

Using geographical aggregation and statistically reliable health data for local policy development



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Research

Objectives

- ❑ Describe reasons for the development of sub county (community) units
- ❑ Explain ways to develop geographical units for analysis
- ❑ Identify sources of data and GIS tools for sub county (community) analysis

Reasons for Sub-county units

- Policy & Planning
 - Need something smaller than county data
- Surveillance/Research Purposes
 - BRFSS & Comparison Groups
- Statistical Reliability
 - 20 or more events¹ (mortality)
- Confidentiality
 - Privacy & HIPAA

¹HP 2010 Criteria for Data Suppression

Geographical Analysis of a Sub Community

- **Research of Local Zones/Districts**
 - **Community Planning Advisory Committee (CPAC)**
 - CPAC district boundaries correspond to the six planning districts as established by the city's 2010 Comprehensive Plan
 - Does not include Beaches
 - **Jacksonville Sheriff's Office (JSO)**
 - Divided by six Zones
 - Does not include Beaches

Geographical Analysis of a Sub Community

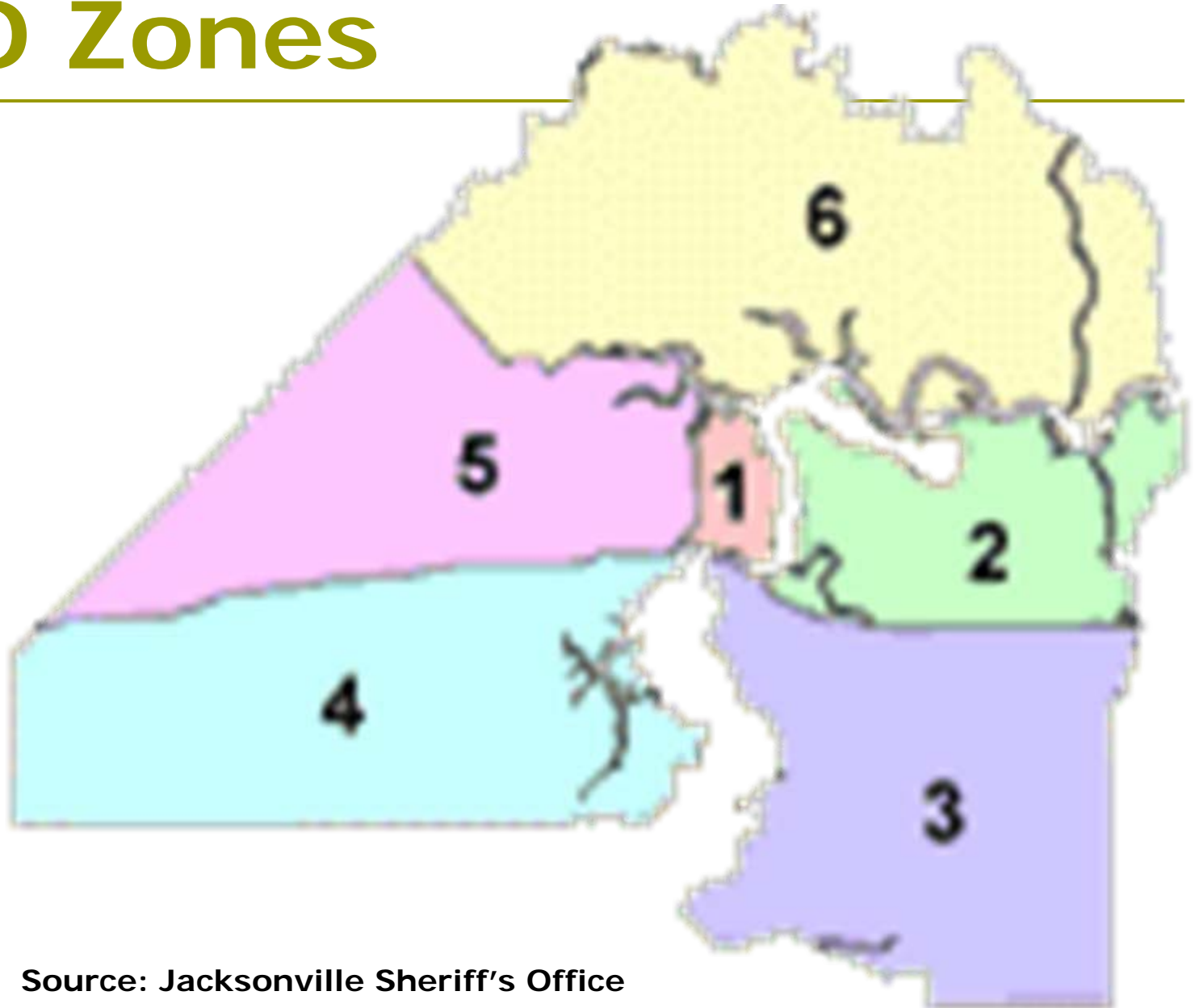
- **Research of Local Zones/Districts**
 - **Duval County Public School Board (DCPSB)**
 - Divided by five Regions (does include the Beaches)
 - Aprox. 35 schools in each region
 - All regions include corresponding feeder schools
 - **DCPSB**
 - Seven Districts
 - Created by 14 City Council Districts (2 each)

