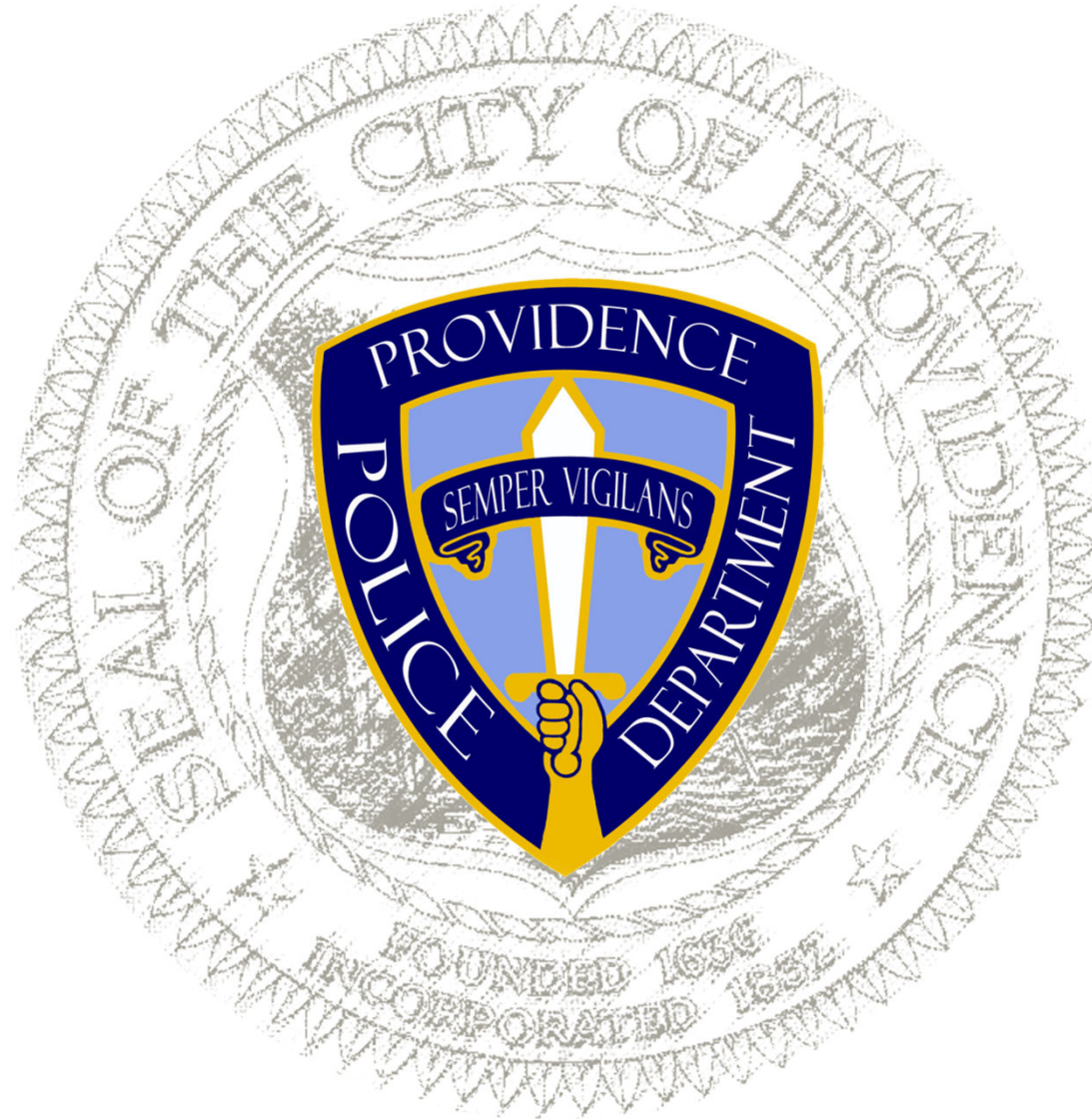


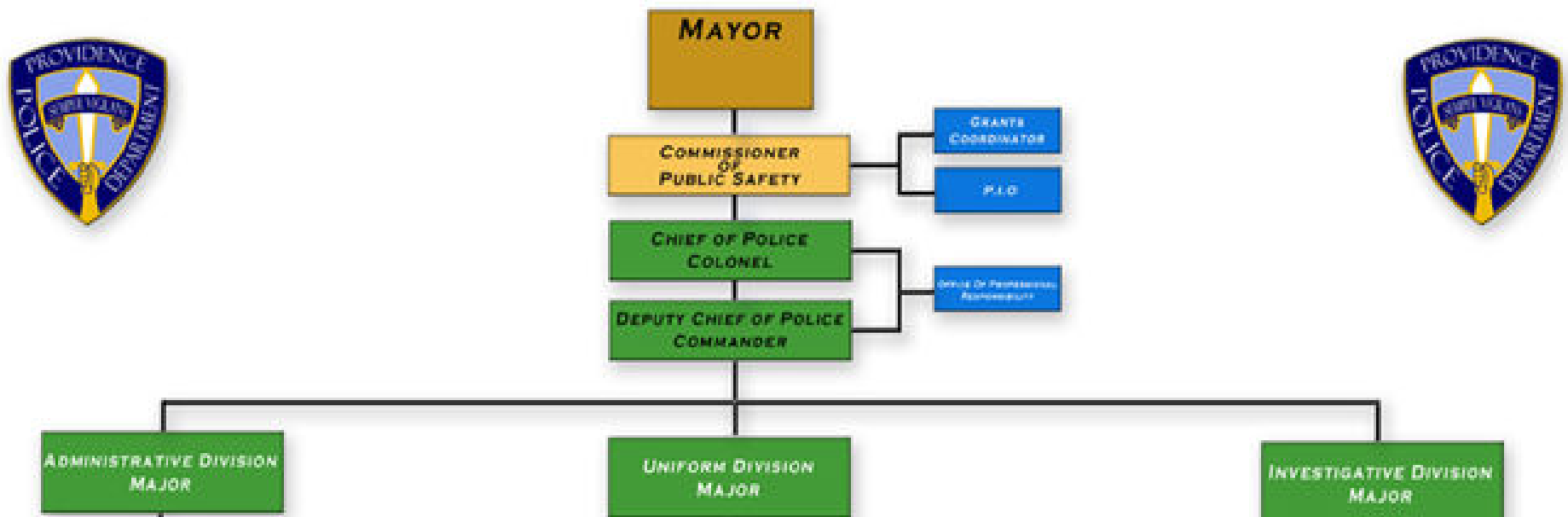
City of Providence



Supporting Community Policing with GIS

Providence Police - Command Structure

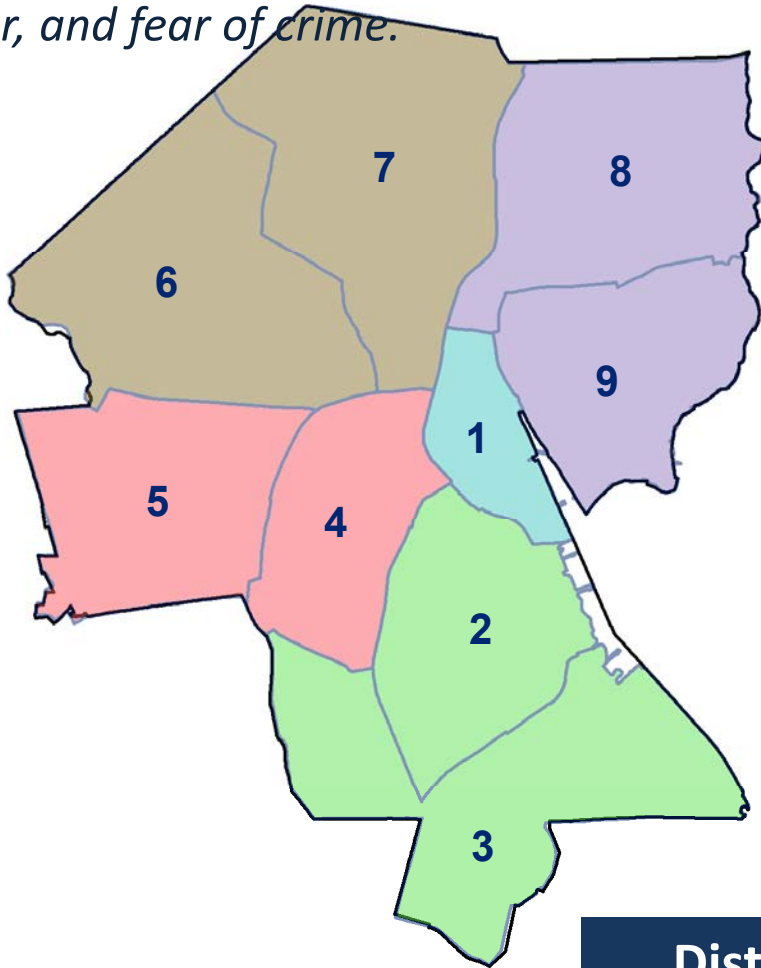
- Part of the Division of Public Safety
 - Fire, PEMA, Communications
- Celebrating 150 years of service (Sept 2014)



Police Districts

Community policing is a philosophy that promotes organizational strategies, which support the systematic use of **partnerships** and **problem-solving techniques**, to **proactively** address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime.

U.S Department of Justice



- 2003-2004
 - 9 Districts
 - 9 District Cmdrs.
- Current
 - 9 Districts
 - 5 District Cmdrs.
- Future
 - 5 Districts
 - 5 District Cmdrs.

District Commanders are the face of PPD

History of Data Analysis Functions

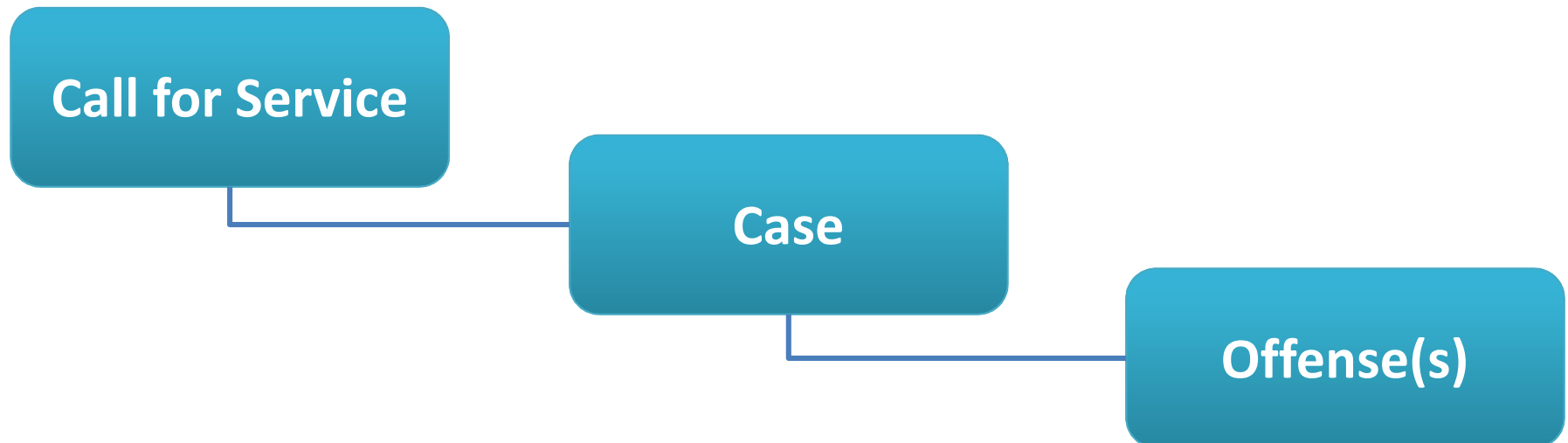
- ProvStat – 2003
 - Citywide Performance Measurement Initiative
 - GIS and data analysis
 - All city departments ***except*** Police
- Providence Plan, 2003 – 2011
 - Outside agency provided crime analysis for PPD
- “Category 5” Fiscal Hurricane
 - Providence Plan contract not renewed
 - ProvStat takes over PPD data analysis
- ProvStat analyst moved fulltime to Public Safety
 - Focus on analysis of crime and public safety issues

Source Data

AEGIS Records Management System

2013

- Computer Aided Dispatch (CAD)... ***114,428 calls for service***
