

3. DEMOGRAPHICS

3.1 Population and Growth Rates of Project Area

Table 3-1 presents the historic population of the project area. Indian and non-Indian population are presented. Totals are given within and outside the Fort Peck Indian Reservation. Table 3-1 includes all population of Daniels, Roosevelt, Sheridan and Valley counties. The project area does not include all of Valley County; and, therefore, the combined county population is greater than the project population. Sources of data are the censuses¹ of the United States from 1930 through 1990.

In the early years of the census, no racial breakdown was available by county. In 1960, racial statistics were not adequate to identify the Indian population. After 1970, the Indian population could be adequately defined by county. The four county area in which the project is situated had a total population in 1930 of 37,275. By 1990, that population had declined to 26,236. On the Fort Peck Indian Reservation the population declined from 11,874 in 1960 to 10,595 in 1990. However, the Indian population grew from 3,127 (non-white) in 1960 to 5,782 (Native American) in 1990, in which period the non-Indian population declined from 8,747 to 4,813.

Outside the Fort Peck Indian Reservation, in the area to be served by Dry Prairie, total population declined from 27,150 in 1960 to 15,641 in 1990.

Annual growth rates of the Indian population within the Fort Peck Indian Reservation were high (2.1 percent) in the three decades between 1960 and 1990 (Table 3-1). Annual rate of *decline* in growth in the non-Indian population was also high during the same period, -2.0% within the Fort Peck Indian Reservation and -1.8% outside the Reservation. Table 3-1 presents growth rates for ten and twenty year periods to better define the population trends between 1960 and 1990.

3.2 Montana Indian Population and Growth Rates²

Table 3-2 summarizes the Indian population for the state of Montana during the century from the 1890 through 1990. Indian population in the state ranged from a low of 10,745 in 1910 to a high of 47,524 in 1990. The population in 1890 was 11,206. The population remained relatively stable, with moderate decline, through 1920. Over the last 50 years, the Indian growth rate in Montana was 2.1%

¹Bureau of Census, Montana, General Population Characteristics, 1952, 1962, 1973, 1982, 1992.

²The 1950 Census of Population for Montana, General Characteristics, provided information on Montana Indian population from 1880 through 1950 and for each census year during the period. (See Table 14, Race by Sex, for the State, Urban and Rural, 1950, and for the State, 1880 to 1940).

