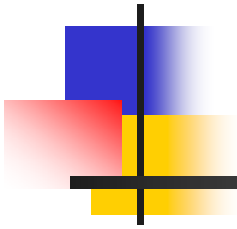


# Administrative Uses of GIS



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National Archive of Criminal Justice Data

\*The views and opinions of the author expressed herein do not necessarily reflect those of the United States Department of Justice



# The Current Approach

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- Law Enforcement agencies tend to use GIS for:
  - Tactical Analysis
  - Strategic Analysis
  - Operational Analysis



# Administrative Uses

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- Extends beyond the operational use of deployment, patrol strength, etc.
- Utility for supervisory officers
  - Performance evaluations
  - Training / re-training
  - Accountability to the public



# Administrative Uses

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- Using GIS to identify areas / beats where officers are disrespected has all of the benefits listed previously
- Disrespect implies that officers have lost control of an area
  - Safety issue
  - Resource issue



# What is disrespect?

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- Arrest charges considered here include:
  - Resisting arrest
  - Fleeing and eluding
  - Failure to obey a lawful order
  - Obstructing police
- This does NOT include assaulting an officer



# Methodology

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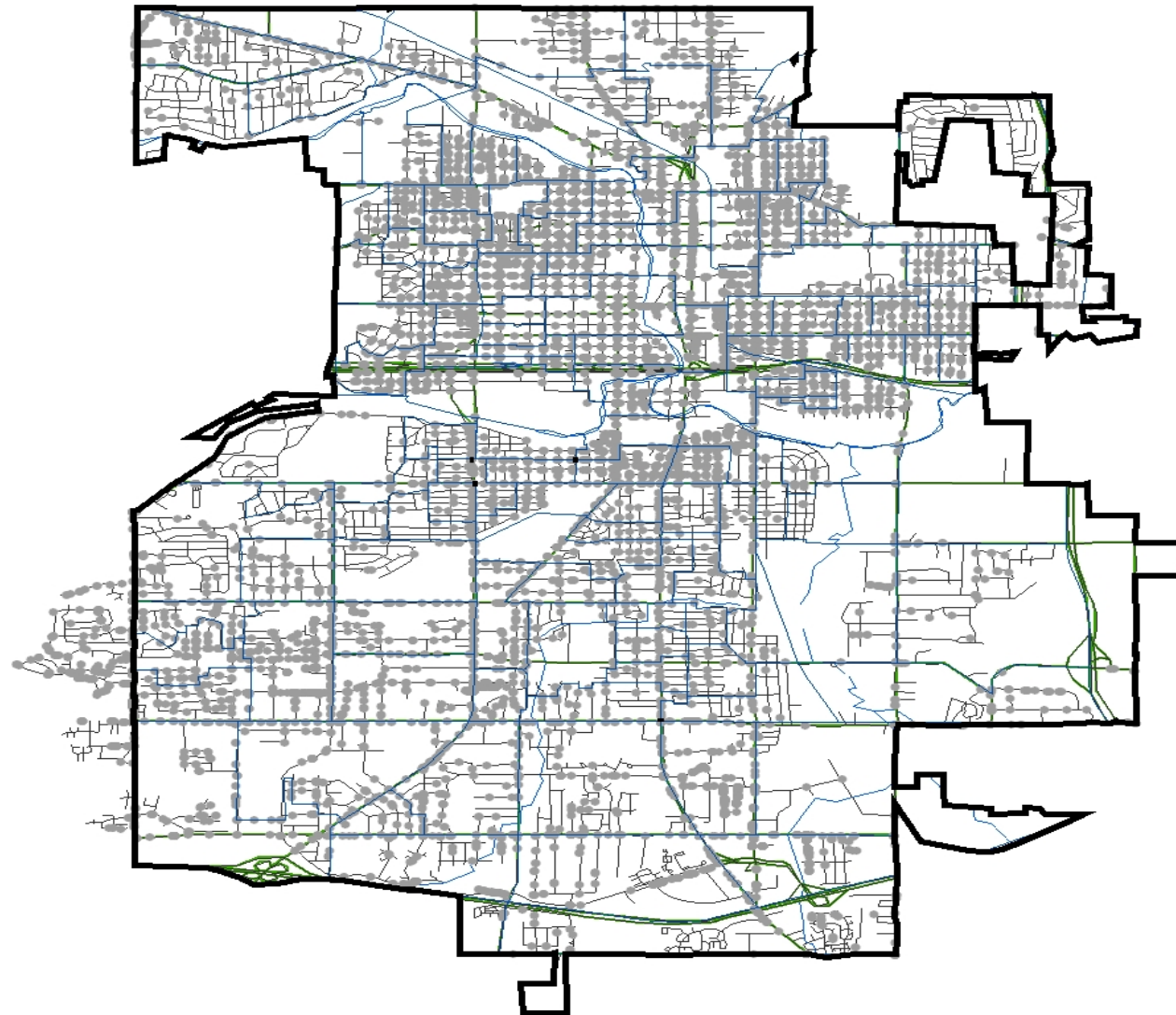
- Examined data for the last 4 years available (1998-2001)
- Geocoded all arrest and incident data
- Examined 'Disrespect' arrest charges in relation to all arrest charges
- Used Crimestat III to examine hot spots of disrespect arrests



