## DAYTIME POPULATIONS

Broward County experiences a net loss of population during the daytime, because many residents commute to neighboring counties. Within the County, Fort Lauderdale, Pompano Beach, Deerfield Beach and Pembroke Park experience a net increase.

## DAYTIME POPULATION

Total population is usually expressed as the number of permanent residents living in a city or county. However, in the daytime, the population may be significantly higher or lower than the resident population. For example, downtown areas may gain large numbers of suburban commuters during the daytime. The US Census calculates daytime population based on the number of people who are present in an area during normal business hours, including workers, children in school, people in hospitals, temporary lodgers, and retail customers. It does not include visitors (tourists) or college students, unless they live in the area.

According to 2014 American Community Survey estimates (ACS), Broward County has 1.82 million
 residents, but during the daytime the population is only 1.74 million. Broward is a net exporter of labor force, since there are fewer jobs in the county than workers. Many workers commute from Broward to the adjoining counties--Miami-Dade and Palm Beach-both of which show higher daytime population than residents. For Broward County, this trend has barely changed since 2000, where data shows a net daytime population loss of 73,272 due to commuters compared to a loss of 71,980 in 2014.

## EMPLOYMENT-RESIDENCE RATIO

Another way of looking at daytime population data is through the employment-resident ( $\mathrm{E}-\mathrm{R}$ ) ratio. The E-R ratio is an indicator of the jobs-to-workers balance in an area. A value greater than 1.00 shows there are more employees working in the area than living there (net importer of labor). A value of less than 1.00 in areas shows that there are more workers commuting to other areas because there are fewer jobs available (net exporters of labor). A similar measure, the jobs-to-housing ( $\mathrm{J}-\mathrm{H}$ ) ratio, measures number of local jobs against number of housing units. The J-H ratio has been used in studies to make a case for more balanced mix of residential and employment uses within close proximity of each other to help shorten commutes. Unfortunately, neither the E-R nor J-H ratios quantify whether the residents are actually working within their own area or commuting elsewhere. Workers' skills aren't necessarily matched to jobs closest to where they live. Meanwhile, employment centers may not provide housing that is affordable to the employees in the area. Despite a semblance of $\mathrm{E}-\mathrm{R}$ balance, the skills/affordability mismatch may promote longer commutes.

| COUNTY | BROWARD |  | PALM BEACH |  | MIAMI-DADE |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000 | 2014 | 2000 | 2014 | 2000 | 2014 |
| Total Residents | 1,623,018 | 1,815,269 | 1,131,184 | 1,359,074 | 2,253,362 | 2,600,861 |
| Total Workers (aged 16+) | 670,271 | 778,671 | 499,268 | 608,032 | 956,458 | 1,219,954 |
| Residents in labor force | 743,543 | 850,651 | 475,572 | 591,057 | 899,323 | 1,150,052 |
| Daytime population | 1,549,746 | 1,743,289 | 1,154,880 | 1,376,049 | 2,310,497 | 2,670,763 |
| Net change due to commuters | -73,272 | -71,980 | 23,696 | 16,975 | 57,135 | 69,902 |
| Employment Residence Ratio | 0.90 | 0.92 | 1.05 | 1.03 | 1.06 | 1.06 |

Sources: U.S. Census Bureau, 2000; U.S. Census Bureau, 2010-2014 5-Year American Community Survey

Of the three counties, Broward has the lowest employment-residence ( $\mathrm{E}-\mathrm{R}$ ) ratio (number of workers working in a county relative to workers living in that county). E-R ratio of 0.92 means that, in net terms, Broward exports $8 \%$ of its workers to other counties. While this trend existed in 2000, the data shows that the export of its workers decreased from $10 \%$ to $8 \%$ (2014).

## DAYTIME POPULATIONS IN BROWARD COUNTY CITIES

The daytime populations of municipalities in Broward differ considerably from their resident populations. During the daytime, Fort Lauderdale's population increases by more than 84,000, whereas Pembroke Pines decreases by over 27,000.