TABLE 3-1

HISTORIC POPULATION AND GROWTH RATES
FORT PECK INDIAN RESERVATION AND COUNTIES IN PROJECT AREA

Year	Race	Project Counties					Fort Peck	
		Daniels	Roosevelt	Sheridan	Valley	Total	Indian Reservation	Off Reservation
1930		5,553	10,672	9,869	11,181	37,275	--	
1940		4,563	9,806	7,814	15,181	37,364	--	
1950		3,946	9,580	6,674	11,353	31,553	--	
1960	Non-White	5	2,773	63	834	3,675	3,127	548
	White	3,750	8,958	6,395	16,246	35,349	8,747	26,602
	Total	3,755	11,731	6,458	17,080	39,024	11,874	27,150
1970	Indian	16	3,110	42	972	4,140	3,477	663
	Non-Indian	3,067	7,255	5,737	10,499	26,558	6,576	19,982
	Total	3,083	10,365	5,779	11,471	30,698	10,053	20,645
1980	Indian	16	3,865	38	889	4,808	4,273	535
	Non-Indian	2,819	6,602	5,376	9,361	24,158	5,648	18,510
	Total	2,835	10,467	5,414	10,250	28,966	9,921	19,045
1990	Indian	6	5,355	50	770	6,181	5,782	399
	Non-Indian	2,260	5,644	4,682	7,469	20,055	4,813	15,242
	Total	2,266	10,999	4,732	8,239	26,236	10,595	15,641
10-Year Growth Rate (1960-1970), %								
	Indian	12.3	1.2	(4.0)	1.5	1.2	1.1	1.9
	Non-Indian	(2.0)	(2.1)	(1.1)	(4.3)	(2.8)	(2.8)	(2.8)
	Total	(2.0)	(1.2)	(1.1)	(3.9)	(2.4)	(1.7)	(2.7)
10-Year Growth Rate (1970-1980), %								
	Indian	0.0	2.2	(1.0)	(0.9)	1.5	2.1	(2.1)
	Non-Indian	(0.8)	(0.9)	(0.6)	(1.1)	(0.9)	(1.5)	(0.8)
	Total	(0.8)	0.1	(0.7)	(1.1)	(0.6)	(0.1)	(0.8)
10-Year Growth Rate (1980-1990), %								
	Indian	(9.3)	3.3	2.8	(1.4)	2.5	3.1	(2.9)
	Non-Indian	(2.2)	(1.6)	(1.4)	(2.2)	(1.8)	(1.6)	(1.9)
	Total	(2.2)	0.5	(1.3)	(2.2)	(1.0)	0.7	(1.9)
20-Year Growth Rate (1960-1980), %								
	Indian	6.0	1.7	(2.5)	0.3	1.4	1.6	(0.1)
	Non-Indian	(1.4)	(1.5)	(0.9)	(2.7)	(1.9)	(2.2)	(1.8)
	Total	(1.4)	(0.6)	(0.9)	(2.5)	(1.5)	(0.9)	(1.8)
20-Year Growth Rate (1970-1990), %								
	Indian	(4.8)	2.8	0.9	(1.2)	2.0	2.6	(2.5)
	Non-Indian	(1.5)	(1.2)	(1.0)	(1.7)	(1.4)	(1.5)	(1.3)
	Total	(1.5)	0.3	(1.0)	(1.6)	(0.8)	0.3	(1.4)
30-Year Growth Rate (1960-1990), %								
	Indian	0.6	2.2	(0.8)	(0.3)	1.7	2.1	(1.1)
	Non-Indian	(1.7)	(1.5)	(1.0)	(2.6)	(1.9)	(2.0)	(1.8)
	Total	(1.7)	(0.2)	(1.0)	(2.4)	(1.3)	(0.4)	(1.8)

annually. From 1960 through 1990, the state-wide Indian growth rate was 2.7%. Therefore, a growth rate of 2.1% on the Fort Peck Indian Reservation from 1960 through 1990 (Table 3-1) was not atypical. It is reasonable to expect a comparable growth rate in the future.

TABLE 3-2

POPULATION AND GROWTH RATE OF MONTANA INDIANS

Year	Population	10-Year	20-Year	30-Year	50-Year
1890	11,206	--	--	--	--
1900	11,343	.1	--	--	--
1910	10,745	-.5	-.2	--	--
1920	10,956	.2	-.2	-.1	--
1930	14,798	3.1	1.6	.9	--
1940	16,841	1.3	2.2	1.5	.8
1950	16,606	-.1	.6	1.4	.8
1960	21,181	2.5	1.2	1.2	1.4
1970	27,130	2.5	2.5	1.6	1.8
1980	37,153	3.2	2.8	2.7	1.9
1990	47,524	2.5	2.8	2.7	2.1

3.3 Project Population Projection From 1990 Census

Table 3-3 presents population projections within the Fort Peck Indian Reservation for both Indians and non-Indians and for the Dry Prairie area outside the Reservation. The Indian population was projected to grow at a rate of 2.1% annually. The non-Indian population, both within and outside the Reservation, was projected to decline at a progressively slower rate. The rate of decline projected for 1990 through 2000 was approximately half the rate of decline experienced over the past 30 years. In the absence of a slowing in the rate of decline in the non-Indian population, the future population becomes extremely small. Projections at the historic rate of decline were not considered reasonable.

