

How State VOCA Administrators Can Use GIS

State VOCA administrators can use GIS in many ways. As an analytical tool, GIS can identify trends and patterns not discernible by tabular inquiries. An example would be exploring the relationship between addresses of applicants for crime victim compensation and locations of crime to learn whether an appropriate number of applications is being submitted from neighborhoods with high crime rates.

GIS facilitates data-driven decisionmaking. By using multiple-source data, administrators can analyze problems in greater depth. For example, integrating information on subgrants funded by VOCA victim assistance, the Violence Against Women Act (VAWA), the Centers for Disease Control and Prevention's Rape Prevention and Education Grant Program, and the U.S. Department of Health and Human Services, Family Violence Prevention Funds into one data warehouse can be key to developing a statewide financial plan for victim services. GIS can be used in operations by using its funding data to determine which organizations will receive VOCA victim assistance grants.

Because GIS can track changes over time, it can evaluate strategies. If a VOCA victim assistance administrator responds to requests for increased services in African-American communities by developing plans for delivering services and awarding grants to appropriate organizations, the administrator can track the use of services from those grants on a regular basis. If certain programs are accessed as expected and others are not, the administrator can use this information to ask questions about the patterns of use and explore further options.

Administrators can use GIS to disseminate information to advisory groups and the public and to conduct legislative analysis. GIS can be used to coordinate services with other agencies and organizations, as in child abuse investigation and treatment teams that include cross-jurisdictional involvement of law enforcement, prosecution, child protective services, and health and mental health services.

In summary, GIS can be a valuable tool in helping administrators implement a comprehensive and seamless service delivery system for crime victims.

How Administrators of VOCA Victim Assistance Can Use GIS

Several factors can influence where and why crime occurs, including the distance from an offender's residence, familiarity with his or her surroundings, and accessibility to and knowledge of the victim (www.ojp.usdoj.gov/cmrc/briefing_book/whymap.html). Therefore, mapping incidents of crime, locations of crime victims, and potential crime hot spots can help in making decisions about where to locate victim services.

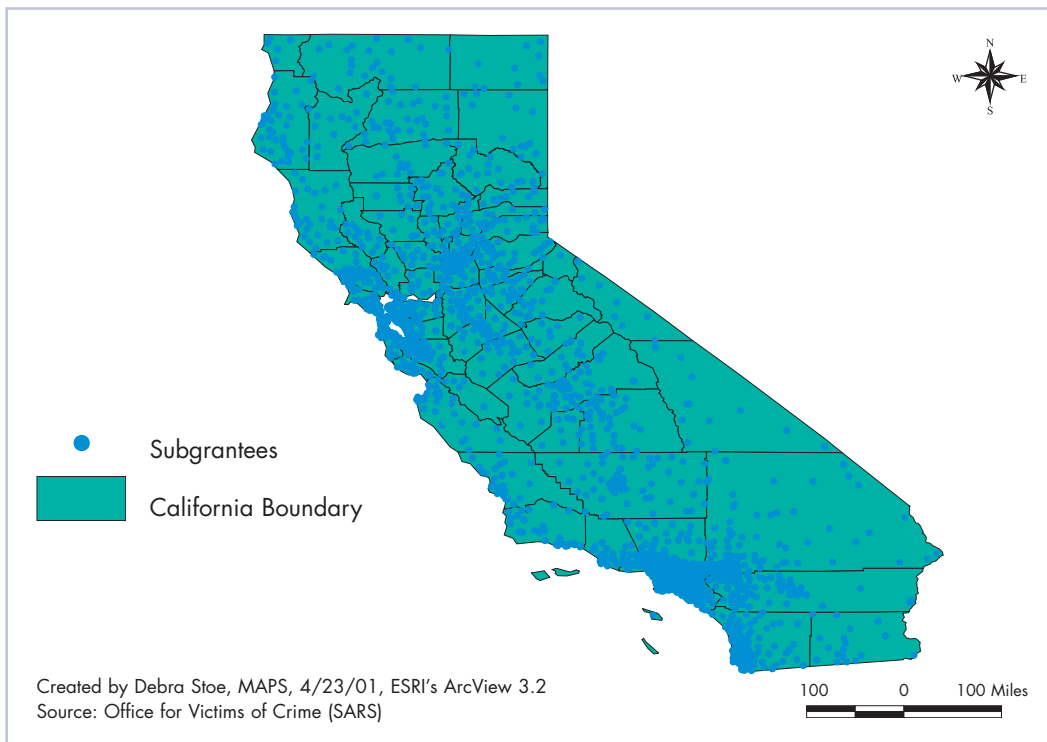
As previously mentioned, one of the more recognized GIS capabilities is its visual display of information. For many individuals, information that is spatially displayed is more easily communicated and understood. GIS can improve presentation of information at planning, policy, and funding meetings by displaying the information in various formats, such as maps, reports, and tables accompanied by descriptive narratives.