The eastern Broward cities of Fort Lauderdale, Pompano Beach, and Deerfield Beach gain the most daytime population. Communities with the least change between resident and daytime populations are generally located in central parts of the county, along the I-595 corridor or in the southeast. Cities in the

MUNICIPALITIES THAT GAIN DAYTIME POPULATION, 2014

| Municipality | Resident <br> Population | Daytime <br> Population | Net <br> Commuters | Net <br> Daytime <br> Change |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Fort Lauderdale | 171,137 | 255,610 | 84,473 | $49 \%$ |
| Pompano Beach | 103,234 | 119,891 | 16,657 | $16 \%$ |
| Deerfield Beach | 77,341 | 81,059 | 3,718 | $5 \%$ |
| Pembroke Park | 6,220 | 6,301 | 81 | $1 \%$ | northwest and southwest corners of Broward County experience the greatest loss of the daytime population.



## MAPPING NET DAYTIME POPULATION CHANGES

The map to the left shows cities that lose more than 10\% population in the daytime in darker blue. Cities that gain more than $10 \%$ daytime population are shown in orange. Light blue represents little change (less than 10\%). Since the data is place-based and some of the unincorporated areas are not, there is no data available for areas shown in white.

Of note, the Fort Lauderdale-Hollywood International Airport (FLL) located in the east central part of the County is one example of a large attractor that is not a census place. Each day over 73,000 travelers pass through the four terminals at FLL. Airport employees include 12,500 badged workers. Other blank areas on the map represent County facilities, including waste management facilities.

Daytime population is often used to understand traffic and commuter patterns. However, this map illustrates that while data may not be readily available for nonplaces, it is important to understand their role in attracting daytime population, since they may include important employment facilities.

## VISITORS IMPACTS

Visitors and out of state students are a source of non-permanent population in Broward County that also affect daytime populations. According to Greater Fort Lauderdale Convention and Visitors Bureau, there were 15.4 million visitors to Broward County in 2015. The numbers of visitors to Broward County varies according to time of year. Rather than simply assume a constant rate of 1.28 million visitors per month, a proxy value of monthly tourist tax collection from 2007 - 2015 was used to illustrate the busiest periods annually for visitors to Broward County. The highest periods of visitors to Broward County generally falls between December and April. Using both set of peak months for the 9 year period, on average $45 \%$ of total tourist tax collection occurs during these months. The graph also shows that 2009 was the year with the lowest tourist tax revenue.

## BROWARD COUNTY TOTAL TOURIST TAX COLLECTIONS BY MONTH 2007-2015



Another potential indicator to indirectly measure the impacts on visitors throughout the County is the measure of the number of seasonal, recreation or occasional use housing units (seasonal units). According to 2014 ACS, $9.3 \%$ of housing units in Broward County are seasonal units and 14 of the cities in the County have higher rates of seasonal units than the County. The top four cities with highest percentage of seasonal units include Hillsboro Beach (52.3\%), Lauderdale-by-the-Sea (38\%), Pembroke Park (30\%) and Hallandale Beach (29\%). The city with the highest number of seasonal units is Fort Lauderdale with 11,600 units. While some cities may not have increased daytime populations due to worker commutes, they might be experiencing increased population seasonal volumes due to visitors.

## STUDENTS

As stated at the beginning of this BBTN, college students are not included in the daytime population data, unless they live in the area. According to 2014 ACS, there are 139,091 people age 15 and over enrolled in college or graduate school. It should be noted that some, but not all, are out of state students. According to U.S. Department of Education, National Center for Education Statistics 16\% of first-time degree/certificate-seeking undergraduates in degree-granting postsecondary institutions in the state of Florida are out of state students. Based on the assumption that this same rate applies in Broward County, there are approximately 22,255 out of state students.