- Criminal Cases ***25,598 cases***
- Criminal Offenses ***28,545 offenses***
- Arrests ***6917 arrests***

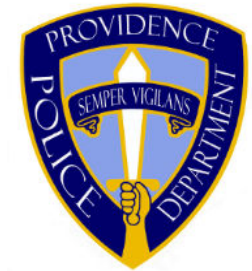


Standard for Reporting Crime - UCR\NIBRS

- Uniform Crime Reporting (UCR)
 - First UCR report published in 1930
 - Standardize criminal offenses nationwide
 - Incident based
 - Does not count victims
 - Hierarchy Rule
- National Incident Based Reporting System (NIBRS)
 - Approved for use in 1988
 - Offense based, more details
 - Better way to assess victims
- *Providence moved to NIBRS in 2006*

NIBRS Offense Codes

- 22 Offense types/46 Offense codes
- Eight Major types tracked by the FBI
 - Homicide
 - Sexual Assault (4 offense codes)
 - Robbery
 - Aggravated Assault
 - Burglary
 - Motor Vehicle Theft
 - Larceny (8 offense codes)
 - Arson
- 11 additional “B” Offenses



Data Support, GIS Support and Reporting

- Weekly Command Staff meeting (CompStat)
- NIBRS reports
- Providence Police/Public Safety
 - Command Staff
 - District Commanders
 - Investigative Division
 - Commissioner's office
- Mayor, Council, Other City Departments
- Non-profit and community groups
- Press Requests

Community Policing = Partnership

Weekly Command Staff Meeting

- Tuesday Mornings
- Providence Police
 - Senior staff
 - District Commanders
 - Investigative Division
- Outside Partners
 - Attorney General
 - U.S. Attorney
 - Social Service Agencies
 - Brown University Police
 - Department of Corrections