CPAC



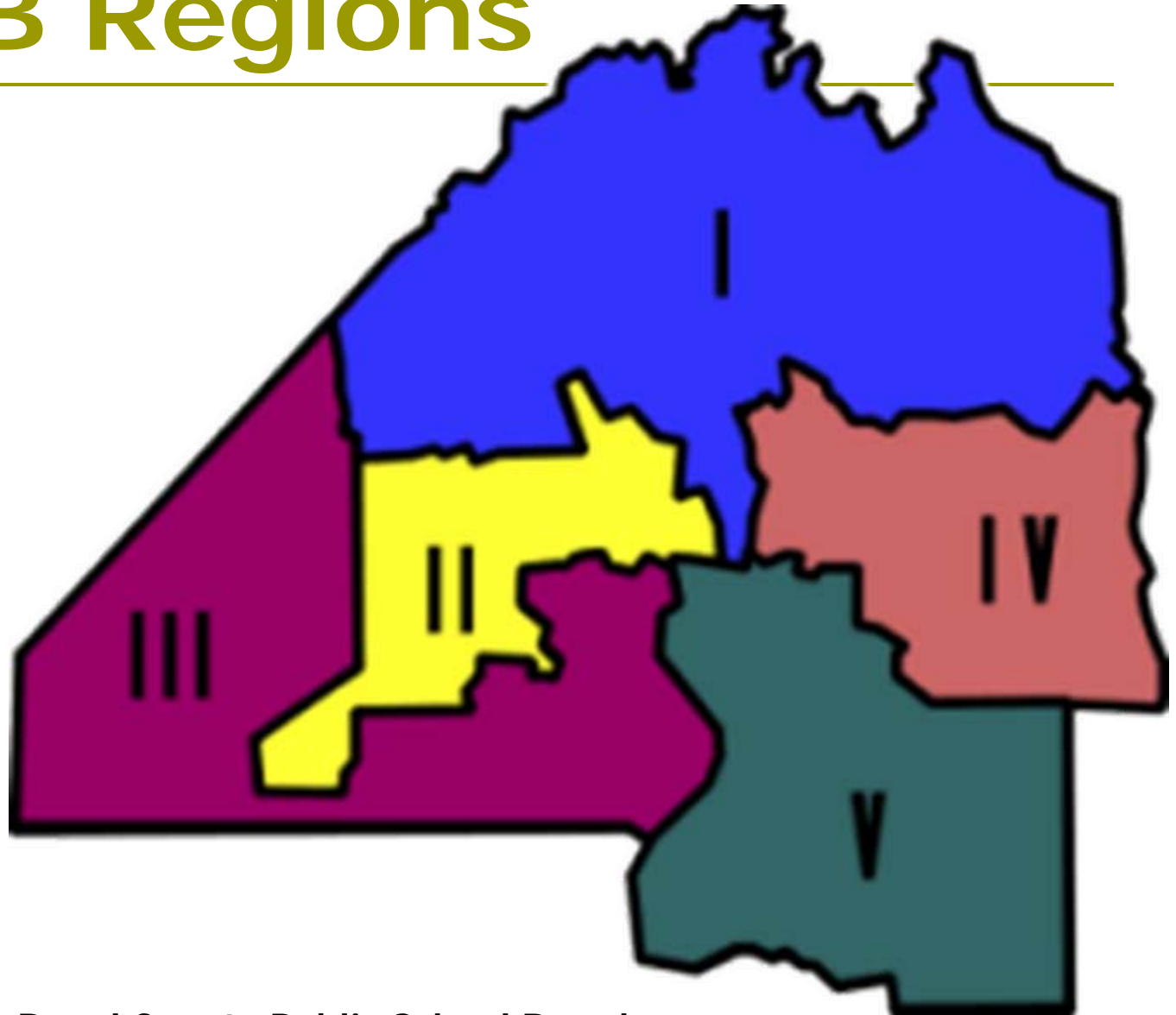
Source: City of Jacksonville

JSO Zones



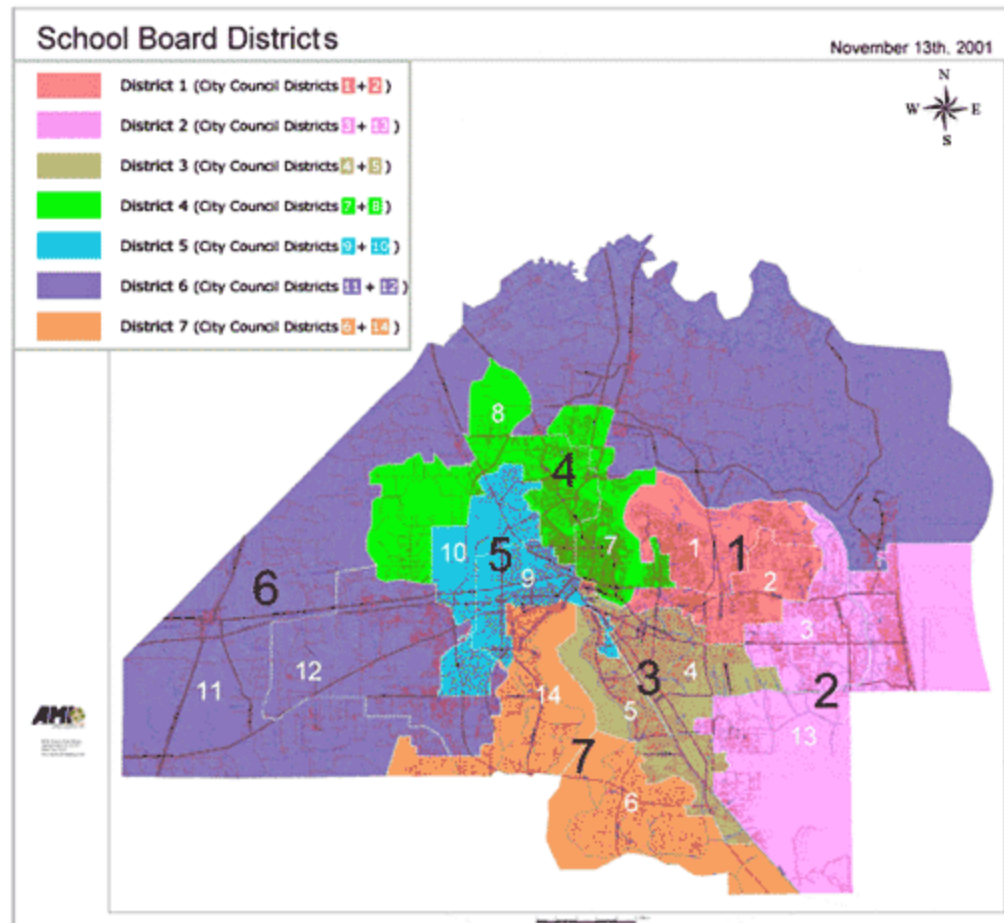
Source: Jacksonville Sheriff's Office

DCPSB Regions



Source: Duval County Public School Board

DCPSB Districts



Geographical Analysis of a Sub Community

- **By Census:** datasets don't lend itself well to this analysis
- **By Zip Code:** data suppression and confidentiality issues
- **Health Zone:** built by zip codes
- **County:** limited, data is watered down

