

Final Report of Utah Crime Assessment

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Under contract with
Community Research Associates**

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Because of their enthusiastic invitation to collaborate in assessing crime in Utah, the Utah Commission on Criminal and Juvenile Justice stands as a pleasant anomaly in BJA's continuing efforts to assist states. It is unusual to work with a state where there is absolutely no obstinacy in accessing, assessing, and interpreting crime and drug issues. Utah's Commission staff has been supportive and collegial in this effort. If this behavior is any indication of the degree to which they will utilize the information, most of which reaffirms information they had collected and assessed, and initiate activities which can address serious crime in the state, they are likely to be the model which BJA, OJJDP, and other agencies can point to with pride as representative of true collaboration with the goal of improvement in the quality of life of its constituents.

Process

Prior to beginning the process of Technical Assistance in assessing Utah crime, the Executive Director, Commission on Criminal and Juvenile Justice requested a meeting with the consultant to discuss the type of assessment to be conducted and the data needed to perform it. This preliminary meeting proved to be an excellent idea. It established a working relationship, without any biases or predispositions regarding the results. The many telephone and email conversations which followed, resulted in a more useful product for CCJJ and Utah.

A preliminary report was sent to CCJJ in mid-December, 1999. Most of the findings were included but the conclusions and recommendations were withheld until conversations about the preliminary report could be conducted. These conversations occurred on January 7, 2000 in Salt Lake City. The consultant met with the Executive Director, Camille Anthony, and her entire staff for most of a day and then presented the preliminary report to the CCJJ Advisory Board in a two hour presentation. The comments and observations of the staff and the Advisory Board were extraordinarily useful in interpreting the information. On January 20 and 21, the consultant returned to Salt Lake City for the final presentation of the assessment and testified before a joint meeting of the Utah Senate Transportation and Public Safety Committee and the Utah Senate Judiciary Committee on January 20, 2000, as well as a joint meeting of the House Judiciary Committee and the House Law Enforcement and Criminal Justice Committee on Friday, January 21, 2000. Each of the joint legislative meetings allowed visitors and the audience for each presentation numbered more than 40 persons from state and local government and interest groups. The exposure, interest and enthusiasm which has resulted from this BJA initiative is unprecedented, in the experience of the consultant.

The assessment reached many conclusions and provided many valuable methodologies and results. In general, the information is quite consistent with the information the CCJJ had accumulated or was gathering, on its own. This is not to diminish the influence or importance of the initiative but speaks to the talent, conscientiousness, and foresight of Ms. Anthony and her staff. In many ways, this report validates the information and issues they had identified but it also provides some comparative assessments which put

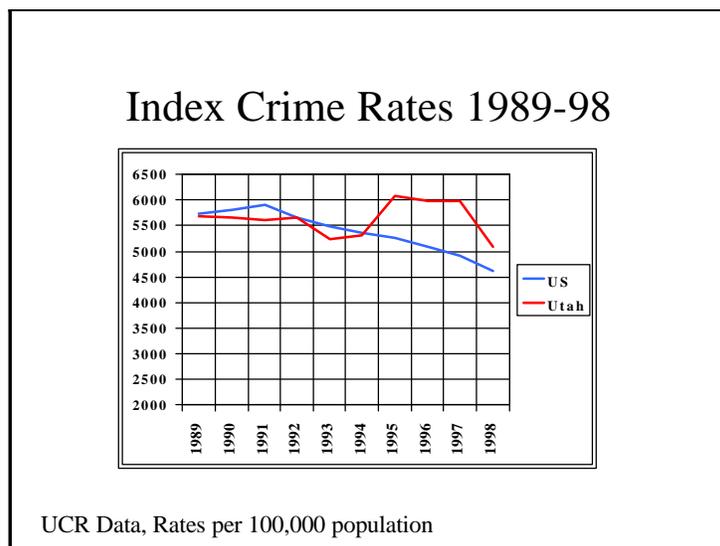
some of the information in context, relative to other jurisdictions. This is the most useful and influential statewide assessment the consultant has conducted under support from BJA.

This report addresses the issues of crime and drugs in Utah, relative to other jurisdictions, the spatial assessment of crime in Utah, the primary conclusions from the assessment, and the recommendations.

Index Crime in Utah

Crime in Utah reflects a series of contrasts that make generalizations impossible, or at least misleading. Considering the information presented in Slide 1, it would appear that serious crime rates have been generally consistent with those of the United States, based on data published by the Federal Bureau of Investigation, Uniform Crime Reporting (UCR) Program. It would also appear that crime rates spiked in Utah in 1995, inconsistent with national trends, and did not decrease significantly until 1998. That decrease in serious crime rates in Utah, however, was a significant one of 8.2 percent, compared to a decrease in the U.S. rates of 6.4 percent. A comprehensive assessment of crime in Utah requires that the data be disaggregated in order to determine the nature, direction, and causes of the crime trends.

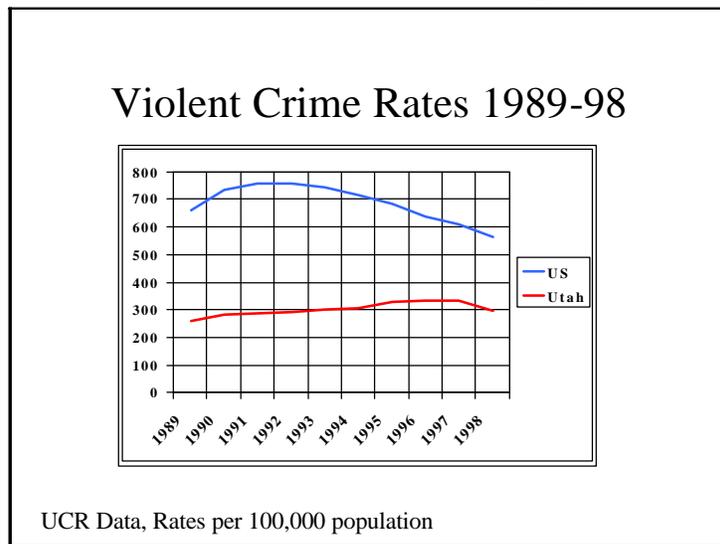
Slide 1



Crime rates for serious violent crime (Murder, Rape, Robbery, Aggravated Assault) in Utah are about half the rate (52.3 percent) of violent crime in the United States. Slide 2 shows the trend of violent crime in the United States and in Utah, based on data published by the Federal Bureau of Investigation, Uniform Crime Reporting (UCR) Program. While the U.S. rate of serious violent crime reached its highest point in 1991 (rate was 758.1 per 100,000 population), that same year Utah's serious violent crime rate was 286.7 per 100,000 population. The highest rate of serious violent crime in Utah

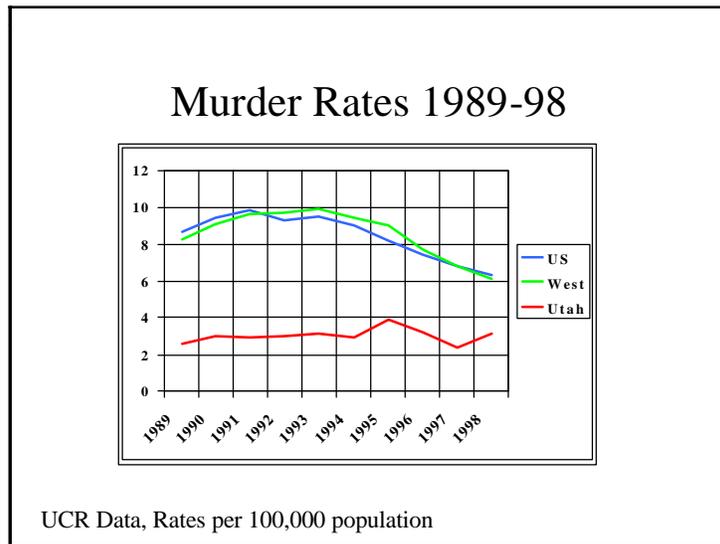
between 1989 and 1998 was 334.1 per 100,000 according to UCR data, a rate about half the lowest rate of violent crime in the United States' average. These data suggest that Utah's crime problem is associated with crimes other than violent crimes.

Slide 2



These comments are not to suggest that there are no violent crime issues in Utah. Relative to other states and the national average, the violent crime rates are low. Additionally, the issues that do exist in Utah are isolated to particular crimes. Murder, the most serious of offenses, is certainly not one of Utah's problems. As shown in Slide 3, the murder rate in Utah is, and has been, extraordinarily low. Utah's murder rate has historically been about one third to one half that of the United States rate. The 1998 murder rate in the United States was 6.3 per 100,000 population, the lowest rate since 1967. The murder rate in Utah in 1998 was 2.8 per 100,000 population, less than half the national rate. What appears to be major increases in Utah's rates, such as the increase in 1995, are most likely due to statistical variance of rare events associated with the very small number of cases and do not represent trends or patterns. Murder is a particularly important crime to track, however, due to the seriousness of the crime but also due to the fact that virtually all murders are reported to police. For all other crime categories, there is a variance between crimes occurring and crimes reported. This is almost never the case with murder. Because of the complete reporting data, some researchers maintain that murder rates represent a barometer of violence in a jurisdiction. If that is true in Utah, the rate of violence is extraordinarily low.

Slide 3

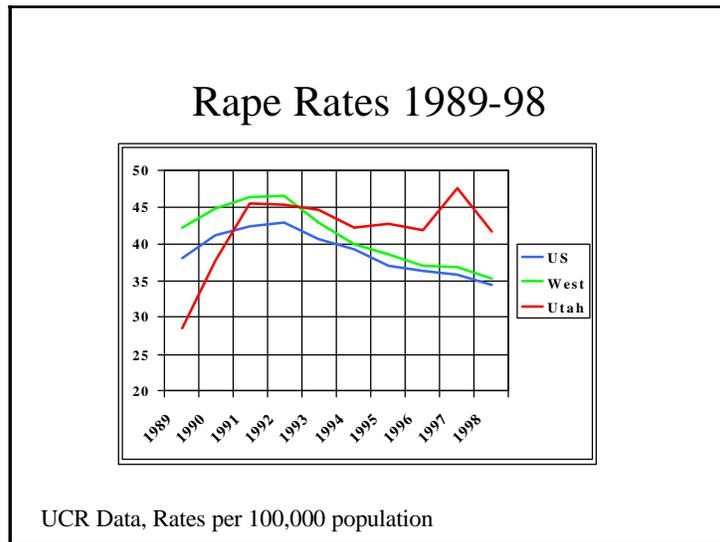


Just as murder is the crime most likely to be known to police and reported accurately in crime statistics, rape is the serious crime least likely to be reported by victims to police. This criminological fact is supported by victimization surveys conducted in many states and the National Crime Victimization Survey conducted by the Bureau of Census and Bureau of Justice Statistics. Even though statistics regarding rape are viewed guardedly by most justice researchers, the crime trends represent valuable information for planners and policy makers. Utah's rape rates represent the major concern among serious violent crimes. As Slide 4 shows, since 1993, Utah's rape rates have been higher than the United States average and the average for the western states. There is no way to determine from existing data whether this pattern reflects a reporting phenomenon or actual behavior. The remarkable increase from 1989 to 1991 shown in the rate of reported rape, an increase of 60 percent, suggests the strong possibility of a change in the reporting of crimes by victims, perhaps accompanying an initiative to place more victim assistance professionals in the field or increase the number or attention given to rape crisis centers within the state. While only an epidemiological assessment would explain that increase, information secured by the Commission on Criminal and Juvenile Justices shows that Victim Assistance programs in Utah increased from 5 to 16 during the period of the increase in reported rapes. This information confirms the impression that the high rape rates are consistent with reporting increases rather than behavioral factors. That being the case, the high rape rate actually serves to show that Utah is doing an excellent job, or at least better than prior to 1991, of encouraging victims of rape to report their victimization.

