. However, in more rural sections of the proposed route, particularly North Dakota and most of South Dakota, emergency response times may be long based on communication, dispatch, and travel time constraints. It is the intent of Keystone to work with local law enforcement, fire departments, and emergency services providers, including medical aid facilities, to establish appropriate measures that would ensure effective emergency response and provision of related services; this information would be included in the ERP developed as part of the Keystone Project (Appendix C). With implementation of applicable measures in the ERP, construction-related impacts on public services are expected to be minor.

The influx of construction workers, and possibly spouses, in local communities also has the potential to generate additional demands on local public services. The magnitude of public service impacts would vary by community, depending on the size of the non-local workforce and their accompanying families, the size of the community, and duration of stay. However, as noted above, few non-local workers are expected to be accompanied by family members because of the short construction period and transient nature of the work. Therefore, potential public service impacts associated with temporary increases in population would be short term and minor.

Transportation and Traffic

Construction activities could result in short-term impacts on the transportation infrastructure. These impacts could include disruption to traffic flow due to the movement of construction equipment, materials, and crew members; closure of existing roads and railways during construction of pipeline crossings; and damage to local roads from movement of heavy construction equipment and materials. In general, impacts on local traffic levels would be of short duration and would be located in rural areas. Pipeline construction schedules typically begin and end outside of peak commuting hours. Any temporary impacts would include damage to local unpaved roadways and disruption of traffic flow, particularly during the initial staging that requires transport of bulk construction equipment and materials to the respective spread areas, as well as closures and disruption of roads during open-cut pipeline installation.

Prior to beginning construction work, Keystone would obtain permits and approvals for all road and railroad crossings. Construction across paved roads, highways, and railroads would be in accordance with the requirements of these permits. In general, all major paved highways and state roads and all railroads would be crossed by boring beneath the road or railroad, thereby minimizing disturbance to the transportation corridor.

In several areas, the pipeline ROW parallels major highways such as I-70 and State Road 370, both in St. Charles County, Missouri. Boring techniques would result in minimal or no disruption to traffic at road, highway, or railroad crossings, but congestion could be increased in areas where the pipeline parallels existing major highways that experience heavy traffic during the morning and evening peak hours of travel. Keystone's construction contractors would work with state and local transportation authorities to ensure that construction in the parallel areas would not greatly affect traffic conditions. This likely would include conducting major pipeline work during the off-peak traffic hours. Completing each boring would require from 1 to 2 days for most roads and railroads, and up to 10 days for long crossings such as interstates or four-lane highways.

The open-cut method would be used to cross smaller rural routes, unpaved roads, and driveways, where permitted by local authorities or private owners. The open-cut method requires establishment of detours and temporary closure of the road to traffic. If a reasonable detour is not available, at least one lane of traffic would be kept open, except during brief periods during actual installation of the pipe. Most open-cut road crossings would be completed and the road resurfaced within 1 or 2 days. Safety measures would be implemented, such as posting signs at open-cut road crossings and the use of flagging personnel to indicate safe passage through construction areas. These measures also would help to minimize traffic disruptions.

Keystone would use public and preexisting private roads to provide access to most of the construction ROW. To minimize the effects of large machinery and transport trucks on local roads, traffic flows, and related services, major highways would be used as much as possible to transport slow-moving, heavy construction equipment to the spread areas. Keystone does not anticipate the need to improve and maintain many temporary roads to access the work areas. Paved roads are not likely to require improvement or maintenance prior to or during construction. Gravel roads and dirt roads may require maintenance during the construction period due to high use. Road improvements such as blading and filling would be restricted to the existing road footprint (i.e., the road would not be widened). Private roads and new temporary access roads would be used and maintained only with permission of the landowner or local land management agency.