Example of Unreliable Data

2004 Lung Cancer Mortality Rate



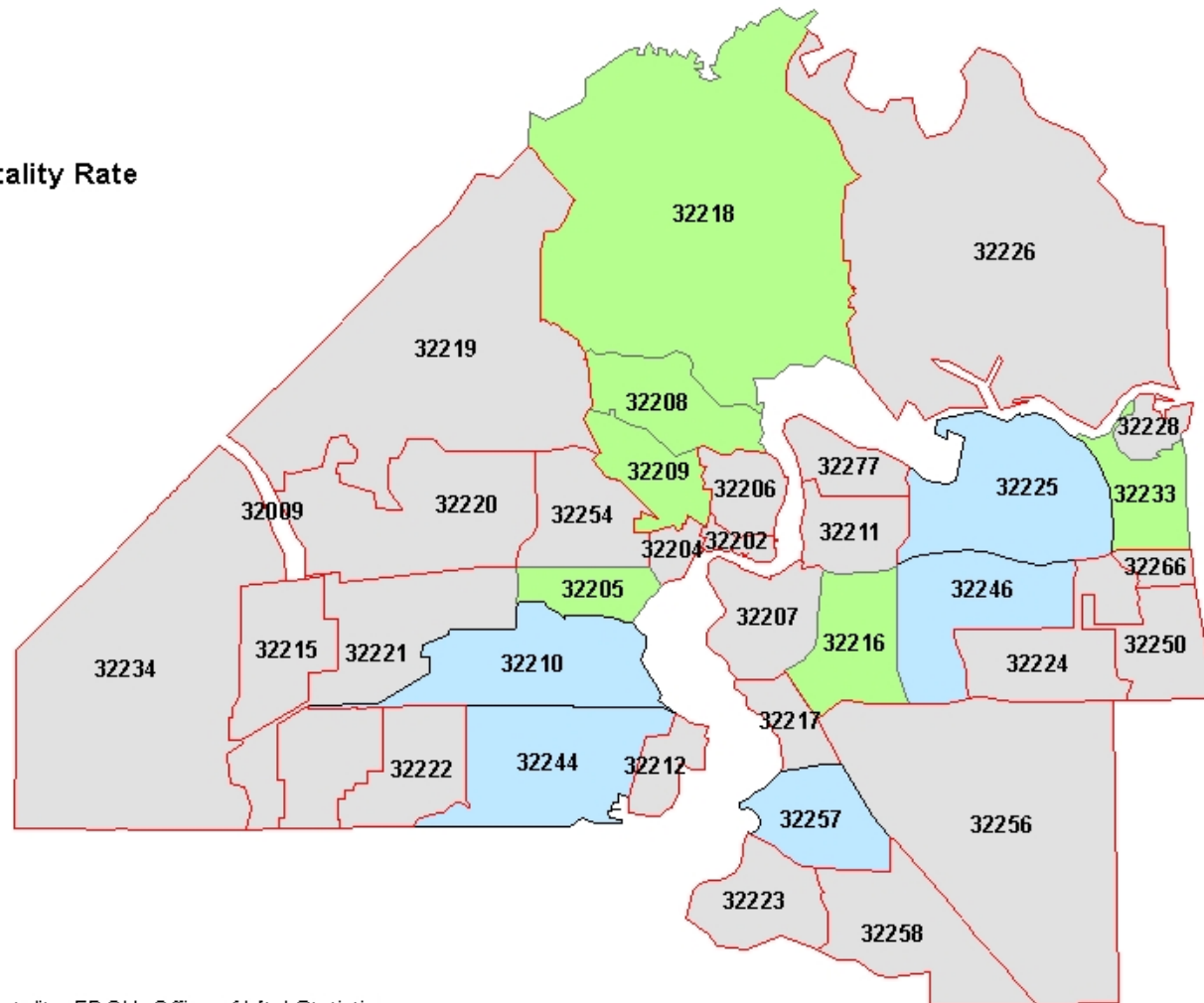
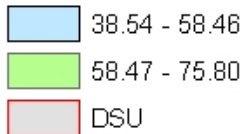
Zip Code	Cases	Rate
32202	6	DSU
32204	4	DSU
32205	21	68.69
32206	9	DSU
32207	19	DSU
32208	27	75.67
32209	30	75.80
32210	34	58.46
32211	17	DSU
32212	0	DSU
32215	0	DSU
32216	20	63.13
32217	16	DSU
32218	28	67.21
32219	8	DSU
32220	12	DSU
32221	14	DSU
32222	2	DSU
32223	8	DSU
32224	11	DSU
32225	20	38.54
32226	6	DSU
32227	0	DSU
32233	21	66.83
32234	11	DSU
32244	25	46.58
32246	21	52.88

**DSU –
Data Statistically
Unreliable**

**Not Shown:
Zip Codes 32250 – 32277
These were all DSU
except 32257**

Lung Cancer Mortality Rate by Zip Code, Duval County 2004

Lung Cancer Mortality Rate



Source Mortality: FDOH, Office of Vital Statistics
Source Population: Claritas
Prepared by: Health, Policy and Evaluation Research, DCHD, July 11, 2006



