
**Pacific Northwest
National Laboratory**

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Hanford Area 2000 Population

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May 2004



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Richland, Washington 99352

Summary

This report was prepared for the U.S. Department of Energy (DOE) Richland Operations Office, Surface Environmental Surveillance Project, to provide demographic data required for ongoing environmental assessments and safety analyses at the DOE Hanford Site near Richland, Washington. This document includes 2000 Census estimates for the resident population within an 80-kilometer (50-mile) radius of the Hanford Site. Population distributions are reported relative to five reference points centered on meteorological stations within major operating areas of the Hanford Site - the 100 F, 100 K, 200, 300, and 400 Areas. These data are presented in both graphical and tabular format, and are provided for total populations residing within 80 km (50 mi) of the reference points, as well as for Native American, Hispanic and Latino, total minority, and low-income populations.

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1.0 Introduction

Population size and distribution are important criteria for assessing the magnitude of the risk to the public from radionuclide and hazardous chemical emissions, whether from accidents or in the course of normal operations. Data pertaining to population size and distribution are required to prepare environmental dose assessments for radionuclide emissions as required by DOE Order 5400.5 (DOE 1993) and other types of risk evaluations prepared under the National Environmental Policy Act (42 USC 4321) or other requirements. They may also be used by non-DOE facilities within the Hanford Site to ensure that nonreactor nuclear facility Safety Analysis Reports are in compliance with U.S. Nuclear Regulatory Commission (NRC) guidelines (NRC 1975; NRC 1988).

Previous population estimates were prepared for the Hanford Site based on the 1980 Census (Sommer et al. 1981) and the 1990 Census of Population (Beck et al. 1991). This report was prepared based on 2000 Census data to provide updated information for the Hanford Site. The report presents total population estimates within an 80-km (50-mile) radius from five reference points on the Hanford Site: the 100 F Area Meteorological Station, the 100 K Area Meteorological Station, the 200 Area Hanford Meteorological Station (Building 622-R), the 400 Area Meteorological Station, and the 300 Area Meteorological Station (Building 303C) (see Figure 1.1). The areas within 80 km (50 mi) of these reference locations encompass all or part of twelve counties in two states (see Figure 3.2). The Washington counties include Adams, Benton, Franklin, Grant, Kittitas, Klickitat, Walla Walla, and Yakima. The Oregon counties include Morrow and Umatilla. The 100 Area radii also include very small portions of Chelan and Douglas Counties in Washington. The 50-year forecasts in Sommer et al. (1981) and Beck et al. (1991) were very seldom used, so updated 50-year forecasts were not prepared for this report.

In February 1994, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (59 FR 7629), directed federal agencies in the Executive Branch to consider environmental justice so that their programs would not have "disproportionately high and adverse human health or environmental effects" on minority and low-income populations. The Council on Environmental Quality (CEQ) later provided additional guidance for integrating environmental justice (EJ) into the National Environmental Policy Act process in a December 1997 document, *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ 1997). In response to those guidelines, this report identifies minority and low-income populations within 80 km (50 mi) of the five reference points. Population estimates include total resident, total minority, Hispanic and Latino, Native American, and low-income populations.

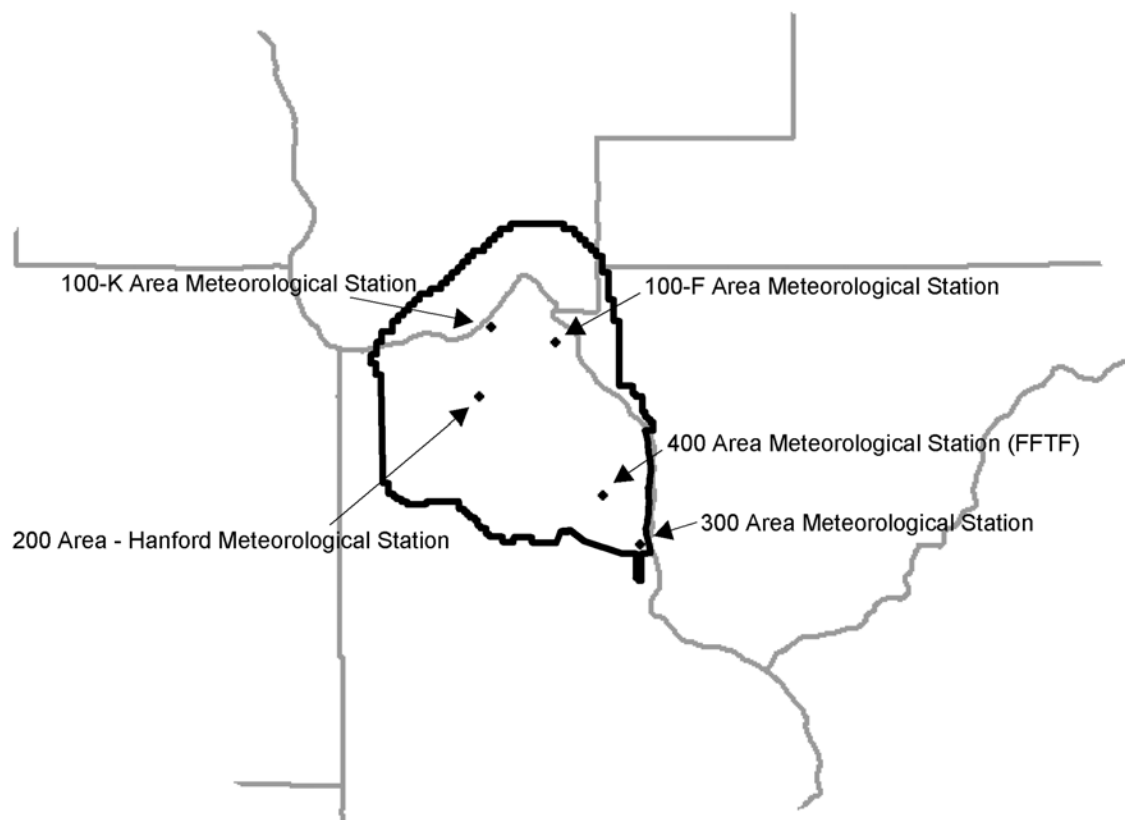


Figure 1.1. Reference Locations on the Hanford Site

2.0 Analysis Methods

The analyses for this report used a methodology similar to that in prior analyses of Hanford area population conducted with 1990 Census data (Beck et al. 1991). However, due to advances in geographic information systems and mapping tools, this report provides greater resolution and detail than the 1991 study, which presented data in 10-mile increments from the Hanford reference points. This report also uses census data at the block and block group level rather than at the larger tract level, which locates populations with greater accuracy and precision. Another change from the Beck et al. (1991) report was the choice of reference points. Four reference points were used in that report, including the 100 N, 200, 300, and 400 Areas. For this report the 100 N Area reference point was replaced by two different 100 Area points – the 100 K and 100 F Areas - to better reflect current site cleanup activities. The reactor at the 100 N Area has been shut down and decommissioning of the facilities at that site is well underway. The 100 K and 100 F Area population distributions were included in this report to provide representative data for ongoing remediation activities at a number of nearby sites along the Columbia River corridor.

The population distributions developed for this report are presented as circular grids by distance and direction relative to the five reference points identified previously. In contrast, the US Census geographical unit allocations are based on population and have irregular boundaries that are established with assistance from local committees. The process for distributing population data gathered from census units into the circular grid used for Hanford Site assessments is described in the following sections. Figure 2.1 shows a map of census blocks in southeast Washington relative to the Hanford Site boundary and an 80-km (50-mile) circular grid centered on the 200 Area Hanford Meteorological Station.

2.1 US Census Bureau Geographic Definitions

The U.S. Census Bureau divides counties into tracts, block groups, and blocks. Census tracts are small, relatively permanent, statistical subdivisions of counties delineated by local committees of census data users in accordance with Census Bureau guidelines for the purpose of collecting and presenting decennial census data. Census tracts generally contain between 1,000 and 8,000 people, with an optimum size of 4,000 people (Census 2003a). Census tracts are composed of block groups. A block group contains one or more census blocks and is the lowest-level geographic entity for which the Census Bureau tabulates sample data (such as income) from the decennial census. A census block is the smallest geographic entity for which the U.S. Census Bureau collects and tabulates 100 percent decennial census population count information (such as race and ethnicity).

Among the 367 census block groups within 50 miles of the 200 Area Hanford Meteorological Station, the largest had a population of 5,649 individuals, and the smallest had a population of zero. There are 17,833 census blocks within or partially within the 80-km (50-mile) radius grid relative to the Hanford Meteorological Station. The block with the largest population contains 1,747 people, and there are 7,129 blocks with no residents.

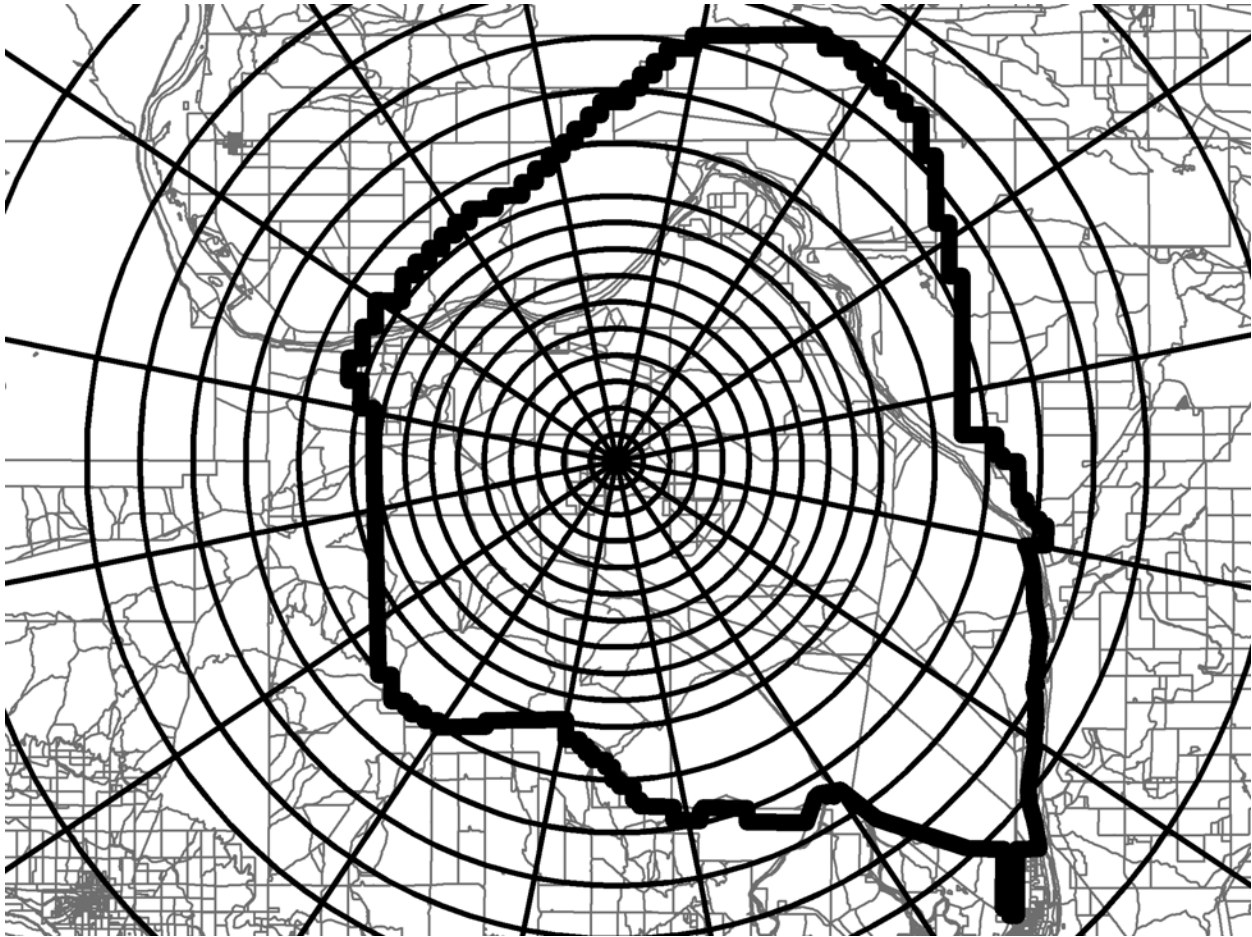


Figure 2.1. Map of Census Blocks in Southeast Washington including the Hanford Site with Site Boundary and a 50-Mile Grid Centered on the 200 Area Hanford Meteorological Station. Grid is shown out to approximately 25 miles.

2.2 Geographic Division of Area Surrounding the Hanford Site for Analysis

The population data contained in this report are distributed into circular grids relative to each of the five identified reference points on the Hanford Site. Each grid consists of sectors defined by circles of 20 unique radii (i.e., distances from the reference point), with the first 0 to 10 miles being in 1-mile increments, 10 to 20 miles in 2-mile increments, 20 to 40 miles in 5-mile increments, and 40 to 50 miles in one increment. The 20 annular areas defined by these circles are divided into 16 radial sectors corresponding to the major compass directions, creating a 320-sector circular grid (partially shown in Figure 2.1). These 320-sector distance-and-direction grids were centered on each of the five reference points.

The populations within each of the 320 sectors of these circular grids were determined in two steps. First, for maximum accuracy, the population totals were extracted from 2000 Census population data at the census block level (for total population and minorities) (Census 2001a and b) and at the block group

level (Census 2002a and b) for low-income populations, along with geographic information that referenced the population data to a map of the area (Census 2001c). To ensure consistency and comparability with the block-level racial data, the percentages of low-income population at the block group-level were multiplied by the total population in each of the block group's constituent blocks. This calculated block-level low-income population was then allocated among the 320 sectors.

Second, the populations were placed into a geographic information system (GIS) software package to produce population estimates for each sector in the circular grid. Because of the irregular shape and size of the Census blocks, it was often necessary to allocate parts of the census block population into one or more sectors of the circular grid. This was required where census blocks fell into two or more sectors (see Figure 2.1), or where blocks located along the outer edge of the grid were only partially contained within the grid. In such cases, a fraction of the census block population was assigned to each grid sector based on the fraction of the census block area contained within that sector using the "geoprocessing" capabilities within the GIS software.

In order to assign the census block populations to the appropriate grid sectors, the total area of each of the blocks was calculated. The blocks were then divided into segments that fell within each of the grid sectors, and the area of the resulting pieces was calculated. The census block segments were assigned populations in proportion to their resulting area, using the implicit assumption of a uniform distribution of population within each block. Thus, if a grid cell contained 27% of the land area of a particular census block, it also was assumed to contain 27% of the block's population. To ensure that the sum of the populations for all 320 sectors matched that for the entire 50-mile grid, rounding of any resulting fractional populations was avoided during this process until the final presentation of results.

Using this process in combination with the most finely-detailed census data provides the greatest accuracy in the population distributions; however, any adjustment of this type involves a degree of unavoidable uncertainty in allocating the block population. Where census blocks are geographically large and the population distributions within the block are less uniform, this procedure can lead to larger uncertainties in assigning population. However, for the most part, any errors introduced by this process are small and usually reassign small numbers of people to neighboring cells.

2.3 Definitions of Minority Designations

The "minorities" designation in the Census data counts both racial minorities (black, Asian, Native American, Alaska Native, Pacific islander, and either mixed race or "other" race), and Hispanics and Latinos. The Hispanic and Latino category may be viewed as the ancestry, nationality group, lineage, or country of birth of the person or person's parents or ancestors before arrival in the United States. Hispanics and Latinos may be of any race, so white Hispanics and Latinos are added to the racial minorities (which includes non-white Hispanics and Latinos) to obtain an estimate of the total minority population. Nationally, in 2000, non-Hispanic or non-Latino whites were 69.1% of the population, meaning that minorities were 30.9% (Census 2001d).

2.4 Definitions of Low-Income Designations

Low-income individuals live in households that report an annual income less than the United States official poverty level, as reported by the Census Bureau. The poverty level varies by size and relationship of the members of the household. The 2000 Census poverty level was based on incomes in the year 1999 and was set at \$17,029 for a family of four in that year (Census 2003b). Nationally, in 1999, 12.4% of all persons lived in households that had incomes below the poverty level.

3.0 Results: Population Distribution in the Year 2000

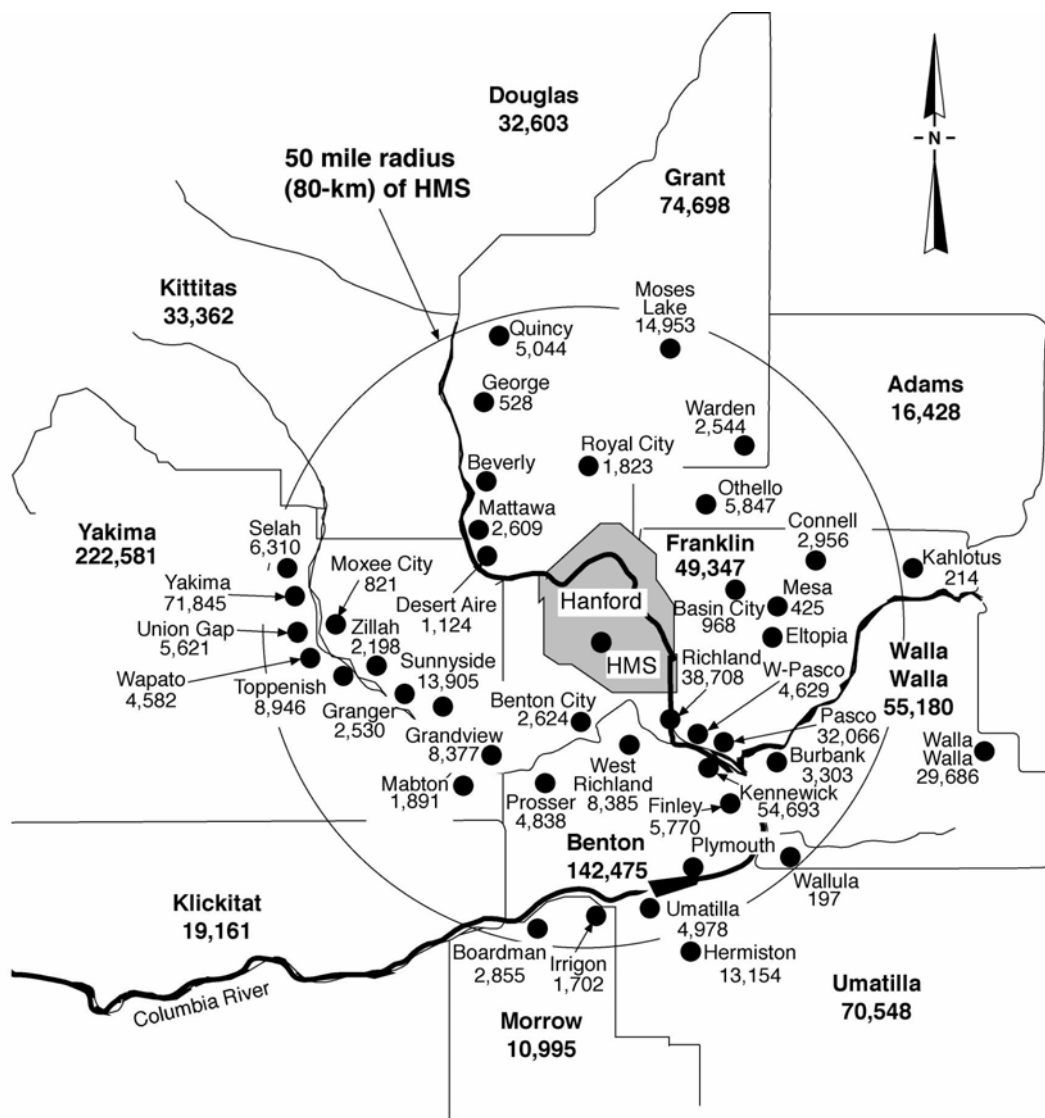
Population estimates for each population group in each of the areas surrounding the five reference points are presented in tables, as well as graphically, in the following sections. The tables are presented as matrices of 320 sectors composed of population estimates at each of the 20 radii (20 incremental distances from the reference points) for each of the 16 standard compass-point directions. The graphic presentation consists of circular distance-and-direction grids centered on each of the five reference points. The graphic information has been aggregated into an 80-sector grid to simplify viewing. The grids show populations at five 16-km (10-mile) intervals from the reference points, again divided into 16 compass directions.

Section 3.1 discusses population growth in the counties and cities near Hanford from 1990 to 2000. Sections 3.2 through 3.6 provide the graphic distance and direction grids and 320-sector tables for populations within 80 km (50 miles) of the five reference points on the Hanford Site: the 100 F Area Meteorological Station, the 100 K Area Meteorological Station, the Hanford Meteorological Station in the 200 Area, the 300 Area Meteorological Station, and the 400 Area Meteorological Station. For each reference point, five sets of tables and grids are provided for total populations as well as for minority and low-income populations. There are currently no permanent residents within the Hanford Site boundary.

3.1 Counties and Cities near Hanford

Cities closest to the Hanford reservation include Richland, Kennewick, Pasco, West Richland, Benton City, Prosser, Sunnyside, Grandview, and Mesa, all of which are located in southeastern Washington State. The locations and year 2000 populations for these and other nearby communities are presented in Figure 3.1. The closest major city to any Hanford facility is Richland, Washington, which is located in Benton County and had a population of 38,708 according to the 2000 census.

