

# 2012 Regional Transportation Plan

## Chapter II Regional Setting



# Chapter II – Regional Setting

## A. THE BERKSHIRES

The social and economic characteristics of a region strongly influence the transportation system, land use patterns, and use of different transportation services. It is important to consider population, employment, and how people travel in order to evaluate future transportation needs in the region. This chapter also examines Environmental Justice, an important component of the transportation planning process. Finally, we consider regional travel characteristics and how regional and national travel trends relate to forecasts of future transportation demand.

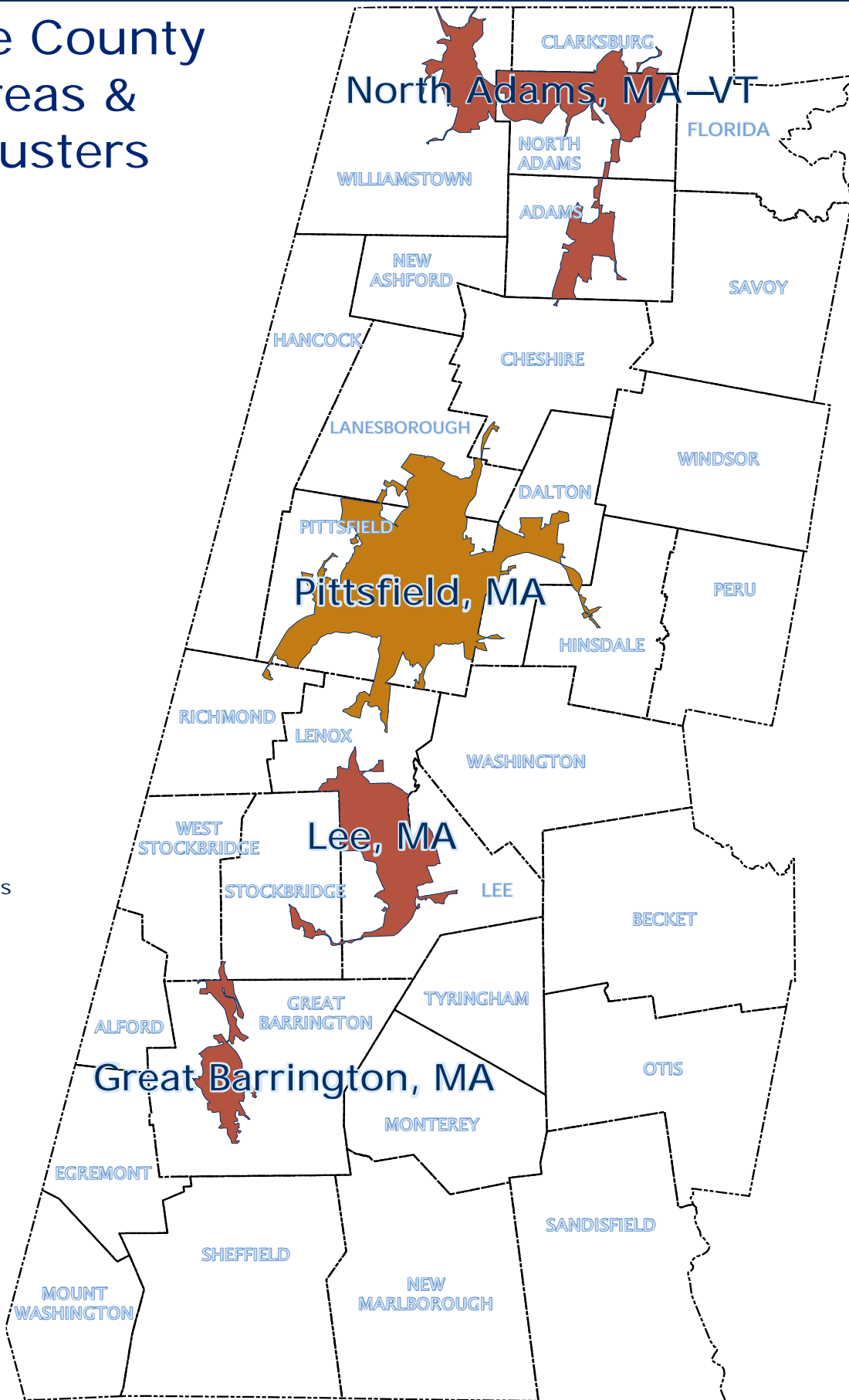
The Berkshires are a travel and tourism destination recognized for its natural resources, historical significance, and timeless charm. The Region is home to many natural and cultural attractions including Tanglewood, Mass MoCA, several festivals and concert series, and a number of ski areas and outdoor destinations.

