

# **Weed and Seed Crime Pattern Data Analysis**

Prepared for the  
Office of Weed and Seed  
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by the



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## **INTRODUCTION**

Operation Weed and Seed is a cooperative strategy involving a United States Attorney, a local community, local social organizations, neighborhood residents, and local law enforcement. The Weed and Seed goal is to prevent, control, and reduce violent crime and illicit drug activity in designated high crime neighborhoods. A Weed and Seed site can range from a few blocks to a few square miles, but typically a site is a crime “hot spot” that still represents a limited portion of the crime activity and area of a host jurisdiction.

In order to document Weed and Seed’s impact on crime, the Office for Weed and Seed (OWS) and the Justice Research and Statistics Association (JRSA) solicited crime information in the spring of 2003 from all active Weed and Seed sites. Weed and Seed grantees were asked to select the top three crime issues in their site and to provide a series of data for each type of crime that included (a) two years of crime statistics before the implementation of the Weed and Seed strategy, (b) crime statistics for the year that the Weed and Seed site actually started operations, and (c) up to three years of post-implementation crime statistics. These data were to be provided for the entire host jurisdiction as well as the Weed and Seed site target area, which would allow both a pre/post view of crime and a comparison between a site and its host jurisdiction.

Although Operation Weed and Seed generally targets violent and illicit drug crimes as key public safety issues, each site has unique crime issues. Local record keeping styles are not universal across the nation. As such, the sites used the best data available, which tend to come in different formats. Some sites provided reported crime statistics, others arrest data, and still others calls for service. All sites were encouraged to submit information even if they had not been in operation for four full years.

## **NINETY-EIGHT WEED AND SEED SITES PARTICIPATE**

By October 2003, 98 Weed and Seed sites had submitted crime pattern data reports to JRSA. These submissions were reviewed for completeness and accuracy and were then entered into an automated database file. Based on the number of years of data provided, the Weed and Seed sites were then divided into the following groupings for analysis purposes.

Twenty of the 98 sites (20.4 percent) provided a full six-year time series for three types of crime data for both the site and the host jurisdiction: two years of baseline crime data, Weed and Seed implementation year data, and three subsequent years of data. These 20 sites provide the most extensive crime pattern information we have.

Nineteen of the 98 sites (19.4 percent) included a five-year time series for crime data, with a full series of post-implementation data. The site provided at least one year of baseline crime data, the year of implementation data, and at least two subsequent years of

Weed and Seed operations data. Combining these 19 sites with the 20 sites with full crime series provides an even more robust view of crime patterns in Weed and Seed sites and their host jurisdictions.

Seven of the 98 sites (7.1 percent) had more than one year pre- and one year post-Weed and Seed implementation, but were missing data for one or two crimes or had inconsistent crime series. For example, in one site the pre-site crime data were from the full police precinct, but after the implementation of Weed and Seed, the crime series used only data from the site, which is much smaller than the police precinct.

Fourteen of the 98 sites (14.2 percent) had only one year of data following the Weed and Seed implementation year. These sites will become more valuable for analysis as time passes and their crime series become longer.

Twenty-six of the 98 sites (26.5 percent) reported only baseline and implementation crime series data. These sites with only historical crime data will also become more valuable for analysis as time passes and their crime series become longer.

Twelve of the 98 sites (12.2 percent) had only site crime series data, only jurisdiction-wide data, or only post-Weed and Seed implementation data. On an individual basis, these sites may provide insight into local success, but they are not amenable to aggregation with the other sites for analysis.

### **CRIME ISSUES IN WEED AND SEED SITES**

The Operation Weed and Seed goal is to prevent, control, and reduce violent crime and illicit drug activity in designated high crime neighborhoods. Of the crimes reported most often, violent crime and/or drugs are included by all but three of the 98 sites. In fact, as Table One shows, 61.2 percent of the sites mention illicit drugs as one of their three top crime issues. Three of the five most frequently cited offenses are violent crimes, i.e., assault, robbery, and homicide.

Homicide is mentioned by 22.4 percent of the Weed and Seed sites as a key crime issue, and weapon offenses are mentioned by 19.4 percent. The emphasis on homicide, weapons, and other violent crimes indicates a significant overlap between the goals of Operation Weed and Seed and the Department of Justice's program Project Safe Neighborhood. Project Safe Neighborhood is another major Department of Justice program that seeks to reduce the illegal use of firearms and firearms-related crimes.

The 14 different types of priority crimes mentioned by Weed and Seed sites attest to the uniqueness and complexity of local neighborhood issues. In addition to the violent and illicit drug issues, auto theft, theft, prostitution/vice, domestic violence, and gang activity are key local issues.

