

2. Trends

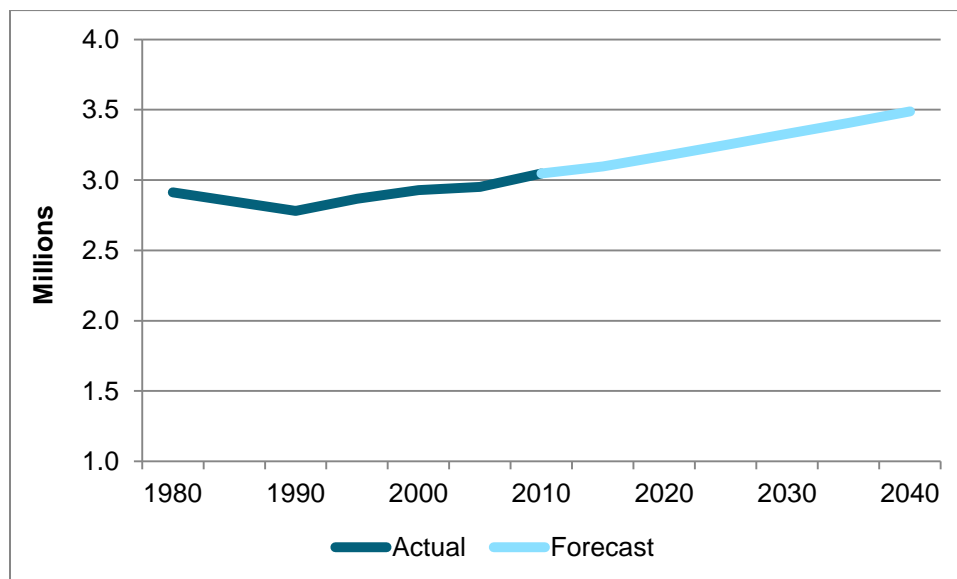
In addition to those points highlighted in Chapter 1, there are several socioeconomic and passenger trends that point to a need for more coordinated park and ride planning in the state of Iowa.

2.1 Socioeconomics

Population is increasing at a slow pace, and growth is not uniform across the state

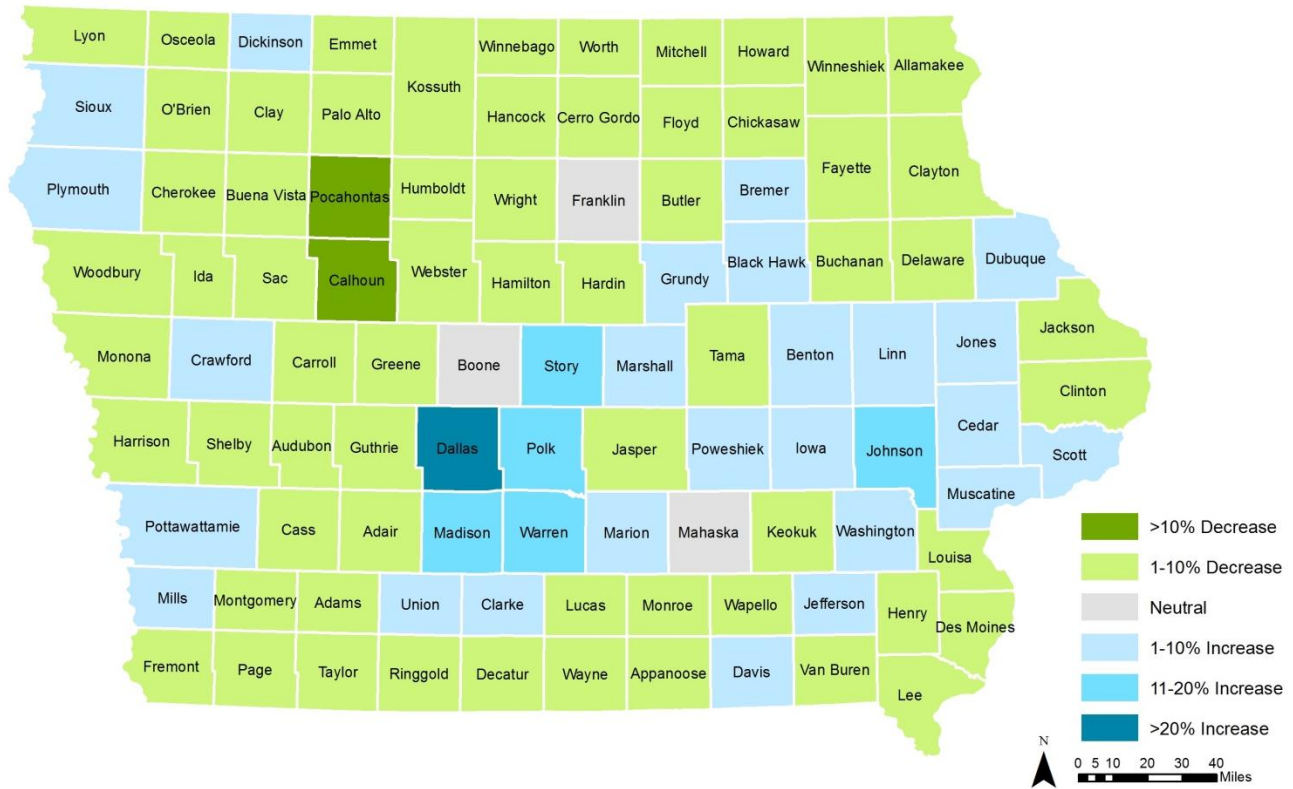
According to the 2010 United States census, Iowa's population grew 4.55 percent since 2000 to 3.04 million people. Although the state's population is slowly increasing, this growth was not uniform across the state. Of Iowa's 99 counties, 31 saw an increase in population since 2000, while 65 counties declined in population and three remained virtually unchanged. While there was growth in various locations across Iowa, the majority of population increases took place within or near metropolitan areas. Figure 2.1 shows Iowa's statewide population trends since 1980 and projected to 2040. Figure 2.2 illustrates the percentage change in county population between 2000 and 2010.

