Laramie County and Colorado Worker Commuting Pattern Analysis

A Report to the Cheyenne Metropolitan Planning Organization



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Introduction

Research & Planning (R&P) contracted with the Cheyenne Metropolitan Planning Organization (MPO) in 2007 to study Laramie County worker commuting flows. The project's purpose was to determine not only the amount of commuting into and out of Laramie County, but also the sources and destinations of commuters. Additionally, R&P obtained geographic information for Colorado residents who commute into Wyoming for work. MPO intends to use the information and analysis presented in this report to determine the feasibility of a commuter bus service along the Front Range to transport those who live in Colorado and work in Laramie County to their jobs more efficiently. What follows is a summary of the project. The commuting pattern data modeling strategy, additional reports and technical documentation can be found at <u>http://doe.state.wy.us/lmi/commute.htm</u>.

Time Line and Methodology

The initial agreement between R&P and MPO began through a Memorandum of Understanding (MOU) during summer 2007 (Wyoming Department of Employment, 2007). At this time, MPO served as an intermediary between R&P and the State of Colorado to secure Colorado driver's license data for people who work in Wyoming (Colorado Department of Revenue, 2008). The Colorado driver's license data provides the residential street addresses for individuals who reside in Colorado. From summer 2007 until February 2008, R&P worked with Colorado officials and staff to determine the required data elements, number of downloads required, as well as input and output file layouts.

The flow of the data exchange and processing used in this study is described in Figure 1. Definitions for commonly used terms are shown in Appendix A. An important initial step was to obtain latitude and longitude for workers' residential addresses. R&P utilized the services of the Bureau of Labor Statistics to accomplish this (see Residency Assignment step, Figure 1; Bureau of Labor Statistics, n.d.). In order to protect individuals' confidentiality as mandated by Wyoming and U.S. statutes, social security numbers (SSNs) were removed prior to file transfer to the Bureau of Labor Statistics (BLS). In their place, an unrelated sequence number was attached.

After the geographic coordinates for the residential location were obtained, they could be compared to the coordinates of work locations in the Wyoming Employer Quarterly Master File (EQUI; Bureau of Labor Statistics and Wyoming Department of Employment, Research & Planning, n.d.). Joining the geographically coded Wyoming and Colorado worker files with the Wyoming EQUI data allowed R&P to calculate the distance between the assigned

residence location and probable work locations.¹ Using the final residence/work location parings, we calculated commuting flow rates using several variables (e.g., age, sex, employer industry, wage levels, county of residence or work, and tenure). These commuting measures were used to create a mathematical profile of commuting behavior. Commuting may occur daily, weekly or along some other period.

Results

Figure 2 displays selected major commuting flow components for Laramie County. The top line (work and live in Laramie County) refers to the right vertical axis while the remaining flow components refer to the left vertical axis. The number of intracounty transactions (see Appendix A for definition) increased from 28,508 in first quarter 2000 (2000Q1) to 34,628 by fourth quarter 2007 (2007Q4).

The next lower line on Figure 2 represents commuting inflow to Laramie County by workers who are not residents of Colorado or Wyoming. This flow component was relatively steady until mid-decade when large increases occurred. Although the rate of increase has slowed somewhat, an upward trend in 2007 is still seen. Further investigation (see Table 3) showed the majority of the increase in this inflow component was due to former Wyoming residents (based on their state of origin, see Appendix A for definition) returning to the state for work.

The flow of Wyoming residents who commute to Laramie County peaked in 2005 and then began to decline. This may be due to wage competition induced by Wyoming's current economic expansion driven by minerals and related industries offering relatively higher wages. The result is that at least some workers have been drawn away from Laramie County to other locations in the state.

The bottom line of the chart shows the commuting inflow of Colorado residents to Laramie County since 2000Q1. Although this is the smallest component of inflow, it grew from 1,209 transactions in 2000Q1 to 3,314 by 2007Q4, or an average annual compound rate of 13.9%. As Figure 2 illustrates, the inflow from Colorado was nearly equal to the total inflow from other Wyoming counties by 2007Q4.

¹ More than one probable work location exists in many cases because employers report multiple operating units for their respective Unemployment Insurance accounts. Once we calculate the distances to each probable work location, a statistical algorithm then assigns the most likely pairing of residence and work location for each record in a particular quarter primarily based on distance.

We identified the counties that contributed the most to Laramie County inflow in Table 1.² Historically, Albany County and Natrona County constituted the largest components of flow from within the state. The next lower section of the table highlights the Colorado counties providing the most commuters into Laramie County. Locales along the Front Range (e.g., Weld, Larimer, Adams, Denver, El Paso, Arapahoe, Douglas, Jefferson, Pueblo, and Boulder counties) are the largest contributors. These 10 Colorado counties comprised 89.4% of the commuting from Colorado in 2007Q4. The final section of Table 1 illustrates the amount of commuting into Laramie County by workers who were not residents of either Colorado or Wyoming. The numbers shown on this line also appear in Figure 2.