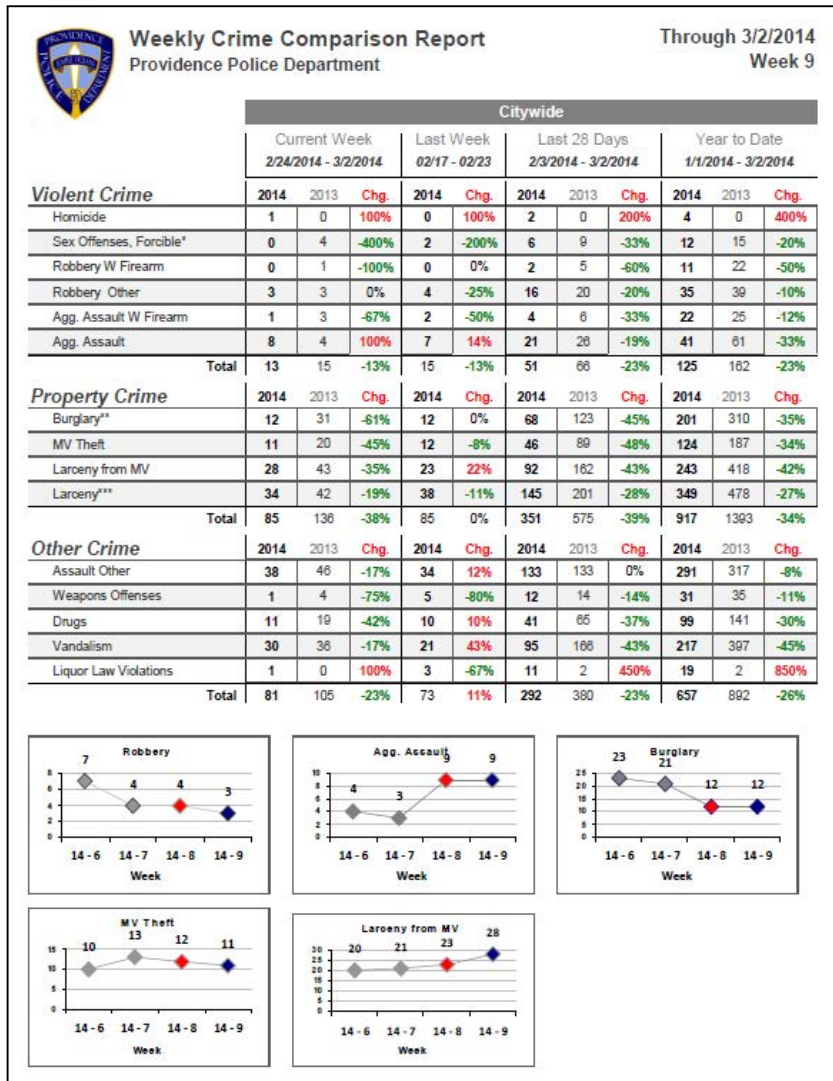
Meeting Process

- Tuesday Meeting = Monday “stat day”
- Export crime, arrest and cad data,
 - ~500 cases
 - ~2300 calls for service
 - ~140 Arrests
- Geocode data, append to existing shape files
- Download offense code data separately.
- Link shape file .dbf /Offense code data to MS Access database
- Use Access to “add value”, create reports

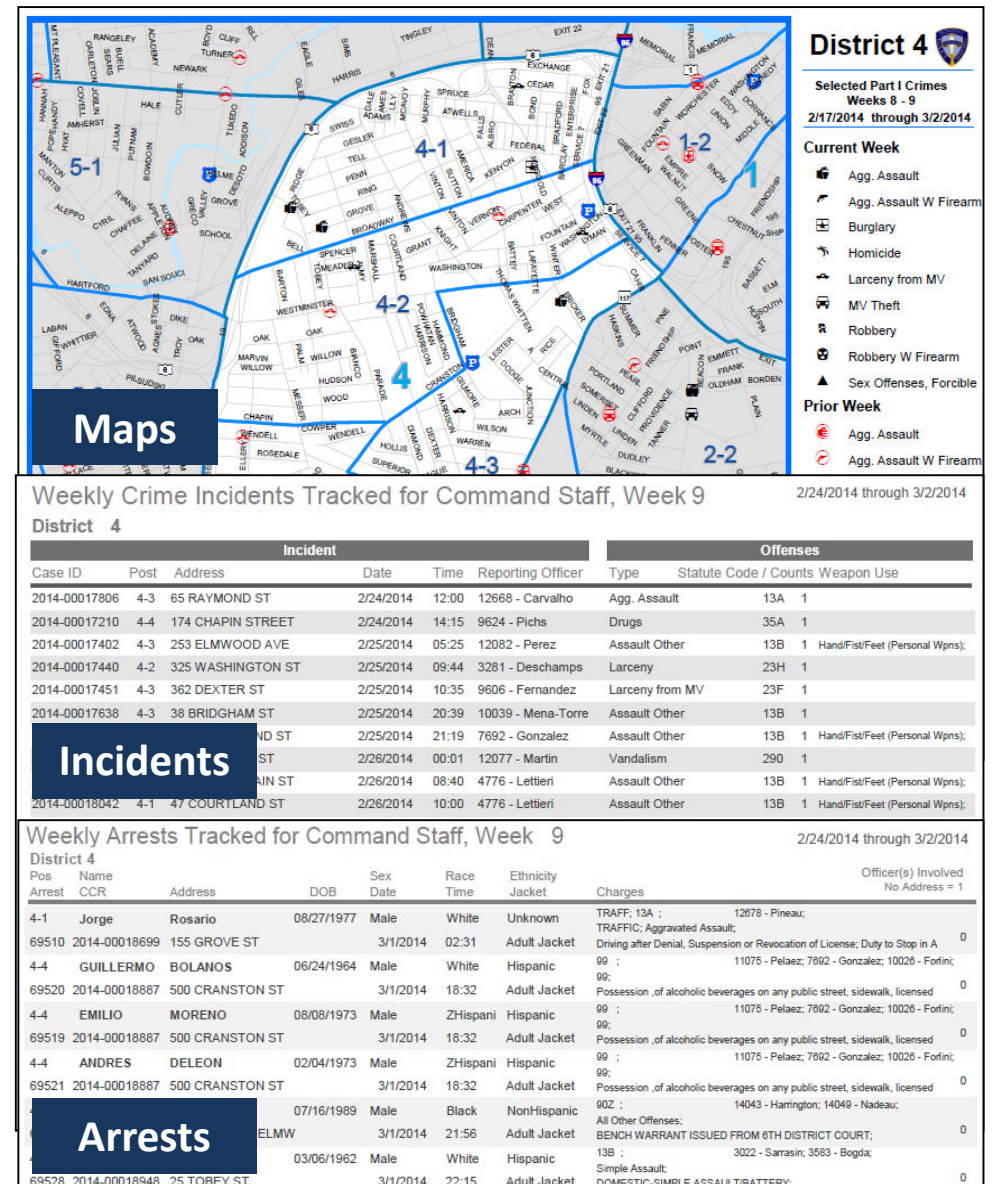
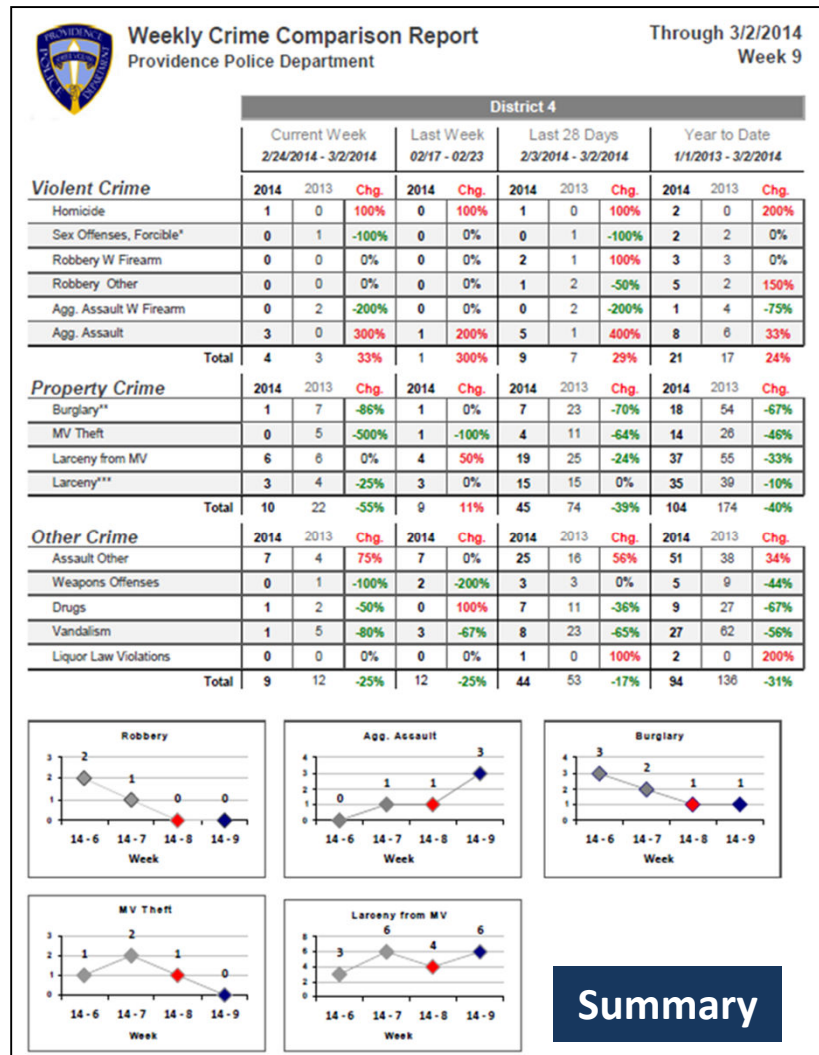
**94% Address
Match**