Damage to existing roads also would be minimized by following permit requirements for maximum vehicle loads and width limits. Any soil remaining on the road surface from construction equipment and activities would be removed, and any damage to roads would be repaired by Keystone to preexisting conditions or better, following construction. Public safety on the roads would be provided by construction personnel while equipment is being moved. Police assistance would be requested only when necessary. Transportation planning conducted for the Keystone Project as necessary to support state and local permitting would identify possible routes to be used during construction. In addition, Keystone would conduct more detailed traffic studies in more populated areas, in conjunction with state and local permitting processes.

Property Damages and Values

Land use patterns along the pipeline route vary, as described in Section 3.9. The predominant land use, however, is agricultural, particularly in the northern portions of the route. Keystone would acquire permanent pipeline ROW easements along the pipeline route. Keystone would implement its CMR Plan to minimize adverse effects on agricultural and other activities. Measures include, among others, allowing for irrigation to continue during construction when feasible and mutually agreeable to Keystone and landowners, avoiding disruption of surface drainage, installing trench breakers on slopes at regular intervals to prevent water movement and erosion, and allowing for continued operation of water lines during construction.

All land disturbed by the construction project would be restored to the best extent possible. Keystone would repair or restore drain tiles, fences, and land productivity if these are damaged or adversely affected during construction. All agricultural land disturbed during construction, other than that required for permanent aboveground facilities, would be returned to pre-construction levels of productivity. Only the agricultural production on the land on which aboveground facilities are located would be permanently reduced, and landowners would be compensated for this loss in production. If interruption of water line services during construction leads to agricultural resource damage, Keystone would provide reasonable compensation to landowners for lost productivity.

Keystone would be responsible for reclaiming all lands as nearly as practicable to an equivalent level of capability. In addition, Keystone would compensate landowners for actual crop losses resulting from removal of standing crops, disruption of planned seeding activity, disruption of general farming activities, or other losses resulting from construction. Compensation would be negotiated between Keystone and private landowners based on fair market values. (Refer to Section 3.9 for a discussion of easement acquisition). If repair or replacement is not possible, Keystone would compensate landowners for property damage.

The net economic impact of construction-related Keystone Project activities on individual landowners would be negligible. Lost revenue from existing land uses and property damage would be offset by monetary compensation such that the economic status of landowners would be similar to existing conditions. As such, potential construction-related economic effects on landowners would be negligible.

The value of agricultural land should not be adversely affected by the pipeline Project because Keystone would restore the land to its pre-project productivity. Keystone would also compensate landowners for any crop or other losses they sustain during the construction period.

In addition, the pipeline is unlikely to have adverse impacts on property values. Anstine³ notes that diminution in property value, when present, is typically associated with facilities which emit noticeable byproducts such as odors, vapor plumes, or noise. Similarly, RESI⁴ notes in its literature review that some industrial facilities may increase surrounding property values, while others may decrease values. In the latter case, however, the reductions were associated with such factors as industrial activities, visual alterations to the landscape, and perceived risks to human health. Because the Keystone Pipeline will not emit odors, vapors, or noise, nor adversely affect viewscapes, there is little potential for reduced property values attributable strictly to the pipeline.

Environmental Justice

The analysis of environmental justice effects is presented in Section 3.10.2.2.

3.10.2.2 Operations Impacts

Population

During operation, Keystone estimates that the proposed Keystone Project would require approximately 26 permanent employees, including 20 field staff and 6 head office staff. If all employees moved into the region along with their families, the population in the region of influence could increase by about 65 people. Because the new population would be dispersed across the region of influence based on the location of facilities, long-term population effects at the community level would not be expected to alter local demographic characteristics and are considered negligible.

Housing

Housing demand for the approximately 26 permanent positions generated by operation of the proposed Keystone Project would represent a permanent, yet negligible, increase in housing demand in selected

³ Anstine, Jeff, 2003, "Property Values in a Low Populated Area When Dual Noxious Facilities Are Present," *Growth and Change*, 34:345-358.

