# City Crime Rankings 2011- 2012

## Methodology

As noted above, the crimes tracked by the UCR Program include the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, motor vehicle theft, and arson. This combination of crimes are also sometimes known as *Crime Index* offenses; the index is simply the total of the eight main offense categories. The FBI discontinued use of this measure in 2004 because its officials and advisory board of criminologists concluded that the index was no longer a true indicator of crime. The primary concern was that the Crime Index was inflated by a high number of larceny-thefts, which account for nearly 60% of reported crime, thereby diminishing the focus on more serious but less frequently reported offenses, such as murder and rape. The consensus of the FBI and its advisory groups was that the Crime Index no longer served its purpose and that a more meaningful index should be developed.

While the FBI considers how it will replace the Crime Index, *City Crime Rankings* continues to provide total crime numbers, rates, and trends for U.S. cities and metropolitan areas as a service to readers. We offer a cautionary note, however, that in 2010, larceny-theft comprised 59.9% of all reported crimes.

Our analyses are conducted on two geographic units: the city and the metropolitan statistical area (MSA) as provided by the FBI. The cities included in these analyses are those with populations of 75,000 or more.

Each MSA contains a principal city or urbanized area with a population of at least 50,000 inhabitants. MSAs include the principal city; the county in which the city is located; and other

adjacent counties that have, as defined by the OMB, a high degree of economic and social integration with the principal city and county as measured through commuting. In the UCR Program, counties within an MSA are considered metropolitan. In addition, MSAs may cross state boundaries.

The methodology used to produce the statistics presented in this book is fairly straightforward. In the first analysis, a score is calculated for each metropolitan area and city; this score is a summary of the percent differences of the reported crime rate from the national rate of six crime types (excluding larceny-theft and arson). Because this formula is unique to this book, it is described in detail below. The rest of the analyses are simple calculations of reported crime rates per 100,000 population and percent change for one year and five years. Lastly, all the analyses present a ranking that is a simple sort of the values computed for the analysis and numbered from highest to lowest. In case of a tie, the rankings are listed alphabetically. Parentheses indicate negative numbers and rates (except in the data distribution charts). Data reported as "NA" are not available or could not be calculated. The national totals and rates appearing at the top of each table are for the entire United States, including both metropolitan and nonmetropolitan areas. Specific totals for metropolitan areas and larger cities are provided in the Appendix.

**Comparison Score Methodology**

The methodology for determining the city and metro area comparison crime rate rankings involves a multistep process in which the reported crime per 100,000 population rate are compared to the national reported crime per 100,000 population rate and then indexed to create a summary score and ranking across six areas of reported violent and property crime. The

methodology used for this edition of the book has been used for the past thirteen editions and is described here in detail.

Reported crime rates per 100,000 population in 2010 across six crime categories—murder, rape, robbery, aggravated assault, burglary, and motor vehicle theft—were examined in this analysis. Larceny-theft was removed from this analysis because of the aforementioned concerns noted by the FBI and others. Cities with populations of 75,000 or more that reported data for the six categories of crime measured were included in the analysis. There is no population minimum for metropolitan areas. In all, 405 cities and 354 metro areas were included in the results.

The following are steps for the comparison score calculation and examples that illustrate the calculations:

1. For each of the six categories of reported crime, the crime rate per 100,000 residents of a city or metropolitan area is calculated from the reported crime and population data provided to the FBI by local law enforcement agencies for a particular type of crime. In the example below, the calculation for murder is 11 divided by 150,000 multiplied by 100,000, which results in a 7.33 per capita reported murder rate per 100,000 people for that year.

Example: City A, Population 150,000

|  | Murder | Rape | Robbery | Aggravated Assault | Burglary | Motor Vehicle Theft |
|---|---|---|---|---|---|---|
| Reported Crime Count | 11 | 31 | 126 | 375 | 957 | 175 |
| Rate per 100,000 | 7.33 | 20.67 | 84.00 | 250.00 | 638.00 | 116.67 |

2. The percent difference between the metro area or city rate and the national rate for each of the six crimes is then computed. The use of percent difference for each crime separately eliminates weighting more frequent crimes more heavily (e.g., a city may have 1 murder and 1,500 burglaries). Negative numbers are displayed in parentheses here and throughout the analysis tables. The formula for this calculation is:

$$\frac{\text{Metro Area or City Rate} - \text{National Rate}}{\text{National Rate}} \times 100$$

Example: City A, Population 150,000

| | Murder | Rape | Robbery | Aggravated Assault | Burglary | Motor Vehicle Theft |
|---|---|---|---|---|---|---|
| City Rate | 7.33 | 20.67 | 84.00 | 250.00 | 638.00 | 116.67 |
| National Rate | 4.8 | 27.5 | 119.1 | 252.3 | 699.6 | 238.8 |
| Percent Difference | 52.71 | (24.84) | (29.47) | (0.91) | (8.81) | (51.14) |

3. The number is then scaled to be one-sixth of the index to make it comparable to scores in the previous editions of this book. A number of years ago, each of the six crimes was weighted based on the results of a telephone survey that determined which crimes were of greatest concern to Americans. The polls indicated that most Americans believed crimes such as burglary are more likely to happen in their lives than more serious crimes such as murder. Thus, burglary received the highest weight, and murder received the lowest weight in the formula. In subsequent years, the polling was discontinued and, consequently, the weights were eliminated. However, equal weight is assigned to the crimes during this step in the analysis so that future scores would be more closely comparable to the scores with the weighted factors.

Example: City A, Population 150,000

|  | Murder | Rape | Robbery | Aggravated Assault | Burglary | Motor Vehicle Theft |
|---|---|---|---|---|---|---|
| Percent Difference | 52.71 | (24.84) | (29.47) | (0.91) | (8.81) | (51.14) |
| Weighting Factor | .1667 | .1667 | .1667 | .1667 | .1667 | .1667 |
| Resulting Score | 8.62 | (4.31) | (5.08) | (0.32) | (1.63) | (8.69) |

4. The final comparison score for each metro area and city is the sum of the individual scores for the six crimes. In this case, the sum is −11.41. The interpretation of these scores is that the higher a metro area or city score, the further above the national score; the lower the score, the further below the national score; and a score of zero is equal to the national score.

5. The scores are then sorted from highest to lowest to produce the rankings. Note that the rankings do not indicate the actual difference between the scores, only their order. The 18th Annual America's Cities and Metropolitan Areas with the Highest and Lowest Crimes Rates tables on pages [xx–xxvii] provide the results of the metro area and city scores. The Metropolitan and Cities Comparison Scores Distribution Analysis for 2009 on pages [xiii–xvi] provides the results of the distribution of these scores.

This methodology results in a score for each metro area and city that compares its rate to the national rates, providing a means to gauge crime trends in communities.