Table 2 shows the inflow to Laramie County by industry, regardless of residency. Construction, Leisure & Hospitality, Retail Trade and Professional & Business Services brought 56.7% of total commuters to the county. The inflow rates for Construction, Retail Trade and Leisure & Hospitality all increased substantially toward the end of the series. Since workers in Retail Trade and Leisure & Hospitality on average earn comparatively low wages, projected fare estimates may need to be lower.

Table 3 helps identify from which states workers came (other than Colorado or Wyoming) by using the state-of-origin methodology (SOO; see Appendix A). Using this methodology, we see that most of the people not residing in Wyoming or Colorado but working in Laramie County were returning former state residents. In fact, 27.8% of these workers in 2007Q4 had Wyomingissued SSNs. Although the top 12 states of origin were mostly Wyoming neighbors (e.g., Colorado, Utah, Montana, South Dakota, and Nebraska), several other states such as California, Texas, New York, Michigan, and Illinois were prominent as well.

Tables 4 and 5 show the commuting outflows from Laramie County by geography and industry. Table 4 shows the most common destinations for people living in Laramie County but commuting out for work were, Albany, Natrona, and Campbell counties in 2007Q4. The three industries drawing the most Laramie County residents to other counties for work included Construction, Leisure & Hospitality, and Professional & Business Services. It may seem odd that the industries which import the most workers also export the most workers. However, several factors including job availability, pay rates, commuting cost and standard of living all affect worker decisions regarding where they live and work. One point to consider is that a shuttle service could not only serve to bring workers to Laramie County, it could transport Laramie County residents who desire to work in Colorado to those locations.

² To conserve space, only data from first quarter 2004 forward are shown in Tables 2, 3, 4, and 5. R&P will post the complete tables to its website <u>http://doe.state.wy.us/lmi</u>.

Conclusion

This project marks the first use of out-of-state driver's license data in the construction of the commuting pattern data model. Results indicated that commuting from the Colorado Front Range to Laramie County increased substantially during the last seven years and may continue to do so as the national economy slows. Given the recent rapid rise in fuel prices and current levels of commuting, the development of some sort of mass transit between the Colorado Front Range communities and Laramie County may be more feasible. Future iterations of the model may well illuminate the negative impact fuel prices have on all types of commuting.

Appendix A: Definitions

Base County – the county whose commuting flows that are being studied. In this case, Laramie County is the base county.

Employer Quarterly Master File (EQUI) – contains a summary of the number of workers covered by Unemployment Insurance, the total wages paid, and the employers' geographic coordinates.

Inflow – the amount of commuting into the base county from another county (e.g., Source County).

Intracounty Commuting – people who work and reside in the same county.

Transaction – each time a worker receives wages from an employer is a transaction. People receiving wages from more than one employer in a quarter would have multiple transactions. The counts shown in the tables and figure are transactions.

Intercounty Commuting – commuting flows between counties.

Outflow – the amount of commuting from the base county to another county (e.g., Target County).

Quarterly Wage Records (Wyoming Department of Employment, n.d.) – details all the people who worked for each employer in a quarter by SSN and their wages. *Source County* – the county that supplies commuting workers for another county.

State of Origin – A worker's state of origin represents where they most likely lived when their SSN was issued. The first three digits of the SSN are the state of origin identifier. For example, people who were issued SSNs while living in Wyoming are generally issued SSNs that begin with "520". *Target County* – the county which receives commuting workers.

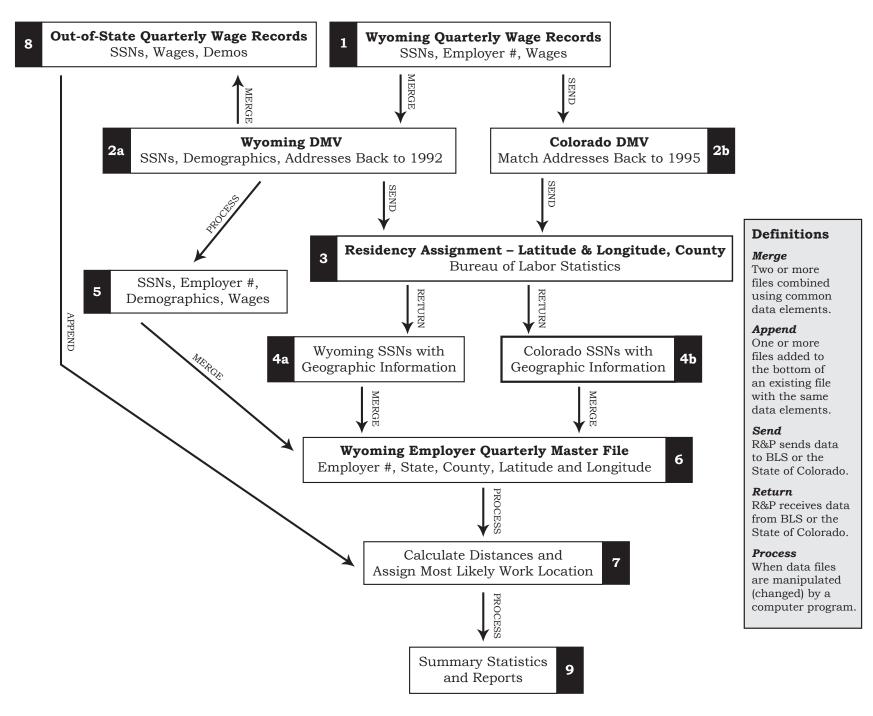
References

Bureau of Labor Statistics. (n.d.). Quarterly Census of Employment and Wages Overview. Downloaded June 27, 2008 from <u>http://www.bls.gov/cew/cewover.htm</u>