⁴ RESI Research and Consulting, 2004, "The Proposed Catoctin Project: Literature Review & Case Study Analysis," Towson University, Towson, Maryland.

areas along the pipeline route. It is expected that existing available housing resources in these areas could accommodate this demand; therefore, this impact is considered minor.

Local Economic Activity

During operation, the proposed Keystone Project would generate a demand for goods and services, including power, which would result in economic benefits to the region. The cost of operational goods and services is estimated at \$1.3 million per year, plus an additional \$46.5 million for power (TransCanada 2007b). It is further estimated that approximately 90 percent of this total, or about \$43.0 million, would be spent in the project area. In addition to the 26 permanent jobs directly attributed to operations and the associated \$5.5 million annual payroll, these expenditures would support additional jobs and related income benefits in the region.

Agriculture

Once construction is complete, most agricultural land uses would not be prohibited within the permanent pipeline ROW, and agricultural production would return to near pre-construction levels. However, some agricultural practices, such as forest production and permanent orchards, would not be allowed within the permanent pipeline ROW. Areas that historically were in forest or orchard production would remain fallow or would shift to an alternative agricultural use. In addition, construction and operation of ancillary aboveground facilities on agricultural lands would permanently remove this land from agricultural production. It is estimated that approximately 62 acres of agricultural land would be permanently displaced by aboveground facilities. Accordingly, long-run agricultural production is expected to decline with implementation of the Keystone Project. As described in Section 3.9, potential adverse economic effects on individual landowners would be compensated by easement acquisition, and no economic impact would be expected to occur at the individual or farm level. However, there could be adverse indirect effects on the related support industries that serve crops that would be prohibited or displaced within the permanent ROW. Given the small amount of land potentially affected relative to the total amount of land dedicated to agricultural production in the region of influence, impacts to the agricultural sector are considered minor.

Because of current legal constraints regarding the publication of site-specific CRP contract information and data, the following analysis was completed based on a “worst-case” scenario approach, as identified below:

- We assumed that all acres affected by the Project within a county would touch, dissect, or cross a portion of a CRP contract(s) within that county.
- Because the exact location is not known of where, if at all, the pipeline would affect a CRP contract, we assumed that all acreage of the CRP contract affected by the pipeline would be removed from the program. Consequently, all annual monetary and environmental benefits would be lost. The worst-case approach was used because of potential disclosure problems under the Freedom of Information Act. In particular, because participation in and compensation paid by FSA to individual farmers are confidential, no information on particular parcels potentially affected by the Keystone Project can be revealed.
- The CRP practices in the counties affected by the pipeline are grasses, wetlands, and trees. For this analysis, the land use types considered for the affected counties included agriculture, cropland, grassland, rangeland, and wetland acres.

The results of this worst-case analysis are shown in Table 3-10.2-2.