Meeting Reports

- Updated Weekly
 - Key offense codes
 - Breakout Firearms
 - Larceny from MV
 - Comparison
 - Same week last year
 - Last week
 - Past 28 Days
 - Year to Date
 - Line graph of past 28 days



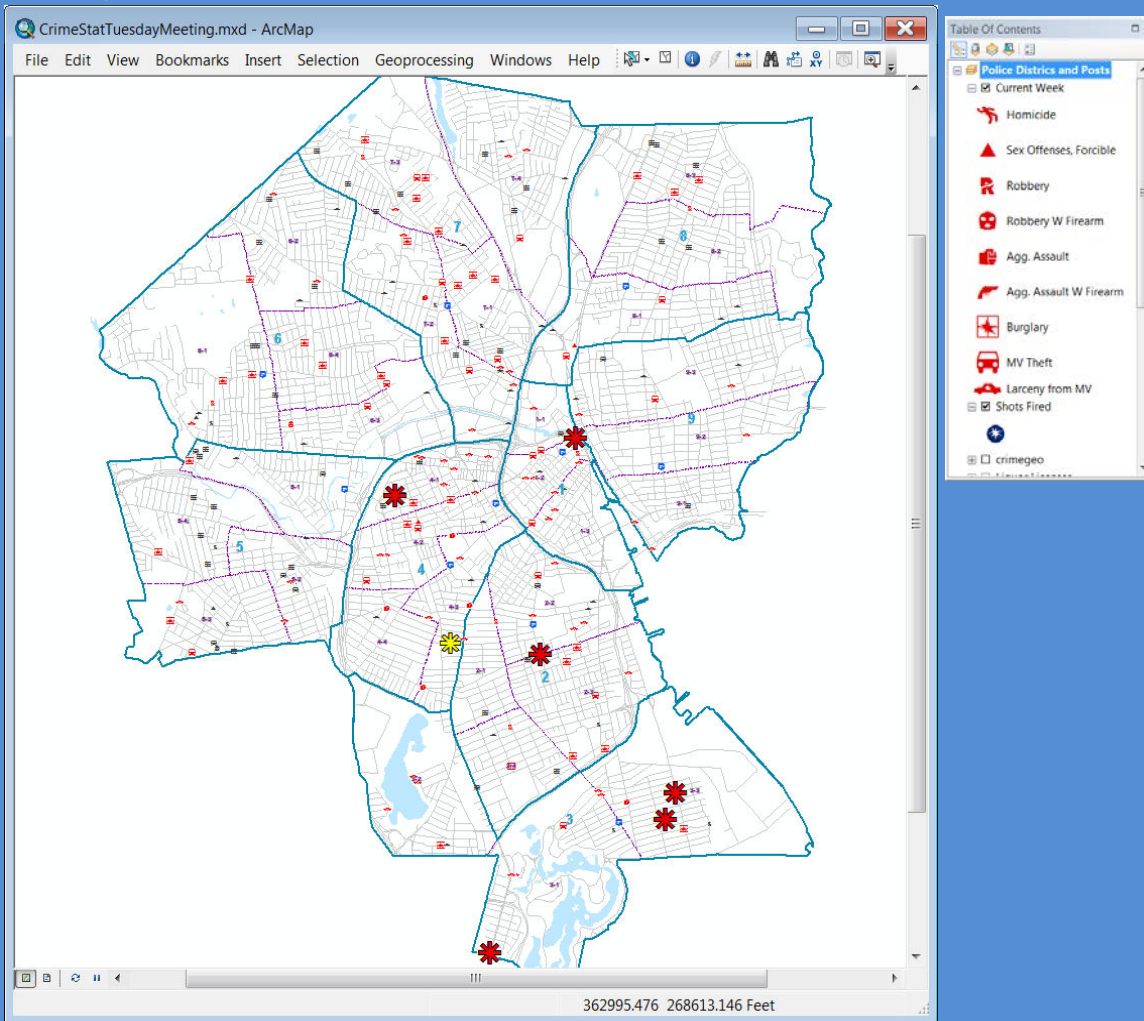
District Reports



Customized reporting for each District

Arc Map at Weekly Meeting

Projected on Screen 1



My Laptop screen

CompStat Quick Menu

<Type an address...> Customize

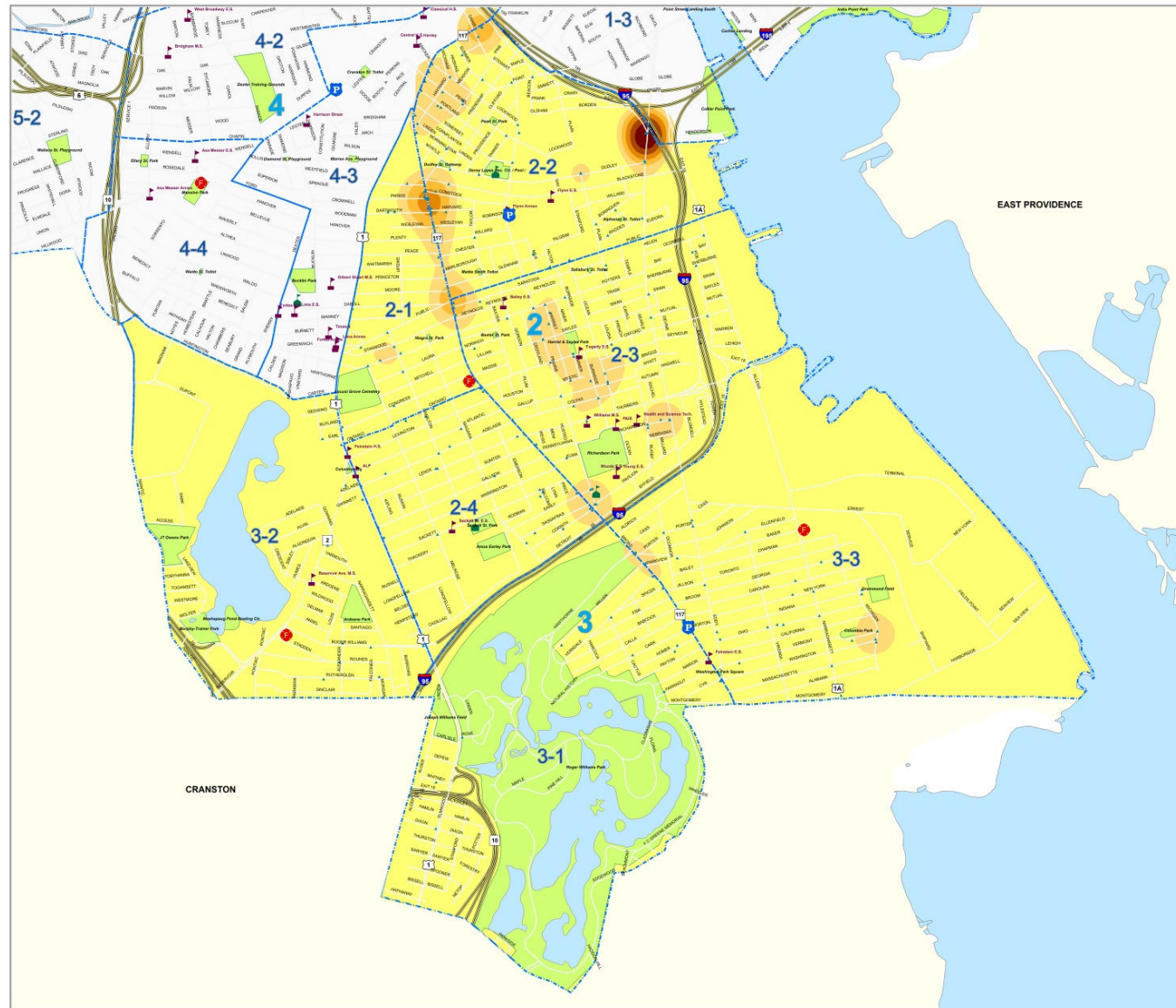
Table

Current Week

DIST	Offense Type	Address	Date	Offen
4	Sex Offenses, Forcible	140 COURTLAND ST	10/19/2013	11D
4	Robbery	177 PEACE ST	10/20/2013	120
4	Agg. Assault	79 ELMWOOD AVE	10/14/2013	13A
4	Agg. Assault	201 MESSER ST	10/17/2013	13A
4	Agg. Assault	1108 WESTMINSTER ST	10/19/2013	13A
4	Agg. Assault	623 POTTERS AVE	10/19/2013	13A
4	Burglary	69 GROVE ST	10/16/2013	220
4	Burglary	267 BROADWAY	10/18/2013	220
4	Burglary	33 MARSHALL ST	10/18/2013	220
4	MV Theft	139 WOOD ST	10/16/2013	240
4	MV Theft	359 CARPENTER ST	10/17/2013	240
4	Larceny from MV	101 CEDAR ST	10/14/2013	23F
4	Larceny from MV	SPRUCE ST & AMES ST	10/14/2013	23F
4	Larceny from MV	CEDAR ST & BRADFORD ST	10/14/2013	23F
4	Larceny from MV	64 AMERICA ST	10/14/2013	23F