Bureau of Labor Statistics. (n.d.). Residency Assignment System.

- Colorado Department of Revenue. (n.d.). Colorado Driver's License Database (unpublished raw data).
- Wyoming Department of Employment, Research & Planning. (2007). Memorandum of Understanding with Cheyenne Metropolitan Planning Organization (unpublished document)
- Wyoming Department of Employment, Research & Planning. (n.d.). Quarterly Census of Employment and Wages. (unpublished raw data).
- Wyoming Department of Employment, Research & Planning. (n.d.). Wyoming Wage Records Database. (unpublished raw data).
- Wyoming Department of Transportation. (n.d.). Wyoming Driver's License Database (unpublished raw data).

Figure 1: Commuting Pattern Data Flow Diagram



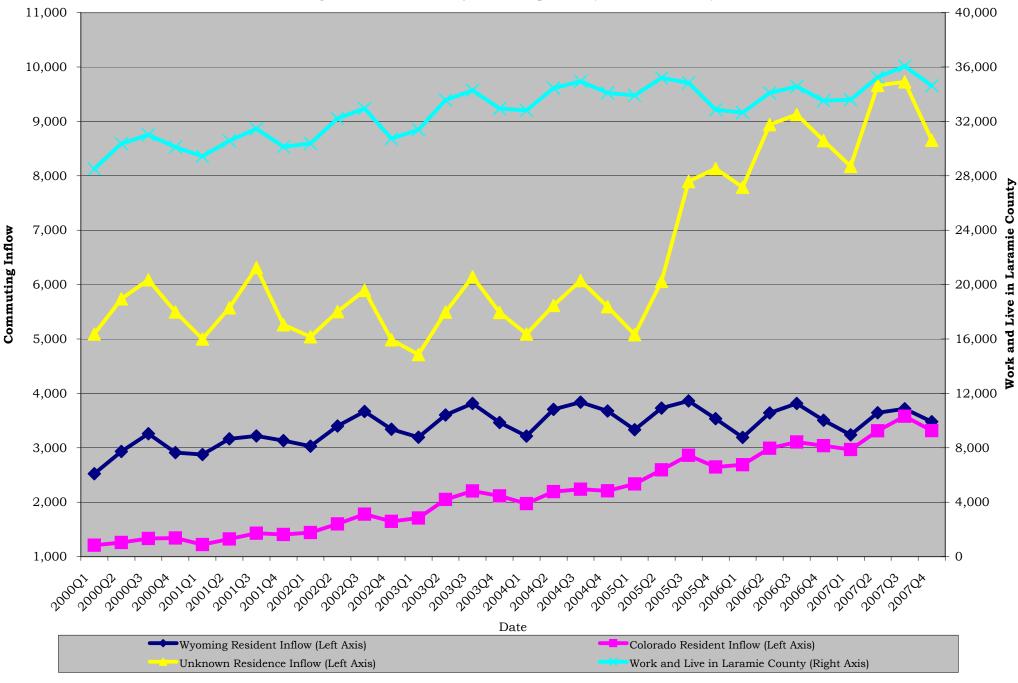


Figure 2: Laramie County Flow Components (Outflow Excluded)

Prepared by Doug Leonard, Wyoming Department of Employment, Research & Planning, 7/1/2008