TABLE 3.10.2-2 Worst-Case Scenario for Conservation Reserve Program Acres and Loss of Program Benefits by State Attributable to the Mainline Project									
State	CRP Acres	Continuous CRP Acres ^a	CREP Acres	Annual Rent	Grass Acres (CP 1, 2, 4, and 10)	Wetland Acres (CP 9 and 23)	Wildlife Habitat Acres (CP 4, 12, and 25)	Tree Acres (CP 3, 11)	
Illinois	335.5	79.4	0.0	\$30,088	250.3	7.7	12.6	1.3	
Kansas	3,516.8	251.8	0.0	\$198,935	2647.7	0.0	617.3	0.0	
Missouri	7,643.5	182.2	5.2	\$516,789	7307.3	66.3	143.2	9.8	
Nebraska	3,027.3	145.6	63.7	\$230,527	2723.1	20.1	340.3	9.0	
North Dakota	11,407.2	241.2	0.0	\$493,203	7781.4	3,378.3	3,496.7	0.0	
South Dakota	2,066.1	232.5	0.0	\$102,235	1338.5	465.9	198.4	7.5	
Total	27,996.4	1,132.7	68.9	\$1,571,776	22,048.3	3,938.3	4,808.5	27.6	
	Total Acres Affected during Construction ^b	Total Acres Affected by Permanent Right-of-Way ^b	CRP Acres	Worst-Case Percent of Affected CRP Acres during Construction	Worst-Case Percent of Affected CRP Acres from Permanent Right-of-Way	Agriculture, Cropland, Grassland Rangeland, and Wetland Acres Affected during Construction ^b	Worst-Case Percent of Affected CRP Acres Based on Land Use Type	Annual Rent ^c	Loss of Annual Rent Based on % Change ^c
Illinois	909	358	336	100	100.0	693	100	\$30,100	\$30,100
Kansas	1,871	608	3,517	53	17	1,697	48	\$199,000	\$95,500
Missouri	4,675	1,687	7,644	61	22	3,768	49	\$516,800	\$253,200
Nebraska	3,335	1,323	3,027	100	44	3,198	100	\$230,500	\$230,500
North Dakota	3,440	1,342	11,407	30	12	3,099	27	\$493,200	\$133,100
South Dakota	3,377	1,349	2,066	100	65	3,183	100	\$102,200	\$102,200
Total	17,607	6,667	27,996	63	24	15,638	56	\$1,572,000	\$847,000

**TABLE 3.10.2-2
Continued**

Notes:

- CP = Conservation Practice. Numbers refer to specific practices. For example, CP1 is the new introduction of grasses and legumes. See Farm Service Agency. 2007. Conservation Reserve Program, Summary and Enrollment Statistics, FY 2006. Washington, DC. May.
- CREP = Conservation Reserve Enhancement Program.
- CRP = Conservation Reserve Program.

- ^a Includes CREP acres
- ^b Data from TransCanada 2007d
- ^c Rounded to nearest \$100

Under the worst-case scenario (worst case assumes that all landowner tract acreage is impacted even though only some small percentage of that acreage is actually included in the CRP program, an obviously highly conservative assumption), the pipeline could affect 17,607 acres, 15,638 acres of which are either agricultural, cropland, or wetland acreage in those counties affected by the Mainline Project. Removal of all of the affected CRP acreage in those counties would result in a loss of about \$802,000 in annual rental income payments to those participants who remove their land. As shown in Table 3-10.2-2 and as discussed above, all landowner rents were assumed lost on land, regardless of the percentage of that land enrolled in FSA programs. Consequently, for Illinois, Nebraska, and South Dakota, all rents were assumed lost under the worst-case scenario.⁵

The worst-case scenario is not probable, and the impact on FSA program participants, like those enrolled in the CRP and FWP programs, is expected to be minimal, temporary, and localized. Mitigation is recommended in Section 3.9 to prevent any adverse economic or environmental impact to FSA program participants (see Section 3.9.3.1).

Tax Revenue and Fiscal Resources

Once the Keystone Project is constructed, it would generate property tax revenues for the states and counties traversed by the pipeline, in accordance with applicable tax structures. Keystone has developed estimates of property taxes by state based on the value and/or length of pipe in the ground and quantity of aboveground facilities (see Table 3.10.2-3). Overall, an estimated \$46.7 million in annual property tax revenues would be generated by the Keystone Project in the region of influence. Most of these revenues, about \$30.2 million, are attributed to the Mainline Project. The Cushing Extension would generate the remaining \$16.5 million. The incremental property tax revenues for the Mainline Project would be 0.24 percent of total current property taxes among all affected counties. The corresponding percent for the Cushing Extension would be 7.66 percent because of the lower current property taxes in the affected counties. Jurisdictions in Kansas would realize the greatest annual property tax benefits (\$18.1 million). No property tax revenues would be generated in Illinois, where property taxes are not levied. Local counties would be the primary beneficiaries of estimated property tax benefits listed in Table 3.10.2-3. Based on the size of the existing tax base of affected jurisdictions, which varies substantially within the region of influence, these revenues may represent a minor to major fiscal benefit of the Keystone Project that would be realized over the long term.