Figure 2.1: Iowa population, 1980-2040



Sources: U.S. Census Bureau, Decennial Census (1980, 1990, 2000, 2010); Woods and Poole Economics Inc.

Figure 2.2: County population change, 2000-2010

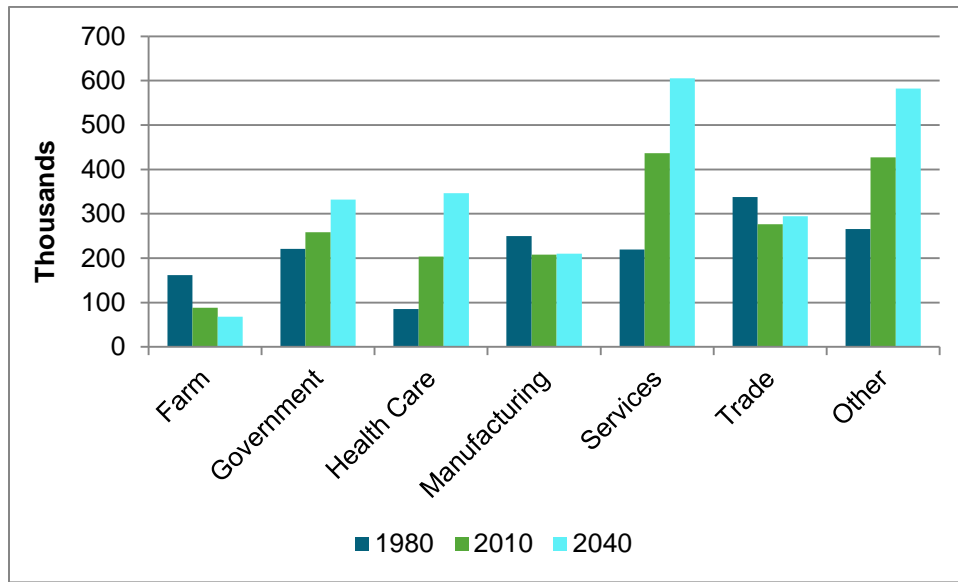


Source: U.S. Census Bureau, Decennial Census (2000, 2010)

Traditional employment sectors have changed

The geography of Iowa’s employment sectors has changed as well. Traditionally, farming and manufacturing were two of the primary employment sectors in Iowa, but technological advancements and economic diversification have changed this in recent years. Instead, the areas that have seen the most growth in employment are the health care and services sectors, which are more often located in urban areas. According to the [2013 Commuting in America, Commuting Mode Choice, Brief 10](#), published by the American Association of State Highway and Transportation Officials (AASHTO), modes such as transit and carpooling are affected by employment sectors. Urban service and management-oriented jobs are more supportive of transit; whereas construction, manufacturing, or agricultural jobs are more supportive of single-occupant vehicle travel, and to a lesser degree, carpooling. In Iowa, these trends are expected to continue through 2040, as illustrated in Figure 2.3.

