MONTANA COMMUNICABLE DISEASE EPIDEMIOLOGY

Weekly COVID-19 Update in Montana (as of 12/10/2021)

This report is a weekly snapshot of COVID-19 activity in Montana. Data are analyzed based on information available as of December 10, 2021. Data are provisional and expected to change as more information is received.

Case Data

Table 1. Summary of COVID-19 Activity – Montana, as of 12/10/2021

	TOTAL	RECENT WEEK	PERCENT CHANGE FROM PREVIOUS WEEK
LABORATORY TESTS	**2,212,449**	**26,836**	**-9%**
DEATHS	**2,830**	**62**	**-52%**

Figure 1. COVID-19 Cases and Hospitalizations over Time - Montana, as of 12/10/2021

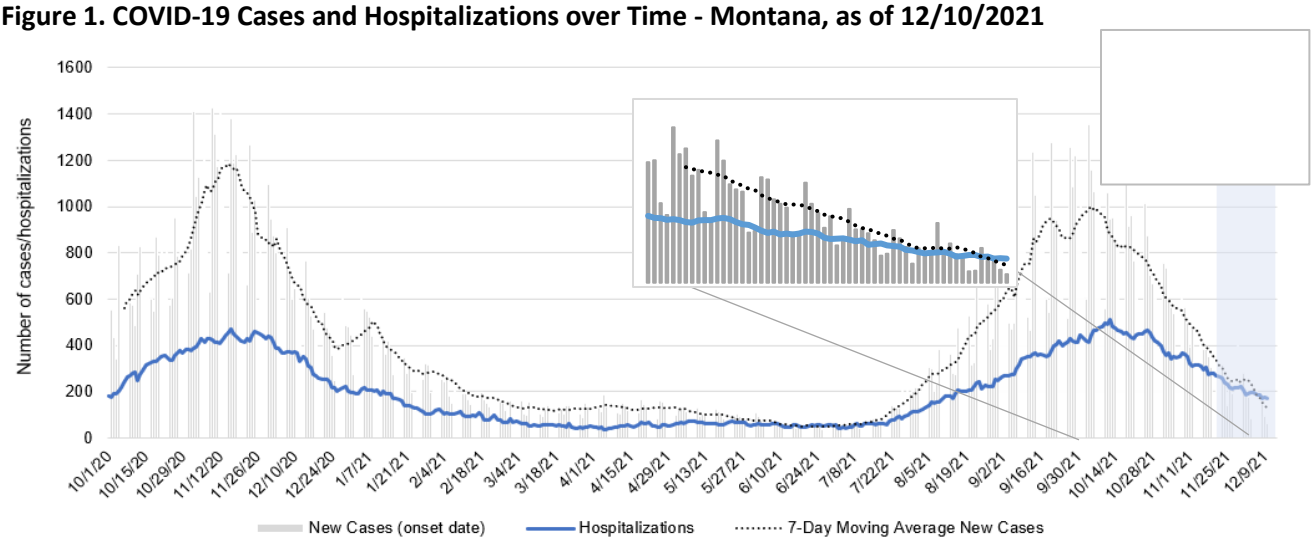
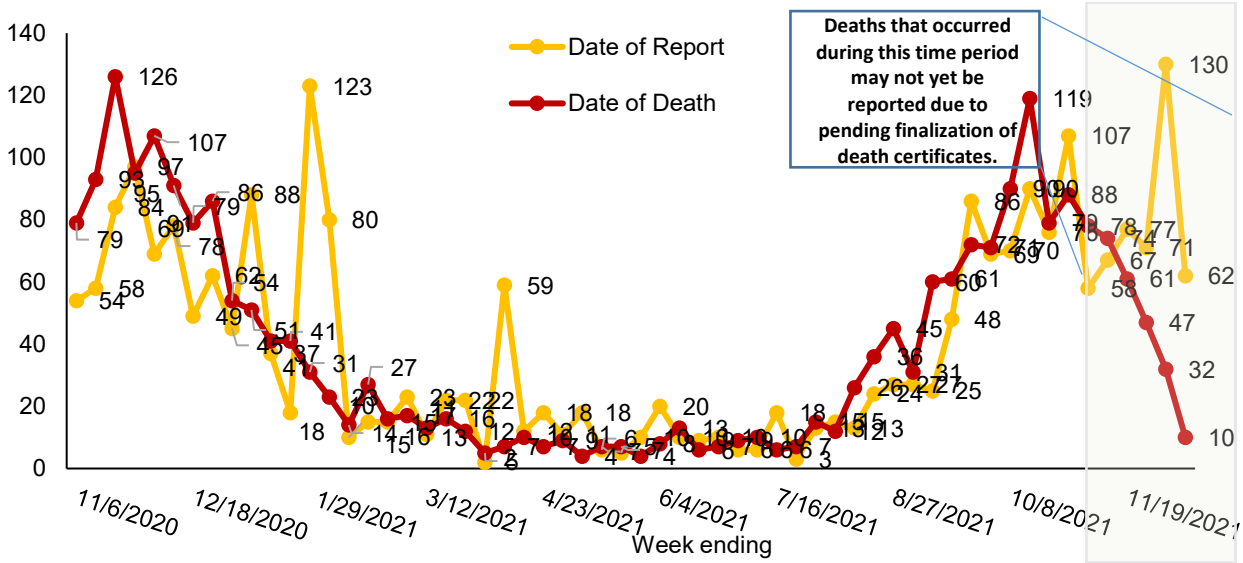