**Table One**  
**Weed and Seed Sites' Crime Issues by Type of Offense**

<u>Rank</u>	<u>Crime</u>	<u>Number of Sites Reporting</u>	<u>Percent of Sites Reporting</u>
1	Drugs	60	61.2%
2	Assault	34	34.7%
3	Robbery	33	33.7%
4	Burglary	23	23.5 %
5	Homicide	22	22.4%
6	Weapon Offenses	19	19.4%
7	Auto Theft	12	12.2%
8	Theft	11	11.2%
9	Prostitution/Vice	10	10.2%
10	Calls for Service	9	9.2%
11	Domestic Violence	9	9.2%
12	Gang Activity	6	6.1%
13	Alcohol	5	5.1%
14	Distrub/HousingViol.	5	5.1%
15	Juvenile Issues	5	5.1%
16	Violent Crime	4	4.1%
17	Part I Crime	3	3.1%
18	Rape	2	2.0%
19	Child Abuse	2	2.0%
21	Warrants	1	1.0%

Note: 98 sites reported data. Seven sites were missing at least one of the three priority crimes.

Table Two ranks offenses by the frequency that Weed and Seed sites list them as their top priority crime issue. In 76 percent of the Weed and Seed sites reporting, violent, weapon, or drug crimes are listed as the highest priority crime for the Weed and Seed site. Drugs are mentioned most often as the most important crime – 33.7 percent of the time. Homicide is mentioned second most often, at 19.6 percent, and assault third most often, at 10.9 percent.

**Table Two**  
**Top Priority Weed and Seed Sites' Crimes by Type of Offense**

Rank	Crime	Number of Sites Reporting	Percent of Sites Reporting
1	Drugs	31	33.7%
2	Homicide	18	19.6%
3	Assault	10	10.9%
4	Burglary	9	9.8%
5	Robbery	6	6.5%
6	Auto Theft	3	3.3%
7	Calls for Service	3	3.3%
8	Weapon Offenses	3	3.3%
9	Part I Crimes	2	2.2%
10	Violent Crimes	1	1.1%
11 to 16	Other crimes	6	1.1% each

Note: A total of 98 sites reported data.

### **SIX-YEAR CRIME PATTERN RESULTS**

Twenty of the 98 sites (20.4 percent) included a full six-year time series for crime data: two years of baseline crime data, implementation year data, and three subsequent years of Weed and Seed operations data. These 20 sites provide the most extensive crime pattern information regarding Weed and Seed sites. While the Weed and Seed goal is to prevent, control, and reduce violent crime and illicit drug activity in designated high crime neighborhoods, there is a long-held concern that the initiation of the Weed and Seed strategy in a high crime neighborhood increases reported crime – at least in the early stages of the program.

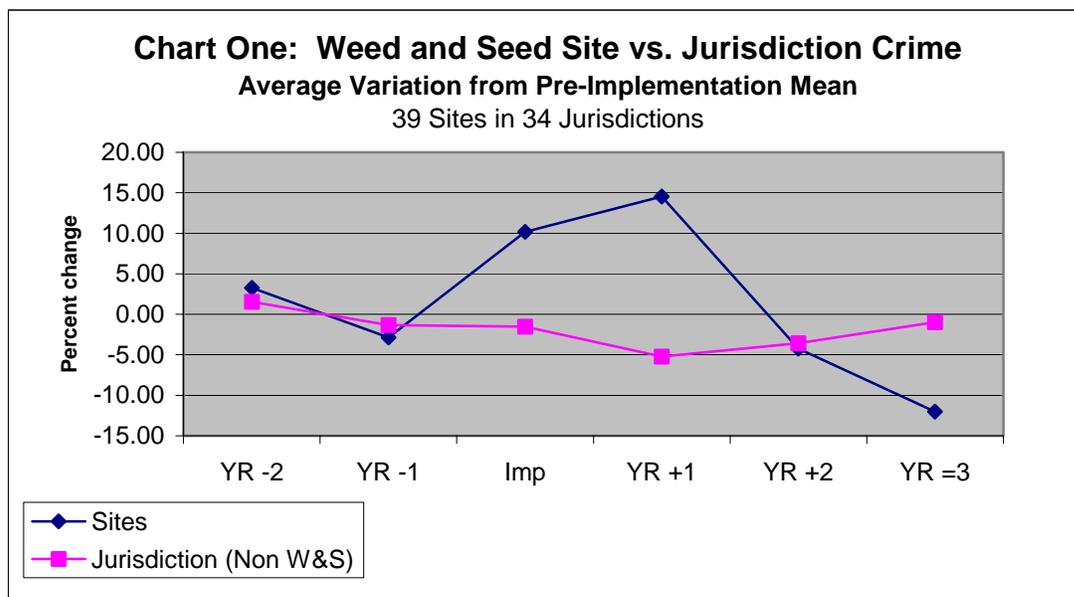
The analysis of data from these 20 Weed and Seed sites shows that this is in fact a normal occurrence. As seen in Chart One, reported crime increases, on average, during the year of implementation as well as in the first year following implementation.

