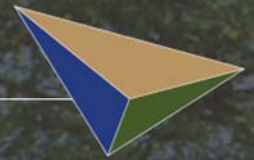


Chapter 3

Socio-Economic Profile



Old Town Fort Collins. Image Credit: City of Fort Collins

Chapter 3: Socio-Economic Profile

I. Socio-Economic Data

In 2013, the North Front Range Metropolitan Planning Organization (NFRMPO) updated the Land Use Allocation Model for the North Front Range region. This model uses a base year of 2012 to generate socio-economic data forecasts to the horizon year 2040. The resulting forecasts provide input to the NFRMPO Regional Travel Demand Model (RTDM) to project future travel volumes on roadways and potential transit ridership. The household and employment data are estimated for the area within the North Front Range Modeling Boundary, which is larger than the NFRMPO boundary.

Overall Forecast

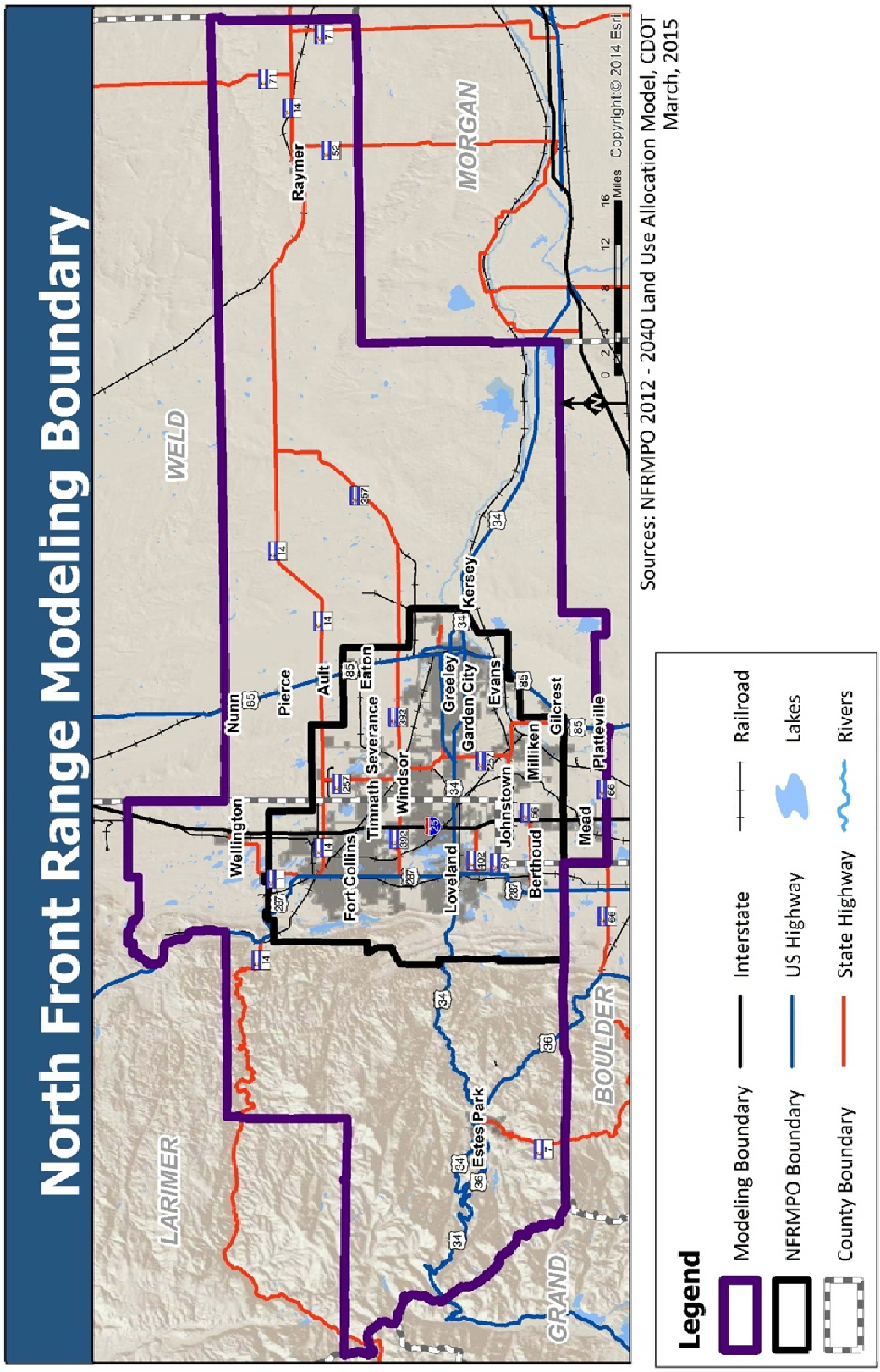
In 2013, the NFRMPO contracted with Steven B. Fisher, Ph.D., Phyllis Resnick, Ph.D., and Logan Simpson Design to prepare a demographic forecast for the North Front Range portion of Larimer and Weld counties making up the North Front Range Modeling Boundary, **Figure 3-1**. The socio-economic forecasts are divided into seven subregions, **Figure 3-2**. The NFRMPO municipalities and counties in each subregion are described in **Table 3-1** and shown in **Figure 3-3**. The team worked closely with the State Demographer’s office and a stakeholders’ group to develop North Front Range specific information. The report, *2040 Economic and Demographic Forecast*,²³ describes the forecasting process and resulting anticipated growth in population, households, and employment from 2010 to 2040, in five year increments. **Tables 3-2 through 3-4** summarize the results from the report.

Subregion	NFRMPO Municipalities and Counties
1 – Surrounding Area	Eaton, LaSalle, Severance, Larimer County, Weld County
2 – Greeley/Evans	Evans, Garden City, Greeley, Milliken, Severance, Weld County, Windsor
3 – Fort Collins	Fort Collins, Larimer County
4 – Loveland/Berthoud	Berthoud, Johnstown, Loveland, Larimer County, Weld County
5 – Extended Larimer County	Larimer County
6 – Extended Weld County	Weld County
7 – Central I-25	Johnstown, Milliken, Timnath, Windsor, Larimer County, Weld County

Source: NFRMPO 2012-2040 Land Use Allocation Model

²³ Steve Fisher, Phyllis Resnick. *2040 Economic and Demographic Forecast*, North Front Range Metropolitan Planning Organization. 2012-2013.

Figure 3-1: North Front Range Modeling Boundary



Sources: NFRMPO 2012 - 2040 Land Use Allocation Model, CDOT March, 2015

Legend

- Modeling Boundary
- NFRMPO Boundary
- County Boundary
- Interstate
- US Highway
- State Highway
- Railroad
- Lakes
- Rivers

Figure 3-2: North Front Range Subregions

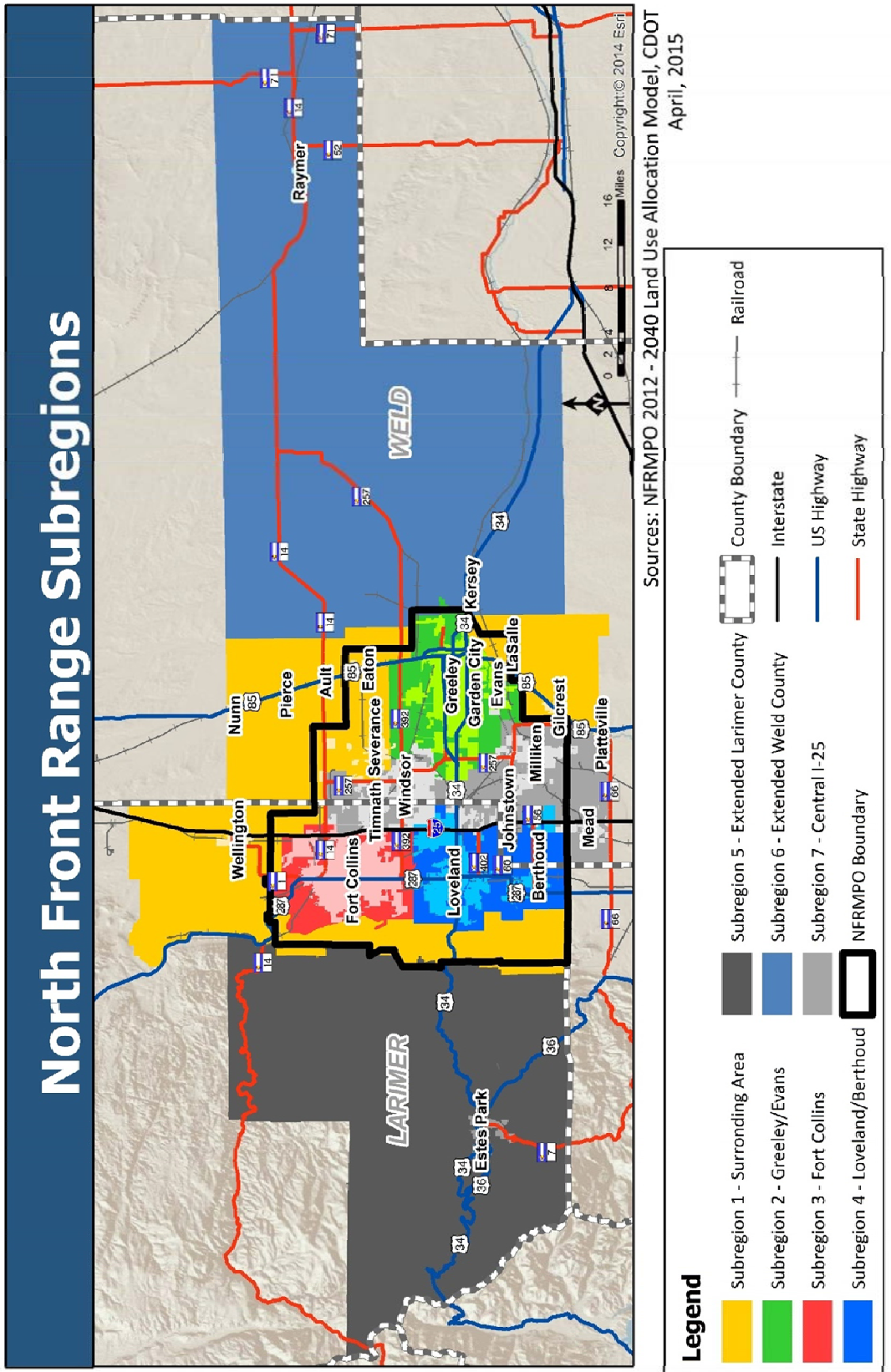
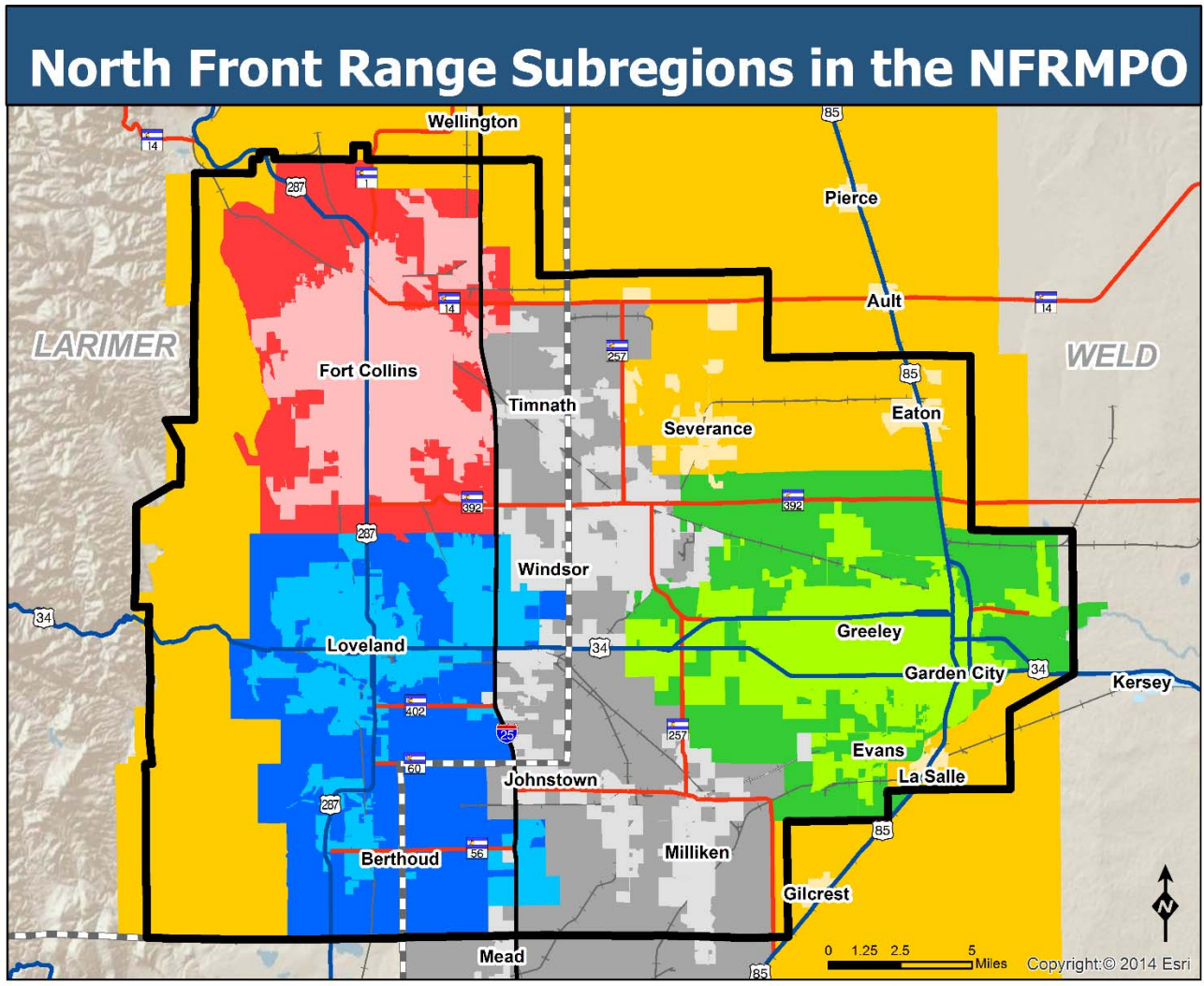


