IN THIS ISSUE


- The Gross Metropolitan Product (GMP) information remains constant from the previous issue given that the Bureau of Economic Analysis will release this information on September 2018.

- U.S. Census annual data remains constant from the previous issue given that the 2017 ACS data expected release date is January 2019.

- Data on total non-farm payroll employment for Las Cruces MSA was added in this issue, collected from the Bureau of Labor Statistics.

- Data on Downtown (Main Street) Las Cruces foot traffic was added in this issue.

- Data on Las Cruces International Airport departures and destinations was added in this issue.
EXECUTIVE SUMMARY

The 2nd quarter 2018 economic outlook of the City of Las Cruces indicates mild economic improvements. Unemployment rate for the City of Las Cruces is lower than the State of New Mexico and higher than the Nation. The May 2018 preliminary figures of the not-seasonally adjusted unemployment rate for the City of Las Cruces is 3.9%, while the State indicates a 4.1% for the same statistic. In comparison, the Nation has 3.6% for the same measurement. The number of payroll jobs in Las Cruces metropolitan area has decreased from a year ago. The preliminary numbers on total non-farm payroll employment in Las Cruces metropolitan area for May 2018 indicate a total of 70,100 payroll jobs. In comparison to the May 2017 figures on the same statistic at 70,900 payroll jobs it represents a decrease of roughly 800 jobs in this annual period. The number of Supplemental Nutrition Assistance Program (SNAP) cases by Doña Ana administrative offices was 27,213 on May 2018, which is 122 more cases than April 2018.

More new businesses registrations and lower business permit renewals. On May 2018, there were 73 new business registrations, which is higher than the number of business registrations for May 2017 at 52. The total number of new business registrations for the first 5 months of 2018 is 299, which is higher than the first 5 months of 2017 at 251. Business permit renewals for May 2018 were 187, which is lower than the May 2017 figures at 316.

Mixed housing market. Median listing home prices as reported by Trulia.com and Realtor.com in the City of Las Cruces were $189,950 and $199,125 respectively for June 2018. This represents a change from May 2018 of -$1,550 for Trulia.com and $13,675 for Realtor.com, which are mixed signals in the housing market.
TABLE OF CONTENTS

Gross Metropolitan Product (GMP) ........................................................................................................ 5
GMP and Real GMP growth ......................................................................................................................5
Real GMP Cumulative Growth and Share of GMP by Major Industry ................................................. 6
Unemployment & Labor Force ............................................................................................................... 7
Unemployment Rate ...............................................................................................................................7
  Top Employment Industries ................................................................................................................. 8
  Wages for Top Employment Industries ..............................................................................................8
  Labor Force Participation Rate and Unemployment Rate by Age ..................................................... 9
  Labor Force Participation Rate and Unemployment Rate by Sex .................................................... 11
  Labor Force Participation Rate and Unemployment Rate by Education ......................................... 13
  Hours Worked by Sex .........................................................................................................................15
  Total Non-Farm Payroll Employment Las Cruces MSA ................................................................17
Income .....................................................................................................................................................18
  Median Household Income .................................................................................................................. 18
  Percent of Households with Retirement or Supplemental Income .................................................... 19
  SNAP Cases ........................................................................................................................................ 20
Housing ..................................................................................................................................................21
  All-Transactions House Price Index ................................................................................................. 21
  Home Medial Listing Prices ............................................................................................................... 22
  Housing Units ....................................................................................................................................23
Economic Stress Index ............................................................................................................................ 25
Business ..................................................................................................................................................26
  New Business Permits ......................................................................................................................... 26
  Renewals Business Permits ................................................................................................................ 27
  Best/Worst Performing Industries in Employment ......................................................................... 28
  Best/Worst Performing Industries in Wages ..................................................................................... 29
Innovation ................................................................................................................................................ 30
  Patents ................................................................................................................................................ 30
  Degrees Awarded at NMSU ............................................................................................................... 31
  Technology ......................................................................................................................................... 32
Tourism .................................................................................................................................................... 33
Downtown Las Cruces .............................................................................................................................34
Las Cruces International Airport ..........................................................................................................35
References ...............................................................................................................................................36
Glossary .................................................................................................................................................. 37
Appendix ................................................................................................................................................ 38
The BEA reports that Gross Metropolitan Product (GMP), which is the value of all goods and services produced within Las Cruces metropolitan area grew by only 0.07 percent from 2015 to 2016. The GMP figure grew from $6,005 million in 2015 to $6,009 million in 2016 in chained 2009 dollars.

