

# CALCULATIONS OF RATES AND TRENDS

1. **Crime Rate per 1,000 inhabitants:** This represents the number of Index offenses per 1,000 inhabitants.

For example: What is the crime rate for a municipality with 513 Index offenses (murder, rape, robbery, aggravated assault, burglary, larceny-theft and motor vehicle theft), with a population of 8,280?

$$513 \text{ (Index offenses)} \div 8,280 \text{ (population)} = .061957 \times 1,000 = 62.0 \text{ (crime per 1,000 inhabitants)}$$

2. **Crime Trend:** A crime trend shows the extent to which crime increased or decreased. This is done by comparing a period of the current year with the same period of a previous year.

For example: A municipality experienced 264 Index offenses in a previous year and 513 Index offenses in the current year. What is the percent of the increase?

$$\begin{aligned} 513 \text{ (current year Index offenses)} - 264 \text{ (previous year Index offenses)} &= 249 \text{ (numerical increase)} \\ 249 \text{ (numerical increase)} \div 264 \text{ (previous year)} &= .943 \times 100 = +94\% \text{ (percent change)} \end{aligned}$$

NOTE: If there were more Index offenses in a previous year than in the current year, we would have a percentage decrease.

3. **Number of Police personnel per 1,000 inhabitants:** This is calculated in the same manner as a crime rate. For example: A municipality with a population of 8,280 and 28 police personnel. How many officers are there per 1,000 population?

$$28 \text{ (police personnel)} \div 8,280 \text{ (population)} = .00338 \times 1,000 = 3.4 \text{ (police personnel per 1,000 inhabitants)}$$

NOTE: This formula can be applied to either total police personnel or just police officers per 1,000 inhabitants.

4. **Police Assaulted Rate:** This is calculated at a rate per 100 police officers.

For example: A municipality with 25 officers had five of them assaulted during the month. What is the police assaulted rate?

$$5 \text{ (police officers assaulted)} \div 25 \text{ (police officers)} = .2 \times 100 = 20 \text{ (police assaulted per 100 officers)}$$

5. **Clearance Rate:** This refers to the percent of Index offenses cleared (solved), over a specific period of time.

For example: A municipality with 513 Index offenses in a chosen time frame, cleared 95 of these offenses. What is the clearance rate?

$$95 \text{ (Index offenses cleared)} \div 513 \text{ (Index offenses)} = .185 \times 100 = 18.5 \text{ (percent cleared)}$$

6. **Annual Mean Population:** Is determined for each municipality designated a resort municipality by use of the following formula:

$$\text{AMP} = \frac{12P + 3SP}{12}$$

Where **AMP** equals Annual Mean Population; **P** equals Population; **SP** equals Seasonal Population.