4	Larceny from MV	SPRUCE ST & LILY ST	10/14/2013	23F
4	Larceny from MV	RINGGOLD ST & BROADWAY	10/15/2013	23F
4	Larceny from MV	184 FEDERAL ST	10/16/2013	23F
4	Larceny from MV	47 FORD ST	10/17/2013	23F
4	Larceny from MV	OAK ST & SYCAMORE ST	10/18/2013	23F
4	Larceny from MV	69 OAK ST	10/18/2013	23F
4	Larceny from MV	114 SPRUCE ST	10/18/2013	23F
4	Larceny from MV	242 ATWELLS AVE	10/20/2013	23F
4	Larceny from MV	150 CRANSTON ST	10/20/2013	23F
4	Larceny	160 BENEDICT ST	10/17/2013	23D
4	Larceny	37 HUDSON ST	10/18/2013	23H
4	Larceny	686 POTTERS AVE	10/20/2013	23H
4	Larceny	101 FORD ST	10/20/2013	23H
4	Assault Other	19 ELMWOOD AVE	10/17/2013	13B
4	Assault Other	359 CARPENTER ST	10/18/2013	13B
4	Assault Other	39 MADISON ST	10/19/2013	13B
4	Weapons Offenses	177 DEXTER ST	10/18/2013	520
4	Weapons Offenses	228 ATWELLS AVE	10/20/2013	520
4	Vandalism	NEWTON ST & FEDERAL ST	10/18/2013	290
4	Vandalism	52 VERNON ST	10/19/2013	290
5	Burglary	10 SACRAMENTO ST	10/17/2013	220

Projected on Screen 2 - 4 Week line graphs

District Summary Maps





 **Providence Police Department**



District 2 - 3

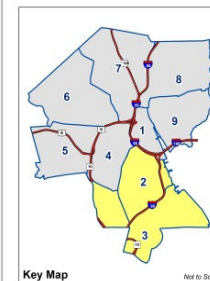
Commander: Lt. Oscar Perez

Legend

-  Police Substation
-  School
-  Fire Station
-  Recreation Center
-  Police Posts
-  Park