Figure 2.3: Iowa employment by sector, 1980-2040

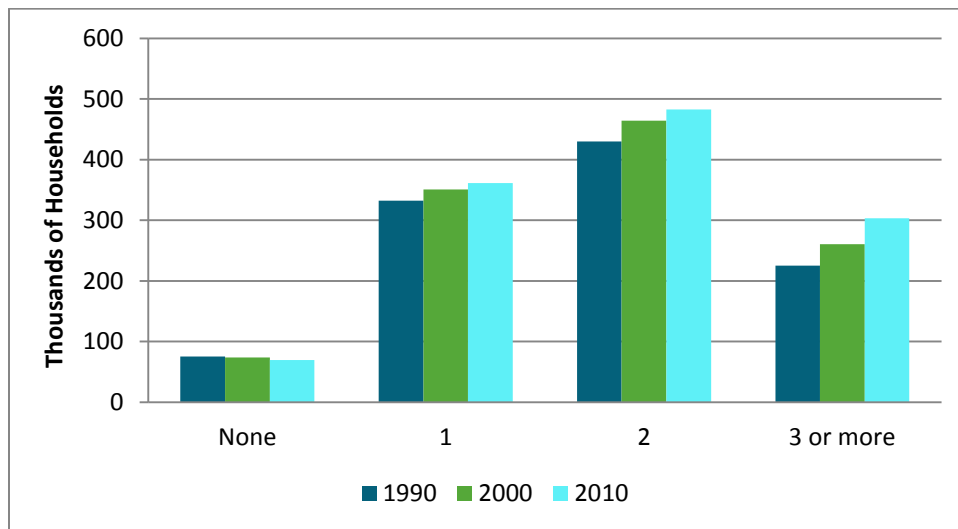


Sources: U.S. Bureau of Economic Analysis; REMI Economic Models Inc.

The number of vehicles per household has increased

Since 1990, the number of households with three or more vehicles has increased by 35 percent, while the number of households without any vehicles decreased 8 percent. However, as in 1990, the majority of households still have one or two vehicles. Figure 2.4 illustrates the increase in vehicles per household from 1990 to 2010.

Figure 2.4: Number of vehicles available per household in Iowa, 1990-2010



Source: U.S. Census Bureau, Decennial Census (1990, 2000)
2006-2010 American Community Survey's five-year estimates

2.2 Passengers

Passenger travel is increasing

Since 1990, travel across all passenger modes (aviation, highway, passenger rail, and public transit) has increased by about 16 percent. Between Iowa’s two primary commuter modes, highway passenger vehicle-miles traveled (VMT) increased by 37 percent between 1990 and 2010, while the number of annual public transit rides increased by 17 percent in the same time period. Table 2.1 shows the passenger transportation trends for each mode from 1990 to 2010.

Table 2.1: Iowa passenger transportation trends, 1990-2010

	1990	2000	2010
Amtrak rides	51,719	55,146	68,744
Aviation enplanements	1,385,684	1,610,292	1,469,143
Highway VMT	20,323,000,000	26,048,000,000	27,859,000,000
Transit rides	22,417,065	22,423,693	26,209,999

Source: Iowa DOT (Note: Highway VMT includes include automobiles, pickup trucks, and motorcycles.)

Most Iowans drive alone to work

In 2010, 78.7 percent of workers commuted to work by driving alone, 10.3 percent of Iowans carpooled to work, 3.8 percent walked, and 1.1 percent used public transportation. Additionally, 1.3 percent of the working population used an “other” mode of transportation to work, and 4.8 percent of employed Iowans worked at home. These trends remained largely the same between 2000 and 2010. However, between 1980 and 2010, the percentage of workers driving to work alone increased from 62.1 percent to 78.7 percent, while carpooling decreased from 18.4 percent in 1990 to 10.3 percent in 2010. Table 2.2 shows how Iowans got to work from 1980 to 2010. According to the same AASHTO report cited in section 2.1, these trends are consistent with those at the national level and reflect a shift toward single-occupant vehicle travel to work, contributing to the potential for more congestion on Iowa’s roadways.

