

**SOCIOECONOMIC PORTRAIT
LOWER MISSOURI BASIN
STATE WATER PLAN**

POPULATION

Recent Estimates

Between the 2010 Census and July 1, 2013, the population of the Lower Missouri Basin increased 2.4 percent to 76,209. During the same period Montana’s population increased 2.6 percent to 1,015,165. The Lower Missouri Basin is the only of Montana’s four major basins with neither a “Metropolitan” nor a “Micropolitan” Statistical Area. According to the Executive Office of the President, Office of Management and Budget (Executive Office of the President 2013), a “Metropolitan Statistical Area” is considered to have “at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.” “Micropolitan Statistical Areas” are defined similarly with the exception that the area’s core consists of “at least one urban cluster” with a population between 10,000 and 50,000.

Populations of counties in the Lower Missouri Basin for 2013 are listed in **Figure 1**. Nearly one-fifth of the Basin’s residents lived in Hill County. More than half of the Basin’s population resided in the three largest counties, Hill, Fergus, and Roosevelt. The populations of six of the Basin’s 15 counties declined between 2010 and 2013.

Between 2010 and 2013, Roosevelt County ranked 90th among the fastest growing U.S. counties with populations of at least 10,000 after growing by 6.7 percent to 11,125 during the period. The fastest growing county in the nation was Roosevelt County’s neighbor across the North Dakota border, Williams County, which grew by 32.1 percent between 2010 and 2013. Population levels for the counties may be underestimated because many individuals working in Bakken oil and gas activities are counted as residents outside of the region by the Census Bureau.

**Lower Missouri Basin Counties
Populations - 2013**

Blaine	6,604
Daniels	1,791
Fergus	11,501
Garfield	1,290
Golden Valley	859
Hill	16,568
Judith Basin	2,016
McCone	1,709
Musselshell	4,629
Petroleum	506
Phillips	4,179
Roosevelt	11,125
Sheridan	3,668
Valley	7,630
Wheatland	2134

Figure 1

<u>Reservations</u>	<u>Population 2010</u>	<u>% Change 2000-10</u>
Fort Belknap	2,851	-3.7
Fort Peck	<u>10,008</u>	<u>-3.0</u>
Total	12,859	-3.2

Figure 2

Source: U.S. Census Bureau, Population Division

The populations of Montana’s seven Indian reservations totaled 66,598 in 2010 with one-fifth residing in the Lower Missouri Basin. **Figure 2** displays the populations of Indian reservations in the Basin and the percentage change in population between 2000 and 2010. The Fort Belknap and Fort Peck Reservations saw population declines during the period.

LOWER MISSOURI BASIN POPULATION by SUB-BASIN - 2010

Population estimates from the 2010 Census were aggregated by 8-digit hydrologic unit code (HUC) sub-basins for the Lower Missouri Basin. Population estimates for these sub-basins are presented in **Figure 3**. One quarter of the Basin population resided in the Middle Milk River sub-basin in the vicinity of Havre.

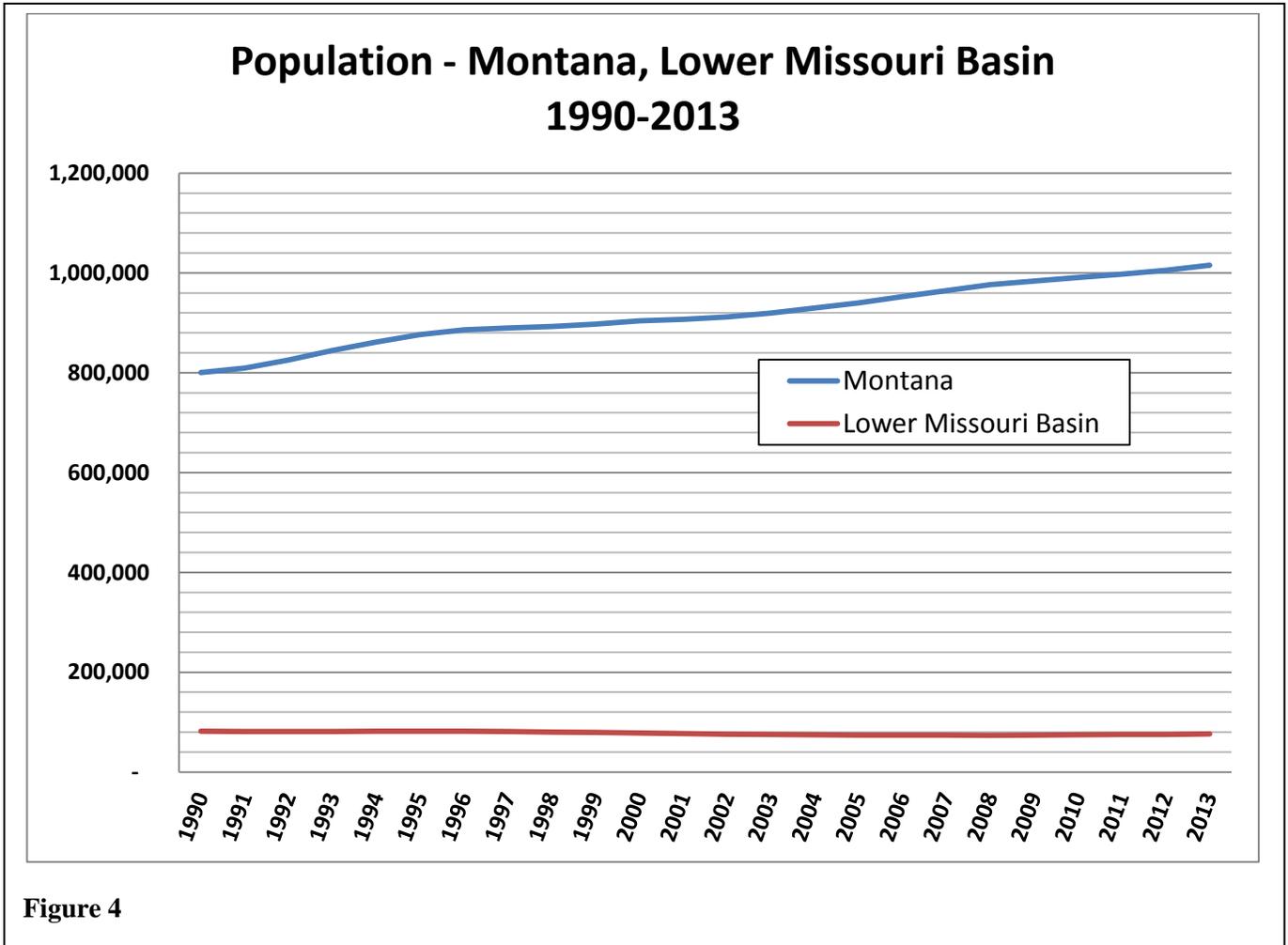
<u>SUB-BASIN</u>	<u>2010 POPULATION</u>
Arrow Creek	993
Battle Creek	147
Beaver Creek (Milk R)	843
Big Dry Creek	766
Big Muddy Creek	3,936
Big Sandy Creek	3,978
Box Elder Creek (Musselshell R)	1,197
Brush Lake	307
Bullwhacker-Dog Creeks	1,435
Charlie-Little Muddy Creeks	3,797
Cottonwood Creek	372
Flatwillow Creek	249
Fort Peck Reservoir	785
Frenchman Creek	57
Judith River	11,331
Little Dry Creek	185
Lodge Creek	556
Lower Milk River	5,408
Lower Musselshell River	240
Middle Milk River	19,350
Middle Musselshell River	3,096
Milk River Headwaters	170
Peoples Creek	1,361
Poplar River	3,036
Porcupine Creek	298
Prarie Elk-Wolf Creeks	6,153
Redwater River	1,728
Rock Creek	84
Sage Creek	1,217
Upper Milk River	765
Upper Musselshell River	4,669
West Fork Poplar River	339
Whitewater Creek	170
Wild Horse Lake	12

Figure 3

Source: U.S. Census Bureau, Population Division; Montana Department of Natural Resources and Conservation

Trends

Between 1990 and 2013, the population of the Lower Missouri Basin decreased by 6.6 percent while Montana's population increased by 27 percent (**Figure 4**). Musselshell and Roosevelt Counties were the only counties in the Basin with increasing populations during the period. Their populations increased by 12.8 percent and 1.5 percent, respectively. The populations of McCone, Sheridan, and Daniels Counties each decreased by more than 20 percent.