Figure 2. COVID-19 Deaths by Report Date and Date of Death – Montana, 11/1/2020 – 12/10/2021



Vaccine Data

Montana began vaccinating individuals in mid-December 2020 with a phased process: Phase 1A on December 14, 2020, Phase 1B on January 19, 2021, and Phase 1B+ on March 8, 2021. Vaccinations were opened to all Montanans age 16+ on April 1, 2021 and expanded to all Montanans age 12+ on May 10th, 2021. Most recently, the Pfizer vaccine was approved for the 5-11 year old age group on October 29th, 2021. To date, 1,273,042 doses have been given across the state and 52% of the eligible population is considered fully vaccinated (table 3).

Table 2: COVID-19 Vaccine Doses Administered for the 12 and older population – Montana, as of 12/10/2021

	NUMBER	PERCENT OF ELIGIBLE POPULATION	WEEK ENDING 11/26	WEEK ENDING 12/3	WEEK ENDING 12/10*
TOTAL DOSES ADMINISTERED	**1,252,513**		15,261	23,488	**18,644**
DOSE 1 ADMINISTERED	**585,417**	**63%**	2,740	3,605	**2,572**
FULLY VACCINATED INDIVIDUALS	**522,038**	**56%**	1,675	2,432	**1,967**

*the data for the most recent week are preliminary and are expected to be an underestimate of the doses administered during the week, due to a reporting lag.

Table 3: COVID-19 Vaccine Doses Administered for the 5 and older population – Montana, as of 12/10/2021

	NUMBER	PERCENT OF ELIGIBLE POPULATION	WEEK ENDING 11/26	WEEK ENDING 12/3	WEEK ENDING 12/10*
TOTAL DOSES ADMINISTERED	**1,273,042**		17,224	28,701	**22,814**
DOSE 1 ADMINISTERED	**598,776**	**59%**	4,473	4,964	**3,657**
FULLY VACCINATED INDIVIDUALS	**529,207**	**52%**	1,905	6,285	**5,052**

*the data for the most recent week are preliminary and are expected to be an underestimate of the doses administered during the week, due to a reporting lag.

Figure 3. COVID-19 Vaccine Doses Administered by Week, 5+ Years – Montana, as of 12/10/2021