To illustrate mapping crime victim services as an administrative tool, the State of California is depicted in exhibits 9 and 10. The data source used is the OVC SARS database. Subgrantees are geocoded by their ZIP Codes using ESRI's ArcView 3.2 software. Using a pin map, one can identify areas where available services are more densely located (exhibit 9). This overview of the state is a starting point that will provide information to further develop regional analysis.

Victim assistance administrators can plot the catchment areas of victim service providers on a map along with the victim population groups served. Overlaying this information with the types of crimes committed can help determine what additional services are needed in which locations for underserved groups.

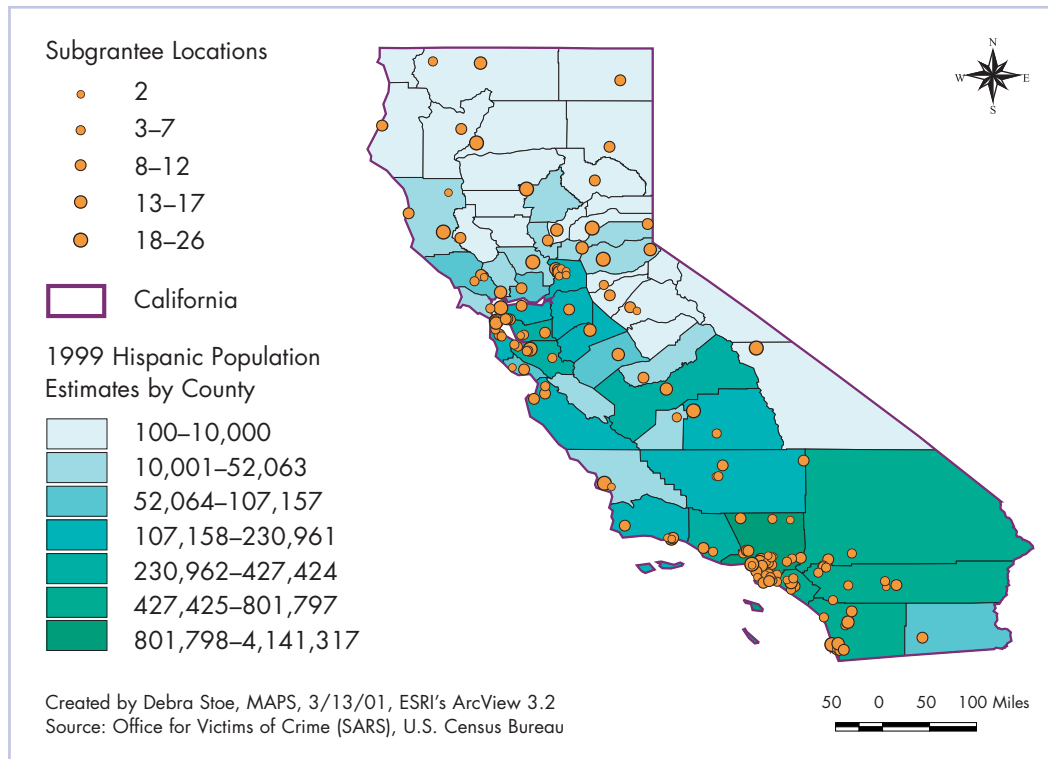
For example, areas with many reports of crimes against the elderly may need specialized services. Using law enforcement crime reports and calls-for-service information, VOCA

Exhibit 9: Locations of Subgrantees in California



Disclaimer: This map represents 206 ZIP Codes and 82 percent of the California subgrantees.