Public Services

During operation, the approximate 26 permanent employees serving the Keystone Project and their associated family members would represent a long-term, yet minor, increase in the demand for the provision of public services. No decline in public service levels or need for facility expansions are anticipated. Further, any increase in demand for public services would be offset by increases in government revenues from property tax payments, which are often used to fund these services.

Transportation and Traffic

The proposed pipeline would be located underground and the aboveground ancillary facilities would be unmanned; consequently, pipeline operations would not affect local transportation systems. A negligible increase in vehicle trips would be associated with operations staff commuting to Keystone Project facilities.

⁵ Further, in the worst-case situation, producers would be required to pay 25 percent of the annual rental payment, plus federal cost shares received, plus all annual rental payments, plus interest. These data are not included in Table 3.10.2-2.

**TABLE 3.10.2-3
Property Tax Revenue Generated by the Keystone Project**

State/County	Current Total Ad Valorem Property Taxes (Unless Noted) (\$)	Property Tax Revenue (Project) (\$)	Percent of Existing Revenue (%)
MAINLINE PROJECT			
North Dakota			
Pembina	10,212,016	713,843	6.99
Cavalier	6,295,726	19,457	0.31
Walsh	12,382,781	620,070	5.01
Nelson	4,364,556	936,951	21.47
Steele	3,814,357	690,742	18.11
Barnes	13,006,449	1,019,881	7.84
Ransom	6,607,588	649,205	9.83
Sargent	6,040,508	646,274	10.70
<i>North Dakota subtotal</i>	<i>62,723,981</i>	<i>5,296,423</i>	<i>8.44</i>
South Dakota			
Marshall	1,574,320	719,444	39.82
Day	2,070,614	905,346	26.70
Clark	1,871,952	1,081,954	35.90
Beadle	3,506,097	466,616	6.49
Kingsbury	1,459,097	462,898	24.06
Miner	1,887,182	738,034	25.61
Hanson	1,168,129	405,268	22.42
McCook	2,242,276	338,343	12.70
Hutchinson	2,550,459	708,283	20.45
Yankton	18,725,119	671,109	2.39
<i>South Dakota subtotal</i>	<i>37,055,245</i>	<i>6,497,295</i>	<i>11.55</i>
Nebraska (Taxes Levied)			
Cedar	14,373,607	848,105	5.90
Wayne	12,999,096	461,839	3.55
Stanton	10,581,066	594,587	5.62
Platte	93,424,920	68,326	0.07
Colfax	14,080,472	542,448	3.85
Butler	15,539,120	548,347	3.53
Seward	23,915,026	596,017	2.49
Saline	19,624,429	651,342	3.32
Jefferson	13,079,964	692,043	5.29
Gage	27,964,647	203,148	0.73
<i>Nebraska subtotal</i>	<i>245,582,347</i>	<i>5,206,202</i>	<i>2.12</i>