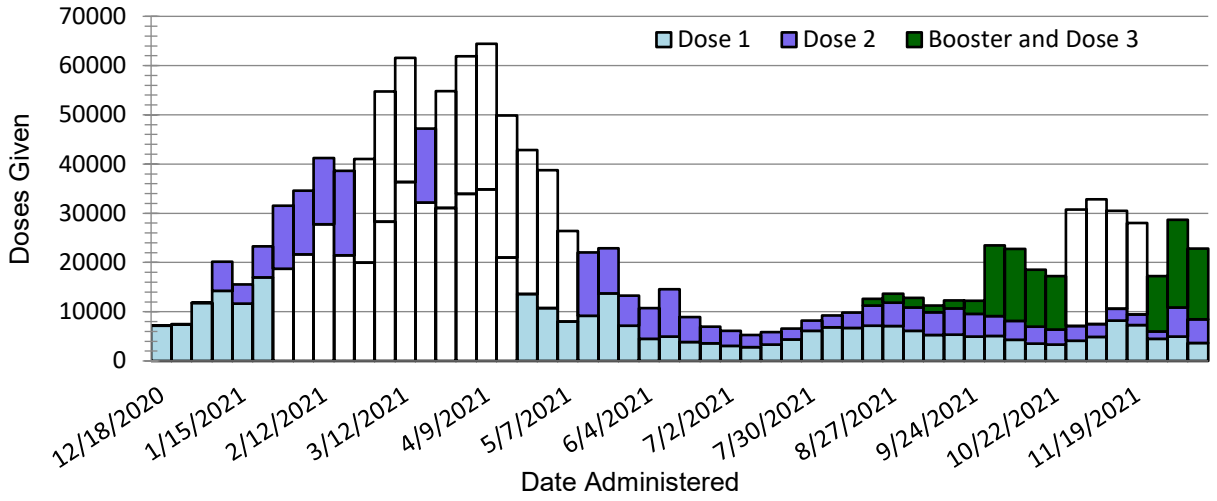
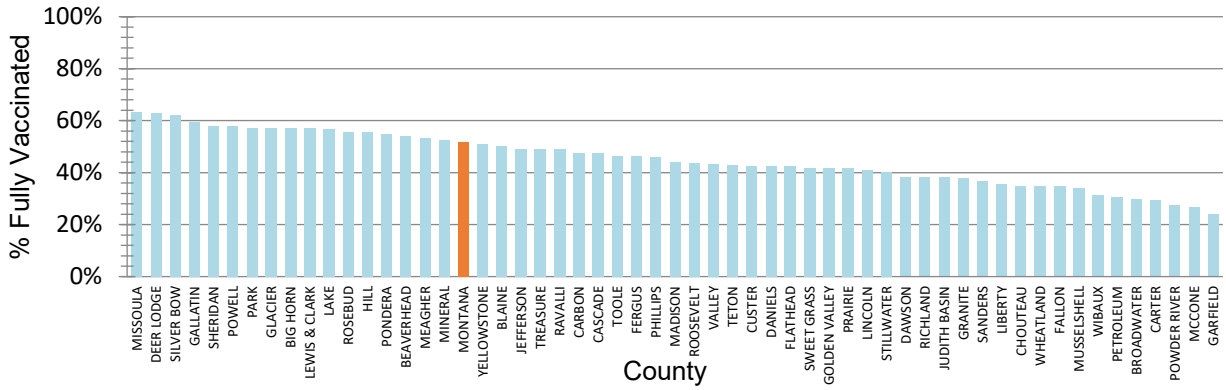


Figure 4. Percent of Eligible Montanans (5+ years) Fully Vaccinated by County – Montana, 12/10/2021



Variant and Breakthrough Cases

Figure 6 displays the percentage of the most common SARS-CoV-2 lineages detected each week, among all samples sequenced that were collected that week. There were 8,165 samples that were sequenced and their lineages were reported to GISAID since September 2020; figure 5 displays the number of specimens sequenced by week. A variant is a lineage that has one or more mutations that differentiate it from other lineages in circulation. Currently, Delta and Omicron (B.1.1.529) are the only Variants of Concern circulating in the US. **There have been no Omicron variants detected in Montana at this time.** Of specimens collected and sequenced in November and December, 1782/1786 (99%) are Delta. Delta has been the predominant variant in Montana since July 2021.

Figure 5. Number of COVID-19 samples sequenced by collection date, Montana 12/14/2021 [n=8,165]