The metropolitan area is growing at a smaller rate than the state or the nation. In comparison, the nation grew by 1.49 percent from 2015 to 2016, whereas the state of New Mexico grew by 0.15 percent for the same period.

2017 GMP data expected release date: September 2018

Source: U.S. Bureau of Economic Analysis
GROSS METROPOLITAN PRODUCT HIGHLIGHTS:

Nevertheless, compared to the nation and the state of New Mexico, Las Cruces MSA has experienced strong economic output growth over the past years. This is evidenced by the real cumulative growth, which has been higher than the nation and the state at least since 2001.

In terms of industry’s value of goods and services produced within the region, the main driver of the GMP has been state and local government with 17.3% of the average annual share of GMP since 2001. The next industry is federal civilian government, whose production accounts for roughly 14.2% of the average annual share of RGMP since 2001. As it can be observed, the metro-area is highly dependent on the public sector for its output.

Source: U.S. Bureau of Economic Analysis
UNEMPLOYMENT & LABOR FORCE
HIGHLIGHTS:

The BLS performed data revisions on their Local Area Unemployment statistics for cities on April 20, 2018. The not-seasonally-adjusted preliminary unemployment rate for the City of Las Cruces on May 2018 was 3.9%, which is slightly below the State of New Mexico with a rate of 4.1%. This implies that the City is performing slightly better than the State, in terms of unemployment rates the highest unemployment rate experienced in the City during the past 12 months was on August 2017, where the seasonally adjusted unemployment rate reached 6%. The seasonally adjusted unemployment rates were calculated using monthly seasonal indices.

The not seasonally adjusted unemployment rates are expected to be higher at certain parts of the year. The reason is because there are monthly seasonal fluctuations that affect employment trends in certain months more than others. For instance, students tend to join the labor force during the summer, which increases the unemployment rate.

The annual change in the unemployment rate indicates that although the City was not as affected as the State by the great recession, it is still behind the unemployment rate levels it had prior to the great recession.

June 2018 data expected release date: July 20, 2018

Source: U.S. Bureau of Labor Statistics
UNEMPLOYMENT & LABOR FORCE HIGHLIGHTS:

The top 10 industries with the largest number of employees in the City of Las Cruces by 6-digit NAICS codes for the 1st quarter of 2018 are indicated in the first graph. Some of the industries with the largest number of employees in the City are Elementary and Secondary Schools, Limited-Service Restaurants, Full-Service Restaurants, General Medical and Surgical Hospitals, and Home Health Care Services, which collectively employed 12,106 in Q1 of 2018.

The second graph indicates the average annual wage paid in the 1st quarter of 2018 to employees in the top 10 industries. The average annual wage paid to Elementary and Secondary Schools industry was $40,728 in 1st quarter of 2018. Limited and Full-Service Restaurants paid $14,225 and $16,348 per employee respectively in the 1st quarter of 2018. It is important to notice that out of the 10 industries with the largest number of employees, only 5 industries pay annual wages above $40,000. These industries are: Elementary and Secondary Schools, General Medical and Surgical Hospitals, Offices of Physicians (except Mental Health Specialists), Police Protection (Federal, State, and Local), and Other Individual and Family Services.

Q2 2018 data expected release date: September 2018
UNEMPLOYMENT & LABOR FORCE HIGHLIGHTS:

The 2016 labor force participation rate by age in the City of Las Cruces indicates that the age cohort with the largest participation in the labor force is the group ages 25 to 44 years with 80%. This statistic is closely followed by the age cohort 20 to 24 years and 45 to 54 years, with 79% each.