Figure 3-3: North Front Range Subregions in the NFRMPO



Sources: NFRMPO 2012 - 2040 Land Use Allocation Model, CDOT July, 2015

Legend

 Subregion 1 - Surrounding Area	 Subregion 4 - Loveland/Berthoud	 County Boundary	 State Highway
 Subregion 2 - Greeley/Evans	 Subregion 7 - Central I-25	 Interstate	 Railroad
 Subregion 3 - Fort Collins	 NFRMPO Boundary	 US Highway	

Table 3-2: Population Projections			
Subregion	2010	2040	Percent Growth (%)
1	50,867	89,651	76.25%
2	115,974	223,091	92.36%
3	171,417	259,078	51.14%
4	78,733	149,932	90.43%
5	21,373	39,863	86.51%
6	7,746	14,532	87.61%
7	42,404	120,043	183.09%
Total	488,514	896,190	83.45%

Source: 2040 Economic and Demographic Forecast

Table 3-3: Household Projections			
Subregion	2010	2040	Percent Growth (%)
1	19,900	35,728	79.54%
2	43,633	86,680	98.66%
3	64,526	99,959	54.91%
4	30,563	59,451	94.52%
5	8,218	15,703	91.08%
6	3,033	5,795	91.06%
7	16,585	47,861	188.58%
Total	186,459	351,176	88.34%

Source: 2040 Economic and Demographic Forecast

Table 3-4: Employment Projections			
Subregion	2010	2040	Percent Growth (%)
1	11,288	20,007	77.24%
2	58,263	115,059	97.48%
3	101,158	146,456	44.78%
4	40,763	78,267	92.01%
5	5,397	9,572	77.36%
6	2,173	3,860	77.63%
7	18,574	55,374	198.13%
Total	237,615	428,599	80.38%

Source: 2040 Economic and Demographic Forecast

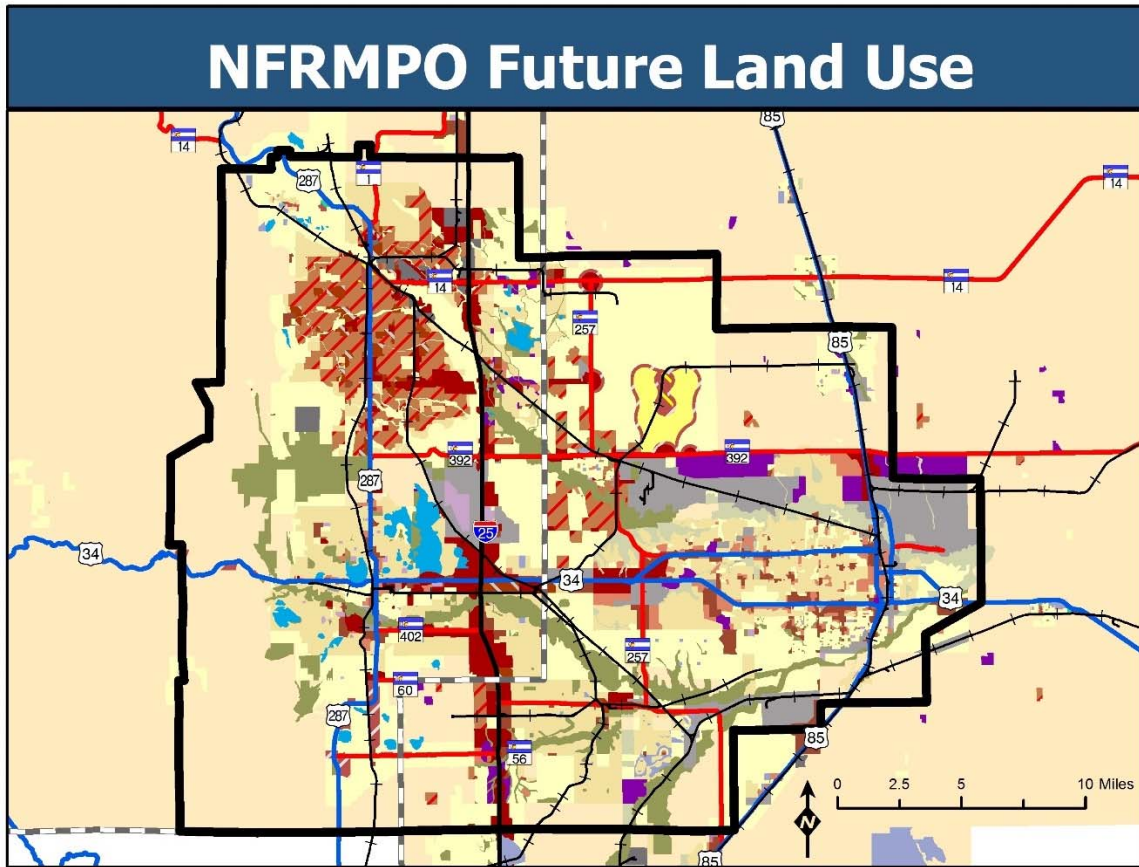
Land Use Allocation Model

The Land Use Allocation Model (LUAM) is a parcel/land use based growth model. The LUAM distributes household and employment projections set in the *2040 Economic and Demographic Forecast* report. The model allocates households and employment based on consolidated future land uses from local jurisdictions in the region, shown in **Figure 3-3**. These projections serve as control totals for the LUAM, meaning the population totals limit the allocation of households and employment. The North Front Range modeling area consists of seven sub-regions: Central I-25, Fort Collins, Greeley, Loveland, Extended Larimer County, Extended Weld County, and Surrounding Area. The Upper Front Range (UFR) portion within the ozone nonattainment area (see **Figure 4-1** in **Chapter 4**) is included for ozone conformity determinations. **Table 3-2** highlights which municipalities and counties are contained in each subregion. Each subregion has individual control totals set for 2012, 2015, 2025, 2035, and 2040 for households and employment. **Tables 3-5 and 3-6** summarize the results of the land use allocation by subregion. **Figures 3-4 through 3-8** display the results of the land use allocation model by traffic analysis zone (TAZ).

Table 3-5: Adjusted Household Data			
Subregion	2012	2040	Percent Growth (%)
1	15,404	35,730	131.95%
2	44,793	86,679	93.51%
3	68,862	99,893	45.06%
4	35,780	59,523	66.36%
5	6,936	15,703	126.40%
6	2,937	5,796	97.34%
7	18,074	47,861	164.81%
Total	192,786	351,185	82.16%
<i>Source: NFRMPO 2012-2040 Land Use Allocation Model</i>			

Table 3-6: Adjusted Employment Data			
Subregion	2012	2040	Percent Growth (%)
1	9,124	20,008	119.29%
2	71,050	115,064	61.95%
3	101,729	146,460	43.97%
4	51,365	78,276	52.39%
5	5,859	9,573	63.39%
6	2,359	3,856	63.46%
7	24,859	55,374	122.75%
Total	266,345	428,611	60.92%
<i>Source: NFRMPO 2012-2040 Land Use Allocation Model</i>			