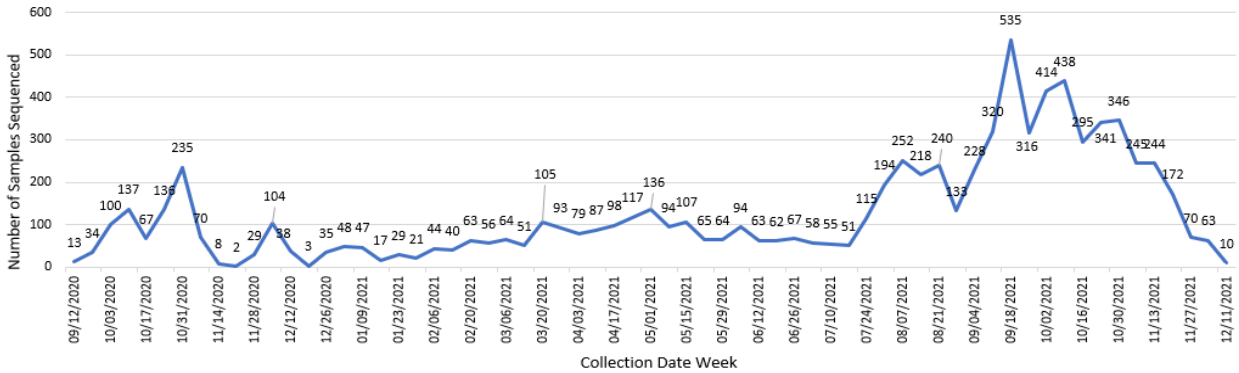
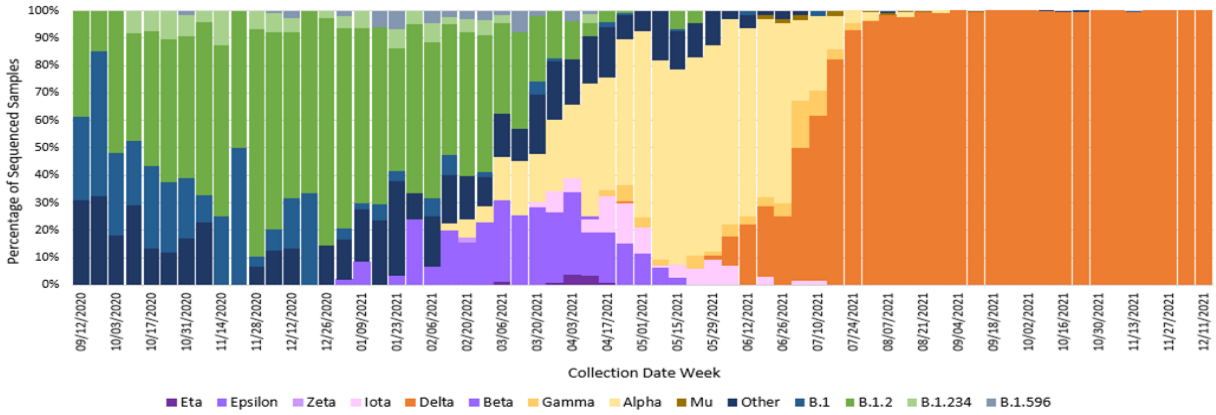


Figure 6. Percent of COVID-19 variants in sequenced samples by collection date, Montana 12/14/2021



A breakthrough COVID-19 infection is defined as a positive SARS-CoV-2 specimen collected ≥14 days after completing the primary COVID-19 vaccine series of an FDA-authorized COVID-19 vaccine. Depending on the specific vaccine administered, completion of series could be one or two doses of vaccine. As of 12/14/21, Montana reports 15,591 cases of confirmed breakthrough disease, which includes 883 hospitalizations and 276 deaths. Over the past 8 weeks (October 16 – December 10) the number of cases among unvaccinated individuals was 3.9 times higher than the number of cases among vaccinated individuals; the number of hospitalizations and deaths among unvaccinated individuals were 4.5 and 3.1 times higher, respectively, compared to vaccinated individuals.

Hospitalizations and Deaths and Vaccination Status

COVID-19-related hospitalizations and deaths were analyzed between **April 1 and December 10** to review vaccination status. Since the beginning of April this year, 84% of Montanans who were hospitalized and 77% of those who died were unvaccinated at the time of infection (Table 4). Of the 5,347 individuals who were hospitalized during this time period, 89 (2%) were <18 years old, 781 (15%) were 18 to 44 years old, 1,847 (35%) were 45 to 64 years old and 2,630 (49%) were ≥65 years old.

Additionally, COVID-19-related hospitalization and death data from **October 16 – December 10** (last 8 weeks) were analyzed to review vaccination status. Eighty-two percent of Montanans who were hospitalized and 76% of those who died had not received a COVID-19 vaccine (Table 5). Of the 1,552 individuals who were hospitalized during this time period, 32 (2%) were <18 years old, 172 (11%) were 18 to 44 years old, 525 (34%) were 45 to 64 years old and 823 (53%) were ≥65 years old.