The changes in population for Lower Missouri Basin counties for the periods 1990 to 2010 and 2000 to 2010 are displayed in **Figure 5**. For each period, Musselshell County, with growth of 10.5 percent and 1.6 percent, respectively, was the only county in the Basin increasing in population. Montana’s population increased by 24 percent between 1990 and 2010 and by 10 percent between 2000 and 2010.

Population Change - Lower Missouri Basin Counties			
<u>County</u>	<u>1990-2010</u>	<u>Percent Change</u>	<u>2000-2010</u>
Blaine	-2.9		-7.1
Daniels	-22.0		-13.1
Fergus	-4.1		-2.7
Garfield	-23.9		-6.5
Golden Valley	-3.0		-13.3
Hill	-8.9		-2.7
Judith Basin	-9.0		-11.5
McCone	-23.2		-11.4
Musselshell	10.5		1.6
Petroleum	-4.8		0.0
Phillips	-17.4		-6.7
Roosevelt	-4.9		-1.6
Sheridan	-27.9		-17.3
Valley	-9.9		-3.7
Wheatland	-3.5		-3.7

Figure 5

The U.S. Census Bureau estimates the populations of cities and towns and “Census designated places” (CDPs). CDPs are identified as “settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located.” Population estimates from the 1990, 2000, and 2010 censuses for cities, towns, and CDPs in the Lower Missouri Basin are presented in **Figure 6**. (** indicates a CDP split into two CDPs in 2010.)

Figure 6 Estimated Populations for Lower Missouri Basin Cities, Towns, and CDPs

	Census Population <u>2010</u>	Census Population <u>2000</u>	Census Population <u>1990</u>	Percent Change <u>2000-2010</u>
Blaine County				
Chinook city	1,203	1,386	1,512	-13.2%
Fort Belknap Agency CDP	1,293	1,262	422	2.5%
Harlem city	808	848	882	-4.7%
Hays CDP	843	702	333	20.1%
Lodge Pole CDP	265	214	--	23.8%
Turner CDP	61	--	--	
Daniels County				
Flaxville town	71	87	88	-18.4%
Scobey city	1,017	1,082	1,154	-6.0%
Fergus County				
Denton town	255	301	350	-15.3%
Grass Range town	110	149	159	-26.2%
Lewistown city	5,901	5,813	6,097	1.5%
Lewistown Heights CDP	407	365	--	11.5%
Moore town	193	186	211	3.8%
Roy CDP	108	--	--	
Winifred town	208	156	188	33.3%
Garfield County				
Jordan town	343	364	494	-5.8%
Golden Valley County				
Lavina town	187	209	151	-10.5%
Ryegate town	245	268	260	-8.6%
Hill County				
Agency CDP *	--	324	--	
Azure CDP	286	253	--	13.0%
Beaver Creek CDP	271	291	--	-6.9%
Gildford CDP	179	185	--	-3.2%
Havre city	9,310	9,621	10,201	-3.2%
Havre North CDP	716	973	1,110	-26.4%
Herron CDP	116	100	--	16.0%
Hingham town	118	157	181	-24.8%
Inverness CDP	55	103	--	-46.6%
Kremlin CDP	98	126	--	-22.2%
Rocky Boy's Agency CDP *	355	--	--	
Rudyard CDP	258	275	--	-6.2%
Saddle Butte CDP	128	138	--	-7.2%
Sangrey CDP	306	263	--	16.3%
St. Pierre CDP	350	289	--	21.1%
West Havre CDP	316	284	--	11.3%

Figure 6 (cont'd) Estimated Populations for Lower Missouri Basin Cities, Towns, and CDPs

	Census Population <u>2010</u>	Census Population <u>2000</u>	Census Population <u>1990</u>	Percent Change <u>2000-2010</u>
Judith Basin County				
Geyser CDP	87	--	--	
Hobson city	215	244	226	-11.9%
Stanford town	401	454	529	-11.7%
McCone County				
Circle town	615	644	805	-4.5%
Musselshell County				
Camp Three CDP	173	138	--	25.4%
Klein CDP	168	188	--	-10.6%
Melstone town	96	136	166	-29.4%
Musselshell CDP	60	60	--	0.0%
Roundup city	1,788	1,931	1,808	-7.4%
Petroleum County				
Winnett town	182	185	--	-1.6%
Phillips County				
Dodson town	124	122	137	1.6%
Malta city	1,997	2,120	2,340	-5.8%
Saco town	197	224	261	-12.1%
Whitewater CDP	64	--	--	
Zortman CDP	69	--	--	
Roosevelt County				
Bainville town	208	153	165	35.9%
Brockton town	255	245	365	4.1%
Culbertson town	714	716	796	-0.3%
Froid town	185	195	195	-5.1%
Poplar city	810	911	881	-11.1%
Wolf Point city	2,621	2,663	--	-1.6%
Sheridan County				
Antelope CDP	51	43	--	18.6%
Medicine Lake town	225	269	357	-16.4%
Outlook town	47	82	109	-42.7%
Plentywood city	1,734	2,061	2,136	-15.9%
Reserve CDP	23	37	--	-37.8%
Westby town	168	172	253	-2.3%

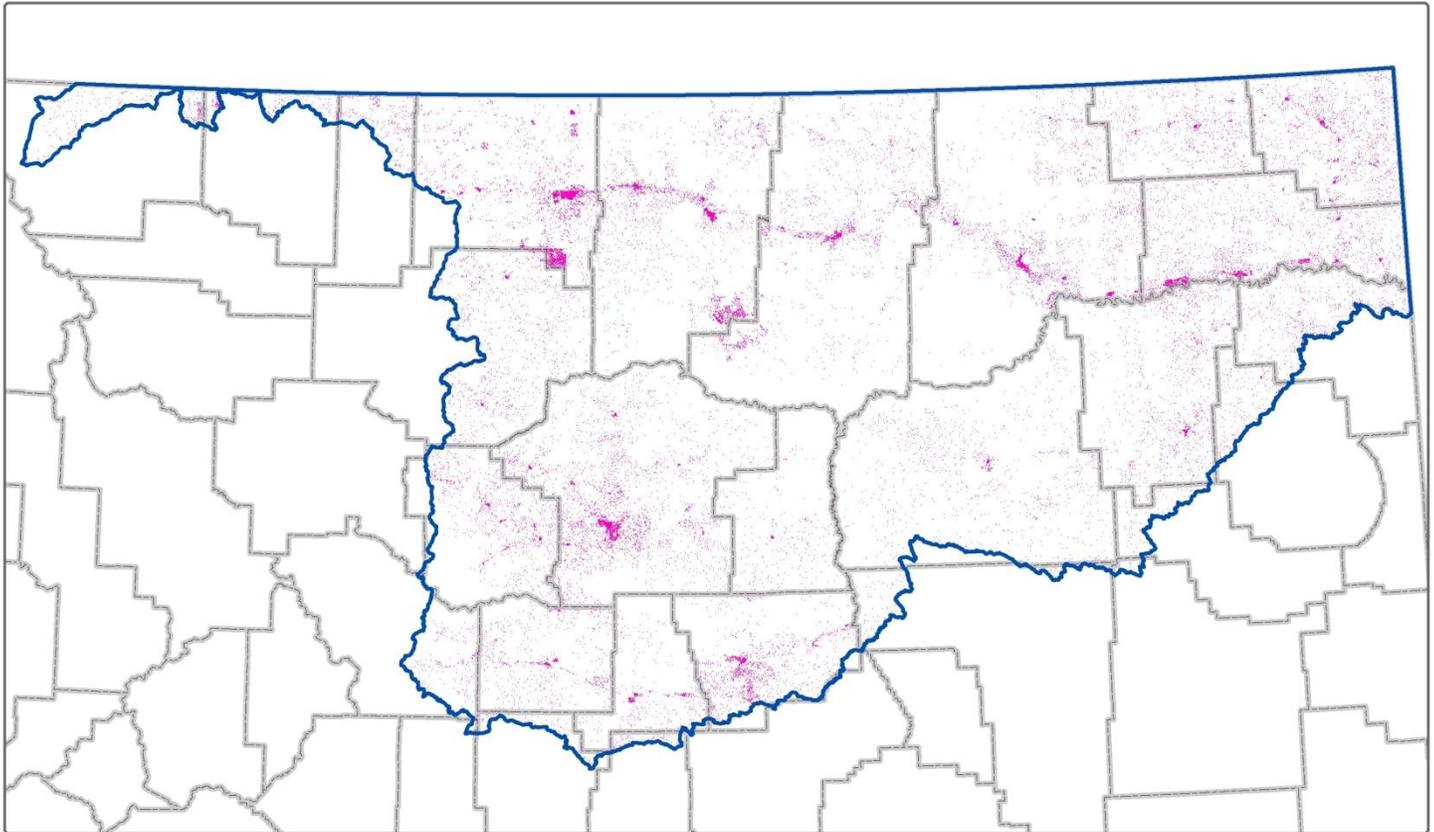
Figure 6 (cont'd) Estimated Populations for Lower Missouri Basin Cities, Towns, and CDPs