Violent Crime 2013

-  Less
-  More



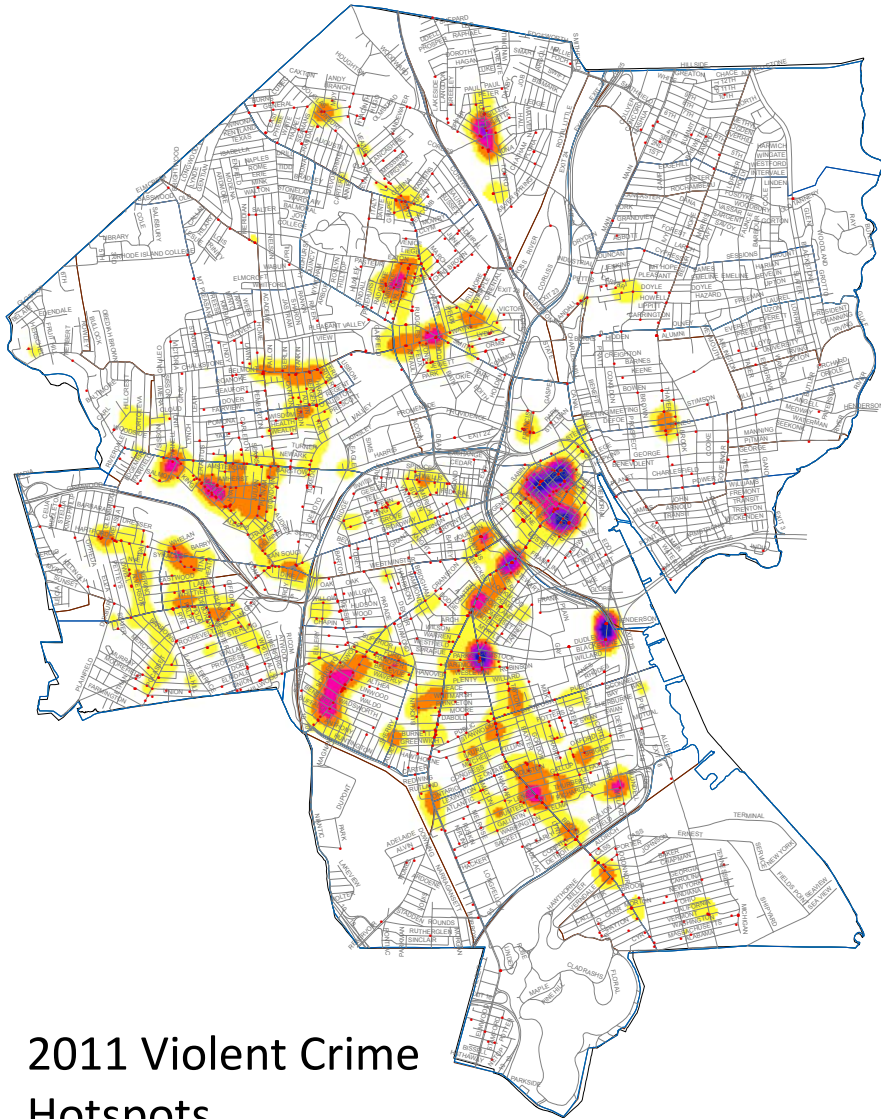
Office of Public Safety Commissioner

City of Providence
325 Washington St
Providence, RI

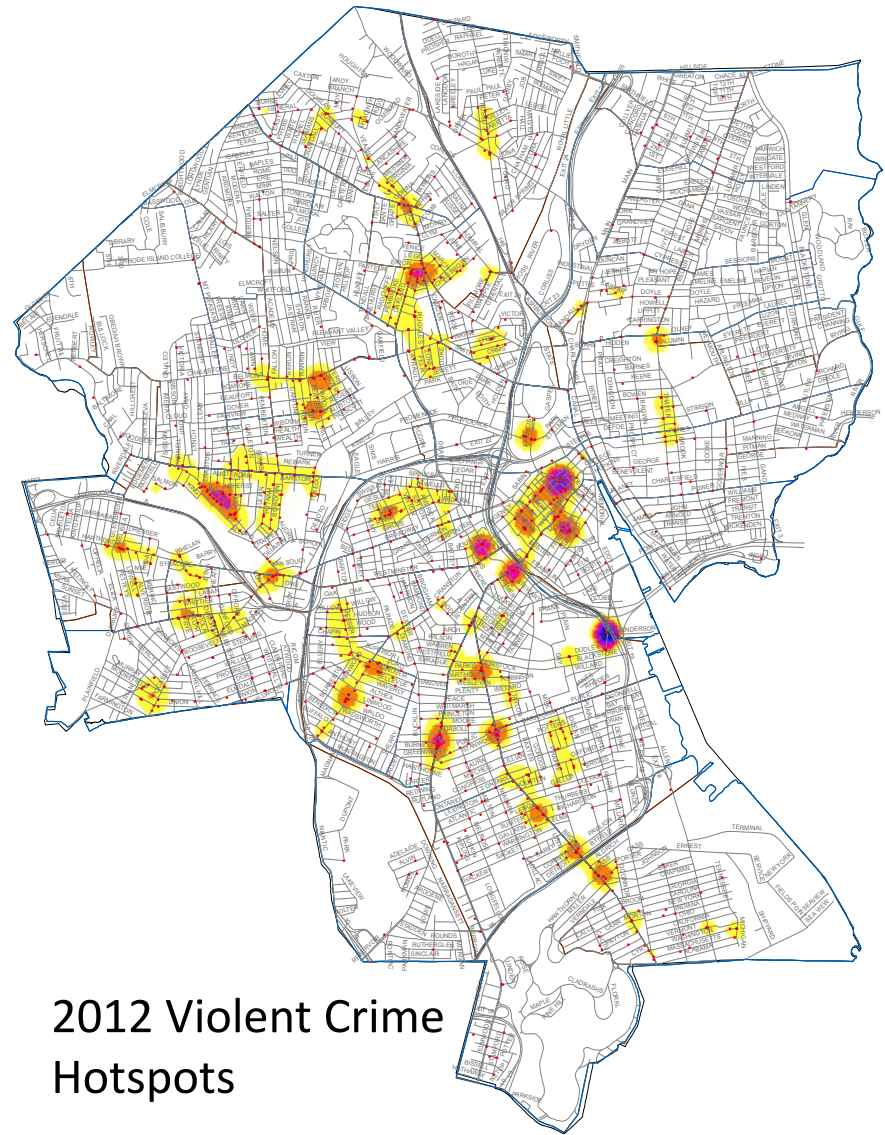


Prepared by: D. Clement

Hot Spot Mapping (aka kernel density)



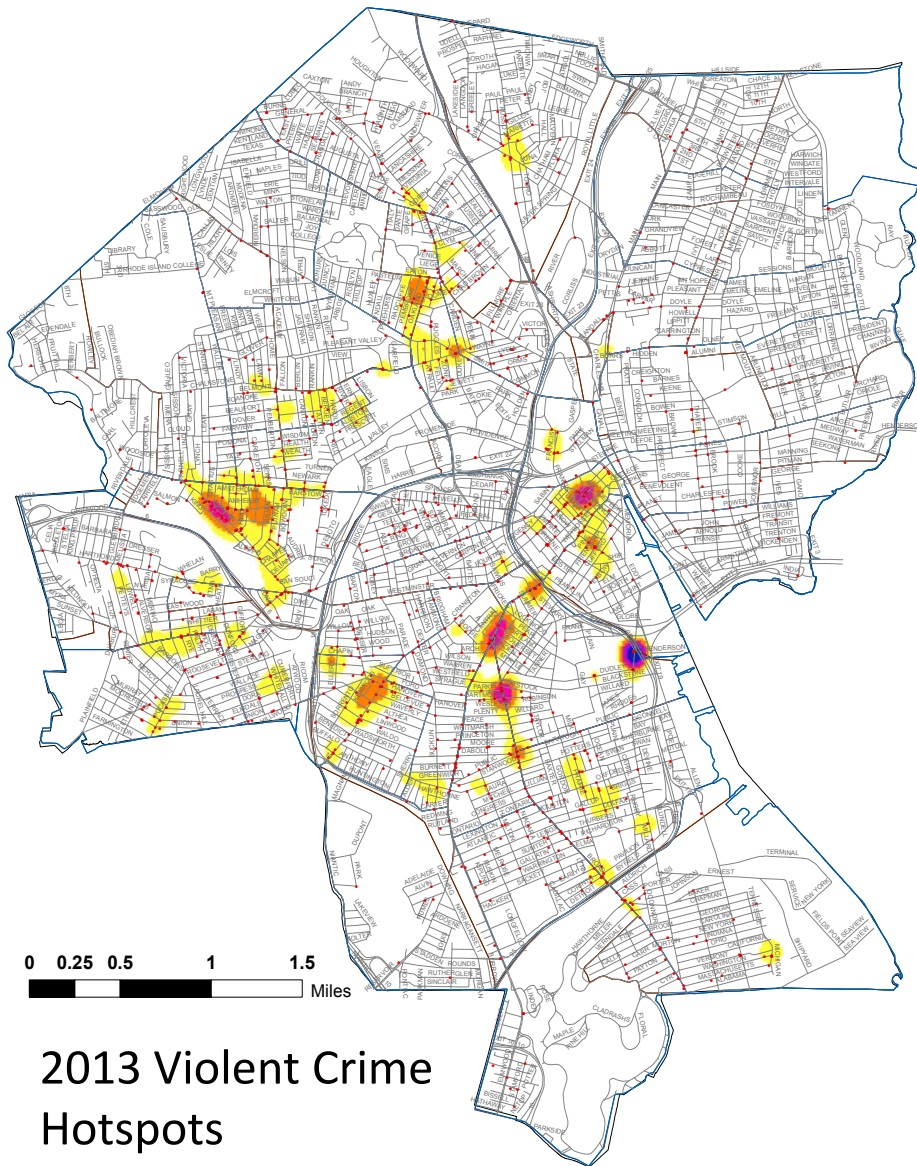
2011 Violent Crime
Hotspots



2012 Violent Crime
Hotspots

Analyze clusters of incident points

Hot Spot Mapping (aka kernel density)