TABLE 3-3

POPULATION PROJECTIONS

Year	Fort Peck Indian		Fort Peck Non-Indian		Dry Prairie		Total Persons
	Growth Rate, %	Persons	Growth Rate, %	Persons	Growth Rate, %	Persons	
1990		5,822		4,900		14,107	24,829
	2.1		-.9		-.9		
2000		7,167		4,476		12,888	24,531
	2.1		-.8		-.8		
2010		8,822		4,131		11,893	24,846
	2.1		-.7		-.7		
2020		10,860		3,851		11,086	25,797
	2.1		-.6		-.6		
2030		13,369		3,626		10,439	27,434
Change		7,547		-1,274		-3,668	2,605

Projections were made for the project over a 40 year period beginning in 1990 and ending in 2030. The regional drinking water project proposed in PL 106-382 will have a functional life that will extend well beyond a 50 year period and well beyond the year 2030. Design was based on population in year 2030 for several reasons. First, a 40 year period was considered reasonable as an economical life of project for evaluation of the future stream of operation, maintenance and replacement (OMR) costs in the sizing of pipelines, pumping stations and the water treatment plant. Second, projection over more than a 40 year period with a declining non-Indian population and an increasing Indian population represents high-risk estimating. An investment of greater federal, state and local funds in the project for a level of population projected beyond year 2030 was not considered sound due to uncertainties as discussed above. Water conservation gains are realistic over the next three decades to permit an increase in population beyond year 2030 if greater population is realized. Due to current uncertainties, water treatment plant expansion and construction of additional pipeline capacity can be planned with more cost-effectiveness when a population greater than projected for 2030 and full potential for future water conservation have been realized. With future knowledge, better decisions can be made with regard to the location and amounts of increased demand than can be made currently.

3.4 Distribution of 1990 Population Within Project Area³

The population in the project area in 1990 was 24,829. Population within the Fort Peck Indian Reservation was 10,722, and population outside the Reservation was 14,107. Indian population within the Fort Peck Indian Reservation was 5,822. The total population in communities classified as “places” by the Census was 13,865, and the remaining population of 10,964 was outside communities classified as “places” (in smaller communities, in suburbs of the places, and in rural areas). Table 3-4 lists the places and the smaller communities.

Glasgow, Wolf Point, Plentywood and Scobey are the communities in the project area with 1990 population greater than 1,000. These communities account for approximately 70 percent of the total community population. Smaller communities, such as Whitetail, Peerless, Oswego, Fort Kipp, Raymond and Antelope have the smallest populations. Because these latter communities are not “places” as defined by the Census, their populations are not defined and are not separable from the rural population by block group.

3.5 Comparison of Population Projections with 2000 Census

The population projections in the previous section were made on the basis of the 1990 census. By March 2001, population data were available from the 2000 census for comparison with projections.⁴

³Bureau of Census, 1990, U.S. Census Data, Database: C 90STF3A, Summary Level: Block Group and Place: <<http://venus.census.gov>>.

⁴U.S. Department of Commerce, March 2001, *Census 2000 Redistricting Data (Public Law 94-171) Summary File, 2000 Census of Population and Housing; Summary File-(MT)* [machine-readable data files]/prepared

