

## 2.5 SOCIOECONOMICS

Construction and operation of two or more small modular reactors (SMRs) at the Clinch River Nuclear (CRN) Site has the potential to affect the social and economic characteristics of the region surrounding the CRN Site. This section describes the socioeconomic characteristics potentially affected by the Clinch River (CR) SMR Project, including demography, community characteristics, historic properties, and environmental justice.

Tennessee Valley Authority (TVA) analyzed regional socioeconomic data to determine the appropriate geographical area of interest, which is defined by the areas where construction and operations workforce and their families would reside, spend their income, and use their benefits, thereby affecting the economic conditions of the region. The geographical area of interest identified for the proposed CR SMR Project is the four-county area (Anderson, Knox, Loudon, and Roane counties, Tennessee) where approximately 87 percent of the federal and contractor employees at the U.S. Department of Energy (DOE) Oak Ridge facilities reside (Reference 2.5.1-1). The DOE employee residence statistics were used as an indication of the potential pattern of residence for the proposed CR SMR Project workforce because the DOE mission is primarily nuclear in nature and employs highly trained technical workers, similar to the proposed CR SMR Project. Socioeconomic analyses were also conducted, as appropriate, for the 50-mile (mi) CRN Site region.

### 2.5.1 Demography

This subsection describes the following demographic characteristics: population data by sector, population data by political jurisdiction, population density, and transient populations. The demography within the geographical area of interest and the 50-mi radius are characterized in the following subsections.

#### 2.5.1.1 Population Data by Sector

The population distribution surrounding the CRN Site, up to a 50-mi radius, is estimated based upon the 2010 U.S. Census Bureau decennial census data. The population distribution is estimated in fifteen concentric bands at 0 to 0.3 mi, 0.3 to 1 mi, 1 to 2 mi, 2 to 3 mi, 3 to 4 mi, 4 to 5 mi, 5 to 6 mi, 6 to 7 mi, 7 to 8 mi, 8 to 9 mi, 9 to 10 mi, 10 to 20 mi, 20 to 30 mi, 30 to 40 mi, and 40 to 50 mi from the CRN Site center point. These bands are subdivided into 16 directional sectors, each centered on one of the 16 compass directions and consisting of 22.5 degrees. Population sectors out to 2 mi are shown in Figure 2.5.1-3, population sectors out to 10 mi are shown in Figure 2.5.1-1, and population sectors out to 50 mi are shown in Figure 2.5.1-2.

The population projections are derived from county estimates obtained from the states and based on cohort component (Kentucky and Tennessee) and cohort survey (North Carolina) methodologies. The counties that were used for the population projections are listed in Table 2.5.1-1. Using linear or polynomial regression, an equation was derived to analyze population growth for each county. The equation was used in conjunction with the 2010 census data to

produce a growth ratio. Ratios were calculated for each county and for each year, then weighted by area and summed into sectors. The ratio set was then used to produce a sector-level population projection ratio set for the 50-mi region. For a county with a projected negative growth rate, the 2010 population values for that county are held constant to produce conservative results without overestimating (a growth ratio of one is used). For counties predicting a decline at the end of the states' projection data set, the highest population value in the projection period is held constant (i.e., the ratio calculated for the last data point of the states' data set was used for the remaining projected years).

The census population counts were then sorted into the radial grid. In instances where census blocks were divided by sector boundary lines, the population was weighted by area to produce proportionate data values. These values were summed and multiplied by their projection ratio to produce the final permanent population radial grid maps (Figures 2.5.1-1, 2.5.1-2, and 2.5.1-3). The years selected for the projection period represent the 2010 census, calculation development year (2013), projected start of construction date (2021), projected commencement of operation date for the last unit (2027), and 40 years (yr) beyond the last date.

Permanent population is projected to 40 yr beyond the projected 2027 commencement of operation date for the last unit. Table 2.5.1-2 shows the projected permanent population for each sector out to 10 mi, for the years 2010, 2013, 2021, 2027, 2037, 2047, 2057, and 2067. Population for all sectors in the 10-mi radius for each projected year is shown in Table 2.5.1-3. Table 2.5.1-4 shows the projected permanent population for each sector in the 10- to 50-mi region for the years 2010, 2013, 2021, 2027, 2037, 2047, 2057, and 2067. The total number of people in the 10- to 50-mi region for each projected year is shown in Table 2.5.1-5.

#### 2.5.1.2 Population Data by Political Jurisdiction

The region within 50 mi of the CRN Site includes all or part of 33 counties in Tennessee, North Carolina, and Kentucky (Table 2.5.1-1). Knoxville is the largest city within 50 mi, with a 2010 population of 178,874, followed by Oak Ridge with 29,330 and Maryville with 27,465 (Reference 2.5.1-2). Smaller cities within the region include Sevierville (14,807), Athens (13,458), Crossville (10,795), La Follette (7456), Dayton (7191), Fairfield Glade (6989), Pigeon Forge (5875), Sweetwater (5764), Rockwood (5562), Madisonville (4577), Etowah (3490) and Norris (1491) (Reference 2.5.1-3; Reference 2.5.1-2). Many other smaller towns and cities are distributed within the region. Figure 2.1-1 illustrates the location of these cities and towns in relation to the CRN Site.

Most of the nine-county Knoxville, Tennessee metropolitan statistical area (MSA) is located within the 50-mi CRN Site region, including all of Anderson, Blount, Knox, Loudon, Morgan, and Roane counties, Tennessee; most of Campbell and Union counties, Tennessee; and a portion of Grainger County, Tennessee (Reference 2.5.1-4). The Knoxville, Tennessee MSA has a 2010 population of 837,571 and an estimated 2013 population of 852,715 (Reference 2.5.1-5). Small portions of the Cleveland, Tennessee and Morristown, Tennessee MSAs are located in the southwest and northeast areas, respectively, of the 50-mi region (Reference 2.5.1-4).

Historic and projected population levels for the geographical area of interest and the State of Tennessee are presented in Table 2.5.1-6. Population levels for 1970 through 2010 included in Table 2.5.1-6 are U.S. Census Bureau decennial census data. From 2000 to 2010, Roane and Anderson counties grew at an annual average annual growth rate of 0.44 percent and 0.53 percent, respectively, and Knox and Loudon counties grew at annual average annual growth rates of 1.31 percent and 2.42 percent, respectively. During the same period, the State of Tennessee grew at an average annual growth rate of 1.15 percent. (Reference 2.5.1-6)

Population projections for the state and counties of Tennessee were developed by the University of Tennessee Center for Business and Economic Research. Between 2010 and 2040, the annual growth rates for Anderson, Knox, Loudon, and Roane counties as well as the State of Tennessee are projected to decline, indicating a slowing in population growth. By 2035, Roane County is projected to begin decreasing in population. (Reference 2.5.1-7)

Table 2.5.1-7 presents the age and gender distribution in 2010 for the populations in Anderson, Knox, Loudon, and Roane counties, Tennessee, as well as for the State of Tennessee.

#### 2.5.1.3 Transient Population

Transient populations are defined as “people (other than those just passing through the area) [who] work, reside part-time, or engage in recreational activities, and are not permanent residents of the area” as described in U.S. Nuclear Regulatory Commission Regulatory Guidance 4.7, *General Site Suitability for Nuclear Power Stations*. Though relatively rural in nature, the region surrounding the CRN Site has numerous tourist attractions and events that contribute to the transient population. The 50-mi region includes both large cities (e.g., Knoxville) and smaller cities (e.g., Pigeon Forge and Sevierville) that are well known for their transient attractions.

Major contributors to the regional total transient population include events and attractions, one commercial airport, and state and national parks. Each of these is discussed in the following paragraphs.

Transient data for recreational activities were gathered through personal communications with businesses, event coordinators, local chambers of commerce, and tourism departments within the region. This method for collecting transient data provides an accurate assessment of people visiting the area and a precise location of transient contributors. The events and attractions that contribute to the transient population in the CRN Site region are shown in Table 2.5.1-8.

Transient data are not generally available at a city level. One city, Pigeon Forge, which is located near the Great Smoky Mountains National Park, has developed a comprehensive report that includes visitor counts from 1987 through 2012. According to this report, Pigeon Forge had a total annual visitor count of 2,856,682 in 2012. This value was used to calculate the daily visitor estimate (7826 persons) of this city for inclusion into the transient population calculation. Pigeon Forge is home to numerous transient attractions, including Dollywood, Titanic Museum Attraction, and WonderWorks.