In terms of 2016 unemployment rates for the city, the age cohort with the largest unemployment rate is individuals in the age of 16 to 19 years with almost 28% unemployment rates. The cohort with the smallest unemployment rate (below the age of 65) is the 45 to 54 years cohort with 5% unemployment rate.

2017 ACS data expected release date: January 2019
In comparison to the Nation and State, the labor force participation rate of individuals ages 16 to 24 is higher in the City of Las Cruces. In the 16 to 19 years age cohort, the labor force participation in Las Cruces is almost 47%, whereas in the Nation it’s close to 38 percent. However, the unemployment rate for the same cohort is much larger for the City of Las Cruces, than for the Nation.

In almost all age cohort instances the unemployment rate for the City exceeded the unemployment rate of the Nation. It is only in the age cohort of 45 to 54 years, where the City has an unemployment rate of 4.9% compared to 5.5% of the Nation.
UNEMPLOYMENT & LABOR FORCE HIGHLIGHTS:

The labor force participation rate by sex in the City of Las Cruces has remained relatively constant since 2005, since male labor force participation has always been larger than female labor force participation rate. In terms of unemployment, females have historically met lower unemployment rates than males.

Source: U.S. Census Bureau ACS 5 Year Estimates
UNEMPLOYMENT & LABOR FORCE
HIGHLIGHTS:

In comparison to the State of New Mexico and to the United States, the City of Las Cruces is not much different in terms of labor force participation rates (LFPR). In 2016, the female LFPR was 72.6%, which is slightly above the Nation at 72.2 percent, and 4.8 percentage points above the State which has 67.8%.

However, in terms of the 2016 unemployment rate, females in the City of Las Cruces experienced close to 8.3% unemployment rates. This figure is larger than the State of New Mexico and the Nation with 7.3% and 6.7% respectively.
The historical labor force participation rate by educational level in the City indicates that individuals with bachelor’s degrees or higher tend to participate much more in the labor force than individuals who are high school graduates (or equivalent) only.

The unemployment rate figures by educational attainment in the City indicate that individuals with less than high school degrees do not only participate less in the labor force, but also face higher unemployment rates with higher volatilities. Individuals in the City with bachelor’s degree or higher tend to have historical below 5 percent unemployment rates with higher stability.

Source: U.S. Census Bureau ACS 5 Year Estimates
In terms of the 2016 unemployment rate, individuals in the City of Las Cruces with less than high school face a much larger unemployment rate than the State or the Nation. In 2016, individuals with less than a high school degree in the City faced 16.8% unemployment rates, which is substantially higher than the State of New Mexico at 13.4% and the Nation with 11.2%.
UNEMPLOYMENT & LABOR FORCE HIGHLIGHTS:

Hours worked is a measurement for exploring underutilized workforce. A full-time employee is expected to typically work 35 or more hours per week for more than 40 weeks of the year. The Census Bureau reports that the percentage of females above the age of 16 and below age 64 have increased the number of hours they work over time. In its counterpart males have been decreasing the number of hours they work considered to be full-time from 2006 to 2016. This can be observed in the graphic below indicating hours worked of what would be considered part-time employment. In here, the share of females working part-time has been decreasing since 2006, whereas the share of males working part-time has been increasing since 2010.
UNEMPLOYMENT & LABOR FORCE
HIGHLIGHTS:

In comparison to the State of New Mexico and to the United States, the City of Las Cruces faces a lower percentage of males working full-time. However, when comparing females, the proportion in the City is almost equal to the State. Although, it is still below the Nation. This implies that females in the City of Las Cruces have a higher tendency to work full time, than females in the State, but below females in the Nation. However, this is not the case for males, which have a lower tendency for working full-time than males in the State and the Nation.