| | | | | | | | | Da | | | | | | | | |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| County of Residence | 2004Q1 | 2004Q2 | 2004Q3 | 2004Q4 | 2005Q1 | 2005Q2 | 2005Q3 | 2005Q4 | 2006Q1 | 2006Q2 | 2006Q3 | 2006Q4 | 2007Q1 | 2007Q2 | 2007Q3 | 2007Q4 |
| Albany | 753 | 881 | 883 | 826 | 812 | 893 | 913 | 807 | 769 | 852 | 869 | 774 | 767 | 798 | 823 | 824 |
| Big Horn | 33 | 38 | 42 | 64 | 33 | 34 | 47 | 54 | 25 | 30 | 41 | 46 | 27 | 32 | 40 | 51 |
| Campbell | 97 | 115 | 129 | 129 | 106 | 122 | 141 | 119 | 109 | 107 | 122 | 141 | 122 | 112 | 127 | 113 |
| Carbon | 136 | 147 | 153 | 145 | 124 | 142 | 164 | 149 | 118 | 130 | 120 | 119 | 95 | 123 | 132 | 107 |
| Converse | 88 | 100 | 101 | 95 | 97 | 99 | 116 | 95 | 88 | 102 | 112 | 108 | 93 | 118 | 118 | 97 |
| Crook | 28 | 36 | 37 | 22 | 23 | 29 | 31 | 19 | 23 | 25 | 21 | 17 | 18 | 28 | 25 | 15 |
| Fremont | 233 | 275 | 299 | 298 | 277 | 300 | 298 | 270 | 214 | 233 | 235 | 240 | 220 | 237 | 263 | 235 |
| Goshen | 262 | 280 | 285 | 271 | 259 | 277 | 286 | 271 | 264 | 296 | 305 | 279 | 290 | 329 | 285 | 280 |
| Hot Springs | 34 | 42 | 44 | 37 | 40 | 52 | 45 | 29 | 31 | 45 | 39 | 31 | 33 | 56 | 49 | 39 |
| Johnson | 29 | 28 | 29 | 30 | 27 | 26 | 25 | 23 | 24 | 33 | 30 | 27 | 24 | 26 | 22 | 21 |
| Lincoln | 61 | 58 | 62 | 55 | 56 | 52 | 42 | 41 | 40 | 49 | 47 | 44 | 39 | 41 | 45 | 42 |
| Natrona | 505 | 541 | 563 | 565 | 478 | 530 | 563 | 567 | 533 | 605 | 657 | 644 | 551 | 616 | 613 | 609 |
| Niobrara | 22 | 25 | 26 | 21 | 20 | 21 | 22 | 28 | 23 | 34 | 36 | 26 | 24 | 21 | 28 | 18 |
| Park | 99 | 125 | 133 | 150 | 92 | 94 | 104 | 106 | 73 | 88 | 106 | 107 | 84 | 102 | 106 | 111 |
| Platte | 317 | 370 | 375 | 317 | 316 | 390 | 405 | 372 | 369 | 430 | 436 | 380 | 365 | 415 | 419 | 381 |
| Sheridan | 147 | 156 | 181 | 162 | 150 | 145 | 140 | 123 | 124 | 137 | 142 | 130 | 129 | 133 | 145 | 133 |
| Sublette | 47 | 43 | 49 | 47 | 44 | 45 | 40 | 40 | 37 | 41 | 41 | 40 | 38 | 47 | 45 | 35 |
| Sweetwater | 157 | 195 | 199 | 229 | 184 | 210 | 227 | 203 | 154 | 182 | 202 | 156 | 139 | 142 | 156 | 147 |
| Teton | 50 | 72 | 57 | 58 | 61 | 75 | 61 | 59 | 49 | 48 | 47 | 54 | 57 | 68 | 65 | 60 |
| Uinta | 68 | 115 | 122 | 77 | 84 | 133 | 133 | 86 | 70 | 107 | 135 | 65 | 70 | 122 | 130 | 88 |
| Washakie | 32 | 40 | 45 | 61 | 35 | 40 | 39 | 51 | 34 | 42 | 49 | 53 | 33 | 59 | 59 | 58 |
| Weston | 18 | 24 | 23 | 16 | 15 | 21 | 19 | 23 | 21 | 25 | 23 | 25 | 21 | 20 | 22 | 16 |
| Total Wyoming | 3,216 | 3,706 | 3,837 | 3,675 | 3,333 | 3,730 | 3,861 | 3,535 | 3,192 | 3,641 | 3,815 | 3,506 | 3,239 | 3,645 | 3,717 | 3,480 |
| Colorado | | | | | | | | | | | | | | | | |
| Larimer | 611 | 649 | 682 | 720 | 726 | 794 | 854 | 778 | 765 | 907 | 992 | 953 | 963 | 1,074 | 1,103 | 1,076 |
| Weld | 364 | 398 | 376 | 371 | 411 | 459 | 479 | 440 | 493 | 505 | 517 | 502 | 516 | 646 | 774 | 713 |
| Adams | 147 | 157 | 181 | 163 | 153 | 166 | 205 | 190 | 195 | 214 | 179 | 193 | 182 | 220 | 216 | 216 |
| Denver | 134 | 158 | 148 | 147 | 148 | 156 | 193 | 202 | 181 | 208 | 219 | 211 | 189 | 191 | 219 | 188 |
| El Paso | 101 | 116 | 134 | 122 | 149 | 178 | 201 | 162 | 163 | 185 | 186 | 190 | 203 | 188 | 195 | 184 |
| Arapahoe | 121 | 150 | 163 | 161 | 161 | 181 | 186 | 175 | 178 | 189 | 184 | 213 | 193 | 201 | 208 | 183 |
| Jefferson | 122 | 144 | 133 | 121 | 129 | 155 | 179 | 178 | 177 | 188 | 189 | 191 | 187 | 165 | 173 | 158 |
| Boulder | 79 | 85 | 83 | 89 | 102 | 115 | 126 | 118 | 119 | 134 | 143 | 119 | 111 | 141 | 134 | 126 |
| Douglas | 53 | 57 | 63 | 61 | 67 | 70 | 77 | 70 | 77 | 83 | 78 | 80 | 73 | 83 | 102 | 87 |
| Pueblo | 29 | 30 | 34 | 36 | 30 | 35 | 49 | 41 | 45 | 54 | 64 | 52 | 48 | 46 | 48 | 33 |
| Top 10 Colorado | 1,761 | 1,944 | 1,997 | 1,991 | 2,076 | 2,309 | 2,549 | 2,354 | 2,393 | 2,667 | 2,751 | 2,704 | 2,665 | 2,955 | 3,172 | 2,964 |
| All Other Colorado | 212 | 250 | 241 | 218 | 259 | 285 | 313 | 294 | 295 | 325 | 354 | 333 | 304 | 358 | 406 | 350 |
| Total Colorado | 1,973 | 2,194 | 2,238 | 2,209 | 2,335 | 2,594 | 2,862 | 2,648 | 2,688 | 2,992 | 3,105 | 3,037 | 2,969 | 3,313 | 3,578 | 3,314 |
| Unknown - Not | | | | | | | | | | | | | | | | |
| Colorado or Wyoming | 5,092 | 5,619 | 6,074 | 5,595 | 5,078 | 6,060 | 7,894 | 8,131 | 7,791 | 8,940 | 9,126 | 8,646 | 8,174 | 9,662 | 9,727 | 8,654 |
| Total | 10,281 | 11,519 | 12,149 | 11,479 | 10,746 | 12,384 | 14,617 | 14,314 | 13,671 | 15,573 | 16,046 | 15,189 | 14,382 | 16,620 | 17,022 | 15,448 |
| | | | | | | | | | | | | | | | | |