Figure 3-4: NFRMPO Future Land Use



Sources: NFRMPO 2012 - 2040 Land Use Allocation Model, CDOT March, 2015

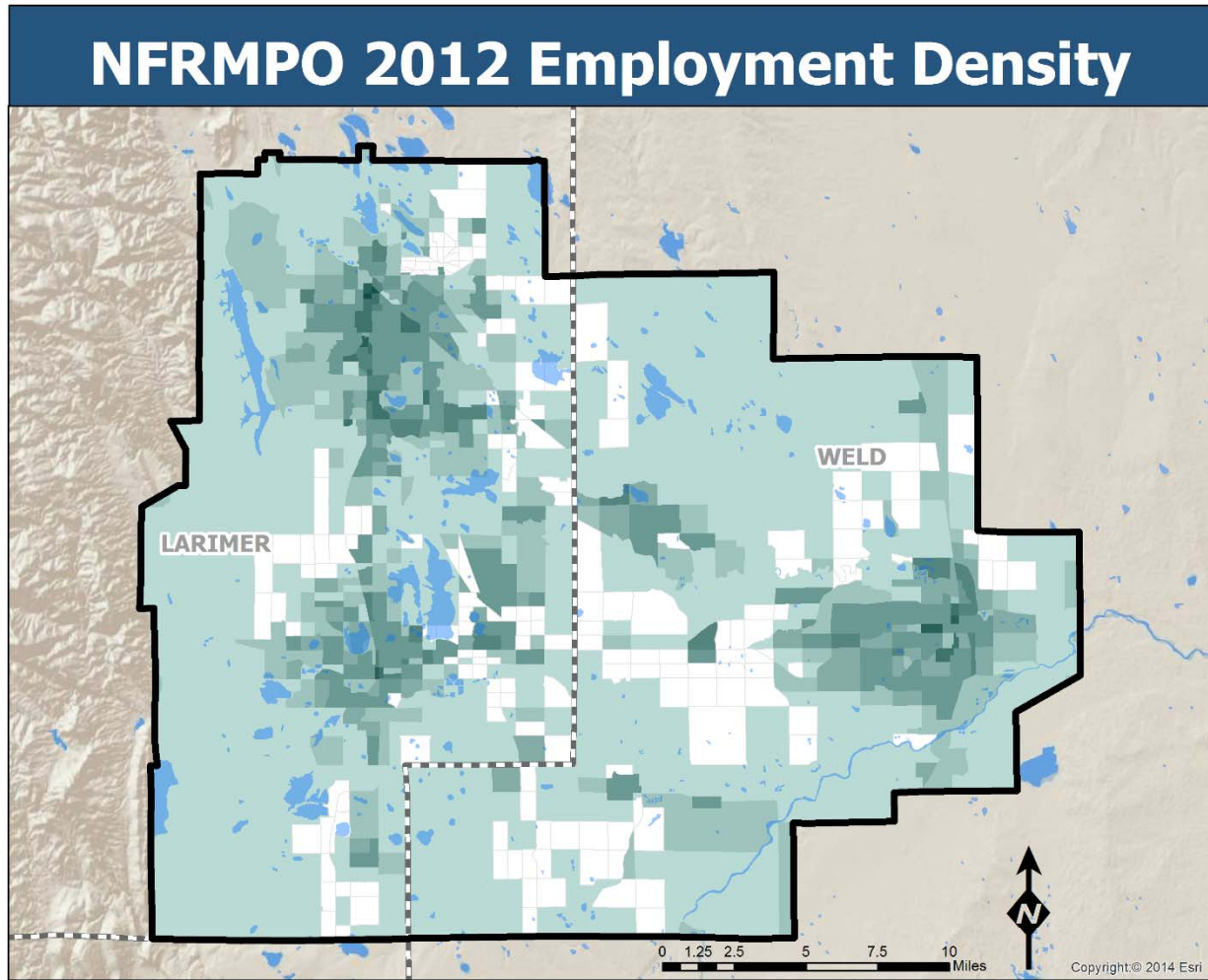
Legend

Land Use Categories

- Commercial-Retail High (>2 emp/acre)
- Commercial-Retail Low (<2 emp/acre)
- Industrial High (>.2 emp/acre)
- Industrial Low (<.2 emp/acre)
- Office
- Mixed Use Commercial High
- Mixed Use Commercial Low
- Mixed Use Commercial Medium
- Mixed Use PUD Residential/Commercial Retail
- Mixed Use Residential High
- Mixed Use Residential Low
- Mixed Use Residential Medium
- Conservation
- Open Space, Parks

- Water
- Government Employment
- Recreation Sports fields, etc.; Campus K-12
- Multi-Family Residential (12-35 du/acre)
- Single Family Residential-Low (.3 - 2 du/acre)
- Single Family Residential-Medium (2-5 du/acre)
- Single Family Residential-High (5-12 du/acre)
- Single Family Residential-Ultra Low (<.3 du/acre)
- Agriculture / Residential
- NFRMPO Boundary
- Country Boundary
- Interstate
- U.S. Highway
- State Highway
- Railroad

Figure 3-5: NFRMPO 2012 Employment



Source: NFRMPO 2012 - 2040 Land Use Allocation Model
May, 2015

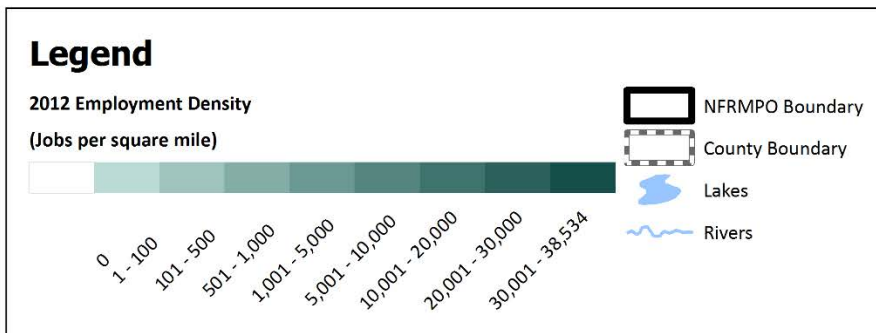
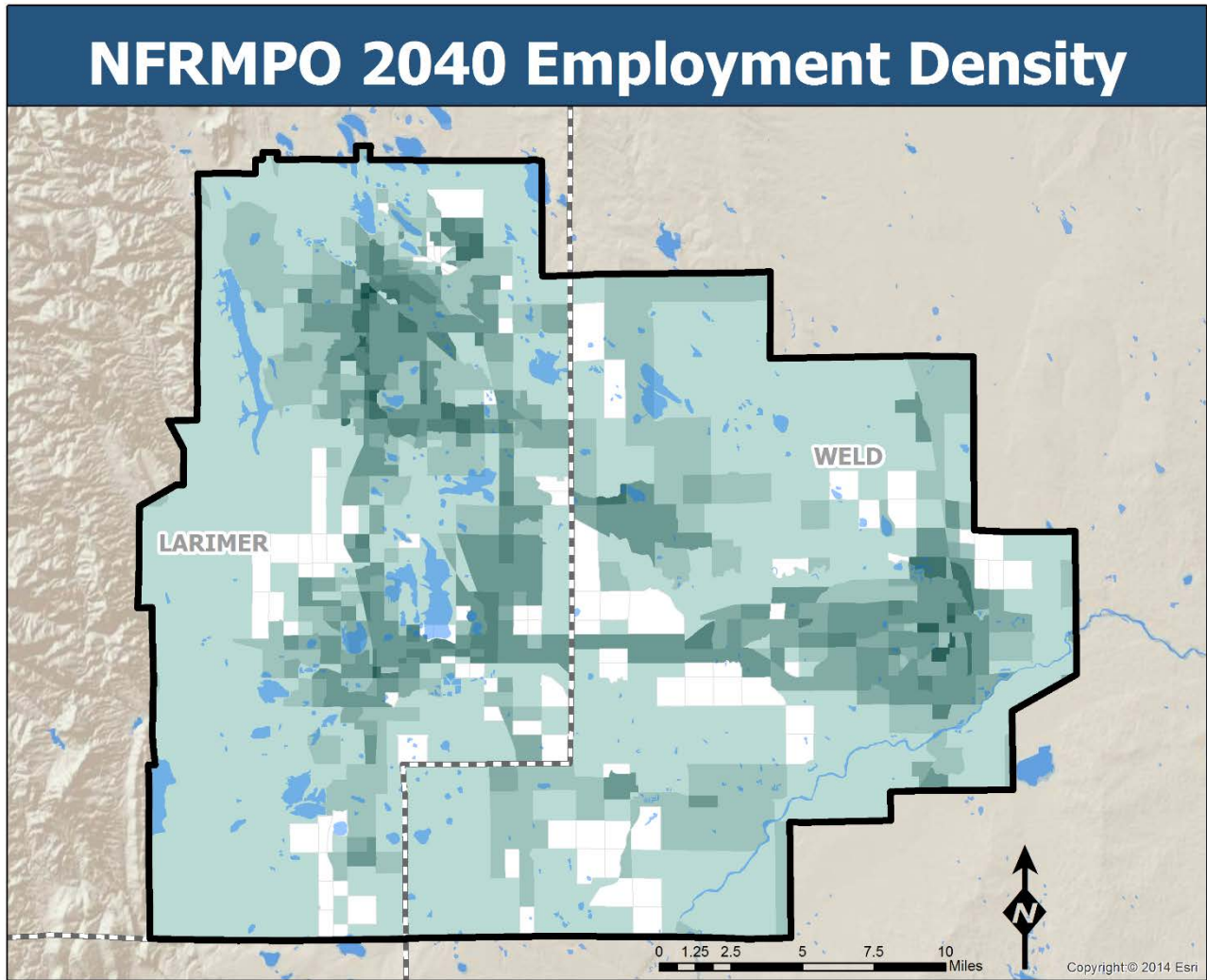


Figure 3-6: NFRMPO 2040 Employment



Source: NFRMPO 2012 - 2040 Land Use Allocation Model
May, 2015

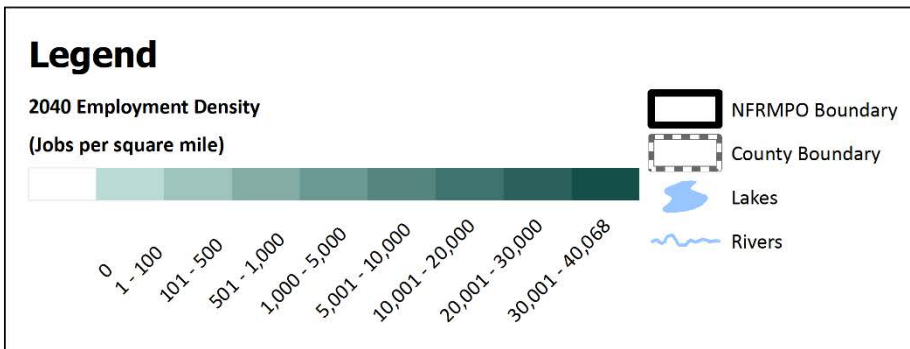
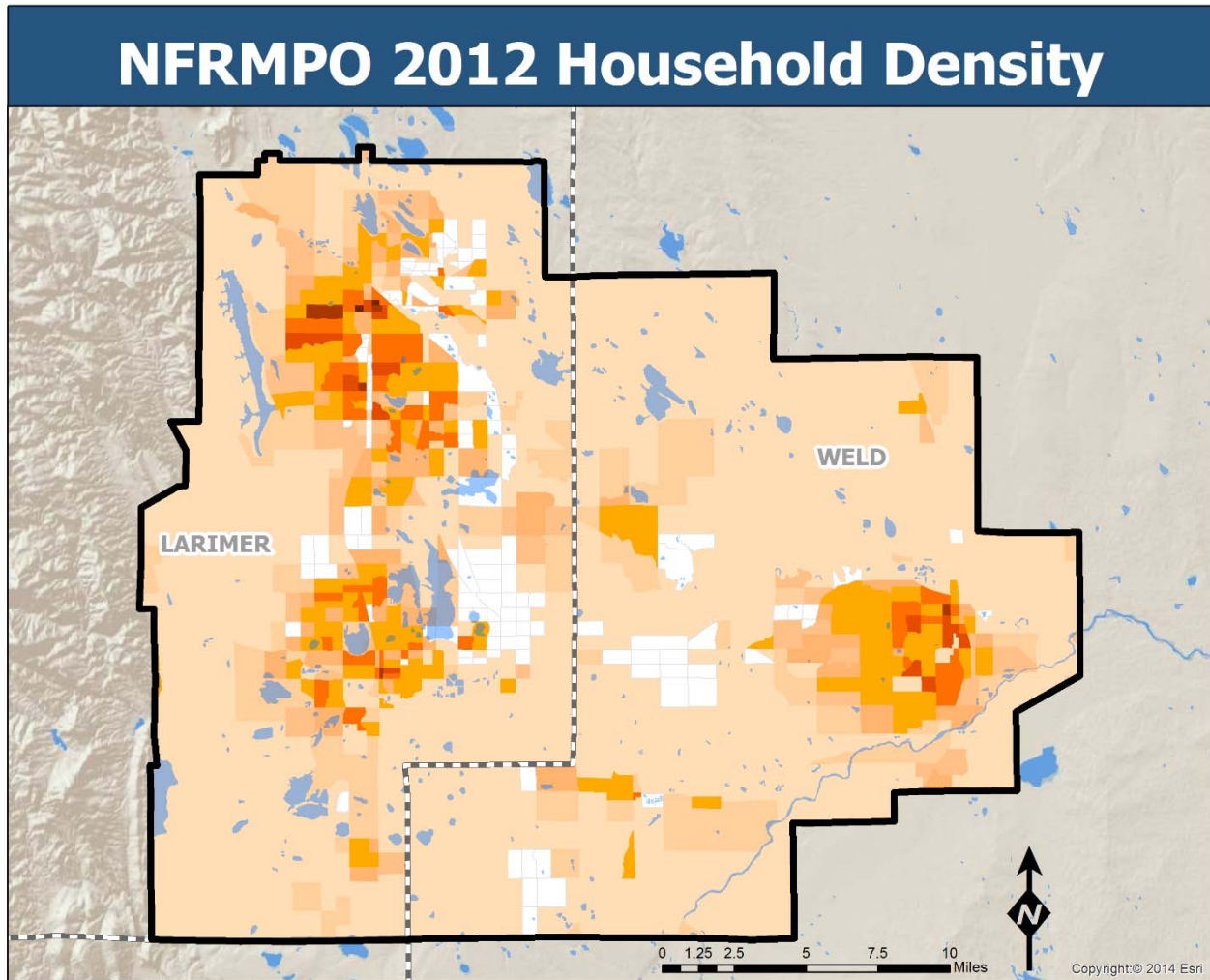