Crime statistics respond not just to the level of offending in an area, but to law enforcement practices as well. Intensive law enforcement, as called for in the Weed and Seed strategy, often results in higher levels of reported crime, especially for crimes for which an arrest is a primary source for offense reporting (e.g., drug crimes).

Another reason for crime increasing in the implementation and following years is that residents' willingness to report crime to the police increases. One of the goals of any community policing strategy is to motivate local residents to become more involved in the crime fighting process by making them equal partners in identifying crime priorities and developing strategies to fight crime. With increased police manpower and community policing programs in Weed and Seed neighborhoods, more reported crimes are an expected result.

While crime continues to increase in the host jurisdictions in the second and third year after Weed and Seed implementation, in the third year it decreases in Weed and Seed sites. Further analysis shows that offense types for which reports are self-generated, either through the police knowledge of incidents (e.g., homicide) or victims (e.g., aggravated assaults), decline more quickly than crimes that are historically underreported (e.g., burglary) or the result of long-term or investigative activity (e.g., drug offenses or gang-related crimes).

Although tentative, this finding suggests that special police emphasis, community policing, and neighborhood cooperation with the police can have a positive impact, even in the toughest parts of town.

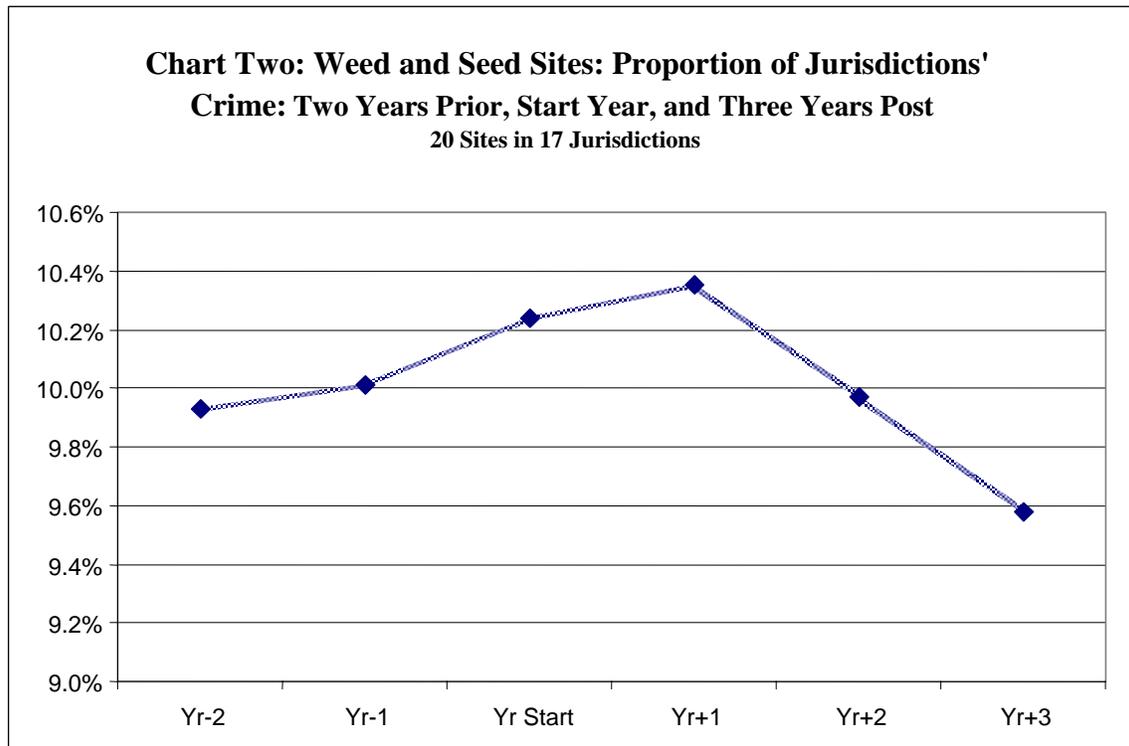


### PROPORTIONALITY – ANOTHER POINT OF VIEW

Chart Two uses another approach for analyzing Weed and Seed crime patterns. It examines crime trends occurring in Weed and Seed target areas as a percentage of overall crime for their respective jurisdictions. Weed and Seed sites account for a slightly increasing percentage of crime in the host jurisdiction in the year prior to the implementation of Weed and Seed. This variation is small and would certainly be within a normal range of variation.

In the year that Weed and Seed strategies are implemented, the percentage of crime occurring in the sites increases (as with the percentage change reported in Chart One). This is likely due in part to increased crime reporting resulting from intensive law enforcement activities and greater cooperation by residents in crime control activities.