During the decade of the 1990s, the population of Benton and Franklin Counties, where most Hanford employees reside, grew at a compounded annual rate of 2.5%, while the 10 counties surrounding the site as a whole grew at 2.1% per year. For comparison, the nation's population growth rate was about 1.2% per year from 1990 to 2000. The more rapid local growth rate occurred in part due to the increased funding devoted to Hanford cleanup and the development of the local economy. Table 3.1 shows the growth for selected counties, towns, and cities within the region surrounding the Hanford Site. Many cities and towns in the area grew by a third or more during the decade, and four of them more than doubled in size.



Note: If population not listed, less than 1,000.

HMS = Hanford Meteorological Station

Figure 3.1. 2000 Census Populations for Counties and Selected Cities within an 80-km (50-mile) Radius of the Hanford Meteorological Station

Table 3.1. Population Growth from 1990 to 2000 in Selected Counties and Cities Surrounding the Hanford Site

	Census	Census	Percent		Census	Census	Percent
	1990	2000	Growth		1990	2000	Growth
<u>Washington</u>			1990-2000	<u>Washington, Cont.</u>			1990-2000
Adams County	13,603	16,428	20.8%	Walla Walla County	48,439	55,180	13.9%
Othello	4,638	5,847	26.1%	Burbank	1,745	3,303	89.3%
				Walla Walla	26,482	29,686	12.1%
				Walla Walla	N/A	197	N/A
Benton County	112,560	142,475	26.6%	Yakima County	188,823	222,581	17.9%
Benton City	1,806	2,624	45.3%	Grandview	7,169	8,377	16.9%
Finley	4,897	5,770	17.8%	Granger	2,053	2,530	23.2%
Kennewick	42,152	54,751	29.9%	Mabton	1,482	1,891	27.6%
Prosser	4,476	4,838	8.1%	Moxee	825	821	-0.5%
Richland	32,315	38,708	19.8%	Selah	5,113	6,310	23.4%
West Richland	3,962	8,385	111.6%	Sunnyside	11,238	13,905	23.7%
Franklin County	37,473	49,347	31.7%	Toppenish	7,419	8,946	20.6%
Connell	2,005	2,956	47.4%	Union Gap	3,120	5,621	80.2%
Kahlotus	167	214	28.1%	Wapato	3,795	4,582	20.7%
Mesa	252	425	68.7%	Yakima	54,843	71,845	31.0%
Pasco	20,337	32,066	57.7%	Zillah	1,911	2,198	15.0%
Grant County	54,798	74,698	36.3%	<u>Oregon</u>			
Desert Aire	N/A	1,124	N/A	Morrow County	7,625	10,995	44.2%
George	324	528	63.0%	Boardman	1,387	2,855	105.8%
Mattawa	941	2,609	177.3%	Irrigon	737	1,702	130.9%
Moses Lake	11,235	14,953	33.1%				
Quincy	3,738	5,044	34.9%	Umatilla County	59,249	70,548	19.1%
Royal City	1,104	1,823	65.1%	Hermiston	10,040	13,154	31.0%
Warden	1,639	2,544	55.2%	Umatilla	3,046	4,978	63.4%
Kittitas County	26,725	33,362	24.8%	Sum for Counties Shown	565,911	694,775	22.8%
Klickitat County	16,616	19,161	15.3%				
Sources: Census 1991, Table DP-1; Census 2001d, Table DP-1. N/A = Not Applicable.							

3.2 100 F Area

The 100 F Area Meteorological Station is near the northeast corner of the Hanford Site. At the 2000 Census there were about 382,200 people residing within 80 km (50 mi) of this location. Based on census block data, about 149,500 (39%) of these residents were minorities. The Hispanic and Latino population (all races) was the single largest minority group, with 127,200 members (33% of the total population). There were 7,500 Native Americans (2% of the total). There were an estimated 65,800 low-income individuals (about 17% of the population).

Figures 3.2 to 3.7 and Tables 3.2 to 3.6 show population distributions for total, minority, and low-income populations living within 50 miles of the 100 F Area Meteorological Station on the Hanford Site.

About 300 people live within 10 miles of the 100 F Area Meteorological Station. There are about 3,000 people within 15 miles, and 18,000 people within 20 miles, mostly from the north to ENE. There are about 36,000 people living between 20 and 25 miles from the 100 F Area Meteorological Station, mostly SSE to south. There is a small concentration of Native Americans living between 18 and 20 miles to the north, and a few hundred living in the Tri-Cities area 20-50 miles to the south and southeast. The largest Native American population is 40-50 miles WSW in the Yakima area, with over 4,000 individuals. Hispanic and Latino populations are concentrated 16-20 miles to the northeast (6,300 individuals), 20-25 miles to the WNW (2,900-plus individuals), 25-30 miles SSE (2,300 individuals), 30-35 miles to the SSE (25,400 individuals) and SW (17,300 individuals), 35-40 miles to the SW (6,900 individuals) and 40-50 miles to the WSW (17,800 individuals) and due west (11,600 individuals).

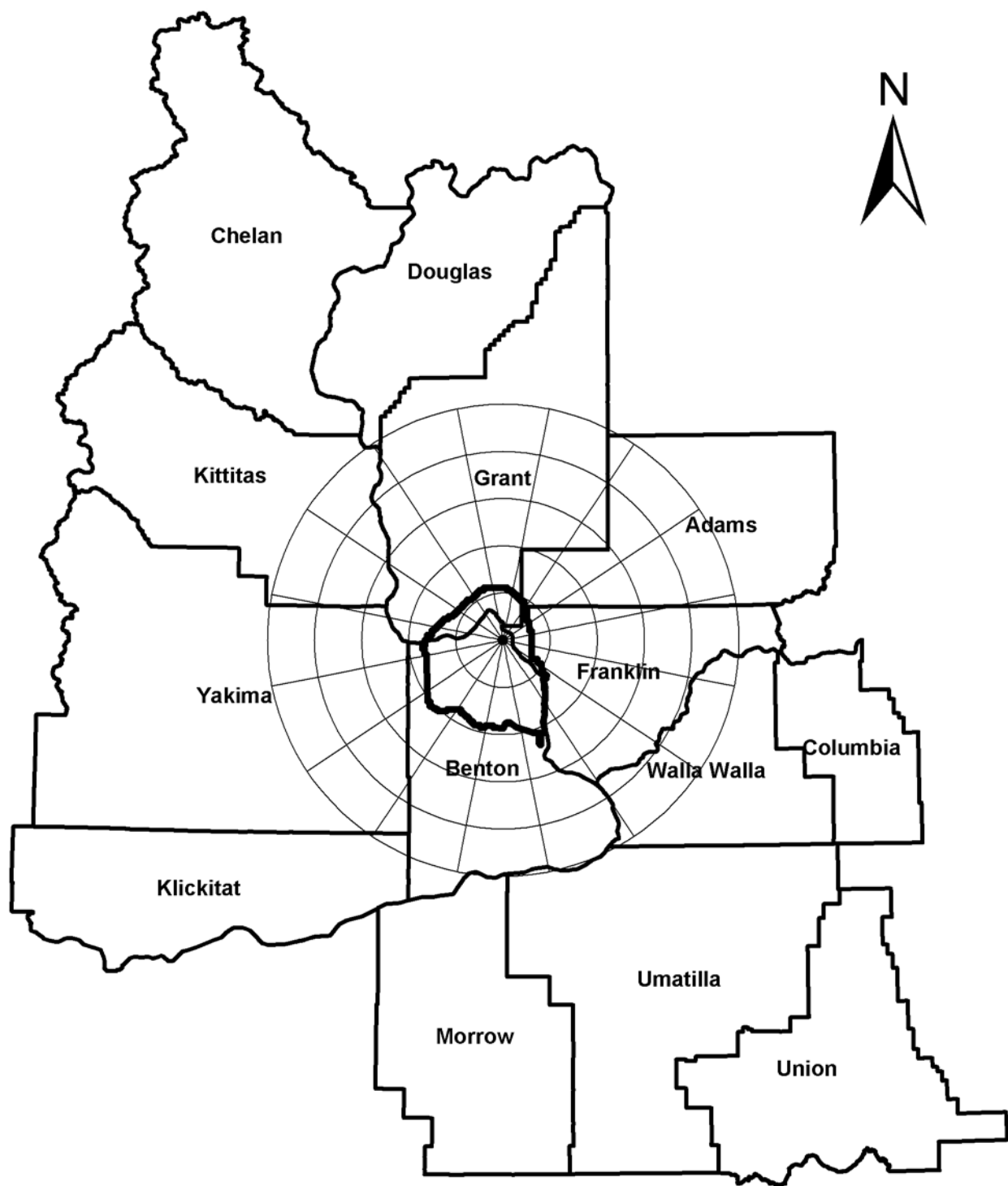


Figure 3.2. Map of 80-km (50-mi) Region Surrounding the 100 F Area Meteorological Station

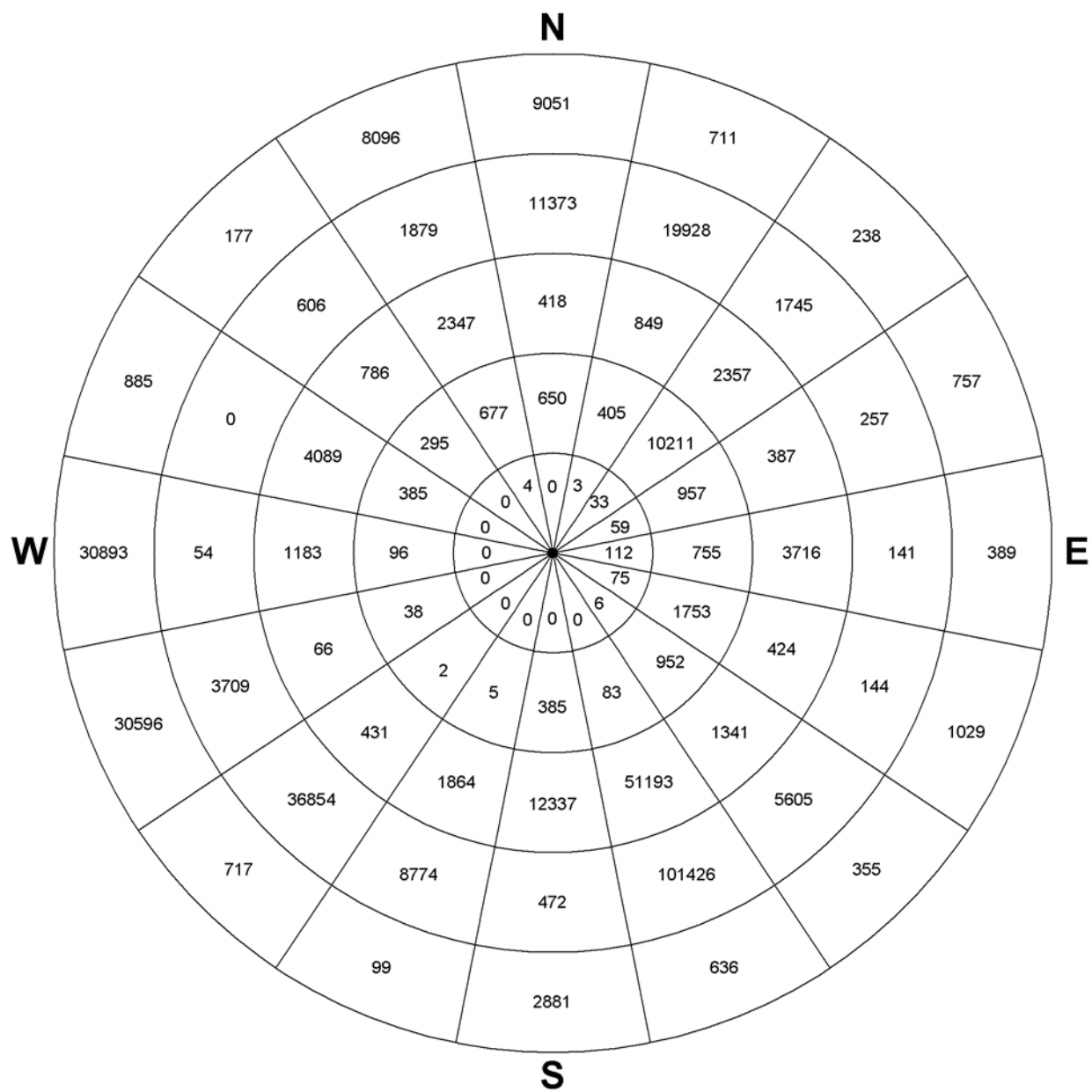


Figure 3.3. Map of Total Resident Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

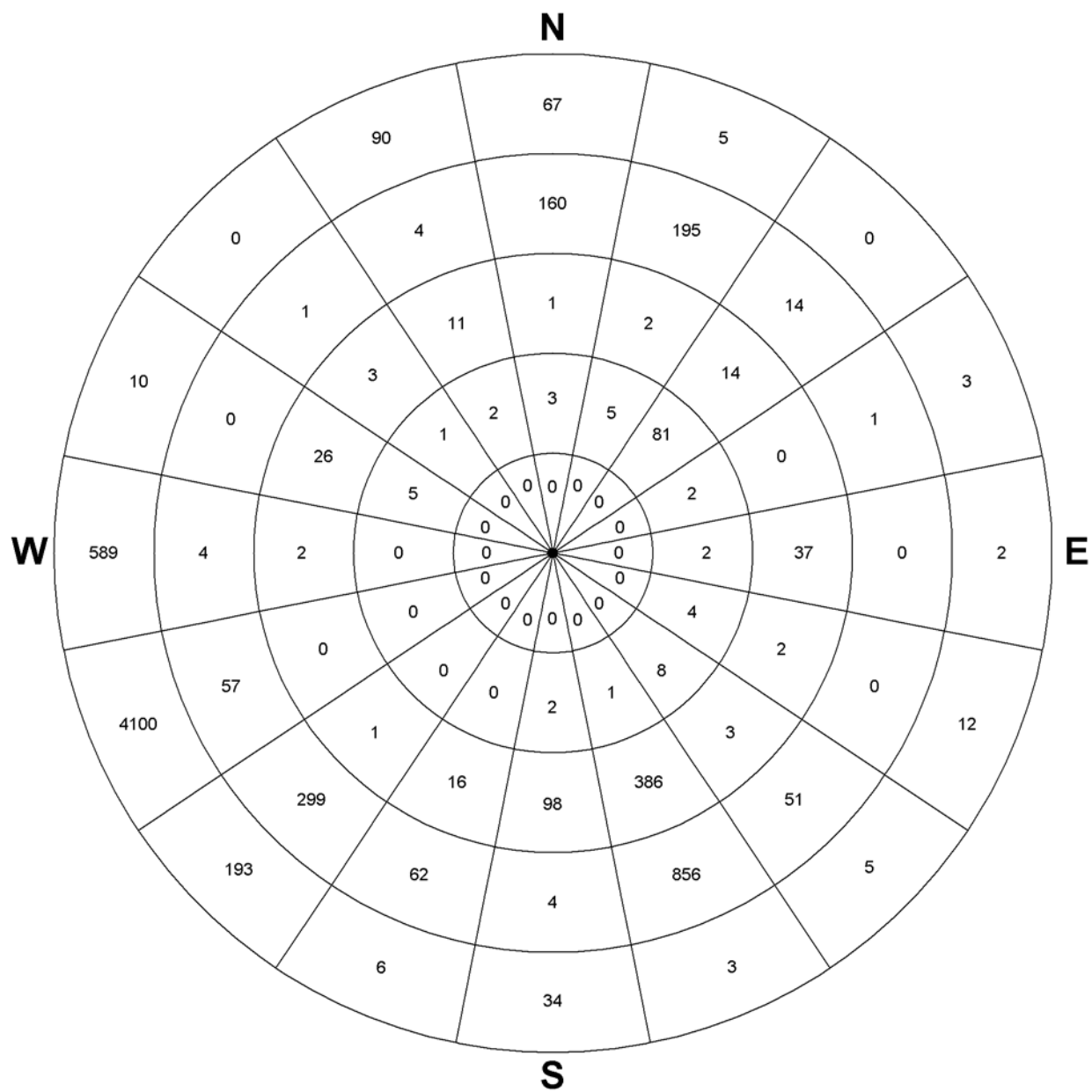


Figure 3.4. Map of Native American Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

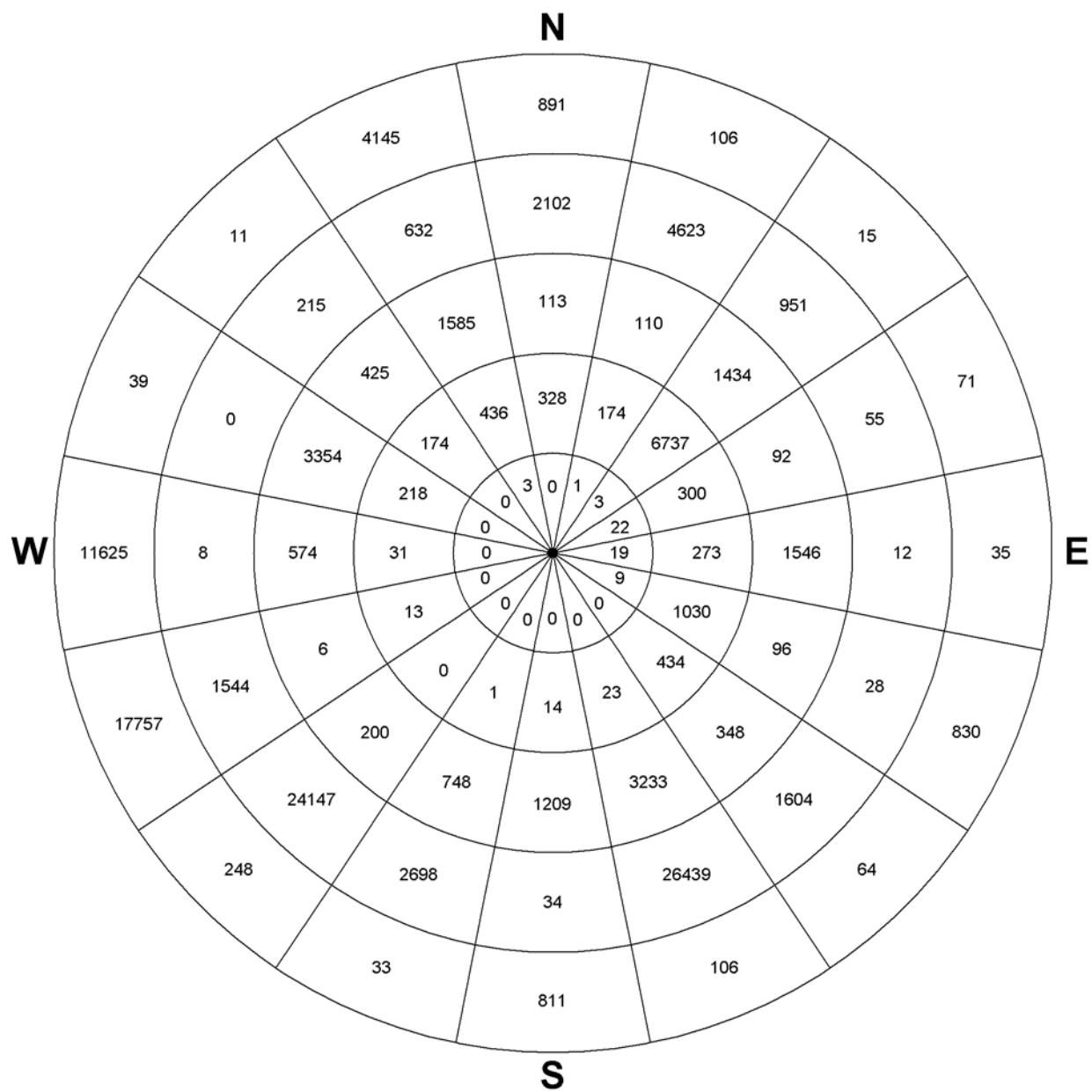


Figure 3.5. Map of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

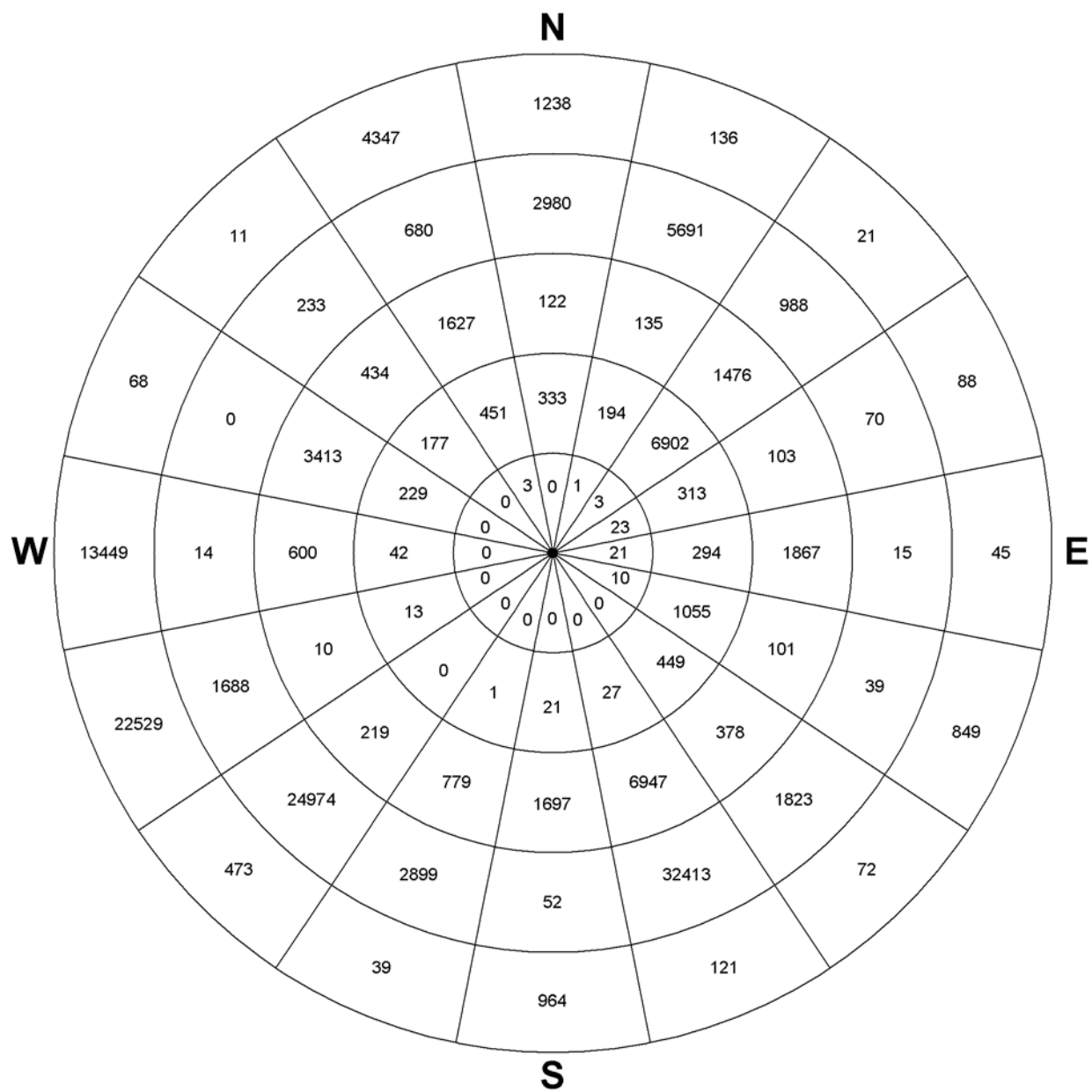


Figure 3.6. Map of Total Minority Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