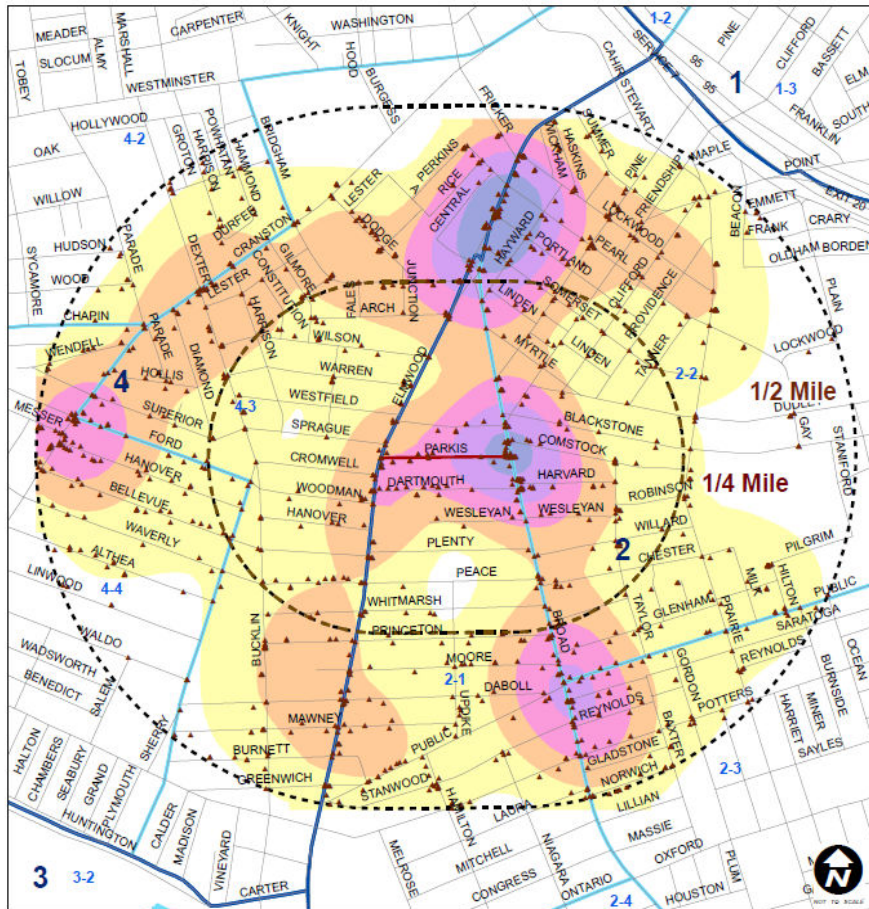


- Open to misinterpretation
- Clustering is relative to the data set
- Does not tell the whole story
- Hotspots are the result of
 - Crime Generators (mall)
 - Crime Attractors (vacant properties)
 - Crime Enablers (a park after closing time)

Support Non-Profit Initiatives



Crime Study - Parkis Ave. - .5 Mile Buffer November 1, 2012 - November 17, 2013



Legend

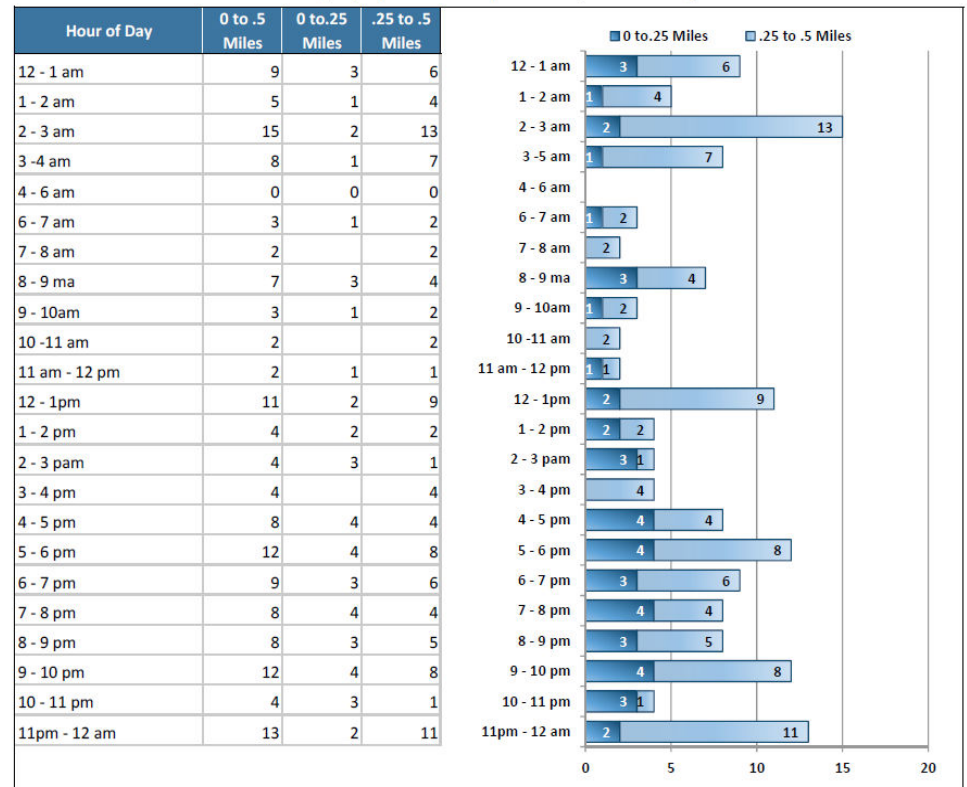
- ▲ Crime Location
- Police Districts
- Police Posts
- Crime Density Analysis: Less
- More

Office of Public Safety Commissioner Providence Police Department

City of Providence
325 Washington St
Providence, RI

D. Clement - 11/21/2013

Violent Crime Activity by Hour of Day - Nov. 1, 2013 through Nov 17th 2013



- Crime in and around a place to aid decision making

Support Business Community

- Perception of crime downtown relative to time and place



Providence Police Department Crime Analysis

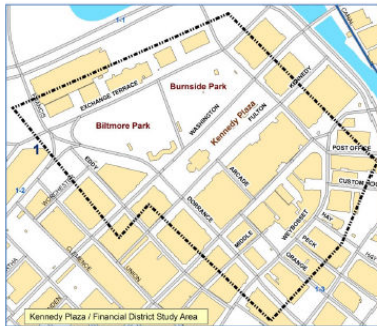
Analysis of Crime in the Downtown Neighborhood, Providence RI

The analysis of violent crime for the Downtown neighborhood looked at selected offense categories from Jan 1st 2011 through November 30th 2013. Selected crimes included homicide, robbery, forcible sexual offenses and aggravated (felony) assault.

The geographic footprint of Downtown is almost identical to the footprint of the Providence Police Department's (PPD) District 1 (D1). D1 excludes only a small section between Canal St and South Main St. Therefore, analysis will be based on incidents recorded in D1 and will include; type of crime, day of week and hour of day when the incident occurred.

For the purposes of this study we will also breakout crime incidents occurring in the vicinity of Kennedy Plaza in an area roughly bounded by Exchange Terrace to the north, Weybosset St to the south, Exchange St in the east and Dorrance St in the west. It will be classified as the Kennedy Plaza study area.

(see picture at right)



Findings for the Downtown neighborhood are:

- Violent Crime in Downtown has been decreasing yearly since 2011. 109 incidents in 2011, 102 in 2012, and through December 8th 2013, only 77 incidents.
- Throughout the Downtown, 29% of violent crime incidents since January 1st, 2011 occur between the traditional offices hours of 7 am to 6 pm.
- 61% of all violent crime occurs between 9pm and 6am, with the majority of that happening between midnight and 3am in and around the City's nightclubs.
- Almost half (45%) of all violent crime incidents Downtown occur on the weekend (Saturday from 12 am to Monday 12 am)
- In 2013, Felony assaults in the District 1 were down by more than half. Most assaults occur between people who are known to each other. Aggressive intervention by PPD prevented minor incidents from escalating.