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There are 14 events and attractions within 10 mi of the CRN Site that contribute approximately 15,556 peak daily visitors to the transient population. The City of Kingston, located about 7.2 mi west, hosts several events throughout the year. The largest of these events is the Smokin the Water Celebration, which occurs over a two-day period during the July 4<sup>th</sup> holiday and contributes approximately 12,000 peak daily visitors. The second largest is the Kingston Country Fair. This event occurs the first Saturday in October and hosts approximately 980 people (see Table 2.5.1-8).

Within the 10- to 50-mi radii, there are over 100 events and attractions contributing approximately 500,000 peak daily visitors to the total transient population. The top two attractions, each contributing over 100,000 peak daily visitors, are Neyland Stadium and the Rossini Festival located in Knoxville. Neyland Stadium, located approximately 25.9 mi east, is the University of Tennessee's football stadium and home to the Tennessee Volunteers (Reference 2.5.1-8). The Rossini Festival, located approximately 26 mi east, is a single day event that occurs in April of each year (see Table 2.5.1-8).

There is one large commercial airport, McGhee Tyson Airport, in the CRN Site region. The Bureau of Transportation Statistics reports that in 2013, McGhee Tyson Airport hosted approximately 813,000 arrival passengers and 817,000 departure passengers. (Reference 2.5.1-9) To develop a realistic peak daily visitor count for this facility, the maximum occupancy of the airport terminal (3587 people) was used. McGhee Tyson Airport is located approximately 22.0 mi east-southeast of the CRN Site in Alcoa, Tennessee.

Outdoor recreation is an important pastime in Tennessee and a large draw for transient population into the region. Table 2.5.1-9 lists the national and state parks located within the region that maintain visitor counts. There are 10 Tennessee state parks and three national parks that maintain visitor counts located within the 50-mi region. The state park with the largest daily peak visitor estimate is the Cumberland Mountain State Park with approximately 3944 daily visitors. The Hiwassee / Ocoee Scenic River State Park, Big Ridge State Park, Cove Lake State Park and Indian Mountain State Park also significantly contribute to the total transient population with 3763, 2894, 1849, and 1678 peak daily visitors, respectively. The remaining five state parks each have peak daily visitor estimates ranging from approximately 650 to 300 persons. The three national parks that maintain visitor counts within the region are Big South Fork National River and Recreation Area, Obed Wild and Scenic River, and Great Smoky Mountains National Park. The national park with the largest transient population is the Great Smoky Mountains National Park. Located approximately 31 mi southeast, the Great Smoky Mountains National Park recorded an annual visitor count of 9,685,829 persons (Reference 2.5.1-10). The peak daily visitor estimates for state and national parks within the region that contributed to the total transient population are listed in Table 2.5.1-9.

The transient population projections are derived from the survey data collected to identify the events, facilities, parks, and attractions that contribute to the total transient population estimate. The transient population data were converted into a common persons/day format. The location of each event was identified so that the data could be integrated into the appropriate sector. For

areas such as parks and public lands, an even spatial distribution of the transient populations was assumed, and those populations were divided into sectors. The transient population is summed for each sector and used as a base transient population. A ratio of transient population and the 2010 permanent population was produced. The projected transient population was calculated by multiplying the 2010 base population by the county projection ratio for the years of interest and then multiplying that result by the transient ratio. The result was a final projected transient population for each sector by the year of interest.

Transient population is projected to 40 yr beyond the 2027 projected commencement of operation date for the last unit. Table 2.5.1-10 shows the projected transient population for each sector for the years 2013, 2021, 2027, 2037, 2047, 2057, and 2067 for the non-zero sectors. The sectors that have zero values are not illustrated in the table. The population values shown represent the peak or calculated peak daily population for each sector and year. The total projected transient population estimates for each projected year are represented in the “total” field of Table 2.5.1-10. The estimated peak daily transient population for 2013 for the CRN Site region is 573,138 persons.

The population of transient workers entering the region for work also was evaluated. This population consists of individuals who reside in one county and work in another. The U.S. Census Bureau tracks worker flows in and out of counties; data are available representing the five-year period 2006-1010 (Reference 2.5.1-11). The transient worker discussion includes those 17 counties whose land area is primarily (at least 50 percent) within the 50-mile radius of the CRN Site. Table 2.5.1-11 identifies the number of workers who travel into each of those 17 counties for work. Workers traveling from one county to another within the 17 counties are not counted as transients. A total of 30,868 workers were identified as traveling into the 17 counties for work.

A notable special population source within 10 mi of the CRN Site is the Oak Ridge National Laboratory (ORNL) located within the City of Oak Ridge. ORNL employs a total of 4400 staff and 3200 guest researchers per year (Reference 2.5.1-12). While these employees are counted by the U.S. Census at their residences, it is noted that the daily fluctuation associated with this workforce increases the temporary population of the City of Oak Ridge.

#### 2.5.1.4 Total Permanent and Transient Populations

Tables 2.5.1-2 through 2.5.1-5 show contributors to the transient population in the 50-mi region. Table 2.5.1-10 summarizes the total transient population by sector and year of interest. The peak daily transient population for the region in 2013 is approximately 573,138 people. The estimated permanent population for 2013 in the region is approximately 1,199,275 people. The total 2013 projected population for the region is approximately 1,772,413 people. Using a calculated growth rate of 0.72, the estimated cumulative total population for 2067 is 2,643,269 people.

#### 2.5.1.5 Population Density

Information on population density and distribution in the area surrounding the CRN Site is useful for conducting the socioeconomic analysis in this Environmental Report. NUREG-1437, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*, Rev. 1, provides a population characterization methodology based on two factors: “sparseness” and “proximity.” Sparseness describes population density and city size within 20 mi of a site, and proximity describes population density and city size within 50 mi of a site. Demographic categories based on sparseness and proximity are presented in Table 2.5.1-12. In accordance with NUREG-1437, the matrix presented in Table 2.5.1-13 is used to rank the population density category of an area as low, medium, or high.

The 2010 census data were used to characterize the population density within the CRN Site region. A total of 331,238 people live within 20 mi of the CRN Site (Tables 2.5.1-3 and 2.5.1-5). A 20-mi radius area contains 1257 square miles (sq mi); therefore the population density is approximately 264 persons per sq mi. This population density is classified as a Category 4 sparseness (greater than or equal to 120 persons per sq mi within 20 mi).

Based on the 2010 census data, 1,158,026 people live within 50 mi of the CRN Site (Tables 2.5.1-3 and 2.5.1-5). A 50-mi radius area contains 7854 sq mi; therefore the population density is approximately 147 persons per sq mi. This population density is classified as Category 3 proximity (one or more cities with 100,000 or more persons and less than 190 persons per sq mi within 50 mi). Because the CRN Site is classified as a Category 4 sparseness and Category 3 proximity, the NUREG-1437 matrix indicates the CRN Site is located in a high population area.

#### 2.5.1.6 References

Reference 2.5.1-1. U.S. Department of Energy, DOE-Related Employment, Payroll, and Residence Statistics for Oak Ridge Area, December 31, 2012, Website: <http://www.oakridge.doe.gov/external/portals/0/hr/12-31-12%20payroll%20&%20residence.pdf>; 2013.

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Reference 2.5.1-3. U.S. Census Bureau, Community Facts: Oak Ridge City, Tennessee, Website: [http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml), 2010.

Reference 2.5.1-4. Executive Office of the President and Office of Management and Budget, Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas; OMB Bulletin No. 13-01, Website: <http://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b-13-01.pdf>, February 28, 2013.

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Reference 2.5.1-5. U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013 - United States - Metropolitan and Micropolitan Statistical Area; and for Puerto Rico - 2013 Population Estimates, Website:  
<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>, 2013.

Reference 2.5.1-6. U.S. Census Bureau, Profile of General Demographic. Table DP-1. Census 2000 Summary File 1 (SF 1) 100-Percent Data., Website: [www.census.gov](http://www.census.gov), 2000.

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Reference 2.5.1-8. University of Tennessee Athletics, Neyland Stadium, Website:  
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Reference 2.5.1-9. Bureau of Transportation Statistics, Transportation Statistics: Knoxville, TN: McGhee Tyson (TYS), Website:  
[http://www.transtats.bts.gov/airports.asp?pn=1&Airport=TYS&Airport\\_Name=Knoxville,%20TN:%20McGhee%20Tyson&carrier=FACTS](http://www.transtats.bts.gov/airports.asp?pn=1&Airport=TYS&Airport_Name=Knoxville,%20TN:%20McGhee%20Tyson&carrier=FACTS), 2013.