Figure 3-7: NFRMPO 2012 Households



Source: NFRMPO 2012 - 2040 Land Use Allocation Model
May, 2015

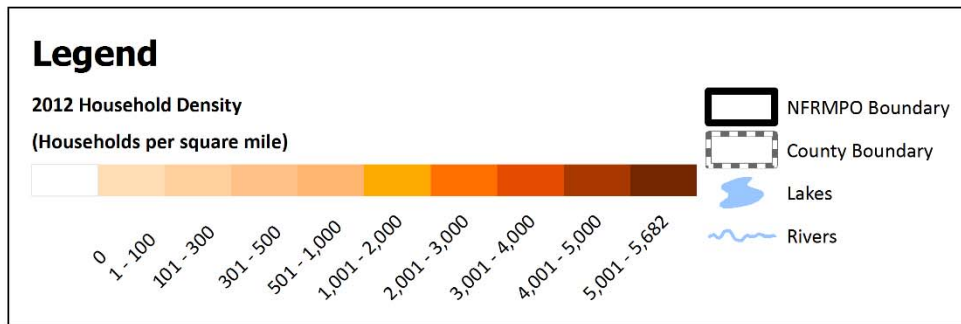
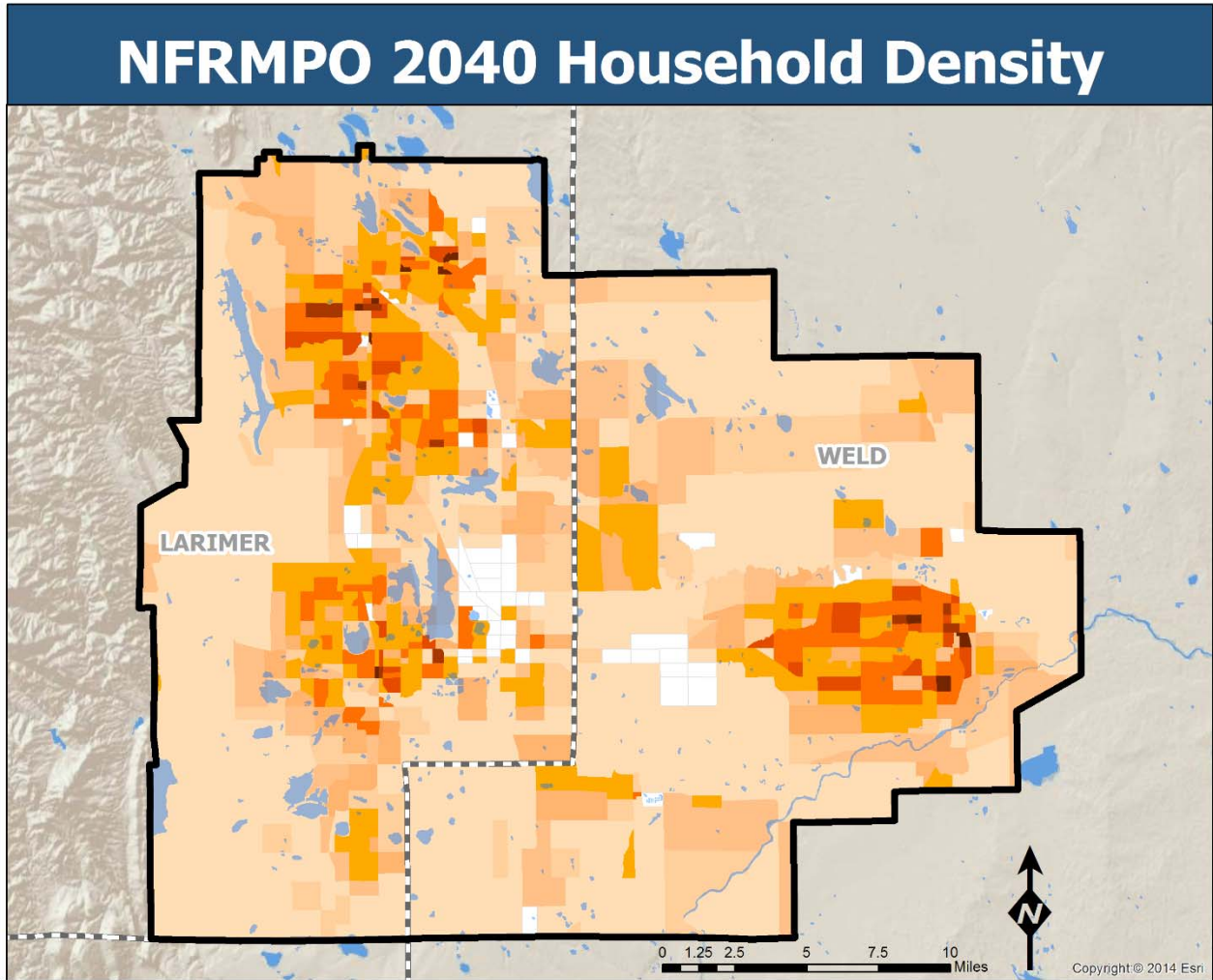
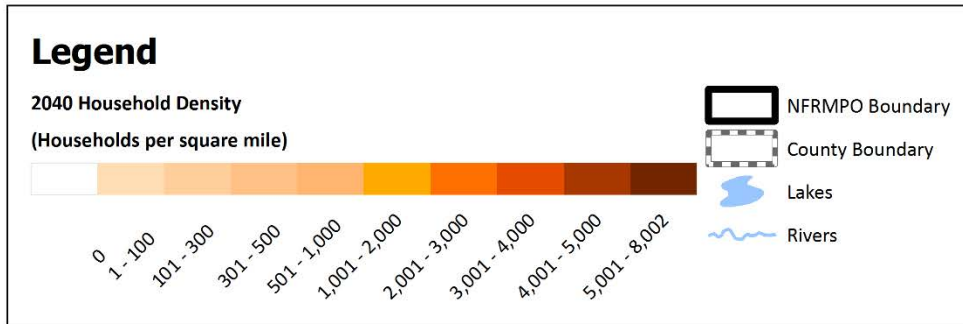


Figure 3-8: NFRMPO 2040 Household Forecasts



Source: NFRMPO 2012 - 2040 Land Use Allocation Model
May, 2015



Regional Travel Demand Model

Households

The *2040 Economic and Demographic Forecast*,²⁴ projects households in the North Front Range will increase 0.2 percent annually between 2010 and 2040. For input into the travel model, household projections were classified by five household sizes, or the number of people occupying the household, and three income levels, illustrated in **Table 3-7** for the 2012 base year and **Table 3-8** for the 2040 projections. These classifications increase the sensitivity of the RTDM in response to household characteristics.

Household Income (2010 dollars)	1-person HH	2-person HH	3-person HH	4-person HH	5+ person HH	Total HH	Percent
Less than \$20,000 (Low Income)	17,186	1,936	33,401	8,798	11,759	73,080	38%
\$20,000 - \$74,999 (Medium Income)	8,322	1,257	13,403	17,072	11,499	51,553	27%
\$75,000 and higher (High Income)	3,333	22,672	9,095	24,864	8,189	68,153	35%
Total	28,841	25,865	55,899	50,734	31,448	192,786	100%
Percent	15%	14%	29%	26%	16%	100%	

Source: NFRMPO 2012-2040 Regional Travel Demand Model

Household Income (2010 dollars)	1-person HH	2-person HH	3-person HH	4-person HH	5+ person HH	Total HH	Percent
Less than \$20,000 (Low Income)	31,306	3,526	60,845	16,027	21,421	133,125	38%
\$20,000 - \$74,999 (Medium Income)	15,160	2,290	24,416	31,098	20,947	93,910	27%
\$75,000 and higher (High Income)	6,071	41,600	16,567	45,294	14,918	124,150	35%
Total	52,537	47,116	101,827	92,419	57,286	351,185	100%
Percent	15%	14%	29%	26%	16%	100%	

Source: NFRMPO 2012-2040 Regional Travel Demand Model

²⁴ Steve Fisher, Phyllis Resnick. *2040 Economic and Demographic Forecast*, North Front Range Metropolitan Planning Organization. 2012-2013.

Employment

Overall, employment is projected to grow at approximately two percent per year for the entire region, with Weld County projected to grow at a slightly higher rate than Larimer County.

The location of employment for 2012 was determined by geocoding Quarterly Census of Employment and Wages (QCEW) data from the Bureau of Labor Statistics (BLS) to the street centerline map for the North Front Range. The results show each employer and the number of employees for each mapped location. These results were then aggregated to the TAZ level. **Figure 3-9** shows major employers, those with more than 100 employees, across the North Front Range. In 2012, major employers were predominately within cities, as in previous years. These major employers were viewed as major activity centers due to their sizable contributions to transportation network use.