# Type of Arrest by Year

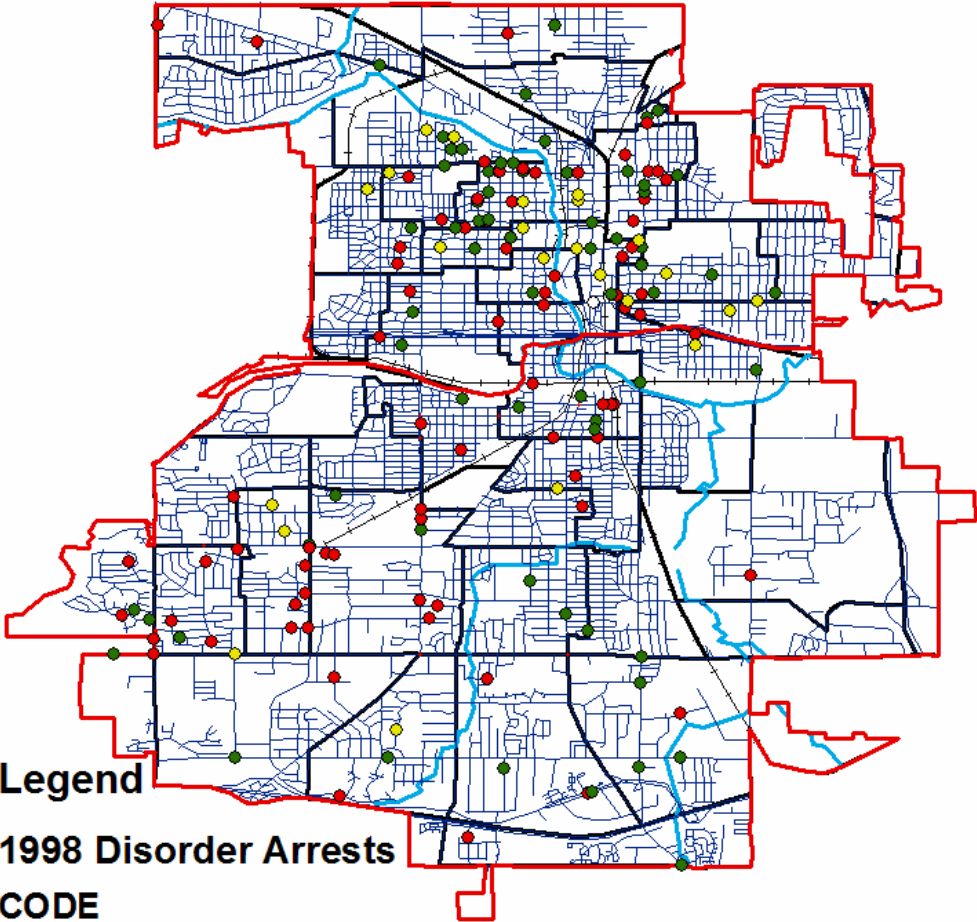
Arrest Type	1998	1999	2000	2001	Total
Resisting Arrest (% within year)	92 (46.5%)	96 (47.5%)	138 (67.0%)	116 (61.1%)	442 (55.5%)
Fleeing & Eluding (% within year)	26 (13.1%)	26 (12.9%)	26 (12.6%)	28 (14.7%)	106 (13.3%)
Failure to Obey (% within year)	79 (39.9%)	77 (38.1%)	38 (18.4%)	46 (24.2%)	240 (30.2%)
Obstructing Police (% within year)	1 (0.5%)	3 (1.5%)	4 (1.9%)	0 (0..0%)	8 (1.01%)
Total Disrespect (% of all arrests)	198 (3.7%)	202 (3.4%)	206 (3.3%)	190 (4.4%)	796 (3.6%)