Reference 2.5.1-10. National Park Service, Welcome to Visitor Use Statistics, Website:  
<https://irma.nps.gov/Stats/>, August 28, 2013.

Reference 2.5.1-11. U.S. Census Bureau, Metropolitan and Micropolitan, Website:  
<http://www.census.gov/population/metro/data/other.html>, May 6, 2013.

Reference 2.5.1-12. Oak Ridge National Laboratory, Oak Ridge National Laboratory Fact Sheet, Website: <http://www.ornl.gov/about-ornl>, 2015.

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**Table 2.5.1-1**  
**Counties Wholly or Partially Within the 50-Mile Radius**

<b>State</b>	<b>Counties</b>	
Kentucky	McCreary	Whitley
North Carolina	Cherokee	Graham
	Swain	
Tennessee	Anderson	Meigs
	Bledsoe	Monroe
	Blount	Morgan
	Bradley	Overton
	Campbell	Pickett
	Claiborne	Polk
	Cumberland	Putnam
	Fentress	Rhea
	Grainger	Roane
	Hamilton	Scott
	Jefferson	Sevier
	Knox	Union
	Loudon	Van Buren
	McMinn	White

Note: See Figure 2.5.1-2

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**Table 2.5.1-2 (Sheet 1 of 5)**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

Year	Direction							
	Sector 0-0.3 (mi)	Sector 0.3-1 (mi)	Sector 1-2 (mi)	Sector 2-3 (mi)	Sector 3-4 (mi)	Sector 4-5 (mi)	Sector 5-10 (mi)	Sector 0-10 (mi)
<b>North</b>								
2010	0	0	0	0	0	104	2591	2695
2013	0	0	0	0	0	106	2633	2739
2021	0	0	0	0	0	109	2725	2834
2027	0	0	0	0	0	109	2762	2871
2037	0	0	0	0	0	110	2788	2898
2047	0	0	0	0	0	110	2803	2913
2057	0	0	0	0	0	110	2819	2929
2067	0	0	0	0	0	110	2850	2960
<b>North-Northeast</b>								
2010	0	0	0	0	0	0	7644	7644
2013	0	0	0	0	0	0	7763	7763
2021	0	0	0	0	0	0	8022	8022
2027	0	0	0	0	0	0	8155	8155
2037	0	0	0	0	0	0	8298	8298
2047	0	0	0	0	0	0	8395	8395
2057	0	0	0	0	0	0	8511	8511
2067	0	0	0	0	0	0	8678	8678
<b>Northeast</b>								
2010	0	5	0	0	0	0	1287	1292
2013	0	5	0	0	0	0	1309	1314
2021	0	5	0	0	0	0	1360	1365
2027	0	5	0	0	0	0	1393	1398
2037	0	5	0	0	0	0	1436	1441
2047	0	5	0	0	0	0	1466	1471
2057	0	5	0	0	0	0	1503	1508
2067	0	5	0	0	0	0	1555	1560
<b>East-Northeast</b>								
2010	0	8	8	1	0	0	1084	1101
2013	0	8	8	1	0	0	1119	1136
2021	0	8	9	1	0	0	1207	1225
2027	0	8	9	1	0	0	1270	1288

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**Table 2.5.1-2 (Sheet 2 of 5)**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

Year	Direction							
	Sector 0-0.3 (mi)	Sector 0.3-1 (mi)	Sector 1-2 (mi)	Sector 2-3 (mi)	Sector 3-4 (mi)	Sector 4-5 (mi)	Sector 5-10 (mi)	Sector 0-10 (mi)
2037	0	8	9	1	0	0	1368	1386
2047	0	8	9	1	0	0	1464	1482
2057	0	8	9	1	0	0	1568	1586
2067	0	8	9	1	0	0	1670	1688
<b>East</b>								
2010	0	7	13	110	34	85	5276	5525
2013	0	7	13	113	35	88	5491	5747
2021	0	8	14	118	38	94	6060	6332
2027	0	8	14	121	40	98	6467	6748
2037	0	8	14	123	41	103	7110	7399
2047	0	8	14	125	43	106	7748	8044
2057	0	8	14	127	45	110	8438	8742
2067	0	8	14	130	47	116	9101	9416
<b>East-Southeast</b>								
2010	0	6	37	92	112	262	6686	7195
2013	0	6	38	94	118	278	7075	7609
2021	0	6	39	99	135	317	8076	8672
2027	0	6	39	102	147	344	8740	9378
2037	0	6	39	104	161	377	9603	10,290
2047	0	6	39	106	172	404	10,278	11,005
2057	0	6	39	109	185	434	11,068	11,841
2067	0	6	39	112	203	475	12,098	12,933
<b>Southeast</b>								
2010	0	8	40	81	214	200	12,408	12,951
2013	0	8	40	82	222	211	13,139	13,702
2021	0	8	42	84	241	241	15,017	15,633
2027	0	8	42	85	253	260	16,262	16,910
2037	0	8	42	85	267	285	17,867	18,554
2047	0	8	42	85	278	304	19,108	19,825
2057	0	8	42	85	290	327	20,567	21,319
2067	0	8	42	85	307	357	22,492	23,291

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**Table 2.5.1-2 (Sheet 3 of 5)**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

Year	Direction							
	Sector 0-0.3 (mi)	Sector 0.3-1 (mi)	Sector 1-2 (mi)	Sector 2-3 (mi)	Sector 3-4 (mi)	Sector 4-5 (mi)	Sector 5-10 (mi)	Sector 0-10 (mi)
<b>South-Southeast</b>								
2010	0	7	57	64	223	264	1661	2276
2013	0	7	57	65	226	275	1759	2389
2021	0	7	59	67	232	301	2010	2676
2027	0	7	59	67	234	318	2177	2862
2037	0	7	59	67	234	338	2391	3096
2047	0	7	59	67	234	353	2557	3277
2057	0	7	59	67	234	372	2753	3492
2067	0	7	59	67	234	396	3010	3773
<b>South</b>								
2010	0	12	27	36	143	183	1546	1947
2013	0	12	28	36	145	186	1616	2023
2021	0	13	28	37	148	195	1792	2213
2027	0	13	29	38	150	199	1904	2333
2037	0	13	29	38	150	203	2044	2477
2047	0	13	29	38	150	205	2152	2587
2057	0	13	29	38	150	209	2279	2718
2067	0	13	29	38	150	213	2446	2889
<b>South-Southwest</b>								
2010	0	13	29	39	142	140	1123	1486
2013	0	13	30	40	144	142	1142	1511
2021	0	14	30	41	148	145	1183	1561
2027	0	14	31	41	149	147	1200	1582
2037	0	14	31	41	150	147	1211	1594
2047	0	14	31	41	150	147	1219	1602
2057	0	14	31	41	150	147	1229	1612
2067	0	14	31	41	150	147	1242	1625
<b>Southwest</b>								
2010	0	12	49	66	126	252	919	1424
2013	0	13	50	67	128	256	932	1446
2021	0	13	51	69	131	263	957	1484
2027	0	13	51	69	132	265	964	1494

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**Table 2.5.1-2 (Sheet 4 of 5)**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

Year	Direction							
	Sector 0-0.3 (mi)	Sector 0.3-1 (mi)	Sector 1-2 (mi)	Sector 2-3 (mi)	Sector 3-4 (mi)	Sector 4-5 (mi)	Sector 5-10 (mi)	Sector 0-10 (mi)
2037	0	13	51	69	132	265	965	1495
2047	0	13	51	69	132	265	965	1495
2057	0	13	51	69	132	265	965	1495
2067	0	13	51	69	132	265	965	1495
<b>West-Southwest</b>								
2010	0	15	65	164	144	355	5814	6557
2013	0	15	65	166	146	360	5893	6645
2021	0	16	67	171	150	369	6052	6825
2027	0	16	68	172	151	372	6099	6878
2037	0	16	68	172	151	373	6105	6885
2047	0	16	68	172	151	373	6105	6885
2057	0	16	68	172	151	373	6105	6885
2067	0	16	68	172	151	373	6105	6885
<b>West</b>								
2010	0	17	102	153	174	706	4666	5818
2013	0	17	104	156	176	716	4729	5898
2021	0	17	107	160	181	735	4857	6057
2027	0	18	107	161	182	741	4895	6104
2037	0	18	107	161	183	742	4900	6111
2047	0	18	107	161	183	742	4900	6111
2057	0	18	107	161	183	742	4900	6111
2067	0	18	107	161	183	742	4900	6111
<b>West-Northwest</b>								
2010	0	20	85	237	82	210	5050	5684
2013	0	21	86	240	84	213	5119	5763
2021	0	21	88	246	86	218	5257	5916
2027	0	21	89	248	87	220	5298	5963
2037	0	21	89	248	87	220	5303	5968
2047	0	21	89	248	87	220	5303	5968
2057	0	21	89	248	87	220	5303	5968
2067	0	21	89	248	87	220	5303	5968