	Census Population <u>2010</u>	Census Population <u>2000</u>	Census Population <u>1990</u>	Percent Change <u>2000-2010</u>
Valley County				
Fort Peck town	233	240	226	-2.9%
Frazer CDP	362	452	403	-19.9%
Glasgow city	3,250	3,253	3,572	-0.1%
Hinsdale CDP	217	--	--	
Nashua town	290	325	375	-10.8%
Opheim town	85	111	145	-23.4%
St. Marie CDP	264	183	--	44.3%
Wheatland County				
Harlowton city	997	1,062	1,049	-6.1%
Judith Gap city	126	164	133	-23.2%
Shawmut CDP	42	--	--	

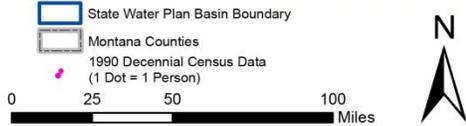
Source: U.S. Census Bureau, Population Division; Montana Department of Commerce; Montana Department of Natural Resources and Conservation

Figures 7 and 8 display maps of the population distributions for the Lower Missouri Basin as reported in the censuses of 1990 and 2010.

Lower Missouri 1990 Decennial Census Population Distribution



Legend



Data Disclaimer and Information

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Coord. Sys.: NAD 1983 StatePlane Montana FIPS 2500
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Meter
Author: Drew Swayne, DNRC OIT GIS
Date: 10/2/2013

Figure 7

Lower Missouri 2010 Decennial Census Population Distribution

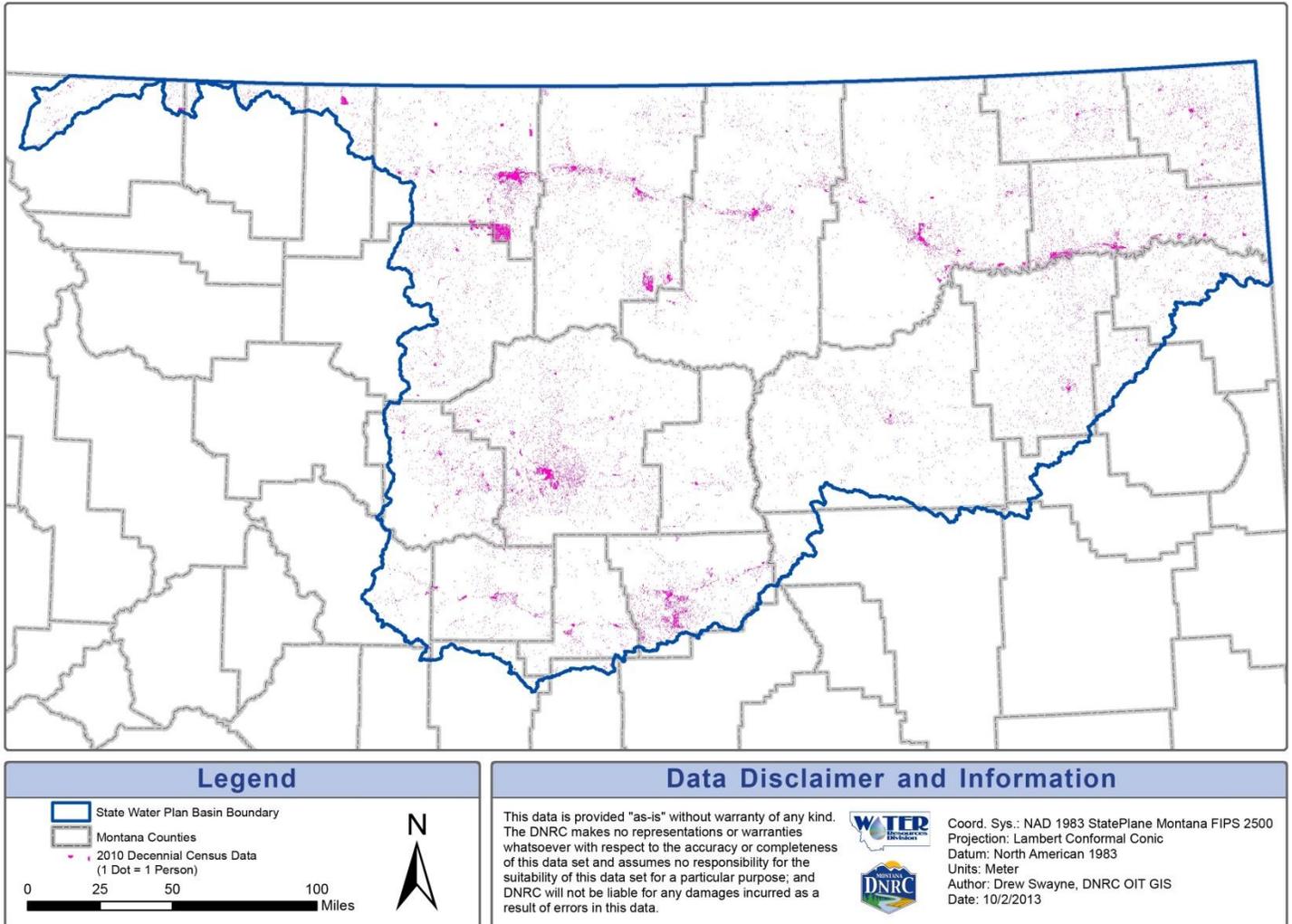


Figure 8

The Lower Missouri was the only major basin in Montana with a decreasing population, declining by 8.4 percent between 1990 and 2010. The population of the Middle Milk, the most populous sub-basin, fell by 10 percent.

Figure 9 displays population trends over recent decades for the sub-basins in the Lower Missouri Basin.

Population Trends - Lower Missouri Sub-Basins – 1990-2010

SUB-BASIN	1990	2000	2010	Percent Change 1990-2010	Percent Change 2000-2010
Arrow Creek	1,168	1,154	993	-15.0	-14.0
Battle Creek	83	132	147	77.1	11.4
Beaver Creek (Milk R)	923	849	843	-8.7	-0.7
Big Dry Creek	958	792	766	-20.0	-3.3
Big Muddy Creek	5,369	4,783	3,936	-26.7	-17.7
Big Sandy Creek	2,643	3,378	3,978	50.5	17.8
Box Elder Creek (Musselshell R)	1,155	1,300	1,197	3.6	-7.9
Brush Lake	504	372	307	-39.1	-17.5
Bullwhacker-Dog Creeks	1,702	1,566	1,435	-15.7	-8.4
Charlie-Little Muddy Creeks	3,913	3,757	3,797	-3.0	1.1
Cottonwood Creek	487	424	372	-23.6	-12.3
Flatwillow Creek	248	290	249	0.4	-14.1
Fort Peck Reservoir	1,015	828	785	-22.7	-5.2
Frenchman Creek	85	76	57	-32.9	-25.0
Judith River	11,954	11,635	11,331	-5.2	-2.6
Little Dry Creek	284	244	185	-34.9	-24.2
Lodge Creek	788	650	556	-29.4	-14.5
Lower Milk River	5,901	5,444	5,408	-8.4	-0.7
Lower Musselshell River	282	264	240	-14.9	-9.1
Middle Milk River	21,506	20,613	19,350	-10.0	-6.1
Middle Musselshell River	3,153	3,214	3,096	-1.8	-3.7
Milk River Headwaters	136	143	170	25.0	18.9
Peoples Creek	1,151	1,425	1,361	18.2	-4.5
Poplar River	3,710	3,467	3,036	-18.2	-12.4
Porcupine Creek	419	384	298	-28.9	-22.4
Prarie Elk-Wolf Creeks	6,468	6,274	6,153	-4.9	-1.9
Redwater River	2,322	1,969	1,728	-25.6	-12.2
Rock Creek	90	94	84	-6.7	-10.6
Sage Creek	1,350	1,247	1,217	-9.9	-2.4
Upper Milk River	1,133	859	765	-32.5	-10.9
Upper Musselshell River	4,477	4,909	4,669	4.3	-4.9
West Fork Poplar River	595	439	339	-43.0	-22.8
Whitewater Creek	209	226	170	-18.7	-24.8
Wild Horse Lake	47	9	12	-74.5	33.3