# The Arrest Picture – All Arrests





# 1998 Disorder Arrests



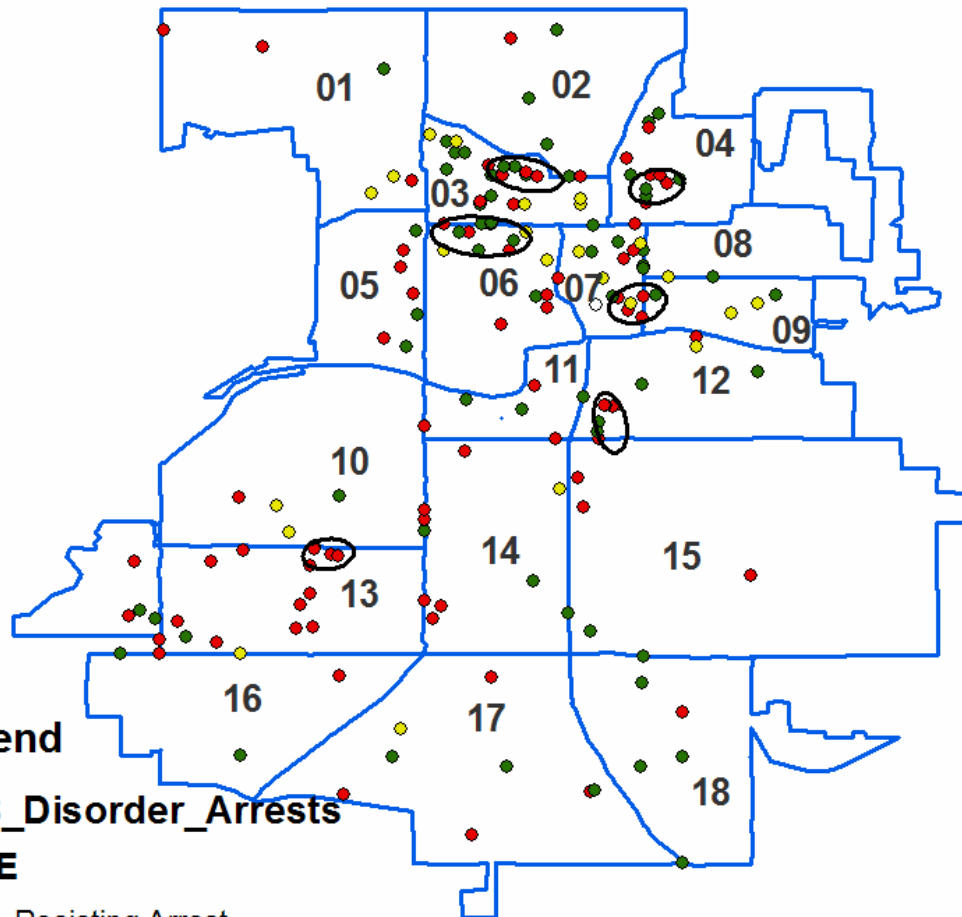
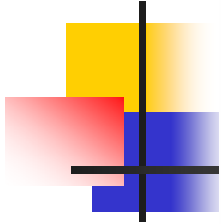
## Legend

### 1998 Disorder Arrests

#### CODE

- Resisting Arrest
- Fleeing and Eluding
- Failure to Obey a Lawful Order
- Obstructing Police