Table 4. Vaccination status of COVID-19 hospitalizations and deaths – April 1 to December 10, 2021

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	**5,347**	**1196**
UNVACCINATED	4,465 (84%)	926 (77%)
VACCINATED (BREAKTHROUGH CASE)	882 (16%)	270 (23%)
UNVACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	**<1-102 (62)**	**23-103 (70)**
VACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	**16-101 (74)**	**20-101 (81)**

Table 5. Vaccination status of COVID-19 hospitalizations and deaths – October 16 to December 10, 2021

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	**1,552**	**323**
UNVACCINATED	1,267 (82%)	245 (76%)
VACCINATED (BREAKTHROUGH CASE)	285 (18%)	78 (24%)
UNVACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	**<1-96 (64)**	**23-103 (71)**
VACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	**17-101 (73)**	**20-101 (80)**

Reported COVID-19 Cases by County with Trendline – Montana, past 6 weeks

Big Horn	51	138	174	16	11	18	7	
Broadwater	34	26	22	33	22	14	-8	
Carbon	42	58	41	40	15	14	-1	
Carter	1	21	4	1	0	0	0	
Cascade	387	562	273	114	171	112	-59	
Chouteau	33	8	10	13	4	8	4	
Custer	71	49	65	21	22	16	-6	
Daniels	2	1	10	1	1	4	3	
Dawson	65	46	22	25	29	18	-11	
Deer Lodge	18	18	11	8	12	8	-4	
Fallon	11	19	14	11	17	12	-5	
Fergus	51	62	28	10	14	12	-2	
Flathead	402	344	339	229	179	115	-64	
Gallatin	462	426	380	220	362	181	-181	
Garfield	9	10	1	1	3	2	-1	
Glacier	65	94	53	48	20	20	0	
Golden Valley	7	4	3	0	2	2	0	
Granite	8	3	1	3	1	0	-1	
Hill	56	54	26	11	24	14	-10	
Jefferson	48	30	32	50	37	13	-24	
Judith Basin	6	3	0	2	0	0	0	
Lake	95	138	101	70	55	72	17	
Lewis and Clark	357	282	215	141	181	108	-73	
Liberty	2	3	0	2	0	1	1	
Lincoln	40	44	61	42	29	22	-7	
Madison	35	16	15	10	29	11	-18	
McCone	6	13	12	0	6	5	-1	
Meagher	9	4	2	3	5	1	-4	

Missoula	379	306	228	139	140	108	-32	
Park	188	41	63	31	53	40	-13	
Phillips	22	15	12	11	9	4	-5	
Powder River	3	2	2	0	1	0	-1	
Prairie	4	5	6	3	7	4	-3	
Richland	61	29	73	11	41	17	-24	
Rosebud	12	17	13	11	44	6	-38	
Sheridan	6	7	6	10	18	1	-17	
Stillwater	40	13	0	2	38	0	-38	
Teton	18	17	15	6	6	1	-5	
Treasure	6	0	6	7	7	0	-7	
Wheatland	4	3	0	1	3	1	-2	
Yellowstone	769	664	526	323	296	207	-89	
MONTANA	**4399**	**4027**	**3365**	**1893**	**2214**	**1363**	**-851**	

†Note: Data are based on the date of report into the Montana Infectious Disease Information System (MIDIS). Underlined numbers in the above table reflect adjusted counts and may include cases diagnosed but not reported in earlier time frames. These adjustments result from local and state data reconciliation efforts, conducted to ensure accurate data.