Even if high levels of rape are reporting artifacts, rape does, however, represent an important and serious concern in Utah and steps should be taken to determine the nature, extent and causes of this problem. It is recommended that Victims of Crimes Act funding be used to assist the state in assessing the nature and extent of the crime through a victimization survey, and in addressing rape and sexual assault. First it is necessary to

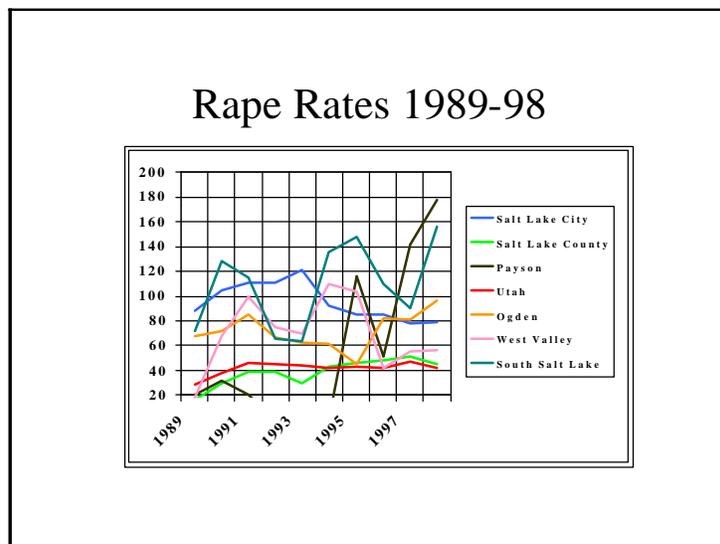
locate the areas which are most problematic and that can be done through a variety of methods.

Slide 4



An examination of jurisdictional crime data, as reported to the Bureau of Criminal Identification, Department of Public Safety, shows several jurisdictions with rape rates two to three times those of the state average. These data should be considered for the trends they represent rather than an isolated year.

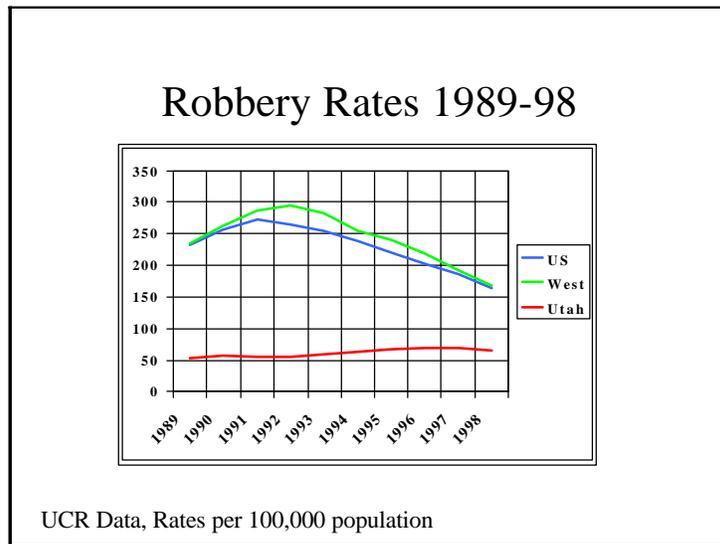
Slide 5



These data suggest that Payson, in Utah County, South Salt Lake, Ogden, and Salt Lake City had extraordinarily high rape rates in 1997 and 1998 while West Valley has had high rates historically. The presence of colleges and universities is frequently found to be related to high rape rates. This may be the case with some of the jurisdictions identified in the assessment. If this is the case, local justice officials should consider an analysis of the crimes, victims, offenders and temporal patterns in order to address the localized problems.

Robbery is primarily an urban crime problem. Criminological research has supported that conclusion for at least the past five decades. As Slide 6 shows, Utah's robbery rates have been quite mild, compared to U.S. rates. The upward trend in Utah can partially be explained by migration patterns and urban growth. With only a few geographic exceptions, robbery does not represent a major issue for Utah.

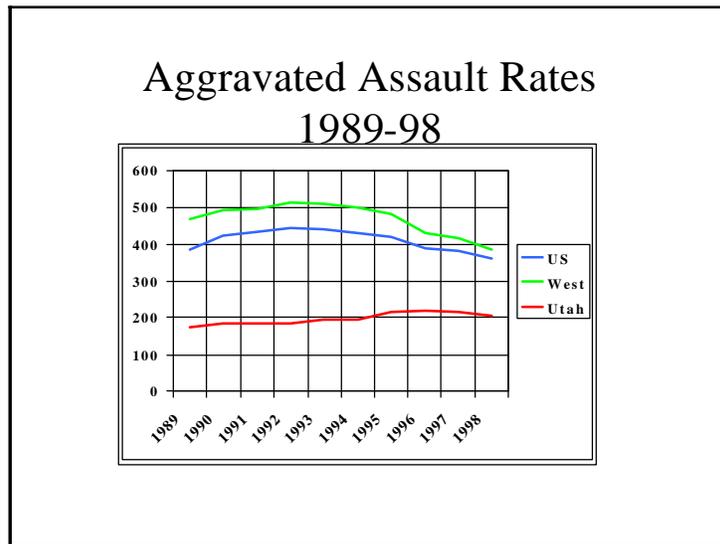
Slide 6



The last of the violent crimes included in the Crime Index of serious crimes is Aggravated Assault. Felonious assault rates in Utah are about half the rates for the U.S. and Western states, as shown in Slide 7. Again, with the exception of localized problem areas, aggravated assault does not represent a trend or pattern problem for the state.

The trends shown in the charts included in the Appendix show the likely direction of future violent crime rates, based on past trends. These trends should be viewed with caution, however, because they are often associated with prosperity (increased migration into the state), and urbanization.

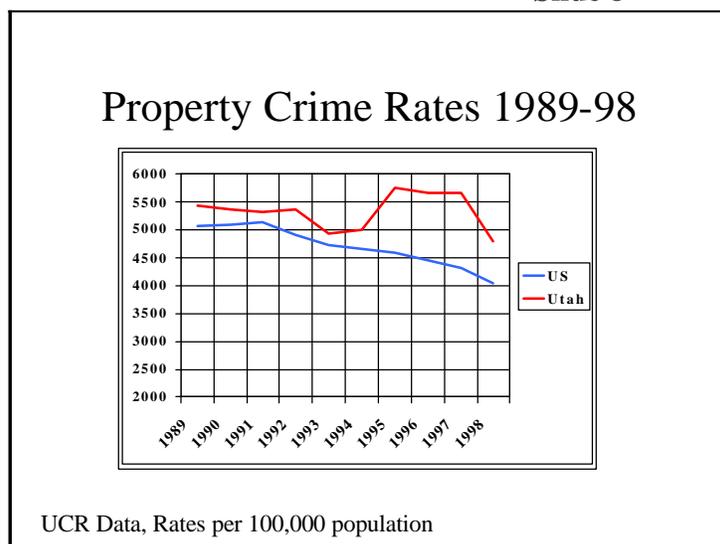
Slide 7



Property crime is the major component of the Crime Index. Although the Crime Index is commonly thought to include the most serious crimes, some less serious crimes such as minor larcenies or thefts are included and represent the bulk of the Index crimes and rates. Typically the Statewide Strategy for Drug Control, Violence Prevention and System Improvement focuses on areas other than property crime, but it is important to include it in Utah's plan. To do otherwise would be to ignore a major component of drug-related crime and to ignore the major crime problem Utah faces currently.

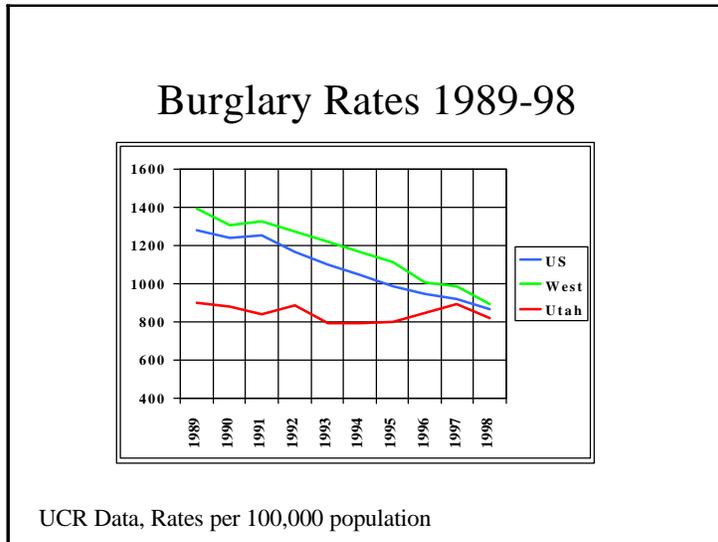
As Slide 8 shows, Utah's higher-than-average Index crime rates are due almost entirely to higher-than-average property crimes.

Slide 8



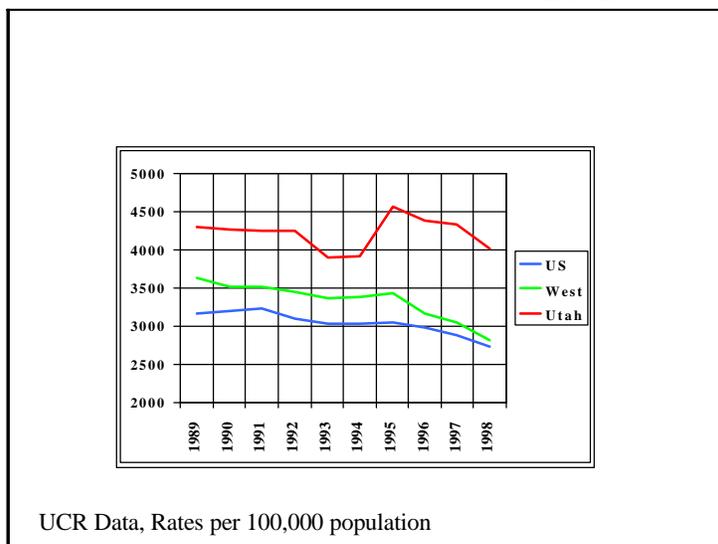
Burglary, though not declining in Utah as it is in the nation, does not represent a major crime problem as Slide 9 shows. Utah's burglary rate is still lower than the national average and that of the western states.

Slide 9



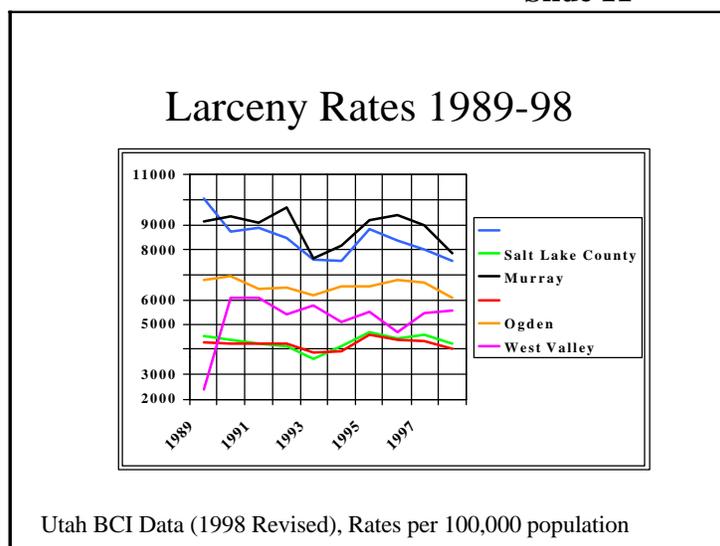
Larceny, however, is the major crime issue faced by Utah criminal justice planners and policy makers. Slide 10 shows the consistently higher rate trend for Utah. While the nation and the western states have recognized trend lines suggesting past and future reductions, Utah has had rates far higher than the U.S. averages and the trend line suggests no appreciable reductions in the future.