## 1998 Disorder Arrest Hot Spots



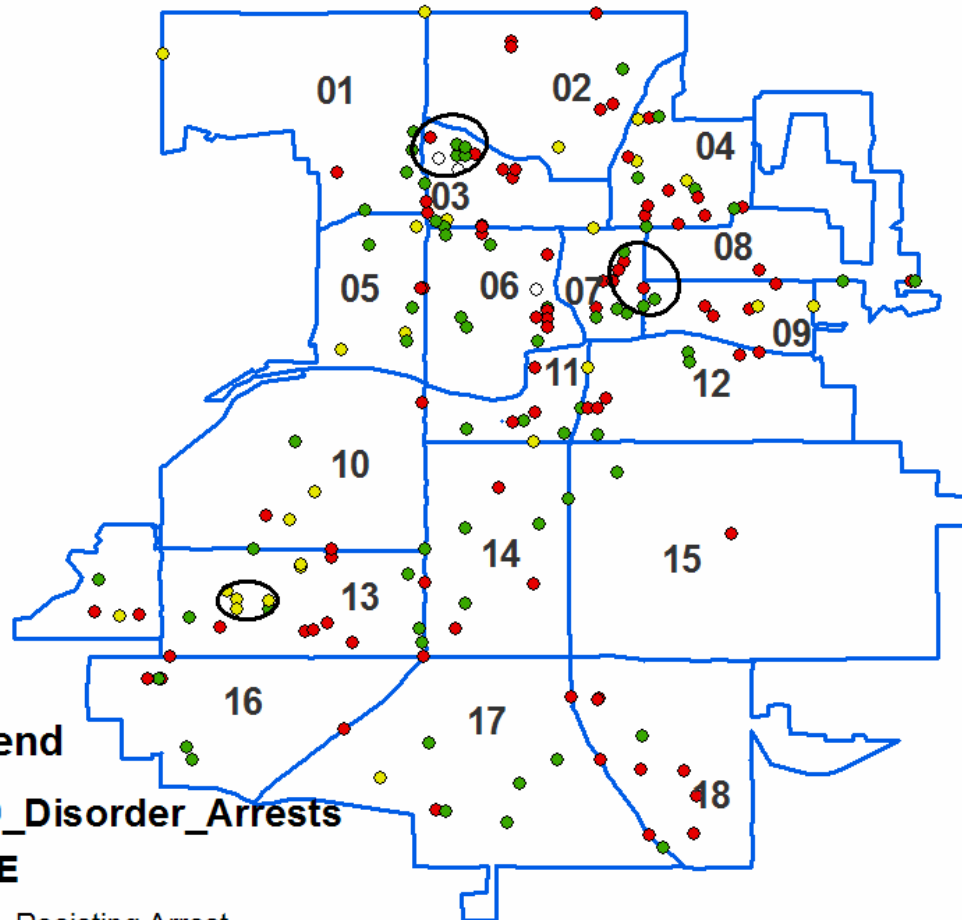
### Legend

1998\_Disorder\_Arrests

### CODE

- Resisting Arrest
- Fleeing and Eluding
- Failure to Obey a Lawful Order
- Obstructing Police

## 1999 Disorder Arrest Hot Spots



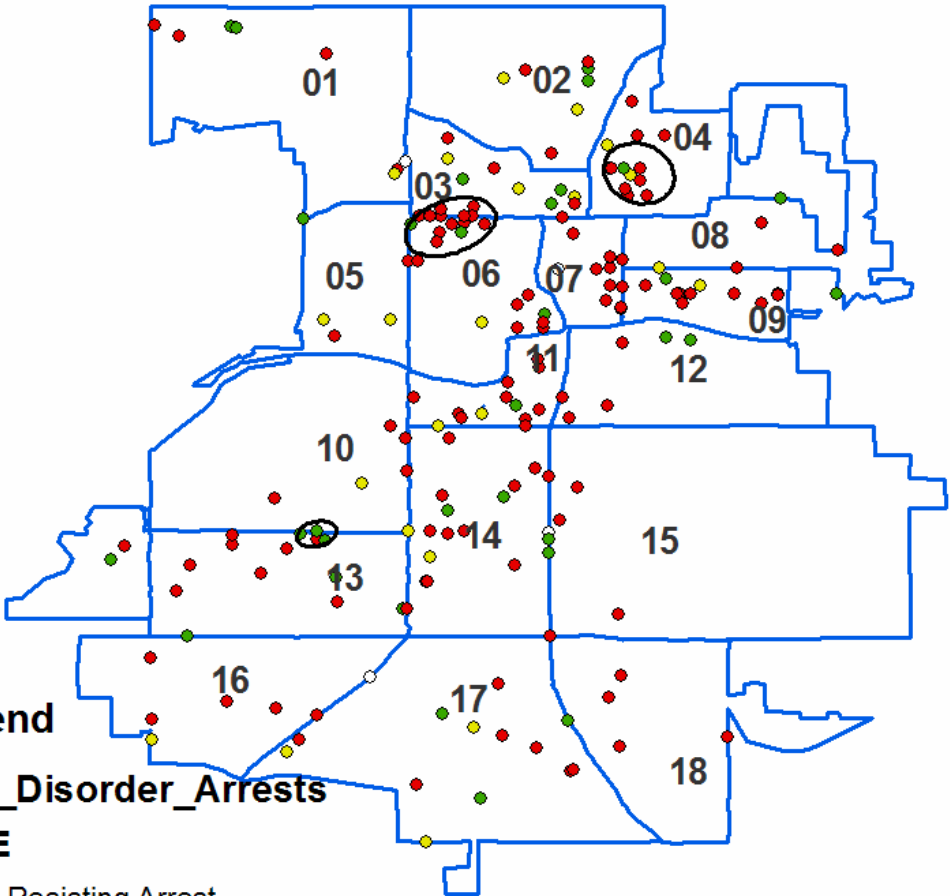
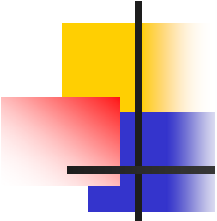
### Legend