The Berkshires contain three distinct population centers. The City of Pittsfield and surrounding towns, located near the physical center of the Region, have the largest concentration of population and employment in the Berkshires. The North Adams/Adams/Williamstown urban cluster in the north and the Great Barrington urban cluster in the south are significant contributors to regional employment and population. Portions of the Towns of Stockbridge, Lee, and Lenox also comprise a US Census defined urban cluster along the US 7/20 corridor. Aside from these areas, the Region is primarily rural with an overall population density of approximately 137 persons per square mile.

The 2010 Census estimates the population of the County at 131,219, a slight decrease from 2000. The overall population change for the Commonwealth was +3.1% during the same period. Approximately two thirds of the region's population remains concentrated in the two cities, Pittsfield (44,737) and North Adams (13,708). Many of the smaller communities in the Berkshires contain informal hamlets and town centers that are neighborhood centers of activity. Many of our smaller communities have low population density, sparse development, and many of the same challenges confronting many rural areas all over the United States.

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## Berkshire County Urban Areas & Urban Clusters



### Legend

- Urban Clusters
- Urbanized Area
- Local Boundaries



0 1.25 2.5 5 Miles

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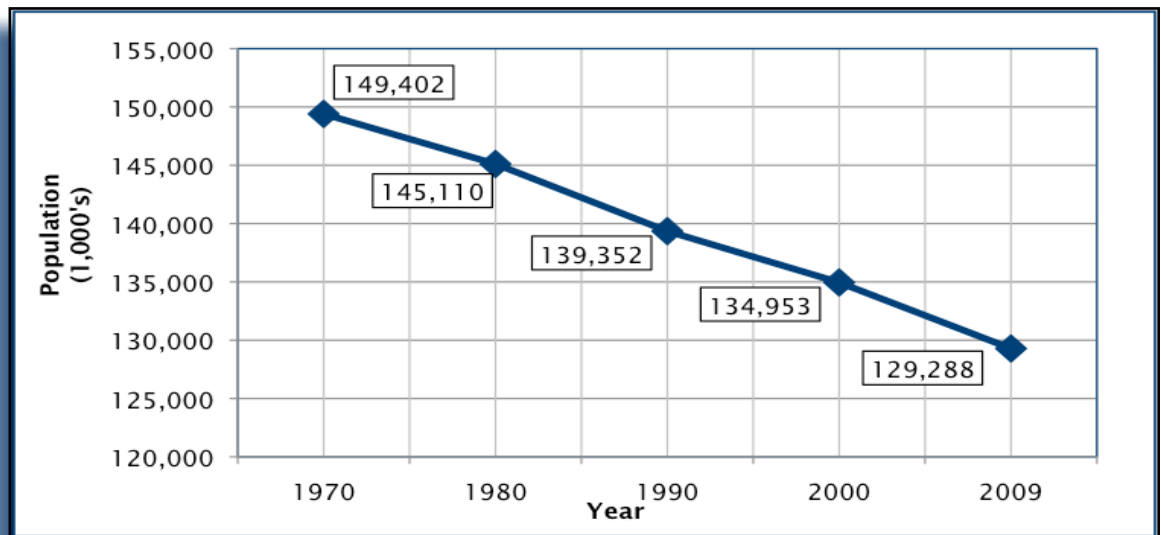


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## B. POPULATION

Berkshire County's population declined steadily since its peak in 1970. The population of Berkshire County peaked sometime around 1970, however, the region steadily lost population since. The American Community Survey provides statistically accurate interim estimates of population that are based on indicators such as birth and death certificates, and building permit activity.