Figure 9

Components of Population Change

The Lower Missouri Basin's population decline of 4,901 between 2000 and 2010 was the result of a natural increase of 1,567 and net emigration of 6,140. The population in the Basin increased by two percent during the period due to natural increase, or the amount by which births exceeded deaths. Only five of the Basin's fifteen counties experienced positive rates of natural increase with the highest, ten percent, occurring in Roosevelt County. Net emigration during the decade amounted to nearly eight percent of the Basin's 2000 population level, reflecting the substantially larger number of people moving out of the Lower Missouri to other parts of Montana and to other states compared to the number moving in. Only Golden Valley and Musselshell Counties experienced net immigration between 2000 and 2010 although migration trends in some parts of the Basin have changed significantly due to Bakken oil and gas activities since 2010. The substantial level of emigration from Roosevelt County has been reversed since 2010. The components of population change for the Basin's counties are displayed in **Figure 10**. (The components of population change do not reconcile with the total population change due to the variance in estimation methods applied to different demographic characteristics.) The composition of population change for counties within the Basin varies significantly.

Components of Population Change – Lower Missouri Basin Counties 2000-2010

	<u>Births</u>	<u>Deaths</u>	<u>Natural Increase</u>	<u>%Pop. Chg. Nat. Inc.</u>	<u>Intl. Migration</u>	<u>Domestic Migration</u>	<u>Net Migration</u>	<u>%Pop.Chg. Migration</u>
Blaine	1,191	631	560	8.0	1	-1,024	-1,023	-14.6
Daniels	138	260	-122	-6.0	25	-188	-163	-8.1
Fergus	1,057	1,567	-510	-4.3	92	-152	-60	-0.5
Garfield	168	126	42	3.3	6	-177	-171	-13.4
Golden Valley	82	84	-2	-0.2	6	31	37	3.6
Hill	2,786	1,454	1,332	8.0	-3	-1,086	-1,089	-6.5
Judith Basin	156	181	-25	-1.1	6	-272	-266	-11.4
McCone	151	178	-27	-1.4	6	-261	-255	-12.9
Musselshell	447	584	-137	-3.0	0	301	301	6.7
Petroleum	38	32	6	1.2	6	-62	-56	-11.4
Phillips	405	510	-105	-2.3	-2	-594	-596	-13.0
Roosevelt	2,192	1,138	1,054	9.9	-1	-1,252	-1,253	-11.8
Sheridan	222	582	-360	-8.8	1	-556	-555	-13.5
Valley	805	907	-102	-1.3	2	-813	-811	-10.6
Wheatland	222	259	-37	-1.6	6	-186	-180	-8.0
TOTAL	10,060	8,493	1,567	2.0	151	-6,291	-6,140	-7.8

Figure 10

In 2010, the median age of residents of counties in the Lower Missouri Basin ranged from 31 years in Roosevelt County to 51.2 years in Judith Basin County. The median age for Montana was 39.7 years and 36.9 for the U.S.

The distributions of population by age for the Lower Missouri Basin and for Montana are presented in **Figure 11**. Compared to the state as a whole, the Lower Missouri Basin has proportionately fewer people between the ages of 20 and 45 years old. The Basin’s lack of a metropolitan or micropolitan area or of a large college are the likely reason for the small number of residents in this age group.

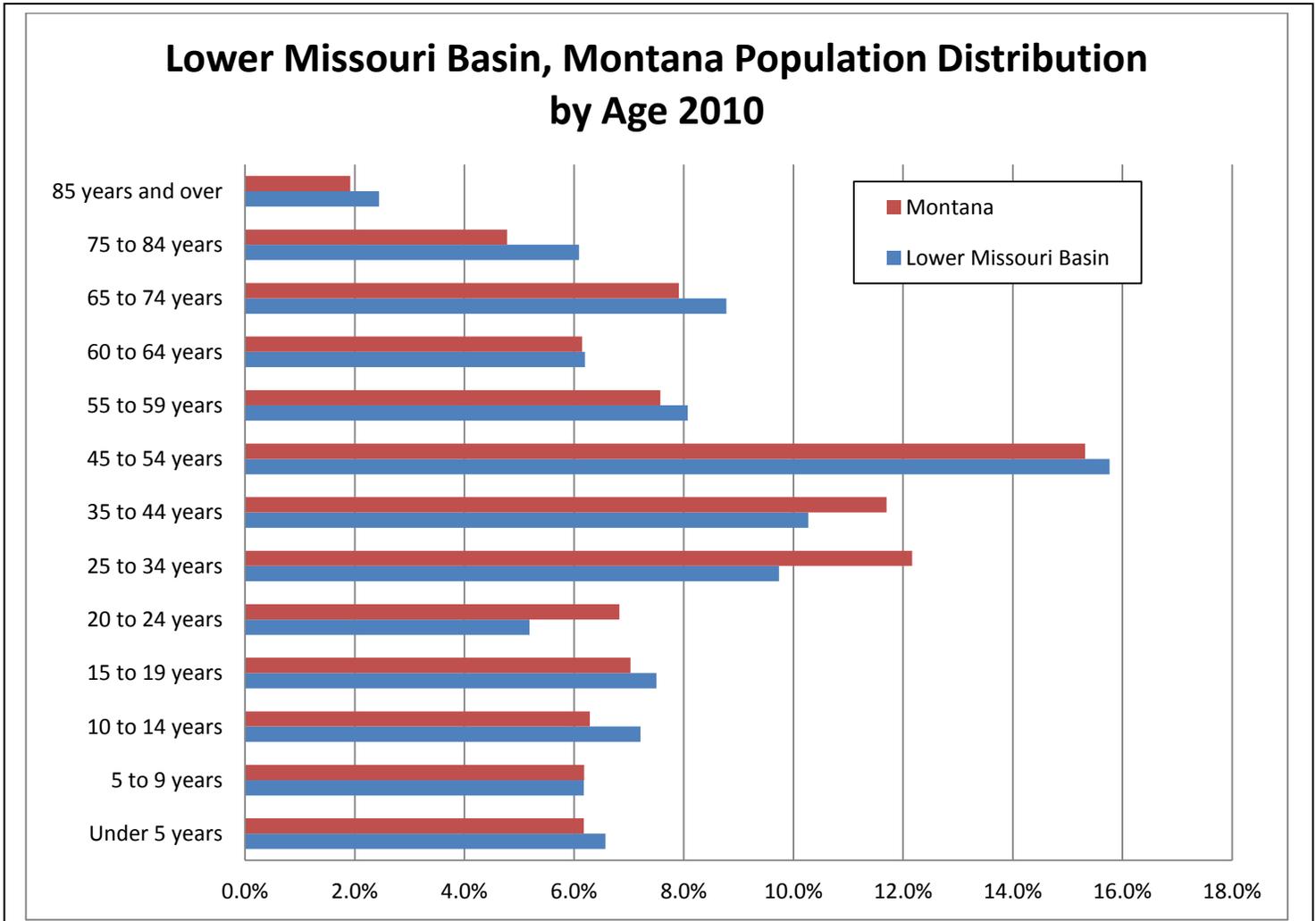


Figure 11

Projections

Population trends can be somewhat mysterious. States have experienced various trends reflecting each state's particular natural endowments and historical circumstances. Those circumstances arise from unique, complex national, regional, and local dynamics that determine the geography of socioeconomic development and patterns of population change over time. For example: Iowa has seen consistent, low levels of population growth broken only by negative growth in the 1980s; California experienced very high levels of growth throughout the twentieth century, tapering off in recent decades at lower, but still high, levels; North Dakota's pattern of low levels of alternating population increases and declines is now being broken by rapid growth since 2010.