TABLE 3-4

1990 POPULATION OF COMMUNITIES, PUBLIC WATER SYSTEMS AND RURAL AREAS
FORT PECK INDIAN RESERVATION AND DRY PRAIRIE

	1990 Population	1990 PWS Population	% PWS Population	Fort Peck Indian Reservation	County

Community					
Glasgow	3,574	3,652	14.7	No	Valley
Wolf Point	2,880	3,518	14.2	Yes	Roosevelt
Plentywood	2,119	2,119	8.5	No	Sheridan
Scobey	1,160	1,160	4.7	No	Daniels
Poplar	878	2,114	8.5	Yes	Roosevelt
Culbertson	780	784	3.2	No	Roosevelt
Frazer	401	422	1.7	Yes	Valley
Nashua	371	319	1.5	No	Valley
Brockton	368	507	2.0	Yes	Roosevelt
Medicine Lake	362	381	1.5	No	Sheridan
Westby	265	265	1.1	No	Sheridan
Froid	230	253	1.0	No	Roosevelt
Bainville	146	166	.7	No	Roosevelt
Opheim	141	144	.6	No	Valley
Outlook	113	143	.6	No	Sheridan
Flaxville	77	77	.3	No	Daniels
Whitetail	--	--	.0	No	Daniels
Peerless	--	--	.0	No	Daniels
Oswego	--	--	.0	Yes	Valley
Fort Kipp	--	--	.0	Yes	Roosevelt
Raymond	--	--	.0	No	Sheridan
Antelope	--	103	.4	No	Sheridan
	13,865	16,187	65.2		

Total Rural					
Outside Places	10,964	--	--		
Outside PWS	--	8,642	34.8		

Community and Rural	24,829	24,829	100.0		

Reservation	10,722	10,722	43.2		
Community	4,527	6,561	26.4		
Rural	6,195	4,161	16.8		

Dry Prairie	14,107	14,107	56.8		
Community	9,338	9,626	38.8		
Rural	4,769	4,481	18.0		

Total	24,829	24,829	100.0		

by the U.S. Census Bureau, 2001. Population data, but not other 2000 census data, were available at the time of this writing.

Table 3-5 summarizes the 1990 population of 24,829 by county with adjustment to include only that part of Valley County within the project boundary. Table 3-5 also presents the actual and projected population from the 2000 census and 2000 projections, respectively. The 2000 census gives a population of 23,106 in the project boundaries, and the 2000 projected population was 24,531. The projection anticipated a decline of 298 persons between 1990 and 2000 (-1.20%), and the actual decline was 1,723 persons (-5.74%). The projection fell short by 1,425 persons.

TABLE 3-5							
COMPARISON OF PROJECTED POPULATION WITH 2000 CENSUS							
PROJECT TOTALS							
Project Area	1990		2000		Project	Project	
	County	Project	County	Project	Population	Change	%
Population	Population	Population	Population	Population	Change		%
Daniels County	2,266	2,266	2,017	2,017	(249)		(10.99)
Roosevelt County	10,999	10,999	10,620	10,620	(379)		(3.45)
Sheridan County	4,732	4,732	4,105	4,105	(627)		(13.25)
Valley County	8,239	-	7,675	-	-		-
Valley County (Project Only)		6,832	-	6,364	(468)		(6.85)
Total	26,236	24,829	24,417	23,106	(1,723)		(6.94)
Project Projection		24,829		24,531	(298)		(1.20)
Actual Census/Projection Difference		0		(1,425)	(1,425)		(5.74)

TABLE 3-6							
COMPARISON OF PROJECTED POPULATION WITH 2000 CENSUS							
INDIAN AND NON-INDIAN							
Project Area	1990		2000		Project	Project	
	Project	Project	Project	Project	Population	Change	%
Population	Population	Population	Population	Population	Change		%
Actual Census							
Indian	5,822	6,330	508	8.72			
Non-Indian	19,007	16,776	(2,231)	(11.74)			
	24,829	23,106	(1,723)	(6.94)			
Project Projection							
Indian	5,822	7,167	1,345	23.10			
Non-Indian	19,007	17,364	(1,643)	(8.64)			
	24,829	24,531	(298)	(1.20)			
Actual Census/Projection Difference							
Indian	0	(837)	(837)	(14.38)			
Non-Indian	0	(588)	(588)	(3.09)			
	0	(1,425)	(1,425)	(5.74)			

Table 3-6 gives projections for the Indian and non-Indian populations for comparison with 2000 census results. The projections, based on the 1990 census, contemplated an increase in the Indian population from 5,822 to 7,167, a 23.1% increase. The actual 2000 census enumerated 6,330 Indian persons, an 8.72% increase. The projection fell short by 837 persons.