Colleges, universities and other centers of higher learning are large traffic generators, and most educational facilities do not provide on-site campus housing. A few students may be traveling short distances from surrounding communities or neighborhoods. However, there is as much or more likelihood that they are traveling longer distances from other counties they call home. Since housing is expensive, many college students are living at home to cut down costs. As in the case of the Fort Lauderdale-Hollywood International Airport (FLL), it is important to understand these daytime attractors, as well.

| TABLE 1: BROWARD COUNTY CITIES COMMUTER-ADJUSTED DAYTIME POPULATION |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| City | Total resident population 1 | Total workers ${ }^{2}$ working in place ${ }^{3}$ | Total workers living in place ${ }^{4}$ | Estimated daytime population 5 | Daytime population change due to commuting ${ }^{6}$ | \% daytime population change due to commuting ${ }^{7}$ | Workers who lived and worked in the same place ${ }^{8}$ | \% workers who lived and worked in the same place ${ }^{9}$ | Employme <br> nt <br> residence <br> ratio ${ }^{10}$ |
| Coconut Creek | 55,590 | 17,604 | 26,816 | 46,378 | -9,212 | -16.57 | 4,686 | 17.5 | 0.66 |
| Cooper City | 32,058 | 8,373 | 16,649 | 23,782 | -8,276 | -25.82 | 2,662 | 16.0 | 0.50 |
| Coral Springs | 125,150 | 41,953 | 62,480 | 104,623 | -20,527 | -16.40 | 18,378 | 29.4 | 0.67 |
| Dania Beach | 30,531 | 11,145 | 13,756 | 27,920 | -2,611 | -8.55 | 1,445 | 10.5 | 0.81 |
| Davie | 95,721 | 40,344 | 46,984 | 89,081 | -6,640 | -6.94 | 9,432 | 20.1 | 0.86 |
| Deerfield Beach | 77,341 | 37,665 | 33,947 | 81,059 | 3,718 | 4.81 | 8,499 | 25.0 | 1.11 |
| Fort Lauderdale | 171,137 | 165,675 | 81,202 | 255,610 | 84,473 | 49.36 | 37,313 | 46.0 | 2.04 |
| Hallandale Beach | 38,270 | 14,031 | 15,901 | 36,400 | $-1,870$ | -4.89 | 3,198 | 20.1 | 0.88 |
| Hillsboro Beach | 1,635 | 389 | 550 | 1,474 | -161 | -9.85 | 151 | 27.5 | 0.71 |
| Hollywood | 145,128 | 65,577 | 67,921 | 142,784 | -2,344 | -1.62 | 19,301 | 28.4 | 0.97 |
| Lauderdale Lakes Lauderdale-by-the- | 33,710 | 7,083 | 14,161 | 26,632 | -7,078 | -21.00 | 1,184 | 8.4 | 0.50 |
| Sea | 6,241 | 2,017 | 2,427 | 5,831 | -410 | -6.57 | 376 | 15.5 | 0.83 |
| Lauderhill | 69,082 | 12,302 | 29,545 | 51,839 | -17,243 | -24.96 | 2,971 | 10.1 | 0.42 |
| Lazy Lake | 35 | 4 | 17 | 22 | -13 | -37.14 | 4 | 23.5 | 0.24 |
| Lighthouse Point | 10,693 | 3,793 | 5,280 | 9,206 | $-1,487$ | -13.91 | 1,148 | 21.7 | 0.72 |
| Margate | 54,929 | 16,307 | 26,023 | 45,213 | $-9,716$ | -17.69 | 4,288 | 16.5 | 0.63 |
| Miramar | 128,414 | 38,898 | 61,861 | 105,451 | -22,963 | -17.88 | 8,524 | 13.8 | 0.63 |
| North Lauderdale | 42,354 | 6,362 | 20,155 | 28,561 | -13,793 | -32.57 | 2,122 | 10.5 | 0.32 |
| Oakland Park | 42,795 | 19,790 | 21,968 | 40,617 | -2,178 | -5.09 | 3,585 | 16.3 | 0.90 |
| Parkland | 25,895 | 4,296 | 12,293 | 17,898 | -7,997 | -30.88 | 2,109 | 17.2 | 0.35 |
| Pembroke Park | 6,220 | 2,530 | 2,449 | 6,301 | 81 | 1.30 | 91 | 3.7 | 1.03 |
| Pembroke Pines | 159,920 | 47,831 | 75,048 | 132,703 | -27,217 | -17.02 | 14,166 | 18.9 | 0.64 |
| Plantation | 88,486 | 42,868 | 44,770 | 86,584 | -1,902 | -2.15 | 10,025 | 22.4 | 0.96 |
| Pompano Beach | 103,234 | 59,016 | 42,359 | 119,891 | 16,657 | 16.14 | 14,326 | 33.8 | 1.39 |
| Sea Ranch Lakes | 737 | 175 | 314 | 598 | -139 | -18.86 | 32 | 10.2 | 0.56 |
| Southwest Ranches | 7,583 | 1,264 | 3,810 | 5,037 | -2,546 | -33.58 | 473 | 12.4 | 0.33 |
| Sunrise | 88,391 | 43,274 | 43,349 | 88,316 | -75 | -0.08 | 8,605 | 19.9 | 1.00 |
| Tamarac | 62,478 | 17,458 | 28,482 | 51,454 | -11,024 | -17.64 | 3,758 | 13.2 | 0.61 |
| West Park | 14,604 | 2,004 | 6,244 | 10,364 | -4,240 | -29.03 | 352 | 5.6 | 0.32 |
| Weston | 67,567 | 23,863 | 30,020 | 61,410 | -6,157 | -9.11 | 7,707 | 25.7 | 0.79 |
| Wilton Manors | 11,994 | 4,339 | 6,303 | 10,030 | -1,964 | -16.37 | 1,227 | 19.5 | 0.69 |
|  |  |  |  | вmsd | AREAS |  |  |  |  |
| Central County | 6,944 | 3187 | 2,331 | 7,800 | 856 | 12.33 | 95 | 4.1 | 1.37 |
| Broadview Park | 7,175 | 748 | 4,027 | 3,896 | -3,279 | -45.70 | 254 | 6.3 | 0.19 |
| Hillsboro Pines | 511 | 129 | 232 | 408 | -103 | -20.16 | 67 | 28.9 | 0.56 |