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**Table 2.5.1-2 (Sheet 5 of 5)**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

Year	Direction							
	Sector 0-0.3 (mi)	Sector 0.3-1 (mi)	Sector 1-2 (mi)	Sector 2-3 (mi)	Sector 3-4 (mi)	Sector 4-5 (mi)	Sector 5-10 (mi)	Sector 0-10 (mi)
<b>Northwest</b>								
2010	0	19	24	48	13	80	1574	1758
2013	0	19	24	49	13	81	1602	1788
2021	0	19	25	50	14	83	1664	1855
2027	0	20	25	50	14	84	1692	1885
2037	0	20	25	50	14	84	1714	1907
2047	0	20	25	50	14	84	1728	1921
2057	0	20	25	50	14	84	1743	1936
2067	0	20	25	50	14	84	1771	1964
<b>North-Northwest</b>								
2010	0	0	1	0	0	149	1700	1850
2013	0	0	1	0	0	151	1739	1891
2021	0	0	1	0	0	155	1831	1987
2027	0	0	1	0	0	156	1883	2040
2037	0	0	1	0	0	156	1936	2093
2047	0	0	1	0	0	156	1972	2129
2057	0	0	1	0	0	156	2008	2165
2067	0	0	1	0	0	156	2077	2234
<b>Totals</b>								
2010	0	149	537	1091	1407	2990	61,029	67,203
2013	0	151	544	1109	1437	3063	63,060	69,364
2021	0	155	560	1143	1504	3225	68,070	74,657
2027	0	157	564	1155	1539	3313	71,161	77,889
2037	0	157	564	1159	1570	3403	75,039	81,892
2047	0	157	564	1163	1594	3469	78,163	85,110
2057	0	157	564	1168	1621	3549	81,759	88,818
2067	0	157	564	1174	1658	3654	86,263	93,470

Note: Based on 2010 USCB data. See Section 2.5.1.1 for methodology used to generate permanent population projections. No permanent population distribution is within the exclusion area boundary.

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**Table 2.5.1-3**  
**Projected Permanent Population for Each Sector 0 to 10 Miles (0 to 16 km)**

<b>Cumulative Totals</b>	<b>0-0.3 (mi)</b>	<b>0-1 (mi)</b>	<b>0-2 (mi)</b>	<b>0-3 (mi)</b>	<b>0-4 (mi)</b>	<b>0-5 (mi)</b>	<b>0-10 (mi)</b>
2010	0	149	686	1777	3184	6174	67,203
2013	0	151	695	1804	3241	6304	69,364
2021	0	155	715	1858	3362	6587	74,657
2027	0	157	721	1876	3415	6728	77,889
2037	0	157	721	1880	3450	6853	81,892
2047	0	157	721	1884	3478	6947	85,110
2057	0	157	721	1889	3510	7059	88,818
2067	0	157	721	1895	3553	7207	93,470

Note: Based on 2010 USCB data. See Section 2.5.1.1 for methodology used to generate permanent population projections.

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**Table 2.5.1-4 (Sheet 1 of 5)**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

Year	Direction				
	Sector 10-20 (mi)	Sector 20-30 (mi)	Sector 30-40 (mi)	Sector 40-50 (mi)	Sector 10-50 (mi)
<b>North</b>					
2010	2059	516	5058	6279	13,912
2013	2102	522	5111	6346	14,081
2021	2205	538	5261	6517	14,521
2027	2270	546	5330	6604	14,750
2037	2352	553	5387	6680	14,972
2047	2409	556	5398	6693	15,056
2057	2472	559	5406	6704	15,141
2067	2574	570	5499	6828	15,471
<b>North-Northeast</b>					
2010	8698	10,535	25,119	9337	53,689
2013	8847	10,647	25,224	9397	54,115
2021	9191	10,977	25,808	9650	55,626
2027	9,413	11,132	25,910	9716	56,171
2037	9705	11,308	25,914	9742	56,669
2047	9911	11,432	25,917	9743	57,003
2057	10,157	11,581	25,921	9744	57,403
2067	10,509	11,793	25,926	9793	58,021
<b>Northeast</b>					
2010	32,319	22,447	11,747	10,948	77,461
2013	32,879	22,977	11,995	11,187	79,038
2021	34,168	24,289	12,577	11,722	82,756
2027	35,001	25,189	12,891	11,985	85,066
2037	36,106	26,521	13,189	12,147	87,963
2047	36,891	27,706	13,379	12,157	90,133
2057	37,824	29,024	13,588	12,177	92,613
2067	39,148	30,477	13,808	12,290	95,723
<b>East-Northeast</b>					
2010	63,674	172,503	47,676	21,238	305,091
2013	65,974	179,276	49,522	22,012	316,784
2021	72,026	197,268	54,409	23,911	347,614
2027	76,378	210,290	57,928	25,109	369,705

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**Table 2.5.1-4 (Sheet 2 of 5)**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

Year	Direction				
	Sector 10-20 (mi)	Sector 20-30 (mi)	Sector 30-40 (mi)	Sector 40-50 (mi)	Sector 10-50 (mi)
2037	83,326	231,277	63,557	26,575	404,735
2047	90,257	252,501	69,232	27,642	439,632
2057	97,744	275,348	75,340	28,853	477,285
2067	104,860	296,672	81,037	30,684	513,253
<b>East</b>					
2010	75,605	58,268	36,761	46,774	217,408
2013	78,598	60,614	38,599	49,636	227,447
2021	86,527	66,761	43,398	57,086	253,772
2027	92,255	71,167	46,816	62,351	272,589
2037	101,408	77,966	51,999	70,213	301,586
2047	110,528	84,330	56,718	77,246	328,822
2057	120,319	91,086	61,690	84,628	357,723
2067	129,684	98,239	67,225	93,135	388,283
<b>East-Southeast</b>					
2010	15,702	71,929	7738	3236	98,605
2013	16,397	74,935	8067	3406	102,805
2021	18,187	82,625	8909	3834	113,555
2027	19,437	88,039	9502	4137	121,115
2037	21,215	95,720	10,346	4599	131,880
2047	22,676	101,710	11,010	5014	140,410
2057	24,228	107,836	11,690	5443	149,197
2067	26,220	116,490	12,639	5938	161,287
<b>Southeast</b>					
2010	6322	13,059	309	2602	22,292
2013	6665	13,617	321	2672	23,275
2021	7547	15,039	352	2868	25,806
2027	8139	16,026	373	3017	27,555
2037	8918	17,396	402	3263	29,979
2047	9522	18,450	425	3509	31,906
2057	10,211	19,544	448	3754	33,957
2067	11,132	21,114	481	4000	36,727

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**Table 2.5.1-4 (Sheet 3 of 5)**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

Year	Direction				
	Sector 10-20 (mi)	Sector 20-30 (mi)	Sector 30-40 (mi)	Sector 40-50 (mi)	Sector 10-50 (mi)
<b>South-Southeast</b>					
2010	13,319	6959	1896	543	22,717
2013	14,054	7237	1970	555	23,816
2021	15,933	7923	2151	587	26,594
2027	17,165	8345	2262	608	28,380
2037	18,725	8813	2382	635	30,555
2047	19,895	9081	2448	654	32,078
2057	21,268	9386	2523	674	33,851
2067	23,172	10,035	2693	707	36,607
<b>South</b>					
2010	9010	16,818	13,722	4509	44,059
2013	9460	17,453	14,161	4620	45,694
2021	10,595	19,004	15,228	4889	49,716
2027	11,326	19,948	15,869	5042	52,185
2037	12,220	20,970	16,553	5188	54,931
2047	12,851	21,526	16,929	5257	56,563
2057	13,588	22,166	17,378	5352	58,484
2067	14,716	23,614	18,360	5583	62,273
<b>South-Southwest</b>					
2010	3443	10,838	28,433	12,972	55,686
2013	3596	11,097	29,031	13,273	56,997
2021	3978	11,720	30,463	14,013	60,174
2027	4220	12,084	31,282	14,462	62,048
2037	4517	12,464	32,112	14,984	64,077
2047	4736	12,685	32,586	15,367	65,374
2057	4993	12,970	33,226	15,838	67,027
2067	5357	13,526	34,477	16,533	69,893
<b>Southwest</b>					
2010	2802	4804	9786	22,268	39,660
2013	2841	4908	10,047	22,877	40,673
2021	2920	5139	10,661	24,315	43,035
2027	2945	5253	11,028	25,188	44,414

