Locating Justice – The Power of GIS in Law Enforcement

PrepTech Talks

Powered by NAPSG Foundation

March 13th, 2024

National Alliance for Public Safety GIS (NAPSG) Foundation

napsgfoundation.org | @napsgfoundation
Webinar Prep

• Due to the large attendance, all participants are muted for the duration of the session to prevent background noise.

• Please use the Q&A functionality within Teams for questions that are relevant to the whole group.

• We will address these Q&A throughout the webinar!
After the webinar

The recording and slides will be made available.

- Materials will be emailed to those who attended.
- Materials will also be posted on the Events Page of the NAPSG Website.

Q&A responses will be posted on the event page.
Agenda

01
Introduction
NAPSG Foundation

02
GIS in Law Enforcement
Shelby Roberson
Matt Harris

03
Closing
NAPSG Foundation
01 Introduction
About NAPSG Foundation

• 501(c)(3) non-profit organization established in 2005
• +20,000 members: Public Safety Officials, Operators, and GIS Staff
  Mostly in the US, but spans the globe
• All training, tools, best practices and other resources provided at no cost
NAPSG Foundation Mission

**Advance Geospatial**
technology and capabilities for and with the public safety community

**Foster Adoption**
of geospatial tools, information, and best practices for planning, daily operations, and disasters

**Bridge the Gaps**
across agencies and disciplines, to better protect the communities they serve
How Do We Do It

- National Guidelines and Standards
- Exercises & Simulations
- Education & Training
- Tech Assistance
- Transferring knowledge and skills
- Building capacity in using innovative technology
- Fostering regional collaboration through implementation
- Defining and promulgating consistent best practices
Attendees

Total Participants

163

*May include duplicates that attended multiple events or exclude those who did not provide location details.
GIS in Law Enforcement

Shelby Roberson
Matt Harris
LOCATING JUSTICE
THE POWER OF GIS IN LAW ENFORCEMENT

SHELBY ROBERSON - MONTGOMERY COUNTY (MARYLAND) POLICE DEPARTMENT
MATT HARRIS – CITY OF SANTA ROSA (CALIFORNIA) POLICE DEPARTMENT
ABOUT MCPD & SRPD

**SRPD**
- 200 sworn
- 70 professional staff
- 9 beats
- 41 sq mi
- 177,000 people

**MCPD**
- 1300 sworn
- 650 civilian
- 6 districts/stations
- 507 sq mi
- 1.06 million people
OUTLINE

- Why GIS?
- Examples of what we do with GIS in our respective police departments
  - Simple/less licensing required to more complicated/more licensing required
- A few notes about data
- Caveats and Issues
- Questions
WHY IS GIS/MAPPING SO IMPORTANT?

- Nearly everything has a “where” component
  - CAD data, RMS, addresses, beats/regions, districts, you name it!
  - Take advantage of XY coordinates or addresses
- Identify patterns, trends, and correlations
- Useful for predictive analysis
- Provides data-driven insights for things like resource allocation, understanding populations/communities served
GIS IS ONLINE
ARCGIS ENTERPRISE/PORTAL & ARCGIS ONLINE

- Static PDF/image maps become outdated the moment they are created

- Online maps allow you to interact – zoom, read pops-ups, symbolize, control scaling, labels, etc

- Give the power to the end user through functional applications

- Can connect to your secure, centralized data sources
START SIMPLE - COMPARE STATS (COMPSTAT) MEETING MAPS

- Interactive map used in weekly comp stat meeting
- ArcGIS WebApp Builder
- Hosted in ArcGIS Online – no PII, publicly-accessible data
SCPSC DAT - MAP MODULE DATA

- Interactive map used to query Records Management System (RMS) and CAD data
- ArcGIS WebApp Builder
**DAILY THEFTS FROM AUTO**

- Updated each morning at 5am
- Interactive Portal map + emailed PDF map

---

**Thefts from Auto & Theft Parts from Auto**

14 Aug 2023

**Incidents**
- Past 24 Hours (12)
- Past 3 Days (29)
- Past 7 Days (55)

---

Data Source: Calls for service
Final Disposition: UCR codes: 0614, 0615, 0624, 0625, 0626
Cash-2 and Dash-4
Data refreshed daily at 5am

---

See attached file [click here](#) to view the interactive map.