Source: U.S. Census Bureau ACS 5 Year Estimates
UNEMPLOYMENT & LABOR FORCE HIGHLIGHTS:

The Bureau of Labor Statistics reports on a monthly basis the Total Nonfarm Payroll Employment (TNPE) for Las Cruces MSA. The latest figure of the seasonally adjusted TNPE indicates that the metropolitan area of Las Cruces has 70,100 payroll jobs. The first graph indicates a downward tendency in the TNPE seasonally adjusted since January 2017 with relative increases in June 2017 and January 2018. The lowest figure was reported on March 2018, where TNPE reported was at 69,900 jobs. Since March 2018, there has been a slight recovery in May 2018 adding 200 jobs in last 3 months.

The second graph illustrates TNPE from an industry perspective, since March 2018 to May 2018 State government has represented the largest decrease in jobs for the Las Cruces MSA. The greatest increase in this time period has been in the Trade, Transportation, and Utilities adding about 200 jobs. If the industry has no changes, then no line is observed in the industry.

June 2018 data expected release date: July 20, 2018
INCOME HIGHLIGHTS:

The U.S. Census Bureau reports median household income for the City of Las Cruces in 2016 at $41,215. In comparison, the state of New Mexico has a household income of $45,674 for 2016. A difference of $4,459 between the State and the City’s median household income. However, even though the City has a smaller median household income than the State, the trend has been positive overall. In 2010 the median household income in the City was $38,391, which means that median household income has increased $2,824 in 6 years.

The second graph illustrates the composition of 2016 household income. It indicates that for the City of Las Cruces, about 33% of households earn less than $24,999 annually. This represents 1 out of every 3 households in the City earn below $24,999. In comparison to the State, with 29% of households earning below $24,999, the City has a larger proportion of households earning less annual income.
INCOME HIGHLIGHTS:

In terms of retirement income, the City has a larger proportion of households on retirement income than the State. In 2016 about 21.5% of households in the City of Las Cruces were receiving some form of retirement income (excluding social security). At least since 2010 there is a larger proportion of households in the City of Las Cruces that receive retirement income, than the State. Albeit, the trends on City and State households with retirement income have been increasing both since 2010. This is a phenomenon expected to continue as more baby-boomers continue to retire.

The second graph illustrates the percentage of households with Supplemental Security Income (SSI) for the City of Las Cruces and the State of New Mexico. The SSI is an assistance program that provides cash support and health care coverage (i.e., Medicaid) to people with low-income and limited assets who are either aged 65 or older, blind, or disabled (children included). The proportion of households with SSI is smaller for the City of Las Cruces, than for the State. In 2016 the SSI for the City was 5.8% of households, whereas for the State the SSI was 6.1% of households.

Source: U.S. Census Bureau ACS 5 Year Estimates
The New Mexico Human Services Department publishes a monthly statistical report with figures of Supplemental Nutrition Assistance Program (SNAP) cases by administrative office. In this report, there are 3 offices reported for the Doña Ana County (East, South, and West offices). The reports indicate that for May 2018 the number of SNAP program cases in Doña Ana County was 27,213, which represents an increase of 122 cases from April 2018 at 27,383.

The number of SNAP cases in Doña Ana in the past 12 months reached its minimum of 27,091 in April 2018 and its maximum of 27,505 in October 2017. At least in the past 12 months there is a downward tendency in cases of SNAP recipients.

March 2018 data expected release date: late April 2018
The Federal Housing Financing Agency (FHFA) report the All-Transactions House Price Indexes (HPI), which is an index on the purchase-only data by adding prices from appraisal and sales of homes in a geographic area. The statistic indicates that the Las Cruces MSA faces a lower index, than compared to the state of New Mexico. It is shows that the index has been recovering after the Great Recession of 2008.

The tendency of all transactions HPI in Las Cruces MSA indicates an increase in the last year. In the 1st quarter of 2018 the index is at 168.31, which is the highest it has been since 2010. If we compare the 1st quarter of 2018 with the last quarter of 2017, there has been an appreciation of 0.5% based on this index.

2018 Q4 All-Transactions Index data expected release date: August 23, 2018
Monthly median listing prices for homes in the City of Las Cruces are collected from 3 agencies: Zillow.com, Trulia.com, and Realtor.com.