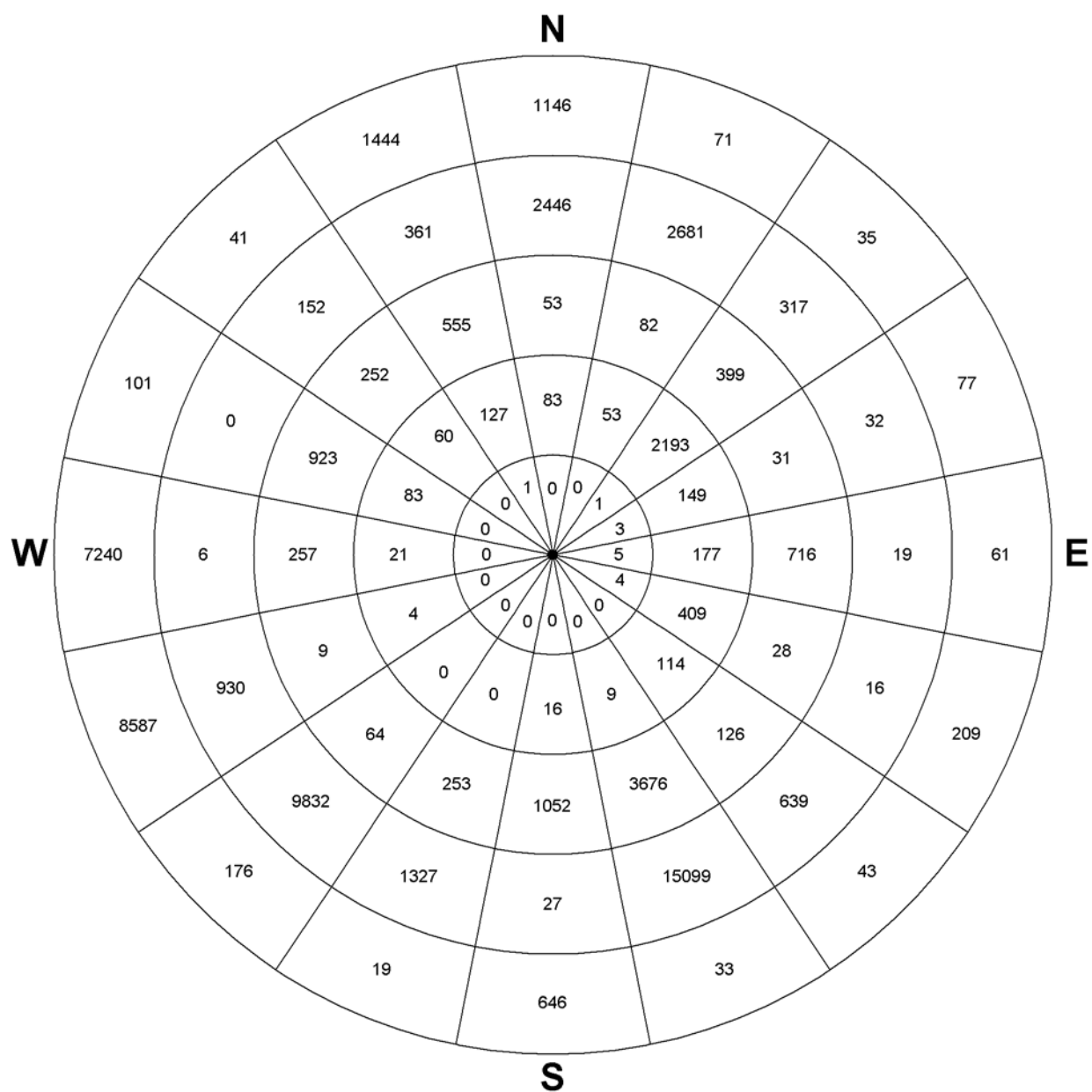


Figure 3.7. Map of Low-Income Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

Table 3.2. Distribution of Total Resident Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	2	4	4	4	0	0	0	0	0	0	0	0	0	0	14
4-5	0	0	1	5	5	6	1	0	0	0	0	0	0	0	0	0	18
5-6	0	0	1	3	6	7	1	0	0	0	0	0	0	0	0	0	18
6-7	0	0	5	6	7	8	1	0	0	0	0	0	0	0	0	0	27
7-8	0	1	7	12	15	13	1	0	0	0	0	0	0	0	0	0	49
8-9	0	1	7	14	22	18	1	0	0	0	0	0	0	0	0	0	63
9-10	0	1	10	15	53	19	1	0	0	0	0	0	0	0	0	4	103
10-12	1	33	49	37	131	53	31	0	0	0	0	0	0	4	18	27	384
12-14	3	186	149	103	132	465	103	4	0	0	0	0	7	51	108	21	1,332
14-16	38	61	813	400	300	764	202	0	0	0	0	0	14	90	88	41	2,811
16-18	282	43	3,065	228	59	251	249	10	28	0	0	10	27	96	29	149	4,526
18-20	326	82	6,135	189	133	220	367	69	357	5	2	28	48	144	52	439	8,596
20-25	397	274	632	289	621	328	1,039	18,225	7,106	286	16	34	1,183	3,535	345	2,188	36,498
25-30	21	575	1,725	98	3,095	96	302	32,968	5,231	1,578	415	32	0	554	441	159	47,290
30-35	2,388	11,356	1,644	155	86	42	1,795	89,499	368	8,088	25,465	626	0	0	400	275	142,187
35-40	8,985	8,572	101	102	55	102	3,810	11,927	104	686	11,389	3,083	54	0	206	1,604	50,780
40-50	9,051	711	238	757	389	1,029	355	636	2,881	99	717	30,596	30,893	885	177	8,096	87,510
Total	21,492	21,896	14,584	2,417	5,113	3,425	8,259	153,338	16,075	10,742	38,004	34,409	32,226	5,359	1,864	13,003	382,206

Table 3.3. Distribution of Native American Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12-14	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	6
14-16	0	0	5	1	2	3	1	0	0	0	0	0	0	0	0	0	12
16-18	0	0	14	1	0	0	2	0	0	0	0	0	0	5	0	0	22
18-20	3	0	60	0	0	0	5	1	2	0	0	0	0	0	1	2	74
20-25	1	2	1	0	4	1	3	142	53	6	0	0	2	22	0	11	248
25-30	0	0	13	0	33	1	0	244	45	10	1	0	0	4	3	0	354
30-35	19	77	14	1	0	0	18	737	4	52	208	1	0	0	1	0	1,132
35-40	141	118	0	0	0	0	33	119	0	10	91	56	4	0	0	4	576
40-50	67	5	0	3	2	12	5	3	34	6	193	4,100	589	10	0	90	5,119
Total	231	207	109	6	41	18	67	1,246	138	84	493	4,157	595	41	5	107	7,545

Table 3.4. Distribution of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
5-6	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
6-7	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	4
7-8	0	0	0	5	4	1	0	0	0	0	0	0	0	0	0	0	10
8-9	0	0	0	7	4	2	0	0	0	0	0	0	0	0	0	0	13
9-10	0	1	3	6	8	3	0	0	0	0	0	0	0	0	0	3	24
10-12	0	15	28	8	43	10	7	0	0	0	0	0	0	2	12	22	147
12-14	2	89	77	22	34	333	49	0	0	0	0	0	4	30	74	7	721
14-16	17	29	297	148	156	523	85	0	0	0	0	0	9	64	58	12	1,398
16-18	162	12	2,400	79	12	87	128	5	1	0	0	4	11	49	13	88	3,051
18-20	147	29	3,935	43	28	77	165	18	13	1	0	9	7	73	17	307	4,869
20-25	113	70	358	56	299	77	294	887	596	85	5	3	574	2,950	186	1,520	8,073
25-30	0	40	1,076	36	1,247	19	54	2,346	613	663	195	3	0	404	239	65	7,000
30-35	189	2,276	948	31	11	4	1,145	25,420	22	2,568	17,287	259	0	0	154	24	50,338
35-40	1,913	2,347	3	24	1	24	459	1,019	12	130	6,860	1,285	8	0	61	608	14,754
40-50	891	106	15	71	35	830	64	106	811	33	248	17,757	11,625	39	11	4,145	36,787
Total	3,434	5,014	9,140	540	1,885	1,993	2,450	29,801	2,068	3,480	24,595	19,320	12,238	3,611	825	6,801	127,195

Table 3.5. Distribution of Total Minority Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
4-5	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
5-6	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
6-7	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	5
7-8	0	0	0	5	4	1	0	0	0	0	0	0	0	0	0	0	10
8-9	0	0	0	7	4	2	0	0	0	0	0	0	0	0	0	0	13
9-10	0	1	3	6	8	3	0	0	0	0	0	0	0	0	0	3	24
10-12	0	21	29	8	46	11	9	0	0	0	0	0	0	3	12	22	161
12-14	2	98	78	22	38	338	50	2	0	0	0	0	4	32	74	7	745
14-16	18	29	311	150	163	533	87	0	0	0	0	0	9	66	58	16	1,440
16-18	163	12	2,435	82	14	94	132	5	1	0	0	4	14	55	14	91	3,116
18-20	150	34	4,049	51	33	79	171	20	20	1	0	9	15	73	19	315	5,039
20-25	122	76	371	65	310	82	317	2,459	851	87	5	4	600	3,005	188	1,557	10,099
25-30	0	59	1,105	38	1,557	19	61	4,488	846	692	214	6	0	408	246	70	9,809
30-35	273	2,861	983	41	14	4	1,228	30,961	36	2,755	17,861	273	0	0	168	32	57,490
35-40	2,707	2,830	5	29	1	35	595	1,452	16	144	7,113	1,415	14	0	65	648	17,069
40-50	1,238	136	21	88	45	849	72	121	964	39	473	22,529	13,449	68	11	4,347	44,450
Total	4,673	6,157	9,390	597	2,242	2,054	2,722	39,508	2,734	3,718	25,666	24,240	14,105	3,710	855	7,108	149,479

Table 3.6. Distribution of Low-Income Population within 80 km (50 mi) of the Hanford 100 F Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7-8	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
8-9	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
9-10	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	1	7
10-12	0	2	3	2	9	4	4	0	0	0	0	0	0	1	4	6	35
12-14	0	13	10	9	24	118	12	0	0	0	0	0	2	11	23	5	227
14-16	5	11	111	67	88	211	24	0	0	0	0	0	3	19	19	8	566
16-18	36	9	575	39	17	46	30	1	1	0	0	1	6	21	6	20	808
18-20	42	18	1,494	32	39	30	44	8	15	0	0	3	10	31	8	88	1,862
20-25	51	36	70	25	141	19	102	1,495	473	23	2	4	257	769	101	514	4,082
25-30	2	46	329	6	575	9	24	2,181	579	230	62	5	0	154	151	41	4,394
30-35	277	1,491	306	19	11	5	376	14,426	12	1,232	7,236	99	0	0	98	66	25,654
35-40	2,169	1,190	11	13	8	11	263	673	15	95	2,596	831	6	0	54	295	8,230
40-50	1,146	71	35	77	61	209	43	33	646	19	176	8,587	7,240	101	41	1,444	19,929
Total	3,728	2,887	2,945	292	978	666	922	18,817	1,741	1,599	10,072	9,530	7,524	1,107	505	2,488	65,801

3.3 100 K Area

The 100 K Area Meteorological Station is near the northwest corner of the Hanford Site. At the 2000 Census there were about 481,900 people residing within 80 km (50 mi) of this location. Because 100 K is located several miles west of 100 F, the 50-mile radius for this reference point includes the city of Yakima and several surrounding towns located west of the site; thus, the total population for this reference point is higher than the population for 100 F. Based on census block data, about 176,800 (37%) of these residents were minorities. The Hispanic and Latino population (all races) was the single largest minority group, with 148,100 members (31% of the population). There were 10,100 Native Americans (2% of the total). There were an estimated 80,600 low-income individuals (about 17% of the population).

Figures 3.8 to 3.13 and Tables 3.7 to 3.11 show population distributions for total, minority, and low-income populations living within 50 miles of the 100 K Area Meteorological Station on the Hanford Site.

Although the 100 K Area Meteorological Station is comparatively isolated in the northwest corner of the Hanford site, about 400 people live in the farming areas toward the north, ranging from northeast to northwest. About 1,700 people live within 15 miles, and 12,400 people live within 20 miles, mostly from the WNW to ENE. There are about 16,000 people living between 20 and 25 miles from the 100 K Area Meteorological Station, mostly to the ENE. There are small concentrations of Native Americans living between 20 and 25 miles to the ENE, and a few hundred living in the Tri-Cities area 20-50 miles to the south and southeast. The largest Native American population is 40-50 miles WSW in the Yakima area, with over 4,000 individuals. Hispanic and Latino populations are located 16-18 miles to the north (over 1,500 individuals) and WNW (2,700 individuals), 20-25 miles to the ESE to ENE (7,500 individuals), 25-30 miles SSE to SSW (3,800 individuals), 30-35 miles to the SSW (10,000 individuals) and SW (14,000 individuals), 35-40 miles to the SE (22,400 individuals) and NNE (4,900 individuals), and 40-50 miles to the WSW (11,200 individuals) and due west (30,200 individuals).

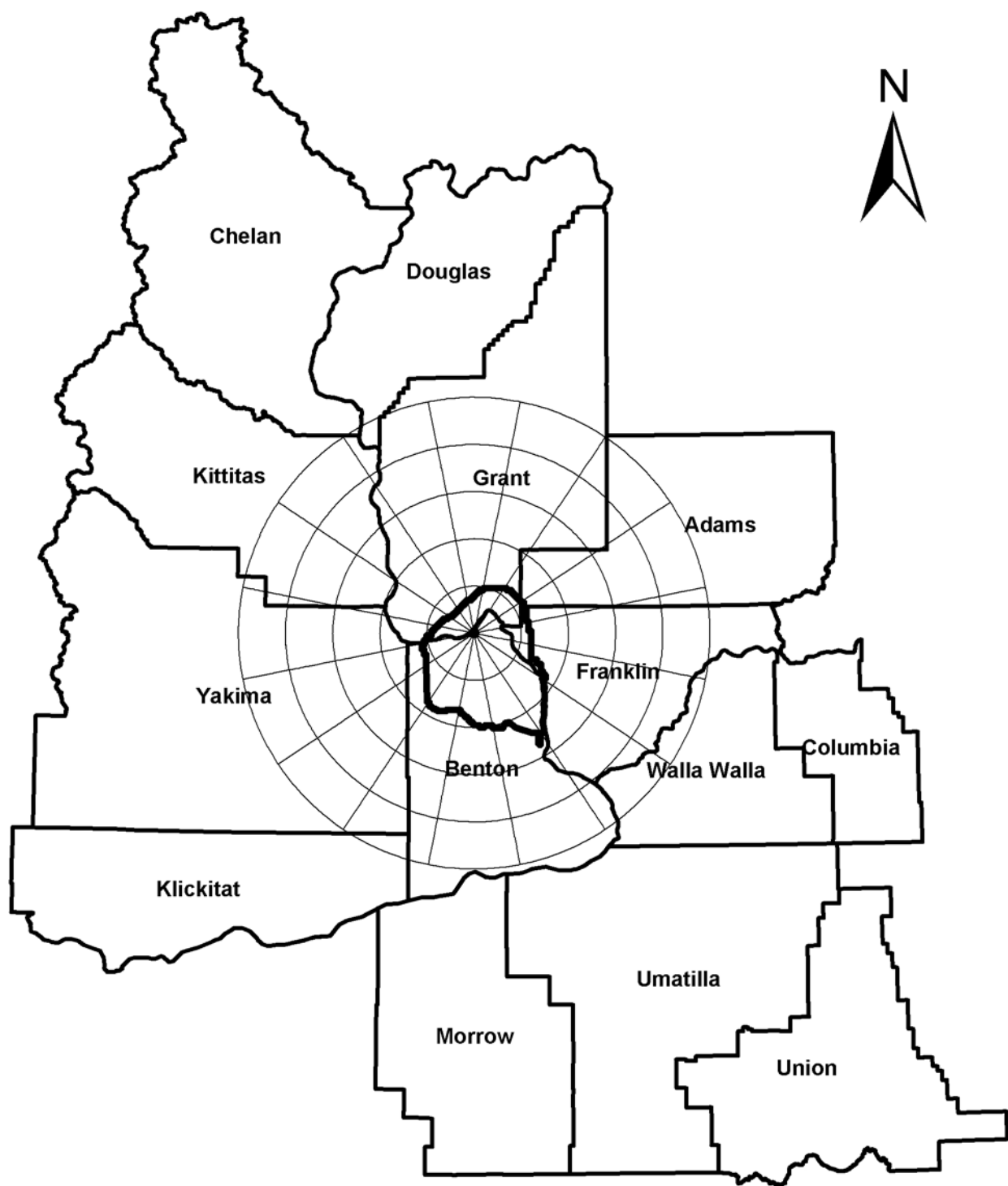


Figure 3.8. Map of 80-km (50-mi) Region Surrounding the 100 K Area Meteorological Station

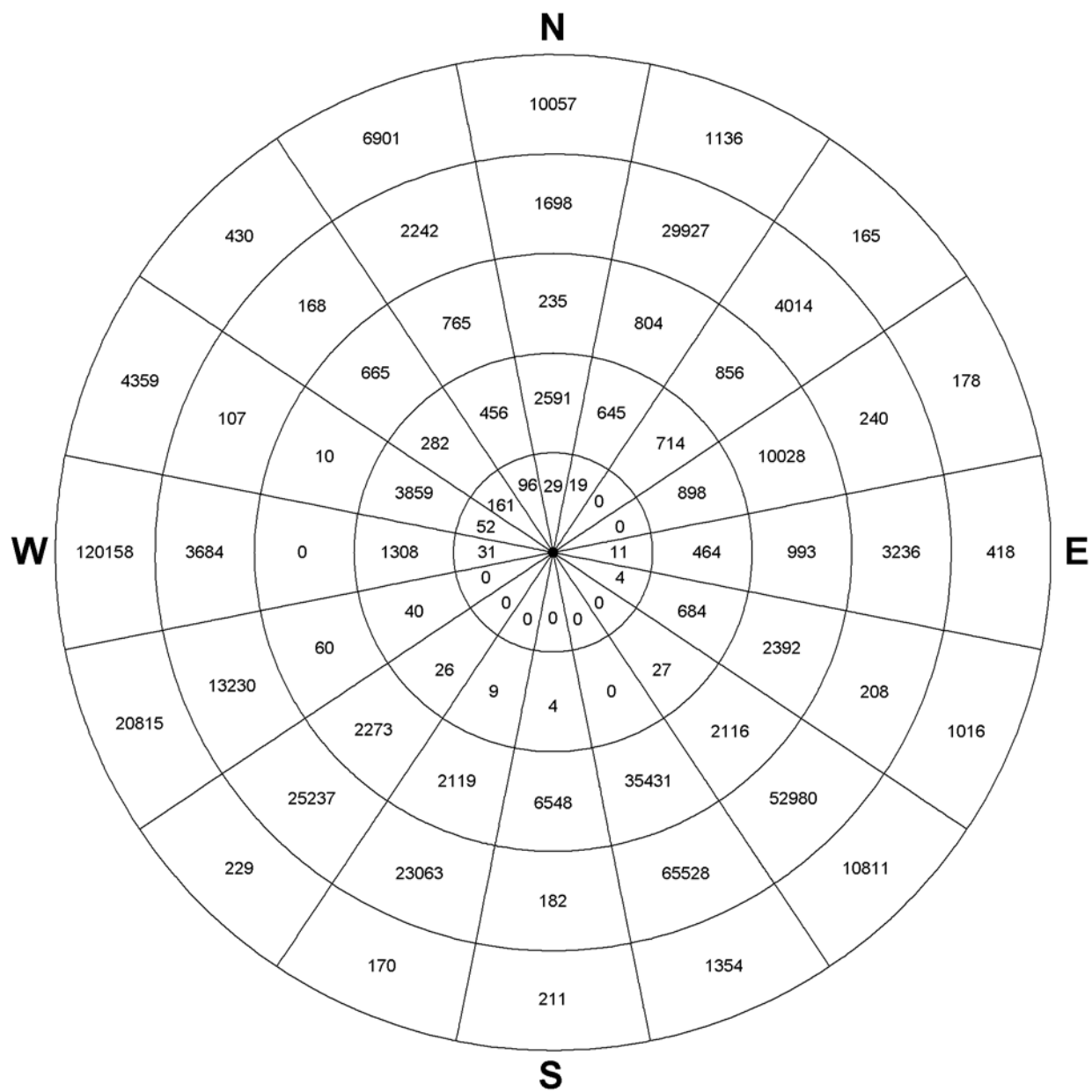


Figure 3.9. Map of Total Resident Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