Similarly, as shown in Table 3-6 a decline in the non-Indian population was projected from 19,007 in 1990 to 17,364 in 2000, a decline of 8.64%. The actual decline was to 16,776 persons, a decline of 11.74%. The projected decline was exceeded by 588 persons.

The change between 1990 and 2000, with a net difference of 1,425 persons between the 2000 census and projections, results in a lower population than expected, but does not warrant alteration of the design population. The Pine Ridge Indian Reservation in the Mni Wiconi Project, a drinking water project in South Dakota, experienced an actual decline in census Indian population between 1980 and 1990 before the start of the project, but experienced a 27% increase in Indian population during the last decade, due in part to the opportunity for off-Reservation tribal members to return home and reside on allotted lands that were previously without a safe and adequate water supply. The rate of increase in Indian population on the Fort Peck Indian Reservation between 1990 and 2000 was low at 0.84%, the slowest rate of increase since the 1950s. It is reasonable to expect in-migration during the next decade (2000 to 2010), due in part to the regional water system as demonstrated by what has happened on the Pine Ridge Indian Reservation.

Table 3-7 presents the 1990 to 2000 change in population of places in Dry Prairie and on the Fort Peck Indian Reservation. Places declined from 13,464 to 12,325, an average 8.46% decline. As much as 35.09 and 33.42% declines were experienced in Westby and Brockton, respectively. Flaxville, Bainville and Poplar experienced modest increases in population. Larger places in the project boundaries, such as Wolf Point and Glasgow, experienced 7.53 and 8.98% declines, respectively. The remaining population outside places experienced a decline from 11,365 to 10,781 persons, a 5.14% decline. Therefore, rural areas declined at a lower rate than census "places," which was not expected.

3.6 Housing and Source of Water⁵

Table 3-8 presents the number of houses (occupied and vacant) from the 1990 Census. There were 9,222 occupied houses in the project area. There were 3,450 occupied houses on the Fort Peck Indian Reservation and 5,772 occupied houses outside the Reservation in the Dry Prairie area. The average number of persons per household throughout the project area was 2.69. Indian occupied housing on the Reservation averaged 3.62 persons per occupied house, and in the Dry Prairie area there were 2.44 persons per occupied house. In block group 3, BNA 9550,

⁵Bureau of Census, 1990, U.S. Census Data, Database: C 90STF3A, Summary Level: Block Group and Place: Housing. <<http://venus.census.gov>>. Data for the Indian population on the Fort Peck Indian Reservation were derived from Tables 13 and 228 of the *1990 Census of the Population for Montana, General Population Characteristics*. Data for the state of Montana were derived from Tables 25 and 28. Appendix A provides housing information by block group.

TABLE 3-7				
COMPARISON OF 1990 AND 2000 CENSUSES				
PLACES AND RURAL				
Place	1990 Population	2000 Population	Change	% Change
Dry Prairie				
Bainville	146	153	7	4.79
Culbertson	780	716	(64)	(8.21)
Flaxville	77	87	10	12.99
Froid	230	195	(35)	(15.22)
Glasgow	3,574	3,253	(321)	(8.98)
Medicine Lake	362	269	(93)	(25.69)
Nashua	371	325	(46)	(12.40)
Opheim	141	111	(30)	(21.28)
Outlook	113	82	(31)	(27.43)
Plentywood	2,119	2,061	(58)	(2.74)
Scobey	1,160	1,082	(78)	(6.72)
Westby	265	172	(93)	(35.09)
Total	9,338	8,506	(832)	(8.91)
Fort Peck Indian Reservation				
Brockton	368	245	(123)	(33.42)
Poplar	878	911	33	3.76
Wolf Point	2,880	2,663	(217)	(7.53)
Total	4,126	3,819	(307)	(7.44)
Total Places	13,464	12,325	(1,139)	(8.46)
Total Project	24,829	23,106	(1,723)	(6.94)
Rural (Non-Places)	11,365	10,781	(584)	(5.14)

Valley County, 4.00 persons per household (Appendix A, Table A-1) was the highest average number of persons per household recorded. This block group includes the community of Frazer and has a high percentage of Indian population, which has a lower median age and is consistent with a higher number of persons per occupied house.