Slide 10



An assessment of particular jurisdictions shows that Salt Lake City, Murray (population in 1998 was 35,374), Ogden, and West Valley (1998 population was 101,996) had the most serious larceny problems. Salt Lake County, including an unduplicated population (only those persons not residing in other jurisdictions) of 382,811 persons, produced the most larcenies but the rate was consistent with the state's rate, albeit high by national standards. The relative trends are shown in Slide 11.

Slide 11



Types of Larceny

An assessment of detailed data from the FBI's Uniform Crime Reporting Program and from the Bureau of Criminal Identification for 1997 shows that the major larceny category for Murray was theft from automobiles (rate was 4,233 per 100,000 population). For that category, Murray had a rate three times that of Salt Lake County and almost twice that of Salt Lake City. Analysis of data from Salt Lake City, the other major contributor to larceny and larceny rates in Utah, shows that theft from automobiles is the category of larceny that ranks the highest, followed by shoplifting. This was true of larceny data for 1996, 1997 and 1998. The 1998 larceny rates are revised to account for the underreporting of 901 larcenies occurring in Salt Lake City that year that were not reported to BCI or the FBI.

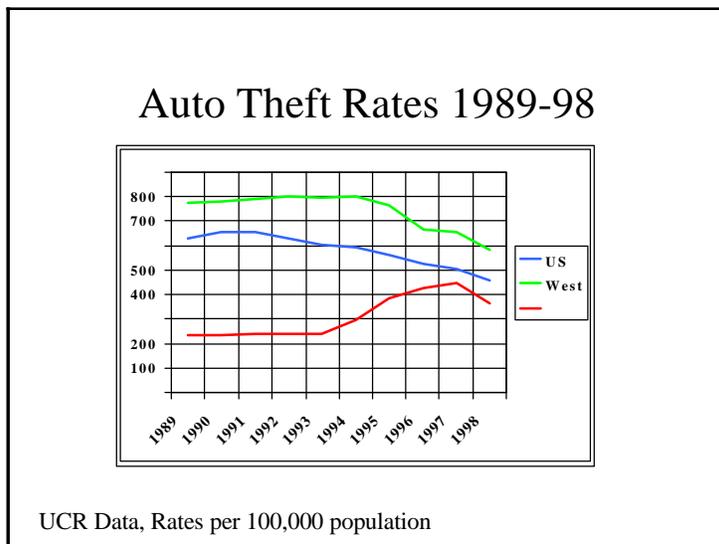
For Salt Lake City, where data are most available due to the sophistication of the crime analysis and research personnel, it appears that the decrease in larcenies from 1996 to 1998 was due largely to a remarkable decrease in larcenies of property valued at less than \$50. Higher value larcenies decreased over the three years, but at a far slower pace, with higher value larcenies actually increasing from 1997 to 1998.

Bivariate analyses described later show the linkage between larceny and drug problems.

Like robbery, auto theft tends to be an urban crime problem. Utah has had relatively low rates of auto theft, especially considering the high rate of larceny in the state, but, as was

the case with burglary, the gap between state rates and national rates appears to be closing, as shown in Slide 12.

Slide 12



Serious Crime Problems: Summary

The assessment of Utah's serious crime rates shows conclusively that the two areas of greatest concern are rape and larceny. Larceny is the crime category that represents the greatest percentage of serious crime, nationally and in Utah. Additionally, research supports the notion that theft and drugs are related. It appears that Utah, a state on the brink of a population growth due to the Olympics, must address these serious concerns with enthusiasm. They do not represent the "clear and present danger" of serious violent crime seen in some states, but they represent issues which can be addressed now that the trends are apparent. Appendix 1 shows the trend lines for each of the Index crimes. These trend lines, consistent with the data presented above, were created using regression formulas with a "crime by time" protocol.

Assessment of Jurisdictions with Highest Populations

In assessing the major population jurisdictions of Utah, it is most appropriate to address the counties with the highest populations. There are four counties in Utah with more than 175,000 persons. While BJA suggests that a separate assessment be conducted of jurisdictions with more than 250,000 population, that would include on one county (Salt Lake) in Utah. In an effort to be comprehensive in addressing the spirit of the high-population assessment, this assessment will err to inclusiveness rather than exclusiveness. To present an accurate picture of crime in these four jurisdictions, three-year averages for all violent crimes will be utilized since, fortunately each of the violent crime categories would be subject to "rare-event" skewness due to fluctuations. There are sufficient larcenies reported to present those rates by year.

Salt Lake County, the most populous area in the state, had a population of 902,592 persons in 1998. Salt Lake County had the highest murder rate of the four, averaged over the period 1996-98 only 4.25 murders per 100,000 population. This rate is favorably compared to the U.S. MSA rate of 6.7 per 100,000 population, as reported in the 1998 Crime in the United States. Weber County, with 184,224 citizens, had an average murder rate for 1996-98 of 3.65 per 100,000 population while the rate for Utah County (population 341,579) was 1.45 per 100,000 population and for Davis County (population 237,374) the average murder rate was 1.18 per 100,000 population. Clearly, murder rates are low in the highest population areas of the state.

Rape rates were highest in Salt Lake County for the years 1996 through 1998, of the most heavily populated areas of the state. Salt Lake's average rape rate was 54.28 per 100,000 population for the three-year average, while Weber County had an average rape rate of 47.57 per 100,000 population, Utah County had an average rate of 36.77 per 100,000 population and Davis County had an average rape rate of 23.47 per 100,000 population. Three of the four jurisdictions had rape rates higher than the 1998 U.S. rate for MSA's of 36.1 per 100,000.

Robbery and Aggravated Assault rates for the four jurisdictions were well below the U.S. averages. Salt Lake had the highest rates for robbery (124.64 per 100,000) followed by Weber County (72.7 per 100,000 population), Utah County (19.89 per 100,000 population), and Davis County (12 per 100,000 population). In 1998 the U.S. robbery rate for MSA's was 197.9 per 100,000 population, a rate far higher than any of the four counties in Utah. Salt Lake had the highest aggravated assault rates for the three year average (301.26 per 100,000 population), followed by Weber County (210.12 per 100,000 population), Davis County (106.92 per 100,000 population) and Utah County (99.01 per 100,000 population). In 1998 the U.S. rate of aggravated assault for MSA's was 197.6 per 100,000 population. It was only for the crime of rape that any of the four jurisdictions were at or above the U.S. average for metropolitan areas.

For the crime of larceny, three of the four most populous jurisdictions in Utah exceeded the U.S. average for metropolitan areas. Salt Lake County had a larceny rate in 1998 of 5216.2 per 100,000 population, Weber County had a larceny rate in 1998 of 4195.44 per 100,000 population, Utah County had a larceny rate of 3058.74 per 100,000 population, and Davis County had a larceny rate in 1998 of 1485.84 per 100,000 population. The U.S. average larceny rate for MSA's in 1998 was 2911.4 per 100,000 population.

Regarding drug arrests for the major population areas, Salt Lake County had the highest arrest rate for total drug arrests in 1997 (819.75 per 100,000 population) and for total juvenile drug arrest rates (156.56 per 100,000 population). Davis County had the next highest rates for drug arrests followed by Utah County and Weber County. Similarly, Salt Lake County had the highest rates of treatment for drugs, according to the Division of Substance Abuse.

The only discrepancy noted in the comparisons of crime rates and drug arrest rates for the four population centers of the state, shows Weber County with relatively high rates of

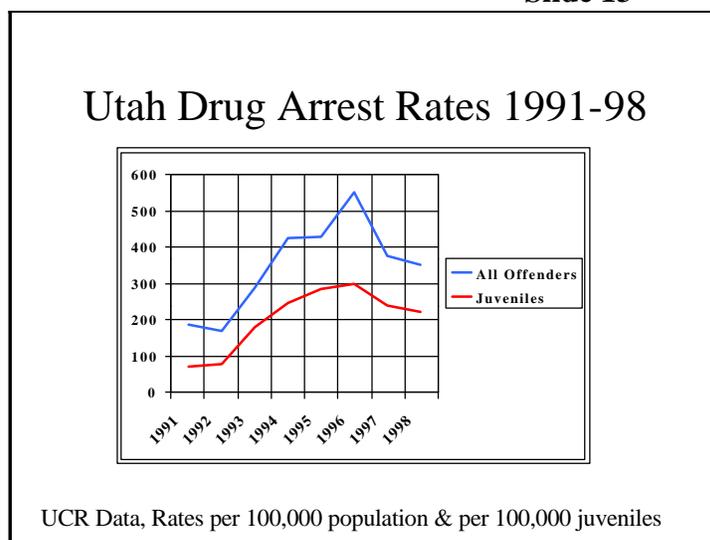
rape and larceny, as well as relatively high rates of drug treatment but relatively low rates of drug arrests. This suggests that additional emphasis be placed on interdiction efforts in Webber County.

Nature and Seriousness of Utah's Drug Problems

Nationally, 13.2 percent of arrests for drug violations in 1998 identified a juvenile offender (according to UCR data). In Utah, the rate of juvenile arrests for drug violations is 20.9 percent, a rate fifty percent higher than the U.S. Slide 13 shows the relationship between all arrests for drug violations in Utah and the rate for juvenile arrests, per 100,000 juveniles. In 1998 Utah's juvenile arrest rate for drug violations was 219.88 per 100,000 juveniles while the U.S. rate was 209.5 per 100,000 juveniles. The total arrest rate for drug violations in Utah was 350.99 per 100,000 population while the U.S. rate in 1998 was 596.2 per 100,000 population of those jurisdictions reporting arrests. It

not extraordinarily high in Utah, they are almost exactly equal to the national average. Juvenile arrests for drug violations represent a higher percentage of all arrests for drug violations in Utah because the total arrest rate is quite low compared to the U.S. average.

Slide 13



The drug violation arrest data is interesting and important. It would appear, based on in Utah. Other data suggest

The Substance Abuse and Mental Health Service Administration (SAMHSA),

drug and alcohol treatment. These data, the Treatment Epi presented by state and by year for 1992 1997. For 1997 the data show that Utah had an

of 589 per 100,000 population. Utah's admission rate fo

was almost three times the national average (82 per 100,000 population for Utah versus 29 per 100,000 population in U.S.) and more than twice the national average for cocaine treatment. Utah's and the U.S. rates were equal for admissions for heroin treatment. If these data represent, in some measure, the degree to which drug abuse is a problem within a jurisdiction, it would appear that drugs, particularly methamphetamine, cocaine, and heroin, are problems in Utah. The arrest data do not, however, correspond to that indication. Either treatment is sought by a higher proportion of substance abusers in Utah or drug arrest rates are lower compared to those using illegal substances than national arrest rates. If a lower arrest rate discrepancy is the explanation, more attention needs to be focused on interdiction as well as treatment.

The spatial analysis of crime and drug use in Utah provides some insight into where these events are occurring and the social and demographic analysis provides some indications as to what factors are associated with rates, by county.

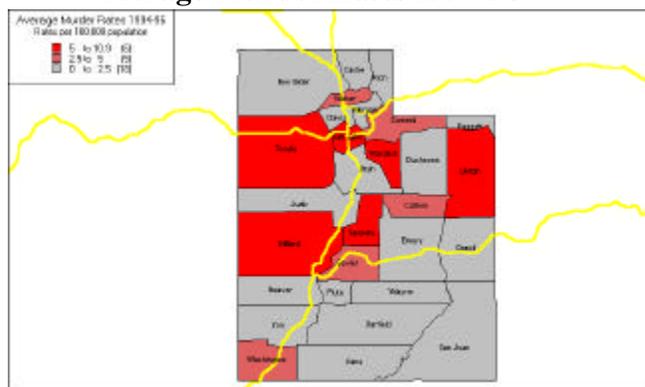
Spatial Analysis of Crime and Drugs in Utah

While the index crime data presented above provide a picture of Utah's crime trends, isolating crimes by county shows patterns of crime and drugs in the state. General analysis provides information regarding the types of crime representing the greatest problems in Utah and spatial analysis provides the second element of strategic assessment, where those problems are most prevalent. Since standardized rates (rates per 100,000 population) represent the only valid method for comparing jurisdictions, each of the crime categories uses rates of crime. Some of the counties are sparsely populated and a single year's crime rates could cause a spiking of rates, giving an erroneous impression of the scope of the problems, particularly for rare events such as murder, rape and robbery. For this reason, "moving averages" are calculated in portions of this analysis, showing the average of three-years rates by county. Additionally, the interstate highway network in Utah is superimposed on some of the maps. Patterns in other states have suggested that the development of communities along interstates is associated with drugs and crime.