Exhibit 10: 1999 California's Hispanic Population and OVC Subgrantees



Disclaimer: This map represents 206 ZIP Codes and 82 percent of the California subgrantees.

administrators can examine areas where the greatest density of these incidents occur and overlay this information with the locations and use rates of existing victim services, senior housing, senior citizen centers, meals-on-wheels programs, and other services. VOCA assistance administrators can use this information to work with these organizations to establish needed services.

When administrators must manage or coordinate multiple funding sources that cross legal boundaries (e.g., states, Indian Country, neighborhoods, or cities), GIS can help them better allocate the funds by creating a map of current funding and developing other maps to demonstrate statewide coverage of victim services. This is done by using GIS to reconfigure the distribution of funds. Using the previous example of crimes against elders, victim services funding can be coordinated with other funding for elder services to create a more accessible and victim-friendly system.

In exhibit 10, GIS mapping reveals how accessible services are to minority crime victims. It shows estimates of California's Hispanic population and the locations of subgrantees. Administrators can use this information to determine which programs must have the bilingual and bicultural capacity to provide services to this ethnic group.

A GIS containing census data on Hispanics, African-Americans, Asians, and Native Americans can help administrators plan for delivery of services in these communities. This information can be linked to other maps with specific features, such as jurisdictional boundaries, public transportation routes, sites accessible to people with disabilities, and geographic terrain that complicates service delivery. Administrators can use this information to plan service development and outreach.

In the next map, we move from a state to a much smaller area, the City of New Haven, Connecticut (exhibit 11). This map shows the locations of VOCA-funded subgrantees and raises questions about what other services are available for crime victims. Additional research resulted in the new map (exhibit 12), which shows 21 additional service locations, reflecting much greater coverage.

To provide a comprehensive picture of available services, additional contextual mapping could add layers of provider agencies' service areas and of the public transportation system in relation to courts, police stations and substations, and residential areas.

The next example shows the location of VOCA subgrantees covering the states of California and Nevada in a variation on the pin map (exhibit 13). Graduated symbols are used to