Table 2.2: How Iowans got to work, 1980-2010

	1980	1990	2000	2010
Drove alone	62.1%	73.4%	78.6%	78.7%
Carpooled	18.4%	11.9%	10.8%	10.3%
Public transportation	1.9%	1.2%	1.0%	1.1%
Walked	8.6%	5.8%	4.0%	3.8%
Other (bicycle, motorcycle, taxi)	1.6%	0.9%	0.9%	1.3%
Worked at home	7.3%	6.7%	4.7%	4.8%

Sources: U.S. Census Bureau, Decennial Census (1980, 1990, 2000);
2006-2010 American Community Survey 5-Year Estimates

Average travel time to work has increased

Average travel time to work for Iowans has slowly increased over the past two decades, and this trend will likely continue. Since 1990, the percentage of workers commuting 30 minutes or more to work has increased from 16 percent to 19 percent, while the percentage of workers commuting less than 15 minutes has decreased from 51 percent in 1990 to 45 percent in 2010.

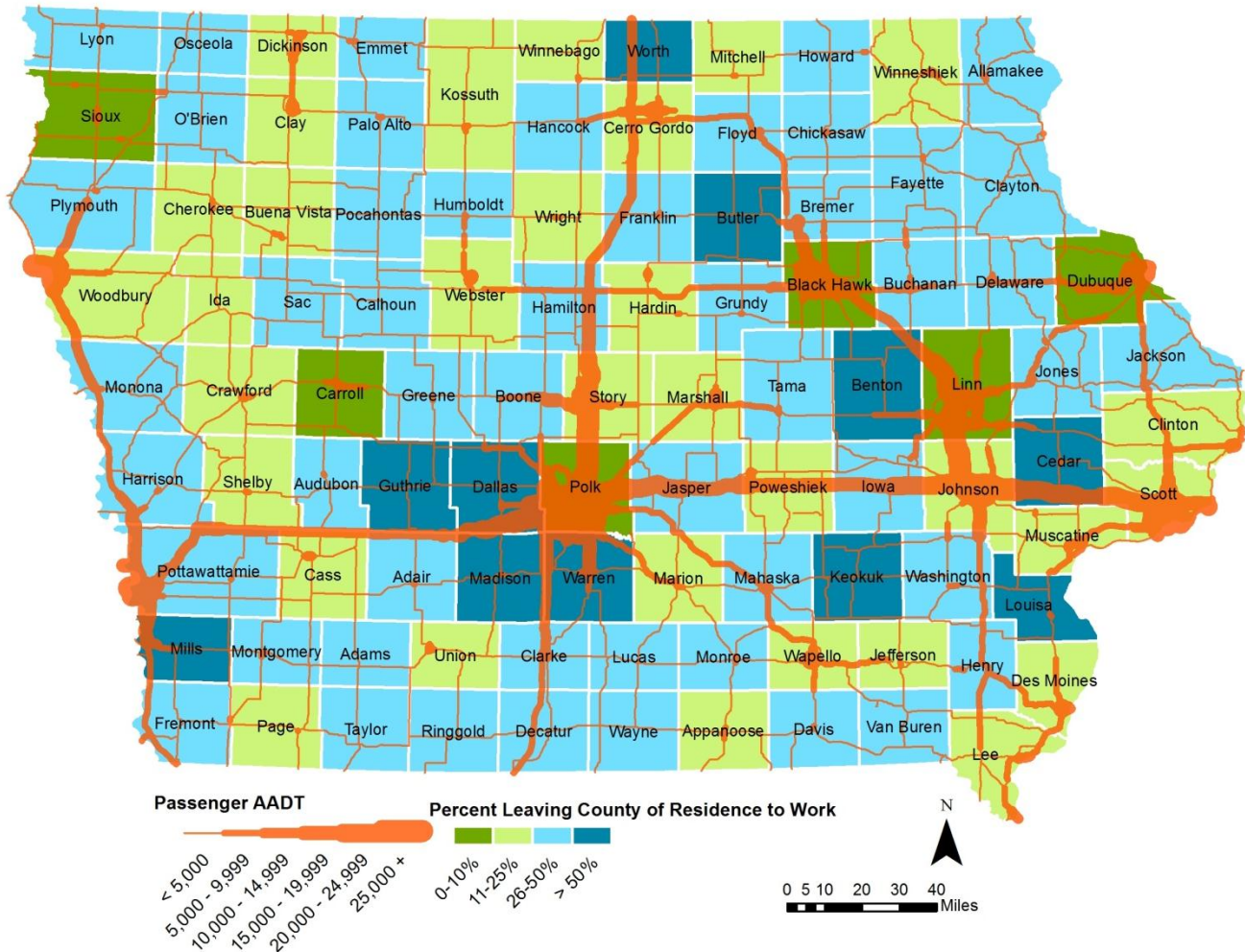
More Iowans are commuting to locations outside their county of residence which can often result in increased travel times to work. In 1990, approximately 17 percent of workers commuted to a job outside their county of residence; while in 2010, this number was about 22 percent. Additionally, there were 11 counties in Iowa where more than 50 percent of residents traveled to jobs outside their home county in 2010, compared to only two counties in 1990. Figure 2.5 illustrates potential commuter routes, highlighting the passenger vehicle average annual daily traffic (AADT) on primary highways, compared with the percentage of the workforce leaving their county of residence to go to work.