The averages of murder rates for 1996, 1997, and 1998 have shown interesting patterns in serious violent crime. Of the heavily populated jurisdictions, Salt Lake County (including Salt Lake City) had an average murder rate of 4.25 per 100,000 population. Weber County had an average murder rate for the period of 3.65 per 100,000 population. The other two heavily populated jurisdictions, Davis County and Utah County each had average rates below 2 per 100,000 population (1.18 and 1.45 respectively).

Considering the three year moving averages from 1994 (1994, 1995, and 1996; 1995, 1996, and 1997; 1996, 1997, and 1998) for murder rates, as shown in the maps below, the pattern is remarkably consistent, with Millard County having the most notable pattern. That county had three year moving averages of 10.88, 13.37 and 5.26 per 100,000 population for the three iterations. These averages, even though decreasing, were among the highest in the state for each of the periods and Millard represented the only county with a consistently high rate for each of the calculations.

Average Murder Rates 1994-96

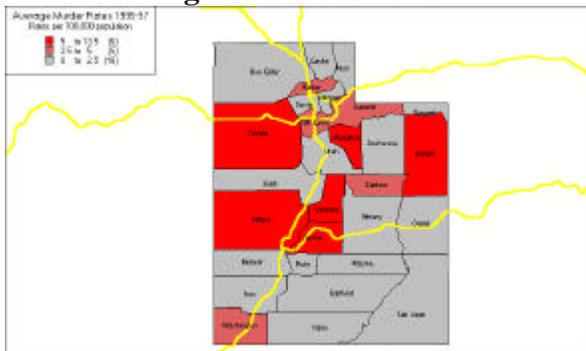


The adjacent maps show the spatial patterns of murder in Utah for the period 1994 through 1998.

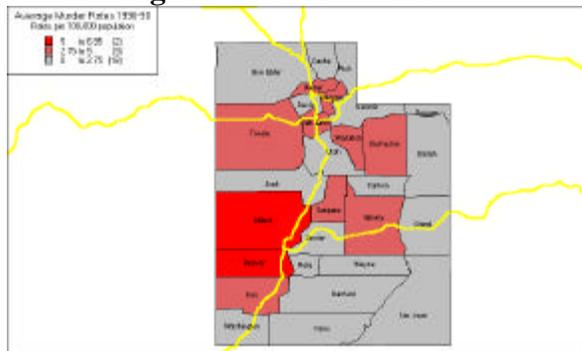
According to the FBI's Uniform Crime Reporting Program, in 1998 the murder rate in metropolitan areas of Utah was 2.91 per 100,000 population while the rate for rural areas of the state was 5.04 per 100,000 population. This suggests

that attention should be focused on isolating the precise locations of highest rates outside the urban areas.

Average Murder Rates 1995-97



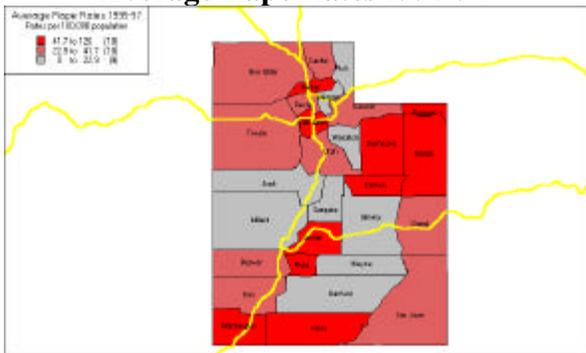
Average Murder Rates 1996-98



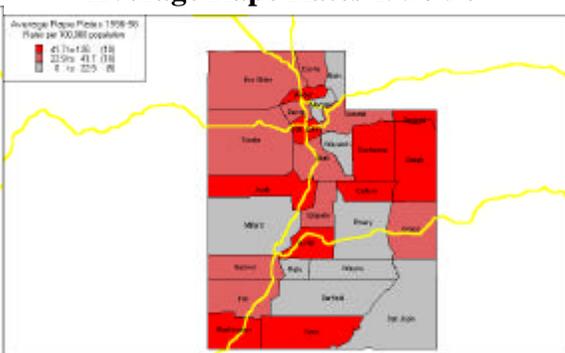
Rape rate averages also remained relatively consistent throughout the past five years, by county. The counties consistently with the highest rape rate averages, again using a three year moving average, were Duchesne County, Salt Lake County, Weber County and Washington County.

Of additional concern is the fact that Duchesne County recognized an increase in its average rape rates from 66 per 100,000 population in 1994, 1995, and 1996; to 84.74 per 100,000 population averaged for 1996, 1997, and 1998. Salt Lake County's average remained steady at 57 to 54 per 100,000 population, and Weber County realized a

Average Rape Rates 1995-97



Average Rape Rates 1996-98



slight increase from 39.5 to 42.7 to 47.6 per 100,000 population in the final three year period.

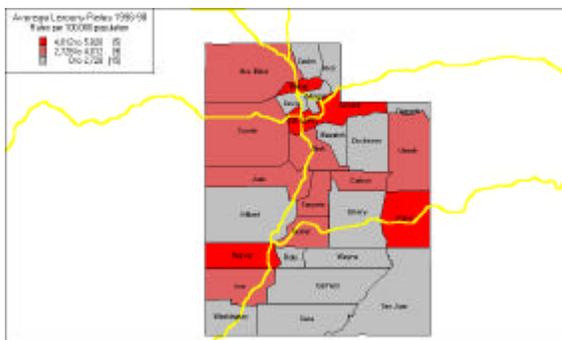
Robbery, based on criminological literature, is an urban crime. This is true of robbery in Utah. Salt Lake County (124.6 per 100,000 population) has an average robbery rate that is almost twice that of the next highest rate for any other county. The next highest average robbery rate is that of Weber County (72.7 per 100,000 population). Interestingly, Davis County, with a 1998 population of 237,374 persons and Utah County, with a 1998 population of 341,579 persons, both having higher population totals

than Weber County, had very low robbery rate averages (12.0 and 19.9 per 100,000 population).

Aggravated Assault rates are far more widely distributed across the state. In 1998, metropolitan areas of Utah had an average Aggravated Assault rate of 226.62 per 100,000 population, as recorded by the FBI, while rural areas had a rate of 94.47 per 100,000 population. Utah's rates for this crime are far lower than the U.S. averages.

As stated earlier, larceny is clearly the major Index crime problem facing Utah. Certainly it is the least serious of all index crimes and is less likely to be associated with violence than other serious crimes. The 1998 Crime in Utah publication by BCI shows that the average value of items stolen in each larceny was \$1,237.39, compared to the average larceny in the U.S. of items valued at \$650, according the FBI. Utah's average represents a huge increase over the average for 1997 (\$428.07), 1996 (\$435.47), 1995 (\$523.88), and 1994 (\$364.69). The difference in the value of items stolen in 1998 appears to be in the category of "other" which is the category of larceny not including thefts from pocket-picking, purse-snatching, shoplifting, from autos, from buildings, from coin-machines, or the theft of bicycles or motor vehicle parts and accessories. This category also represented the most frequently observed category of theft state-wide with 30.58 percent classified as "other." That percentage is consistent with previous years (in 1997 "other" larcenies represented 31.1 percent of all larcenies) but it is the value of the items stolen that changed.

Average Larceny Rates 1996-98



The map shows that Salt Lake County has had consistently high larceny rates. As mentioned earlier however, Salt Lake City, Murray (population in 1998 was 35,374), Ogden, and West Valley (1998 population was 101,996) had the most serious larceny problems in 1998. The rest of Salt Lake County, including an unduplicated population (only those persons not residing in other jurisdictions) of 382,811 persons,

produced the most larcenies but the rate was consistent with the state's rate.

Salt Lake City had more larcenies from motor vehicles (33.2 percent of all of the larcenies in Salt Lake City) than any other category. The second highest category was shoplifting (24.8 percent). Together, these two categories represented 58 percent of all larcenies in Salt Lake City, or 8,062 larcenies, almost ten percent of all larcenies in Utah in 1998. In 1997 the unincorporated areas of Salt Lake County had almost 20 percent of all larcenies in the state categorized as "other."

Drugs and Crime in Utah

The Drugs/Crime nexus in Utah is an interesting one. Using arrest data to approximate the presence and prevalence of drugs in a jurisdiction has long been problematic. Arrest data show trends and patterns in interdiction policy and not necessarily trends and patterns in drug use. A reasonable adjunct to arrest data are those data produced by the Utah Department of Human Services under the 1998 "Treatment Episode Data Set" for Utah. This initiative is described by the U.S. Department of Health and Human Services as follows:

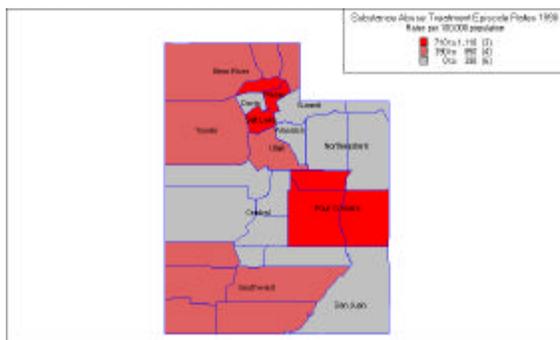
The TEDS system comprises data on treatment admissions that are routinely collected by States in monitoring their individual substance abuse treatment systems. TEDS is an admission-based system, and TEDS admissions do not represent individuals. A given individual admitted to treatment twice within a given year would be counted as two admissions.

As mentioned earlier, national comparisons suggest the nature and scope of the drug problem in Utah. The Treatment Episode Data Set (TEDS) for 1992-1997 shows that in 1997 Utah had an adjusted substance abuse admission rate of 834 per 100,000 population, compared to the national average of 589 per 100,000 population. Utah's admission rate for methamphetamine treatment was almost three times the national average (82 per 100,000 population for Utah versus 29 per 100,000 population in U.S.) and more than twice the national average for cocaine treatment. Utah's and the U.S. rates were equal for admissions for heroin treatment. The "Treatment Admission Data Summary, TEDS Fiscal Year 1998" for Utah shows that 57 percent of the treatment admissions in 1998 were for drugs and 43 percent of the treatment admissions were for alcohol. Alcohol admissions have been declining in Utah since 1992. Statewide, the proportions of admissions for methamphetamine has increased from 12 percent in 1997 to 16 percent in 1998. The 1998 report cautions that *methamphetamine use by females increase precipitously from 16.3 percent in 1997 to 22.8 percent in 1998 and became the second most prevalent drug of abuse among females*. This suggests that methamphetamine use by women in Utah is a serious and increasing concern.

Cocaine abuse admission declined from 1997 to 1998 but was still the fourth most prevalent drug of abuse. Statewide, heroin abuse treatment has also declined. In 1998 heroin represented the drug abused by 10 percent of all treatment clients, equal to the rate of cocaine abuse. Marijuana was the most frequent drug of abuse with 18 percent of the clients seen for this drug, followed closely by methamphetamine.

The map below shows the substance treatment rates (per 100,000 population) for 1998.