Table 1: Commuting Inflows to Laramie County by Residence Location

| Industry | | | | | | | | Da | te | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| industry | 2004Q1 | 2004Q2 | 2004Q3 | 2004Q4 | 2005Q1 | 2005Q2 | 2005Q3 | 2005Q4 | 2006Q1 | 2006Q2 | 2006Q3 | 2006Q4 | 2007Q1 | 2007Q2 | 2007Q3 | 2007Q4 |
| Agriculture, Forestry, & Fishing | 76 | 96 | 91 | 88 | 77 | 86 | 99 | 141 | 145 | 149 | 149 | 153 | 164 | 162 | 174 | 168 |
| Mining | 21 | 17 | 25 | 18 | 25 | 42 | 62 | 59 | 59 | 70 | 79 | 71 | 44 | 53 | 73 | 72 |
| Construction | 1,002 | 1,158 | 1,223 | 1,146 | 1,009 | 1,262 | 1,612 | 1,772 | 1,842 | 2,362 | 2,007 | 1,905 | 1,494 | 2,344 | 2,313 | 1,647 |
| Manufacturing | 335 | 360 | 357 | 302 | 314 | 355 | 416 | 428 | 424 | 459 | 486 | 455 | 427 | 443 | 462 | 441 |
| Wholesale Trade | 218 | 201 | 219 | 211 | 182 | 226 | 289 | 289 | 279 | 307 | 302 | 279 | 270 | 274 | 284 | 301 |
| Retail Trade | 1,503 | 1,660 | 1,824 | 1,824 | 1,558 | 1,874 | 2,215 | 2,345 | 1,961 | 2,078 | 2,223 | 2,127 | 2,048 | 2,338 | 2,558 | 2,470 |
| Transportation, Warehousing & Utilities | 502 | 553 | 518 | 456 | 442 | 497 | 538 | 558 | 655 | 652 | 728 | 756 | 735 | 834 | 859 | 812 |
| Information | 225 | 245 | 241 | 269 | 251 | 245 | 271 | 315 | 308 | 302 | 307 | 322 | 323 | 306 | 318 | 326 |
| Financial Activities | 399 | 422 | 421 | 406 | 391 | 438 | 534 | 538 | 520 | 577 | 597 | 579 | 504 | 533 | 564 | 585 |
| Professional & Business Services | 1,477 | 1,688 | 1,739 | 1,819 | 1,421 | 1,691 | 2,043 | 2,053 | 1,733 | 2,140 | 2,296 | 2,164 | 1,956 | 2,263 | 2,283 | 2,137 |
| Education | 417 | 572 | 529 | 555 | 788 | 843 | 881 | 814 | 846 | 933 | 905 | 853 | 976 | 949 | 921 | 892 |
| Health Care & Social Assistance | 801 | 782 | 897 | 877 | 928 | 999 | 1,235 | 1,183 | 1,195 | 1,248 | 1,296 | 1,317 | 1,342 | 1,389 | 1,389 | 1,359 |
| Leisure & Hospitality | 1,901 | 2,122 | 2,377 | 2,045 | 1,899 | 2,153 | 2,623 | 2,200 | 2,072 | 2,407 | 2,721 | 2,398 | 2,257 | 2,497 | 2,842 | 2,507 |
| Other Services | 292 | 337 | 357 | 296 | 295 | 325 | 390 | 350 | 378 | 443 | 476 | 489 | 541 | 789 | 523 | 415 |
| State Govt. Public Admin. | 1,038 | 1,211 | 1,208 | 1,070 | 1,074 | 1,220 | 1,233 | 1,090 | 1,078 | 1,247 | 1,238 | 1,117 | 1,123 | 1,249 | 1,252 | 1,124 |
| Local Govt. Public Admin. | 74 | 95 | 123 | 97 | 92 | 128 | 176 | 179 | 176 | 199 | 236 | 204 | 178 | 197 | 207 | 192 |
| Unknown | | | | | | | | | | | | | | | | • |
| Total | 10,281 | 11,519 | 12,149 | 11,479 | 10,746 | 12,384 | 14,617 | 14,314 | 13,671 | 15,573 | 16,046 | 15,189 | 14,382 | 16,620 | 17,022 | 15,448 |