**TABLE 3.10.2-3
Continued**

State/County	Current Total Ad Valorem Property Taxes (Unless Noted)	Property Tax Revenue (Project)	Percent of Existing Revenue (%)
MAINLINE PROJECT (CONTINUED)			
Kansas			
Marshall	11,772,795	1,395,178	11.85
Nemaha	9,482,614	1,149,747	12.12
Brown	10,209,742	1,143,945	11.20
Doniphan	7,299,226	798,217	10.94
<i>Kansas subtotal</i>	<i>38,764,377</i>	<i>4,487,087</i>	<i>11.58</i>
Missouri			
Buchanan	1,061,552,284	628,976	0.06
Clinton	227,936,441	688,689	0.30
Caldwell	94,313,724	786,220	0.83
Carroll	133,562,042	843,943	0.63
Chariton	115,832,051	1,015,120	0.88
Randolph	304,867,379	704,612	0.23
Audrain	271,818,136	1,232,077	0.45
Montgomery	168,475,439	674,756	0.40
Lincoln	558,363,794	871,809	0.16
St. Charles	6,609,549,616	1,289,799	0.02
<i>Missouri subtotal</i>	<i>9,546,270,906</i>	<i>8,736,001</i>	<i>0.09</i>
Illinois			
Madison	2,404,500,000	0	0.00
Bond	108,000,000	0	0.00
Fayette	133,000,000	0	0.00
Marion	217,700,000	0	0.00
<i>Illinois subtotal</i>	<i>2,863,200,000</i>	<i>0</i>	<i>0.00</i>
CUSHING EXTENSION			
Nebraska (Taxes Levied)			
Jefferson	13,079,964	72,594	0.56
Kansas			
Washington	8,435,597	2,096,285	24.85
Clay	9,014,595	2,060,555	22.86
Dickinson	16,579,757	2,073,703	12.51
Marion	13,669,639	2,219,216	16.23

TABLE 3.10.2-3 Continued			
State/County	Current Total Ad Valorem Property Taxes (Unless Noted)	Property Tax Revenue (Project)	Percent of Existing Revenue (%)
CUSHING EXTENSION (CONTINUED)			
Kansas (continued)			
Butler	65,397,029	2,808,048	4.29
Cowley	31,923,989	2,342,500	7.34
<i>Kansas subtotal</i>	<i>145,020,606</i>	<i>13,600,307</i>	<i>9.38</i>
Oklahoma			
Kay	23,853,655	1,014,883	4.25
Noble	8,943,669	878,126	9.82
Payne	32,315,508	926,111	2.87
<i>Oklahoma subtotal</i>	<i>65,112,832</i>	<i>2,819,120</i>	<i>4.33</i>
Mainline Project subtotal	12,793,596,856	30,223,013	0.24
Cushing Extension subtotal	223,213,402	16,492,019	7.66
Keystone Project total	13,016,810,258	46,715,032	0.36

Sources: TransCanada 2007b, c.

As a part of its permanent aboveground facilities, Keystone would construct short, permanent access roads from public roads to the proposed pump stations, delivery facilities, and MLVs. The miles of new permanent access roads are included in the discussions of above ground facilities for the Mainline Project and the Cushing Extension (Section 2.1.1.3 and 2.1.2.3, respectively). Prior to construction, Keystone would finalize the location of permanent access roads, along with any additional temporary access roads. Impacts of the presence of the access roads on cultural, biological, and physical resources—and the required permits and approvals—are discussed in the respective resource sections. Future maintenance of newly created access roads would be the responsibility of Keystone.

Property Damages and Values

Potential adverse impacts on property values would be based on the encumbrances associated with a pipeline easement, responsibility for property taxes, effects on landowner insurance premiums, and lost economic uses of land. The impact of an oil pipeline project on the value of any land parcel depends on many factors, including the size, current value, and use of the parcel, and the value of other nearby properties.

Most of the lands that would be impacted by the proposed Keystone Project are agricultural. All but the land required for permanent location of aboveground facilities would be returned to pre-construction levels of productivity, and production from those lands would not be affected following construction. As part of the ROW procurement process, Keystone would negotiate with the affected landowners to obtain an easement within the permanent pipeline ROW, compensating for any losses. If a landowner demonstrates that installation of the pipeline negatively impacts a non-agricultural development opportunity, Keystone will negotiate with the landowner for compensation regarding the potential

diminution in the value of that land during the easement acquisition process. (Refer to Section 3.9 for a discussion of easement acquisition.)

Property value effects at the community or regional scale likely would be negligible for two principal reasons. First, land uses on parcels adjacent to the pipeline would not be affected, and land could continue to be used in its highest and best use. Second, the proposed pipeline would be underground and therefore would not adversely affect the regional amenity values that contribute to property values. For these reasons, the proposed Keystone Project is not expected to adversely affect property values.