Exhibit 11: Locations of 1997 and 1998 Subgrantees in New Haven, CT

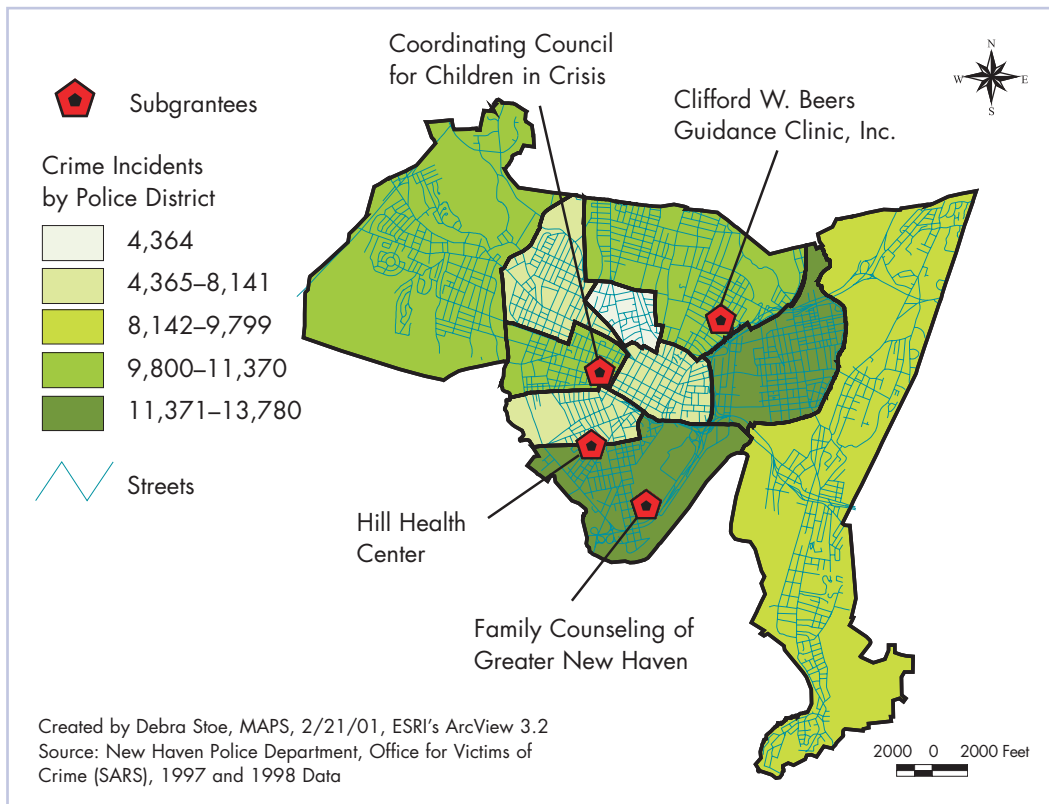


Exhibit 12: Locations of VOCA and Other Service Providers in New Haven, CT

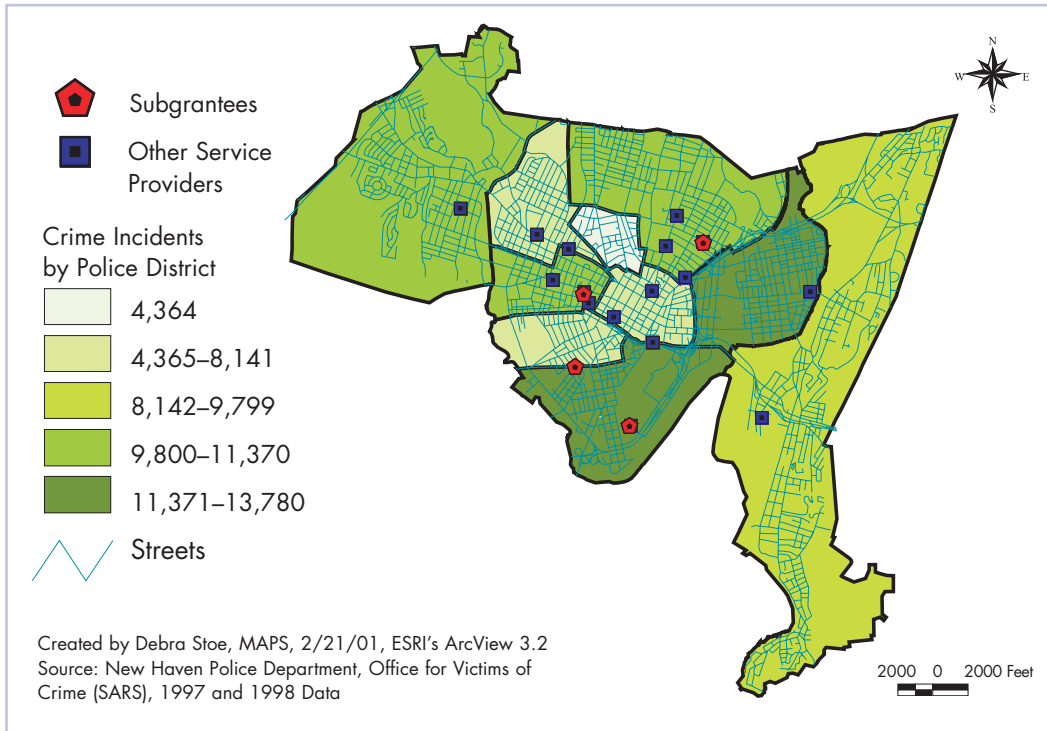
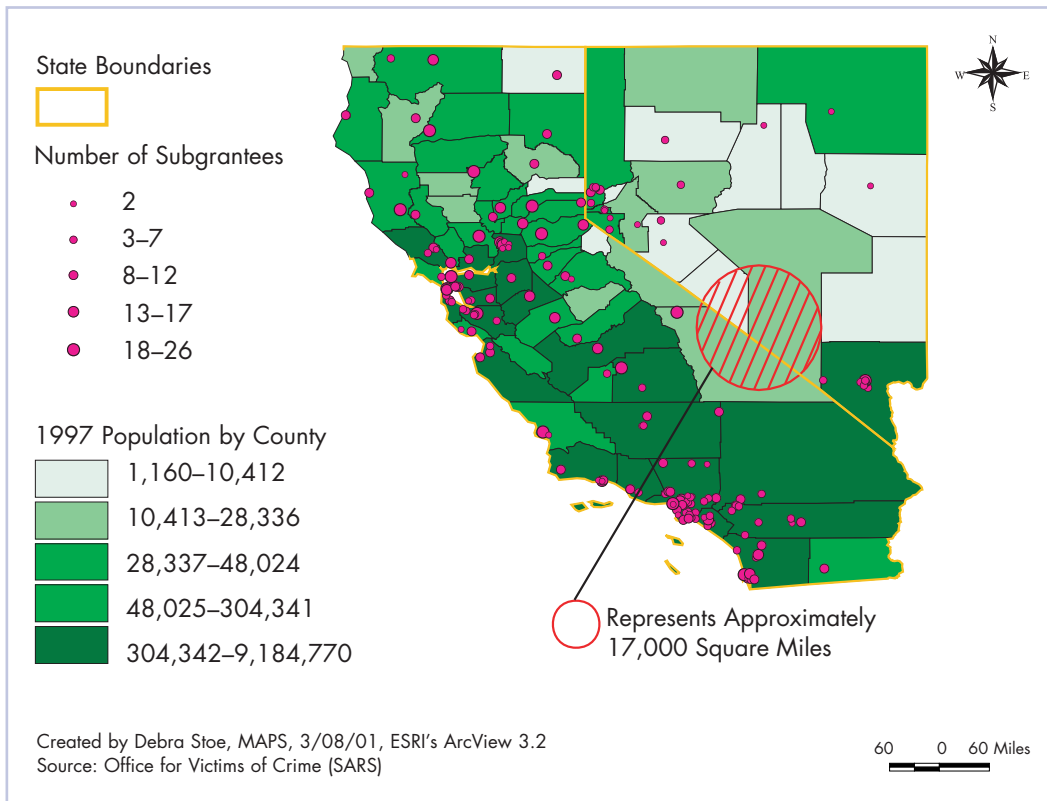