With an increase in jobs moving to Iowa’s metropolitan areas, commuting has taken on more of a role to support the labor force in these metropolitan areas. The influence of a metropolitan area is no longer concentrated around the core city, but includes the surrounding counties as well.

There is still a significant portion of the population that desires to live at the fringe of metropolitan areas, in smaller communities, or in a nonmetropolitan environment. These workers may value the particular lifestyle and quality of life benefits associated with their residence location and are likely willing to commute to jobs located elsewhere.

As is indicated by the figure below, primary roadways facilitating travel to metropolitan economic centers carry more passenger traffic. This trend is suggestive of additional wear and tear on roadways within these travel corridors and can mean increased costs in terms of frequency of maintenance and repair for these roadways.

Figure 2.5: Commuting trends: Passenger average annual daily traffic on primary highways, and percent of workforce leaving county of residence to work, 2010



Sources: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates; Iowa DOT (Note: Passenger vehicles include automobiles, pickup trucks, and motorcycles.)

2.3 Implications

Iowa's socioeconomic and passenger travel trends suggest there will be a need to identify travel demand management strategies for increasing the safety and efficiency of Iowa's transportation system. Increased population in and around metropolitan areas will create congestion and capacity issues as long as single-occupant vehicle travel remains the primary mode of travel. As Iowans drive longer distances to work, it will be increasingly important to identify and maintain commuter routes with facilities to support ridesharing.

Park and ride facilities may have an important role to play in achieving Iowa's transportation goals in the future. Reducing demand for single-occupant vehicle travel through ridesharing activities such as carpooling, vanpooling, and taking public transit are key components of any travel demand management strategy.

In a 2004 Transportation Research Board publication titled [Park-And-Ride/Pool: Traveler Response to Transport System Changes](#), Chapter 3, Report 95, researchers develop findings from reported results and case studies of systems that have implemented park and ride/pool facilities. In this report, some observations indicate the availability of park and ride facilities can facilitate a change in mode choice from a single-occupant vehicle to transit or carpooling/vanpooling. In terms of transit and carpooling, the report indicated that between 40 and 60 percent of park and ride users had commuted by single-occupant vehicles previously. Additionally, in park and ride/pool lot user surveys conducted by the Maryland State Highway Administration, individuals were asked if they had participated in ridesharing previous to their use of the facility, and nearly 46 percent had indicated that they had not.

As the Iowa DOT strives to meet the goals outlined in the 2040 State Transportation Plan and MAP-21, it should consider not only roadway improvement investments, but it should also incorporate strategies that offer

By providing a park and ride system that is strategically placed and consistently managed, Iowans are provided with more opportunities to choose a mode of travel other than single-occupant vehicle travel.

Iowa's commuting public greater choice in how they travel. By providing a park and ride system that is strategically placed and consistently managed, Iowans are provided with more opportunities to choose a mode of travel other than single-occupant vehicle travel.