Predicting population changes is an undertaking that grows increasingly speculative as the time horizon expands and the region under consideration diminishes in size. For the purposes of this planning effort, population projections are provided to inform deliberations of water management issues in which population levels are one factor among many comprising the demand for water. The intent of these projections is neither to predict nor forecast precise population levels at particular points in time and locations in Montana; the purpose, rather, is to offer reasonable estimates of magnitudes of population growth that would presumably relate to the supply and demand for water in various ways over the course of the planning period.

Two sets of population projections are offered here. One set extrapolates trends seen in the period between the 1990 and the 2010 censuses. These projections are provided at the state, county, basin, and sub-basin levels. The other set relies on projections at the state and county levels developed by the Montana Department of Commerce (MT Commerce) using eREMI, a population projection product of Regional Economic Models, Inc. (REMI). Population levels were projected through the twenty-year planning period to 2035.

Figure 12 displays projections of the Lower Missouri Basin's population based on each method. Extrapolating Basin-wide population growth at the average annual rate of population change for the period between 1990 and 2010 would result in 8,159 fewer Basin residents in 2035.

Rather than extrapolate recent trends, the MT Commerce projections forecast moderate rates of population increase through 2035, reflecting assumptions about changes in the Basin's age structure, natality and survival rates, and migration patterns over the period. This projection forecasts a substantially higher average annual rate of growth and an increase in the Basin's population of 7,508 by 2035.

Population Projections – Lower Missouri Basin

	<u>Average Annual Rate</u>	<u>2035</u>	<u>Change 2010-35</u>
1990-2010 Extrapolation	-0.43%	70,871	-8,159
MT Commerce	0.38%	82,070	7,508

Figure 12

Figure 13 displays estimated populations for the Basin’s counties in 2035 as projected by each method. The MT Commerce forecasts predict reductions in population decline in the Basin and higher populations than those that would result from the continuation of trends of recent decades. The sum of the county projections does not equal the basin population projected due to compounding effects related to the basin and county projection calculations.

<u>Population Projections – 2035</u>		
<u>Lower Missouri Basin Counties</u>		
	1990-2010	
	<u>Extrapolation</u>	<u>MT Commerce</u>
Blaine	6,640	7,236
Daniels	1,343	1,981
Fergus	10,897	11,338
Garfield	920	1,513
Golden Valley	811	846
Hill	14,697	18,674
Judith Basin	1,817	2,312
McCone	1,257	1,968
Musselshell	5,234	5,618
Petroleum	483	834
Phillips	3,312	4,156
Roosevelt	10,309	11,033
Sheridan	2,458	3,719
Valley	6,652	8,093
Wheatland	<u>2,020</u>	<u>2,749</u>
	69,446	82,070

Figure 13

Figure 14 presents the projected populations for the Lower Missouri Basin sub-basins in 2035 based on extrapolating trends for the period 1990 to 2010. The populations of the largest sub-basins, the Middle Milk River and Judith Basin, would be projected to decrease by 2,394 and by 733 residents, respectively, if the trends of recent decades were to continue.

Population Projections – Lower Missouri Sub-Basins 2035
1990-2010 Trends

<u>SUB-BASIN</u>	<u>2010</u>	<u>Estimated Population 2035</u>	<u>Estimated Change 2010-35</u>
Arrow Creek	993	811	-182
Battle Creek	147	300	153
Beaver Creek (Milk R)	843	753	-90
Big Dry Creek	766	579	-187
Big Muddy Creek	3,936	2,670	-1,266
Big Sandy Creek	3,978	6,632	2,654
Box Elder Creek (Musselshell R)	1,197	1,252	55
Brush Lake	307	165	-142
Bullwhacker-Dog Creeks	1,435	1,159	-276
Charlie-Little Muddy Creeks	3,797	3,657	-140
Cottonwood Creek	372	266	-106
Flatwillow Creek	249	250	1
Fort Peck Reservoir	785	569	-216
Frenchman Creek	57	35	-22
Judith River	11,331	10,598	-733
Little Dry Creek	185	108	-77
Lodge Creek	556	360	-196
Lower Milk River	5,408	4,849	-559
Lower Musselshell River	240	196	-44
Middle Milk River	19,350	16,956	-2,394
Middle Musselshell River	3,096	3,026	-70
Milk River Headwaters	170	225	55
Peoples Creek	1,361	1,678	317
Poplar River	3,036	2,363	-673
Porcupine Creek	298	195	-103
Prarie Elk-Wolf Creeks	6,153	5,781	-372
Redwater River	1,728	1,194	-534
Rock Creek	84	77	-7
Sage Creek	1,217	1,069	-148
Upper Milk River	765	468	-297
Upper Musselshell River	4,669	4,921	252
West Fork Poplar River	339	168	-171
Whitewater Creek	170	131	-39
Wild Horse Lake	12	2	-10
TOTAL	79,030	70,871	-8,159

Figure 14

While the courses of population change in the Lower Missouri Basin and in particular parts of the state are highly uncertain from the perspective of the present, these projections offer two distinct scenarios for consideration when regarding prospects for future water use in the Basin. They should be viewed as potentially useful tools in examining various factors affecting—and consequences affected by—the supply and demand of the Lower Missouri’s waters.

HOUSING

The number of households in the Lower Missouri Basin in 2010 was 29,129 with an average size of 2.4 people (U.S. Census Bureau; 2007-2011 American Community Survey Profile Report). The total number of housing units was 37,629 with 29,129 occupied and 2,555 for seasonal, recreational, or occasional use.

INCOME and EMPLOYMENT

Total personal income (TPI) is comprised of: net earnings in the forms of wages and salaries, supplemental earnings, and proprietors' income; transfer payments; and income from dividends, interest, and rent. In 2012, TPI in the Lower Missouri Basin was \$3.1 billion, 8 percent of TPI for Montana of \$39.3 billion.¹ Between 1990 and 2012, TPI in the Lower Missouri Basin increased by 49 percent, compared to an increase for Montana of 80 percent.

Per capita personal income (PCPI) in the Lower Missouri Basin in 2012 was reported to be \$40,528, compared to \$39,126 for Montana. Personal income in 2012 (adjusted to 2013 \$s) for the major basins in Montana is displayed in **Figure 18**. With \$13.0 billion, the Clark Fork Basin was the basin with the highest amount of total personal income, but the lowest per capita personal income by a substantial margin. The sparsely populated Lower Missouri had the lowest TPI by a considerable amount, but the Basin nearly matched the Upper Missouri's \$40,676 for the highest PCPI among the state's four major basins.

Personal Income – Major Basins 2012

	<u>Total</u>	<u>Per Capita</u>
Clark Fork	13.0 billion	35,896
Lower Missouri	3.1 billion	40,528
Upper Missouri	12.8 billion	40,676
Yellowstone	10.4 billion	41,448
Montana	39.3 billion	39,126

Adjusted to 2013 \$s.

Figure 18

¹ Figures are from the U.S. Department of Commerce, Bureau of Economic Analysis, Table CA30, adjusted for inflation to 2013 dollars. Estimates are based on administrative records and survey and census data collected by various agencies.