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**Table 2.5.1-4 (Sheet 4 of 5)**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

Year	Direction				
	Sector 10-20 (mi)	Sector 20-30 (mi)	Sector 30-40 (mi)	Sector 40-50 (mi)	Sector 10-50 (mi)
2037	2948	5333	11,442	26,202	45,925
2047	2948	5377	11,749	26,984	47,058
2057	2948	5428	12,093	27,856	48,325
2067	2948	5502	12,551	28,953	49,954
<b>West-Southwest</b>					
2010	4599	5117	4656	8054	22,426
2013	4661	5281	4809	8219	22,970
2021	4787	5683	5183	8597	24,250
2027	4824	5942	5424	8815	25,005
2037	4829	6272	5712	9031	25,844
2047	4829	6518	5901	9136	26,384
2057	4829	6793	6125	9310	27,057
2067	4829	7185	6495	9635	28,144
<b>West</b>					
2010	11,651	3396	27,389	8304	50,740
2013	11,920	3572	28,824	8720	53,036
2021	12,543	4017	32,446	9765	58,771
2027	12,858	4294	34,703	10,418	62,273
2037	13,127	4575	37,002	11,098	65,802
2047	13,254	4696	37,989	11,406	67,345
2057	13,399	4842	39,175	11,764	69,180
2067	13,772	5254	42,542	12,745	74,313
<b>West-Northwest</b>					
2010	3926	4808	7666	8927	25,327
2013	4046	5021	8025	9278	26,370
2021	4348	5560	8924	10,141	28,973
2027	4537	5899	9478	10,662	30,576
2037	4756	6262	10,038	11,222	32,278
2047	4900	6446	10,277	11,516	33,139
2057	5047	6653	10,566	11,867	34,133
2067	5335	7165	11,394	12,665	36,559

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**Table 2.5.1-4 (Sheet 5 of 5)**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

Year	Direction				
	Sector 10-20 (mi)	Sector 20-30 (mi)	Sector 30-40 (mi)	Sector 40-50 (mi)	Sector 10-50 (mi)
<b>Northwest</b>					
2010	5348	3228	2918	10,824	22,318
2013	5520	3332	3006	11,088	22,946
2021	5957	3596	3223	11,692	24,468
2027	6238	3765	3355	11,990	25,348
2037	6572	3967	3502	12,195	26,236
2047	6796	4102	3587	12,167	26,652
2057	7024	4240	3680	12,211	27,155
2067	7461	4504	3885	12,657	28,507
<b>North-Northwest</b>					
2010	5558	575	6223	7076	19,432
2013	5735	589	6337	7203	19,864
2021	6182	623	6606	7490	20,901
2027	6470	645	6767	7646	21,528
2037	6814	669	6927	7775	22,185
2047	7043	683	6983	7784	22,493
2057	7278	697	7041	7806	22,822
2067	7726	731	7287	8041	23,785
<b>Totals</b>					
2010	264,035	405,800	237,097	183,891	1,090,823
2013	273,295	421,078	245,049	190,489	1,129,911
2021	297,094	460,762	265,599	207,077	1,230,532
2027	313,476	488,564	278,918	217,750	1,298,708
2037	337,538	530,066	296,464	231,549	1,395,617
2047	359,446	567,799	310,528	242,275	1,480,048
2057	383,329	608,153	325,890	253,981	1,571,353
2067	409,443	652,871	346,299	270,187	1,678,800

Note: Based on 2010 USCB data. See Section 2.5.1.1 for methodology used to generate permanent population projections.

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**Table 2.5.1-5**  
**Projected Permanent Population for Each Sector 10 to 50 Miles (16 to 80 km)**

<b>Cumulative Totals</b>	<b>10-20 (mi)</b>	<b>10-30 (mi)</b>	<b>10-40 (mi)</b>	<b>10-50 (mi)</b>
2010	264,035	669,835	906,932	1,090,823
2013	273,295	694,373	939,422	1,129,911
2021	297,094	757,856	1,023,455	1,230,532
2027	313,476	802,040	1,080,958	1,298,708
2037	337,538	867,604	1,164,068	1,395,617
2047	359,446	927,245	1,237,773	1,480,048
2057	383,329	991,482	1,317,372	1,571,353
2067	409,443	1,062,314	1,408,613	1,678,800

Note: Based on 2010 USCB data. See Section 2.5.1.1 for methodology used to generate permanent population projections.

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**Table 2.5.1-6**  
**Historical and Projected Population**

	Anderson County		Knox County		Loudon County		Roane County		State of Tennessee	
	Population	Annual Percent Growth	Population	Annual Percent Growth	Population	Annual Percent Growth	Population	Annual Percent Growth	Population	Annual Percent Growth
1970	60,300	NA	276,293	NA	24,266	NA	38,881	NA	3,923,687	NA
1980	67,346	1.17	319,694	1.57	28,553	1.77	48,425	2.45	4,591,120	1.70
1990	68,250	0.13	335,749	0.50	31,255	0.95	47,227	-0.25	4,877,185	0.62
2000	71,330	0.45	382,032	1.38	39,086	2.51	51,910	0.99	5,689,283	1.67
2010	75,129	0.53	432,226	1.31	48,556	2.42	54,181	0.44	6,346,105	1.15
2015	77,285	0.57	460,612	1.31	53,324	1.96	55,411	0.45	6,735,022	1.23
2020	79,061	0.46	488,993	1.23	57,923	1.72	56,301	0.32	7,107,296	1.11
2025	80,713	0.42	516,603	1.13	62,151	1.46	56,805	0.18	7,460,624	0.99
2030	82,202	0.37	543,302	1.03	65,869	1.20	56,897	0.03	7,799,933	0.91
2035	83,444	0.30	569,659	0.97	68,918	0.93	56,583	-0.11	8,127,930	0.84
2040	84,438	0.24	595,787	0.92	71,421	0.73	55,948	-0.22	8,449,472	0.79

Note:

NA = Not Applicable

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**Table 2.5.1-7**  
**Age and Gender Distribution, 2010**

<b>Age Groups</b>	<b>Anderson County</b>		<b>Knox County</b>		<b>Loudon County</b>		<b>Roane County</b>		<b>Tennessee</b>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 5 years	4212	5.6	26,168	6.1	2560	5.3	2699	5.0	407,813	6.4
5 to 14 years	9205	12.3	52,681	12.2	5552	11.4	6521	12.0	831,122	13.1
15 to 24 years	8804	11.7	65,816	15.2	4978	10.3	5825	10.8	863,430	13.6
25 to 44 years	17,706	23.6	116,712	27.0	10,553	21.7	12,118	22.4	1,678,127	26.4
45 to 64 years	22,138	29.5	114,358	26.5	14,479	29.8	16,963	31.3	1,712,151	27.0
65 years and over	13,064	17.4	56,491	13.1	10,434	21.5	10,055	18.6	853,462	13.4
<b>TOTAL</b>	<b>75,129</b>	<b>100.0</b>	<b>432,226</b>	<b>100.0</b>	<b>48,556</b>	<b>100.0</b>	<b>54,181</b>	<b>100.0</b>	<b>6,346,105</b>	<b>100.0</b>
Median Age (years)	42.6		37.2		46.0		44.9		38.0	

**Gender**

Male	36,308	48.3	210,085	48.6	23,828	49.1	26,628	49.1	3,093,504	48.7
Female	38,821	51.7	222,141	51.4	24,728	50.9	27,553	50.9	3,252,601	51.3

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**Table 2.5.1-8 (Sheet 1 of 4)**  
**Contributors to Transient Population within the 50-Mile (80 km) Region<sup>1</sup>**