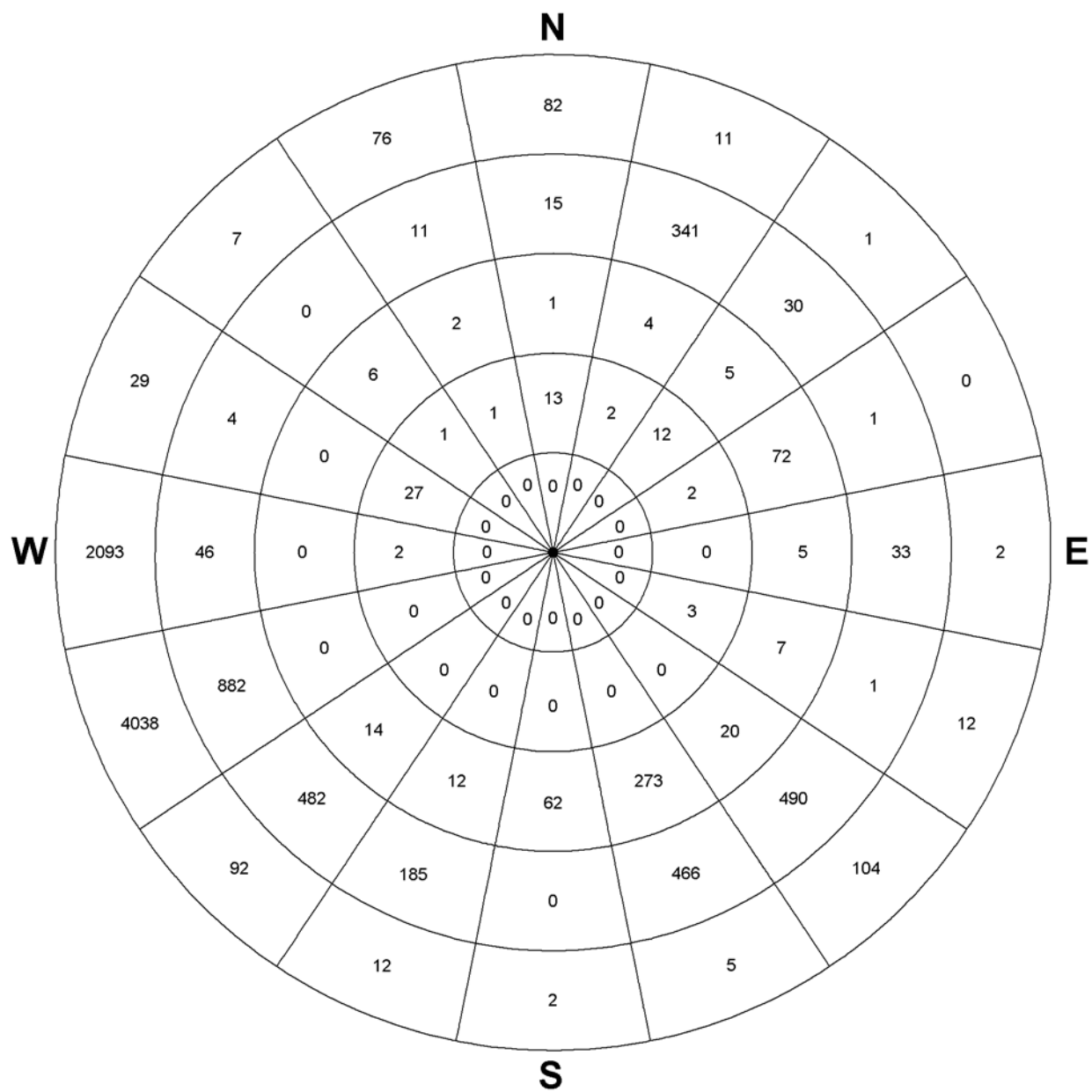


Figure 3.10. Map of Native American Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

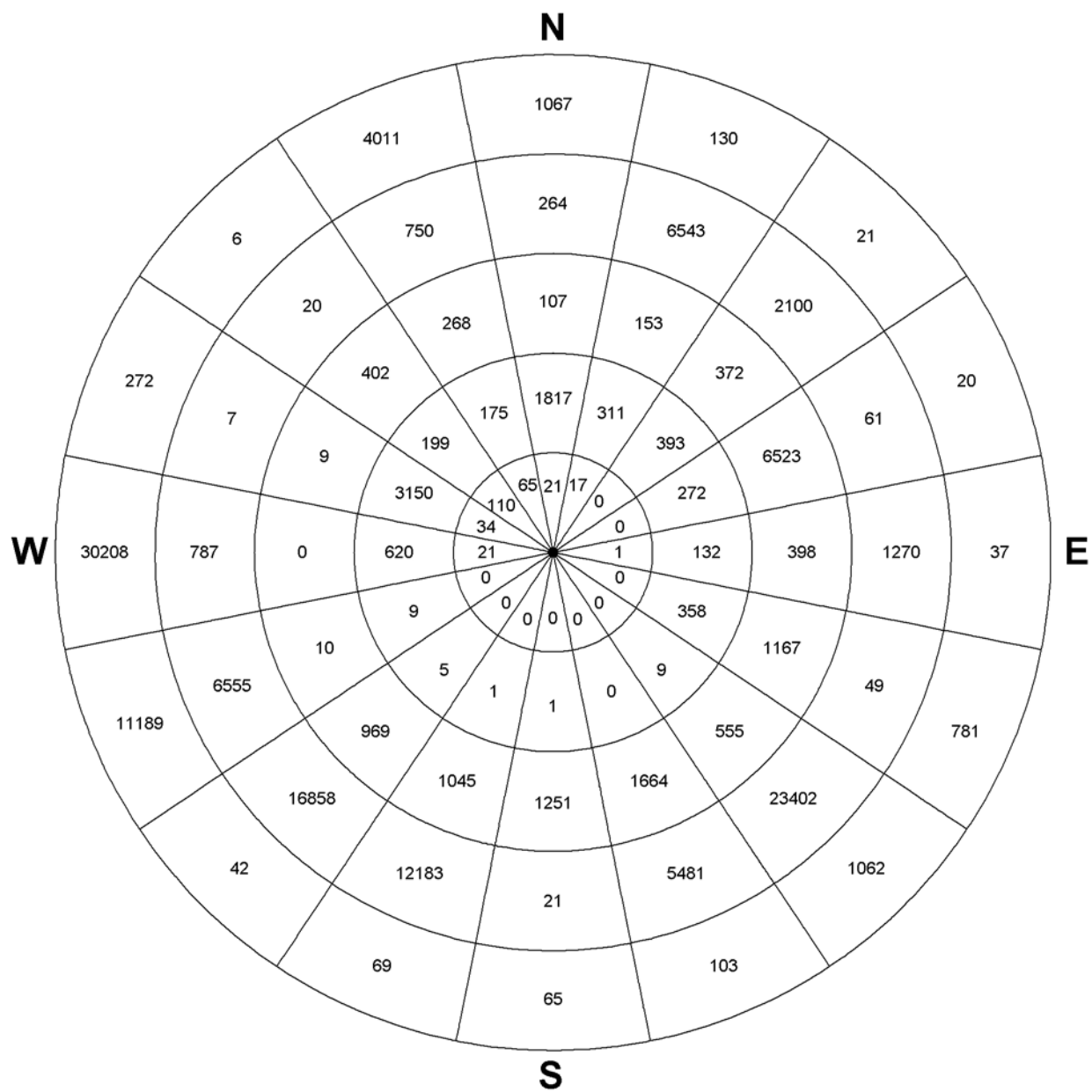
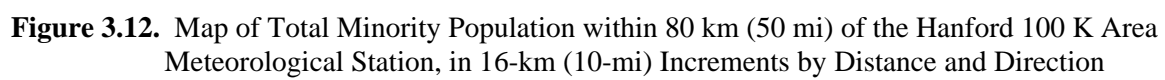


Figure 3.11. Map of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction



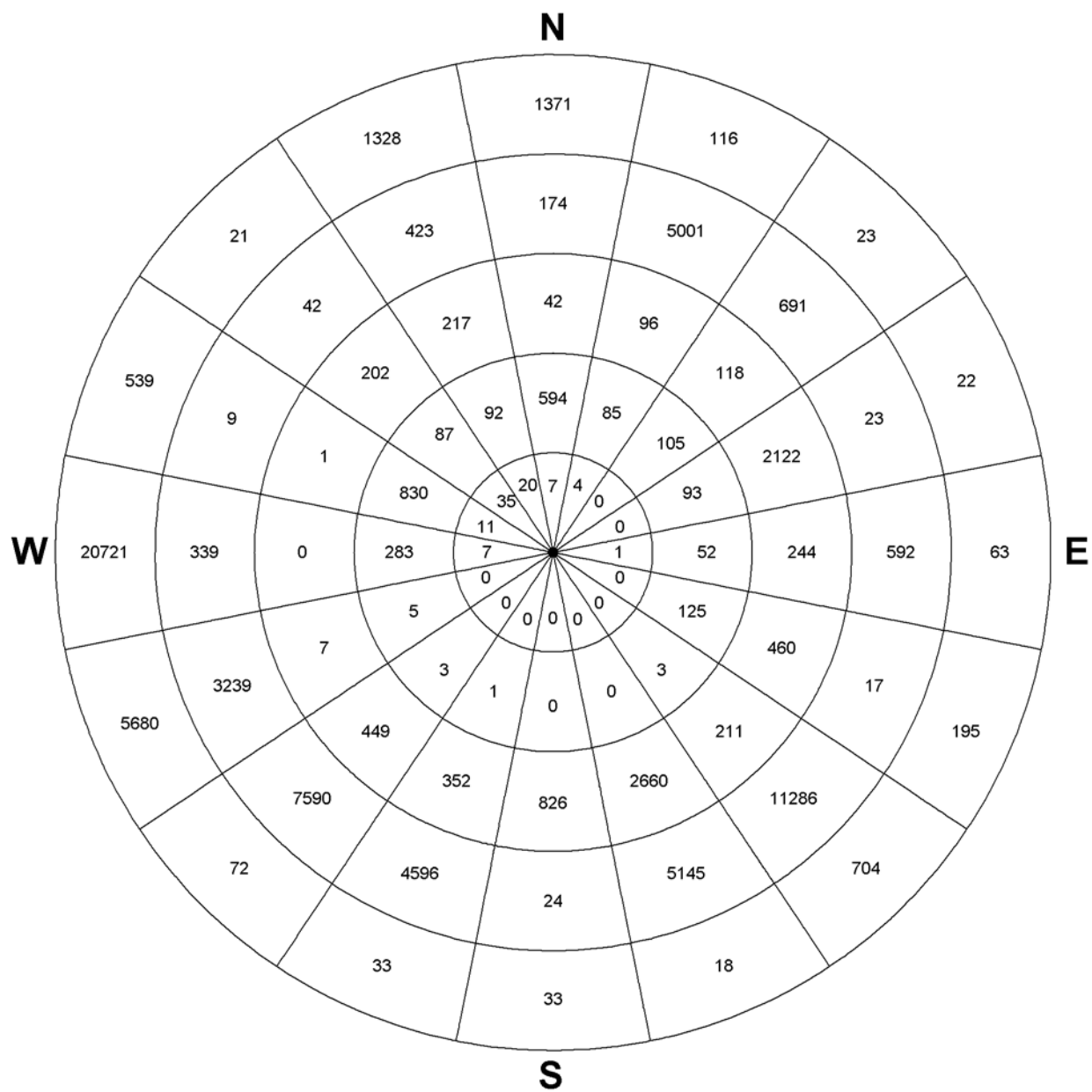


Figure 3.13. Map of Low-Income Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

Table 3.7. Distribution of Total Resident Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	1	0	0	0	0	0	0	0	0	0	0	0	0	4	6	9	31
7-8	4	1	0	0	0	0	0	0	0	0	0	0	0	5	8	35	81
8-9	12	9	0	0	2	0	0	0	0	0	0	0	0	9	18	64	154
9-10	12	9	0	0	9	4	0	0	0	0	0	0	0	12	18	52	132
10-12	16	5	0	11	19	15	0	0	0	0	0	1	34	72	52	14	239
12-14	51	17	16	25	39	24	0	0	0	0	5	12	57	134	17	33	430
14-16	159	90	131	51	85	47	0	0	0	0	9	14	580	119	1	73	1,359
16-18	2,079	214	220	161	152	95	4	0	1	1	10	9	636	3,098	54	143	6,877
18-20	286	319	347	650	169	503	23	0	3	8	2	4	1	436	158	193	3,102
20-25	190	560	387	9,641	278	1,707	547	935	882	36	49	15	0	10	523	348	16,108
25-30	45	244	469	387	715	685	1,569	34,496	5,666	2,083	2,224	45	0	0	142	417	49,187
30-35	502	9,646	3,355	86	3,135	147	5,806	27,272	88	20,072	20,998	1,097	43	0	39	1,365	93,651
35-40	1,196	20,281	659	154	101	61	47,174	38,256	94	2,991	4,239	12,133	3,641	107	129	877	132,093
40-50	10,057	1,136	165	178	418	1,016	10,811	1,354	211	170	229	20,815	120,158	4,359	430	6,901	178,408
Total	14,610	32,531	5,749	11,344	5,122	4,304	65,934	102,313	6,945	25,361	27,765	34,145	125,181	8,387	1,706	10,460	481,857

Table 3.8. Distribution of Native American Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
12-14	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14-16	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	1	6
16-18	10	1	1	1	0	1	0	0	0	0	0	0	0	20	0	0	34
18-20	3	1	7	1	0	2	0	0	0	0	0	0	0	2	1	0	17
20-25	0	4	3	72	2	5	8	4	11	0	0	0	0	0	5	1	115
25-30	1	0	2	0	3	2	12	269	51	12	14	0	0	0	1	1	368
30-35	1	66	29	0	33	1	34	174	0	164	164	21	5	0	0	4	696
35-40	14	275	1	1	0	0	456	292	0	21	318	861	41	4	0	7	2,291
40-50	82	11	1	0	2	12	104	5	2	12	92	4,038	2,093	29	7	76	6,566
Total	111	358	48	75	40	23	614	744	64	209	588	4,920	2,141	60	14	90	10,099

Table 3.9. Distribution of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3
6-7	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	6	16
7-8	3	1	0	0	0	0	0	0	0	0	0	0	3	5	21	17	50
8-9	10	8	0	0	0	0	0	0	0	0	0	0	6	13	45	30	112
9-10	8	8	0	0	1	0	0	0	0	0	0	0	9	12	38	12	88
10-12	1	1	0	0	4	2	0	0	0	0	0	0	16	30	42	1	97
12-14	18	12	7	7	13	2	0	0	0	0	3	2	11	74	4	6	159
14-16	99	50	52	24	23	5	0	0	0	0	1	7	395	80	0	29	765
16-18	1,550	107	124	63	48	18	0	0	0	0	1	0	197	2,667	39	67	4,881
18-20	149	141	210	178	44	331	9	0	1	1	0	0	1	299	114	72	1,550
20-25	104	134	266	6,410	91	974	236	28	143	12	7	0	0	9	346	160	8,920
25-30	3	19	106	113	307	193	319	1,636	1,108	1,033	962	10	0	0	56	108	5,973
30-35	60	1,664	1,981	30	1,252	34	1,009	1,542	15	9,958	13,957	350	1	0	14	611	32,478
35-40	204	4,879	119	31	18	15	22,393	3,939	6	2,225	2,901	6,205	786	7	6	139	43,873
40-50	1,067	130	21	20	37	781	1,062	103	65	69	42	11,189	30,208	272	6	4,011	49,083
Total	3,276	7,154	2,886	6,876	1,838	2,355	25,028	7,248	1,338	13,298	17,874	17,763	31,636	3,472	737	5,269	148,048

Table 3.10. Distribution of Total Minority Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3
6-7	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	6	18
7-8	3	1	0	0	0	0	0	0	0	0	0	0	3	5	21	17	50
8-9	10	8	0	0	0	0	0	0	0	0	0	0	6	13	45	30	112
9-10	9	8	0	0	1	1	0	0	0	0	0	0	9	13	38	12	91
10-12	2	1	0	1	4	2	0	0	0	0	0	0	19	35	42	2	108
12-14	23	13	10	8	14	3	0	0	0	0	3	2	19	74	4	7	180
14-16	101	51	64	25	23	6	0	0	0	0	1	7	411	80	0	32	801
16-18	1,583	108	126	64	50	21	2	0	0	0	1	0	207	2,720	39	68	4,989
18-20	154	142	217	188	48	338	9	0	1	1	0	0	1	301	115	76	1,591
20-25	108	149	274	6,565	96	1,001	250	56	160	12	12	2	0	9	351	170	9,215
25-30	4	30	127	113	328	199	358	4,110	1,276	1,089	1,006	11	0	0	58	123	8,832
30-35	73	2,142	2,034	32	1,563	37	1,333	3,307	15	10,422	14,443	410	5	0	14	644	36,474
35-40	249	6,314	136	40	21	15	25,471	6,141	8	2,279	3,275	7,288	916	13	6	181	52,353
40-50	1,464	175	28	34	49	809	1,405	135	68	82	144	15,889	37,132	400	23	4,147	61,984
Total	3,783	9,142	3,016	7,070	2,197	2,432	28,828	13,749	1,528	13,885	18,885	23,609	38,731	3,668	763	5,515	176,801

Table 3.11. Distribution of Low-Income Population within 80 km (50 mi) of the Hanford 100 K Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	6
7-8	1	0	0	0	0	0	0	0	0	0	0	0	1	2	8	6	18
8-9	3	2	0	0	0	0	0	0	0	0	0	0	2	4	14	9	34
9-10	3	2	0	0	1	0	0	0	0	0	0	0	3	4	11	3	27
10-12	3	1	0	1	1	1	0	0	0	0	0	0	7	16	11	3	44
12-14	9	2	1	2	3	2	0	0	0	0	1	2	12	29	4	6	73
14-16	20	12	10	3	6	3	0	0	0	0	1	2	126	26	0	12	221
16-18	525	27	22	10	10	8	0	0	0	0	1	1	138	673	18	37	1,470
18-20	37	43	72	77	32	111	3	0	0	1	0	0	0	86	54	34	550
20-25	32	74	84	2,111	81	398	66	44	67	4	9	2	0	1	177	100	3,250
25-30	10	22	34	11	163	62	145	2,616	759	348	440	5	0	0	25	117	4,757
30-35	48	1,244	638	4	579	11	109	1,718	11	3,777	6,295	283	5	0	10	310	15,042
35-40	126	3,757	53	19	13	6	11,177	3,427	13	819	1,295	2,956	334	9	32	113	24,149
40-50	1,371	116	23	22	63	195	704	18	33	33	72	5,680	20,721	539	21	1,328	30,939
Total	2,188	5,302	937	2,260	952	797	12,204	7,823	883	4,982	8,114	8,931	21,350	1,390	387	2,080	80,580

3.4 200 Area

The Hanford Meteorological Station is near the center of the Hanford Site. At the time of the 2000 Census there were about 486,300 people residing within 80 km (50 mi) of this location. Based on census block data, about 180,000 (37%) of those residents were minorities. The Hispanic and Latino population (all races) was the single largest minority group, with 150,800 members (31% of the total population). There were 10,400 Native Americans (2% of the total). There were an estimated 81,300 low-income individuals (about 17% of the population).

Figures 3.14 to 3.19 and Tables 3.12 to 3.16 show population distributions for total, minority, and low-income populations living within a 50-mile radius of the Hanford Meteorological Station in the 200 Area of the Hanford Site.

Because of its location near the center of the Hanford Site, the resident population within 10 miles of the Hanford Meteorological Station is very small (estimated as 23 individuals). About 800 people live within 15 miles, and 10,400 people live within 20 miles. There are about 56,000 people living between 20 and 25 miles from the 200 Area Meteorological Station, located mostly to the southwest and the southeast. There are about 1,300 Native Americans living between 20 and 40 miles to the southeast, and about 8,000 Native Americans living 25 to 50 miles to the west and west-southwest. Substantial Hispanic and Latino populations are located 18 to 20 miles to the northwest (2,600 individuals), 25 to 30 miles to the northeast (6,000 individuals) and southwest (18,200 individuals), 30 to 35 miles to the southeast (26,000 individuals), and 40 to 50 miles to the north-northeast (6,300 individuals) and due west (31,500 individuals).