Figure II-1 Population Trend for Berkshire County, 1970-2009



Source: U.S. Census Bureau, 1970-2000 Census and 2009 ACS Population Estimates

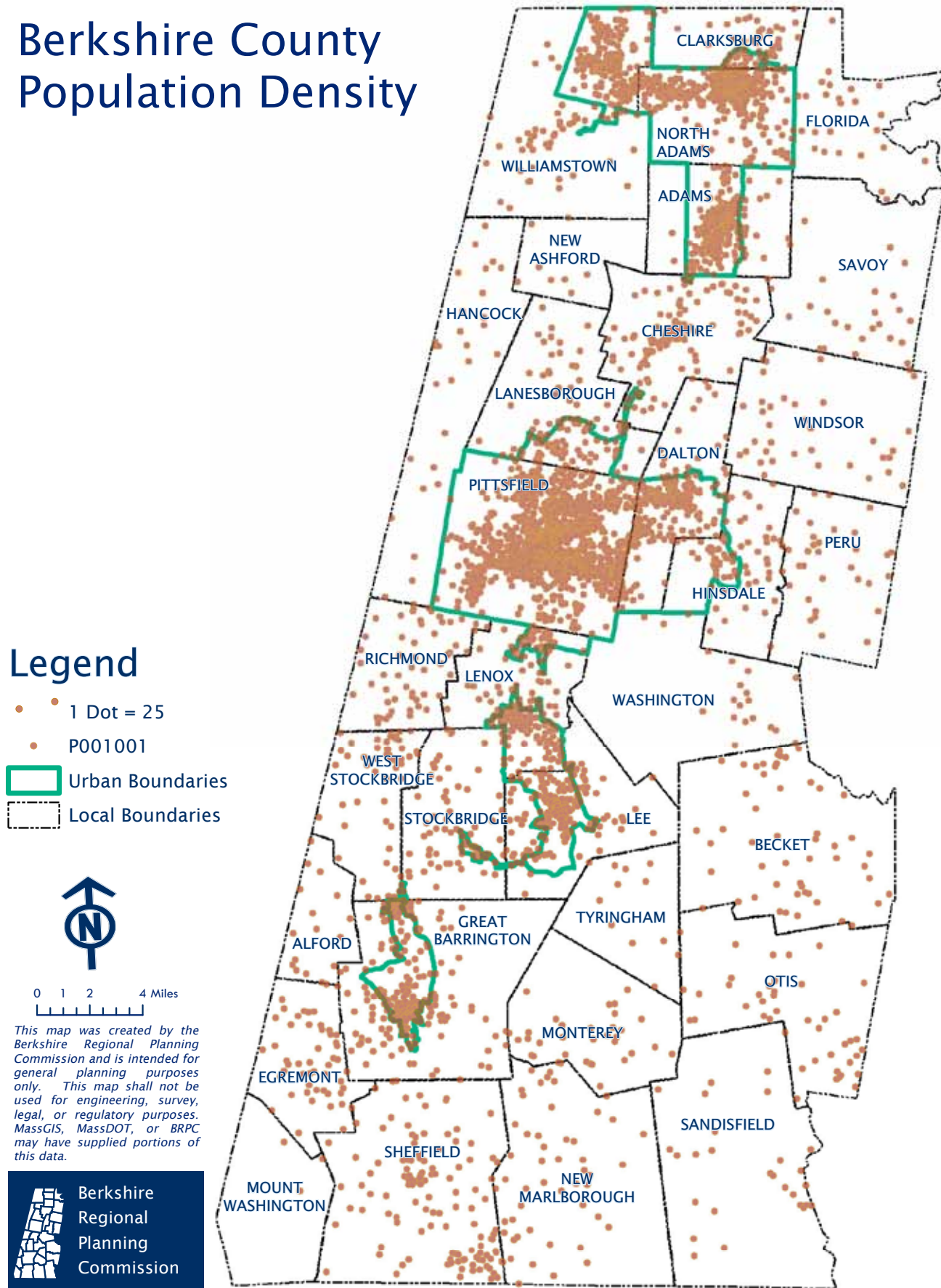
Regional population declined 13% (19,900) between 1970 and 2009. Most (75%) of the County's population decline between 1970 and 2000 occurred in three communities, Pittsfield, North Adams and Adams. The region's other towns either experienced smaller decreases in population, or in some cases flat or relatively modest growth. This pattern mirrors a national trend: population migration from urban centers to less densely populated areas.

In 2000, the median age for Berkshire County was 40.5 compared to 36.5 for all of Massachusetts. This reflects a higher concentration of retirees and a loss of younger working-age population and their children in the region. It is expected that Berkshire County will continue to be a popular location for retirees. This trend could have significant transportation impacts over time.

School enrollment in the Berkshires is declining. The US Department of Education statistics indicate 19,800 students enrolled in public schools in 2002, versus 17,900 in 2009. While a small part of the decrease can be attributed to increase enrollment at Charter Schools, a recent study by the Pioneer Institute states "the decline is due to a reduction in the number of school age children - the population is getting older."