County name	Eligible population 5+	Dose 1	Dose 2	Dose 3	Fully Immunized	Total Doses Administered	Percent eligible with first dose (5+)	Percent Fully Vaccinated (5+)
BEAVERHEAD	9,091	5,268	4,231	1,774	4,919	11,273	58%	54%
BIG HORN	11,975	7,679	6,480	1,838	6,834	15,997	64%	57%
BLAINE	6,044	3,333	2,829	1,092	3,027	7,254	55%	50%
BROADWATER	6,092	2,179	1,600	705	1,830	4,484	36%	30%
CARBON	10,476	5,378	4,635	2,031	4,968	12,044	51%	47%
CARTER	1,141	356	316	137	337	809	31%	30%
CASCADE	76,124	40,262	32,206	11,697	36,008	84,165	53%	47%
CHOUTEAU	5,430	2,114	1,722	932	1,896	4,768	39%	35%
CUSTER	10,692	5,120	4,075	1,725	4,569	10,920	48%	43%
DANIELS	1,559	709	613	263	666	1,585	45%	43%
DAWSON	8,071	3,365	2,801	1,097	3,095	7,263	42%	38%
DEER LODGE	8,887	6,108	5,035	2,516	5,595	13,659	69%	63%
FALLON	2,646	1,022	872	329	918	2,223	39%	35%
FERGUS	10,495	5,232	4,478	2,001	4,854	11,711	50%	46%
FLATHEAD	99,993	49,297	38,542	15,372	42,647	103,211	49%	43%
GALLATIN	110,900	78,453	60,188	22,391	66,067	161,032	71%	60%
GARFIELD	1,188	307	241	70	284	618	26%	24%
GLACIER	12,447	10,006	6,596	2,325	7,110	18,927	80%	57%
GOLDEN VALLEY	788	358	297	101	329	756	45%	42%
GRANITE	3,218	1,399	1,115	419	1,223	2,933	43%	38%
HILL	14,914	9,279	7,044	2,850	8,308	19,173	62%	56%
JEFFERSON	11,819	6,429	5,423	2,364	5,821	14,216	54%	49%
JUDITH BASIN	1,880	773	658	220	719	1,651	41%	38%
LAKE	29,280	18,829	15,406	6,163	16,561	40,398	64%	57%
LEWIS & CLARK	66,257	43,056	35,006	15,600	37,790	93,662	65%	57%
LIBERTY	2,234	835	692	359	790	1,886	37%	35%
LINCOLN	19,480	9,001	7,299	2,927	7,960	19,227	46%	41%
MADISON	8,589	4,226	3,364	1,573	3,785	9,163	49%	44%
MCCONE	1,562	438	410	167	419	1,015	28%	27%
MEAGHER	1,726	977	842	364	918	2,183	57%	53%
MINERAL	4,302	2,505	1,802	844	2,262	5,151	58%	53%
MISSOULA	115,881	81,314	67,622	28,534	73,511	177,470	70%	63%
MUSSELSHELL	4,458	1,639	1,330	450	1,521	3,419	37%	34%
PARK	15,969	10,703	8,250	3,373	9,143	22,326	67%	57%
PETROLEUM	483	158	138	53	147	349	33%	30%
PHILLIPS	3,675	1,823	1,386	735	1,686	3,944	50%	46%
PONDERA	5,389	3,406	2,594	1,099	2,952	7,099	63%	55%
POWDER RIVER	1,588	473	383	153	435	1,009	30%	27%
POWELL	6,534	4,026	3,025	828	3,789	7,879	62%	58%
PRAIRIE	994	448	393	203	415	1,044	45%	42%
RAVALLI	42,972	23,437	18,785	8,621	21,095	50,843	55%	49%
RICHLAND	10,310	4,230	3,291	1,239	3,952	8,760	41%	38%
ROOSEVELT	9,918	4,981	3,680	1,269	4,334	9,930	50%	44%
ROSEBUD	8,160	5,207	4,041	1,551	4,552	10,799	64%	56%
SANDERS	11,641	4,742	4,003	1,477	4,278	10,222	41%	37%
SHERIDAN	3,075	1,887	1,656	806	1,787	4,349	61%	58%
SILVER BOW	33,267	22,799	19,432	8,039	20,689	50,270	69%	62%
STILLWATER	9,451	4,164	3,275	1,431	3,812	8,870	44%	40%
SWEET GRASS	3,523	1,626	1,257	613	1,479	3,496	46%	42%
TETON	5,819	2,984	2,070	964	2,502	6,018	51%	43%
TOOLE	4,391	2,177	1,673	446	2,043	4,296	50%	47%
TREASURE	623	410	284	120	306	814	66%	49%
VALLEY	6,931	3,252	2,571	1,376	3,013	7,199	47%	43%
WHEATLAND	2,035	759	658	213	707	1,630	37%	35%
WIBAUX	898	326	274	50	282	650	36%	31%
YELLOWSTONE	153,378	87,512	72,289	27,199	78,268	187,000	57%	51%
MONTANA	**1,020,663**	**598,776**	**481,178**	**193,088**	**529,207**	**1,273,042**	**59%**	**52%**