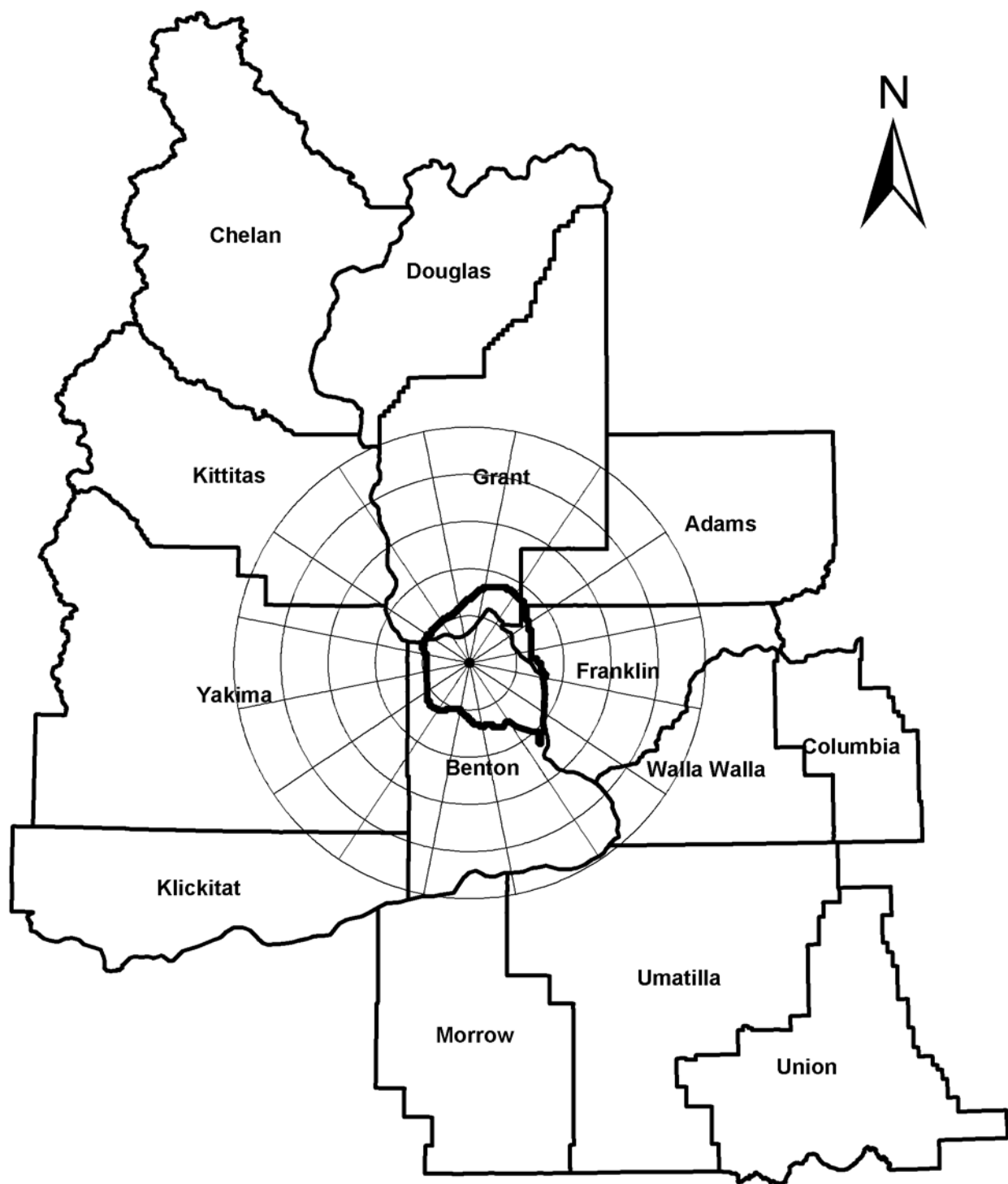


Figure 3.14. Map of 80-km (50-mi) Region Surrounding the 200 Area Hanford Meteorological Station

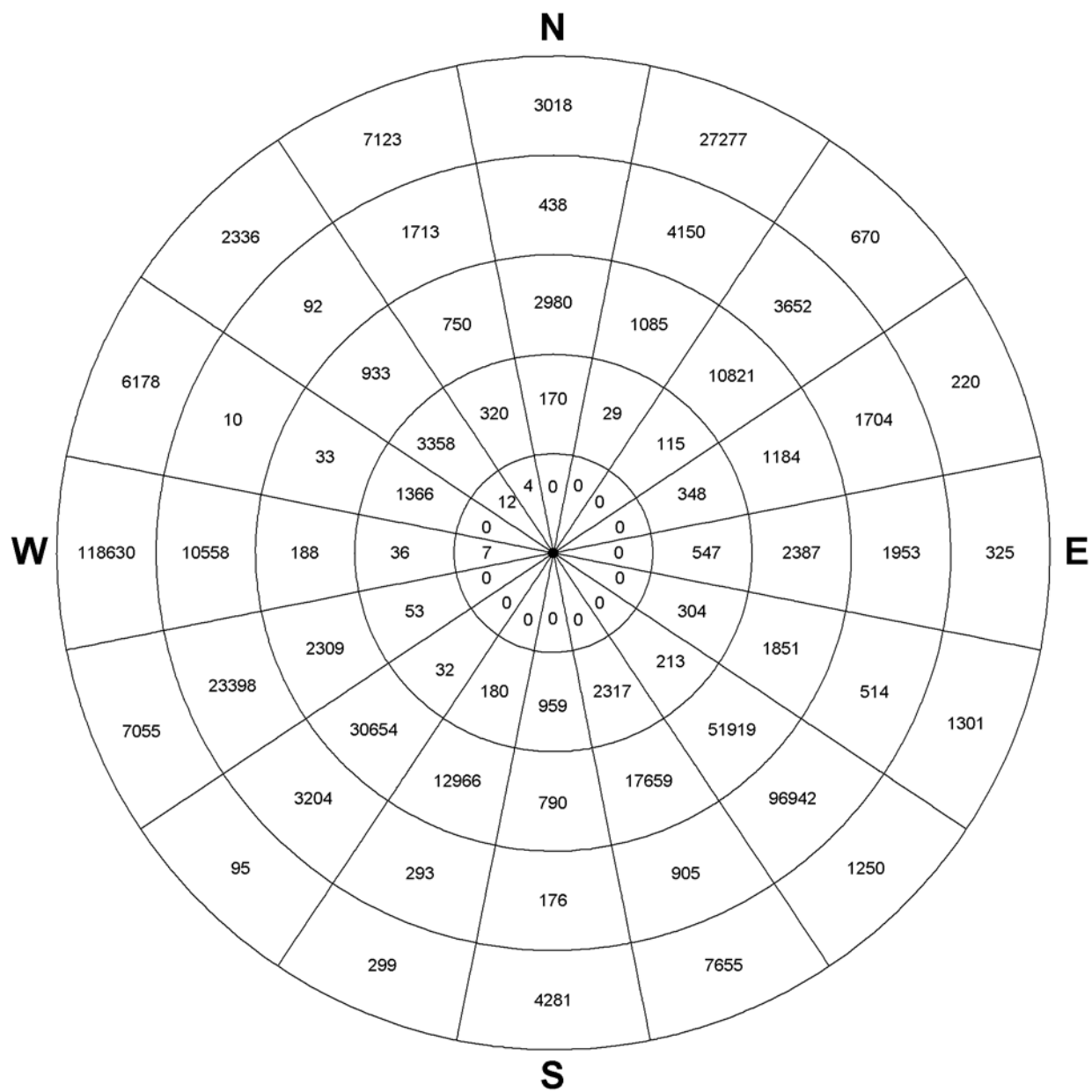
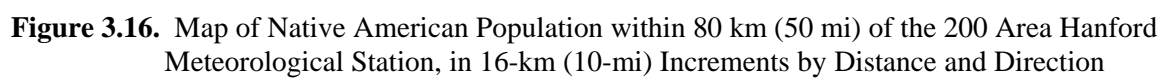


Figure 3.15. Map of Total Resident Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction



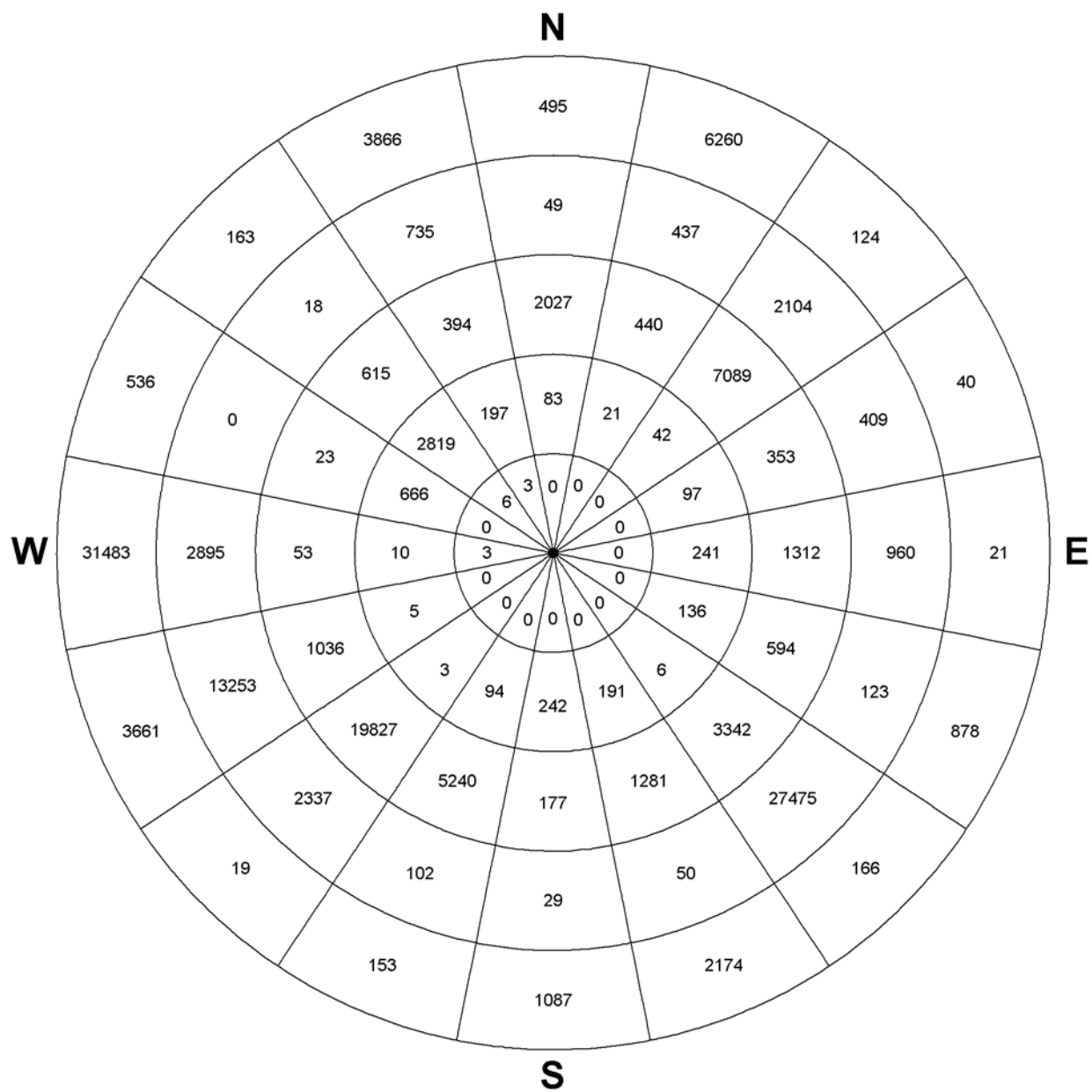


Figure 3.17. Map of Hispanic and Latino Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

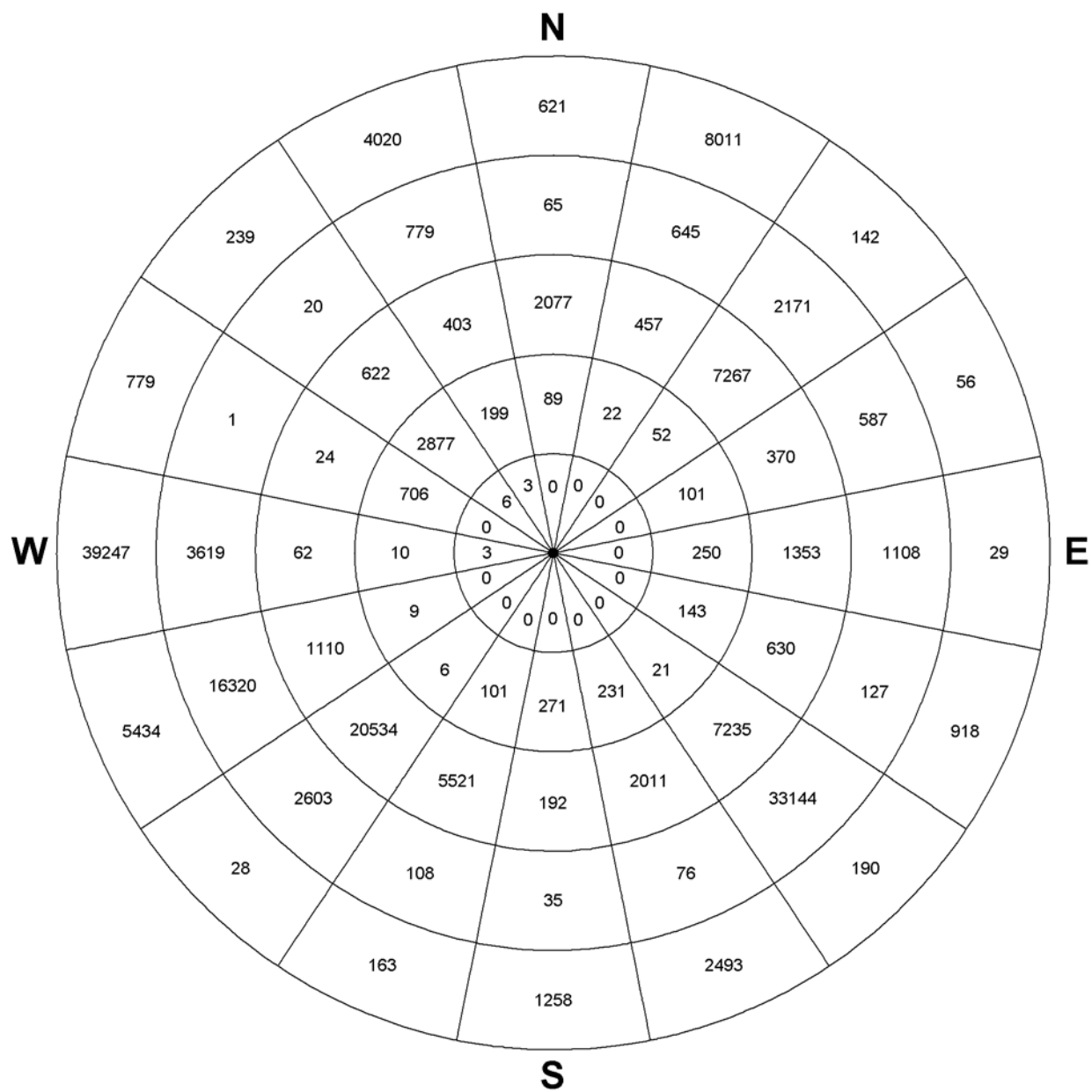


Figure 3.18. Map of Total Minority Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

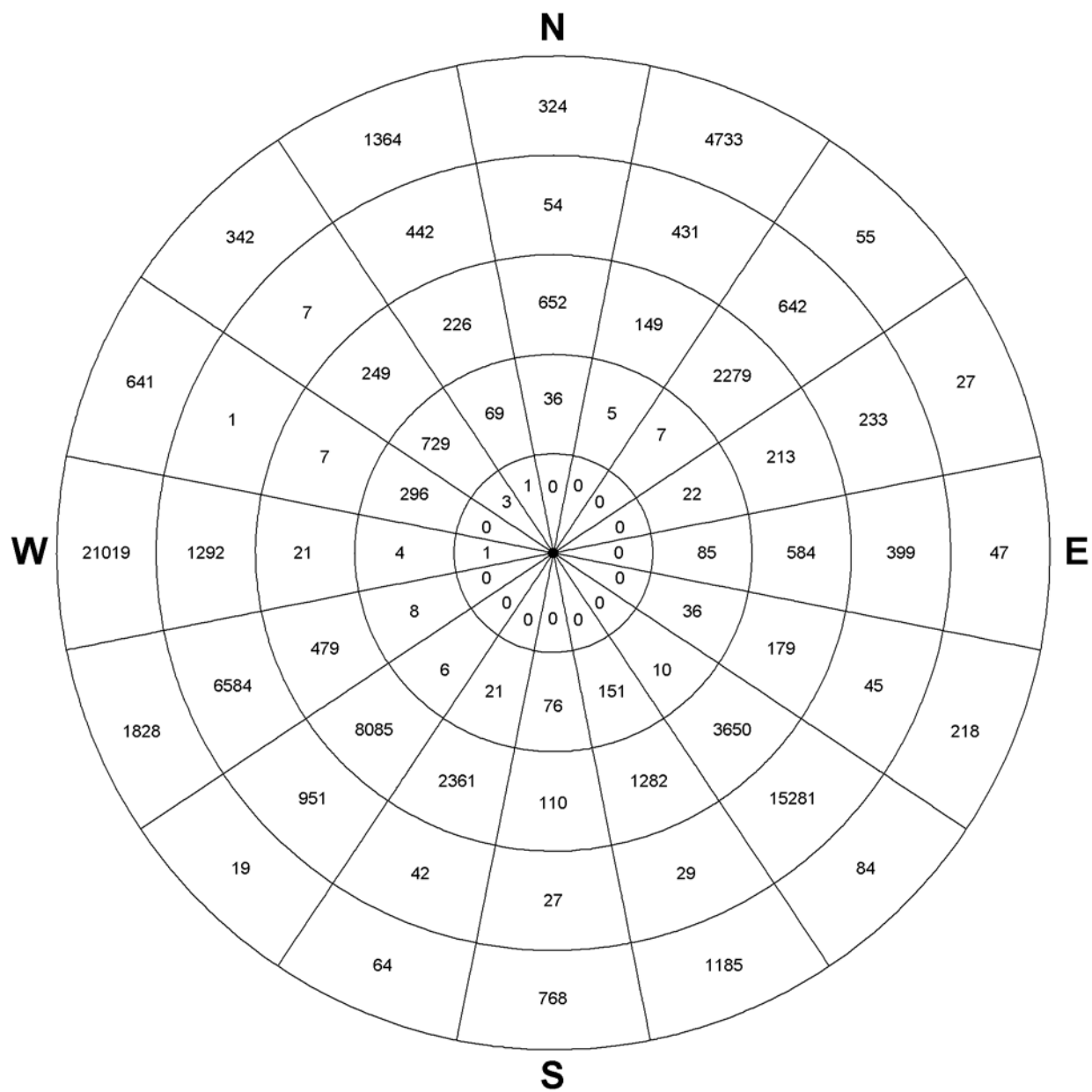


Figure 3.19. Map of Low-Income Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

Table 3.12. Distribution of Total Resident Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5
9-10	0	0	0	0	0	0	0	0	0	0	0	0	7	0	8	3	18
10-12	0	0	1	15	2	0	0	0	0	1	0	7	24	9	38	21	118
12-14	23	0	3	29	12	0	0	3	2	9	0	13	7	32	52	127	312
14-16	58	12	10	45	40	4	15	116	4	12	0	7	3	66	143	123	658
16-18	26	7	17	113	169	44	114	462	112	16	8	13	1	1,075	166	28	2,371
18-20	63	10	84	146	324	256	84	1,736	841	142	24	13	1	184	2,959	21	6,888
20-25	2,484	393	2,035	665	1,636	1,139	26,281	12,743	750	2,972	3,276	340	14	33	805	329	55,895
25-30	496	692	8,786	519	751	712	25,638	4,916	40	9,994	27,378	1,969	174	0	128	421	82,614
30-35	66	379	503	356	46	271	83,468	886	126	262	3,060	8,590	822	0	88	426	99,349
35-40	372	3,771	3,149	1,348	1,907	243	13,474	19	50	31	144	14,808	9,736	10	4	1,287	50,353
40-50	3,018	27,277	670	220	325	1,301	1,250	7,655	4,281	299	95	7,055	118,630	6,178	2,336	7,123	187,713
Total	6,606	32,541	15,258	3,456	5,212	3,970	150,324	28,536	6,206	13,738	33,985	32,815	129,419	7,587	6,731	9,910	486,294

Table 3.13. Distribution of Native American Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
14-16	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4
16-18	0	0	0	0	1	0	1	1	3	0	0	0	0	2	0	0	8
18-20	0	0	2	0	1	3	1	7	6	5	0	0	0	1	19	0	45
20-25	12	2	12	1	6	7	230	96	4	6	23	0	0	0	3	1	403
25-30	3	4	73	1	4	1	171	19	0	76	226	20	4	0	3	1	606
30-35	0	1	1	0	0	1	717	12	0	0	156	364	14	0	0	2	1,268
35-40	1	20	28	18	16	1	129	0	0	3	50	2,301	448	1	0	4	3,020
40-50	26	326	1	0	2	19	6	85	73	3	9	1,410	2,944	81	30	77	5,092
Total	42	353	117	20	30	32	1,255	220	88	93	464	4,095	3,410	85	60	85	10,449