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## Berkshire County Population Density



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Figure II-2 Berkshire County Population Pyramid, 2006–2008



Source: U.S. Census Bureau

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## C. ECONOMICS & EMPLOYMENT

In 2001 the Massachusetts Office of Workforce and Labor Development estimated total regional employment as 61,000; in 2009 it was also 61,000.

Principal regional employment centers are Pittsfield and North Adams, although Dalton, Lenox, Adams, and Williamstown have become more important as the local economy diversified away from manufacturing. Of all the workers who work and/or live in Berkshire County, 29% live in Pittsfield and over 37% work in Pittsfield. More workers commute into the Berkshires than commute out. These inter-regional workers live or work primarily in New York, Vermont, Connecticut, and the Pioneer Valley in Massachusetts. Pittsfield is a net commute attractor, while North Adams breaks even.

The Berkshire County employment profile changed radically over the last 35 years and will continue to transform in the future. In 1970, nearly 34% of workers were employed in the manufacturing sector. By 2000, this number was down to 11% and remains static due to increases in manufacturing efficiency and off-shoring. Our service sector has seen unprecedented growth during the same time, and is expected to fuel any future employment growth. Replacing traditionally well-paying manufacturing jobs that have been lost continues to be a challenge. The profile of jobs is important for understanding how people and goods change demands on the transportation system, particularly the non-traditional work shifts of the service industry and the effects of telecommuting.

The medical and social assistance fields will primarily contribute to economic growth. This increase corresponds to the overall aging of the population and the requirement for more medical and social assistance services.

Some of the region's larger employers are Berkshire Medical Center (Pittsfield), Crane Paper (Dalton), General Dynamics (Pittsfield), Williams College (Williamstown), and Canyon Ranch (Lenox). As of August 2010, the unemployment rate for Berkshire County was 7.7%, which was less than both the state average of 8.3% and the national average of 9.6%. The region's unemployment rate is consistently below state and national averages, a marked difference from the early 1990's when the region lost several major employers including GE.

Pittsfield is the largest employment center in the region. North Adams, Dalton, Lenox, Adams, and Williamstown also contain employment concentrations. According to 2000 Census data, 37% of employed Berkshire County residents work in Pittsfield. Pittsfield remains the region's economic engine despite the loss of manufacturing employment through closings and industrial efficiencies.

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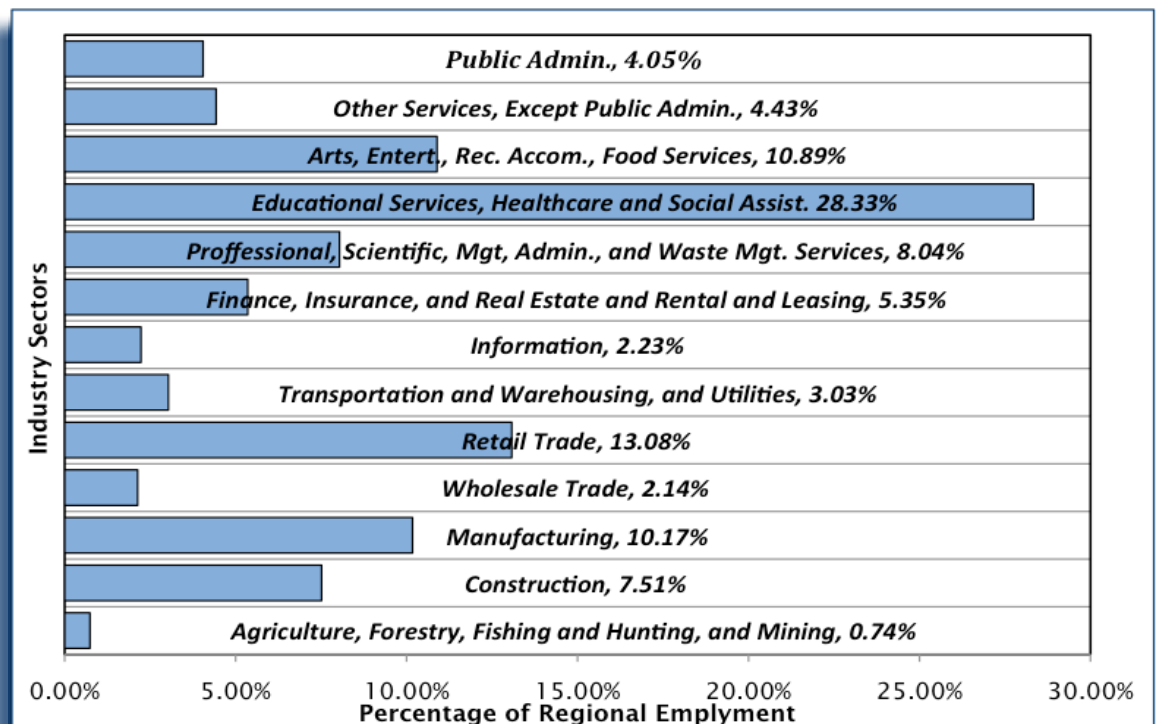
Table II-1 Major Employers in Berkshire County by Employment, 2012