For these 20 sites, the pattern of increasing crime continues for the first full year of operations following Weed and Seed implementation. This is a surprise. It may be that the implementation of the Weed and Seed strategy is more difficult than believed. However, in the second and third year, there is a sharp decrease in the Weed and Seed sites' proportion of crime. By the third year following implementation (that is, with four years of Weed and Seed operations) the proportion of crime committed in the sites is less than pre-Weed and Seed historical levels.

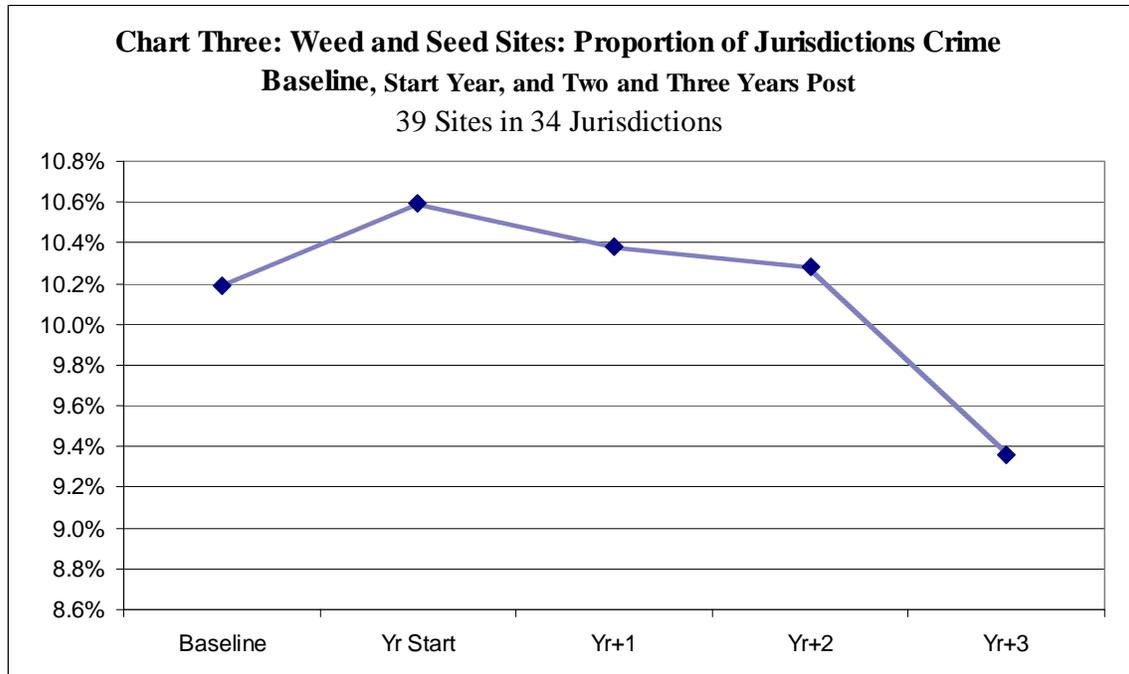


## FIVE- AND SIX-YEAR CRIME PATTERN RESULTS

Nineteen of the 98 sites (19.4 percent) provided five-year crime series. This included at least one year of baseline crime data, implementation year data, and at least two subsequent years of Weed and Seed operations crime data. When these 19 sites are combined with the 20 sites with full crime series data the analytical pool increases to 39 sites. This gives us an even more robust view of crime patterns in Weed and Seed sites and their host jurisdictions.

In many of the 19 Weed and Seed sites only one year of crime history is available. Therefore, in sites with two years of prior history available, the data are collapsed into a single “baseline indicator.” To establish the baseline, either the single year crime history is used, or, where two years are available, the average of the two years is used as the baseline.

Chart Three, below, validates and strengthens the positive finding for the 20 full reporting Weed and Seed sites. As expected, the proportion of crime in the sites as a percentage of the host jurisdictions’ crimes increase from the pre-Weed and Seed baseline to the year of Weed and Seed implementation. However, when the 39-site analysis is calculated, the proportion of reported crime attributed to the Weed and Seed sites declines in the first year after implementation. Furthermore, it decreases each year thereafter. In both the 20- and 39-site sample analyses, the greatest decrease in crime occurs in the third year following implementation (the fourth year of operations).



## WEED AND SEED CRIME PATTERN ANALYSIS BY TYPE OF OFFENSE

As seen earlier, while most Weed and Seed sites have illicit drug, violence, and firearms-related issues in common, they also have distinctive community conditions that result in the selection of different target crimes. This section explores the degree of success that Weed and Seed sites have had for different types of crime. For the 39 Weed and Seed sites with baseline crime measures and a minimum of three years of program activity, five types of crime are selected for time series analysis. These types are:

- Homicide
- Illicit Drugs
- Violence & Weapons (excluding homicide)
- Property Crimes
- Other Crimes (e.g., Gang Activity, Domestic Violence, Prostitution, etc.)

