

License Plate Readers: Policy and Operational Guidance for Law Enforcement Project Summary Highlights

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International Association of Chiefs of Police

Project Scope

This report is based on the findings of a National Institute of Justice (NIJ)–supported study on law enforcement use of the LPR. The goals of the project were to articulate, document, and disseminate the real-world LPR implementation challenges and successes faced by law enforcement agencies and to identify and disseminate successful LPR initiatives from a lessons learned perspective.

Project Design / Information Collection

Several data collection techniques were used to gather data for this project, including: conducting site visits to interview law enforcement practitioners and observe their LPR system in use; reviewing documents and policies; and conducting a survey.

The purpose of the surveys and site visits were to determine the scope of the current LPR implementation, deployment, and usability issues at local, state, and tribal agencies both quantitatively and qualitatively. Specifically, could we determine the following;

1. How is LPR being used by law enforcement agencies in the United States?
2. How many law enforcement agencies in the United States have installed LPR?
3. What have been some of the challenges, both policy and technological, that law enforcement agencies have faced since installing LPR?
4. Are there any differences in law enforcement's use of LPR data based on size, type, or location?
5. How many law enforcement agencies in the United States that installed LPR have a formal policy in place?
6. What is the most common type of LPR system (mobile, fixed, portable) used?

Survey

A stratified random sampling of 500 agencies was surveyed in October 2009 to determine the scope of the current LPR implementation, deployment, and usability issues at local, state, and tribal agencies both quantitatively and qualitatively.

The survey was conducted in two phases. During the first phase the agencies were contacted to determine whether or not they were using a LPR system and if so, who the program point of contact was. The full questionnaire was distributed in the second phase to agencies who had responded in the affirmative and to those who were either unsure or did not respond during the initial contact.

Agencies were given a choice between completing the survey electronically or by paper copy.

Site Visits

Based on the survey results and agency interest in participation, twelve agencies were identified as site visit locations. Implementation and use of the LPR system for a minimum of twelve months was required in order to be considered for site visit selection agencies. Geographical location was also a consideration in choosing the site visit location along with the LPR system type (fixed/mobile). The

agencies chosen are a representative sample of size and agency type. Site visits consisted of interviews and a demonstration of the LPR system.

Interviews. Interviews were conducted with personnel who played key roles in acquiring, implementing, supervising and using the LPR system to learn about and document the challenges, “successes”, strategies for implementation they used, and to discuss departmental policies on LPR. Personnel interviewed included command staff with oversight of the LPR program, LPR operators, IT staff, and crime analysts.

Summary of Findings

Total Agencies Surveyed: 507

- Agencies using LPR: 74
 - Only 40 of the agencies who responded “Yes” were able to complete the survey. The findings in the rest of this summary reflect that number.
- Agencies not using LPR: 264
- Did not respond: 169

Agency Characteristics

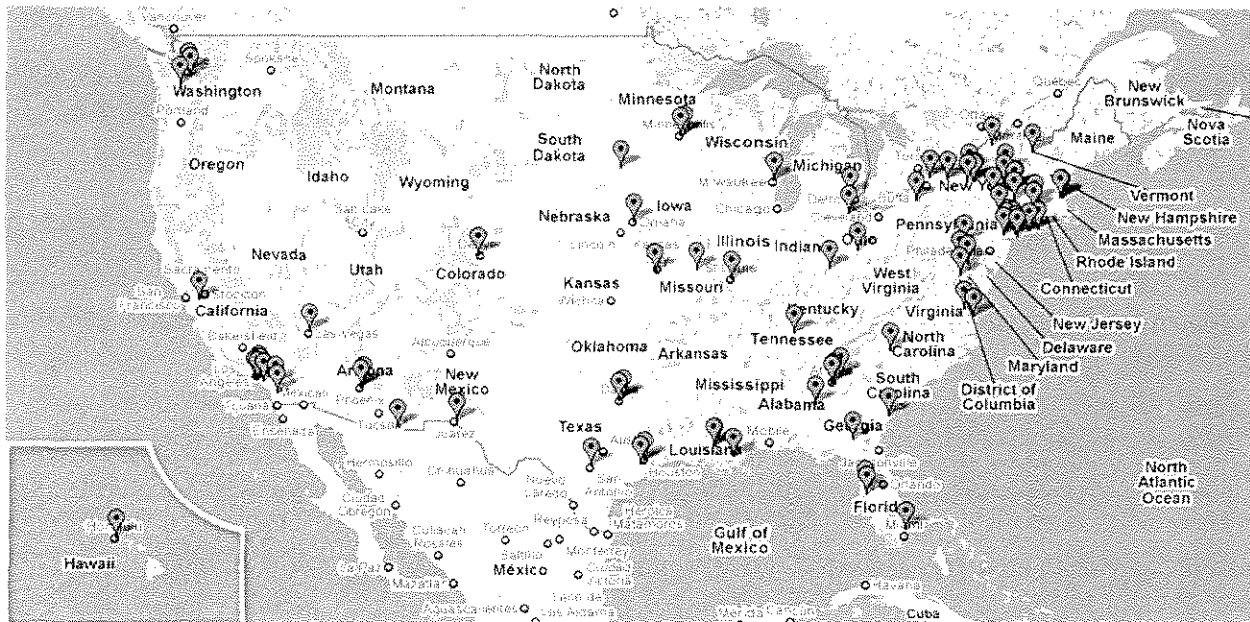
Agency Use of LPR by:

Total Sworn

- 25 – 49: 17.5% (7)
- 50 – 99: 12.5% (5)
- 100 – 249: 12.5% (5)
- 250 – 499: 5% (2)
- 500 – 999: 25% (10)
- 1000+: 27.5% (11)

Type:

- Municipal: 60% (24)
- Sheriff: 22.5% (9)
- State: 17.5% (7)



Geographic representation of LPR use by agencies in project

Operational Use Summary: How is LPR being used by law enforcement agencies in the United States?

LPR Systems

Mobile LPR was the most commonly used system with 92.5% of the agencies using that system, followed by fixed at 17.5%, and portable at 7.5%.

A few notable items about use of fixed systems

- 5 of the 7 agencies had 1000+ sworn and used a combination of mobile and fixed
- The exceptions;
 - Roseland (25-49) – uses LPR only for homeland security purposes focusing on a specific corporation
 - Sugarland (100-249) – no notable reason

Strategic Operational Plan

Do agencies have a strategic operational plan?

- Yes: 6 (all had policy except 1)
- No: 25 (14 had no policy and none in process/planned)
- In process/planned: 8
- Don't know: 1

What was the initial reason for acquiring LPR?

- Auto theft (prevention and recovery): 62.5% (25)
- Vehicle & Traffic enforcement: 27.5% (11)
- Investigations: 25% (10)
- Warrants: 5% (2)
- Intelligence gathering/Homeland security: 5% (2)

- Robberies: 2.5% (1)
- Parolees: 2.5% (1)
- Sex Offenders: 2.5% (1)
- Identify vehicles of interest/wanted vehicles: 12.5% (5)
- Additional reasons
 - Intelligence-led policing
 - Increase general patrol effectiveness

Are agencies expanding their use of LPR?

- From **original** purpose?
 - Yeses: 52.5% (21)
 - No's: 37.5% (15)
 - No responses: 5% (2)
 - Don't know: 5% (2)
- 24 agencies have noted that they plan on continuing the expansion of their current LPR capabilities

How are the agencies **currently** using their LPR system?

- Auto-theft: 82.5% (33)
- General Investigative efforts: 70% (28)
- Vehicle & Traffic enforcement: 50% (20)
- Crime Analysis: 32.5% (13)
- Narcotics: 27.5% (11)
- Smuggling: 10% (4)
- Gang Enforcement: 20% (8)
- Other
 - Amber Alerts
 - Parking Enforcement
 - Homeland Security Initiatives

How effective do the agencies feel their LPR units are?

- Ratings
 - 5: 17.5% (7)
 - 4: 47.5% (19)
 - 3: 15% (6)
 - 2: 7.5% (3)
 - 1: 2.5% (1)
 - I don't know: 5% (2)
 - No response: 5% (2)
- Are there any common factors that can potentially account for these ratings?
 - Type of system?
 - No discernable effect
 - Size of agency?
 - No discernable effect
 - Length of deployment?
 - No discernable effect
 - Purpose of LPR

- Agencies with very specific targets (i.e. auto theft and investigations) rated the effectiveness of their LPR system lower than those who noted a range of uses for their LPR (

What have agencies found to be the business value?

- Increase in stolen vehicle recoveries: 67.5% (27)
- Compare against agencies that indicated they were using LPR for auto theft
- Increase in arrests: 55% (22)
- Increase in productivity by officers: 50% (20)
- Increase crimes solved by using the LPR data: 35% (14)
- Compare against agencies that indicated they were using LPR for auto theft
- Other (please specify): 20% (8)
- I don't know: 7.5% (3)

Part of a regional system:

- Yes: 42.5% (17)
- No: 57.5% (23)

It should be noted that while 60% of all agencies using LPR noted that they do share data with other agencies, regardless of whether or not they are part of a regional system.