Median listing home prices have been increasing since June 2017. The median listing home prices are according to the three websites: $201,500 on May 2018 for Zillow.com; $189,950 on June 2018 for Trulia.com; and $199,725 on June 2018 for Realtor.com.

It is important to point out that even though there is an upward trend in home prices, there are steep fluctuations in median listing prices of homes in the City of Las Cruces, which implies volatility in the housing market of the City. Both Trulia.com and Realtor.com report their last figure to be June 2018, whereas for Zillow it is May 2018.

July 2018 figures (Trulia and Realtor.com) and June 2018 figures (Zillow) will be released in August 2018.
The Census Bureau indicates that the new privately-owned housing units authorized by building permits in the metropolitan area of Las Cruces has been increasing since the beginning of 2018. The number of housing units by building permits during 2018 have been the following: January 89, February 62, March 126, April 84 and May 129. So far in 2018 there have been 490 housing units added in Las Cruces metropolitan area.

Compared with 2017, the number of housing building permits has been increasing in the first 5 months of 2018. This is an indication of the recovery in this market.

June 2018 figures will be released in July 25 2018
HOUSING HIGHLIGHTS:

The Community Development Department of the City of Las Cruces reports permits issued on the number of new residential and new residential multi-family units by month for the City. The first graph illustrates that the number of units from new residential and multi-family has increased in the City.

This information resembles what the US Census Bureau reports for the new privately-owned housing units in the Las Cruces MSA. This confirms, that there was an increase in the supply of housing units for both the City and the MSA of Las Cruces.

The housing units had a large increase due to the construction of new residential multi-family units. The second graph illustrates that the number of new residential housing units, remained relatively stable through 2016 and 2017.

June 2018 data expected release date: late July 2018
**ECONOMIC STRESS INDEX**

**HIGHLIGHTS:**

The Economic Stress Index (ESI) is an augmented version of the Misery Index created by Arthur Okun in the 1970s. It was designed to measure the misery of people by combining the unemployment rate and the inflation rate. In general, a higher value reflects a more miserable society. The ESI includes housing prices, to accurately reflect the “misery” of people. Housing prices adds value because today’s Americans hold more wealth in homes than previous generations.

The ESI for City of Las Cruces and the State is calculated by adding 3-month moving average not seasonally-adjusted monthly unemployment rates, plus the 3-month moving average inflation rates from the monthly CPI of West urban consumers not seasonally adjusted, minus the 3-month moving average of the growth in monthly median listing prices for homes in the City of Las Cruces and New Mexico collected from the mean of Zillow.com, Trulia.com, and Realtor.com.

The ESI indicates that during the last 12 months, the City has had a decrease in the index since January 2018. In general, the linear trend is slightly downwards, which implies a decline in the economic stress of the citizens of Las Cruces. The current statistic indicates that compared to the State, the City is facing higher economic stress. This can be attributed due to the appreciation in housing values for State being more pronounced than in the City.
BUSINESSES HIGHLIGHTS:

New business permits data is available via the Community Development Department at the City of Las Cruces. The 12-month trend indicates an upward tendency in new business registrations. On May 2018, there were 73 new business registrations, which is substantially higher than the average number of business registrations for May at 52. The annual data, however, indicates a downward tendency since 2010.

During the first 5 months of 2018 there were 3 months that under-performed to the 7-year monthly averages from 2010 to 2017. On 2018 the months of January, February, and March indicated smaller number of new business registrations than their averages for from 2010 to 2017. It was during the months of April and May of 2018 when the averages were exceeded.

Source: City of Las Cruces, Community Development Department
BUSINESSES
HIGHLIGHTS:

Information on business permit renewals is also available via the Community Development Department at the City of Las Cruces. In May 2018 187 business renewed their permits with the City. This is smaller than April 2018 at 232 business renewed. The largest increase in business renewals in this time-period occurred on August 2017.