NOTES (1) Total resident population - the total number of persons living in the area as shown in American Community Survey.
(2) Workers - people 16 years and over who were employed and at work during the reference week. The estimate of workers includes part-time and full-time civilian personnel and people in the Armed Forces.
(3) Total workers working in the place - this is the number of workers who reported working in the place, regardless of their place of residence. In other words, it is the total that worked there no matter where they lived. Residence locations are not considered, only workplace locations are reflected in this number.
(4) Total workers living in the place - this is sometimes referred to as the number of resident workers. It is the number of people living in the place who are workers. It includes workers who live there regardless of where they worked, or in other words, no matter where their workplace was located. Place of work location is not considered, only residence location is reflected in this number.
(5) Estimated daytime population - this is the estimate arrived at by adjusting the total resident population by the number of incommuters and outcommuters to the place, using data from the American Community Survey. It does not adjust for people entering or leaving the place for purposes other than commuting, nor does the commuting adjustment take the time of day of the work trips into account. The estimate is calculated by adding the total resident population and the total workers working in the place, and then subtracting from that result the total workers living in the place. This method yields the same result as would be obtained by adding the incommuters and subtracting the outcommuters from the total resident population.
(6) Daytime population change due to commuting - this is the numeric increase or decrease in the population of the area as a result of work-related commuting. It is the net change in the population due to work travel and is computed by subtracting the total resident population from the estimated daytime population. Positive numbers indicate more commuters entering the area than leaving it. Negative numbers occur when more workers leave the area to go to work than enter it to come to work.
(7) Percent daytime population change due to commuting - this is the percentage increase or decrease in the population of the place as a result of work-related commuting. It is calculated by dividing the numeric change due to commuting by the total resident population, and multiplying the result by 100 . Positive figures denote the percentage increase experienced by the population, while negative numbers show the percentage decrease in the population as a result of commuting.
(8) Workers who lived and worked in the same place - this value shows how many workers who lived in a particular place also worked in that same place. It is derived from place of residence location information and responses to the question on workplace location during the week prior to filling out the American Community Survey questionnaire.
(9) Percent workers who lived and worked in the same county - this measure is sometimes used as an indicator of worker retention, but it does not reflect variation in area size (some places cover a large area while others are small) or other attributes very well. It is computed by dividing the number of wor kers who lived and worked in the same place by the total workers living there and multiplying the result by 100 .
(10) Employment-residence $(E-R)$ ratio - this is a measure of the total number of workers working in the place, relative to the total number of workers living in the place. It is often used as a rough indication of the jobs-workers balance in an area, although it does not take into account whether the resident workers possess the skills needed for the jobs that are available. E-R ratios greater than 1.00 occur when there are more workers working in the place than living there. These places can be considered as net importers of labor. For example, an $\mathrm{E}-\mathrm{R}$ ratio of 1.19 means that there are 19 percent more workers working in the place than living in the place. Values less than 1.00 indicate areas that send more workers to other areas than they receive, i.e., they are net exporters of labor. Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-year estimates.