Chart Four shows the percentage of crime for each of these crime types occurring in the Weed and Seed sites versus the host jurisdictions (Non-Weed and Seed<sup>1</sup>). While the analysis for the “total crime” pattern (see Chart Three, above) shows that a Weed and Seed site’s proportion of jurisdiction crime increases in the initial year of operations, this “proportion of crime” analysis shows that the increase appears to be driven primarily by two types of crime.

The proportion of homicides and property crimes occurring in Weed and Seed target areas to the total jurisdictions’ crimes increases in the initial year. Illicit drugs, violence and weapons, and other crimes show no change or decrease in their proportion in the initial year. While homicide is unlikely to increase because of better crime reporting, local Weed and Seed residents seem more likely to report property crime once a Weed and Seed program starts. This makes sense, because a small change in reported property crime, which is a high volume activity, would cause “total” crime to increase within the initial and possibly even the second year of Weed and Seed operation.

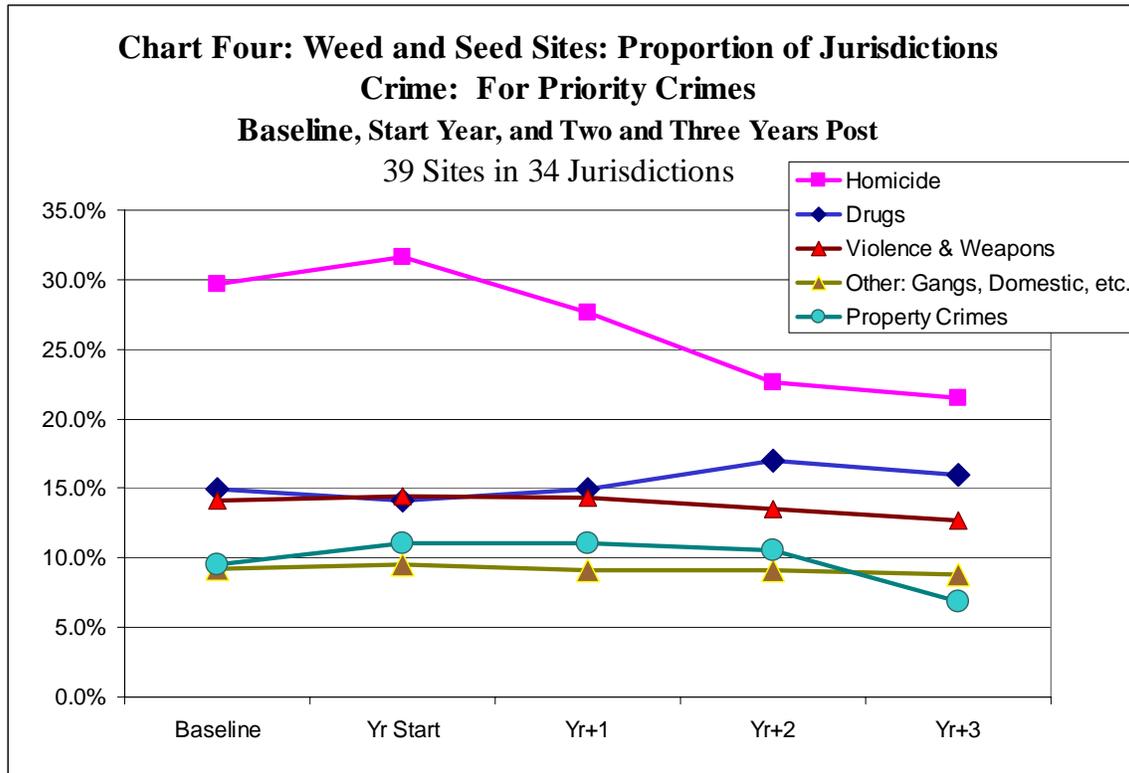
It is encouraging that of the five types of crime, three decrease proportionately in Weed and Seed sites from the onset. For the most part, once a Weed and Seed program starts, crime decreases more rapidly in the site than in the host jurisdiction.

The number of homicides in Weed and Seed sites prior to the initiation of Weed and Seed explains 30 percent of the host jurisdictions’ homicides. The proportion of homicides increases during the initial year of Weed and Seed program. This may be an indicator of the seriousness and persistence of the conditions in the communities selected as Weed and Seed target areas. Fortunately, the proportion of homicides occurring in Weed and Seed sites steadily decreases following the initial year increase. By the third full year of operations, homicides in Weed and Seed sites only account for 21.5 percent of the host jurisdictions’ homicides.

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<sup>1</sup> In this analysis, “jurisdiction crime” refers to crime for the entire jurisdiction excluding the Weed and Seed site. The parenthetical reference “(Non W&S)” is used to indicate this category.