Please email questions or concerns to Shelby Roberson
DAILY THEFTS FROM AUTO

- Interactive map built in ArcGIS WebApp Builder (to be retired 2025)
- Can view details about individual incidents
- Can export table
- Can click links directly to CAD or RMS incident page
SRPD - THEFTS\RECOVERY OF MOTOR VEHICLES

- Updated via web app by Auto Theft Task Force, Interactive Portal shared to all allied agencies
TACTICAL CRIME INFORMATION CENTER (TCIC)

- Built in ArcGIS Dashboards
- Pop-up window uses Experience Builder. User must agree to terms.
- All widgets are interactive with each other
- Allows users to query
- Graphics update based on data
- *Future release will allow CSV export
TACTICAL CRIME INFORMATION CENTER (TCIC)

- Built in ArcGIS Dashboards
- Pop-up window uses Experience Builder. User must agree to terms.
- All widgets are interactive with each other
- Allows users to query
- Graphics update based on data
- *Future release will allow CSV export
OPEN CALLS FOR SERVICE DASHBOARD

- Built with ArcGIS Dashboards
- Connects to CAD Oracle database via a SQL Server view
- Updates near-real time
OPEN CALLS FOR SERVICE DASHBOARD

- Widgets connected to each other
- Used heavily by command staff
Great for multiple programs
- Etch & Catch catalytic converter program. Populate vehicle info from VIN
- Trespass agent letter locations
- Field interview reports – scan driver’s licenses!
- Homeless camp locations
- Complaints/Compliment forms
- Security camera program
- Casualty form
- Tracking overdose info
- Public sign-up for ride alongs
Residents can register their private security cameras (Ring, etc) with MCPD
$250 rebate per camera
PUT IT ALL TOGETHER: SECURITY CAMERA REGISTRATION

Must live in a priority area – determined by GIS analysis of incidents
PUT IT ALL TOGETHER: SECURITY CAMERA REGISTRATION

- Instant App used to determine eligibility
User fills out Survey123 form and receives email
PUT IT ALL TOGETHER: SECURITY CAMERA REGISTRATION

- MCPD employees verify applications using S123 and Dashboards
- Experience Builder used to check statuses.
PUT IT ALL TOGETHER: SECURITY CAMERA REGISTRATION

Dashboard to disseminate results

Applications Submitted: 234
Applications Approved: 144 (62% of total)
Applications Denied: 52 (22% of total)

Committed Funds: $23,775.55
Remaining Funds: $232,224 (90.71% of total allocated)
SRPD PATROL BEAT DASHBOARD

- View / Manage long term focus areas
- Manage responses to citizen complaints and patrol beat projects
- View officer-initiated activity and engagement opportunities
- Find known offenders for searches and warrant service
- Visualize existing and future Automated License Plate Recognition (ALPR) and security camera locations
- Explore and develop Problem Oriented Policing strategies
Data Led Policing Initiative - Patrol Beat Dashboard

**Add Beat Complaint**

South Park Area - 2/29/2024

- Reckless driving (Donuts), speeding, stop signs
- Speeding & No stopping for cross walk, speeding

**New - Bellevue Ave & Slt Ave & Tenimsay**

- 3/15/2023

**Complaint:** Reckless driving (Donuts), speeding, stop signs

**Time of Day:** all

**Day of Week:** Weekends, Weekdays

**Complainant:** South Park Coalition

**Assigned Officer(s):** Traffic Beat 8 Officers and Traffic

**Patrol Strategy:** Conduct Extra Patrol in the area for visibility / Speak with Community Members, and take appropriate enforcement action on traffic violations.

**Patrol Notes:**

[Edit]
SRPD PROPERTY CRIME REVIEW PANEL

- Review recently reported property crime Events and Reports
- Clean/summarize data for better search retrieval
- Tag reports as part of a Trend, Pattern, or Series
SRPD Property Crime Review Panel

Event 1:
- Date Reported: 3/3/2024 08:19
- Last Secure: 3/2/2024 2000
- Add time: 3/1/2024 0740
- Event Type: 10851 STOLEN VEHICLE
- Offense: 10851(A) VC (FEL) THEFT OF VEHICLE
- Address: 2223 McBride Ln Willow Tree Apts
- Premise: PARKING LOT / GARAGE
- Status: FELONY
- Notes: Vehicle was parked on the street and stolen from 1851 Salem. Unknown suspect.
- Owner: 3/4/2024 10:20 AM
- Edited by: 3/4/2024 10:20 AM
- Pattern/Series/Trend: FELONY

Event 2:
- Date Reported: 3/2/2024 12:22
- Last Secure: 3/1/2024 2200
- Add time: 3/1/2024 1226
- Event Type: 10851 STOLEN VEHICLE
- Offense: 10851(A) VC (FEL) THEFT OF VEHICLE
- Address: 1851 SALEM AVE ALPINE APARTMENTS
- Premise: HIGHWAY / ROAD / ALLEY / STREET
- Status: FELONY
- Notes: Vehicle was stolen from 1851 Salem. Unknown suspect.
- Owner: 3/4/2024 10:44 AM
- Edited by: 3/4/2024 10:44 AM
- Pattern/Series/Trend: FELONY