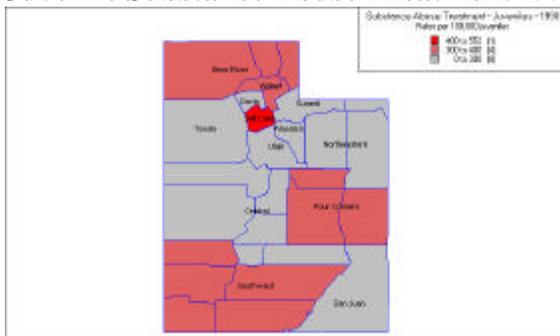
Substance Abuse Treatment 1998



The regions are based on aggregating certain counties into a total of 13 regions, with certain densely populated counties standing alone as a region, such as Salt Lake County.

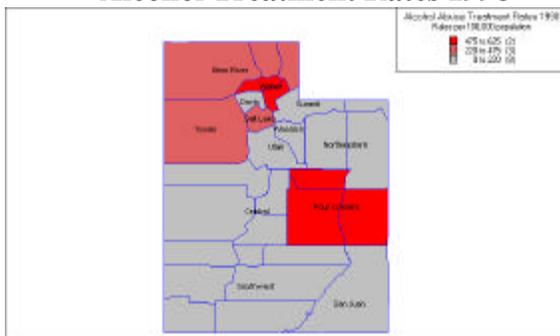
The regions shown in these maps are consistent with those used in the TEDS statistics. It should be noted that "substance abuse" includes alcohol abuse. It should also be noted that Wasatch County did not submit data to the TEDS program for 1998 in time to be included in the analysis.

Juvenile Substance Abuse Treatment 1998



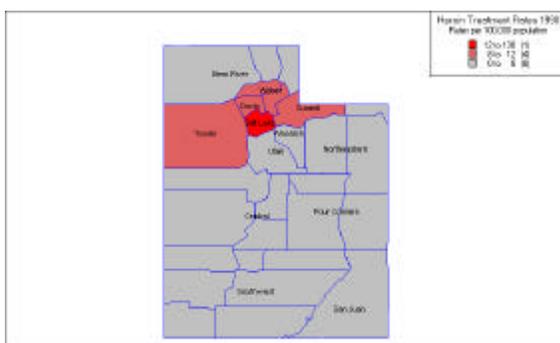
Juvenile substance abuse treatment in Utah in 1998 was generally consistent, by regions, with that of adults. Salt Lake County represented the region with the highest treatment rate, 551.37 per 100,000 juveniles, in the state. The next highest region reporting data was Weber with a juvenile treatment rate of 369.96 per 100,000 juveniles.

Alcohol Treatment Rates 1998



The pattern of alcohol treatment rates, by region, for 1998 shows the "Four Corners" region, including Emery, Grand and Carbon Counties, having the highest treatment rate (624.64 per 100,000 population) followed by Weber (Weber and Morgan Counties) with a rate of 582.46 per 100,000 population. Salt Lake county, by comparison, had a rate of 427.7 per 100,000 population.

Heroin Treatment Rates 1998

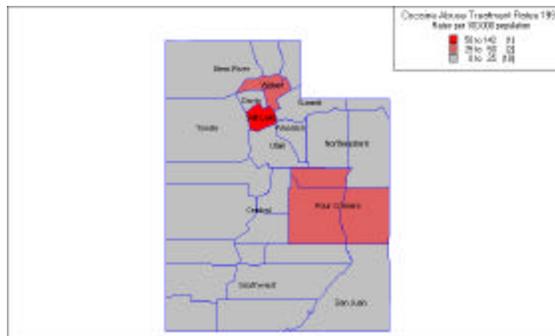


The heroin treatment rates for Utah in 1998 show clearly that Salt Lake County has the highest rate in the state. The heroin treatment rate for Salt Lake County was 129.9 per 100,000 population while the next highest region, Weber, had a rate of 9.42 per 100,000 population. Similarly, cocaine treatment rates were highest in Salt Lake county (141.77 per 100,000 population) followed by Weber region with

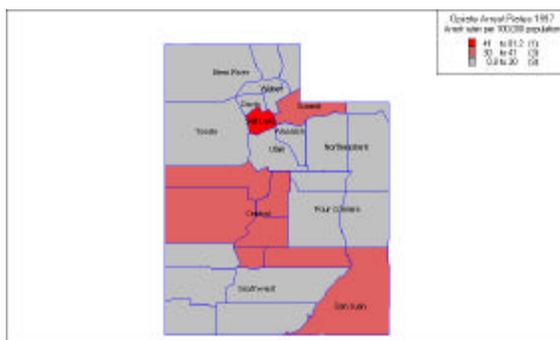
a rate of 49.19 per 100,000 population. Salt Lake County, according to treatment data, the center of heroin and cocaine abuse in Utah.

Cocaine Treatment in 1998

The rates for Salt Lake County for cocaine and heroin treatment are significantly higher than any other area of the state. As the map below, showing arrest rates for opiate possession in 1997 (last year for which arrest data are available) show, the arrest rate focus on Salt Lake County is consistent with the treatment data, suggesting that the interdiction efforts are appropriately placed.

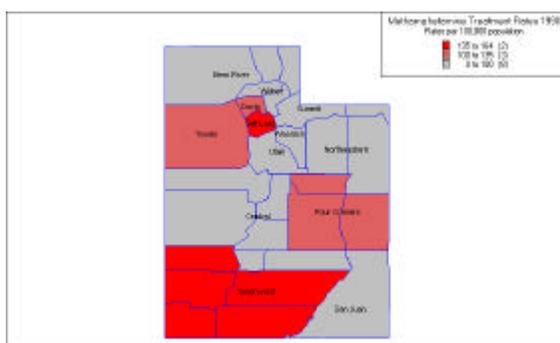


Arrest Rates for Opiate Possession 1997



These arrest rates were collapsed into regions for comparison purposes. It should be mentioned that opiate possession includes both heroin and cocaine possession, under the guidelines of the Uniform Crime Reporting Program. These arrests cannot be separated by the precise drug which was the basis of the arrests in the "summary system" but when the NIBRS data are available in Utah, the specific drug type will be available for assessment.

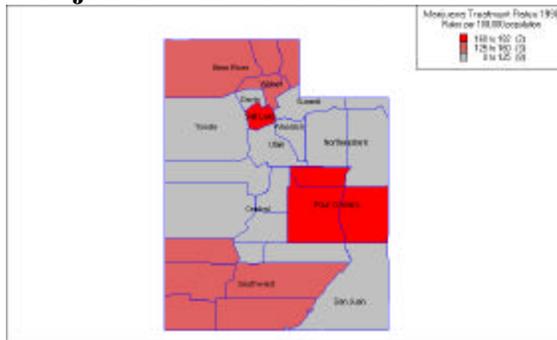
Methamphetamine Treatment Rates 1998



Methamphetamine, as a significant problem in Utah, is localized, as is shown in the map below. This localization is vastly different than any of the other drug categories. The map shows that Salt Lake County, the Four Corners Region and the Southwestern Region of the state are the areas with the highest rates of methamphetamine treatment cases.

Finally, marijuana treatment rates show the most consistent dispersion across the state. Marijuana is the drug most likely to be abused among those treated, according to the TEDS analysis. It is also the drug most likely to result in arrests in Utah and other states. The maps show a consistency of arrest rates and treatment rates for this most prevalent drug.

Marijuana Treatment Rates 1998



The 1998 TEDS summary supports the *prima facie* proposition that drugs and crime are related. The reports shows that 45 percent of the treatment admissions were a result of criminal justice referrals, while 26 percent were self-referrals, 16 percent from alcohol and drug centers, and 7 percent from other community agencies. Only a total of five percent of the referrals were from schools and health care officials.

These data support the proposition that methamphetamine is the major drug problem in Utah and heroin, as well as cocaine, though declining, are serious problems. The following table shows the rates of treatment admissions, based on Utah TEDS for 1998. This table, in concert with the Regional Crime and Arrest table, helps to judge the relationship between crime and drugs, by region:

1998 Utah Treatment Episode Data Set by Region

Region	Treatment Rates	Juvenile Treatment	Drug Treatment	Alcohol Treatment	Cocaine Treatment	Marijuana Treatment	Heroin Treatment	Meth Treatment
Southwest	525.0	337.5	310.4	202.3	14.7	132.0	5.4	135.1
San Juan	313.6	242.1	124.0	189.6	0.0	94.8	0.0	21.9
Central	355.0	192.9	171.8	181.6	19.6	63.8	1.6	63.8
Four Corners	1031.9	316.1	407.3	624.6	34.9	164.9	5.0	134.9
Tooele	677.6	269.4	287.9	368.8	24.0	110.9	9.0	128.9
Utah	474.0	-	330.1	143.9	-	-	-	-
Northwest	352.3	296.1	181.0	168.8	7.3	107.6	2.5	24.5
Bear River	710.6	305.1	262.4	445.9	9.9	158.3	1.5	77.3
Salt Lake	1109.3	551.4	676.2	427.7	141.8	181.2	129.9	163.8
Davis	387.5	163.8	270.8	116.7	24.5	109.0	9.0	100.9
Weber	896.9	369.9	305.1	582.5	49.2	144.4	9.4	76.4
Summit	181.1	48.4	71.6	96.9	8.4	42.1	8.4	12.6
Wasatch	-	-	-	-	-	-	-	-

Rates are per 100, 000 population; Juvenile Treatment Rates are per 100,000 juveniles

1998 Utah Crime and 1997 Utah Arrest Data by Region

Region	Murder Rates 1998	Rape Rates 1998	Robbery Rates 1998	Aggravated Assault Rates 1998	Larceny Rates 1998	1997 Drug Arrest Rates	1997 Poss Marijuana Arrest Rts	1997 Meth /Other Poss Arrest Rts
Southwest	3.1	16.1	7.7	96.0	1353.1	517.5	161.6	251.0
San Juan	0.0	0.0	6.9	159.4	596.1	305.5	183.3	20.4
Central	0.0	33.3	6.7	128.6	2826.7	622.6	229.3	235.9
Four Corners	4.9	39.6	7.4	113.8	3187.8	806.3	375.6	200.9
Tooele	6.3	50.1	6.3	212.9	2834.4	595.7	196.4	244.7
Utah	1.8	31.9	18.4	78.5	3058.7	451.5	274.2	49.7
Northwest	4.8	40.6	11.9	148.0	2495.2	911.3	462.8	260.0
Bear River	0.0	28.3	8.1	76.1	2944.8	247.3	63.8	122.1
Salt Lake	3.6	52.6	121.7	299.7	5216.2	819.7	440.2	115.4
Davis	.8	15.2	8.9	87.6	1485.8	473.2	271.1	100.2
Weber	4.1	50.1	79.4	190.6	4067.7	383.9	132.5	62.4
Summit	0.0	42.0	14.0	42.0	3627.8	279.9	155.0	25.8
Wasatch	14.9	29.8	7.5	178.7	1429.7	65.0	32.5	8.1

Rates per 100,000 population of jurisdictions reporting to BCI/FBI

Although the number of regions is relatively small, the bivariate relationships seen in the analyses further suggest the interrelationships between crime/drug arrests and treatment. The correlation coefficient for cocaine treatment rates with opiate arrest rates, by region, was .652, significant at the .05 level. Heroin treatment rates also showed a significant correlation with opiate arrest rates ($r=.782$). Interestingly, simple assault rates, by region, were significantly correlated with juvenile DUI rates ($r=.756$) and with alcohol treatment rates, by region ($r=.578$). Similarly, drug arrest rates were correlated with weapons violation rates ($r=.827$) and with juvenile liquor violation rates ($r=.732$). Supporting a transmission of values and norms hypothesis, the regional data showed that the correlation between juvenile drug treatment and all drug treatment was .859, significant at the highest level. This is even stronger considering the fact that only 15.9 percent of those treated in 1998 were under the age of 18.

In addition to drug-related analyses, Utah Hospital Discharge Data were inspected. These data, with names removed, are aggregated and made available from Vital Statistics, but with a slight delay. The most recent year for which data are available is 1997.