LPR Policy Summary

Of the agencies surveyed 47.5% (19) had a policy and 15% (6) were in the process of developing or planning one. Common policy elements include:

- Data Access: 68% (17)
- Data Sharing: 44% (11)
- Data Quality: 16% (4)
- Data Retention: 48% (12)
- Operational deployment: 15% (6)
- Other: 16% (4)
 - Data use, training
 - Retention
 - Data Sharing Summary

One of the biggest challenges in developing policy is determining the retention schedule and results ranged from no retention of data at all to indefinite. Some of the considerations agencies took when developing their retention schedule included:

- Why they were using LPR
 - E.g. Auto theft, investigations
- Public opinion vs. agency needs
- Advice from their legal departments
- Established state, local, and departmental protocols
- Technological and financial costs of storing data
- System type
 - Fixed systems generate greater numbers of data than mobile or portable since their feed is 24/7/365.

- How long the information is viable to their needs

Top 9 Agency Lessons Learned

1. Protocol and policy are important: you must define your business needs before writing your policies and procedures and your policy and procedures should be consistent with your business needs.
2. LPR system is only as good as the data it contains – this applies both to the quality of the hotlists and to the reads captured.
3. IT Support and ongoing involvement is absolutely essential.
4. Pre-planning is beneficial, especially in establishing relationships with all requisite partners (utilities, installers, etc.)
5. Fixed installations require a great deal of coordination with all involved parties.
6. Photos (contextual or overview) are absolutely invaluable to investigators. Agencies should give care to remember that they may be used as evidence and so should ensure that the LPR data file is handled accordingly
7. Use Wildcards frequently
8. Remember to check victims
9. Data sharing is the key

Some Specific Success Stories

Remembering Victimology 101

ATM business owner who carried large amounts of cash and serviced ATMs was robbed and murdered. Witness gave description of vehicle as Green Mitsubishi with gold rocker panels. No plate info was available. The agency had a series of fixed LPR cameras and looked for any captures in the area of the crime but couldn't find an LPR capture and photo consistent with the suspect info. Investigator decided to run the *victim's* plate and found several hits. Then they went back and looked at vehicles that passed by after the victim's plate was captured. They quickly found a vehicle matching the suspect vehicle description. Because the information had been gathered by an LPR unit, there was license plate information that provided a critical lead. It also provided evidence that the suspect had been planning the attack and following the victim. The information gained from the LPR capture led to an arrest and prosecution for the homicide.

Using LPR Data to Generate Leads

The parish had a drive-by shooting incident that occurred in an area covered by fixed cameras. There was a general description of the car but no plates provided. Detectives came in and started pulling photos from the fixed cameras for the area. Found a photo of a car matching the description and the car was in *pristine condition*. Found another photo of the car taken later and the car had a rear window that had clearly been shot out. This led detectives to a rental car agency and the recovery of the suspect vehicle as well as the identification of the person who had rented the car used in the crime.

Locating a Missing/Endangered Adult

An associated vehicle was included in a broadcast for a missing adult, 67 years of age, suffering from mental illness. A detective from the Auto unit ran the registration through the LPR system history and discovered that the tag was read 6 times in the last few days within a concentrated area. The detective notified the patrol officer assigned to that district who began to search the area. The victim was quickly located and was in a severe state of dehydration. He was transported to the hospital and family was notified.

Addressing Scofflaws

One agency faced a significant scofflaw and parking problem as their jurisdiction included a number of public beaches. Addressing parking scofflaws was a key part of the initial LPR roll out and continues to be a major benefit to the city. (Under state law, vehicles with more than five or more unpaid parking citations may be impounded.) In one month alone, a concentrated parking sweep resulted in the impound of 338 vehicles and fines exceeding \$200,000. Since the city operates its own tow yard, there was also significant revenue realized in the form of tow and storage fees. On average, the city continues to net well over \$100,000 per month as a direct result of parking scofflaws identified by LPR. The total scofflaw revenue attributable to LPR utilization thus far is well over \$1M.

Note: Many agencies have credited their LPR system with an increase in recovering stolen vehicles; however the actual success was difficult, if not impossible, to determine since the use of LPR is often not specifically noted in reports.