#### 1999\_Disorder\_Arrests

#### CODE

- Resisting Arrest
- Fleeing and Eluding
- Failure to Obey a Lawful Order
- Obstructing Police

# 2000 Disorder Arrest Hot Spots

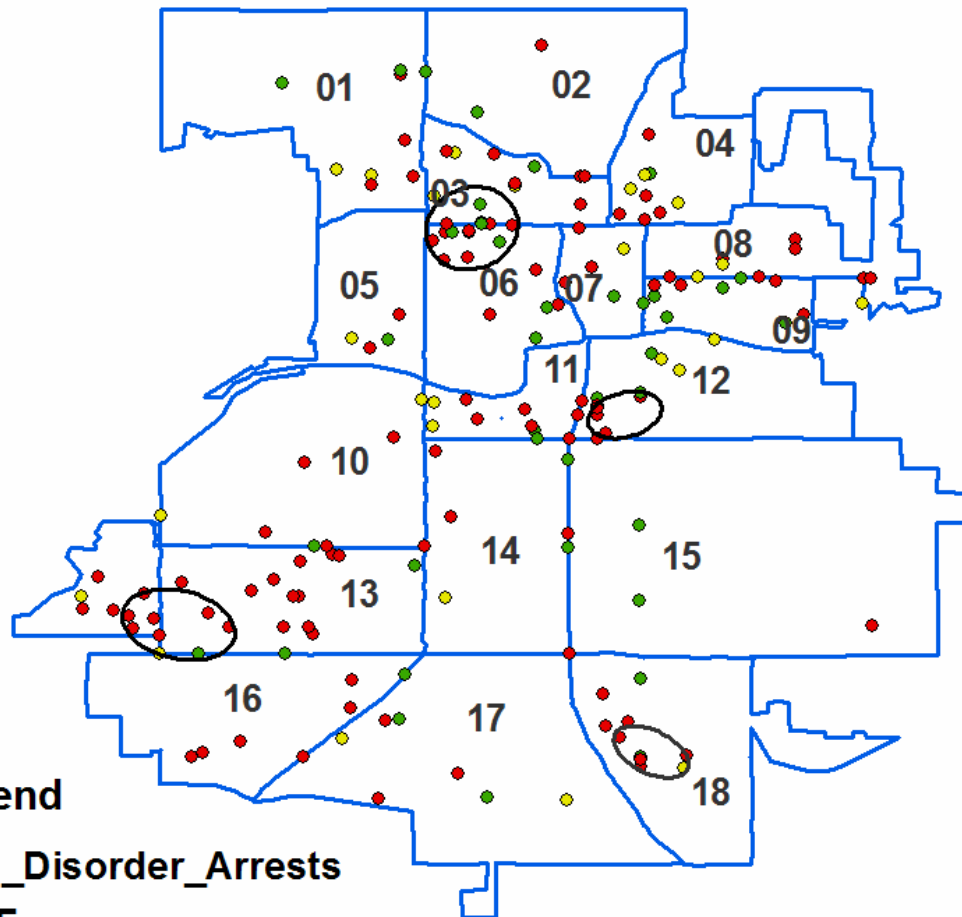


## Legend

### 2000\_Disorder\_Arrests CODE

- Resisting Arrest
- Fleeing and Eluding
- Failure to Obey a Lawful Order
- Obstructing Police

## 2001 Disorder Arrest Hot Spots



### Legend

#### 2001\_Disorder\_Arrests CODE

- Resisting Arrest
- Fleeing and Eluding
- Failure to Obey a Lawful Order



# Results

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- Significant changes in arrests for:
  - Resisting arrest
  - Failure to obey a lawful order
- Consistent hot spots for disrespect found in:
  - Team Area 3, 4, 6 and 7 (North Precinct)
  - Team Area 12 and 13 (South Precinct)



# Next Steps and Theory

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- Hot spots are a statistical statement about where high (concentrated) areas of disrespect are occurring
- Theory can lead us to expectations about where such areas of disrespect occur



# Next Steps and Theory

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- Looking at block-level/neighborhood effects
  - Ideas regarding marginalization (Donald Black):
    - Economic distress
    - Minority populations
    - Linguistic isolation