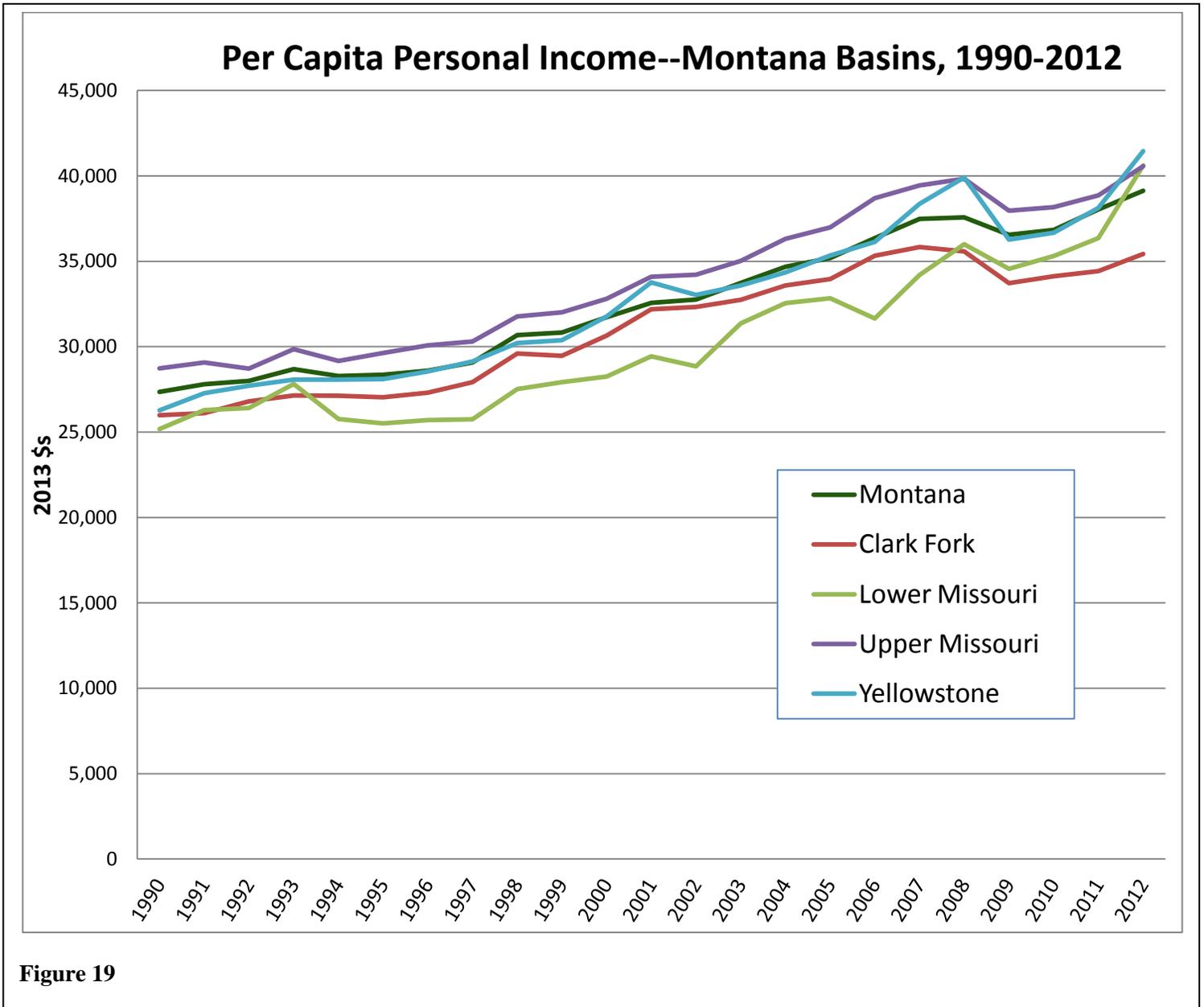


Figure 19

Figure 19 presents similar upward trends in PCPI for each of the major basins over the period. PCPI in the Lower Missouri and the Yellowstone Basins increased at rates greater than the statewide increase with increases of 61 percent and 58 percent, respectively. Between 2007 and 2012, PCPI in the Lower Missouri increased by 19 percent while PCPI in the Clark Fork declined by 1 percent. The impacts of the recent recession are evident from the graph as are the contributions of strong prices for agricultural commodities and activity in the energy sector.

Figure 20 displays TPI and PCPI for Lower Missouri Basin counties for 2012. Hill County accounted for nearly one-quarter of the Basin’s TPI. Daniels County had the highest PCPI among Montana’s 56 counties with PCPI of \$65,789. Sheridan, Valley, and Golden Valley ranked, respectively, third, seventh, and eighth on the list.

<u>Personal Income—Lower Missouri Basin Counties—2012</u>		
<u>County</u>	<u>TPI (\$billion)</u>	<u>PCPI (\$)</u>
Blaine	0.210	31,455
Daniels	0.117	65,789
Fergus	0.432	37,802
Garfield	0.043	34,238
Golden Valley	0.039	46,661
Hill	0.696	42,556
Judith Basin	0.088	43,691
McCone	0.068	40,270
Musselshell	0.170	36,380
Petroleum	0.020	38,922
Phillips	0.170	41,236
Roosevelt	0.366	33,479
Sheridan	0.208	58,212
Valley	0.358	47,751
Wheatland	0.072	34,404

Adjusted to 2013 \$s.
Figure 20

The composition of personal income in Montana has changed over time. The portion of personal income derived from net earnings—primarily in the form of wages and salaries—has declined to 59 percent in 2012. The portion of income from retirement programs and other transfer payments has increased to 18 percent and income derived from dividends, interest, and rent accounted for 22 percent in 2012. For the U.S. in 2012, 65 percent of personal income was derived from net earnings and income from transfer payments and from dividends, interest, and rent comprised, respectively, 17 percent and 18 percent of personal income. **Figure 21** displays the derivation of personal income in 2012 for Montana’s four major basins. For Montana’s major basins in 2012, net earnings comprised the largest portion of personal income in the Yellowstone at 63 percent. Transfer receipts were lowest in the Upper Missouri and Yellowstone Basins with approximately 16 percent of personal income for each basin. The portion of personal income provided by dividends, interest, and rent ranged between 21 percent and 24 percent across the basins. For the Lower Missouri Basin, 57 percent of net income was derived from net earnings, 20 percent from transfer payments, and 23 percent from dividends, interest, and rent.

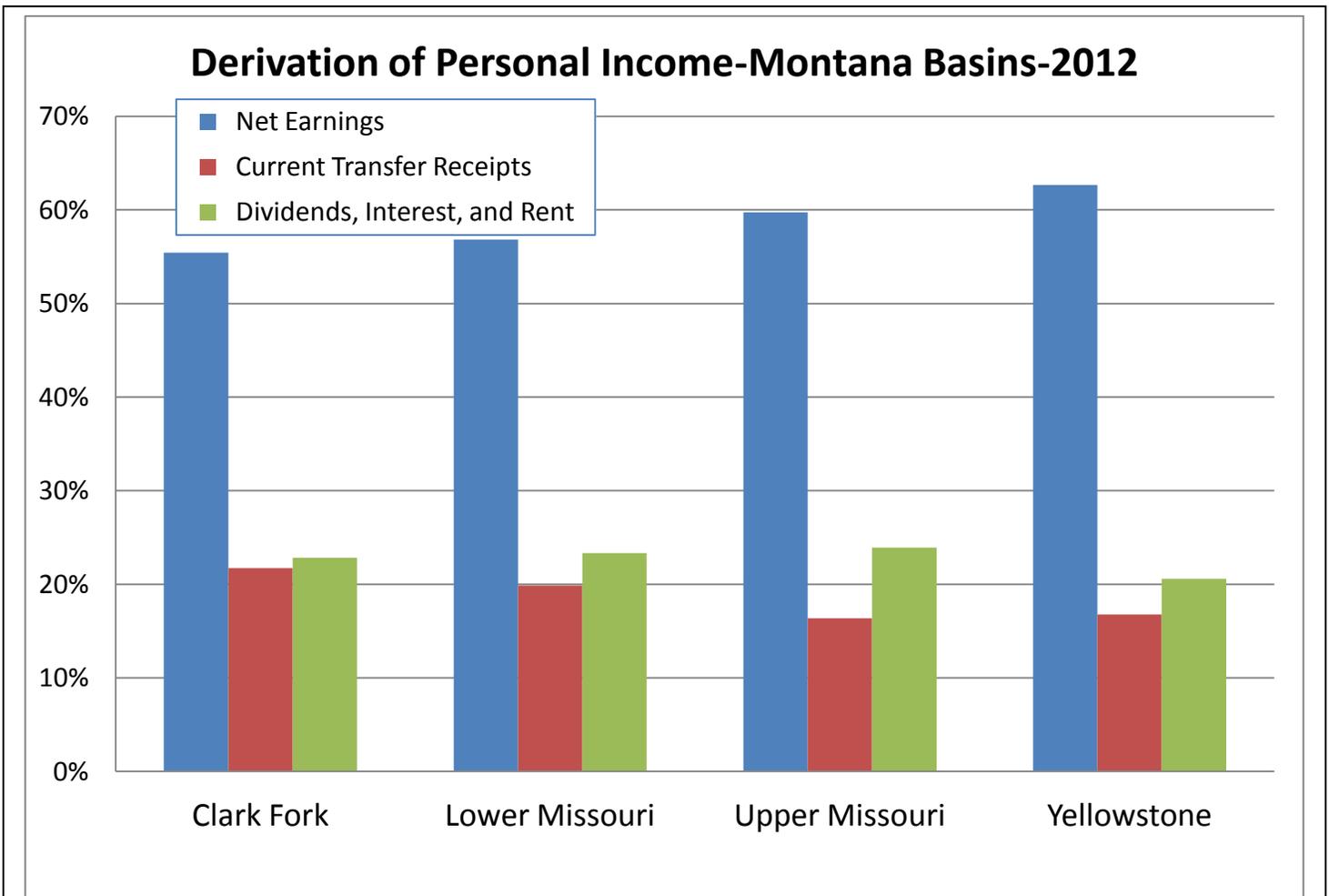


Figure 21

The derivation of personal income for Lower Missouri Basin counties is presented in **Figure 22**. For five Basin counties, net earnings comprised more than 60 percent of personal income. The portion of income derived from transfer payments was above 25 percent for Roosevelt and Musselshell Counties. Income from dividends, interest, and rent was greater than 30 percent in Wheatland, Garfield, and Judith Basin Counties.