TABLE 2: BROWARD COUNTY TOTAL TOURIST TAX COLLECTIONS BY MONTH 2007-2015

| MONTH | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| JAN | \$4,345,156 | \$4,727,356 | \$3,983,280 | \$3,890,877 | \$4,055,687 | \$4,662,492 | \$5,085,933 | \$5,764,901 | \$6,485,370 |
| FEB | \$5,497,558 | \$5,526,053 | \$4,429,125 | \$5,074,860 | \$4,768,340 | \$5,352,291 | \$5,510,358 | \$6,221,929 | \$7,088,533 |
| MAR | \$5,345,425 | \$5,494,124 | \$4,031,730 | \$4,505,420 | \$5,200,449 | \$5,555,001 | \$6,352,084 | \$6,768,443 | \$7,410,655 |
| APR | \$3,768,602 | \$4,162,768 | \$3,105,609 | \$3,240,869 | \$4,056,038 | \$3,981,888 | \$4,226,186 | \$4,952,092 | \$5,459,887 |
| MAY | \$3,175,486 | \$2,980,340 | \$2,616,786 | \$2,805,064 | \$3,130,661 | \$3,324,950 | \$3,413,741 | \$3,782,816 | \$4,045,323 |
| JUN | \$2,501,180 | \$2,492,245 | \$2,117,555 | \$2,331,264 | \$2,616,264 | \$2,801,721 | \$3,127,373 | \$3,380,263 | \$3,618,224 |
| JUL | \$2,593,816 | \$2,344,638 | \$2,253,356 | \$2,419,946 | \$2,766,325 | \$2,971,827 | \$3,185,406 | \$3,565,976 | \$3,885,598 |
| AUG | \$2,467,887 | \$2,287,439 | \$2,023,234 | \$2,112,759 | \$2,386,001 | \$2,561,865 | \$2,876,350 | \$3,345,489 | \$3,474,977 |
| SEP | \$1,999,655 | \$1,824,991 | \$1,611,029 | \$1,733,388 | \$2,061,380 | \$2,214,417 | \$2,335,376 | \$2,675,355 | \$2,991,525 |
| OCT | \$2,953,313 | \$2,658,761 | \$2,263,749 | \$2,628,799 | \$2,858,378 | \$3,146,023 | \$3,224,004 | \$3,695,371 | \$3,944,613 |
| NOV | \$2,957,165 | \$2,898,646 | \$2,367,004 | \$2,589,804 | \$2,996,037 | \$3,209,901 | \$3,796,454 | \$4,099,543 | \$4,725,906 |
| DEC | \$3,651,430 | \$3,222,053 | \$2,819,720 | \$3,213,873 | \$3,740,525 | \$4,070,978 | \$4,565,317 | \$5,183,258 | \$5,581,266 |