Table 3.14. Distribution of Hispanic and Latino Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
9-10	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	2	9
10-12	0	0	0	2	0	0	0	0	0	0	0	0	8	2	29	11	52
12-14	12	0	0	4	1	0	0	1	0	1	0	1	2	4	25	81	132
14-16	51	11	0	11	4	0	0	11	3	4	0	0	0	38	69	91	293
16-18	5	4	1	29	60	16	1	16	38	5	1	1	0	537	109	11	834
18-20	15	6	41	51	176	120	5	163	201	84	2	3	0	85	2,587	3	3,542
20-25	1,766	183	1,074	217	986	428	1,302	1,080	177	1,394	1,587	133	2	23	576	189	11,117
25-30	261	257	6,015	136	326	166	2,040	201	0	3,846	18,240	903	51	0	39	205	32,686
30-35	9	32	158	72	5	58	25,957	43	17	88	2,303	3,858	160	0	18	154	32,932
35-40	40	405	1,946	337	955	65	1,518	7	12	14	34	9,395	2,735	0	0	581	18,044
40-50	495	6,260	124	40	21	878	166	2,174	1,087	153	19	3,661	31,483	536	163	3,866	51,126
Total	2,654	7,158	9,359	899	2,534	1,731	30,989	3,696	1,535	5,589	22,186	17,955	34,444	1,225	3,621	5,195	150,770

Table 3.15. Distribution of Total Minority Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
9-10	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	2	9
10-12	0	0	0	2	0	0	0	0	0	0	0	0	8	3	30	13	56
12-14	12	0	0	4	2	0	0	1	0	1	0	1	2	11	29	81	144
14-16	51	11	1	12	5	2	1	12	3	4	0	1	0	41	71	91	306
16-18	6	4	2	29	63	16	3	24	38	5	2	3	0	561	109	11	876
18-20	20	7	49	54	180	125	17	194	230	91	4	4	0	90	2,638	3	3,706
20-25	1,805	186	1,107	223	1,013	448	3,413	1,610	192	1,458	1,663	139	3	24	579	191	14,054
25-30	272	271	6,160	147	340	182	3,822	401	0	4,063	18,871	971	59	0	43	212	35,814
30-35	11	45	174	83	6	60	31,154	69	21	91	2,511	4,430	198	0	20	169	39,042
35-40	54	600	1,997	504	1,102	67	1,990	7	14	17	92	11,890	3,421	1	0	610	22,366
40-50	621	8,011	142	56	29	918	190	2,493	1,258	163	28	5,434	39,247	779	239	4,020	63,628
Total	2,852	9,135	9,632	1,114	2,740	1,818	40,590	4,811	1,756	5,893	23,171	22,873	42,941	1,510	3,764	5,404	180,004

Table 3.16. Distribution of Low-Income Population within 80 km (50 mi) of the 200 Area Hanford Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
9-10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	4
10-12	0	0	0	1	0	0	0	0	0	0	0	1	3	2	8	4	19
12-14	5	0	0	2	1	0	0	0	0	1	0	2	1	7	11	28	58
14-16	13	3	1	3	3	0	1	4	0	1	0	1	0	14	31	27	102
16-18	6	1	1	7	18	5	5	27	9	2	2	2	0	233	36	6	360
18-20	12	1	5	9	63	31	4	120	67	17	4	2	0	40	643	4	1,022
20-25	582	53	278	116	419	132	2,214	1,036	107	557	797	54	2	7	207	92	6,653
25-30	70	96	2,001	97	165	47	1,436	246	3	1,804	7,288	425	19	0	42	134	13,873
30-35	16	40	24	34	6	24	14,384	26	19	36	912	2,095	99	0	7	126	17,848
35-40	38	391	618	199	393	21	897	3	8	6	39	4,489	1,193	1	0	316	8,612
40-50	324	4,733	55	27	47	218	84	1,185	768	64	19	1,828	21,019	641	342	1,364	32,718
Total	1,066	5,318	2,983	495	1,115	478	19,025	2,647	981	2,488	9,061	8,899	22,337	945	1,330	2,102	81,270

3.5 300 Area

The 300 Area Meteorological Station is near the eastern boundary of the Hanford Site. At the 2000 Census there were about 349,100 people residing within 80 km (50 mi) of this location. Based on census block data, about 128,800 (37%) of these residents were minorities. The Hispanic and Latino population (all races) was the single largest minority group, with 110,900 members (32% of the population). There were 4,500 Native Americans (1% of the total). There were an estimated 56,100 low-income individuals (over 16% of the population).

Figures 3.20 to 3.25 and Tables 3.17 to 3.21 show population distributions for total, minority, and low-income populations living within 50 miles of the 300 Area Meteorological Station on the Hanford Site.

The 300 Area Meteorological Station is comparatively close to the Tri-Cities and to the relatively densely settled farmland to the east of the Columbia River. About 60,500 people live within 10 miles of the 300 Area Meteorological Station, and about 1,000 people live within 3 miles. Most of these people reside in the Richland area, ranging from SSE to SSW, but there are several hundred people living across the river within 10 miles. About 157,000 people reside within 15 miles, and 177,200 people reside within 20 miles, mostly from the SE to SW. Only 5,200 people live between 20 and 25 miles from the 300 Area Meteorological Station, mostly to the WSW. There are small concentration of Native Americans living between 5 and 20 miles to the SE and south, in the Tri-Cities area. The largest Native American population is 40-50 miles to the west, with over 1,600 individuals. Hispanic and Latino populations are located 4-8 miles due south (1,300 individuals), 10-16 miles to the SSE and SE (combined 26,700 individuals), and beyond 25 miles in several directions (mostly N-NNE, W-WSW, and due south).

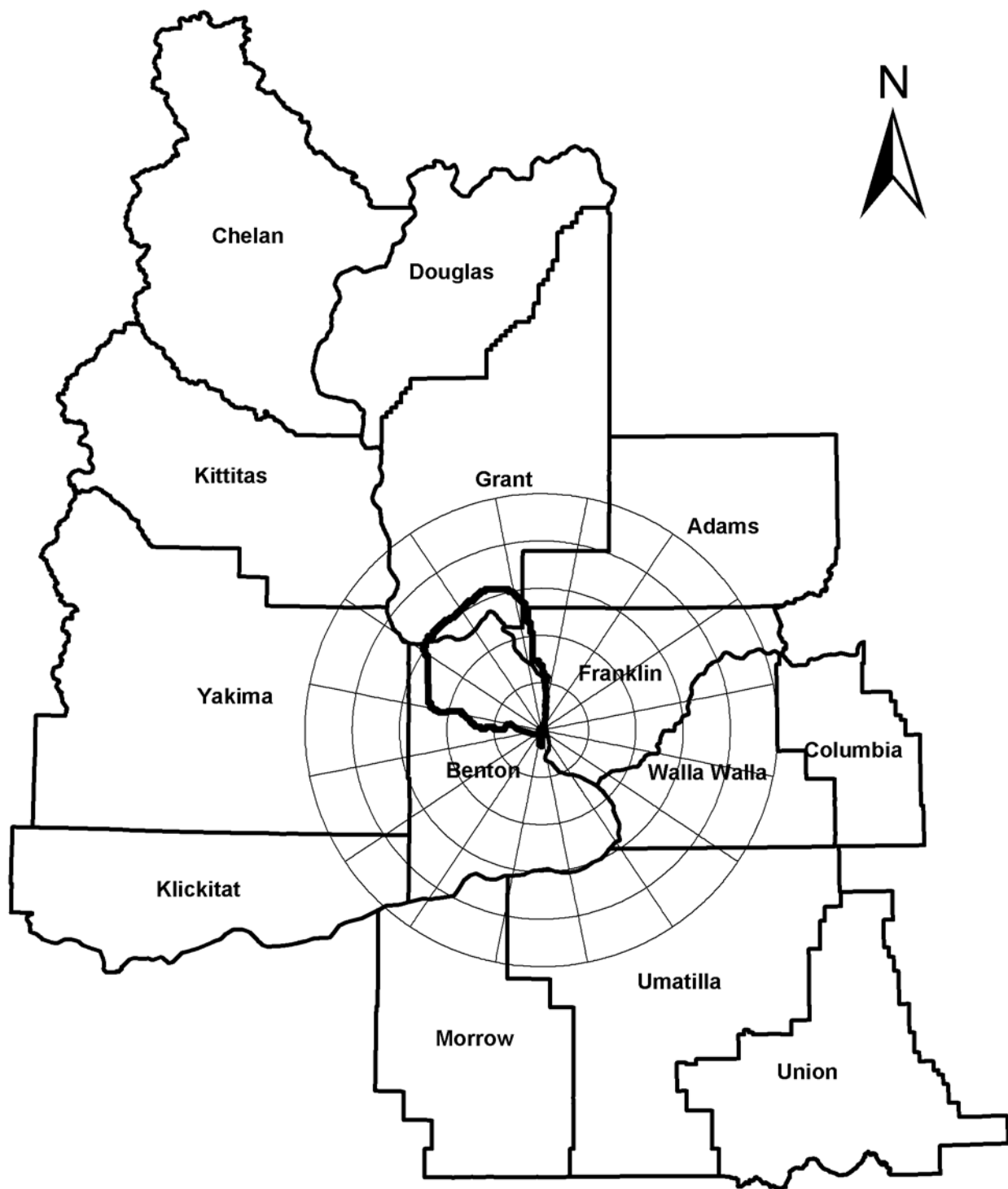
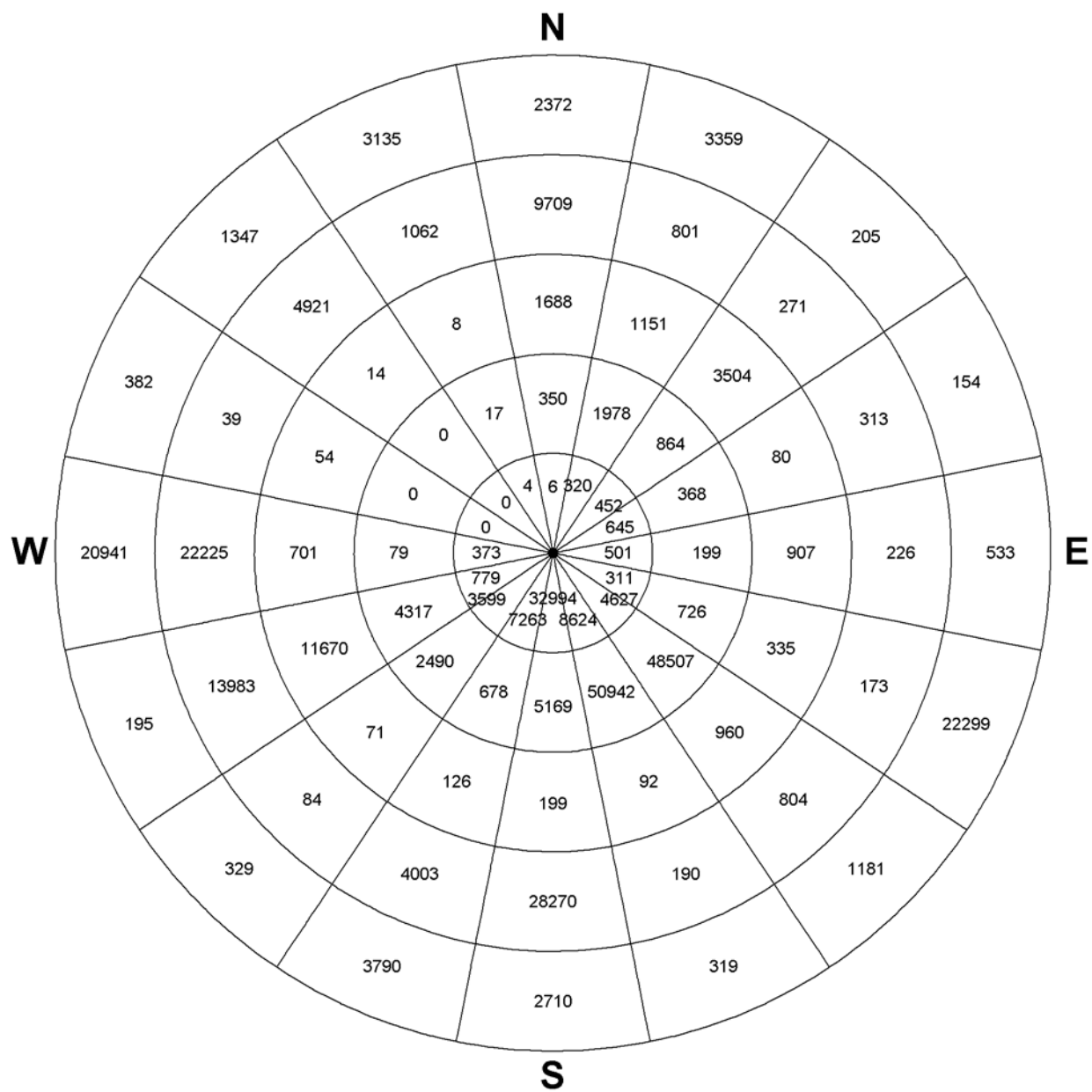


Figure 3.20. Map of 80-km (50-mi) Region Surrounding the 300 Area Meteorological Station



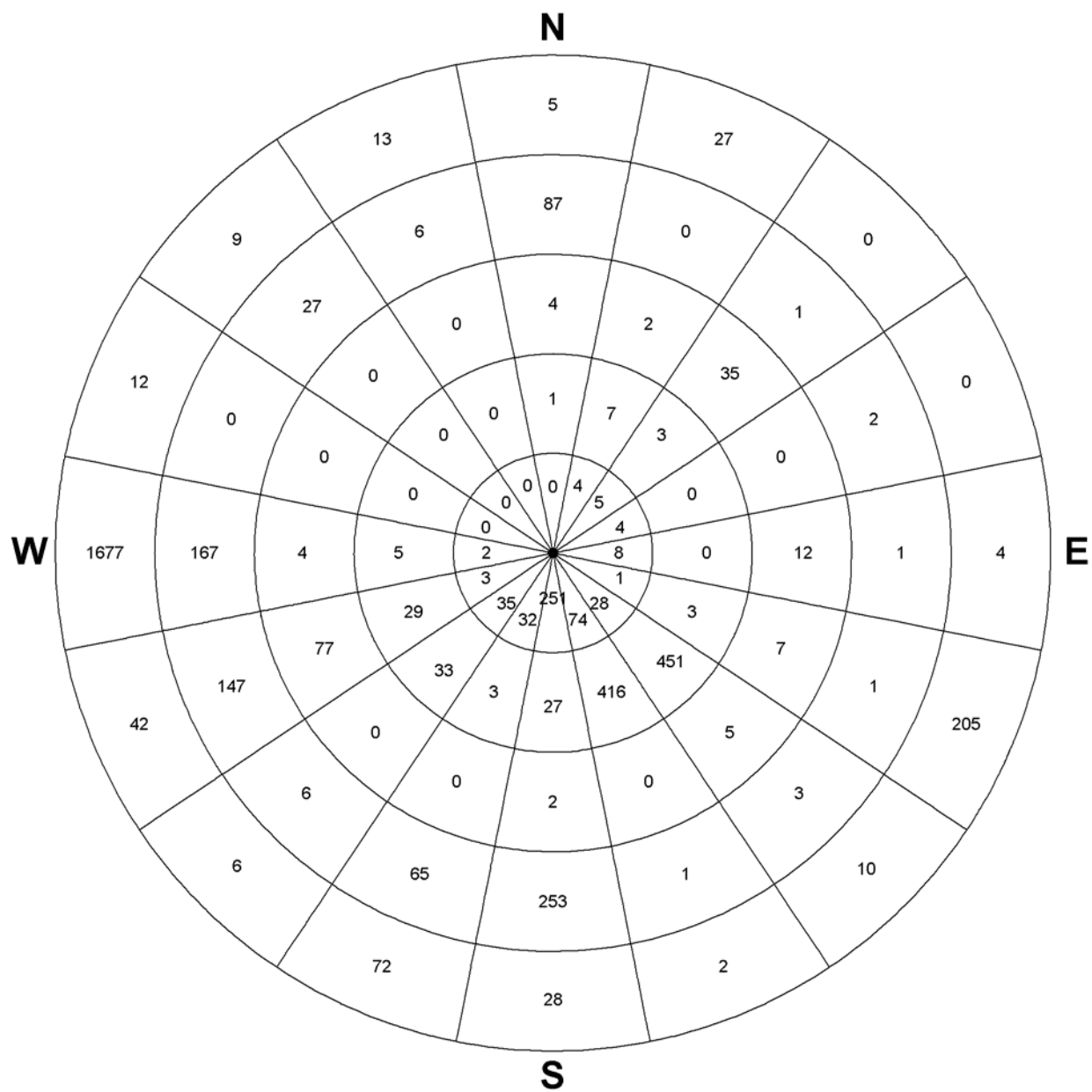


Figure 3.22. Map of Native American Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

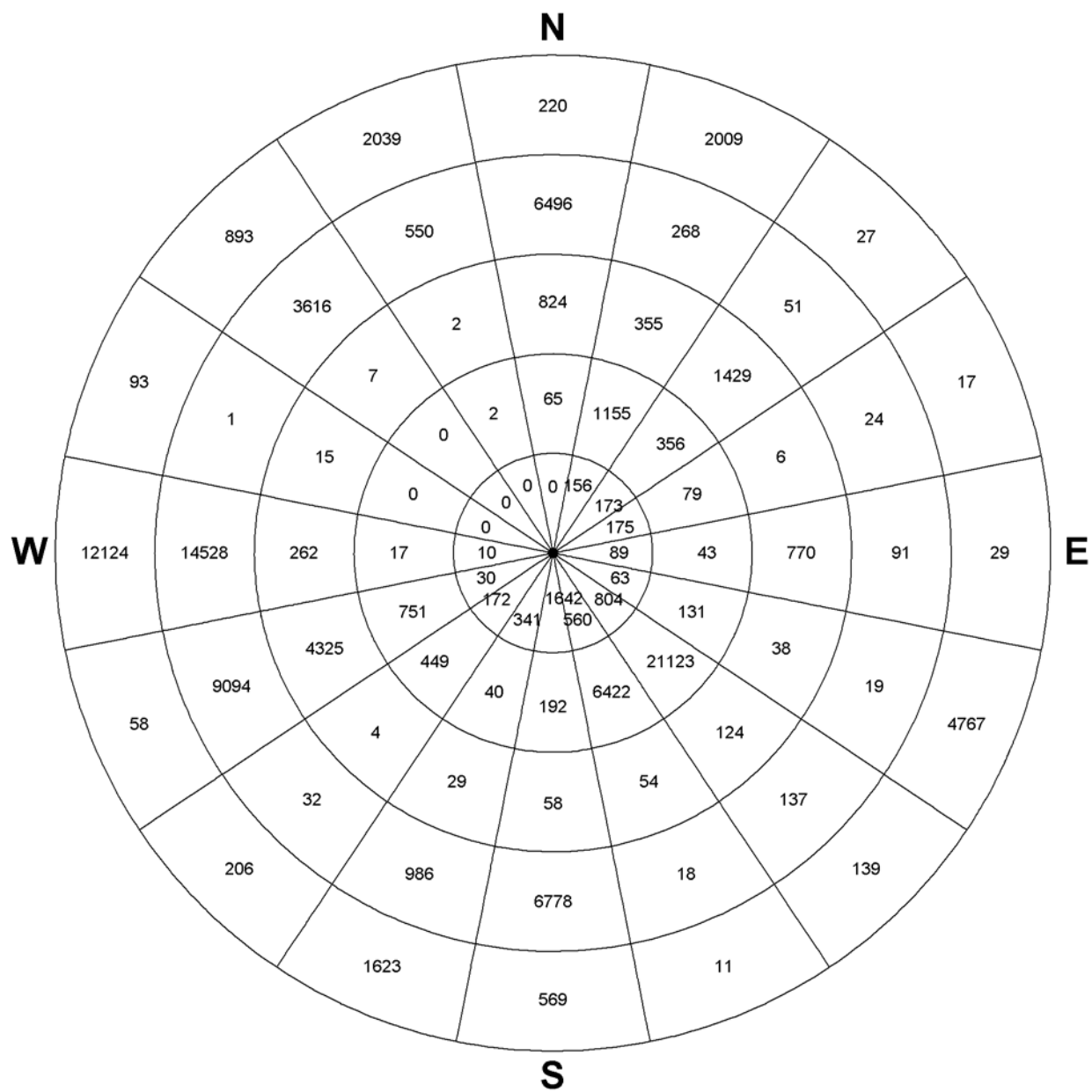


Figure 3.23. Map of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

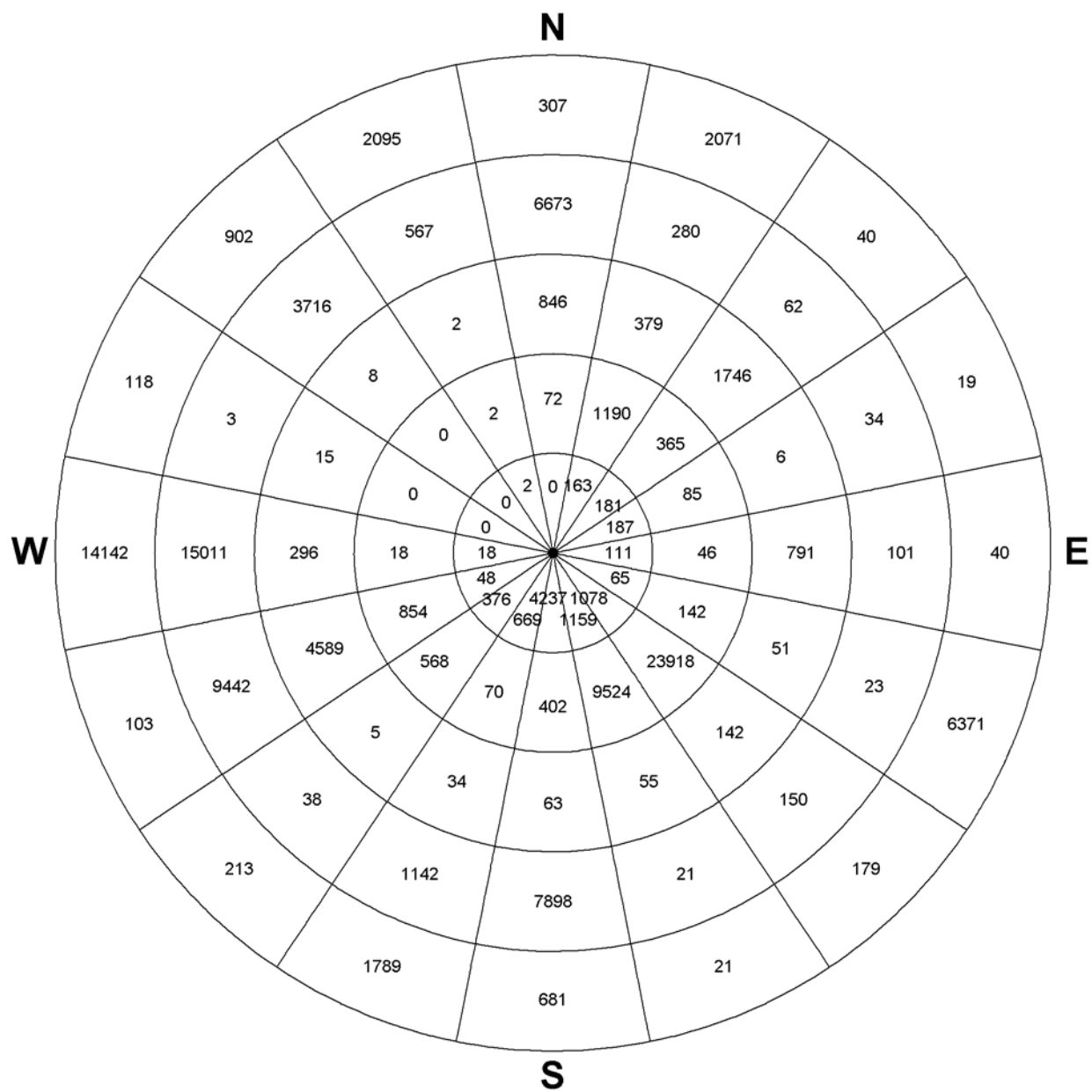


Figure 3.24. Map of Total Minority Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