Environmental Justice

As described in Section 3.10-1.7 and shown in Table 3.10.1-8, minority and low-income populations in a number of communities within the region of influence are meaningfully higher than in the surrounding region. In addition, several Native American tribes are proximate to the pipeline route. The Keystone Project could generate substantial adverse environmental or economic or environmental justice effects in these communities. However, as described below, the Keystone Project and its associated mitigation measures are not expected to result in adverse impacts that would fall disproportionately on minority or low-income populations located along the pipeline route.

As described throughout this EIS, construction and operation of the proposed Keystone Project may generate a range of environmental impacts, but these would be minimized or mitigated, as applicable, based on mitigation proposed by Keystone and additional DOS-recommended mitigation measures. More pertinent to the environmental justice analysis are the related health and safety concerns based on the risk associated with a pipeline failure. Section 3.13 and Appendix L address the risks and associated impacts to public health and safety that would result from a pipeline crude oil release; they also describe how applicable safety regulations and standards would minimize the potential risk of such releases.

Because of the stringent safety and integrity measures Keystone has incorporated into the design, construction, and operation of the pipeline, as well as governing PHMSA pipeline safety regulations, the pipeline does not appear to 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 any minority or low-income populations identified within potentially affected communities in proximity to the Keystone Project.

The proposed Keystone Project would result in negligible to minor and temporary adverse effects on certain socioeconomic resources in the region, such as housing availability and public services. Conversely, Project-related spending and tax revenues would result in substantial socioeconomic benefits in the region of influence, which may in turn positively affect low-income and minority populations and Native American tribes through increased employment opportunities (and income benefits) and improved public service levels.

It also should be noted that an extensive public outreach program has been implemented in conjunction with the Keystone Project to ensure that public input is received, including any potentially affected minority or low-income population and tribal interests. The public review and comment process that DOS has implemented in association with the environmental review under NEPA has provided an additional opportunity for public input. Further, Keystone has communicated directly with the property owners who would be affected by the proposed Keystone Project, irrespective of minority or income status, regarding the proposed route and the results of archaeological and environmental surveys of their property. Therefore, all groups have been provided appropriate opportunities to participate in the EIS process.

In summary, the Keystone Project is not expected to result in any adverse environmental justice impacts to minority or low-income populations or Native American tribes in the region of influence. These populations may benefit from the positive socioeconomic effects that the project is expected to generate.

3.10.2.3 Connected Actions

Wood River Refinery Expansion. Based on the anticipated investment and expansion of the Wood River Refinery, the region and the nation are expected to experience a range of socioeconomic impacts from this connected action. (Only limited economic effects are expected to be generated at other refineries because no substantial changes in capital investment or operations are anticipated.) Expansion of the Wood River Refinery is estimated to cost approximately \$1 billion, which likely would include expenditures on capital equipment, other goods and materials, services, and labor. To the extent that these expenditures are made in the local region, for example Madison County, and industries are present to meet project demands, the project likely would result in substantial regional economic benefits. Within an input-output model framework, these benefits would include increases in direct, indirect, and induced economic output; value added (i.e., labor income, other property income, and indirect business taxes); and employment in the region that result from spending rippling through the economy via inter-industry linkages. This is referred to as the “multiplier” effect. During project implementation, most of these benefits likely would be concentrated directly in the construction sector, including a significant increase in construction jobs. In addition, construction-support businesses and local retailers serving the construction workforce would realize economic benefits. Although the proportion of total project-generated spending that would occur at the regional level is not known, regional economic benefits could be substantial based on the total value of the project. These construction-related benefits would be temporary, lasting through the construction period.

Based on the specialized nature of capital equipment and labor that likely would be required to construct the project, it is probable that a substantial proportion of project spending would occur outside the immediate region. The need to import goods and services to implement the project represents leakage from the regional economy to the national economy, thereby resulting in economic benefits in other parts of the country in the form of increases in output, value added income, and jobs. Similarly, these are short-term benefits coinciding with the construction period.