Event or Location	City	Peak Daily Visitors <sup>2</sup>
Freedom Fest	Alcoa	30,000
Spring Sprint	Alcoa	452
Allardt Pumpkin Festival & Pumpkin Run	Allardt	10,000
Benefit Dinner	Athens	1500
James L. Robb Gym	Athens	1000
Pumpkintown Festival	Athens	8000
Sunshine Hollow	Athens	100
Tennessee Wesleyan Halloween Festival	Athens	1300
Tennessee Wesleyan Soccer	Athens	150
Louie Bluie Festival	Caryville	7500
International Cowpea Festival & Cookoff	Charleston	3500
Autumn Acres	Crossville	295
Clyde York 4-H Center	Crossville	1500
Cumberland Chamber of Commerce	Crossville	250
Deer Creek Golf Club	Crossville	100
Lake Tansi Village Golf	Crossville	122
Palace Theater	Crossville	302
Stonehenge Golf Club	Crossville	145
The Bear Trace at Cumberland Mountain	Crossville	164
Dayton Horse & Carriage Parade	Dayton	2000
Holiday Stroll	Dayton	2000
PumpkinFest	Dayton	5000
Scopes Festival	Dayton	600
Strawberry Festival	Dayton	700
Savannah Oaks Winery	Delano	500
The Gem Players and Theater	Etowah	525
Dorchester Golf Club	Fairfield Glade	172
Druid Hills Golf Club	Fairfield Glade	164
Heatherhurst Golf Club	Fairfield Glade	370
Fontana Village Resort	Fontana Dam	2500
W.E. Rock Eastern Series	Graysville	1400
Emory Golf Course	Harriman	150

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**Table 2.5.1-8 (Sheet 2 of 4)**  
**Contributors to Transient Population within the 50-Mile (80 km) Region<sup>1</sup>**

Event or Location	City	Peak Daily Visitors <sup>2</sup>
Obrien Theatre	Harriman	489
The Princess Theatre	Harriman	540
Brimstone Recreation	Huntsville	3333
Highland Manor Winery	Jamestown	150
Pickett State Park	Jamestown	1291
58 Landing	Kingston	300
Colonial Christmas Candlelight Tour	Kingston	122
Kingston City Park	Kingston	300
Kingston Community Center	Kingston	190
Kingston Country Fair	Kingston	980
Ladd Delaney Park	Kingston	300
Lakeside Golf	Kingston	125
RedBones on the River	Kingston	165
Roane County Healthy Schools 5k	Kingston	106
Smokin the Water	Kingston	12,000
Stormin the Fort Olympic Triathlon	Kingston	161
The Gravel Pit	Kingston	300
Barksdale Stadium	Knoxville	2000
Bijou Theatre	Knoxville	758
BUDDY'S Race Against Cancer	Knoxville	5000
Civic Auditorium and Coliseum	Knoxville	7141
Covenant Health Knoxville Marathon	Knoxville	9200
Game on Against Cancer	Knoxville	250
Knoxville Municipal Golf Course	Knoxville	150
Komen Race for the Cure	Knoxville	10,000
Light the Night Walk	Knoxville	2000
Lindsey Nelson Stadium	Knoxville	3800
Museum of Art	Knoxville	250
Neyland Stadium	Knoxville	102,455
Regal Soccer Stadium	Knoxville	3000
Rossini Festival	Knoxville	100,000

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**Table 2.5.1-8 (Sheet 3 of 4)**  
**Contributors to Transient Population within the 50-Mile (80 km) Region<sup>1</sup>**

Event or Location	City	Peak Daily Visitors <sup>2</sup>
Sherri Parker Lee Stadium	Knoxville	1622
Tennessee Theatre	Knoxville	1638
Thompson-Boling Arena	Knoxville	21,678
Tour de Rockytop	Knoxville	380
Trideltathon	Knoxville	260
Twinkle Toes 5k Run/Walk	Knoxville	150
West Site Y Triathlon	Knoxville	200
Christmas in Old Loudon	Loudon	2000
Fall Pig Roast	Loudon	500
Riverfest	Loudon	5000
Fine Arts Blount Kite Festival	Maryville	1500
Foothills Fall Festival	Maryville	25,000
Foothills Sprint Triathlon	Maryville	230
Ruby Tuesday's Triple Crown of Running	Maryville	646
Smoky Mountains Softball Classic	Maryville	1750
Spring Arts and Crafts Show	Maryville	6750
Red Gate Rodeo	Maynardville	2000
Union County Heritage Festival	Maynardville	5000
River Glen Equestrian Park	New Market	660
Butterflies for Hope 5k	Oak Ridge	100
Butterflies for Hope Bike Ride	Oak Ridge	130
Secret City Festival	Oak Ridge	10,000
BSF Vintage Train Festival	Oneida	5000
Spring Planting Festival	Oneida	3000
Wings Over Big South Fork	Oneida	20,000
World Pig Championship	Pall Mall	100
Rockwood Event Center	Rockwood	400
Rockwood Golf and Country Club	Rockwood	240
Historic Rugby Visitor Centre	Rugby	136

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**Table 2.5.1-8 (Sheet 4 of 4)**  
**Contributors to Transient Population within the 50-Mile (80 km) Region<sup>1</sup>**

Event or Location	City	Peak Daily Visitors <sup>2</sup>
Tennessee Valley Theatre	Spring City	300
Ride the Plains	Strawberry Plains	250
National Muscadine Festival	Sweetwater	10,000
The Lost Sea	Sweetwater	411
Blue Springs Marina	Ten Mile	900
Townsend Fall Festival	Townsend	10,000
Tuckaleechee Caverns	Townsend	500
Rarity Bay Golf Club	Vonore	328
Fort Loudoun State Historic Area	Vonore	2000
Sequoyah Birthplace Museum	Vonore	3000

<sup>1</sup> Events and locations listed in this table contributed > 100 daily visitors.

<sup>2</sup> Values presented in this column represent the peak daily visitors. For events or locations where peak visitor data were not available, average daily visitors were calculated using seasonal and/or annual visitor information.

Note: Information collected by means of a transient population survey. See Section 2.5.1.3 for description of survey methodology.

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**Table 2.5.1-9**  
**National and State Parks Within 50 Miles with Reported Visitor Data**

Tennessee State Parks	Peak Daily Visitors <sup>1</sup>
Big Ridge State Park	2894
Bledsoe State Forest	612
Cove Lake State Park	1849
Cumberland Mountain State Park	3944
Cumberland Trail	504
Fort Loudoun State Historic Park	493
Frozen Head State Park and Natural Area	656
Hiwassee/Ocoee Scenic River State Park	3763
Indian Mountain State Park	1678
Norris Dam State Park	314
National Parks	Peak Daily Visitors <sup>1</sup>
Great Smoky Mountains National Park	26,537
Big South Fork National River and Recreation Area	1644
Obed Wild Scenic River	582

<sup>1</sup> Values presented in this column represent peak or calculated peak daily visitors.

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**Table 2.5.1-10 (Sheet 1 of 2)**  
**Peak Daily Projected Transient Population for Each Sector 0 to 50 Miles (0 to 80 km)**

Distance (mi)	Direction	Year					
		2013	2021	2027	2037	2047	2057
4	E	7	8	8	9	9	9
7	WSW	127	130	131	131	131	131
8	W	12,660	13,002	13,103	13,116	13,116	13,116
8	SSE	529	605	655	720	770	829
9	W	775	796	803	803	803	803
9	WSW	1692	1737	1751	1753	1753	1753
20	NNW	549	592	619	652	674	697
20	NW	27	29	31	33	34	35
20	WNW	557	598	624	654	674	694
20	W	1360	1431	1467	1497	1512	1528
20	SW	913	938	946	947	947	947
20	SSE	7733	8767	9445	10,303	10,947	11,702
20	E	468	515	549	604	658	716
20	NE	10,407	10,815	11,079	11,429	11,677	11,973
20	N	16	17	18	18	19	19
30	NNW	88	93	97	100	102	104
30	NW	298	322	337	355	367	380
30	WNW	870	964	1023	1086	1118	1153
30	W	226	254	272	290	297	307
30	SSW	10,238	10,814	11,149	11,500	11,703	11,966
30	S	431	469	492	517	531	547
30	SSE	5716	6258	6591	6961	7172	7413
30	SE	25	28	29	32	34	36
30	ESE	72,837	80,312	85,575	93,040	98,863	104,817
30	E	67,159	73,970	78,852	86,386	93,436	100,922
30	ENE	250,589	275,737	293,940	323,275	352,941	384,877
30	NE	74	78	81	85	89	93
30	NNE	398	411	416	423	428	433
40	NNW	3704	3860	3955	4048	4081	4115
40	NW	22	24	25	26	27	29
40	WNW	150	166	177	187	192	197
40	W	6736	7582	8109	8647	8877	9155
							9941