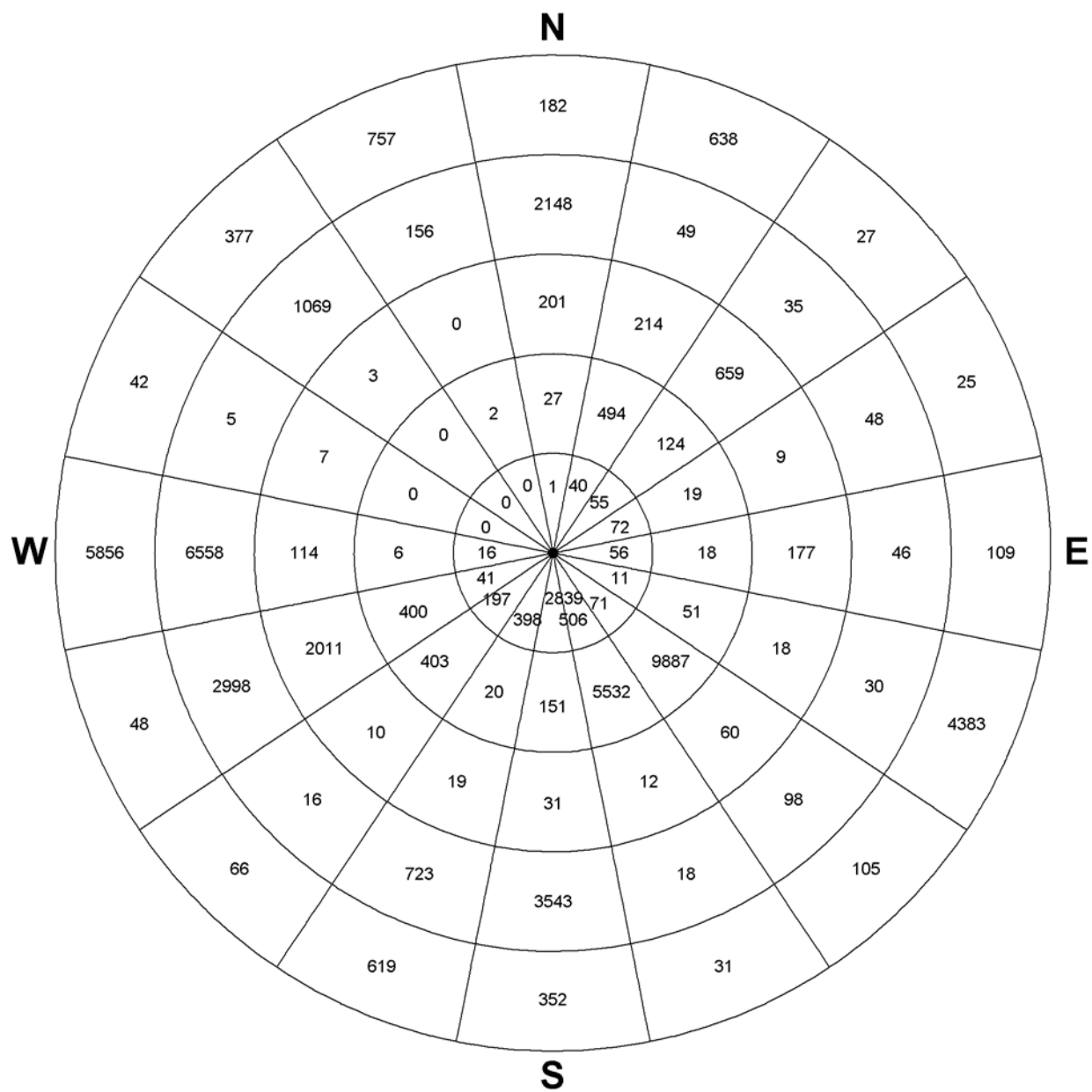


Figure 3.25. Map of Low-Income Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

Table 3.17. Distribution of Total Resident Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	6	21	18	14	3	0	0	0	0	0	0	0	0	0	62
2-3	0	5	24	43	21	16	50	555	186	1	7	1	0	0	0	0	909
3-4	0	12	28	108	28	27	70	1,841	2,683	76	440	23	0	0	0	0	5,336
4-5	0	21	64	59	132	49	39	331	8,114	72	99	21	3	0	0	0	9,004
5-6	0	29	54	78	75	27	35	90	7,081	1,809	1,899	197	200	0	0	0	11,574
6-7	0	39	65	107	52	19	96	62	6,202	3,104	394	26	148	0	0	0	10,314
7-8	0	47	42	65	122	19	322	813	1,728	1,929	283	52	7	0	0	4	5,433
8-9	1	79	77	75	29	123	1,568	1,326	2,861	243	213	213	6	0	0	0	6,814
9-10	5	88	92	89	24	17	2,444	3,606	4,139	29	264	246	9	0	0	0	11,052
10-12	49	195	210	105	66	49	12,494	17,821	4,312	519	1,830	2,379	51	0	0	0	40,080
12-14	29	178	107	85	80	44	22,148	22,546	713	67	628	1,125	5	0	0	0	47,755
14-16	52	403	190	124	21	95	5,953	10,076	130	50	5	277	1	0	0	1	17,378
16-18	104	1,088	117	36	22	350	4,902	445	9	23	11	238	8	0	0	8	7,361
18-20	116	114	240	18	10	188	3,010	54	5	19	16	298	14	0	0	8	4,110
20-25	169	330	319	31	49	331	706	20	6	85	41	3,000	58	0	0	7	5,152
25-30	1,519	821	3,185	49	858	4	254	72	193	41	30	8,670	643	54	14	1	16,408
30-35	9,061	599	101	56	177	57	81	128	10,513	3,411	3	11,142	12,013	22	427	179	47,970
35-40	648	202	170	257	49	116	723	62	17,757	592	81	2,841	10,212	17	4,494	883	39,104
40-50	2,372	3,359	205	154	533	22,299	1,181	319	2,710	3,790	329	195	20,941	382	1,347	3,135	63,251
Total	14,125	7,609	5,296	1,560	2,366	23,844	56,079	60,167	69,342	15,860	6,573	30,944	44,319	475	6,282	4,226	349,067

Table 3.18. Distribution of Native American Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	15
3-4	0	0	0	2	0	0	0	5	19	1	5	0	0	0	0	0	32
4-5	0	1	1	1	6	0	0	1	63	1	1	0	0	0	0	0	75
5-6	0	1	2	1	2	0	0	0	68	14	17	0	1	0	0	0	106
6-7	0	1	2	0	0	0	1	0	63	11	3	0	1	0	0	0	82
7-8	0	1	0	0	0	0	4	3	6	4	3	0	0	0	0	0	21
8-9	0	0	0	0	0	1	13	11	8	1	1	2	0	0	0	0	37
9-10	0	0	0	0	0	0	10	39	24	0	5	1	0	0	0	0	79
10-12	1	0	0	0	0	0	94	124	15	3	23	12	0	0	0	0	272
12-14	0	1	1	0	0	0	194	221	8	0	10	13	0	0	0	0	448
14-16	0	0	0	0	0	0	95	69	4	0	0	1	0	0	0	0	169
16-18	0	6	0	0	0	2	45	2	0	0	0	3	5	0	0	0	63
18-20	0	0	2	0	0	1	23	0	0	0	0	0	0	0	0	0	26
20-25	0	1	2	0	0	5	3	0	0	0	0	12	0	0	0	0	23
25-30	4	1	33	0	12	2	2	0	2	0	0	65	4	0	0	0	125
30-35	83	0	0	0	1	1	0	1	99	58	0	100	103	0	5	0	451
35-40	4	0	1	2	0	0	3	0	154	7	6	47	64	0	22	6	316
40-50	5	27	0	0	4	205	10	2	28	72	6	42	1,677	12	9	13	2,112
Total	97	40	44	6	25	217	497	493	561	172	80	298	1,855	12	36	19	4,452

Table 3.19. Distribution of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2-3	0	2	4	15	0	0	4	27	5	0	0	0	0	0	0	0	57
3-4	0	6	4	11	1	0	10	35	85	3	14	1	0	0	0	0	170
4-5	0	10	25	7	16	2	2	8	470	3	1	0	0	0	0	0	544
5-6	0	14	26	19	17	2	2	3	364	96	81	7	2	0	0	0	633
6-7	0	20	30	42	15	3	28	5	286	139	35	3	3	0	0	0	609
7-8	0	25	8	13	32	4	90	45	133	91	14	8	0	0	0	0	463
8-9	0	39	34	20	5	47	303	92	97	8	11	8	2	0	0	0	666
9-10	0	40	40	48	3	5	365	345	202	1	16	3	3	0	0	0	1,071
10-12	11	93	110	30	7	16	5,175	1,874	144	24	301	310	5	0	0	0	8,100
12-14	6	68	27	5	8	16	13,706	3,935	40	7	148	159	3	0	0	0	18,128
14-16	5	217	79	33	10	26	1,462	570	3	5	0	60	0	0	0	0	2,470
16-18	16	756	29	8	12	50	492	40	2	3	0	96	5	0	0	1	1,510
18-20	27	21	111	3	6	23	288	3	3	1	0	126	4	0	0	1	617
20-25	52	108	164	3	10	38	76	6	1	15	2	1,195	26	0	0	1	1,697
25-30	772	247	1,265	3	760	0	48	48	57	14	2	3,130	236	15	7	1	6,605
30-35	6,181	197	21	4	88	8	16	16	2,776	829	1	6,836	8,555	0	236	114	25,878
35-40	315	71	30	20	3	11	121	2	4,002	157	31	2,258	5,973	1	3,380	436	16,811
40-50	220	2,009	27	17	29	4,767	139	11	569	1,623	206	58	12,124	93	893	2,039	24,824
Total	7,605	3,943	2,036	301	1,022	5,018	22,327	7,065	9,239	3,019	863	14,258	26,941	109	4,516	2,593	110,855

Table 3.20. Distribution of Total Minority Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
2-3	0	2	6	16	0	0	4	103	32	0	2	0	0	0	0	0	165
3-4	0	7	4	13	1	0	10	220	344	16	75	5	0	0	0	0	695
4-5	0	11	26	8	25	2	4	28	1,239	6	7	1	0	0	0	0	1,357
5-6	0	15	27	21	21	3	3	5	785	178	165	11	6	0	0	0	1,240
6-7	0	22	31	45	16	3	29	9	691	270	58	4	6	0	0	0	1,184
7-8	0	27	10	13	34	4	100	81	304	177	19	8	1	0	0	2	780
8-9	0	39	34	20	8	48	440	149	320	21	15	13	2	0	0	0	1,109
9-10	0	40	41	50	5	5	488	564	522	1	35	6	3	0	0	0	1,760
10-12	13	93	112	31	9	16	6,104	3,032	326	49	399	355	6	0	0	0	10,545
12-14	7	72	29	6	9	16	15,012	5,394	62	9	169	204	3	0	0	0	20,992
14-16	6	224	79	37	10	27	1,768	1,046	9	6	0	61	0	0	0	0	3,273
16-18	17	776	29	8	12	57	667	49	2	4	0	101	5	0	0	1	1,728
18-20	29	25	116	3	6	26	367	3	3	2	0	133	4	0	0	1	718
20-25	55	114	172	3	14	49	92	6	1	19	3	1,266	28	0	0	1	1,823
25-30	791	265	1,574	3	777	2	50	49	62	15	2	3,323	268	15	8	1	7,205
30-35	6,336	208	24	4	98	12	16	17	3,164	963	1	7,087	8,792	1	256	115	27,094
35-40	337	72	38	30	3	11	134	4	4,734	179	37	2,355	6,219	2	3,460	452	18,067
40-50	307	2,071	40	19	40	6,371	179	21	681	1,789	213	103	14,142	118	902	2,095	29,091
Total	7,898	4,083	2,394	331	1,089	6,652	25,467	10,780	13,281	3,704	1,200	15,036	29,485	136	4,626	2,668	128,830

Table 3.21. Distribution of Low-Income Population within 80 km (50 mi) of the Hanford 300 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	6
2-3	0	1	3	5	2	0	0	10	0	0	0	0	0	0	0	0	21
3-4	0	1	3	13	3	1	0	48	172	3	19	1	0	0	0	0	264
4-5	0	3	8	7	16	4	0	17	979	4	7	1	0	0	0	0	1,046
5-6	0	3	7	9	9	2	0	0	589	112	105	9	9	0	0	0	854
6-7	0	5	8	13	6	1	0	0	652	160	21	1	7	0	0	0	874
7-8	0	6	5	8	15	1	2	14	150	97	17	3	0	0	0	0	318
8-9	0	10	9	8	2	1	21	103	77	21	12	12	0	0	0	0	276
9-10	1	11	11	6	1	1	48	314	220	1	16	14	0	0	0	0	644
10-12	6	23	19	4	6	5	2,409	1,733	126	14	278	198	3	0	0	0	4,824
12-14	3	29	7	4	7	6	5,915	3,403	19	2	123	112	0	0	0	0	9,630
14-16	3	107	9	6	2	9	1,027	353	4	1	0	22	0	0	0	0	1,543
16-18	7	312	22	3	2	19	323	38	1	1	1	25	1	0	0	1	756
18-20	8	23	67	2	1	12	213	5	1	2	1	43	2	0	0	1	381
20-25	11	89	73	3	4	17	29	2	1	13	6	632	7	0	0	0	887
25-30	190	125	586	6	173	1	31	10	30	6	4	1,379	107	7	3	0	2,658
30-35	2,050	42	12	8	36	10	10	14	1,537	643	0	2,191	3,963	3	93	37	10,649
35-40	98	7	23	40	10	20	88	4	2,006	80	16	807	2,595	2	976	119	6,891
40-50	182	638	27	25	109	4,383	105	31	352	619	66	48	5,856	42	377	757	13,617
Total	2,559	1,435	900	173	406	4,493	10,221	6,099	6,916	1,779	692	5,498	12,550	54	1,449	915	56,139

3.6 400 Area

The 400 Area Meteorological Station is in the south central part of the Hanford Site. At the 2000 Census there were about 353,700 people residing within 80 km (50 mi) of this location. Based on census block data, about 131,700 (37%) of these residents were minorities. The Hispanic and Latino population (all races) was the single largest minority group, with 113,100 members (32% of the population). There were 5,300 Native Americans (1% of the total). There were an estimated 55,700 low-income individuals (about 16% of the population).

Figures 3.26 to 3.31 and Tables 3.22 to 3.26 show population distributions for total, minority, and low-income populations living within 50 miles of the 400 Area Meteorological Station on the Hanford Site.

The 400 Area Meteorological Station is comparatively close to the Tri-Cities, but a few miles further away than the 300 Area from both the city of Richland to the south and the settled farmland to the east of the Columbia River. About 19,700 people live within 10 miles of the 400 Area Meteorological Station, but only about 100 people live within 5 miles, and there are no residents within 3 miles. Most of these people reside in the Richland area, ranging from SSE to SSW, but there are few hundred people living within 10 miles across the river toward the east. About 65,500 people reside within 15 miles, and 156,600 people reside within 20 miles, mostly from the SE to SW. There are small concentrations of Native Americans living between 8 and 25 miles to the SE and south, in the Tri-Cities area. The largest Native American population is 40-50 miles to the west, with about 2,400 individuals. Hispanic and Latino populations are located 8 to 20 miles SE to due south (over 29,000 individuals), 25-35 miles to the NW through NE and WSW, and beyond 35 miles in several directions (mostly N-NNE, west, and south).