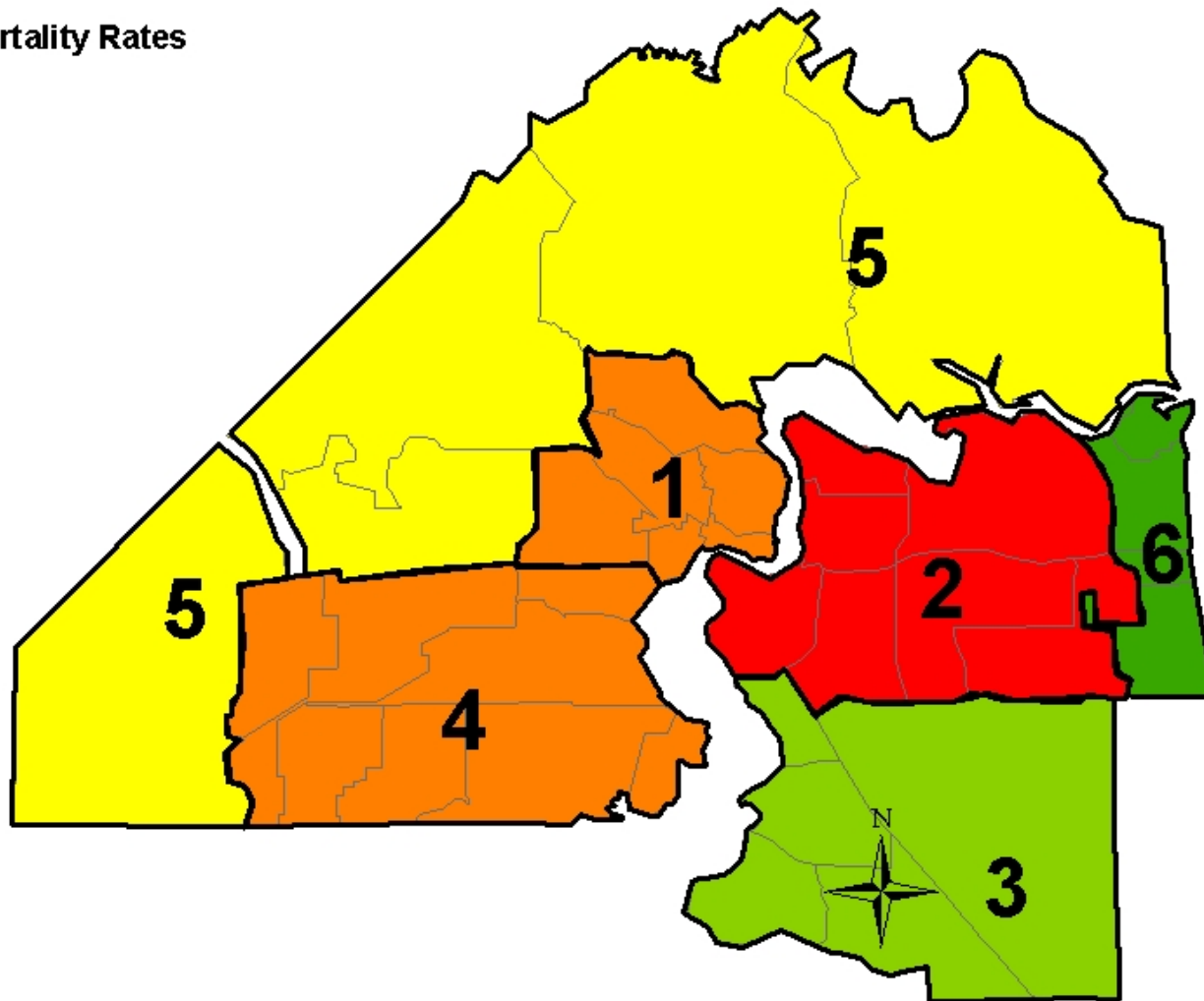
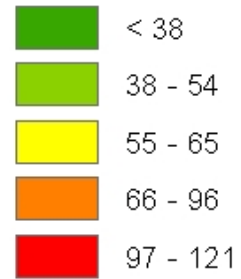
Example of Reporting by Zones

2004 Lung Cancer Mortality Rate

Health Zone	Cases	Rate
1	90	71.20
2	121	46.93
3	54	39.81
4	96	56.89
5	65	82.49
6	37	55.74