Domestic violence is one of the most insidious crimes in society. Often there is difficulty measuring these assaults through customary criminal justice data sources. The Utah Hospital Discharge Data can be queried, by ICD-9 codes, to get the crude rate, per 100,000 population, released after a primary diagnosis of a particular injury or disease. Further, these rates can be categorized by gender and by county of residence. Certainly there is no ICD category for domestic violence but traumatic injury may serve as a proxy for violence, where no better measures exist.

The data for 1997 show that the rate of females over the age of 17, discharged after a diagnosis of traumatic injury (without complications, suggesting that it was a relatively

minor injury but one which needed medical attention) was highest in Emery County (18.5 per 100,000 population), Weber County (2.2 per 100,000 population), Utah County (1.8 per 100,000 population) and Salt Lake county (1.7 per 100,000 population). For those women over the age of 17 diagnosed with traumatic injury with complications in 1997, the highest rates were seen in Wayne County (83.4 per 100,000 population), Sevier County (10.9 per 100,000 population), Weber County (3.3 per 100,000 population), and Salt Lake county (2.4 per 100,000 population). Similarly, Sevier County had the highest rate of females under the age of 18 admitted for traumatic injury in 1997 (rate was 10.9 per 100,000 population). The highest rates for females discharged after a primary diagnosis of "lacerations and open wounds," in 1997 were from the following counties:

Females, Primary Diagnosis "Lacerations and open wounds," 1997

Patient's Residential County	Rate per 100,000 population
Wayne	83.4
Wasatch	45.9
Millard	32.7
Uintah	24.5
Carbon	17.8

In 1996, the county of Sevier had the highest rate (101.3 per 100,000 population) for that category of injury to females.

Again, these data do not show conclusively that domestic violence or violence to women is necessarily higher in the counties shown. There are many reasons for injury other than intentional violent acts. In the absence of other data, the hospital discharge data may be a viable dataset to suggest locations for enquiry and attention.

Social and Demographic Variables Associated with Crime in Utah

The social, economic and demographic patterns in Utah are somewhat consistent with criminological theories but offer some interesting aspects. The variable showing the most consistent strength in bivariate relationships with crimes was divorce rates, by county. The divorce rate, per 1,000 population, was significantly correlated with:

Larceny Rates	($r=.552$)
Juvenile Larceny Arrest Rates	($r=.533$ to $.673$)
Burglary Rates	($r=.399$)
Auto Theft Rates	($r=.503$)
Robbery Rates	($r=.404$)
Rape Rates	($r=.507$ to $.645$)
Juvenile Rape Arrest Rates	($r=.412$)
Weapons Violation Rates	($r=.544$)

The correlation coefficients shown are all significant at the .01 level or higher.

Interestingly, the year of crime or arrest rates for juvenile larceny and rape rates were highest for the same year of divorce rates but were also generally high for the year preceding and subsequent to the divorce rate statistic. This suggests the disruptive effects

and residual effects of divorce. Correlation does not equate to causation but the consistency and significance of the bivariate relationships suggest issues by county.

Ethnicity, a variable mentioned frequently in criminological literature, proved not to be a significant one in assessing bivariate relationships. Ethnicity was calculated using the following formula:

$$\text{Ethnicity} = 1 - [(\text{ProportionWhite})^2 + (\text{ProportionBlack})^2 + (\text{ProportionAsian})^2 + (\text{ProportionNativeAmerican})^2 + (\text{ProportionOther})^2 + (\text{ProportionHispanic})^2]$$

Ethnicity has been found to be a significant factor in explanations of urban crime (in particular, Social Disorganization Theory) and its impact may be diminished in Utah due to the rural nature of much of the state.

When considering the distribution of particular races or ethnicities, by county, the variable, "percent Asian" is significantly related to robbery rates. This, however, may be due to the urban /density relationship to robbery and the residential location of many Asian-American citizens in Utah. "Percent Hispanic" proved to be significantly related to juvenile arrests for drug sales and juvenile arrests for larceny. The relationship would suggest a risk factor unless there are other explanations for the association. More research on offender/arrestee ethnicity would answer the question.

Economic factors and proxies such as per capita income by county and infant mortality rates were not significantly associated with any of the crime or drug rates in bivariate analyses. Other variables, such as rate of induced abortions and rate of births to unwed mothers were also not significant in bivariate assessments.

Multiple regression has long been considered the most valuable statistical technique in understanding the influence of several independent variables on a dependant variable. The social and demographic variables' association with crime variables were examined using the bivariate approaches and then grouped together in a multivariate analysis.

Larceny, a the major crime problem in Utah was examined first, using the following independent variables:

- Ethnicity
- Density (persons per square mile)
- Births to unwed women per 1,000 births
- Rate of low birth weight babies
- Divorce rate per 1,000 population
- Percent of the population below the age of 18

These variables, in combination, produced an R² of .591 in the regression model. This statistic was significant at the .002 level.

The same independent variables were used to assess rape rates, the other major crime problem in Utah. In the regression model these variables produced an R² of .669, which is extraordinarily high in its explanatory power. Inspection of the coefficients revealed the most influential of the variables in the equation for the rape rates was "rate of low

birth weight babies." This variable is typically viewed as a proxy for economic depression but it may also be a factor in teen pregnancy. Adding unemployment rates to the equation did not improve the R^2 further suggesting that low birth weight babies is an artifact of behavioral, not economic, issues.

This analysis suggests that issues such as divorce, birth rate of low-weight babies, and certain ethnic issues may serve as risk factors for a significant portion of the population of Utah. The data suggest that concerted efforts, involving social-assistance agencies as well as justice agencies, are appropriate to address the issues associated with crime in Utah.

Interrelationships of Crime and Drug Variables

In the bivariate analysis, crimes related to alcohol use and abuse were consistently related to drug arrests. Liquor violation arrest rates, both total and juvenile, were related to drug arrests and drug possession rates. Drug arrest rates were significantly associated (bivariate analysis) with rape rates, aggravated assault rates, DUI rates, and liquor violation rates. Juvenile arrests for DUI were significantly associated with drug possession rates, rape rates and aggravated assault rates. Additionally, and of importance, juvenile arrest rates for drugs were significantly associated with juvenile arrests for rape. These associations were based on bivariate, by-county associations. These results suggest that for those locations where one event is high, such as juvenile arrest rates for drug offenses, the other variable is also high, such as juvenile arrests for rape. Similarly, for jurisdictions with low rates of one variable, there tends to be low rates of the other. Again, these associations do not suggest a cause-and-effect but they do suggest location specific risk and resilience factors are present.

Subsequent to the initial analysis, discussions with practitioners and policy makers in Utah suggested that some of the patterns of arrests in Utah were due to seasonal visitors in particular areas, increasing dramatically the non-resident population of certain areas. Daggett County is an example of such a phenomenon. The population of the county is only slightly more than 700 but its arrest rates suggest that, on the average, more than ten percent of the population is arrested for drug crimes each year. Clearly this is not the case. Data recently assessed shows that arrest rates were present only in the summer months in that county. Recreation areas attracting summer visitors increase the non-resident population significantly during the summer months. Seasonal analysis of crime and arrests, based on monthly data, represents a method of validating trends or rejecting spurious trends.

Conclusions

The following conclusions flow logically from the assessment of crime and drug problems in Utah:

- Utah has, arguably through active and aggressive criminal justice measures combined with informal systems of social control, kept violent crime rates in the state at extraordinarily low levels, with the possible exception of rape;
- Rape rates, higher than the national rates, are likely due to better than previously and better than average reporting rates due to aggressive victim assistance;
- Larceny rates in Utah are significantly higher than national averages but the highest rates are localized to particular jurisdictions;
- Juvenile drug arrests and use in Utah appears to be consistent with national rates;
- Adult drug arrest rates in Utah appear to be lower than they should, considering the treatment data as an indication of use, suggesting higher levels of interdiction are needed;
- Methamphetamine use in Utah is extraordinarily high, with use by females increasing at a remarkable rate;
- Cocaine use in Utah, particularly powder cocaine but, to a slightly lesser degree, crack cocaine, is far higher than the national rates, based on treatment data;
- Heroin use in Utah is localized in the Salt Lake area where the rate is extraordinarily high;
- Weber County appears to lag other heavily populated areas in drug arrest rates;
- Seasonal variations in crimes and arrests may cause erroneous impressions of trends in crime in certain recreational areas.

These conclusions are based on assessments done through technical assistance provided by the Bureau of Justice Assistance as well as those flowing from other assessments and methods such as criminal justice agency surveys, assessments completed by the Commission on Criminal and Juvenile Justice, Research Center, and the Utah Division of Substance Abuse. The conclusions, along with the analysis of data, suggest certain recommendations. These recommendations will be organized according to logical categories.

Recommendations

Typically, any state such as Utah and any organization such as the Commission on Criminal and Juvenile Justice, can be given general recommendations like the following:

- Encourage collaboration between the CCJJ and the Division of Substance Abuse to address drug-related matters;
- Address violence-related issues first in a triage approach;
- Establish data-intensive trend and pattern assessments;
- Identify risk factors associated with drugs and delinquency;
- Prioritize policies to address primary, secondary and tertiary issues related to crime causes, prevention and resistance; and,
- Encourage and engage in strategic planning, employing primary, secondary, and tertiary prevention measures.

However, Utah has already addressed or is engaged in each of these general recommendations. The CCJJ appears to be diligent in its collaborative and concerted efforts to address issues related to crime and delinquency. What follows is a series of more specific recommendations which can be considered to build upon the already high levels and quality of planning strategies to address crime-related issues.

Crime Data and Interpretation

All indications are the Utah Bureau of Criminal Investigation does an expert job of collecting, collating and reporting crime data. It is the central repository for UCR data in Utah. There are several things which can be done in the future which will produce more reliable and valid interpretation of the information.

When reporting crimes by jurisdiction, BCI lists population statistics for each jurisdiction. The population is used as the denominator for the calculation of "Officers/Correction Officers per 1,000" population as well as "Crime Rate per 1,000" population. Not all jurisdictions report crime data to the BCI and the annual publication shows those crime categories as "No Data Received." This is the accurate method of reporting that information. Those same non-reporting jurisdictions do have officers and correctional officers shown so the population is still used to calculate the rates of justice system personnel. The only inappropriate use of the population figures occurs when statewide population totals are calculated for use in determining crime rates. The population of non-reporting jurisdictions is included in the calculation of crime rates, statewide. These population figures should be excluded in the totals in order to produce more valid figures and the figures would be more consistent with the FBI non-estimated data. When estimated FBI data are considered (estimates are used for nonreporting jurisdictions in the production of Crime in the United States), the inappropriate use of population figures in Utah's crime data compounds the difference in Utah's calculation of crime rates and the FBI's calculation of Utah's crime rates. It is not recommended that Utah employ an estimation approach, but that simply the population of non-reporting jurisdictions be excluded when calculating statewide rates. Additionally, it is recommended that rates be shown per 100,000 population since that is the standard used by the FBI and widely accepted throughout the United States.

The central crime data repository in many states requests and receives revised data from jurisdictions and the revisions are shown in the subsequent years crime publications. It appears that BCI does not revise any data in later publications. If revisions are received, as is likely to be the case with Salt Lake City for 1998, the changes should be reflected in the subsequent reports.

Utah's aggressive movement to adopt NIBRS widely is laudatory. It will be increasingly important, and difficult, to bring in the remaining agencies not participating in NIBRS. To do so is likely to involve an information and educational process which is unusual for many states. It is recommended that, if the objective is to have as close to 100 percent participation in NIBRS, Utah link a jurisdiction's participation in state and federal funding with participation in crime reporting. Since more data are collected under

NIBRS, there is a greater opportunity for data errors. There should be funding for reliability checks and validity checks with the data, through sampling (some jurisdictions use a ten percent systematic sampling approach, others use random sampling) to ascertain that the data are coded correctly and the data are reported correctly. This is a labor-intensive effort but the adage "garbage in and garbage out" suggests that more information is not necessarily better information unless it is accurate.