Event 3:
- Date Reported: 3/1/2024 14:53
- Last Secure: 2/27/2024 2230
- Add time: 3/1/2024 1030
- Event Type: 10851 STOLEN VEHICLE
- Offense: 10851(A) VC (FEL) THEFT OF VEHICLE
- Address: 1900 SANTA ROSA AVE TARGET SOUTH SPD
- Premise: PARK / PLAYGROUND
- Status: FELONY
- Notes: Victim reported her SUV taken from her parking spot overnight without permission.
- Owner: 3/4/2024 10:44 AM
- Edited by: 3/4/2024 10:44 AM
- Pattern/Series/Trend: FELONY

Event 4:
- Date Reported: 3/3/2024 15:07
- Last Secure: 3/1/2024 23:00
- Add time: 3/1/2024 1000
- Event Type: 10851 STOLEN VEHICLE
- Offense: 10851(A) VC (FEL) THEFT OF VEHICLE
- Address: 2015 PIONEER WAY 1 UNIT AT PIONEER 2000
- Premise: PARKING LOT / GARAGE
- Status: FELONY
- Notes: Victim reported her SUV taken from her parking spot overnight without permission.
- Owner: 3/4/2024 10:44 AM
- Edited by: 3/4/2024 10:44 AM
- Pattern/Series/Trend: FELONY

Event 5:
- Date Reported: 3/3/2024 14:05
- Last Secure: 3/1/2024 1405
- Add time: 3/1/2024 1450
- Event Type: 5940 VANDALISM JUST OCCURRED
- Offense: 5948(V1) VC (FEL) VANDALISM ($400 OR MORE)
- Address: 801 4TH ST UMPIQUE BANK
- Premise: BANK / FINANCIAL INSTITUTION
- Status: FELONY
- Notes: Suspect threw rocks through multiple bank windows causing thousands of dollars in damage and booked into jail.
- Owner: 3/4/2024 10:38 AM
- Edited by: 3/4/2024 10:38 AM
- Pattern/Series/Trend: FELONY

Pattern/Series/Trend:
- DISTRACTION Theft M.O.
- Downtown Commercial Window Smash
- Graffiti - GANG
- Graffiti - TAGGER
- High-Performance Car Theft
Notes
RED 2018 CHEVY CAMARO, CA 8PBA823.
Last flock AKP hit on Jan 19 @ 02:58 hours (Davis St 3B @ 6th St).
Similar case 5R2400006670, same vehicle make/model/year, taken on Jan 18.
Possibility these two vehicles are seen on Davis St & 6th AKP on Jan 19 @ 02:58 hours.

Crime Association (Trend, Pattern, Series)

Crime Association Type
Series

Crime Association Name
High-Performance Car Theft

Crime Association Certainty
Low, Low-Medium, Medium, Medium-High, High

Submit
LET'S TALK ABOUT DATA

KNOW your data
What tables and fields do you have available?
How do they relate to one another?
Where are your gaps?

CENTRALIZE your data
Leverage your existing CAD & RMS (etc) databases, use the XYs
Databases provide structured storage & easy access to vast amounts of data
Users can quickly retrieve and query accurate & timely information

CONTROL what's coming in where you can
Reduce human error
Make it nearly impossible to input mistakes
Streamline workflows

SECURE your data
CJIS compliance
Make use of single-sign on, groups, sharing
Be aware of what you are putting out
AUTOMATE AS MUCH AS YOU CAN

- No reason to do the same tasks manually over and over
- Explore ModelBuilder, Python
- Schedule jobs
  - ArcGIS Pro tools can now be scheduled
  - Database management system (e.g., SQL Server)
  - Windows task scheduler
- Power Automate or Make for emails and other workflows
...BUT YOU DON’T HAVE THE STAFF/TIME/RESOURCES

Advocate, advocate, advocate
Reach out to your DBA, IT, GIS colleagues
Show the art of the possible

Bring in Esri
Ask around your region to see what others are doing. Make connections!
Training and keeping up-to-date is critical
Caveats/Challenges

- Esri licensing
- Network security/firewalls
  - Must carefully consider how this is set up
  - CJIS compliance
- Training
ARCGIS SOLUTIONS FOR LAW ENFORCEMENT

- Helpful if starting from scratch
- If not, use for ideas
- Link
Thank you!

Shelby.Roberson@montgomerycountymd.gov
Mharris@ssrcity.org
03 | Wrap Up
Q&A
Back To Our Roots PrepTech Talk Schedule

• April 10th, 2024: Fighting Fire with Data – The National Emergency Response Information System (NERIS)
• June 2024: GIS for Fire Analysis
• August 2024: Public Safety GIS Symbology
• November 2024: Emergency Medical Service GIS
THANKS!

Do you have any questions?  
kkay@publicsafetygis.org  
napsgfoundation.org/

@napsgfoundation