Business Name	Location	NAICS Sector	Employment
Berkshire Health Systems	Regional	Educational Services, Healthcare and Social Assist.	3,089
Pittsfield Public School District	City of Pittsfield	Educational Services, Healthcare and Social Assist.	1,563
General Dynamic Advanced Information Systems	City of Pittsfield	Prof., Scientific, Mgt, Admin., and Waste Mgt. Services	1067
Williams College	Town of Williamstown	Educational Services, Healthcare and Social Assist.	1044
Jiminy Peak Mountain Resort	Town of Hancock	Arts, Entertainment, Recreation, Accommodation and Food Services	1000**
Crane & Company	Town of Dalton	Manufacturing	800
Canyon Ranch in Lenox	Town of Lenox	Arts, Entertainment, Recreation, Accommodation and Food Services	525**

\*\* Includes Part-time or Seasonal Employees. Employment numbers are as of February 2011 and represent employers with > 500 employees.

Source: Berkshire Regional Planning Commission and United Way

Figure II-3 Berkshire County Industry Sectors



Source: U.S. Census Bureau, American Community Survey 2006-2008

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## D. HOUSEHOLDS & VEHICLE OWNERSHIP

Population dispersion away from center cities toward suburban and rural areas results from a preference for personal automobiles. Most of the population is situated around major transportation routes, particularly north-south along the region's arterial roadways. The MassPike bypassed major population centers when it was constructed half a century ago and did not generate increased development typical of highway interchanges. Large sections of the region contain fewer than 25 people per square mile and are serviced by rural collectors that receive local traffic from sparsely used unpaved and paved local roads. An important function of transportation planning in the Berkshires is balancing funding resources between populated areas and rural areas.

The number of households and household size are critical predictors of travel behavior and service demands. Historically, the number of households in Berkshire County continued to rise even as population began to drop. Between 1970 and 2000, the number of households in the region increased from about 47,000 to 56,000. Since the total population fell consistently over this time, the household size also fell dramatically from 3.1 persons per household to about 2.3. This 25% drop in household size is fairly consistent across the different communities in the Berkshires - rural and urban. Less populated areas do tend to have larger household sizes than the urban core. Region-wide, household size is expected to remain historically small. Trends such as reduced longevity of marriage, extended lifespan, and fewer children all contribute to a decline in household size.

As household size decreased, the number of vehicles per household rose, from 1.35 in 1970 to 1.55 vehicles by 2000. BRPC anticipates the number of vehicles per household to continue increasing through 2035. Most of Berkshire County averages between 1.5 and 2 vehicles per household, but many of the more densely populated areas average less, which keeps the overall average around 1.5 vehicles.

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## E. ENVIRONMENTAL JUSTICE

Executive Order 12898, (1994) Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, establishes procedures for the USDOT to “achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority populations and low-income populations in the United States.”

Environmental Justice (EJ) is the fair treatment of everyone, regardless of circumstances, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no individuals or groups should shoulder a disproportionate share of the negative environmental impacts of Federal policy or investment.

Examining EJ helps the MPO:

- Make better decisions that meet everyone’s needs;
- Design transportation facilities that fit community context;
- Enhance the public-involvement process;
- Increase individual mobility for disadvantaged populations;
- Avoid disproportionately adverse impacts for disenfranchised populations; and
- Identify concerns early in project planning and avoid or mitigate adverse impacts.

The BRPC identifies EJ populations in Berkshire County based on income level, minority status, educational attainment, disability status, and English proficiency (based on the latest US Census or ACS data):

Income Level (Percent of Families below Poverty Line)

(Threshold: > 10 %)

Minority Status (Non-white population from US Census)

(Threshold: > 10 %)

Educational Attainment (Percent of Adults with less than a High School Education)

(Threshold: > 20 %)

Disabled population (Percent of Non-institutionalized individuals 5 years or older who have a disability)

(Threshold: > 20 %)

Less than Fluent in English Language (Percent of Individuals who speak English less than ‘very well’)

(Threshold: > 3 %)

Block groups above these EJ thresholds are typically in population centers. 9 Of the 39 Census tracts in the Region exceed the EJ threshold for 2 or more of the 5 measures.