The number of businesses per 1,000 residents in the City has been decreasing from its highest point in 2011, where it stood at 46 businesses permits (new and renewals) to 37 per thousand residents in 2016.
BUSINESSES HIGHLIGHTS:

The top 10 industries with the largest increases/decreases in employment from the 4th quarter of 2017 to the 1st quarter of 2018 by 3-digit NAICS code industries in the City of Las Cruces is collected from Chmura’s Jobs EQ.

The first graph is an indicator of what industries located within the City of Las Cruces are increasing the most in terms of employment from Q4 2017 to Q1 2018. The industry that increased the most in this quarter was Professional, Scientific, and Technical Services (NAICS 541) with a quarterly increase of 58 jobs. A close follower was Hospitals (NAICS 622), which added 58 jobs to employment.

The second graph is an indicator of what industries located within the City are decreasing the most in terms of employment from 4th quarter 2017 to the 1st quarter of 2018. The industry that lost the most was General Merchandise Stores (NAICS 452), which lost 146 jobs in this time period. Inside this industry we find establishments in that have the equipment and staff capable of retailing a large variety of goods from a single location. Another industry with high loss of employment is Food Services and Drinking Places (NAICS 722) which lost about 132 jobs.

Q2 2018 data release expected date: August 2018
BUSINESSES HIGHLIGHTS:

The top 10 industries with the largest increases/decreases in average annual wages from the 4th quarter of 2017 to the 1st quarter of 2018 by 3-digit NAICS code industries in the City of Las Cruces is collected from Chmura’s Jobs EQ.

The first graph is an indicator of what industries located within the City of Las Cruces are increasing the most in terms of annual average wages per worker. The industry that increased the most in annual average wages per worker was Management of Companies and Enterprises (NAICS 551) with an average annual increase of $2,037 in wages per worker. Another industry that increased as well was Fabricated Metal Product Manufacturing (NAICS 332), which added an average annual increase in wages per worker of $1,376.

The second graph is an indicator of what industries located within the City are decreasing the most in terms of wages on an annual basis per worker. The industry that lost the most was Computer and Electronic Product Manufacturing (NAICS 334), which on average lost an annual average wage per worker of $1,046. Another industry with high loss of average annual wages per worker is Couriers and Messengers (NAICS 492) which lost an annual average wage of $831.

Q2 2018 data release expected date: August 2018
Utility patents granted by inventor city is a measurement of intellectual property (IP), which can potentially help in generating economic development. Patents are also a result of Research and Development (R&D) intensive industries/universities, where they are necessary for competition.

The City has many of its patents assigned to the Arrowhead Center in NMSU. As it can be observed from the graphics, the City of Las Cruces has produced about 2.3 patents per month on average since June 2017.

July 2018 figures will be released in August 1st, 2018.
New Mexico State University (NMSU) has experienced a decline in total students enrolled on Fall at least since 2010. The Office of Institutional Analysis (OIA) indicates that on Fall 2017 there were 14,432 students enrolled in the main campus, which compared to Fall 2010 at 18,552 represents a decrease of 22%.

The number of Bachelor’s degrees awarded on 2017 is 2,596 and it has slightly increased since 2010 with 2,502 Bachelor’s degrees awarded. This implies that although NMSU has seen a decrease in enrollment, it has improved in its graduation rates.
TECHNOLOGY/INNOVATION
HIGHLIGHTS:

Technology is calculated in this report as the sum of 32 industries using NAICS codes 33 and 51 associated to manufacturing and information super-sectors. The 32 industries used for this calculation are listed on the Appendix of this report. The annual technology production as a percentage of 2016 Gross Metropolitan Product for Las Cruces MSA is close to 1% of the total GMP. In comparison El Paso, MSA has 4.2% of its GMP from technology, whereas New Mexico has about 5% of its gross product coming from industries in technology.

The average employment location quotient (LQ U.S. Based) in technology for Las Cruces MSA is 0.23 in 2017. The same statistic for the State is at 0.69 and 0.59 for El Paso MSA. An LQ below 1 implies that we are employing fewer people than the national average in technology industries.