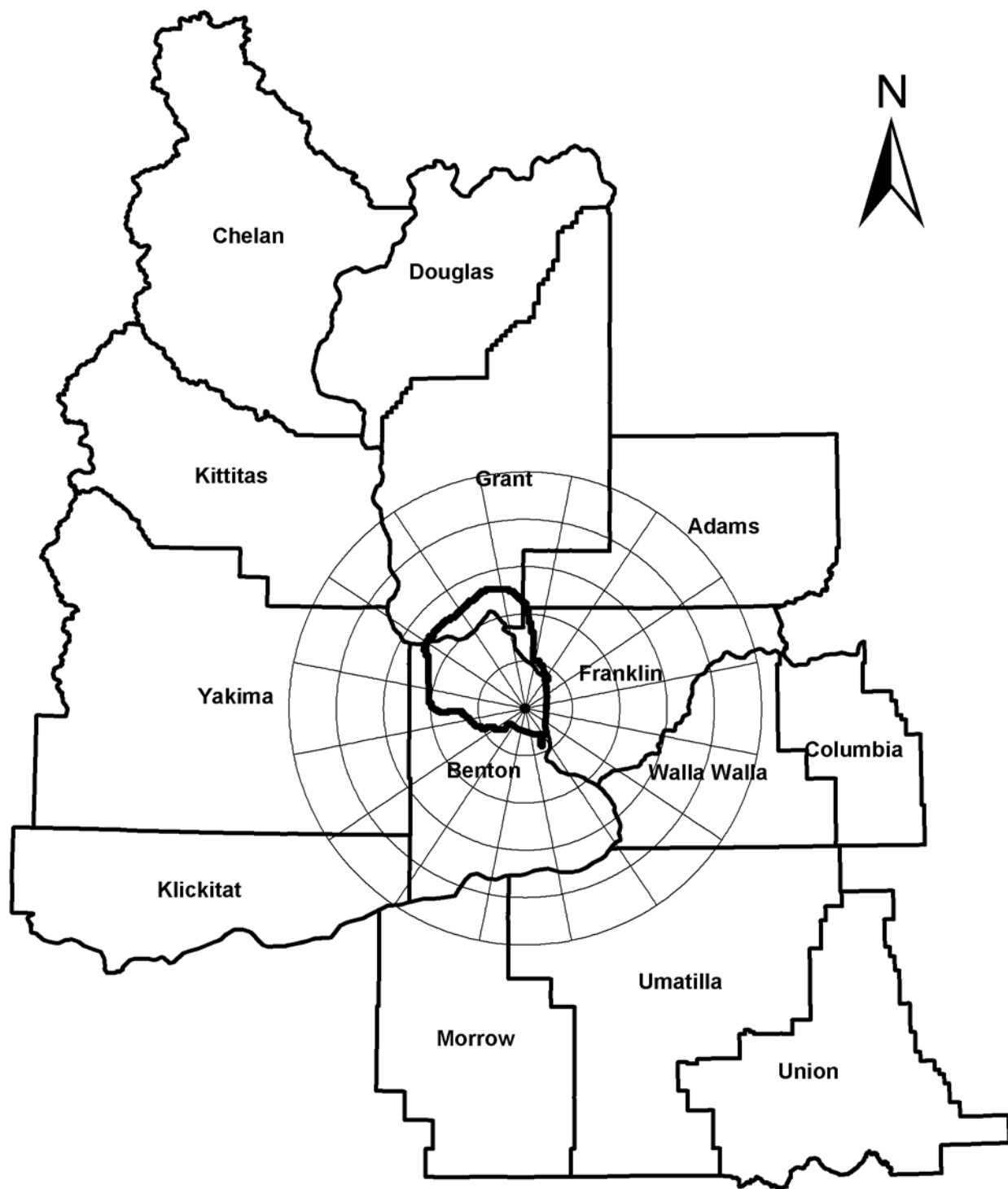
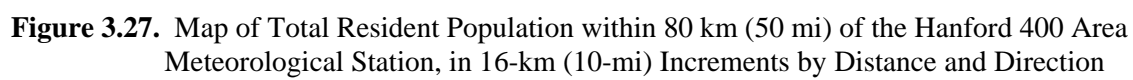


Figure 3.26. Map of 80-km (50-mi) Region Surrounding the 400 Area Meteorological Station



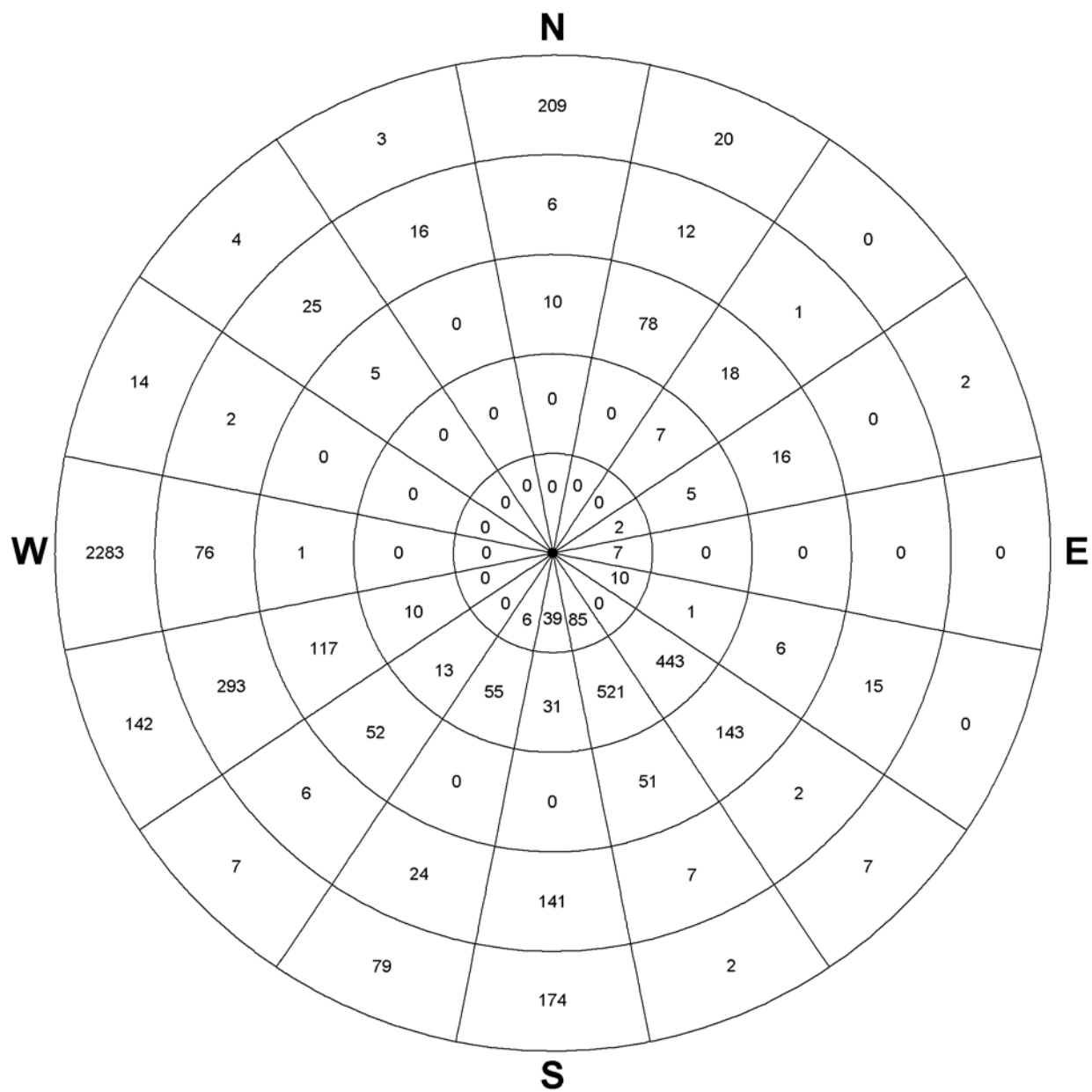


Figure 3.28. Map of Native American Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

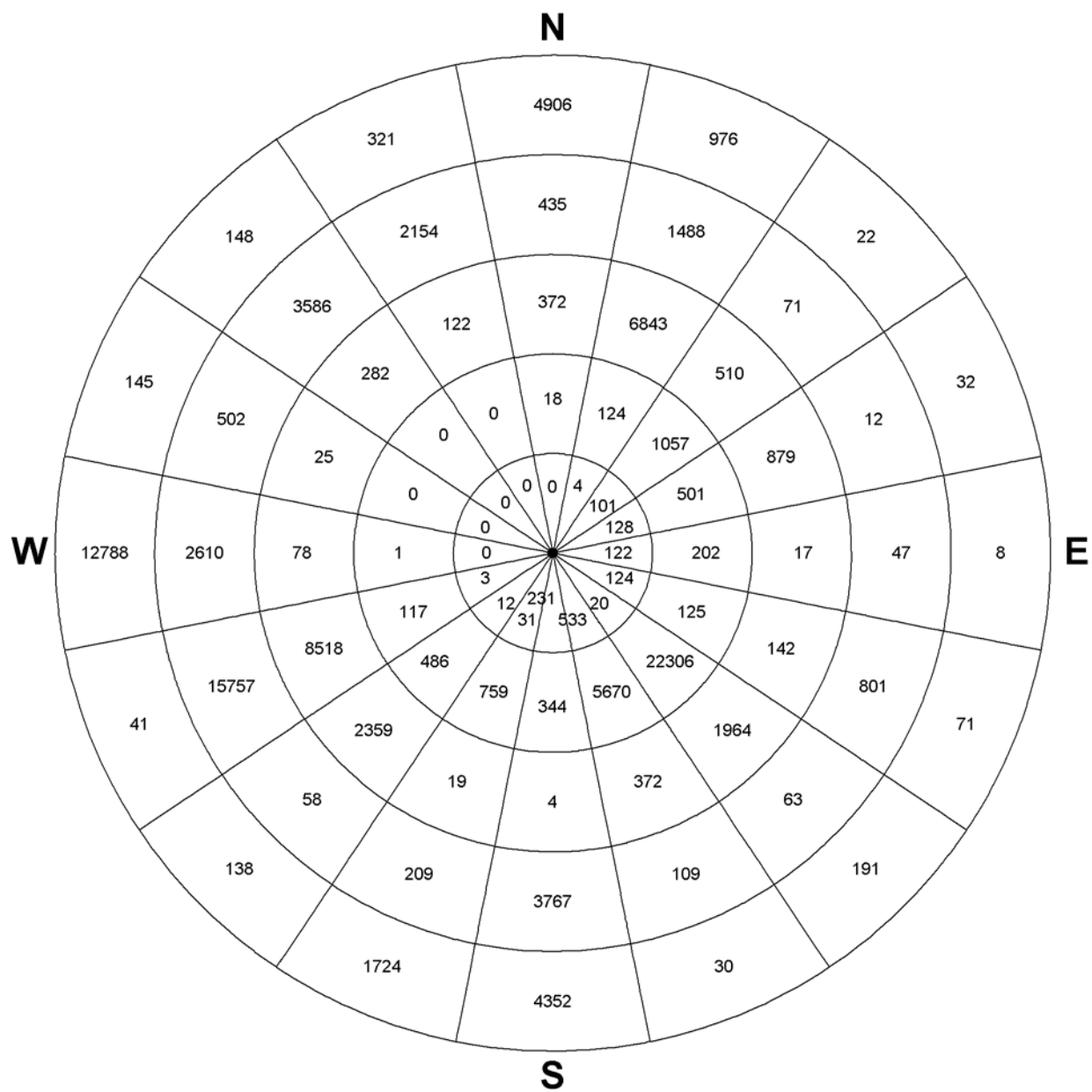


Figure 3.29. Map of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

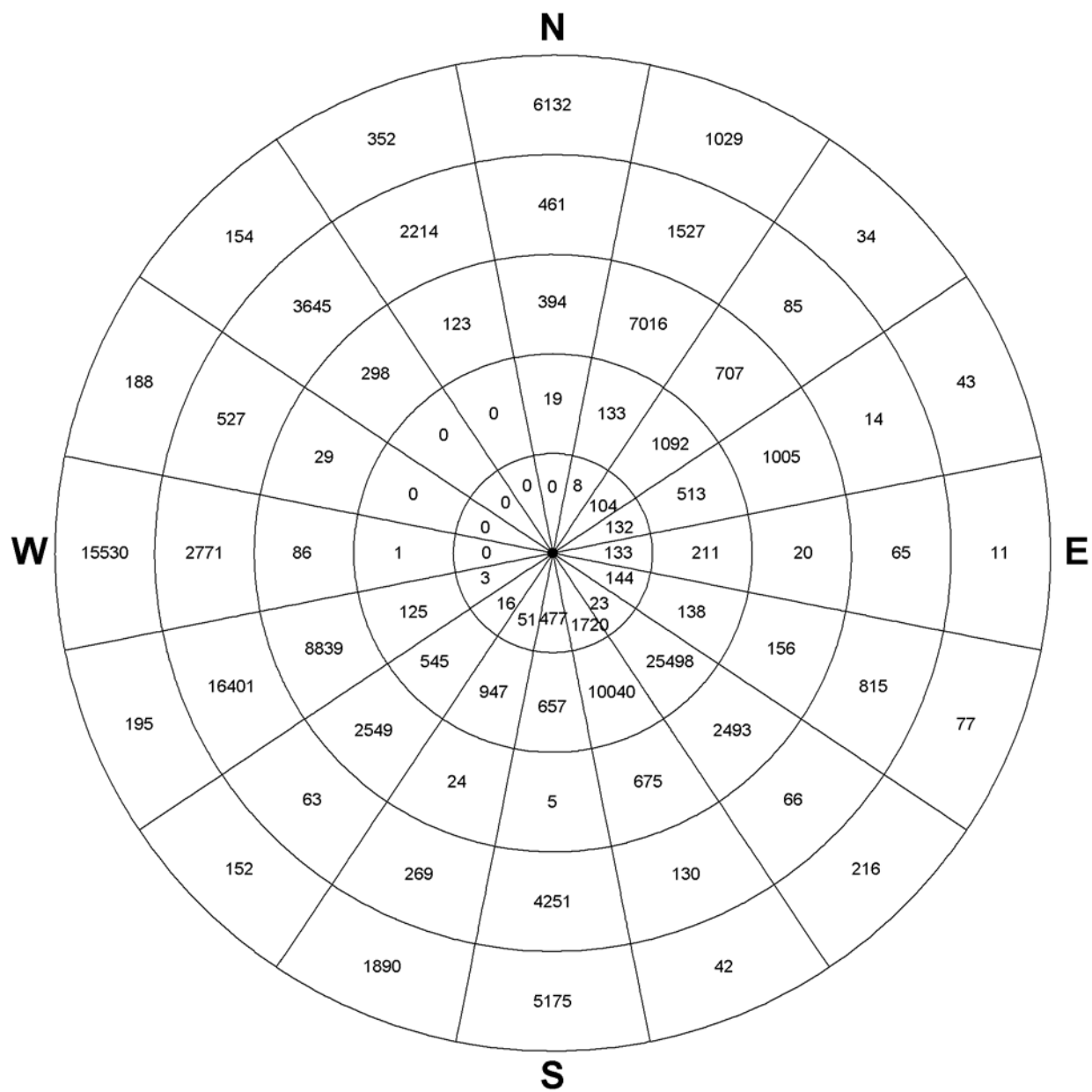


Figure 3.30. Map of Total Minority Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station, in 16-km (10-mi) Increments by Distance and Direction

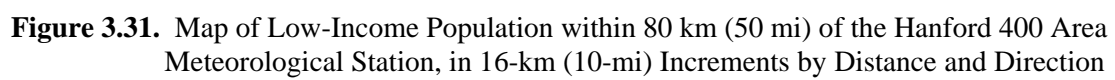


Table 3.22. Distribution of Total Resident Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4-5	0	0	0	0	2	0	0	0	0	52	43	0	0	0	0	0	97
5-6	0	0	0	20	34	33	3	1	5	216	49	0	0	0	0	0	361
6-7	0	0	9	43	42	86	42	13	162	123	5	0	0	0	0	0	525
7-8	0	1	40	70	56	156	55	247	384	19	7	1	0	0	0	0	1,036
8-9	0	15	70	75	86	107	109	2,816	2,161	108	13	4	0	0	0	0	5,564
9-10	0	10	87	90	93	223	125	8,978	1,913	386	195	5	0	0	0	0	12,105
10-12	14	37	149	202	234	199	147	14,204	4,885	1,226	716	1	0	0	0	0	22,014
12-14	25	93	437	127	204	151	1,318	5,520	930	3,525	886	2	1	0	0	0	13,219
14-16	26	140	1,009	188	93	88	3,814	14,390	976	173	262	10	4	0	0	0	21,173
16-18	22	156	106	118	129	109	16,238	20,235	370	8	242	41	4	0	0	0	37,778
18-20	19	82	90	402	42	31	26,408	14,582	477	14	350	163	2	0	0	0	42,662
20-25	115	896	229	73	48	332	13,382	6,838	47	71	3,736	1,065	8	48	27	8	26,923
25-30	600	9,960	1,734	1,631	54	326	1,516	26	5	101	4,246	13,106	204	57	449	197	34,212
30-35	712	580	187	68	122	792	256	68	331	59	98	22,113	2,091	1,017	3,569	1,246	33,309
35-40	620	1,961	85	95	66	126	76	638	13,443	1,054	62	957	3,273	0	894	2,097	25,447
40-50	22,038	2,355	158	383	117	367	1,155	538	19,359	3,944	278	303	23,858	1,090	348	992	77,283
Total	24,191	16,290	4,390	3,585	1,422	3,126	64,644	89,094	45,448	11,079	11,188	37,771	29,445	2,212	5,287	4,540	353,712

Table 3.23. Distribution of Native American Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	4
6-7	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	4
7-8	0	0	0	0	2	2	0	3	3	0	0	0	0	0	0	0	10
8-9	0	0	0	0	3	1	0	23	20	0	0	0	0	0	0	0	47
9-10	0	0	0	0	0	6	0	59	14	5	0	0	0	0	0	0	84
10-12	0	0	1	0	0	1	0	145	12	13	1	0	0	0	0	0	173
12-14	0	0	0	0	0	0	11	26	5	41	8	1	0	0	0	0	92
14-16	0	0	6	1	0	0	20	93	5	1	1	4	0	0	0	0	131
16-18	0	0	0	0	0	0	119	142	1	0	3	0	0	0	0	0	265
18-20	0	0	0	4	0	0	293	115	8	0	0	5	0	0	0	0	425
20-25	2	2	1	0	0	1	136	51	0	0	16	4	0	0	0	0	213
25-30	8	76	17	16	0	5	7	0	0	0	36	113	1	0	5	0	284
30-35	5	1	1	0	0	14	2	0	3	0	0	168	17	2	21	6	240
35-40	1	11	0	0	0	1	0	7	138	24	6	125	59	0	4	10	386
40-50	209	20	0	2	0	0	7	2	174	79	7	142	2,283	14	4	3	2,946
Total	225	110	26	25	7	32	595	666	385	164	78	562	2,360	16	34	19	5,304

Table 3.24. Distribution of Hispanic and Latino Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	3
5-6	0	0	0	10	17	13	1	0	0	2	1	0	0	0	0	0	44
6-7	0	0	3	21	18	29	3	0	7	1	2	0	0	0	0	0	84
7-8	0	0	15	38	25	20	0	7	16	2	2	0	0	0	0	0	125
8-9	0	3	33	30	37	19	10	103	101	9	2	1	0	0	0	0	348
9-10	0	1	50	29	24	43	6	423	107	16	4	2	0	0	0	0	705
10-12	2	3	67	119	74	61	6	697	206	94	78	0	0	0	0	0	1,407
12-14	3	15	268	40	78	26	304	307	51	637	134	1	0	0	0	0	1,864
14-16	6	28	693	69	4	16	608	847	41	28	45	4	0	0	0	0	2,389
16-18	7	63	15	40	34	14	7,308	2,127	27	0	116	20	0	0	0	0	9,771
18-20	0	15	14	233	12	8	14,080	1,692	19	0	113	92	1	0	0	0	16,279
20-25	58	296	69	28	11	94	1,826	366	4	4	1,218	612	1	14	15	6	4,622
25-30	314	6,547	441	851	6	48	138	6	0	15	1,141	7,906	77	11	267	116	17,884
30-35	334	335	53	9	30	731	49	45	89	20	34	15,245	907	502	2,934	807	22,124
35-40	101	1,153	18	3	17	70	14	64	3,678	189	24	512	1,703	0	652	1,347	9,545
40-50	4,906	976	22	32	8	71	191	30	4,352	1,724	138	41	12,788	145	148	321	25,893
Total	5,731	9,435	1,761	1,552	396	1,263	24,544	6,714	8,698	2,742	3,053	24,436	15,477	672	4,016	2,597	113,087

Table 3.25. Distribution of Total Minority Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4-5	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	4
5-6	0	0	0	11	19	14	1	0	0	7	2	0	0	0	0	0	54
6-7	0	0	3	23	20	30	4	3	30	4	2	0	0	0	0	0	119
7-8	0	0	15	38	27	22	0	46	52	3	2	0	0	0	0	0	205
8-9	0	4	35	30	40	23	11	436	193	11	3	1	0	0	0	0	787
9-10	0	2	51	30	26	55	7	1,235	202	25	5	2	0	0	0	0	1,640
10-12	2	4	70	119	76	66	11	1,631	413	132	87	0	0	0	0	0	2,611
12-14	3	17	275	44	80	32	381	740	88	783	171	1	0	0	0	0	2,615
14-16	6	30	709	69	5	18	831	1,769	77	32	46	4	0	0	0	0	3,596
16-18	7	66	21	40	37	14	8,466	3,395	44	0	126	21	0	0	0	0	12,237
18-20	1	16	17	241	13	8	15,809	2,505	35	0	115	99	1	0	0	0	18,860
20-25	63	302	73	28	11	97	2,318	669	5	6	1,309	635	1	14	16	6	5,553
25-30	331	6,714	634	977	9	59	175	6	0	18	1,240	8,204	85	15	282	117	18,866
30-35	345	348	60	10	45	738	51	46	108	20	34	15,740	955	527	2,990	833	22,850
35-40	116	1,179	25	4	20	77	15	84	4,143	249	29	661	1,816	0	655	1,381	10,454
40-50	6,132	1,029	34	43	11	77	216	42	5,175	1,890	152	195	15,530	188	154	352	31,220
Total	7,006	9,713	2,022	1,707	440	1,330	28,296	12,607	10,565	3,181	3,325	25,563	18,388	744	4,097	2,689	131,673

Table 3.26. Distribution of Low-Income Population within 80 km (50 mi) of the Hanford 400 Area Meteorological Station

	Direction																
Distance from Reference Point (Miles)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
0-1mi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4
5-6	0	0	0	2	4	4	0	0	0	10	2	0	0	0	0	0	22
6-7	0	0	1	5	5	10	5	1	7	6	0	0	0	0	0	0	40
7-8	0	0	5	8	7	19	3	8	20	1	0	0	0	0	0	0	71
8-9	0	2	8	9	10	13	2	130	120	5	0	0	0	0	0	0	299
9-10	0	1	10	11	11	27	4	743	121	23	12	0	0	0	0	0	963
10-12	1	2	27	24	27	24	2	1,452	221	81	56	0	0	0	0	0	1,917
12-14	2	6	117	11	8	14	14	361	99	525	76	0	0	0	0	0	1,233
14-16	2	9	294	10	4	7	67	822	26	8	21	1	1	0	0	0	1,272
16-18	1	16	31	15	7	10	3,451	2,085	10	0	27	5	0	0	0	0	5,658
18-20	1	15	26	103	4	3	7,010	1,257	13	1	58	20	0	0	0	0	8,511
20-25	7	126	60	11	4	29	1,286	210	3	9	659	186	1	6	6	2	2,605
25-30	76	2,153	259	347	5	16	81	2	1	16	484	2,881	37	10	97	42	6,507
30-35	101	71	18	9	20	162	31	9	54	9	11	6,478	457	221	775	251	8,677
35-40	74	362	10	14	13	25	9	81	2,095	182	12	274	939	0	247	488	4,825
40-50	2,947	350	20	60	24	66	137	43	2,204	647	61	85	6,033	87	94	268	13,126
Total	3,212	3,113	886	639	153	429	12,102	7,204	4,994	1,525	1,481	9,930	7,468	324	1,219	1,051	55,730

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