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## Environmental Justice

Sources:

- Disability: 2000 Census
- Education: 2005-2009 ACS
- Language: 2005-2009 ACS
- Poverty: 2005-2009 ACS
- Race: 2005-2009 ACS

### Legend

#### NFCS

- Interstate
- Arterial
- Collector

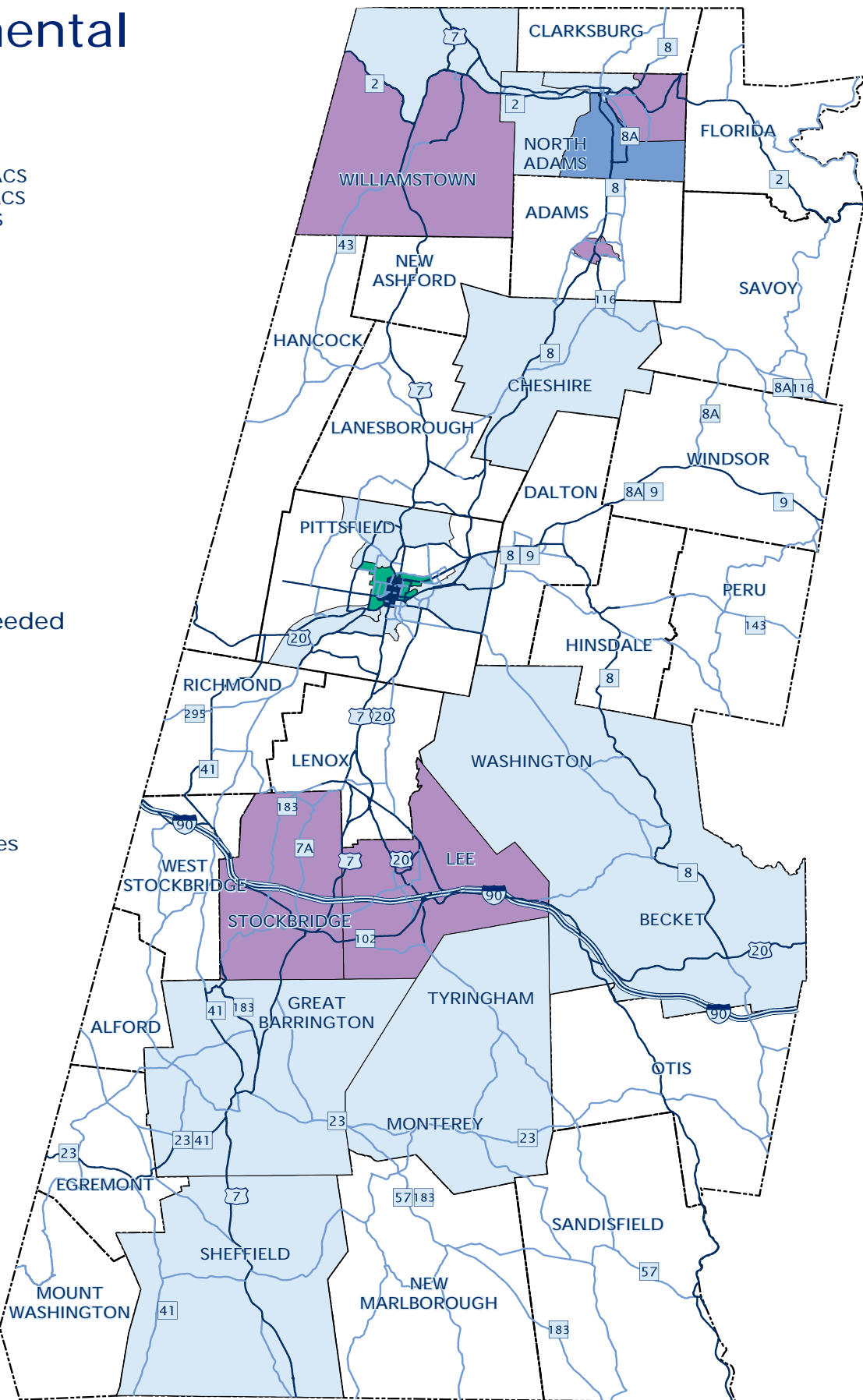
#### EJ Thresholds Exceeded

- 5
- 4
- 3
- 2
- 1
- Local Boundaries



0 15 30 60 Miles

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Poverty and disability status are the most commonly observed EJ measures in Berkshire County and also have the greatest impact on personal mobility. Members of these EJ groups deserve special attention in the transportation planning process, as the economically disadvantaged and the disabled often have more serious mobility impairments. The heavily developed areas of the region– parts of Pittsfield, Adams, and North Adams – exceed multiple EJ thresholds although the towns of Lee and Stockbridge and the southern tract in Williamstown also exceed more than threshold.