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**Table 2.5.1-10 (Sheet 2 of 2)**  
**Peak Daily Projected Transient Population for Each Sector 0 to 50 Miles (0 to 80 km)**

Distance (mi)	Direction	Year					
		2013	2021	2027	2037	2047	2057
40	WSW	385	415	434	458	473	491
40	SW	103	109	113	117	120	124
40	SSW	12,349	12,958	13,307	13,660	13,862	14,134
40	S	571	614	640	667	682	700
40	SE	2374	2603	2759	2973	3138	3308
40	ESE	12,587	13,901	14,827	16,144	17,180	18,241
40	NE	10,125	10,617	10,881	11,133	11,293	11,470
40	NNE	9214	9427	9464	9466	9467	9468
50	NNW	24,252	25,220	25,747	26,181	26,211	26,285
50	NW	10,413	10,981	11,260	11,453	11,426	11,468
50	WNW	324	354	373	392	402	415
50	W	126	141	151	161	165	170
50	WSW	205	215	220	225	228	232
50	SW	12,089	12,850	13,311	13,846	14,260	14,721
50	SSW	4093	4321	4460	4620	4739	4884
50	S	3855	4080	4208	4329	4387	4467
50	SE	4437	4762	5010	5418	5826	6233
50	ESE	4958	5581	6022	6695	7299	7924
50	E	8352	9606	10,492	11,815	12,998	14,241
50	ENE	943	1025	1076	1139	1184	1236
50	NNE	1237	1270	1279	1282	1282	1283
50	N	5060	5196	5266	5326	5337	5345
Total		585,436	637,568	673,646	727,127	775,942	828,332
							885,887

Note: See Section 2.5.1.3 for methodology used to generate transient population projections.

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**Table 2.5.1-11**  
**Transient Workers Entering the 50-Mile Region, 2006-2010<sup>1</sup>**

<b>Workplace County</b>	<b>Number of Workers Residing Outside the Region and Traveling to Work Inside the Region</b>
North Carolina: Graham	358
Tennessee: Anderson	1047
Blount	857
Campbell	1164
Cumberland	1360
Fentress	288
Knox	13,294
Loudon	143
McMinn	1926
Meigs	134
Monroe	312
Morgan	49
Rhea	2734
Roane	373
Scott	553
Sevier	5807
Union	469
Total Transient Workers	30,868

<sup>1</sup> Includes those counties with at least 50 percent of their area within the 50-mi radius.

**Table 2.5.1-12**  
**Description of Sparseness and Proximity Demographic Categories**

<b>Demographic Categories Based on Sparseness</b>	
<i>Category</i>	<i>Description</i>
Most sparse	<ol style="list-style-type: none"><li>1. Less than 40 persons per sq. mi. and no community with 25,000 or more persons within 20 mi.</li><li>2. 40 to 60 persons per sq. mi. and no community with 25,000 or more persons within 20 mi.</li><li>3. 60 to 120 persons per sq. mi. or less than 60 persons per sq. mi. with at least one community with 25,000 or more persons within 20 mi.</li><li>4. Greater than or equal to 120 persons per sq. mi. within 20 mi.</li></ol>
Least sparse	
<b>Demographic Categories Based on Proximity</b>	
<i>Category</i>	<i>Description</i>
Not in close proximity	<ol style="list-style-type: none"><li>1. No city with 100,000 or more persons and less than 50 persons per sq. mi. within 50 mi.</li><li>2. No city with 100,000 or more persons and between 50 and 190 persons per sq. mi. within 50 mi.</li><li>3. One or more cities with 100,000 or more persons and less than 190 persons per sq. mi. within 50 mi.</li><li>4. Greater than or equal to 190 persons per sq. mi. within 50 mi.</li></ol>
In close proximity	

Source: NUREG-1437

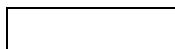
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**Table 2.5.1-13**  
**Generic Environmental Impact Statement Sparseness and Proximity Matrix**

Sparseness Value	Proximity Value			
	1	2	3	4
1	1.1	1.2	1.3	1.4
2	2.1	2.2	2.3	2.4
3	3.1	3.3	3.3	3.4
4	4.1	4.2	4.3	4.4

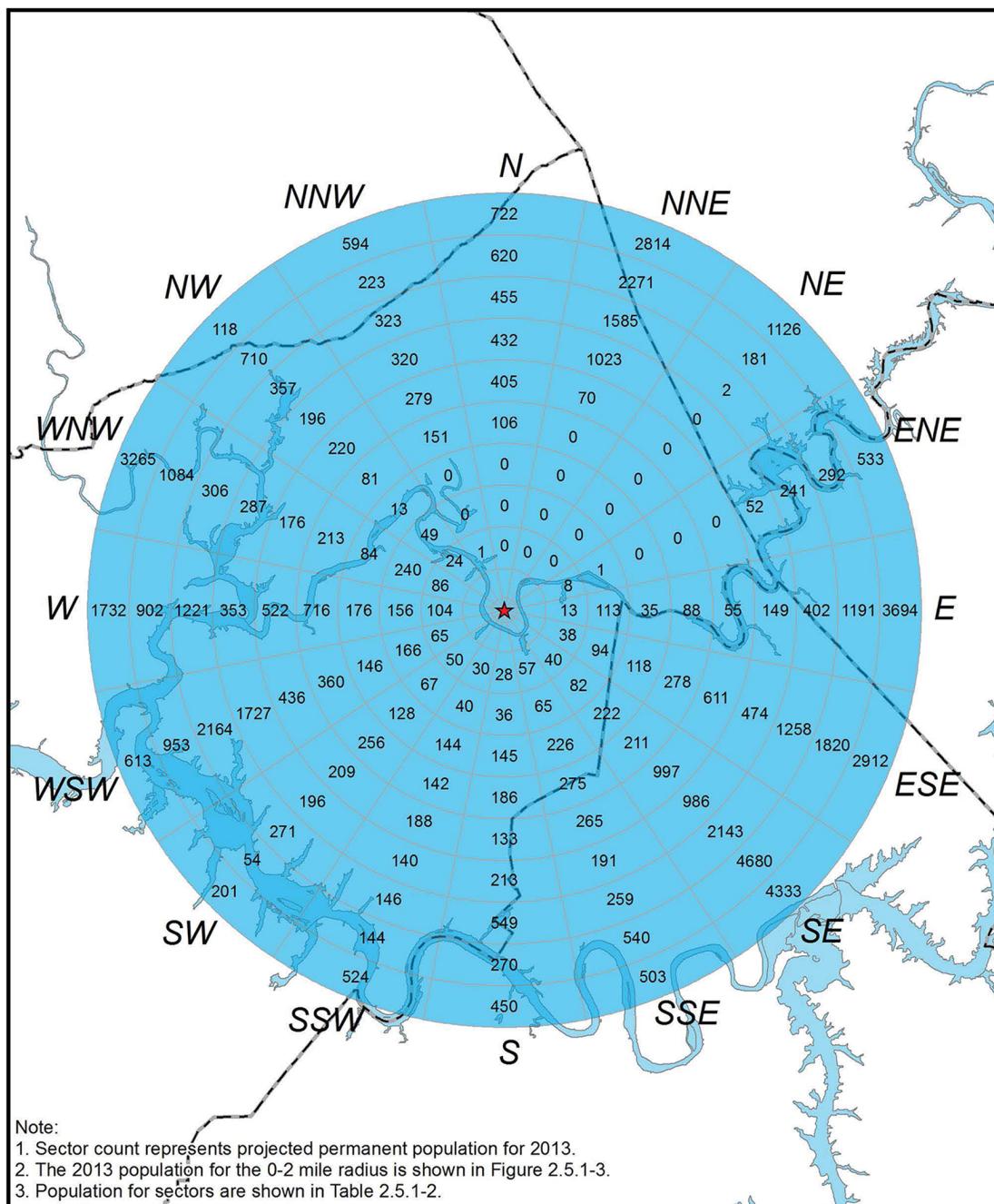
 Low Population Area

 Medium Population Area

 High Population Area

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Source: NUREG-1437



**Legend**

- ★ Clinch River Site Center Point
- 0-10 mi (16km) Sectors
- County Boundary
- Waterbodies