Violence and weapon crimes, property crimes, and all other types of crime decrease as a percentage of the host jurisdictions' crimes as the programs in the Weed and Seed sites mature. Only illicit drug crimes show a different result. During the first full year of operations and for the next two years, the proportion of drug crime in the sites increases when compared to the host jurisdictions' figures.

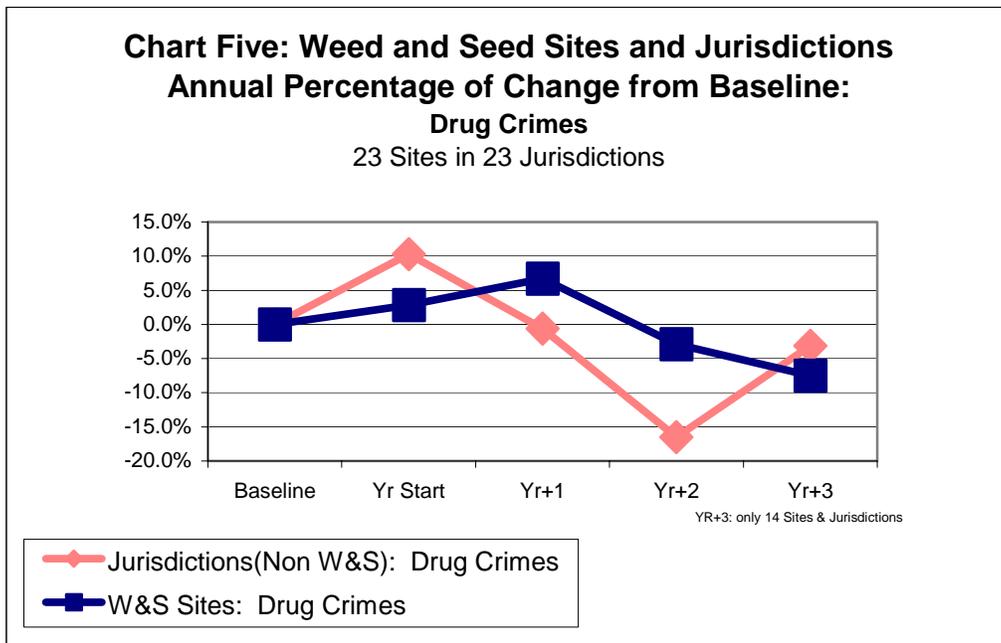


As seen in Chart Four, illicit drug activity may actually increase in Weed and Seed sites. When compared to the host jurisdictions, the proportion of illicit drug activity in Weed and Seed sites becomes higher over time. However, Chart Five, which examines the percentage of change from the baseline, shows that after increasing for the initial and first full year of Weed and Seed, illicit drug crimes decrease in the second full year of operation. While illicit drug crimes eventually decrease in Weed and Seed sites, the decrease in the jurisdiction precedes and is greater than the decrease in the sites until the fourth year of implementation.

Weed and Seed sites are commonly one of the most active illicit drug markets in the host jurisdiction, so it is not surprising that reported drug activity in the initial years of a Weed and Seed program increases. Weed and Seed uses a two-pronged law enforcement strategy. First, intensive law enforcement and investigative efforts address both the street level and "higher end" illicit drug trafficking issues. Then, at the same time, community policing is introduced into the neighborhood. Frequently local residents provide intelligence information on illegal drug and other criminal activities to community police

officers that they probably would not have otherwise given. The community police can either act on the “new tips” themselves or pass them on to specialized or investigative units. In either case, the volume of illicit drug cases increases in the early years of a Weed and Seed site because of increased law enforcement activity.

The interaction between the host jurisdiction’s illicit drug crime pattern and the Weed and Seed pattern creates some interesting possibilities. Is the strong increase in illicit drug cases within the jurisdiction related to the enhanced illicit drug enforcement in the new Weed and Seed site? Does enhanced drug enforcement cause a short-term displacement to areas other than the Weed and Seed site? While this speculation needs verification, the encouraging news is that by the second full year of the Weed and Seed project, illicit drug activity decreases in both the host jurisdiction and the Weed and Seed site.