## F. REGIONAL TRAVEL CHARACTERISTICS

Historically, data on travel characteristics is from the ‘long form’ questionnaire administered during the decennial US Census. This questionnaire was distributed to a 10% sample of households. The long form was discontinued following the 2000 Census and in 2006 the American Community Survey (ACS) began in Berkshire County. The ACS asks fewer detailed questions on transportation topics than the decennial Census long form and relies on a smaller sample size (a 3% sample for 3 year average statistics), limiting census geography.

Table II-2 Means of Transportation to Work

	Car, truck, or van -- drove alone	Car, truck, or van --carpooled	Public Transportation	Walk, or other means	Worked at home
2006–2008 ACS Berkshires	78.3%	9.7%	1.0%	7.0%	3.9%
2000 Census Berkshires	79.2%	9.7%	1.5%	6.1%	3.6%
2006–2008 ACS – Massachusetts	72.9%	8.4%	8.9%	5.9%	3.9%

Only minor changes in the means of travel to work are observed when comparing the ACS data to the 2000 Census. For 2006–8, the Berkshires have a higher proportion of respondents that drive to work than the statewide numbers. The lower proportion of statewide private vehicle commuters is influenced by the Boston metropolitan area because where public transit commuting is common. Transit ridership has declined from a peak in the early 1980’s but is static now. More people in the Berkshires are walking and biking to work. The slight uptick in people working at home may suggest a shift towards telecommuting and cottage businesses.

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Average travel time for commute trips in the Berkshires did not change much between 2000 and 2006–8. The Berkshires have the shortest average trip length of all counties in the Commonwealth because there is less traffic congestion than most regions and a higher concentration of employment and housing centers.

Table II-3 Average Travel Time to Work

	Time in minutes
2006–2008 ACS – Berkshires	19.3
2000 Census – Berkshires	19.2
2006–2008 ACS – Massachusetts	27.1
Barnstable County	23.6
Bristol County	25.7
Essex County	27.0
Franklin County	24.3
Hampden County	21.9
Hampshire County	22.6
Middlesex County	27.6
Norfolk County	30.0
Plymouth County	31.8
Suffolk County	28.7
Worcester County	26.8

Berkshire County has the lowest proportion of workers in the Commonwealth that commute to jobs outside their county of residence. Our positive commute balance exists between bordering Massachusetts as well as New York and Vermont, but we do lose some commuters to Connecticut.

Table II-4 Percent of Workers Working Outside County of Residence: '06-'08 ACS

Barnstable County	15.3%
Berkshire County	7.5%
Bristol County	38.4%
Essex County	35.9%
Franklin County	38.0%
Hampden County	20.0%
Hampshire County	36.8%
Middlesex County	32.5%
Norfolk County	54.5%
Plymouth County	47.4%
Suffolk County	32.3%
Worcester County	28.6%

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## G. TRAFFIC AND TRAVEL TRENDS

The past decade saw a significant reversal of national trends in the growth of motor vehicle travel. During most of the 20th Century, particularly from 1960 to 1995, the nation experienced a boom in vehicle travel that was associated with both economic prosperity and demographic factors.