GMP 2017 figures will be released in August 1st, 2018.
TOURISM*
HIGHLIGHTS:

The Hotel Occupancy Rates (HOR) is a measure of the room nights (rented) per month divided by the number available of hotel rooms per month. For the City of Las Cruces this figure is reported by Visit Las Cruces, which indicate that the average HOR for the last year. The latest figure on February 2018 indicates that the HOR was 43%.

The Average Daily Rate (ADR) is a measure of the room income per month divided by the room nights (rented) per month. The monthly average for 2017 of the ADR is $81.92. The latest figure was for February 2018 with an ADR of $83.36.

*This data is preliminary and subject to change
December 2017 data to be released on August 2018.
DOWNTOWN LAS CRUCES
HIGHLIGHTS:

The Economic Development Department of the City of Las Cruces measures the trends of foot traffic on Main St. to accomplish a Department’s strategic result of increases in annual foot traffic in downtown.

The information on the trend in Main St. as measured by Soofa benches from all 7 benches indicate that for every Monday at noon from June 19, 2017 to May 7, 2018 the general the foot traffic has an upward tendency.

The second graph indicates that City led events and non-City events increase foot traffic. This example comes from Saturday April 28, 2018 when Purple Madness and Farmer’s Market coincidentally occurred in the same day. The figures illustrate the increases in foot traffic with both events.

Source: Economic Development Department utilizing Soofa Data.
LAS CRUCES INTL. AIRPORT HIGHLIGHTS:

The information in the Las Cruces International Airport (LRU) indicates that from June 2017 to June 2018 there has been a total of 906 departures and 1008 destinations to LRU. On the same period, the average monthly departures are 71, whereas the destinations are 77. During the first 6 months of 2018, on average there have been more destinations to LRU than in previous years (2016, 2017, and 2018) in all months. The departures, however, have been smaller than their 2016-2018 averages on January, March, and June.
REFERENCES


**GLOSSARY**

**Average Daily Rate**: is a measure of the room income per month divided by the room nights (rented) per month.

**BEA**: U.S. Bureau of Economic Analysis

**BLS**: U.S. Bureau of Labor Statistics

**Economic Stress Index (ESI)**: In general, a higher value reflects a more miserable society. The ESI includes housing prices, to accurately reflect the “misery” of people.

ESI = Unemployment Rate + Inflation Rate - Growth in Housing Values

**Hotel Occupancy Rates**: is a measure of the room nights (rented) per month divided by the number available of hotel rooms per month.

**Labor Force**: Sum of individuals employed and unemployed.

**Labor Force Participation Rate**: Number of individuals in the Labor Force divided by the overall population ages 16 and over.

**Not Seasonally-Adjusted Unemployment Rate**: Number of individuals who are unemployed (actively seeking employment, ages 16 and over, non-institutionalized) divided by the labor force (sum of individuals employed and unemployed).

**Real Gross Metropolitan Product**: value of goods and services produced within the metropolitan area adjusted to eliminate the effects of inflation.

**Retirement Income**: Includes: (1) retirement pensions and survivor benefits from a former employer, labor union, or Federal, State, county, or other government agency; (2) disability income from sources such as worker’s compensation; companies or unions; Federal, State, or local government; and the U.S. military; (3) periodic receipts from annuities and insurance; and (4) regular income from IRA and KEOGH plans.

**Seasonally-Adjusted Unemployment Rate**: Number of individuals who are unemployed (actively seeking employment, ages 16 and over, non-institutionalized) divided by the labor force (sum of individuals employed and unemployed) adjusted to remove predictable seasonal/monthly pattern influences.

**Supplemental Security Income**: Monthly payment benefits to people with limited income and resources who are disabled, blind, or age 65 or older. Blind or disabled children may also get SSI.

**STEMH**: Degrees in Science, Technology, Engineering, Mathematics, and Health Care.

**Utility Patents by Inventor City**: Permanent patents provided to an inventor resident of a given city.
# APPENDIX

Industries Considered for Technology Measurement were selected based on a technology report by Price Waterhouse Coopers (2016) where technology is defined by these industries.

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<thead>
<tr>
<th>NAICS</th>
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