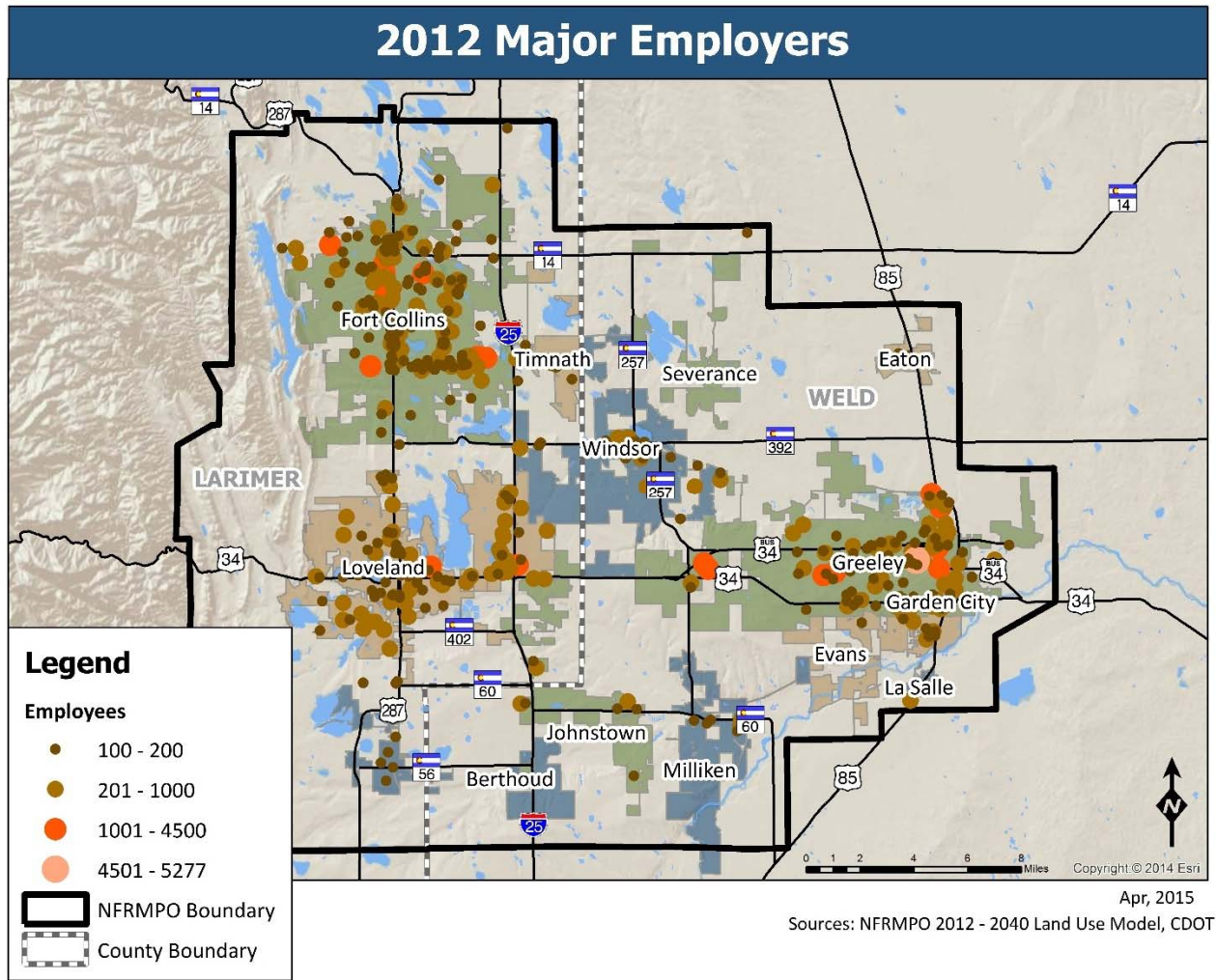
For input into the RDTM, employment was divided into four categories defined by the National Industrial Classification System (NAICS): Basic, Medical, Retail, and Service.

- ▶ **Basic jobs**, also known as production-distribution, are those based on outside dollars flowing into the local economy and include industries that manufacture and/or produce goods locally for export outside the region. Basic jobs include manufacturing, mining, utilities, transportation, and warehousing among others.
- ▶ **Medical jobs** include health care and social assistance.
- ▶ **Retail jobs** include retail trade, post offices, and food service.
- ▶ **Service jobs** include finance, insurance, real estate, and public administration.

The Basic, Medical, Retail, and Service employment estimates for 2012 and forecasts for 2040 are shown in **Table 3-9**. The disaggregated total employment in the travel model does not account for people working from home.

Table 3-9: Classification of Employment					
Classification	2012		2040		Percent Growth (%)
	Employees	Percentage (%)	Employees	Percentage (%)	
Basic	47,155	17.7%	72,293	16.9%	53.3%
Medical	30,101	11.3%	39,233	9.1%	30.3%
Retail	40,692	15.3%	61,132	14.3%	50.2%
Service	148,397	55.7%	255,953	59.7%	72.5%
Total	266,345	100%	387,443	100%	45.5%
<i>Source: NFRMPO 2012-2040 Regional Travel Demand Model</i>					

Figure 3-9: 2012 Major Employers



Aging Population

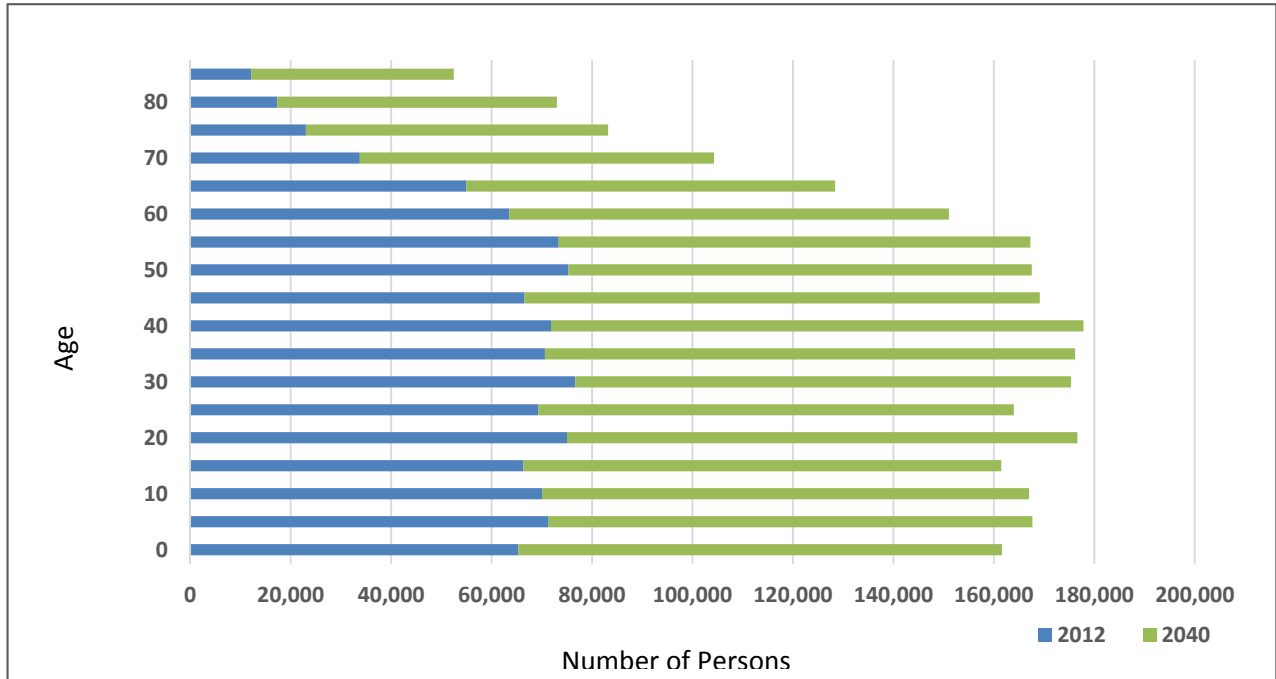
According to the 2010 Census, the baby boomers population (those born between mid-1946 and mid-1964)²⁵ grew by more than 30 percent between 2000 and 2010 in Colorado. **Figure 3-10** shows the significant increase in the 65+ population by 2040, compared to 2012. The likely impacts of new and pending retirees will impact the regional transportation system through:

- ▶ The increased demand for housing units as the in-migration of new workers assume the jobs of the recently retired.
- ▶ The location and availability of amenities, health care, and entertainment for the senior population.
- ▶ The shift in the type of housing necessary to accommodate the growing senior population.
- ▶ The level of service and availability of transit for the senior population.

²⁵ US Census, *The Baby Boom Cohort in the United States: 2012 to 2060*, <http://www.census.gov/prod/2014pubs/p25-1141.pdf>.

American Community Survey (ACS) data (2009 - 2013) was used to identify the percentage of those aged 65 years and older by city in the NFRMPO region, **Figure 3-11**. The cities range from six percent (Timnath) to 16 percent (Garden City).

Figure 3-10: Colorado Population by Age in 2012 and 2040



Source: Colorado Department of Local Affairs

Larimer County is expected to have a larger percentage of its population over the age of 65, while a large portion of Weld County population growth is expected to be in the younger age brackets. The difference in general terms would be an increase in the percentage of retirees in Larimer County and an increase in the percentage of younger families with children in Weld County. **Figures 3-12 and 3-13**, depict this trend.