Lung Cancer Mortality Rate by Health Zone, Duval County 2004

Lung Cancer Mortality Rates



Source Mortality: FDOH, Office of Vital Statistics

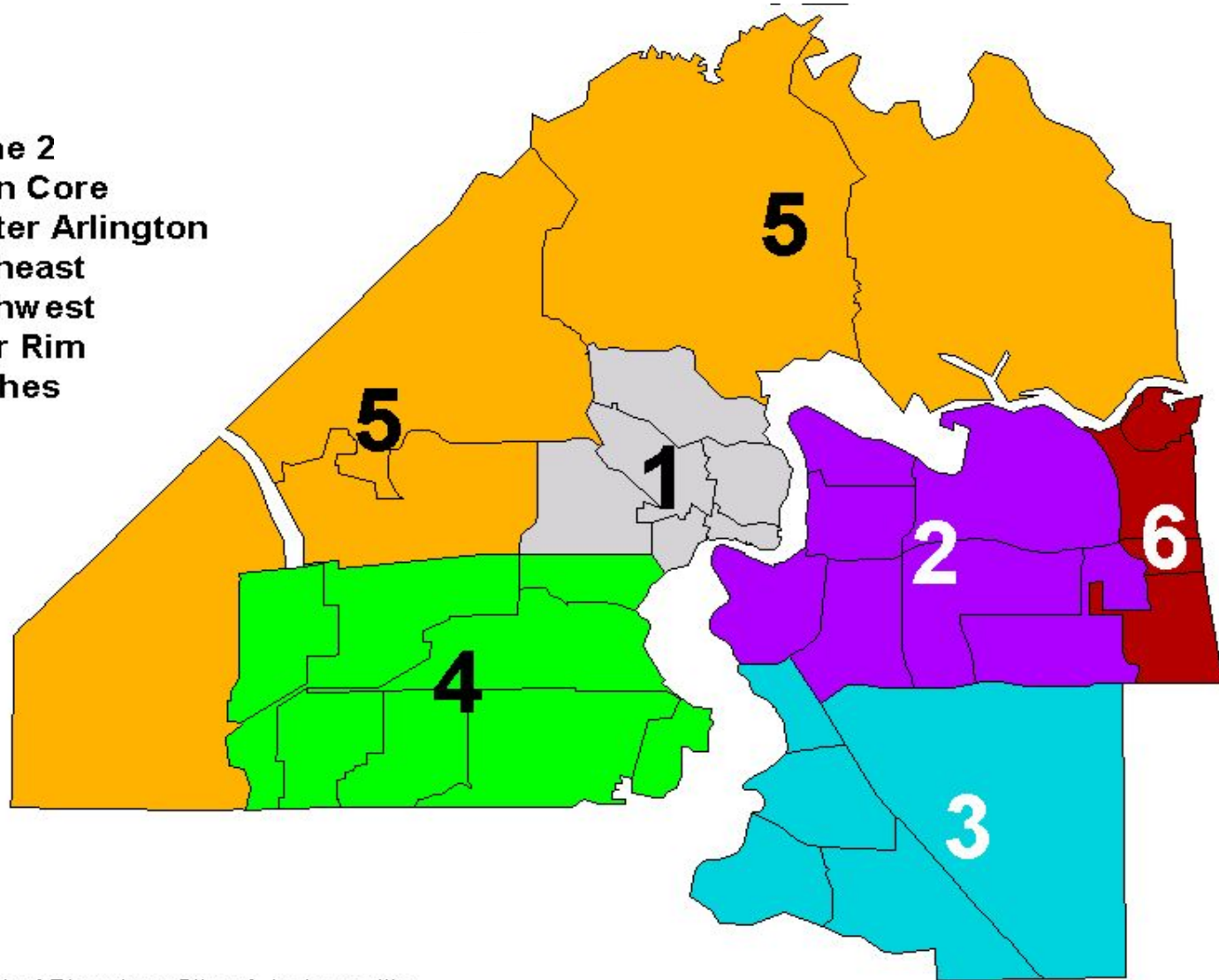
Source Population: Claritas

Prepared by: Health, Policy and Evaluation Research, DCHD, July 11, 2006

Health Zones for Duval County

Health Zone 2

- Urban Core