On the Fort Peck Indian Reservation in the future, it was projected that the number of persons per occupied house would fall to 2.78 persons, midway between the 1990 persons per household on the Fort Peck Indian Reservation and within the Dry Prairie area.

Census block groups were a source of statistical data for housing (Appendix A). The number of houses identified by block group in the 1990 census was compared with the number of houses included in the project's geographic information system (GIS) developed for the preliminary design of the project facilities. The number of houses from the Census compares well with the number of houses identified in the GIS system. Figure 3-1 provides census block group boundaries within the project area.

Figure 3-1 - Block Groups

TABLE 3-8

1990 HOUSING
FORT PECK INDIAN RESERVATION, DRY PRAIRIE AND MONTANA

Statistics	Fort Peck Indian	Fort Peck Non-Indian	Fort Peck Total	Dry Prairie	Total Project	Montana
Population	5,822	4,900	10,722	14,107	35,551	799,065
Total Housing Units	--	--	3,991	8,341	12,332	--
Occupied Houses	1,610	1,840	3,450	5,772	9,222	306,919
Vacant Houses	--	--	541	2,569	3,110	--
Persons Per Occupied Housing Unit	3.62	2.66	3.11	2.44	2.69	2.60

Table 3-9 presents the number of houses in the project area that are connected to public sewer systems, septic tanks or other means of wastewater disposal. Source of water is also presented. The number of housing units connected to public systems, all wells and other sources of water are also included in Table 3-9.

There were 3,450 occupied and 3,991 total housing units on the Fort Peck Indian Reservation in 1990. Public sewer systems served 2,727 total housing units, and public water systems served 2,722 housing units. An additional 1,138 housing units relied on septic tanks for wastewater disposal, and an additional 1,229 housing units relied on wells for source of water. All but 19 housing units had complete plumbing facilities. Corresponding data are presented for the Dry Prairie area in Table 3-9.

Census data for 1990 do not permit separation of Indian from non-Indian housing units connected to the various types of sewer systems and sources of water. Nor does the census data for 1990 permit separation of sewer disposal types and water sources into occupied and vacant housing units.

Public water and sewer systems serve a larger proportion (73%) of housing units in the project area than across the state of Montana (65%).

TABLE 3-9

SEWER, PLUMBING AND WATER SOURCE
FORT PECK INDIAN RESERVATION, DRY PRAIRIE AND MONTANA

Statistic	Fort Peck Indian	Fort Peck Total	Dry Prairie	Total Project Area	Montana
Occupied Housing Units	1,602	3,450	5,772	9,222	306,163
Vacant Housing Units	--	541	2,569	3,110	54,992
Total Housing Units	--	3,991	8,341	12,332	361,155
Sewer (Occupied and Vacant Housing Units)					
Public	--	2,727	6,207	8,934	218,372
Septic Tank	--	1,138	1,922	3,060	135,371
Other	--	126	212	338	7,412
	--	3,991	8,341	12,332	361,155
Plumbing (Occupied Housing Units)					
Complete	1,592	3,431	5,747	9,178	303,806
Lacking	10	19	25	44	2,357
	1,602	3,450	5,772	9,222	306,163
Source of Water (Occupied and Vacant Housing Units)					
Public System	--	2,722	6,272	8,994	236,532
Well	--	1,229	1,949	3,178	109,273
Other	--	40	120	160	15,350
	--	3,991	8,341	12,332	361,155
Source:	STF-3A	STF-3A	STF-3A	--	STF-3A
Level:	BG	BG	BG		State