A recommendation which was suggested by the Commission on Criminal and Juvenile Justice involves the seasonal analysis of crime data. Utah and many other states rely heavily on tourism. That is likely to increase in the future in Utah. Tourism and recreation visitors may contribute to the number of victims and to the number of offenders. This is not necessarily a foregone conclusion, however, there does seem to be a relationship between visitors and certain crimes such as larceny (see, for example, William V. Pelfrey. (1998). "Tourism and Crime: A Preliminary Assessment of the Relationship of Crime to the Number of Visitors at Selected Sites." *International Journal of Comparative and Applied Criminal Justice*, Vol. 22(2). Pp. 293-304.). Unfortunately larceny is a major crime problem in Utah. It was recommended that seasonal analyses of crime and arrests would help to inform the issue of endemic versus invited crime problems. The response and prevention strategies are quite different for the two type of problems. Crime Prevention Through Environmental Design (CPTED) represents a viable method of addressing invited (tourism) crime problems while primary prevention approaches are effective in addressing endemic ones. Other recommendations regarding CPTED will be mentioned below.

Clearly there are uncertainties regarding the nature and extent of rape in Utah. Rates appear high and certain areas appear to have higher concentrations of victims. The high rates appear to be a function of better reporting by victims, probably through the encouragement and assistance of victim assistance coordinators and rape crisis centers. The question is an important one and cannot be answered based on available data. It is recommended that Utah engage in a victimization survey, repeated periodically, to more accurately assess crimes and victimization in Utah. The same survey can be used to address citizen satisfaction with criminal justice agencies, and citizen's views of the causes of crime and disorder. It is certain that such a survey would indicate more crime than official statistics show. Utah should be prepared for that eventuality and not be disturbed by the fact but use the data to more accurately and appropriately assess and address crime and victimization in the state. Attitudinal issues such as fear and opinions regarding criminal justice are heavily influenced by media and current events so those data should be considered independently and with a great many caveats. The victimization data, however, may be the single most important piece of information collected by CCJJ in many years.

Discussions with legislative and advisory groups in Utah suggested hypotheses and explanations of murder rates, rape rates, domestic violence, and the relationship between substance abuse and crime. It is recommended that Utah, through the CCJJ encourage the University of Utah and other similar institutions to seek association with and grants from the Centers for Disease Control and Prevention in better understanding violence and

violent crime. There are few enough murders in the state that each one can be carefully considered, studied and categorized, either annually or historically (using Supplemental Homicide Report data). This can assist in understanding the incidence of other-than-Utah citizens representing victims or offenders, the degree to which the homicides could have been anticipated, therefore prevented, and the circumstances surrounding the homicides. It is also recommended that such an initiative consider suicides also. The demographics of Utah (overwhelming racial category is white) suggest that the incidence of suicide may be of concern in the state, even though the murder rate is very low. Even though it is unlikely that the homicide rate can effectively be reduced, given its very low rate currently, understanding the phenomena which seem to produce such a low rate of this most serious crime can be beneficial to Utah and the nation, however.

Reduction and Prevention of Crime

The trend data and the pattern data suggest that larceny, regionalized in the Salt Lake area although not entirely Salt Lake City, represents the major crime issues facing the state. The bivariate analyses suggest relationships between larceny, violence and drugs. It is recommended that the CCJJ encourage and support the development of a regional crime analysis system for the greater Salt Lake area, including a mapping component. The Salt Lake area contributes almost 63 percent of all larcenies in the state each year. Additionally, heroin use, cocaine use, and rape rates are high in this area. By aggressively identifying "hot spots" of crime, local agencies and state agencies can isolate the causes or facilitators of such event.

Once the specific areas of highest incidence of crimes are identified, Crime Prevention Through Environmental Design can serve as an effective tool to reduce crime and enhance the quality of life of citizens and visitors. This is especially true of the Salt Lake area as it prepares for the Olympics. Federal agencies, including BJA, should contribute to the speedy development of crime mapping processes in preparation for world-wide visitors and attention focused on the metropolitan area. It is recommended that the crime analysis and spatial analysis be used for operational purposes, and not the evaluation of command initiatives. Crime analysis has been a very effective tool of law enforcement but is most effective when used by operational units in addressing specific problems. It can also be very useful to other social services in addressing "root causes" of disorder.

The use of treatment data in better understanding the nature, extent and distribution of drug use proved to be very effective. There still are unresolved issues such as the possibility that Utah citizens are more likely to seek treatment compared to citizens of other states. However, the use of other than criminal justice data in assessing problems like drug use is extremely important. CCJJ has what appears to be an excellent working relationship with the Division of Substance Abuse and the continued use of TEDS data can be very effective. Additionally, hospital admissions data and discharge data, search and separated by ICD codes, can be useful in validating domestic violence data and violence against women trends. Salt Lake City participates in the ADAM data collection project but it is recommended that the hospitals in Salt Lake City be encouraged to participate in DAWN (Drug Abuse Warning Network) through an assessment of

emergency facilities admissions or develop such a data gathering approach independent of federal initiatives.

Interdiction is and continues to be an important element of drug reduction. Certain areas of the state appear to lag in interdiction efforts, such as Weber County. The drug task forces appear to have been effective in a general fashion and, through targeted assessments, may be encouraged to either refocus and become "violence" reduction task forces (although the violence rates are generally low already) or concentrated in areas where interdiction lags. Additionally, interdiction should not be viewed as opposed to treatment. The TEDS data show that almost half of the treatment clients were referred by criminal justice agencies.

Risk and resiliency assessments are valuable methods of conducting secondary prevention. Utah is actively engaged in risk and resiliency assessments and it is recommended that the initiative be continued and that criminal justice agencies be informed of the strides and potential for such initiatives.

Closing Comments

These recommendations are more specific than was originally anticipated in the early stages of this technical assistance. The evidence suggests that Utah is in an enviable position regarding violent crime and has been vigilant and aggressive in addressing quality of life issues for its citizens. It has been a pleasure working with a state agency with professionals as dedicated and talented as those in the Commission on Criminal and Juvenile Justice. If there have been any perceived deficiencies of that organization, it appears, after an intensive assessment of crime and responses to crime in Utah, that any perceptions of deficiencies are incorrect. CCJJ perhaps could articulate its actions and successes more aggressively, at the risk of boasting, because it can represent a model agency which divisions of the federal government can point to for emulation by other states.

Some of the developments in Utah, such as the innovative and logical use of tobacco settlement funds for prevention of drug use and the development of a common continuum of prevention, intervention, and aftercare appear to be of utility to other states. These and other initiatives in Utah can be described as exemplary programs.

Relationship Between Problem Assessment and Strategic Initiatives

Program: *Multi-Jurisdictional Drug Task Forces (Purpose Area 2)*

The assessment of the nature and extent of drug use in Utah suggests that there is more usage than the arrest data reflect. Arrest rates for drug possession and sales in Utah are lower for adults than national rates yet treatment data (TEDS) suggest that treatment rates are twice the national average. These data show clearly the need for continued interdiction efforts.

Interdiction is and continues to be an important element of drug reduction. Certain areas of the state appear to lag in interdiction efforts, such as Weber County. The drug task forces appear to have been effective in a general fashion and, through targeted assessments, may be encouraged to either refocus and become "violence" reduction task forces (although the violence rates are generally low already) or concentrated in areas where interdiction lags. Additionally, interdiction should not be viewed as opposed to treatment. The TEDS data show that almost half of the treatment clients were referred by criminal justice agencies.

The 1998 TEDS summary supports the *prima facie* proposition that drugs and crime are related. The reports show that 45 percent of the treatment admissions were a result of criminal justice referrals, while 26 percent were self-referrals, 16 percent from alcohol and drug centers, and 7 percent from other community agencies. Only a total of five percent of the referrals were from schools and health care officials.

The following table shows the rates of treatment admissions, based on Utah TEDS for 1998. This table, in concert with the Regional Crime and Arrest table, helps to judge the relationship between crime and drugs, by region:

1998 Utah Treatment Episode Data Set by Region

Region	Treatment Rates	Juvenile Treatment	Drug Treatment	Alcohol Treatment	Cocaine Treatment	Marijuana Treatment	Heroin Treatment	Meth Treatment
Southwest	525.0	337.5	310.4	202.3	14.7	132.0	5.4	135.1
San Juan	313.6	242.1	124.0	189.6	0.0	94.8	0.0	21.9
Central	355.0	192.9	171.8	181.6	19.6	63.8	1.6	63.8
Four Corners	1031.9	316.1	407.3	624.6	34.9	164.9	5.0	134.9
Tooele	677.6	269.4	287.9	368.8	24.0	110.9	9.0	128.9
Utah	474.0	-	330.1	143.9	-	-	-	-
Northwest	352.3	296.1	181.0	168.8	7.3	107.6	2.5	24.5
Bear River	710.6	305.1	262.4	445.9	9.9	158.3	1.5	77.3
Salt Lake	1109.3	551.4	676.2	427.7	141.8	181.2	129.9	163.8
Davis	387.5	163.8	270.8	116.7	24.5	109.0	9.0	100.9
Weber	896.9	369.9	305.1	582.5	49.2	144.4	9.4	76.4
Summit	181.1	48.4	71.6	96.9	8.4	42.1	8.4	12.6
Wasatch	-	-	-	-	-	-	-	-

Rates are per 100, 000 population; Juvenile Treatment Rates are per 100,000 juveniles

1998 Utah Crime and 1997 Utah Arrest Data by Region

Region	Murder Rates 1998	Rape Rates 1998	Robbery Rates 1998	Aggravated Assault Rates 1998	Larceny Rates 1998	1997 Drug Arrest Rates	1997 Poss Marijuana Arrest Rts	1997 Meth /Other Poss Arrest Rts
Southwest	3.1	16.1	7.7	96.0	1353.1	517.5	161.6	251.0
San Juan	0.0	0.0	6.9	159.4	596.1	305.5	183.3	20.4
Central	0.0	33.3	6.7	128.6	2826.7	622.6	229.3	235.9
Four Corners	4.9	39.6	7.4	113.8	3187.8	806.3	375.6	200.9
Tooele	6.3	50.1	6.3	212.9	2834.4	595.7	196.4	244.7
Utah	1.8	31.9	18.4	78.5	3058.7	451.5	274.2	49.7
Northwest	4.8	40.6	11.9	148.0	2495.2	911.3	462.8	260.0
Bear River	0.0	28.3	8.1	76.1	2944.8	247.3	63.8	122.1
Salt Lake	3.6	52.6	121.7	299.7	5216.2	819.7	440.2	115.4
Davis	.8	15.2	8.9	87.6	1485.8	473.2	271.1	100.2
Weber	4.1	50.1	79.4	190.6	4067.7	383.9	132.5	62.4
Summit	0.0	42.0	14.0	42.0	3627.8	279.9	155.0	25.8
Wasatch	14.9	29.8	7.5	178.7	1429.7	65.0	32.5	8.1

Rates per 100,000 population of jurisdictions reporting to BCI/FBI

Although the number of regions is relatively small, the bivariate relationships seen in the analyses further suggest the interrelationships between crime/drug arrests and treatment. The correlation coefficient for cocaine treatment rates with opiate arrest rates, by region, was .652, significant at the .05 level. Heroin treatment rates also showed a significant correlation with opiate arrest rates ($r=.782$). Interestingly, simple assault rates, by region, were significantly correlated with juvenile DUI rates ($r=.756$) and with alcohol treatment rates, by region ($r=.578$). Similarly, drug arrest rates were correlated with weapons violation rates ($r=.827$) and with juvenile liquor violation rates ($r=.732$). Supporting a transmission of values and norms hypothesis, the regional data showed that the correlation between juvenile drug treatment and all drug treatment was .859, significant at the highest level. This is even stronger considering the fact that only 15.9 percent of those treated in 1998 were under the age of 18.