- Greater Arlington
- Southeast
- Southwest
- Outer Rim
- Beaches









Zips Codes in Zones

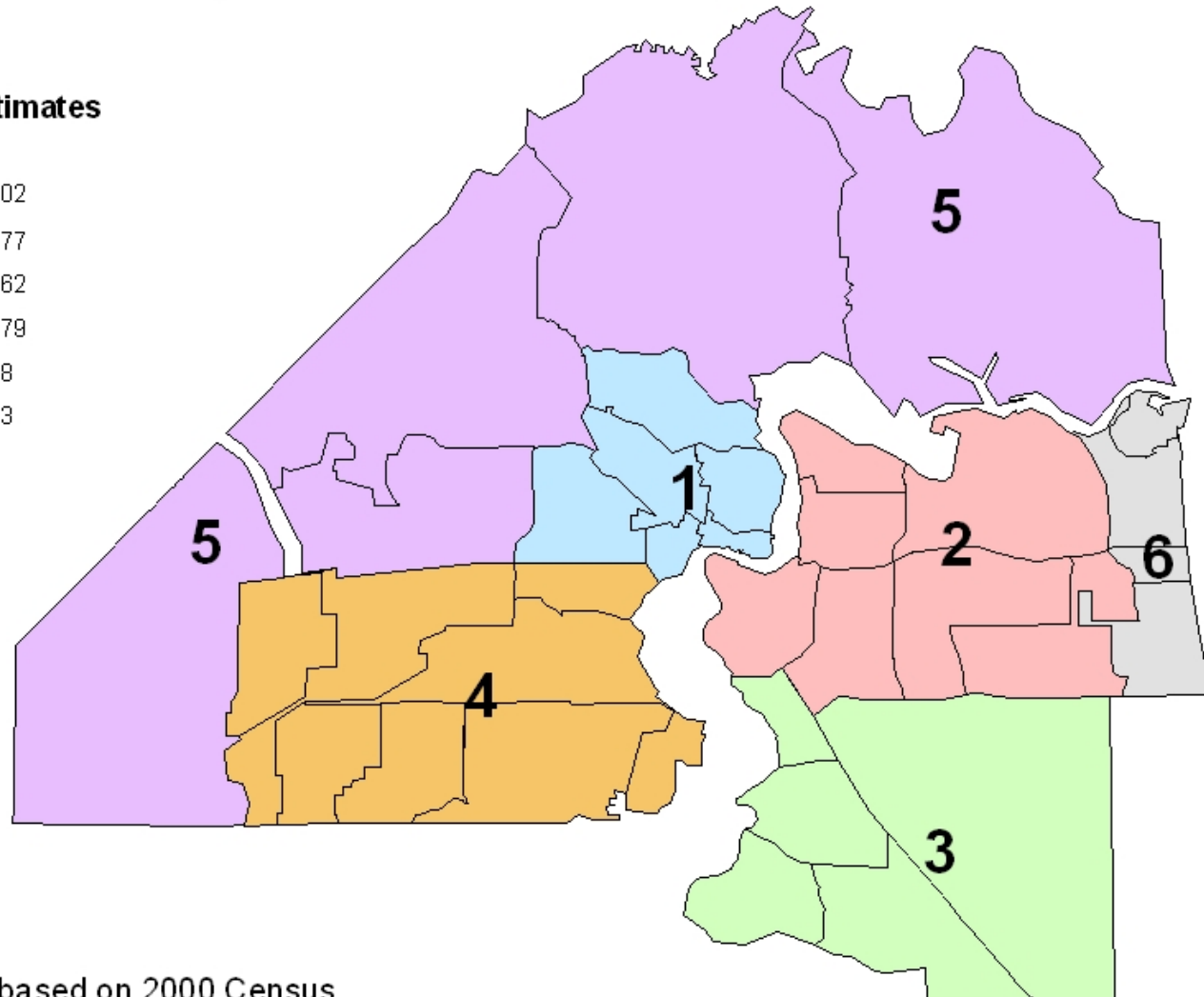
- Zone 1 – 02, 04, 06, 08, 09 & 54
- Zone 2 – 07, 11, 16, 24, 25, 46 & 77
- Zone 3 – 17, 23, 56, 57 & 58
- Zone 4 – 05, 10, 12, 15, 21, 22 & 44
- Zone 5 – 18, 19, 20, 26 & 34
- Zone 6 – 27, 28, 33, 50 & 66