0 2 4 8 12 Kilometers

0 1 2 4 6 Miles



**Figure 2.5.1-1. 0 to 10 Mile Population Sector Map**

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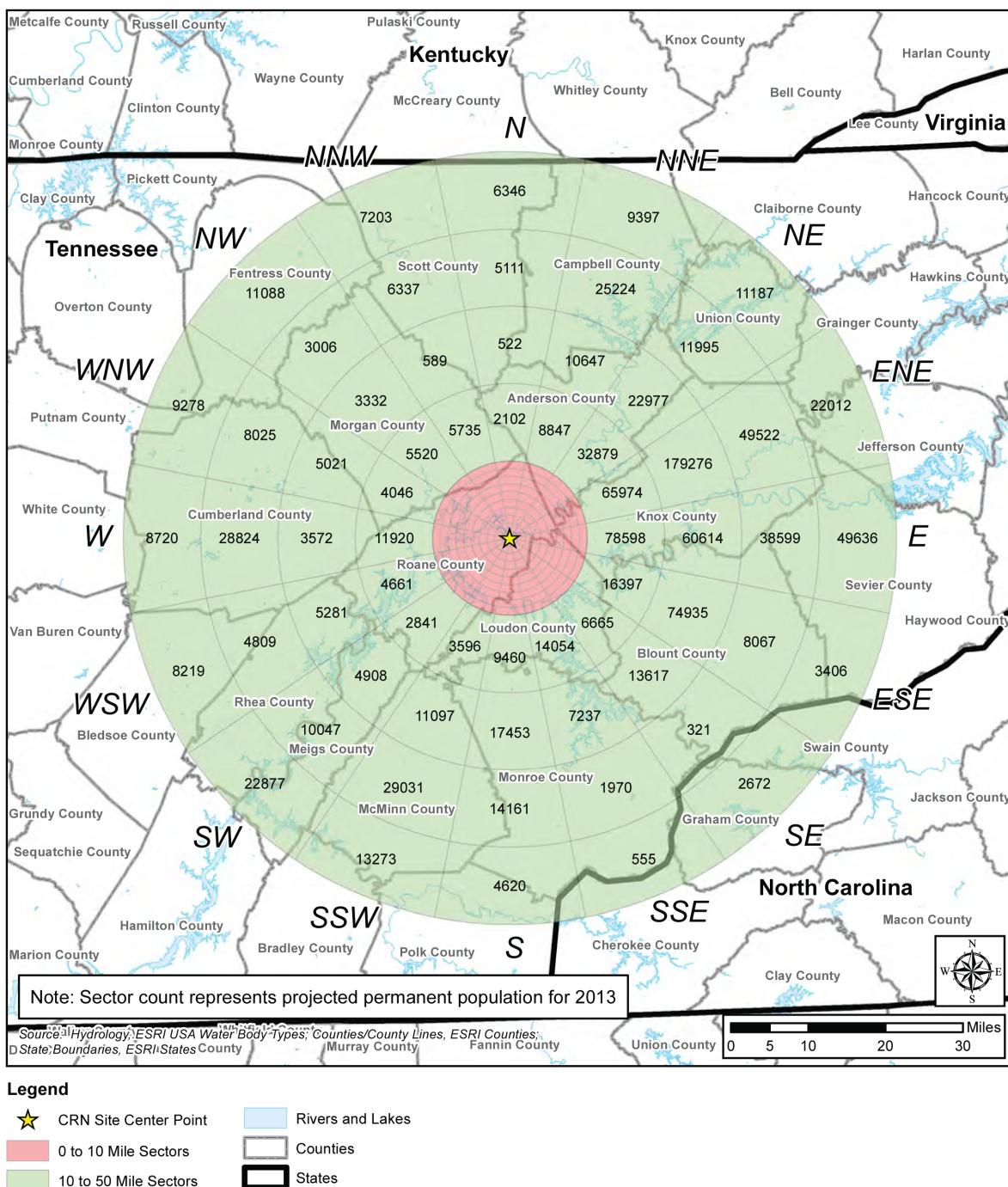
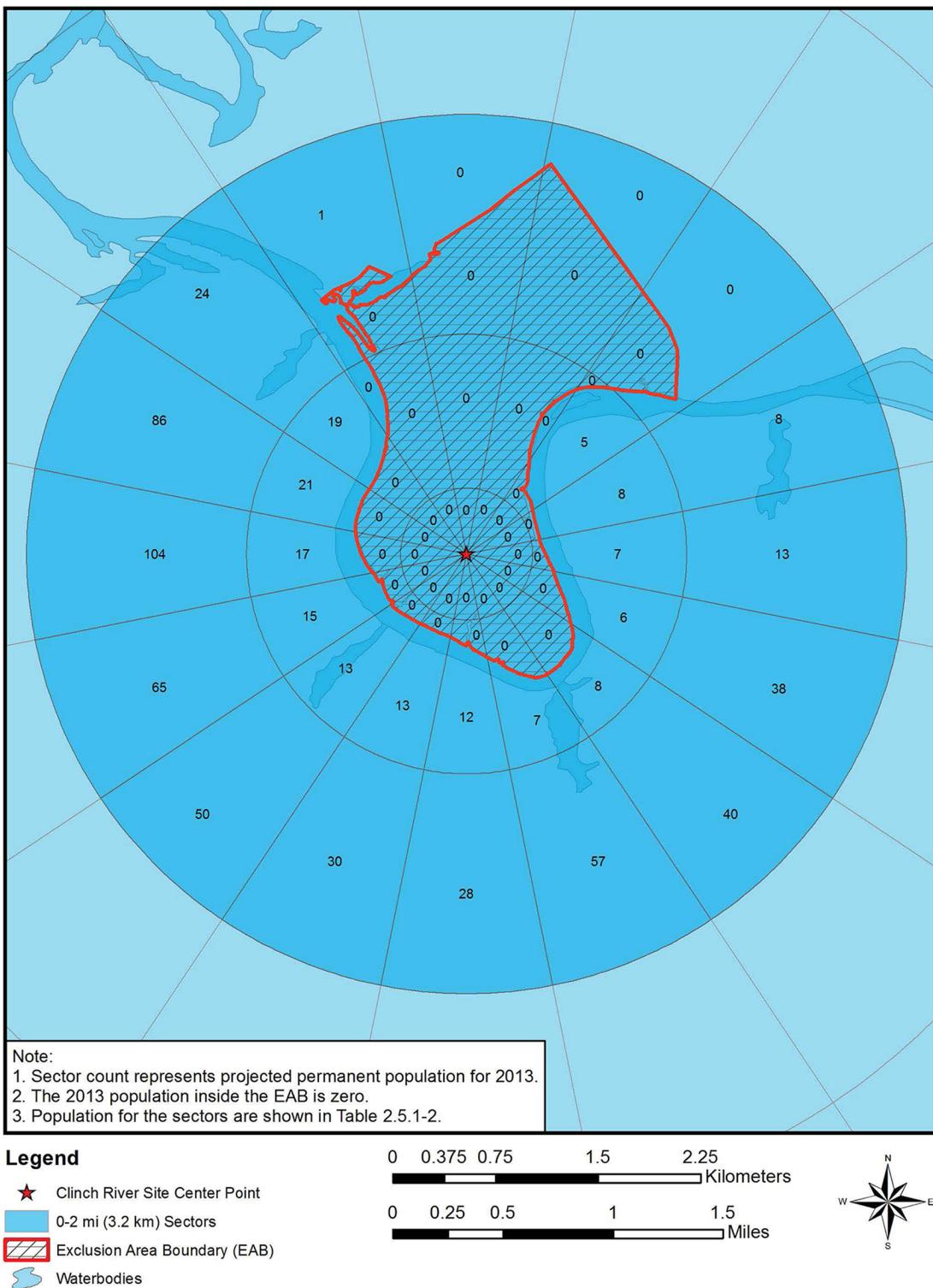


Figure 2.5.1-2. 10 to 50 Mile Population Sector Map

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**Figure 2.5.1-3. 0 to 2 Mile Population Sector Map**