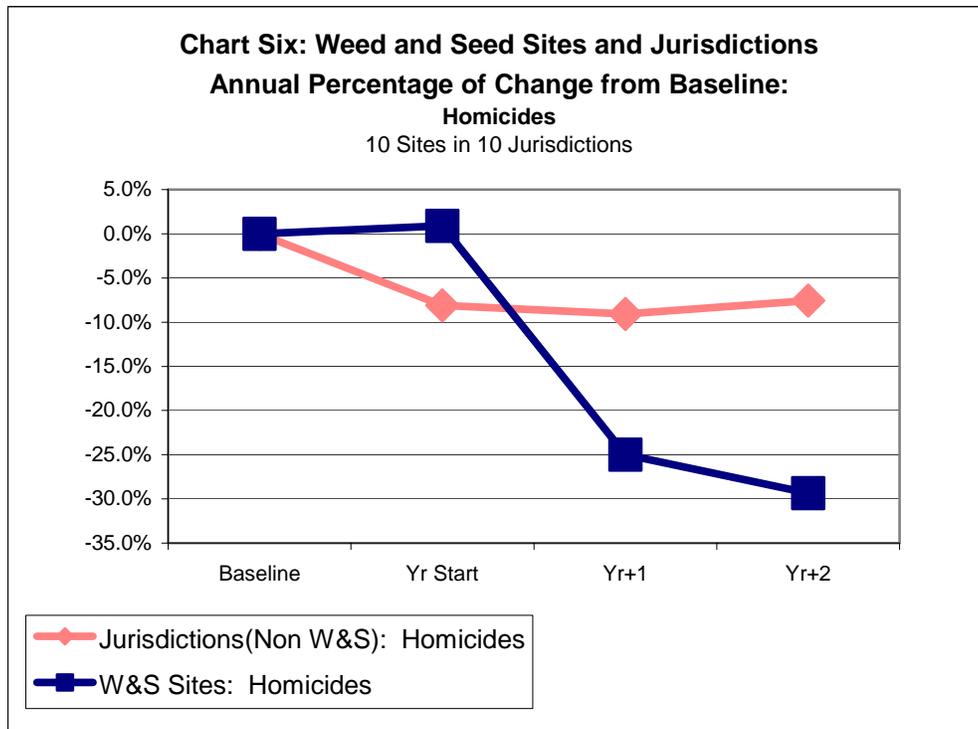


**OTHER ANALYSES BY TYPE OF OFFENSE**

The remainder of this study displays the annual percentage change for homicides, (Chart Six) violence and weapons (Chart Seven), property crimes (Chart Eight), and other crimes (Chart Nine).

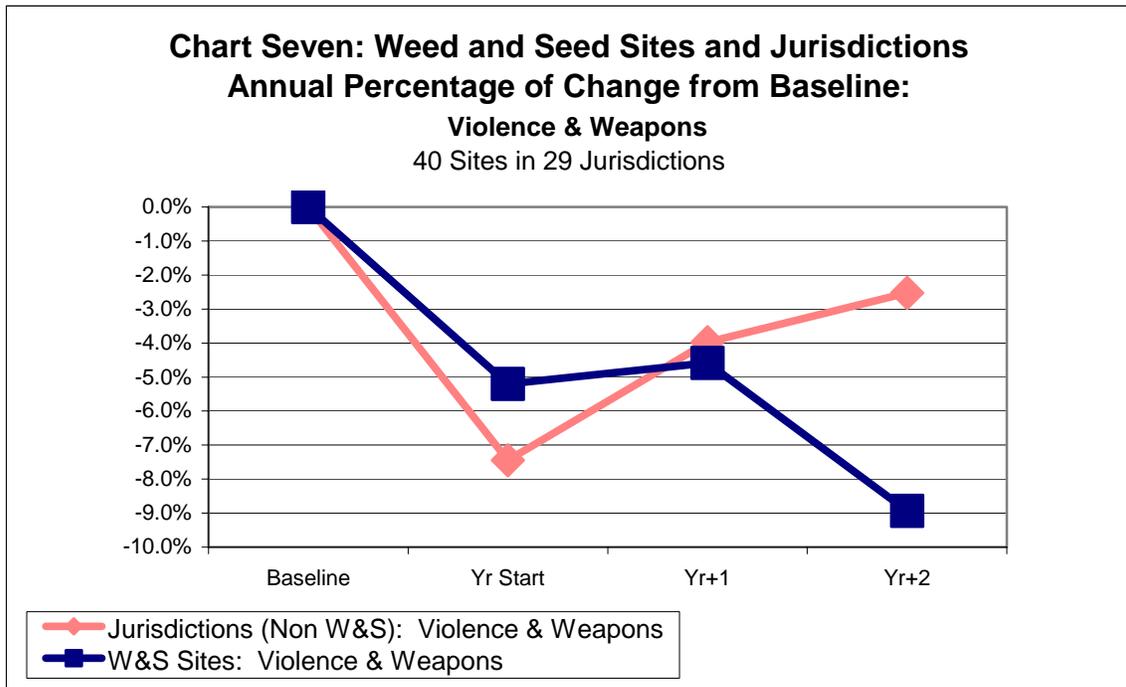
Homicides

In the first full and second years of Weed and Seed operations, homicides decrease substantially, by 25 percent in the first year and by another 30 percent in the second year. In the study sites, there were 166 homicides in the baseline years that preceded the initiation of the Weed and Seed program. During the year of implementation, the homicide count increased slightly to 168, and then decreased each year thereafter – 126 in the first full year of operation and 89 in the second year. This reduction, while dramatic, represents only 10 sites and jurisdictions. However, prior research shows a stronger than expected decrease in homicide when Weed and Seed is effectively implemented.