Duval County Population Estimates by Health Zone, 2006

Population Estimates

Health Zones

	HZ 1 = 127002
	HZ 2 = 272177
	HZ 3 = 142362
	HZ 4 = 170979
	HZ 5 = 80678
	HZ 6 = 67633



N = 860832

Source: Claritas based on 2000 Census

Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, November 2007

Health Zones

Racial Breakdown, 2006

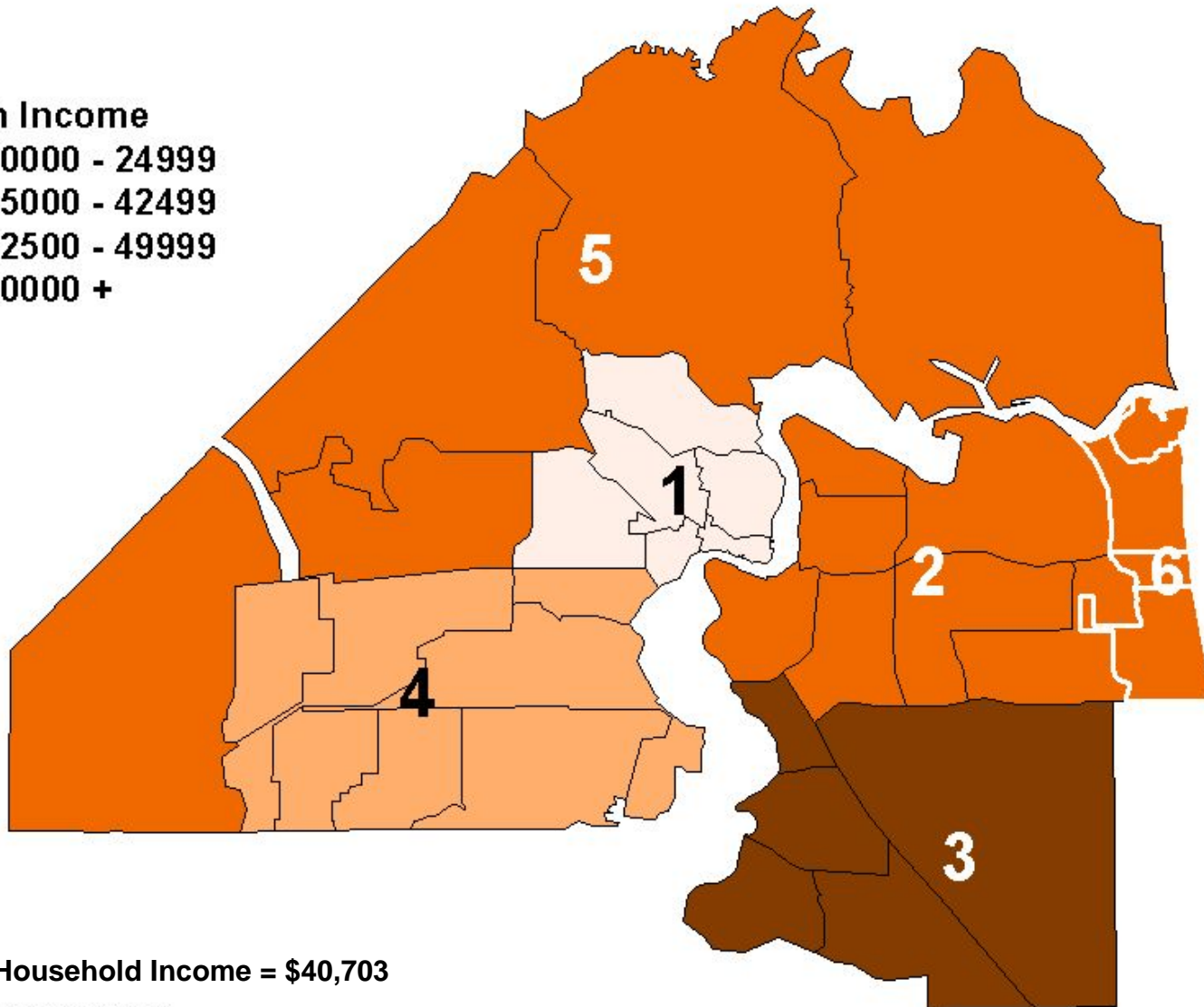
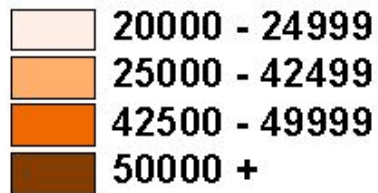
Zone	White	Black	Others
1	16.1%	81.6%	2.3%
2	68.7%	22.0%	9.3%
3	80.3%	10.4%	9.3%
4	66.4%	25.2%	8.5%
5	66.4%	31.0%	2.6%
6	81.1%	11.3%	7.6%

Source: Claritas based on 2000 U.S. Census

Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, November 2007

Median Income by Health Zone, Duval County

Median Income



1999 Median Household Income = \$40,703

Source: U.S. Census Bureau

Prepared by: Center for Health Statistics, Duval County Health Department



Sources of Sub County Data

- Population
 - Census
 - Proprietary (Claritas)
- Office of Vital Statistics
 - Death
 - Birth
- FL Agency for Health Care Administration
 - Hospitalization
 - Ambulatory
 - Emergency Department*

* Data collection started in 2005

QUESTIONS????