Source: Broward County Finance and Administrative Services Department, Records, Taxes and Treasury Division

| TABLE 3:MUNICIPALITIES WITH HIGHER PERCENTAGE OF SEASONAL UNITS THAN BROWARD COUNTY |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Total Housing Units | For seasonal, recreational, or occasional use | $\%$ of <br> Total <br> Housing <br> Units |
| Hillsboro Beach | 2,204 | 1,152 | 52.3\% |
| Lauderdale-by-the-Sea | 6,848 | 2,582 | 37.7\% |
| Pembroke Park | 4,028 | 1,213 | 30.1\% |
| Hallandale Beach | 28,687 | 8,422 | 29.4\% |
| Sea Ranch Lakes | 356 | 68 | 19.1\% |
| Deerfield Beach | 41,842 | 6,887 | 16.5\% |
| Pompano Beach | 55,962 | 9,006 | 16.1\% |
| Hillsboro Pines | 208 | 32 | 15.4\% |
| Lauderdale Lakes | 14,763 | 2,174 | 14.7\% |
| Dania Beach | 15,701 | 2,258 | 14.4\% |
| Lighthouse Point | 6,155 | 822 | 13.4\% |
| Fort Lauderdale | 94,610 | 11,632 | 12.3\% |
| Hollywood | 70,719 | 7,320 | 10.4\% |
| Weston | 25,474 | 2,592 | 10.2\% |
| Broward County | 812,817 | 75,778 | 9.3\% |

Source: U.S. Census Bureau, 2010-2014 5-Year American
Community Survey

| TABLE 4: BROWARD COUNTY CITIES SEASONAL, RECREATIONAL OR OCCASIONAL USE HOUSING UNIIS |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Total Housing Units | For seasonal, recreational, or occasional use | \% of Total Housing Units |
| Broward County | 812,817 | 75,778 | 9.3\% |
| Coconut Creek | 26,408 | 2,062 | 7.8\% |
| Cooper City | 10,940 | 32 | 0.3\% |
| Coral Springs | 44,246 | 652 | 1.5\% |
| Dania Beach | 15,701 | 2,258 | 14.4\% |
| Davie | 37,427 | 1,550 | 4.1\% |
| Deerfield Beach | 41,842 | 6,887 | 16.5\% |
| Fort Lauderdale | 94,610 | 11,632 | 12.3\% |
| Hallandale Beach | 28,687 | 8,422 | 29.4\% |
| Hillsboro Beach | 2,204 | 1,152 | 52.3\% |
| Hollywood | 70,719 | 7,320 | 10.4\% |
| Lauderdale Lakes | 14,763 | 2,174 | 14.7\% |
| Lauderdale-by-the-Sea | 6,848 | 2,582 | 37.7\% |
| Lauderhill | 28,599 | 2,114 | 7.4\% |
| Lazy Lake | 12 | 0 | 0.0\% |
| Lighthouse Point | 6,155 | 822 | 13.4\% |
| Margate | 24,579 | 1,769 | 7.2\% |
| Miramar | 41,388 | 994 | 2.4\% |
| North Lauderdale | 13,963 | 346 | 2.5\% |
| Oakland Park | 19,705 | 909 | 4.6\% |
| Parkland | 8,507 | 222 | 2.6\% |
| Pembroke Park | 4,028 | 1,213 | 30.1\% |
| Pembroke Pines | 63,098 | 2,502 | 4.0\% |
| Plantation | 37,478 | 1,396 | 3.7\% |
| Pompano Beach | 55,962 | 9,006 | 16.1\% |
| Sea Ranch Lakes | 356 | 68 | 19.1\% |
| Southwest Ranches | 2,358 | 128 | 5.4\% |
| Sunrise | 36,973 | 2,304 | 6.2\% |
| Tamarac | 31,783 | 1,770 | 5.6\% |
| West Park | 4,320 | 52 | 1.2\% |
| Weston | 25,474 | 2,592 | 10.2\% |
| Wilton Manors | 7,196 | 336 | 4.7\% |
|  | BMSD A |  |  |
| Central County | 2,425 | 0 | 0.0\% |
| Broadview Park | 2,289 | 80 | 3.5\% |
| Hillsboro Pines | 208 | 32 | 15.4\% |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-year estimates

## BRCMARD

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