Figure 3-11: Percentage of Population 65 Years and Older by City

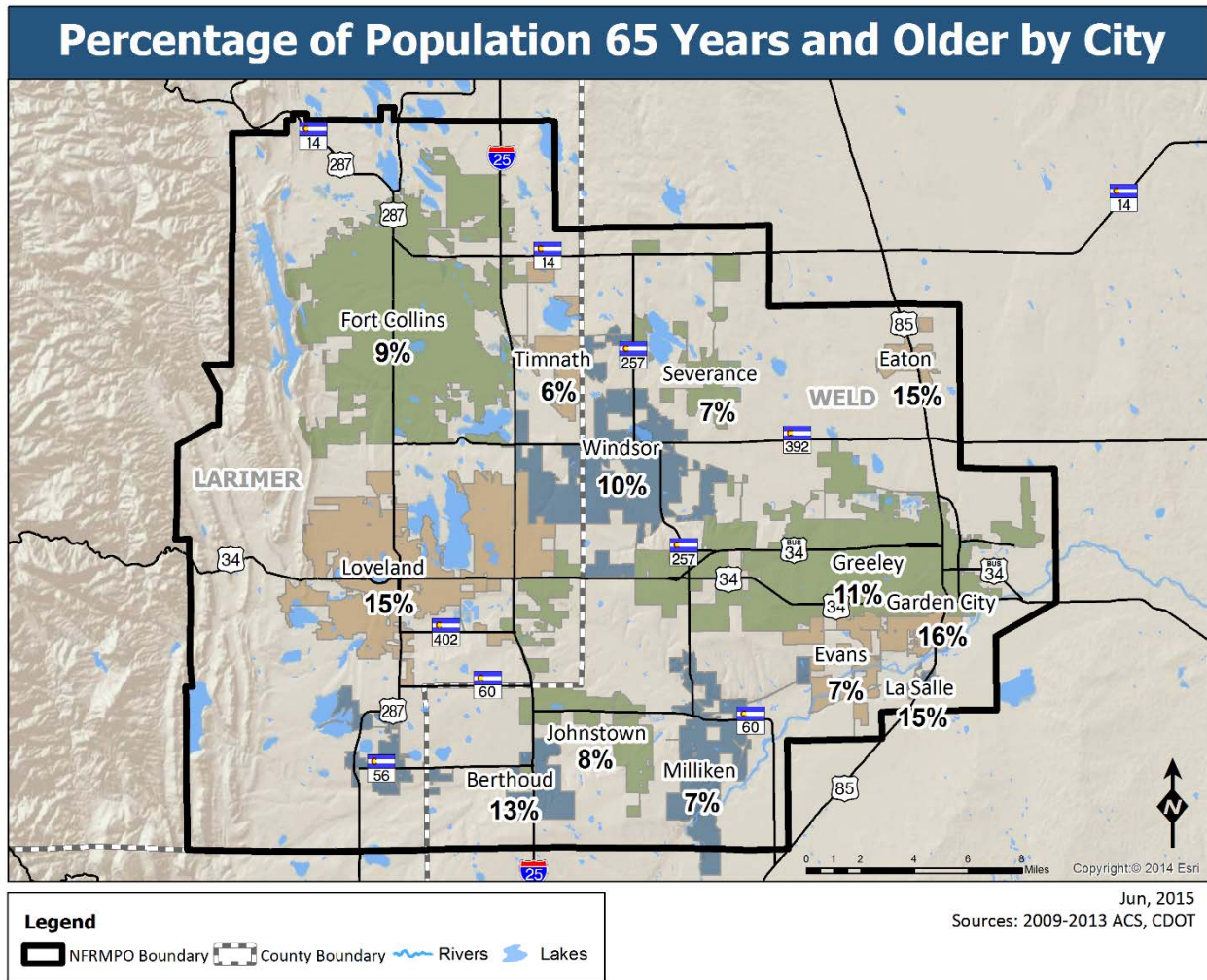
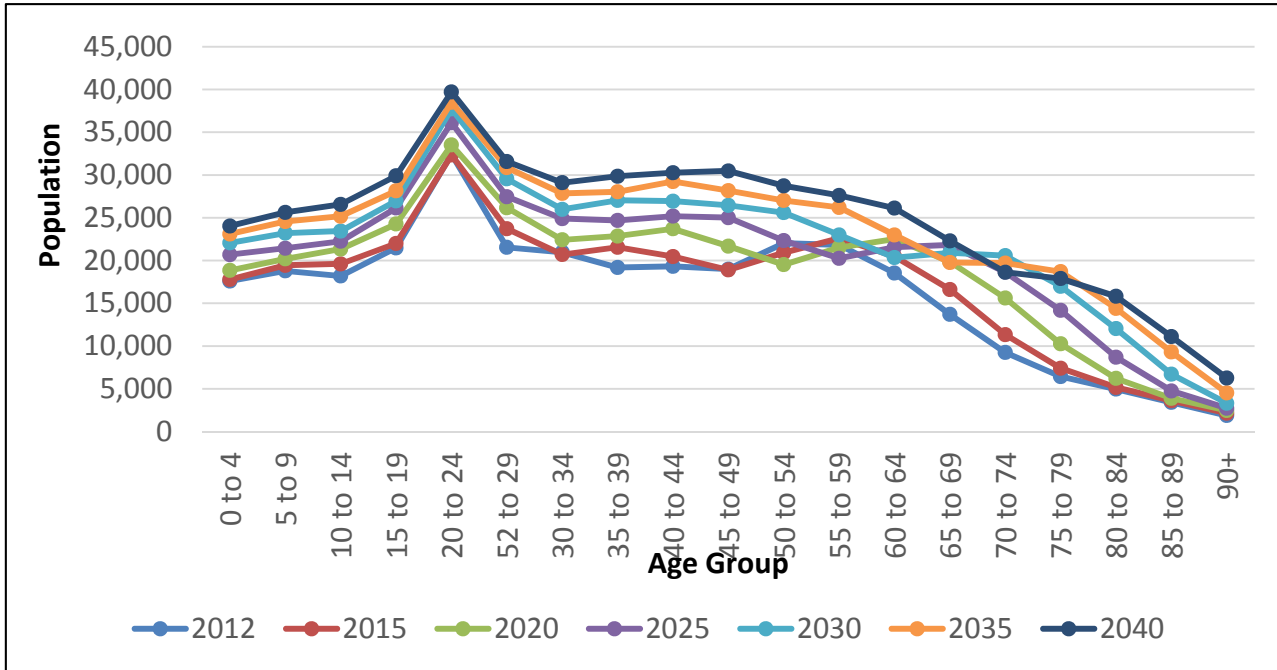
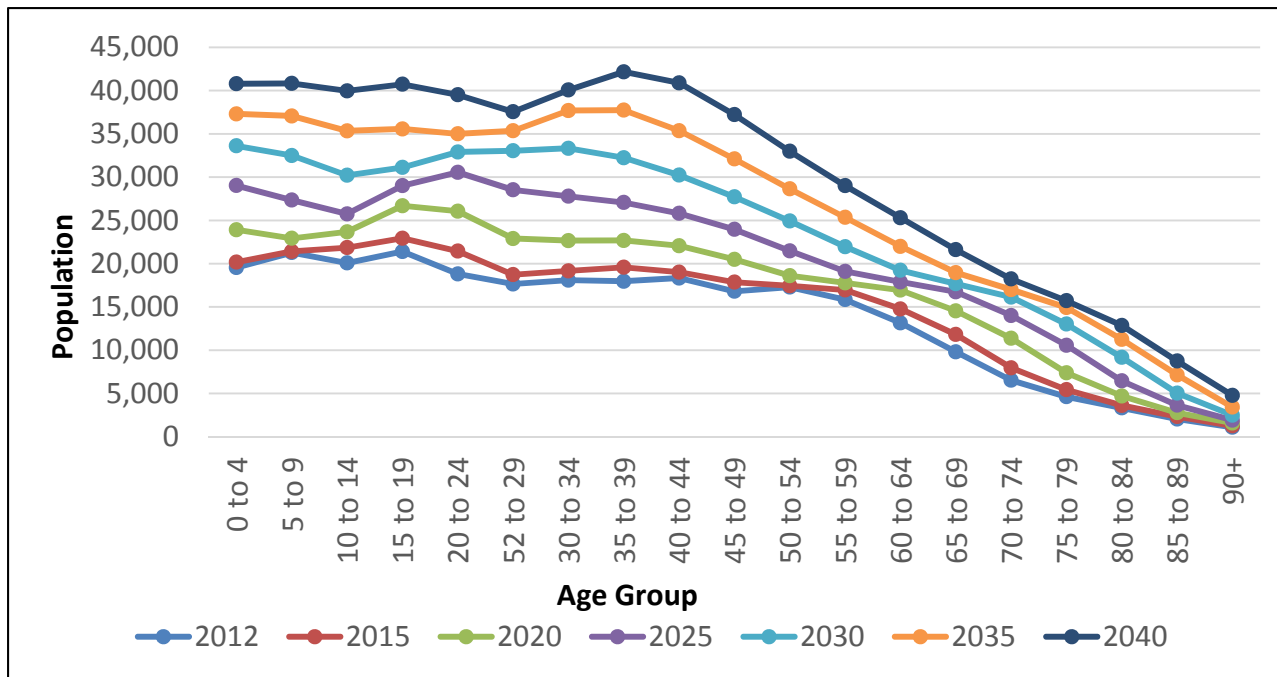


Figure 3-12: Larimer County Age Distribution



Source: State Department of Local Affairs, Demography Division, 2014

Figure 3-13: Weld County Age Distribution



Source: State Department of Local Affairs, Demography Division, 2014

Vehicles by Household

The number of vehicles available in households is slightly different between Larimer and Weld counties, with the overwhelming majority of households having two or more vehicles available, shown in **Table 3-10**.

Table 3-10: Number of Vehicles Available in Households by County		
Number of Vehicles	Larimer County	Weld County
None	4.2%	4.3%
1	28.0%	25.3%
2	43.1%	42.0%
3 or more	24.7%	28.3%
<i>Source: US Census Bureau, Decennial Census, 2010</i>		

The vehicle availability per household is in line with commute patterns across the region. The *NFRMPO 2010 Household Survey* provides information about how residents in the region commute to work. The vast majority of people who commute to work do so in automobiles, **Table 3-11**. Most commuters who use bicycles or walk to work live in Fort Collins or Greeley/Evans.

Table 3-11: Commute to Work by Mode	
Travel Mode	Commuter Trips (%)
Auto/van/truck driver or passenger	89.3%
Bike	6.2%
Walk	3.4%
Transit (local bus or express bus)	0.5%
Other (don't know or refused)	0.6%
Total	100%
<i>Source: NFRMPO Household Survey, 2010</i>	

J. Environmental Justice

Background

Executive Order 12898, *Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-Income Populations (1994)*, was enacted to reinforce Title VI of the Civil Rights Act of 1964. The Civil Rights Act states, “no person in the United States shall, on grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Executive Order 12898 also states, “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

In May 2012, the US Department of Transportation (USDOT) issued an update to Order 5610.2(a), *Actions to Address Environmental Justice in Minority and Low-Income Populations*. The DOT order updates the original EJ order, which was published on April 15, 1997. The DOT order continues to be a key component in the promotion of EJ principles in all DOT programs, policies, and activities. The NFRMPO's EJ process follows three guiding principles outlined in the DOT Order:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations in relation to transportation improvements.
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Under USDOT Order 5610.2(a),²⁶ an adverse effect is defined as:

- ▶ Bodily impairment, infirmity, illness, or death;
- ▶ Air, noise, and water pollution and soil contamination;
- ▶ Destruction or disruption of man-made or natural resources;
- ▶ Destruction or disruption of aesthetic values;
- ▶ Destruction or disruption of community cohesion or a community's economic vitality;
- ▶ Destruction or disruption of the availability of public and private facilities and services;
- ▶ Vibration;
- ▶ Displacement of persons, businesses, farms, or non-profit organizations;
- ▶ Increased traffic congestion, isolation, exclusion, or separation of individuals within a given community or from a broader community; or
- ▶ Denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities.

The NFRMPO EJ process also includes a determination of whether a construction-related activity on the existing transportation system will result in a "disproportionately high and adverse effect on human health or the environment," which is defined by Order 5610.2(a) as:

- ▶ Being predominantly borne by a minority and/or low-income population or
- ▶ Suffered by the minority and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority and/or non-low-income populations.

It is important to identify where significant numbers of minority and low-income households are located within the region to comply with the requirements of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, and DOT Order 5610.2(a). These orders were enacted to ensure

²⁶ http://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/

the full and fair participation of potentially affected communities in transportation decisions. The intent of EJ is to avoid, minimize, or mitigate disproportionately high and adverse impacts on minority populations and low-income populations.

The NFRMPO uses CDOT’s Environmental Justice in Colorado’s Statewide and Regional Planning Process Guidebook, as the framework for addressing EJ in the region. This section discusses minority and low-income populations and the specific efforts in public outreach, mapping, and measuring the benefits and burdens.