Table 2: Commuting Inflows to Laramie County by Industry

| | | | | | | | | Da | te | | | | | | | |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| State of Origin | 2004Q1 | 2004Q2 | 2004Q3 | 2004Q4 | 2005Q1 | 2005Q2 | 2005Q3 | 2005Q4 | 2006Q1 | 2006Q2 | 2006Q3 | 2006Q4 | 2007Q1 | 2007Q2 | 2007Q3 | 2007Q4 |
| WY | 1,146 | 1,322 | 1,409 | 1,262 | 1,183 | 1,543 | 2,179 | 2,312 | 2,228 | 2,473 | 2,580 | 2,357 | 2,241 | 2,507 | 2,632 | 2,403 |
| CA | 553 | 619 | 641 | 573 | 523 | 598 | 746 | 783 | 734 | 880 | 848 | 828 | 765 | 910 | 956 | 836 |
| СО | 252 | 300 | 310 | 315 | 255 | 317 | 414 | 422 | 456 | 492 | 494 | 488 | 471 | 509 | 519 | 503 |
| ТX | 287 | 310 | 336 | 316 | 287 | 337 | 438 | 474 | 415 | 502 | 511 | 466 | 462 | 642 | 579 | 496 |
| NE | 267 | 272 | 317 | 293 | 281 | 317 | 409 | 397 | 374 | 428 | 436 | 393 | 393 | 404 | 406 | 392 |
| SD | 128 | 126 | 132 | 119 | 130 | 143 | 184 | 180 | 171 | 193 | 208 | 215 | 202 | 212 | 198 | 213 |
| МТ | 127 | 119 | 154 | 131 | 129 | 161 | 177 | 190 | 168 | 203 | 220 | 199 | 184 | 197 | 212 | 204 |
| IL | 130 | 137 | 148 | 149 | 127 | 148 | 206 | 187 | 165 | 205 | 199 | 206 | 195 | 234 | 237 | 198 |
| MI | 87 | 94 | 101 | 82 | 72 | 92 | 116 | 132 | 123 | 142 | 165 | 165 | 161 | 213 | 252 | 192 |
| UT | 113 | 144 | 144 | 130 | 117 | 139 | 173 | 186 | 190 | 208 | 191 | 185 | 200 | 220 | 185 | 192 |
| NY | 103 | 121 | 136 | 129 | 112 | 131 | 149 | 160 | 136 | 143 | 167 | 173 | 166 | 188 | 190 | 178 |
| WA | 122 | 132 | 144 | 136 | 120 | 130 | 175 | 179 | 160 | 182 | 168 | 176 | 181 | 224 | 213 | 160 |
| Top 12 States of Origin | 3,315 | 3,696 | 3,972 | 3,635 | 3,336 | 4,056 | 5,366 | 5,602 | 5,320 | 6,051 | 6,187 | 5,851 | 5,621 | 6,460 | 6,579 | 5,967 |
| All Other States of Origin | 1,777 | 1,923 | 2,102 | 1,960 | 1,742 | 2,004 | 2,528 | 2,529 | 2,471 | 2,889 | 2,939 | 2,795 | 2,553 | 3,202 | 3,148 | 2,687 |
| Total | 5,092 | 5,619 | 6,074 | 5,595 | 5,078 | 6,060 | 7,894 | 8,131 | 7,791 | 8,940 | 9,126 | 8,646 | 8,174 | 9,662 | 9,727 | 8,654 |