Derivation of Personal Income—Lower Missouri Basin Counties - 2012			
	<u>Net Earnings</u>	<u>Transfer Payments</u>	<u>Dividends, Interest, and Rent</u>
Blaine	53.0%	24.0%	23.0%
Daniels	69.8%	12.7%	17.5%
Fergus	51.9%	21.1%	27.0%
Garfield	47.4%	18.0%	34.5%
Golden Valley	47.8%	22.6%	29.6%
Hill	57.7%	18.3%	24.0%
Judith Basin	49.7%	18.5%	31.7%
McCone	61.7%	14.3%	24.0%
Musselshell	50.5%	25.3%	24.2%
Petroleum	62.5%	14.6%	22.8%
Phillips	56.6%	20.4%	23.0%
Roosevelt	58.1%	25.4%	16.5%
Sheridan	64.1%	13.2%	22.7%
Valley	60.7%	18.0%	21.3%
Wheatland	41.0%	22.8%	36.2%

Figure 22

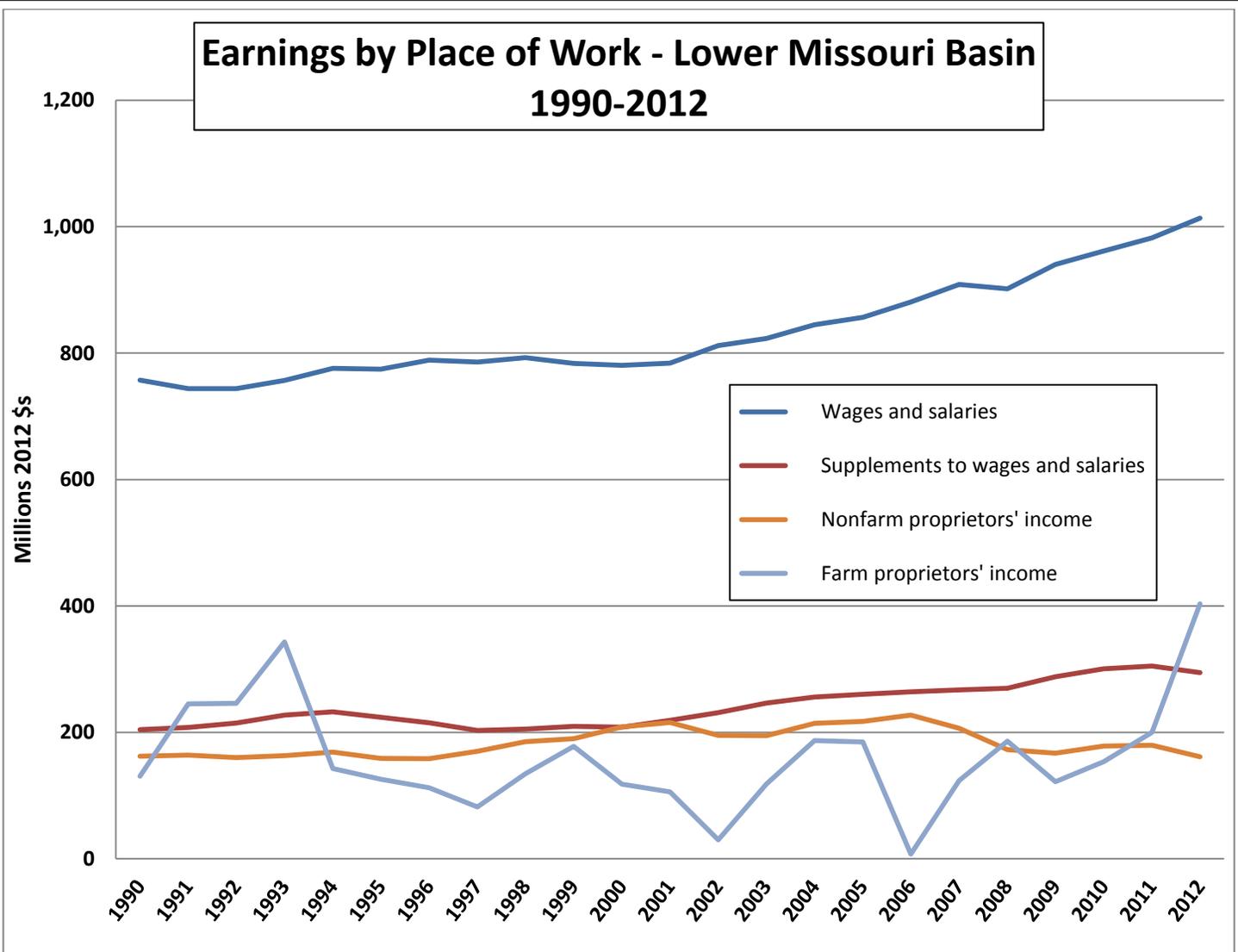


Figure 23

Net earnings are comprised of wages and salaries, supplemental contributions by employers for pension and insurance programs, and proprietors’ income for owners of businesses and farms. Trends for earnings in the Lower Missouri Basin for the period 1990 to 2012—adjusted for inflation—are presented in **Figure 23**. Total earnings for wages and salaries increased by nearly 34 percent to \$1.0 billion and income in the form of supplemental employer contributions increased 44 percent to \$294 million. Non-farm proprietors’ income dropped about 1 percent over the period to \$161 million. Farm proprietors’ income increased 209 percent in real terms, fluctuating between \$7 million and \$403 million and averaging \$160 million since 1990.

Between 1990 and 2011, average wages and salaries in the Lower Missouri Basin rose 21 percent to \$33,741, just below the state average of \$36,652. State-wide, wages and salaries, adjusted for inflation, increased 19 percent over the period. Over the same period, average non-farm proprietors’ income in the Basin decreased 3 percent to \$15,070, exceeding the state-wide average that declined by 2 percent to \$21,057.

Figure 24 displays wage and salary and employment information for the Lower Missouri Basin by three-digit North American Industrial Classification System (NAICS) industrial sub-sector. The data reported are from the U.S. Department of Labor, Bureau of Labor Statistics' Quarterly Census of Employment and Wages for the period of the fourth quarter of 2012 through the third quarter of 2013. The reported employment figures are combined part-time and full-time employment for each sub-sector. Wages and salaries totaling \$613 million were paid to 18,801 employees in the private sector in the Lower Missouri Basin during the period. Total wages and salaries were highest in the health care sector in the amount of \$117 million where one-sixth of private sector workers were employed. Total wages and salaries were next highest in the retail trade and in the mining, quarrying and oil and gas extraction sectors. Ten percent of Basin employees worked in food services and drinking places. Average wages and salaries were highest in the mining and the oil and gas extraction sub-sector. Federal, state, and local levels of government in the Basin paid \$293 million to 7,993 employees.

Figure 24

**Wages and Salaries and Employment – Lower Missouri Basin
2012-2013**

	Wages and Salaries (\$ millions)	Employment	Average Wages and Salaries (\$)
Agriculture, forestry, fishing and hunting			
Crop production	1.973	68	29,022
Animal production and aquaculture	10.630	375	28,347
Forestry and logging	ND	ND	ND
Agriculture and forestry support activities	0.870	32	27,183
Mining, quarrying, and oil and gas extraction			
Oil and gas extraction	6.445	87	74,077
Mining, except oil and gas	36.105	432	83,576
Support activities for mining	20.084	299	67,170
Utilities	16.727	263	63,599
Construction			
Construction of buildings	10.608	317	33,465
Heavy and civil engineering construction	27.188	511	53,206
Specialty trade contractors	15.776	493	32,000

ND: Data not disclosed.