Low Income Populations

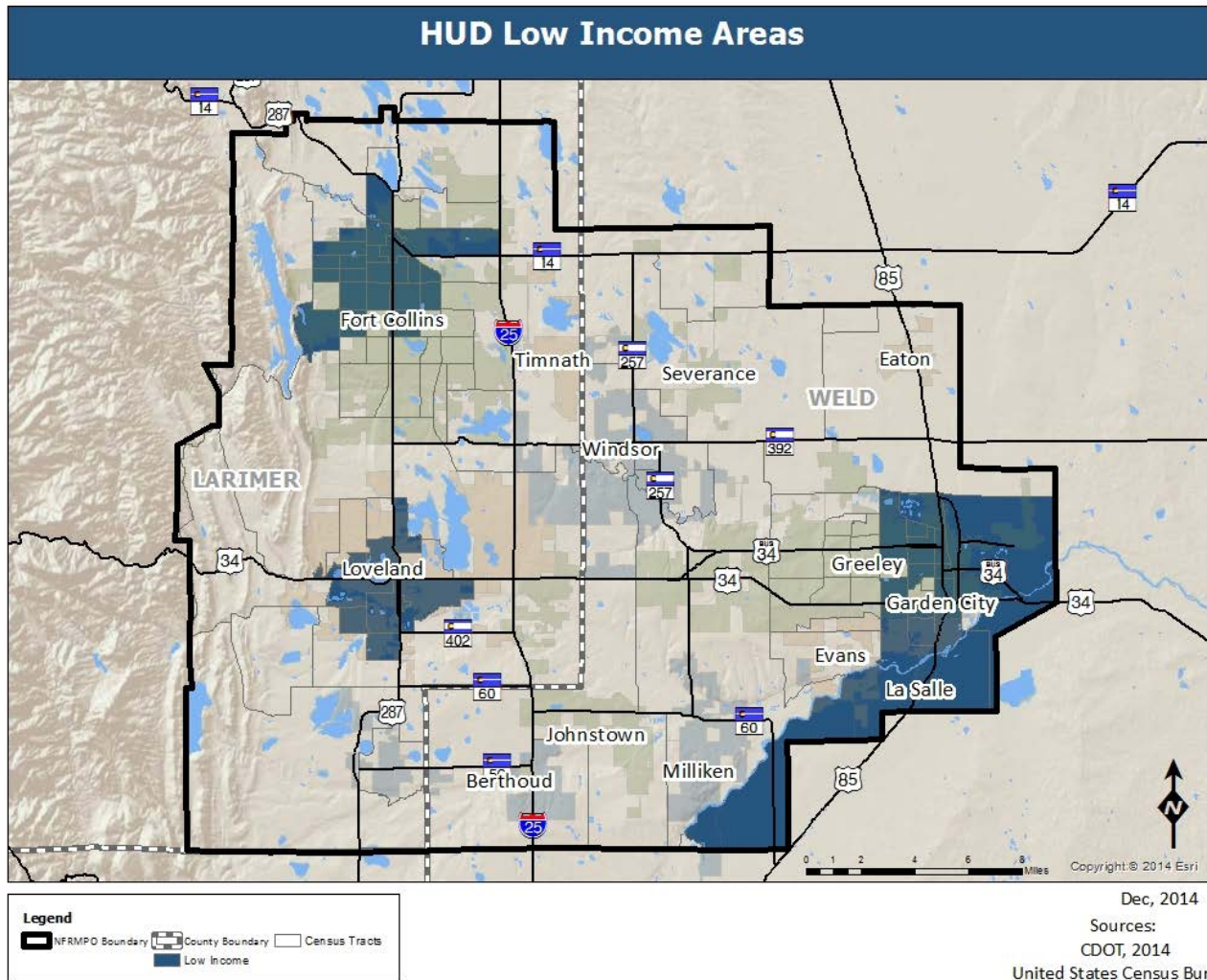
Low-income thresholds are determined by the Department of Housing and Urban Development (HUD) for the 64 counties in Colorado for use by the Department of Local Affairs (DOLA), which allocates Community Development Block Grants (CDBG). The methodology for determining low income follows the CDOT Environmental Justice Guidebook. **Tables 3-12 and 3-13** show low income thresholds for Larimer and Weld counties as determined by HUD for FY 2012.

Table 3-12: Larimer County HUD FY2012 Low Income Limits								
Income Limit	Persons per Household							
	1	2	3	4	5	6	7	8
Low Income Limit	\$43,550	\$49,750	\$55,950	\$62,150	\$67,150	\$72,100	\$77,100	\$82,050
Very Low Income Limit	\$27,200	\$31,300	\$35,000	\$38,850	\$42,000	\$45,100	\$48,200	\$51,300
Extremely Low Income Limit	\$16,350	\$18,650	\$21,000	\$23,300	\$25,200	\$27,050	\$28,900	\$30,800

Table 3-13: Weld County HUD FY2012 Low Income Limits								
Income Limit	Persons per Household							
	1	2	3	4	5	6	7	8
Low Income Limit	\$38,300	\$43,800	\$49,250	\$54,700	\$59,100	\$63,500	\$67,850	\$72,050
Very Low Income Limits	\$23,950	\$27,400	\$30,800	\$34,200	\$36,950	\$39,700	\$42,450	\$45,150
Extremely Low Income Limits	\$14,350	\$16,400	\$18,450	\$20,500	\$22,150	\$23,800	\$25,450	\$27,100

Households have been mapped using Census Tracts with ACS estimates from 2008-2012. The dark blue areas in **Figure 3-14** show Census tracts considered low income based on Median Household Income and Average Household Size.

Figure 3-14: HUD Low Income Areas



Minority Populations

Executive Order 12898 defines the term minority as anyone who is:

- ▶ **American Indian and Alaskan Native** – a person having origins in any of the original people of North America and who maintains cultural identifications through tribal affiliation or community recognition.
- ▶ **Asian or Pacific Islander (including Native Hawaiian)** – a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.
- ▶ **Black/African American** – a person having origins in any of the black racial groups of Africa.
- ▶ **Hispanic/Latino** – a person who is Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

ACS estimates from 2008-2012 show the largest minority population in the region is the Hispanic/Latino segment. The highest concentration, by percentage, of Hispanic/Latino residents is in Garden City at 66 percent,

Evans at 47 percent, LaSalle at 37 percent, and Greeley at 36 percent. By comparison, Fort Collins and Loveland have 10 percent and 12 percent, respectively.

Census tracts show the largest concentrations of Hispanic/Latino residents in **Figure 3-15** reside along the US 85 Corridor in Weld County and smaller pockets in northeast Fort Collins and southeast Loveland.

Figure 3-15: Hispanic/Latino Minority Populations

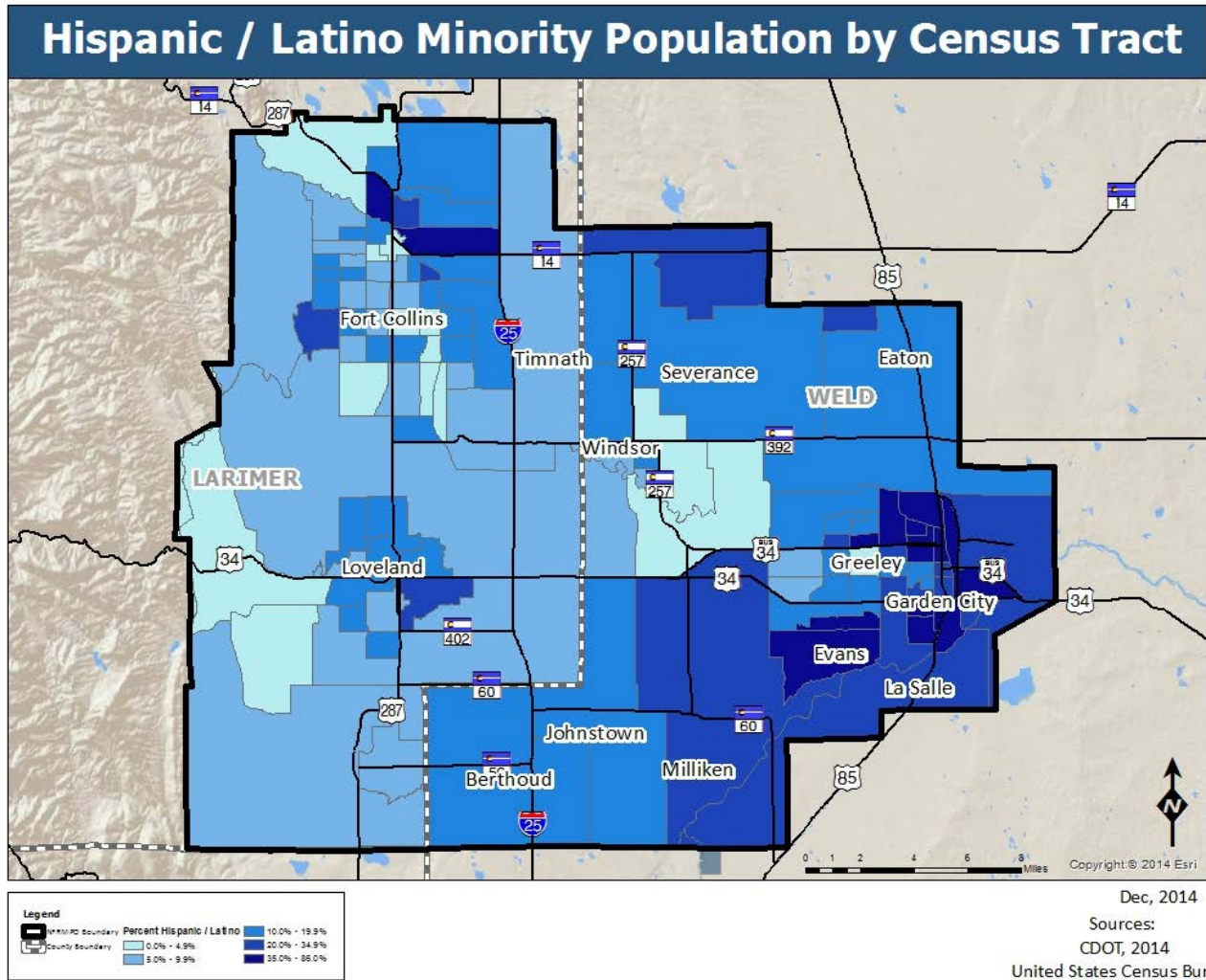
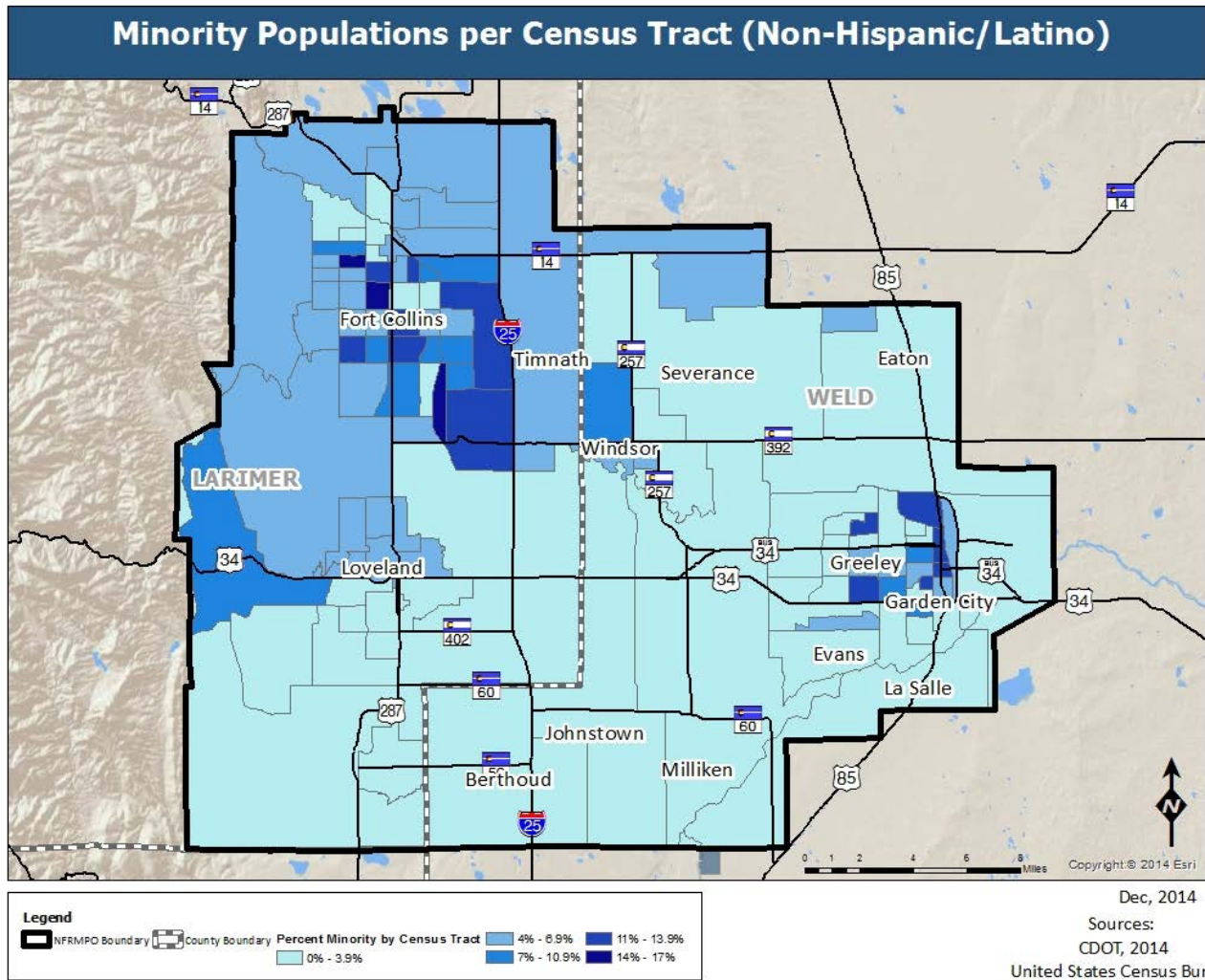