In the long term, expansion of the Wood River Refinery would result in greater refining capacity and increased production/output in the refined petroleum industry. Based on an estimated 340,000 bpd in increased crude oil shipments and an approximate crude oil contract price of \$60 per barrel,⁶ the estimated value of refinery inputs is \$20.4 million per day, or \$744.6 million annually. Depending on the refined product and associated value added at the refinery, the estimated value of refinery production resulting from oil delivered by the Keystone pipeline would be even higher. This would contribute to increases in gross domestic product at the local, state, and national levels. Such an expansion likely would generate an increase in operational expenditures for items such as industrial supplies and maintenance services, and would require a larger operations workforce. Similar to construction, if these operational expenditures and workers are based in the region, future operation of the Wood River Refinery would result in regional economic benefits, including higher levels of income and employment.

Other socioeconomic parameters that could be affected by expansion of the Wood River Refinery include increases in fiscal revenues and increased demands for public services and other local resources. The fiscal benefits of the project would be attributed to increased tax revenues, including sales, property, and

⁶ Energy Information Administration. 2007. Current prices reported in *This Week in Petroleum* on the internet. Available at: <http://tonto.eia.doe.gov/oog/info/twip/twip_crude.html>. Accessed May 17, 2007.

income taxes that would be realized at the local, state, and national level. Conversely, potentially adverse socioeconomic effects could occur—particularly during construction—as a result of increased demand for a range of public services, including law enforcement, fire protection, and medical aid. This could disproportionately affect lower income areas. Depending on the characteristics of the construction workforce, demands may increase for short-term housing in the region, such as hotels/motels and rental units, driving rents up and affecting lower income or minority populations. Other environmental justice concerns, such as disproportionate air and water quality impacts to communities, would not be expected. As described in Sections 3.3 and 3.12, the refinery expansion would be required to obtain and follow all standards and requirements of permits necessary under the CAA and CWA.

In summary, expansion of the Wood River Refinery in response to increased crude oil deliveries from the Keystone pipeline is expected to generate both positive and adverse socioeconomic effects. Because of limited information, the magnitude of these effects has not been quantified at this time; however, the estimated value of the project (approximately \$1 billion) suggests that these effects could be substantial.

3.10.3 References

American Hospital Directory. 2006. Information on Hospital Facilities in the Project Area. Available online at: <<http://www.ahd.com/>>.

Capitol Impact. 2006. Various information and data regarding public service providers in the project area, including law enforcement and fire protection. Available online at: <<http://www.capitolimpact.com/>>.

ENSR. 2006a. Environmental Report for the Proposed Keystone Pipeline Project. Prepared for TransCanada Keystone Pipeline, LLC.

TransCanada. See TransCanada Keystone Pipeline, L.P.

TransCanada Keystone Pipeline, L.P. 2007b. Response to Data Request #1. Submitted to U.S. Department of State by TransCanada Keystone Pipeline, L.P. Application for Presidential Permit. January 29.

TransCanada Keystone Pipeline, L.P. 2007c. Response to Data Request #2. Submitted to U.S. Department of State by TransCanada Keystone Pipeline, L.P. Application for Presidential Permit. April 4.

TransCanada Keystone Pipeline, L.P. 2007d. Filing #9. Submitted to U.S. Department of State by TransCanada Keystone Pipeline, L.P. Application for Presidential Permit. September 10, 2007

U.S. Bureau of the Census. 2000. 2000 Census. Various demographic data, including population, housing, and race-ethnicity. Available online at: <<http://censtats.census.gov/usa/usa.shtml>>. Accessed in 2006.

U.S. Bureau of the Census. 2006. USA Counties. Various demographic data. Available online at: <<http://censtats.census.gov/usa/usa.shtml>>. Accessed in 2006.