Source: U.S. Department of Labor, Bureau of Labor Statistics; Quarterly Census of Employment and Wages; Fourth Quarter 2012 through Third Quarter 2013; Compiled by: Montana Department of Labor and Industry, Research and Analysis Bureau; Montana Department of Natural Resources and Conservation.

Figure 24, continued

**Wages and Salaries and Employment – Lower Missouri Basin
2012-2013**

	Wages and Salaries (\$ millions)	Employment	Average Wages and Salaries (\$s)
Manufacturing			
Food manufacturing	1.084	51	21,245
Beverage and tobacco product manufacturing	0.958	29	33,033
Textile product mills	ND	ND	ND
Wood product manufacturing	0.404	16	25,241
Printing and related support activities	2.570	87	29,537
Chemical manufacturing	ND	ND	ND
Plastics and rubber products manufacturing	ND	ND	ND
Nonmetallic mineral product manufacturing	2.378	76	31,295
Fabricated metal product manufacturing	7.221	173	41,737
Machinery manufacturing	0.185	7	26,442
Computer and electronic product manufacturing	ND	ND	ND
Transportation equipment manufacturing	ND	ND	ND
Furniture and related product manufacturing	ND	ND	ND
Miscellaneous manufacturing	2.933	48	61,096
Wholesale trade			
Merchant wholesalers, durable goods	22.201	413	53,755
Merchant wholesalers, nondurable goods	27.127	715	37,940
Electronic markets and agents and brokers	2.705	71	38,102
Retail trade			
Motor vehicle and parts dealers	18.243	500	36,487
Furniture and home furnishings stores	1.917	66	29,039
Electronics and appliance stores	1.161	56	20,738
Building material and garden supply stores	7.452	265	28,121
Food and beverage stores	14.737	747	19,728
Health and personal care stores	2.966	111	26,721
Gasoline stations	10.308	517	19,938
Clothing and clothing accessories stores	1.844	115	16,035
Sporting goods, hobby, book and music stores	3.432	116	29,589
General merchandise stores	9.865	492	20,050
Miscellaneous store retailers	2.293	124	18,488
Nonstore retailers	1.259	43	29,275

Figure 24, continued

**Wages and Salaries and Employment – Lower Missouri Basin
2012-2013**

	Wages and Salaries (\$ millions)	Employment	Average Wages and Salaries (\$s)
Transportation and warehousing			
Air transportation	0.270	8	33,811
Truck transportation	12.629	272	46,428
Transit and ground passenger transportation	3.591	214	16,779
Pipeline transportation	4.807	69	69,669
Support activities for transportation	5.501	103	53,411
Postal service	0.062	8	7,779
Couriers and messengers	3.940	79	49,876
Warehousing and storage	0.881	19	46,358
Information			
Publishing industries, except internet	2.165	119	18,196
Motion picture and sound recording industries	ND	ND	ND
Broadcasting, except internet	1.875	86	21,802
Telecommunications	26.116	444	58,820
Data processing, hosting and related services	ND	ND	ND
Other information services	ND	ND	ND
Finance and insurance			
Credit intermediation and related activities	25.307	608	41,624
Securities, commodity contracts, investments	3.138	45	69,741
Insurance carriers and related activities	9.119	231	39,474
Real estate and rental and leasing			
Real estate	2.274	109	20,862
Rental and leasing services	0.896	41	21,858
Professional and technical services	21.641	559	38,714
Management of companies and enterprises	0.515	17	30,319
Administrative and waste services			
Administrative and support services	6.234	261	23,886
Waste management and remediation services	1.767	55	32,129
Educational services	2.597	117	22,200
Health care and social assistance			
Ambulatory health care services	29.599	658	44,984
Hospitals	70.796	1,693	41,817
Nursing and residential care facilities	16.896	731	23,114
Social assistance	11.042	700	15,774

Figure 24, continued

**Wages and Salaries and Employment – Lower Missouri Basin
2012-2013**

	Wages and Salaries (\$ millions)	Employment	Average Wages and Salaries (\$s)
Arts, entertainment, and recreation			
Performing arts and spectator sports	ND	ND	ND
Museums, historical sites, zoos, and parks	0.222	19	11,689
Amusements, gambling, and recreation	4.288	284	15,100
Accommodation and food services			
Accommodation	8.054	551	14,618
Food services and drinking places	22.884	1,898	12,057
Other services, except public administration			
Repair and maintenance	8.095	280	28,909
Personal and laundry services	1.973	102	19,345
Membership associations and organizations	6.587	450	14,638
Private households	0.414	29	14,287
Private	613.255	18,801	32,618
Government			
Federal	67.139	1,112	60,377
State	32.635	933	34,979
Local	192.840	5,948	32,421

Summary data about the labor force in the Lower Missouri Basin are presented in **Figure 25**. As of March 2014, seven percent of the state’s labor force was located in the Lower Missouri Basin. Approximately one-fourth of the Basin’s labor force was located in Hill County. Fergus and Roosevelt Counties contained another fourth of the Basin’s labor force. Seven percent of the state’s unemployed persons resided in the Basin resulting in an unemployment rate in the Basin of 5.9 percent. McCone and Sheridan Counties ranked fifth and sixth among Montana counties with the lowest unemployment rates in the state. Petroleum County had the highest unemployment rate among the Basin’s counties with 7.5 percent of its labor force unemployed. The unemployment rate for the entire state was 6.0 percent.

Figure 25

**Labor Force Data – Lower Missouri Basin Counties
February 2013 – March 2014**

	<u>Labor Force</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Unemployment Rate (%)</u>
Blaine	2,662	2,477	185	6.9
Daniels	730	695	35	4.8
Fergus	5,842	5,495	347	5.9
Garfield	592	568	24	4.1
Golden Valley	498	474	24	4.8
Hill	8,171	7,616	555	6.8
Judith Basin	1,084	1,029	55	5.1
McCone	1,038	1,001	37	3.6
Musselshell	2,476	2,352	124	5.0
Petroleum	214	198	16	7.5
Phillips	2,123	1,978	145	6.8
Roosevelt	4,452	4,134	318	7.1
Sheridan	2,097	2,021	76	3.6
Valley	4,023	3,839	184	4.6
Wheatland	1,034	977	57	5.5
Total	37,036	34,854	2,182	5.9

Source: U.S. Department of Labor, Bureau of Labor Statistics; Local Area Unemployment Statistics (LAUS)

In 2012, 153,105 Montanans—15.6 percent—were reported to be living in poverty, just below the U.S. rate of 15.9 percent. Nine percent (13,242) resided in the Lower Missouri Basin. Roosevelt and Blaine Counties ranked third and sixth among Montana counties with the highest poverty rates. Sheridan and Daniels Counties had the second and fifth lowest poverty rates, respectively, in the state. Glacier County had the state’s highest rate with 30.4 percent and Fallon County reported the lowest poverty rate with 8.6 percent. The poverty rate for the Lower Missouri Basin was estimated to be 17.9 percent in 2012. Poverty rates for the Basin over recent decades are provided in **Figure 26**.

Figure 26

Poverty Rates (Percent) – Lower Missouri Basin Counties

	<u>1989</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2012</u>
Blaine	27.8	27.3	22.6	26.2	23.5
Daniels	11.7	12.4	13.6	12.9	10.1
Fergus	14.9	14.6	13.2	14.7	14.1
Garfield	14.7	13.4	15.0	14.4	16.0
Golden Valley	15.6	21.5	21.9	19.6	19.6
Hill	17.8	20.2	16.8	17.1	17.0
Judith Basin	13.9	15.7	15.0	17.1	15.1
McCone	17.5	14.2	14.4	13.7	16.4
Musselshell	17.6	19.7	17.4	18.0	18.7
Petroleum	9.3	16.0	17.8	15.9	19.2
Phillips	17.8	18.1	16.7	17.7	16.1
Roosevelt	22.4	31.3	26.4	31.5	26.4
Sheridan	12.5	11.8	11.7	13.3	9.2
Valley	16.6	17.4	15.2	15.1	15.0
Wheatland	16.1	19.3	22.7	19.9	19.7
Total	17.9	19.9	17.7	19.2	17.9

Source: U.S. Department of Commerce, Census Bureau; Small Area Income and Poverty Estimates (SAIPE).

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