These data suggest strongly that the need for continued interdiction efforts, best organized through Multi-Jurisdictional Drug Task Forces, should be continued, although periodic reassessments will continue to focus, refocus, revise, and perhaps discontinue certain efforts.

Interdiction is and continues to be an important element of drug reduction. Certain areas of the state appear to lag in interdiction efforts, such as Weber County. The drug task forces appear to have been effective in a general fashion and, through targeted assessments, may be encouraged to either refocus and become "violence" reduction task forces (although the violence rates are generally low already) or concentrated in areas where interdiction lags. Additionally, interdiction should not be viewed as opposed to treatment. The TEDS data show that almost half of the treatment clients were referred by criminal justice agencies.

Program: *Adult and Juvenile Drug/Alcohol Treatment (Purpose Area 13)*

Interdiction of drugs and arrests for alcohol-related crimes represent an obvious and necessary method of addressing those issues. Treatment, however, represents the only viable means of addressing underlying causes of the behavior.

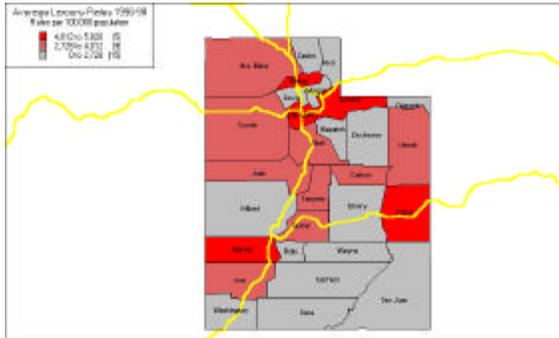
The problem assessment strongly supports the proposition that interdiction alone will be ineffective in reducing or ameliorating the substance abuse problems in Utah. As mentioned earlier, national comparisons suggest the nature and scope of the drug problem in Utah. The Treatment Episode Data Set (TEDS) for 1992-1997 shows that in 1997 Utah had an adjusted substance abuse admission rate of 834 per 100,000 population, compared to the national average of 589 per 100,000 population. Utah's admission rate for methamphetamine treatment was almost three times the national average (82 per 100,000 population for Utah versus 29 per 100,000 population in U.S.) and more than twice the national average for cocaine treatment. Utah's and the U.S. rates were equal for admissions for heroin treatment. The "Treatment Admission Data Summary, TEDS Fiscal Year 1998" for Utah shows that 57 percent of the treatment admissions in 1998 were for drugs and 43 percent of the treatment admissions were for alcohol. Alcohol admissions have been declining in Utah since 1992. Statewide, the proportions of admissions for methamphetamine has increased from 12 percent in 1997 to 16 percent in 1998. The 1998 report cautions that *methamphetamine use by females increase precipitously from 16.3 percent in 1997 to 22.8 percent in 1998 and became the second most prevalent drug of abuse among females*. This suggests that methamphetamine use by women in Utah is a serious and increasing concern.

In the bivariate analysis, crimes related to alcohol use and abuse were consistently related to drug arrests. Liquor violation arrest rates, both total and juvenile, were related to drug arrests and drug possession rates. Drug arrest rates were significantly associated (bivariate analysis) with rape rates, aggravated assault rates, DUI rates, and liquor violation rates. Juvenile arrests for DUI were significantly associated with drug possession rates, rape rates and aggravated assault rates. Additionally, and of importance, juvenile arrest rates for drugs were significantly associated with juvenile arrests for rape. These associations were based on bivariate, by-county associations. These results suggest that for those locations where one event is high, such as juvenile arrest rates for drug offenses, the other variable is also high, such as juvenile arrests for rape. Similarly, for jurisdictions with low rates of one variable, there tends to be low rates of the other. Again, these associations do not suggest a cause-and-effect but they do suggest location specific risk and resilience factors are present.

Cocaine abuse admission declined from 1997 to 1998 but was still the fourth most prevalent drug of abuse. Statewide, heroin abuse treatment has also declined. In 1998 heroin represented the drug abused by 10 percent of all treatment clients, equal to the rate of cocaine abuse. Marijuana was the most frequent drug of abuse with 18 percent of the clients seen for this drug, followed closely by methamphetamine. Treatment efforts, establishing collaborations between criminal justice and substance abuse treatment agencies, can be effective in addressing these issues.

Program: *Gang Enforcement Units*

Gang enforcement units represent a multi-jurisdictional approach to addressing problems which have historically plagued the Salt Lake area.



This map, also presented earlier, shows that Salt Lake County has had consistently high larceny rates. As mentioned earlier however, Salt Lake City, Murray (population in 1998 was 35,374), Ogden, and West Valley (1998 population was 101,996) had the most serious larceny problems in 1998. The rest of Salt Lake County, including an unduplicated population (only those persons not residing

in other jurisdictions) of 382,811 persons, produced the most larcenies but the rate was consistent with the state's rate. Salt Lake City had more larcenies from motor vehicles (33.2 percent of all of the larcenies in Salt Lake City) than any other category. The second highest category was shoplifting (24.8 percent). Together, these two categories represented 58 percent of all larcenies in Salt Lake City, or 8,062 larcenies, almost ten percent of all larcenies in Utah in 1998. In 1997 the unincorporated areas of Salt Lake County had almost 20 percent of all larcenies in the state categorized as "other." Salt Lake County, the site of the Gang Enforcement Units, represented 62.5 percent of all larcenies in the state, as well as the highest rates of drug use. Both larceny and drug use are often gang related. As has been recommended, the Gang Enforcement Units will serve as the basis for a multi-jurisdictional approach to addressing larceny and other drug-related problems in the greater Salt Lake area.

Programs: *Strategic Planning/Assessment and Racial/Ethnic Task Force (Purpose Area 16)*

Ethnicity, a variable mentioned frequently in criminological literature, proved not to be a significant one in assessing bivariate relationships with crime, as described above in the problem assessment. Ethnicity was calculated using the following formula:

$$\text{Ethnicity} = 1 - [(\text{ProportionWhite})^2 + (\text{ProportionBlack})^2 + (\text{ProportionAsian})^2 + (\text{ProportionNativeAmerican})^2 + (\text{ProportionOther})^2 + (\text{ProportionHispanic})^2]$$

Ethnicity has been found to be a significant factor in explanations of urban crime (in particular, Social Disorganization Theory) and its impact may be diminished in Utah due to the rural nature of much of the state. Also diminishing the statistical influence of ethnicity is the relatively small variance from county to county. This does not, however, reduce the need to continue to address racial and ethnic issues and to conduct strategic planning and assessment regarding these and other issues.

Two counties in Utah have very high proportions of native Americans. Several counties have high proportions of Hispanic citizens. Salt Lake County has a relatively high and growing proportion of Asian and Pacific Islanders. These groups must not feel disenfranchised in Utah's efforts to address crime, disorder and quality of life. Some demographic categories show developing relationships which crime-related issues.

When considering the distribution of particular races or ethnicities, by county, the variable, "percent Asian" is significantly related to robbery rates. This, however, may be due to the urban /density relationship to robbery and the residential location of many Asian-American citizens in Utah. "Percent Hispanic" proved to be significantly related to juvenile arrests for drug sales and juvenile arrests for larceny. The relationship would suggest a risk factor unless there are other explanations for the association. More research on offender/arrestee ethnicity would answer the question.

Strategic planning represents the only viable opportunity to identify and address emerging issues relating to crime and disorder. The Technical Assistance provided by BJA in assessing the crime problems in Utah stressed the need to continue Strategic Planning, including the accumulation and assessment of crime data, in order to address these issues appropriately.

Programs: *Court Delay Reduction; Juvenile Drug Court; Court Case Managers (Purpose Area 10)*

Criminological literature, since 1754 and the publication of the essay *Dei deliti e delle pene (On Crimes and Punishments)* by Cesare Bonesana, Marchese de Beccaria, has stressed the importance of deterrence in the control of crime. The three elements of deterrence are the certainty, swiftness, and severity of punishment. Typically the criminal justice system has stressed the last element, severity, yet criminological and psychological literature suggests that it is the least important of the three. The three programs listed address the issues of swiftness (Court Delay Reduction) and both certainty and swiftness (Juvenile Drug Court and Court Case Managers). These programs will be able to address those arrested for the two major categories of serious crime problems in Utah, larceny and rape, as well as drug cases. The remarkable growth of methamphetamine and the high levels of cocaine use in Utah, as shown by the data presented earlier, demand prompt and certain action.

Similarly, in the bivariate analysis, crimes related to alcohol use and abuse were consistently related to drug arrests. Liquor violation arrest rates, both total and juvenile, were related to drug arrests and drug possession rates. Drug arrest rates were significantly associated (bivariate analysis) with rape rates, aggravated assault rates, DUI rates, and liquor violation rates. Juvenile arrests for DUI were significantly associated with drug possession rates, rape rates and aggravated assault rates. Additionally, and of importance, juvenile arrest rates for drugs were significantly associated with juvenile arrests for rape. These associations were based on bivariate, by-county associations. These results suggest that for those locations where one event is high, such as juvenile arrest rates for drug offenses, the other variable is also high, such as juvenile arrests for

rape. Similarly, for jurisdictions with low rates of one variable, there tends to be low rates of the other. Again, these associations do not suggest a cause-and-effect but they do suggest location specific risk and resilience factors are present.

While Utah enjoys relatively low rates of serious violent crime, the charts in the Appendix show that the trends for violent crime are all increasing or flat. This is at a time when U.S. violent crime rates are decreasing substantially. In order to maintain the low levels of serious crime, it is necessary that deterrence measure be employed and the programs listed would accomplish that.

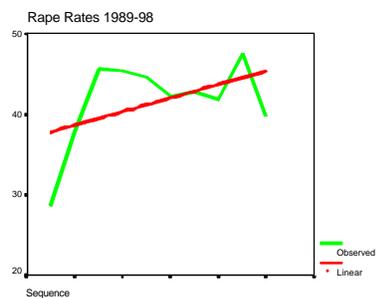
Appendix

**Crime Trend Charts
Utah Index Crimes**

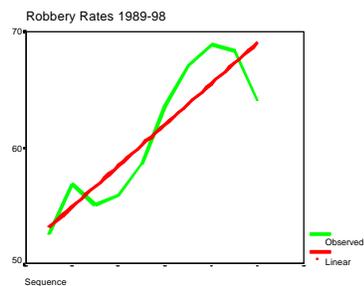
Utah Murder Rate Trend 1989-98



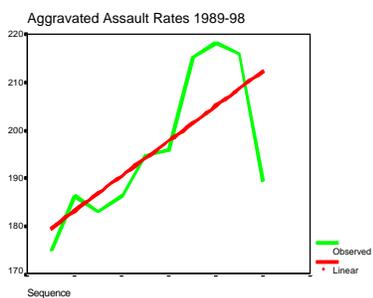
Utah Rape Rate Trend 1989-98



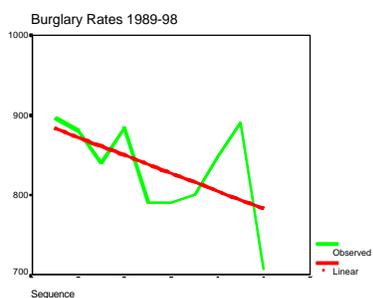
Utah Robbery Rate Trend 1989-98



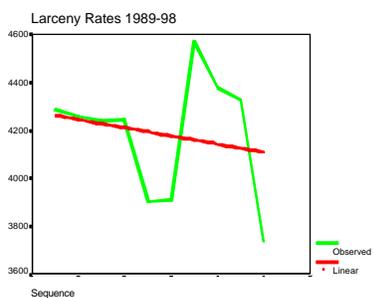
Utah Aggravated Assault Rate Trend 1989-98



Utah Burglary Rate Trend 1989-98



Utah Larceny Rate Trend 1989-98



Utah Auto Theft Rate Trend 1989-98