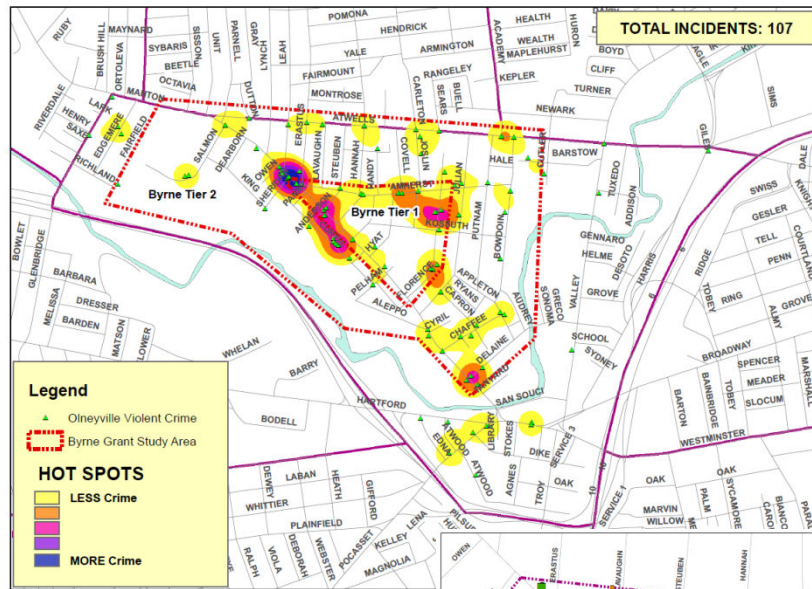
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Hour	2011	2012	2013	TOTAL
12am	15	12	8	35
1am	12	13	7	32
2am	20	24	7	51
3am	7	4	5	16
4am	2	0	2	4
5am	1	2	2	5
6am	0	0	0	0
7am	1	1	1	3
8am	3	1	1	5
9am	4	0	1	5

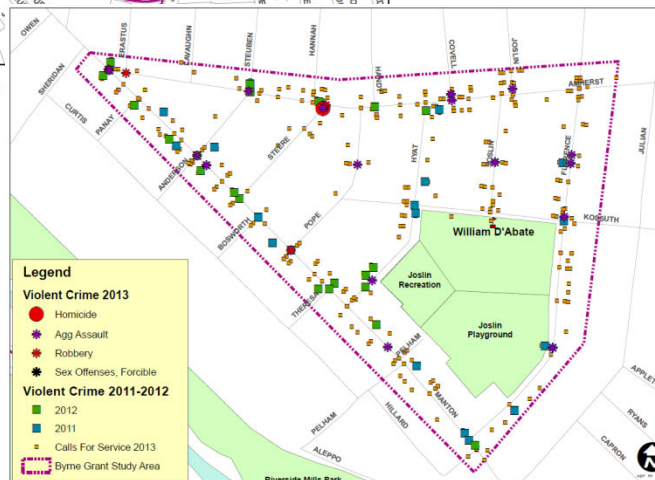
Hour	2011	2012	2013	Total
12am	1	3	1	5
1am	0	0	1	1
2am	1	1	0	2
3am	0	1	0	1
4am	0	0	0	0
5am	0	0	1	1
6am	0	0	0	0
7am	0	0	1	1
8am	1	0	1	2
9am	1	0	0	1
10am	0	1	1	2
11am	0	1	1	2
12pm	1	2	1	4
1pm	1	1	0	2
2pm	4	1	2	7
3pm	0	3	1	4
4pm	2	0	0	2
5pm	0	1	0	1
6pm	1	1	1	3
7pm	2	1	3	6
8pm	0	1	0	1
9pm	1	0	2	3
10pm	2	1	1	4
11pm	0	0	0	0
Total	18	19	18	55

Grant Support



Violent Crime - Byrne Grant Study Area

Analysis of
crime to
benchmark
conditions



Violent Crime - Byrne Grant Study Area

Providence Police Department
Prepared by: D. Clement Printed: 12/25/2013

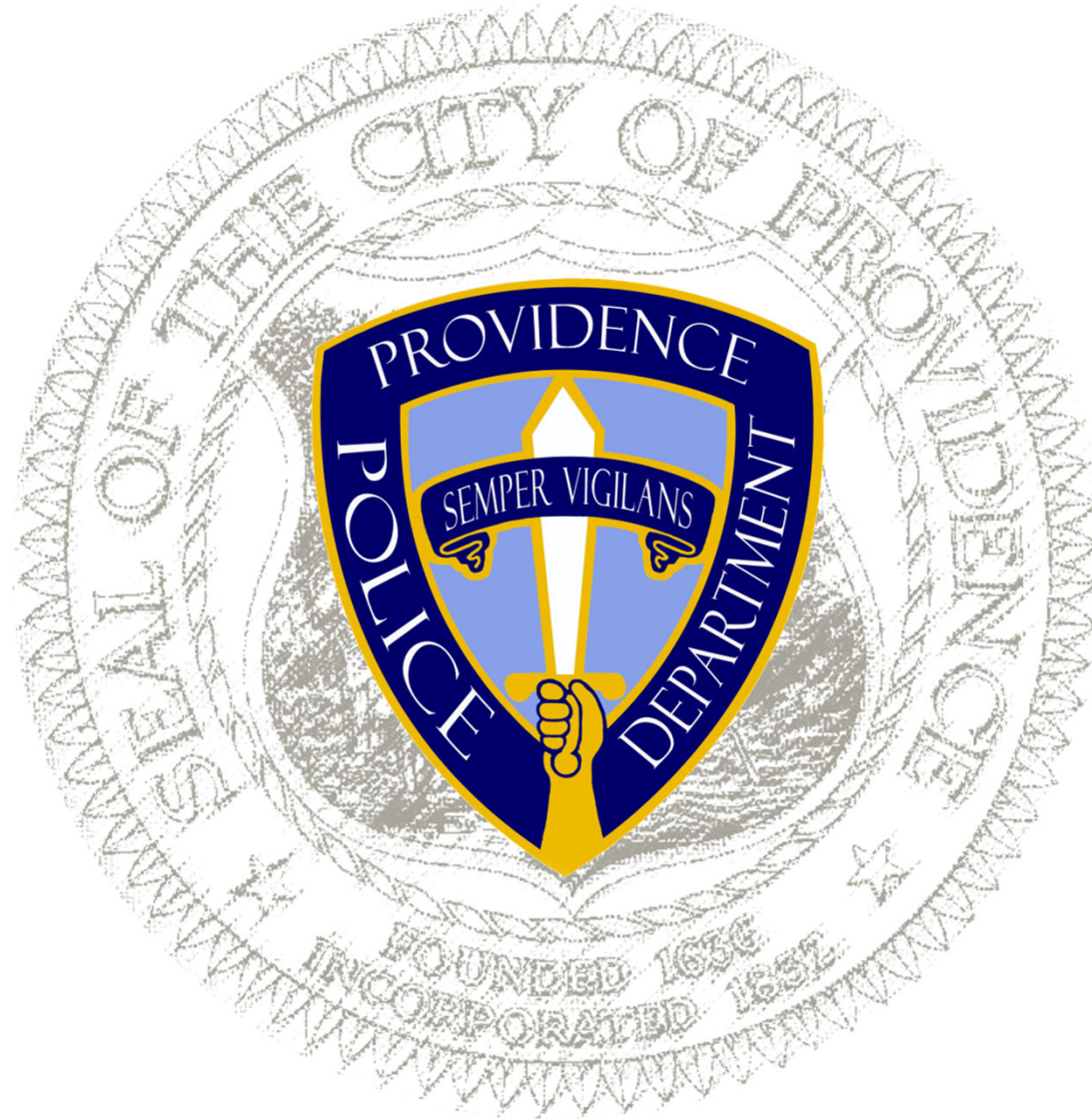
- **DOJ – Byrne Grant**
 - PPD
 - Olneyville Housing Corp
 - Roger Williams College
- **Examine alternate strategies for reducing crime**
 - Early Intervention
 - Parole strategies
 - Public projects
 - Housing

Possible outcome: Grant money funds overtime in target area.

Crime Analysis Unit

- Formalize analysis and intelligence gathering
- Unit Structure
 - Lieutenant over sees unit
 - 2 full time analysts
 - 2-4 interns (Roger Williams University)
- Better data, Better intelligence
- Leverage data connections
- New techniques in law enforcement

City of Providence



Supporting Community Policing with GIS