Figure 3-16 combines all remaining minority populations from 2008-2012 ACS estimates. This analysis shows the predominance of the Hispanic/Latino minority and lack of diversity outside of Fort Collins and Greeley. The block groups in Fort Collins and Greeley are likely due to the presence of major universities and the influx of refugee populations over the past decade

Figure 3-16: Minority Populations



Other Environmental Justice Populations

Limited English Proficiency

Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency (LEP) (2000)*, requires recipients of federal funds to examine the services they provide and identify any need for services to LEP populations. Census tracts with a moderate to high percentage of residents who are proficient in another language, but speak English “less than very well,” are considered to be EJ populations. These languages include Spanish, Asian Languages, African Languages, Arabic, and other languages. **Table 3-14** shows the top five LEP populations in the region. The NFRMPO is required to undertake special outreach for LEP populations. The NFRMPO maintains relationships with local translators who are available for public meetings and document translation for the region’s LEP population and can be requested as needed.

Language	Total	Percent of Population
Spanish	16,960	3.57%
Asian Languages *	1,393	0.29%
Other Indo-European Languages **	624	0.13%
African Languages ***	253	0.05%
Arabic	180	0.03%

*Asian Languages include, but are not limited to Chinese, Japanese, Korean, Thai, and Vietnamese.

**Other Indo-European Languages include, but are not limited to German, Greek, and Russian.

***African Languages include, but are not limited to Afro-asiatic, Nilo-Saharan, and Niger-Congo.

65 Years of Age and Older

The NFRMPO also considers the Senior Population (age 65 and older) in the EJ process. Census tracts with a moderate to high percentage of senior residents are considered to be EJ areas. Seniors face different transportation and mobility challenges which may increase the need for safety improvements in the roadway and pedestrian system, and increased transit, paratransit, demand-response transportation systems, and increased transportation and transit connections throughout the region. Mapping the senior population in the region helps to show where to focus on those needs. **Figure 3-11** in the *Socio-Economic Data Section* shows the highest concentrations of residents age 65 and older by municipality.

Disabled Populations

Census tracts with a moderate to high percentage of residents who are disabled are considered to be EJ populations within the region. ACS-designated disabilities include:

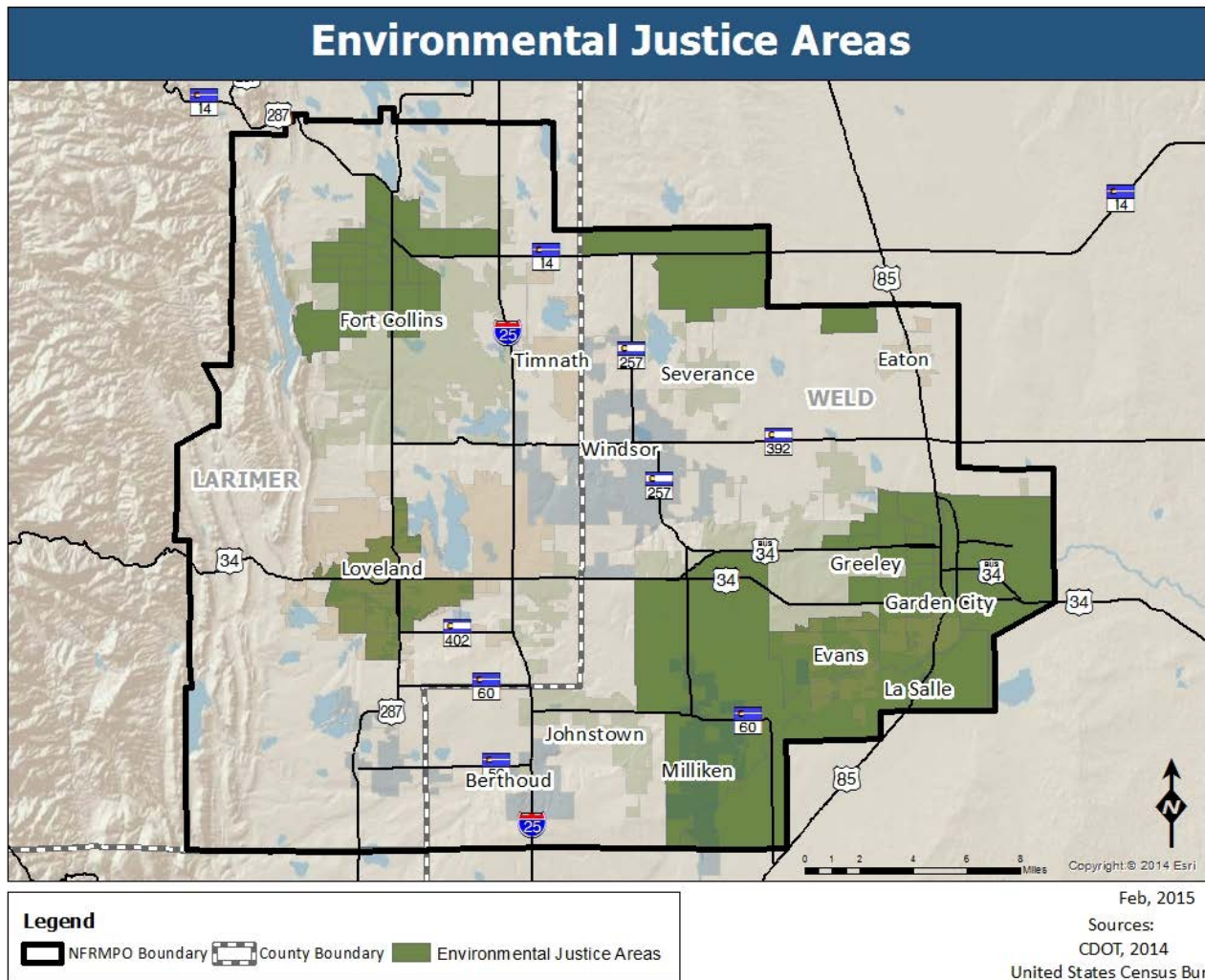
- ▶ **Sensory Disabilities** – conditions including blindness, deafness, or a severe vision or hearing impairment
- ▶ **Physical Disabilities** – conditions which substantially limit one or more basic physical activity.
- ▶ **Mental Disabilities** – physical, mental, or emotional condition lasting more than six months and impair a person’s ability to learn, remember, or concentrate.
- ▶ **Self-Care Disabilities** – physical, mental, or emotional condition lasting more than six months which impair a person’s ability to dress, bathe, or get around inside the home.
- ▶ **Go-outside-home Disabilities** – physical, mental, or emotional condition lasting more than six months and impair a person’s ability to go outside of the home to shop or visit a doctor’s office.
- ▶ **Employment Disabilities** – physical, mental, or emotional condition lasting more than six months which impair a person’s ability to work at a job or business.

Disabled populations face different transportation and mobility challenges which may increase the need for safety improvements in the roadway and pedestrian system, increased transit, paratransit, and demand-response transportation systems, and a higher need for mobility coordination efforts throughout the region. Additional information about existing and potential future transportation services are discussed in the *2040 Regional Transit Element (RTE)*.

NFRMPO Environmental Justice Analysis Areas

Figure 3-17 shows Census tracts with minority populations greater than the regional average of 21.82 percent and tracts considered low income based on Median Household Income and Average Household Size. Census designated minority populations include Hispanic/Latino, Black (Non-Hispanic), Native American (Non-Hispanic), Asian (Non-Hispanic), Hawaiian Pacific Islander (Non-Hispanic), and Other (Non-Hispanic). When implementing transportation projects within the region, an EJ Analysis must be performed on projects within these areas.

Figure 3-17: Environmental Justice Areas



NFRMPO Environmental Justice Process and Analysis

An EJ analysis must be completed on all projects included in the Transportation Improvement Program (TIP). If a project included in the TIP, or subsequent TIP amendments, lies within ¼-mile of or adjacent to an EJ population, an EJ analysis must be completed on the project individually. If it does not, the project is considered Non-EJ. The benefits and burdens of each project must be examined individually on all EJ and Non-EJ projects. An overall analysis on projects in the TIP determines if it meets EJ requirements. The analysis process follows the three guiding principles outlined in DOT order 5610.2(a) listed in the *EJ Background* section. **Chapter 12** includes an overall EJ analysis of regionally significant projects included in the FY2016-2019 TIP and 2040 RTP.

An EJ analysis also includes a determination of whether the transportation related activity will result in a “disproportionately high and adverse effect on human health and the environment” as defined in DOT order 5610.2(a). All EJ procedures are completed by NFRMPO staff. **Table 3-15** lists the benefits and burdens of an EJ or Non-EJ project.

Benefit	Burden
Decrease in travel time	Air and water pollution
Improved air quality	Soil contamination
Expanded employment opportunities	Destruction or disruption of man-made or natural resources
Better access to transit options and alternative modes of transportation (walking and bicycling)	Adverse impacts on community cohesion or economic vitality
Improved quality of transit	Noise and vibration
Increased property values	Decrease in property values