Table 3: Laramie County Commuting Inflow by State of Origin

| | Date | | | | | | | | | | | | | | | |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Location of Work | 2004Q1 | 2004Q2 | 2004Q3 | 2004Q4 | 2005Q1 | 2005Q2 | 2005Q3 | 2005Q4 | 2006Q1 | 2006Q2 | 2006Q3 | 2006Q4 | 2007Q1 | 2007Q2 | 2007Q3 | 2007Q4 |
| Albany | -504 | -597 | -538 | -545 | -515 | -581 | -551 | -507 | -435 | -494 | -539 | -504 | -472 | -542 | -559 | -518 |
| Big Horn | -12 | -11 | -12 | -11 | -16 | -30 | -26 | -21 | -22 | -37 | -44 | -37 | -26 | -47 | -51 | -56 |
| Campbell | -83 | -94 | -134 | -108 | -123 | -134 | -143 | -121 | -105 | -126 | -155 | -145 | -145 | -137 | -162 | -133 |
| Carbon | -69 | -85 | -93 | -86 | -81 | -84 | -90 | -85 | -77 | -77 | -87 | -87 | -82 | -79 | -94 | -90 |
| Converse | -20 | -27 | -100 | -96 | -48 | -56 | -54 | -54 | -62 | -58 | -58 | -59 | -55 | -74 | -71 | -65 |
| Crook | -12 | -14 | -11 | -12 | -7 | -4 | -6 | -6 | -6 | -6 | -8 | -10 | -11 | -14 | -8 | -7 |
| Fremont | -54 | -70 | -65 | -63 | -73 | -87 | -88 | -67 | -53 | -66 | -67 | -53 | -52 | -57 | -63 | -43 |
| Goshen | -48 | -78 | -102 | -84 | -59 | -65 | -60 | -63 | -42 | -46 | -43 | -55 | -58 | -54 | -48 | -61 |
| Hot Springs | -4 | -6 | -6 | -8 | -10 | -12 | -11 | -13 | -11 | -12 | -17 | -14 | -8 | -10 | -10 | -11 |
| Johnson | -9 | -11 | -10 | -11 | -7 | -8 | -10 | -8 | -9 | -12 | -15 | -10 | -9 | -7 | -9 | -10 |
| Lincoln | -17 | -14 | -15 | -20 | -6 | -8 | -13 | -20 | -23 | -21 | -17 | -20 | -15 | -25 | -29 | -24 |
| Natrona | -481 | -494 | -662 | -627 | -618 | -649 | -670 | -593 | -492 | -500 | -530 | -511 | -405 | -390 | -401 | -401 |
| Niobrara | -7 | -5 | -7 | -3 | -6 | -8 | -11 | -11 | -8 | -8 | -8 | -14 | -15 | -12 | -11 | -10 |
| Park | -49 | -55 | -51 | -45 | -34 | -39 | -42 | -36 | -29 | -32 | -26 | -22 | -22 | -31 | -26 | -23 |
| Platte | -81 | -95 | -85 | -103 | -88 | -123 | -103 | -96 | -92 | -110 | -93 | -97 | -98 | -116 | -105 | -96 |
| Sheridan | -47 | -50 | -46 | -40 | -47 | -57 | -64 | -48 | -45 | -52 | -60 | -60 | -54 | -57 | -69 | -55 |
| Sublette | -5 | -9 | -7 | -8 | -8 | -16 | -21 | -18 | -15 | -21 | -18 | -16 | -27 | -25 | -27 | -24 |
| Sweetwater | -83 | -101 | -93 | -92 | -83 | -86 | -115 | -111 | -95 | -107 | -114 | -100 | -103 | -92 | -98 | -101 |
| Teton | -35 | -42 | -38 | -36 | -23 | -39 | -44 | -53 | -40 | -58 | -60 | -56 | -46 | -46 | -56 | -39 |
| Uinta | -162 | -156 | -168 | -156 | -37 | -40 | -52 | -41 | -31 | -39 | -49 | -31 | -16 | -13 | -13 | -15 |
| Washakie | -7 | -7 | -6 | -6 | -12 | -10 | -11 | -7 | -9 | -10 | -13 | -6 | -9 | -15 | -13 | -6 |
| Weston | -9 | -10 | -7 | -7 | -5 | -5 | -11 | -10 | -11 | -14 | -12 | -13 | -10 | -16 | -18 | -14 |
| Unknown Wyoming County | -721 | -754 | -459 | -470 | -396 | -435 | -339 | -356 | -465 | -472 | -496 | -538 | -579 | -575 | -466 | -505 |
| Alaska | -5 | -7 | -13 | -5 | -6 | -8 | -13 | -5 | -4 | -15 | -21 | -14 | -11 | -17 | | |
| Colorado | -464 | -568 | -428 | -455 | -377 | -433 | -429 | -402 | -388 | -368 | -433 | -469 | -466 | -487 | | |
| Idaho | -15 | -20 | -23 | -19 | -21 | -18 | -24 | -14 | -13 | -14 | -29 | -16 | -17 | -21 | | |
| Montana | -46 | -67 | -23 | -26 | -22 | -25 | -44 | -37 | -18 | -20 | -36 | -28 | -23 | -38 | | |
| Nebraska | -62 | -86 | -111 | -88 | -77 | -95 | -93 | -81 | -69 | -86 | -113 | -83 | -79 | -75 | | |
| New Mexico | -24 | -27 | -32 | -21 | -38 | -24 | -20 | -25 | -28 | -21 | -30 | -27 | -28 | -22 | | |
| Oklahoma | | | | | | | | | | | | | | | | |
| South Dakota | -9 | -17 | -24 | -17 | -15 | -20 | -29 | -14 | -15 | -30 | -28 | -14 | -17 | -17 | | |
| Texas | -51 | -49 | | | | | | | -94 | -89 | -112 | -110 | -92 | -111 | | |
| Utah | -26 | -32 | -38 | -20 | -24 | -27 | -42 | -40 | -40 | -44 | -42 | -30 | -47 | -49 | | |
| Total | -3,221 | -3,658 | -3,407 | -3,288 | -2,882 | -3,226 | -3,229 | -2,963 | -2,846 | -3,065 | -3,373 | -3,249 | -3,097 | -3,271 | -2,407 | -2,307 |