Exhibit 13: Identifying Coverages Across California/Nevada State Boundaries



Questions To Consider (Exhibit 12)

- ▶ What crime victim populations do these providers serve?
- ▶ What is the service area of each provider?
- ▶ Do the services meet the needs of the population based on the types of crimes committed?

indicate ZIP Codes that contain more than one subgrantee. The larger the circle, the greater the number of points located within the polygon. In this case, the number of subgrantees within a ZIP Code varies from 1 to 26. Five different sizes of circles are used to indicate various groupings (0–2, 3–7, 8–12, 13–17, 18–26). This map uses 169 geocoded ZIP Codes.

Bordering states that do not share information are limited in their ability to ascertain whether adjacent geographical areas are adequately served. Communicating and sharing spatial data across state boundaries and between agencies minimizes the duplication of services, allowing administrators to maximize services to areas where the rate and types of victimization exceed the services available. Conversely, noted in this map is a 17,000-square-mile area with no visible subgrantee—a point of consideration for both California and Nevada administrators.

Exhibit 14 is another example of an effective use of maps. It shows three images of Nevada that show changes in population by areas of the state. Note the results of slow but steady growth between 1990 and 1999 in the northeast and southwest. This information can affect decisions on how best to allocate funds statewide.

With GIS, an administrator could quickly add several years of population data with service locations

Questions To Consider (Exhibit 14)

- ▶ Are services being expanded in areas with increased population?
- ▶ Does funding have to be reallocated? If so, what happens if some communities lose funding?
- ▶ Do the changes in population coincide with changes in population in bordering states?
- ▶ Can service providers be shared?

to discern whether the population density has increased or decreased in proximity to services provided, possibly explaining a change in victims served. An overlay indicating recent changes in transportation routes could explain why there had been an increase in those seeking assistance. GIS can quickly produce multiple scenarios by integrating and overlaying disparate datasets, allowing for a wide array of possibilities for analysis and support for strategic planning.

Exhibit 14: Nevada’s Changes in Population