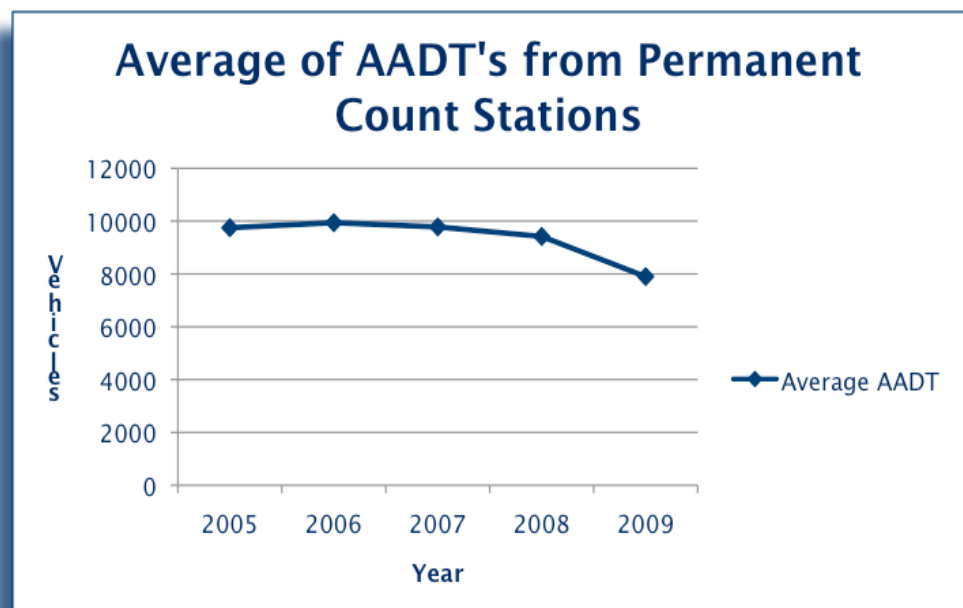
However, as we entered the new Millennium, evidence suggests that per capita growth in personal automobile usage has leveled off. Some demographic factors that contribute to static household travel include:

- Stabilization of average household size following decades of declines,
- Stabilization of female labor force participation rates following decades of increases,
- Stabilization of female share of licensed drivers following decades of increases,
- Stabilization of share of zero-vehicle households following decades of decreases,
- Transition of the baby boom population bubble through their peak travel years, our largest population cohort is starting to drive less

National statistics indicate a recent and major decline in the level of personal travel because of the 'downsized' national economy and the relatively high price of fuel. The National Highway Travel Survey indicates an annual VMT per licensed driver of 10,084 in 2009, down from 11,890 in 2001.

Regional traffic trends are best observed by an examination of traffic count data. Traffic counts at individual locations vary for different reasons: time of year, local land uses, detours or construction, weather, etc. The most reliable traffic count data is from MassDOT's in-pavement vehicle detectors that provide continuous count data.

Figure II- 4



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Between 2006 and 2009, the average traffic collected by the ten (10) permanent count stations decreased approximately 20%. Regional population, employment, and seasonal tourism influence the amount of traffic on Berkshire roads. The international recession lowered travel nationally since 2007, a trend similar to the stagnating travel during the economic slowdown of the late 1990's and early 2000's. BRPC anticipates that travel will increase to coincide with longer-term trends as the economic recovery picks up steam.

Traffic data, particularly in the southern Berkshires, fluctuates seasonally because of special generators like Tanglewood and part-time seasonal homeowners. In the future, factoring all raw traffic counts to account for the unique travel behaviors in the Region will more accurately represent observed conditions.

Table II-5

MassDOT Continuous Count Station Data- annual average daily traffic (AADT):











Station ID	Station Location	2005	2006	2007	2008	2009
1	Route 8, S of TL, in Pittsfield	19,800	21,000	19,700	20,100	-
2	US 20, E of Route 102 intersection, in Lee	6,100	6,700	6,000	5,900	4,600
40	US 7/20, N of Route 7A, in Lenox	24,800	25,200	27,100	22,300	13,800
125	Route 8A/116 in W of TL, in Savoy	1,200	1,200	1,200	1,300	700
140	Route 8, S of Vermont SL, in Clarksburg	2,900	2,900	2,700	2,600	2,700
155	Route 23, W of TL, in Great Barrington	3,600	4,000	3,800	3,700	3,300
162	Route 8, N of TL, in North Adams	16,000	15,700	15,300	15,000	13,900
189	Route 183, S of TL, in Stockbridge	3,000	3,500	2,500	3,100	2,200
190	Route 41, N of TL, West Stockbridge	2,400	2,600	2,400	2,400	1,900
1179	US 7/20 S of 7A, in Lenox	17,700	16,600	17,100	17,800	15,800

Source: MassDOT

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## Continuous Traffic Count Stations

### Legend

-  Count Station & ID
-  Interstate
-  Urban Major Arterial
-  Urban Minor Arterial
-  Urban Collector
-  Rural Major Arterial
-  Rural Minor Arterial
-  Rural Major Collector
-  Rural Minor Collector
-  Local Boundaries



0 1.25 2.5 5 Miles

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