

# SMART POLICING GRANT PHASE I PROCEDURES

## QUERY PARAMETERS

### Query I Parameters – Crimes & Associated Arrests

- Crimes: Part I & Part II
- Date Range: 1/1/06-11/30/10
- Areas: Newton, Central, Southwest, 77<sup>th</sup>, Hollenbeck<sup>1</sup>
- M.O. = Drive-By Shooting (0309), Victim Shot (0430), Shots Fired (1100)

### Query II Parameters – Crimes & Associated Arrests

- Crimes: Part I & Part II
- Date Range: 1/1/06-11/30/10
- Areas: Newton, Central, Southwest, 77<sup>th</sup>, Hollenbeck
- Weapon = Any Firearm (1 \_\_)

### Query III Parameters – Calls for Service

- Incident Code Description: “SHOT” or “GUN” (free text search)
- Date Range: 1/1/06-11/30/10
- Areas: Newton, Central, Southwest, 77<sup>th</sup>, Hollenbeck

## CRIMES

### Steps for Crime Mapping

1. Run a Generate Map query in CAMS based on Query I parameters.
2. Execute the Save Results function (select Data + Associated Arrests) to create a personal geodatabase (Access).
3. Run a Generate Map query in CAMS based on Query II parameters.
4. Execute the Save Results function (select Data + Associated Arrests) to create a personal geodatabase (Access).
5. Using ArcCatalog append CRIME and ASSOC\_ARREST feature classes from the Access database generated with Query II to the Access database generated from Query I. This Access database will be the master from which both mapping and statistics will be based.
6. Remove duplicate records from the CRIME feature class. To do this rename CRIME, e.g., CRIMEBU. Create a copy of CRIMEBU with the same structure and no data. Name the new feature class CRIME. Set the *DR* field as the primary key. Append the data in CRIMEBU to CRIME. Then delete CRIMEBU.
7. Remove duplicate records for the ASSOC\_ARREST feature class using the procedure in step #6, setting the *BOOKINGNBR* field as the primary key.

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<sup>1</sup> The four Areas adjacent to Newton (Central, Southwest, 77<sup>th</sup> and Hollenbeck) were queried in case they are to be included in additional density maps. They were not included in the initial analysis and, thus, were filtered out prior to creating density maps and statistics for Newton.

8. Create one work space (MXD file) with 6 layers sourced to the CRIMES feature class of the master database. Each layer file should have a query builder that filters out data for each year, e.g., 2006, 2007, 2008, 2009, 2010 YTD, and 2006-2010 YTD.
9. Based on Newton incidents, create hot spot/density maps for each layer. Use default settings in Spatial Analyst for kernel density. Determine whether crime locations have included the Newton Area police station by default.<sup>2</sup>
10. Use an Animated GIF program to show movement or stability of gun related crime hot spots in Newton over the last five years.

#### Steps for Crime Statistics

1. In Access create three tables (Total, Gang Related, Non-Gang Related), based on the CRIME feature class.
2. With the Make Table query, filter out Newton crimes based on the *RD* field.
3. With the Make Table query, filter by gang-relation based on the MO Code = 0906.
4. Export each of the three tables to Excel.
5. Combine all three into a single workbook with three worksheets, e.g., Total, Gang Related and Non-Gang Related.
6. For each worksheet add and populate a *Year* field.
7. Create three pivot tables with year by crime type counts.

### CALLS FOR SERVICE

#### Steps for Calls for Service Mapping

1. Run a Generate Map query in CAMS based on Query III parameters.
2. Execute the Save Results function (select Data) to create a personal geodatabase (Access).
3. Create one work space (MXD file) with 6 layers sourced to the CALLSFORSERVICE feature class of the database. Each layer file should have a query builder that filters out data for each year, e.g., 2006, 2007, 2008, 2009, 2010 YTD, and 2006-2010 YTD.
4. Based on Newton CFS data, create hot spot/density maps for each layer. Use default settings in Spatial Analyst for kernel density.
5. Use an Animated GIF program to show movement or stability of gun related calls for service hot spots in Newton over the last five years.

#### Steps for Calls for Service Statistics

1. With a Make Table query in Access, filter out Newton calls for service based on the *RD* field.
2. Export the new CALLSFORSERVICE feature class to Excel.
3. To the worksheet add and populate a *Year* field.
4. Create a pivot table with yearly counts.

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<sup>2</sup> If a location only reflects where the report was filled out, and not the actual location where the crime occurred, the density maps could be skewed.