Table 4: Laramie County Commuting Outflow by Work Location

| | | | | | | | • | Da | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Industry | 2004Q1 | 2004Q2 | 2004Q3 | 2004Q4 | 2005Q1 | 2005Q2 | 2005Q3 | 2005Q4 | 2006Q1 | 2006Q2 | 2006Q3 | 2006Q4 | 2007Q1 | 2007Q2 | 2007Q3 | 2007Q4 |
| Agriculture, Forestry, & Fishing | -44 | -66 | -77 | -56 | -31 | -32 | -26 | -23 | -24 | -25 | -27 | -21 | -29 | -32 | -28 | -25 |
| Mining | -56 | -58 | -74 | -64 | -80 | -99 | -106 | -107 | -104 | -107 | -136 | -154 | -152 | -126 | -126 | -133 |
| Construction | -234 | -285 | -291 | -293 | -248 | -319 | -296 | -262 | -233 | -304 | -302 | -294 | -269 | -370 | -355 | -337 |
| Manufacturing | -33 | -42 | -50 | -52 | -47 | -44 | -45 | -52 | -45 | -43 | -43 | -49 | -43 | -43 | -45 | -40 |
| Wholesale Trade | -170 | -202 | -179 | -175 | -151 | -166 | -174 | -157 | -135 | -136 | -150 | -138 | -155 | -158 | -166 | -153 |
| Retail Trade | -293 | -263 | -249 | -245 | -240 | -253 | -259 | -234 | -215 | -218 | -261 | -225 | -147 | -177 | -172 | -176 |
| Transportation, Warehousing & Utilities | -118 | -134 | -125 | -131 | -127 | -145 | -160 | -158 | -151 | -170 | -162 | -166 | -169 | -197 | -187 | -188 |
| Information | -48 | -51 | -40 | -40 | -40 | -37 | -30 | -23 | -24 | -29 | -31 | -29 | -25 | -24 | -24 | -21 |
| Financial Activities | -200 | -198 | -207 | -224 | -162 | -177 | -174 | -151 | -131 | -114 | -122 | -119 | -108 | -149 | -122 | -107 |
| Professional & Business Services | -372 | -386 | -426 | -384 | -368 | -418 | -389 | -358 | -297 | -352 | -400 | -353 | -365 | -420 | -439 | -396 |
| Education | -118 | -132 | -102 | -141 | -127 | -138 | -106 | -117 | -110 | -125 | -116 | -116 | -112 | -98 | -91 | -99 |
| Health Care & Social Assistance | -283 | -287 | -311 | -295 | -175 | -192 | -189 | -184 | -173 | -177 | -183 | -188 | -182 | -190 | -198 | -205 |
| Leisure & Hospitality | -282 | -398 | -338 | -310 | -272 | -314 | -361 | -291 | -235 | -265 | -291 | -271 | -233 | -246 | -287 | -264 |
| Other Services | -115 | -119 | -99 | -97 | -82 | -88 | -95 | -85 | -151 | -159 | -146 | -146 | -91 | -99 | -95 | -93 |
| State Govt. Public Admin. | -5 | -8 | -5 | -6 | -9 | -5 | -6 | -4 | -5 | -6 | -4 | -5 | -3 | -3 | -3 | -4 |
| Local Govt. Public Admin. | -32 | -40 | -29 | -36 | -32 | -44 | -42 | -36 | -34 | -40 | -44 | -38 | -37 | -49 | -38 | -32 |
| Unknown Industry Wyoming | -116 | -116 | -113 | -88 | -111 | -105 | -77 | -103 | -110 | -108 | -111 | -146 | -197 | -53 | -31 | -34 |
| Unknown Industry Out of State | -702 | -873 | -692 | -651 | -580 | -650 | -694 | -618 | -669 | -687 | -844 | -791 | -780 | -837 | | |
| Total | -3,221 | -3,658 | -3,407 | -3,288 | -2,882 | -3,226 | -3,229 | -2,963 | -2,846 | -3,065 | -3,373 | -3,249 | -3,097 | -3,271 | -2,407 | -2,307 |

Table 5: Laramie County Commuting Outflow by Industry