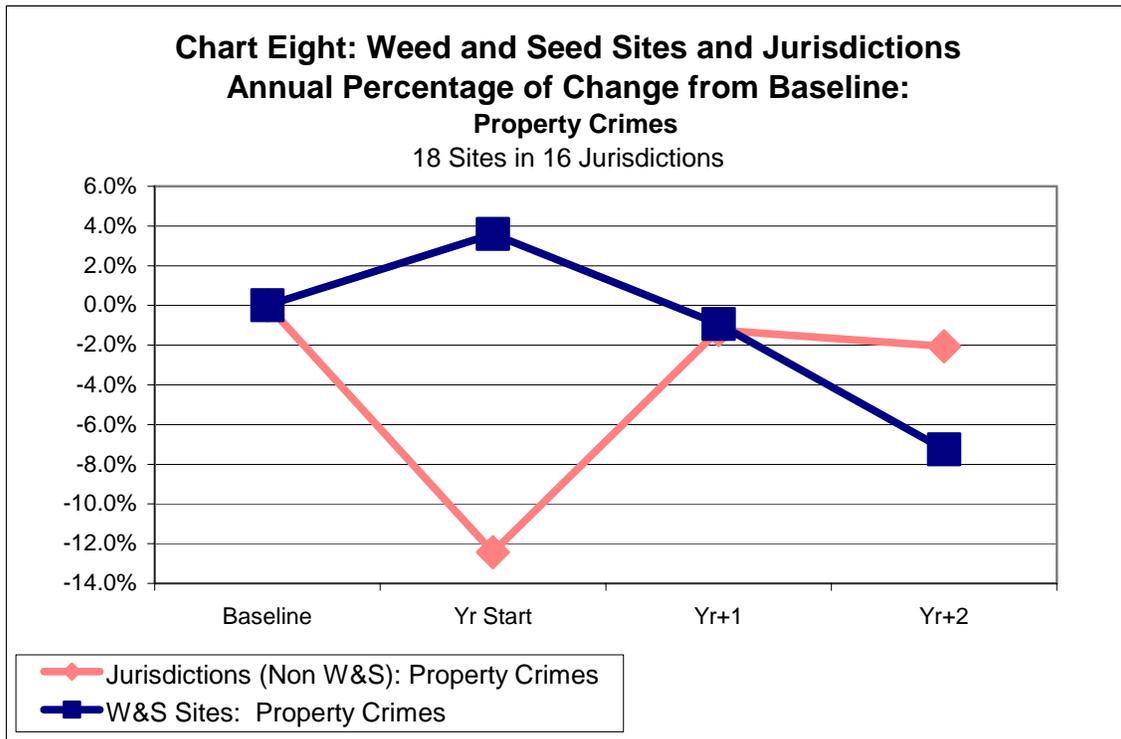
Violence and Weapons

Crime associated with violence and weapons decrease immediately once a Weed and Seed program starts. Violence and weapon crimes cited by Weed and Seed sites as target crimes include robbery, aggravated assault, drive-by shootings, home invasion, crimes involving firearms, and possession of firearms by persons prohibited. Crimes in Weed and Seed sites involving violence and weapons decreased 5 percent in the initial year, 5 percent in the first, and 9 percent in the second full year of operation.



Property Crimes

Property crime activity, like illicit drug crime activity, shows an increase in reported incidents during the year of strategy initiation at Weed and Seed sites. As community police increase their presence and improve communication with the residents, a new willingness to report burglaries, thefts from cars, and general thefts often emerges. After this initial increase, property crimes decrease slightly in the first full year, then by 7 percent, on average, in the second full year in Weed and Seed sites.



Other Crimes

Of the 39 sites with at least a five-year time series for Weed and Seed pre/post crime data, 19 of the sites reported crimes that do not fit into one of the categories already discussed. Six of the 19 Weed and Seed sites target prostitution as one of their target crimes of local interest. Five of the 19 sites target gang activity or juvenile crime. Three of the sites target domestic violence, while two sites target alcohol-related crimes, and two others target local ordinances, like loud noise and housing code violations.

While these crimes are not as serious as homicide, violent crime, and illicit drugs, they indicate how unique Weed and Seed site crime can be. As with drug and property crimes, reports of “other crimes” increase in the Weed and Seed sites in the program initiation year. As with drug and property crimes prior to Weed and Seed implementation, especially with its community policing component, many of these crimes went unreported. After the initial burst of activity, the results indicate that these issues of local interest decrease.

