

# Payday Lenders and the Military: A Study of Hampton Roads, Virginia

Karen J. Hastings



Advisor: Gregory Thomas  
Pennsylvania State University

# Introduction

- ▶ Payday Lenders have long been identified as targeting military populations
  - ▶ Area of concern to leadership due to security risks
- ▶ Hampton Roads has unique military and civilian makeup, making it an ideal area to study
  - ▶ Large Military Population: Army, Navy, Air Force, and Coast Guard (arguably the most militarized region in the US)
  - ▶ Varied Civilian Population: income, rural/urban, ethnic groups

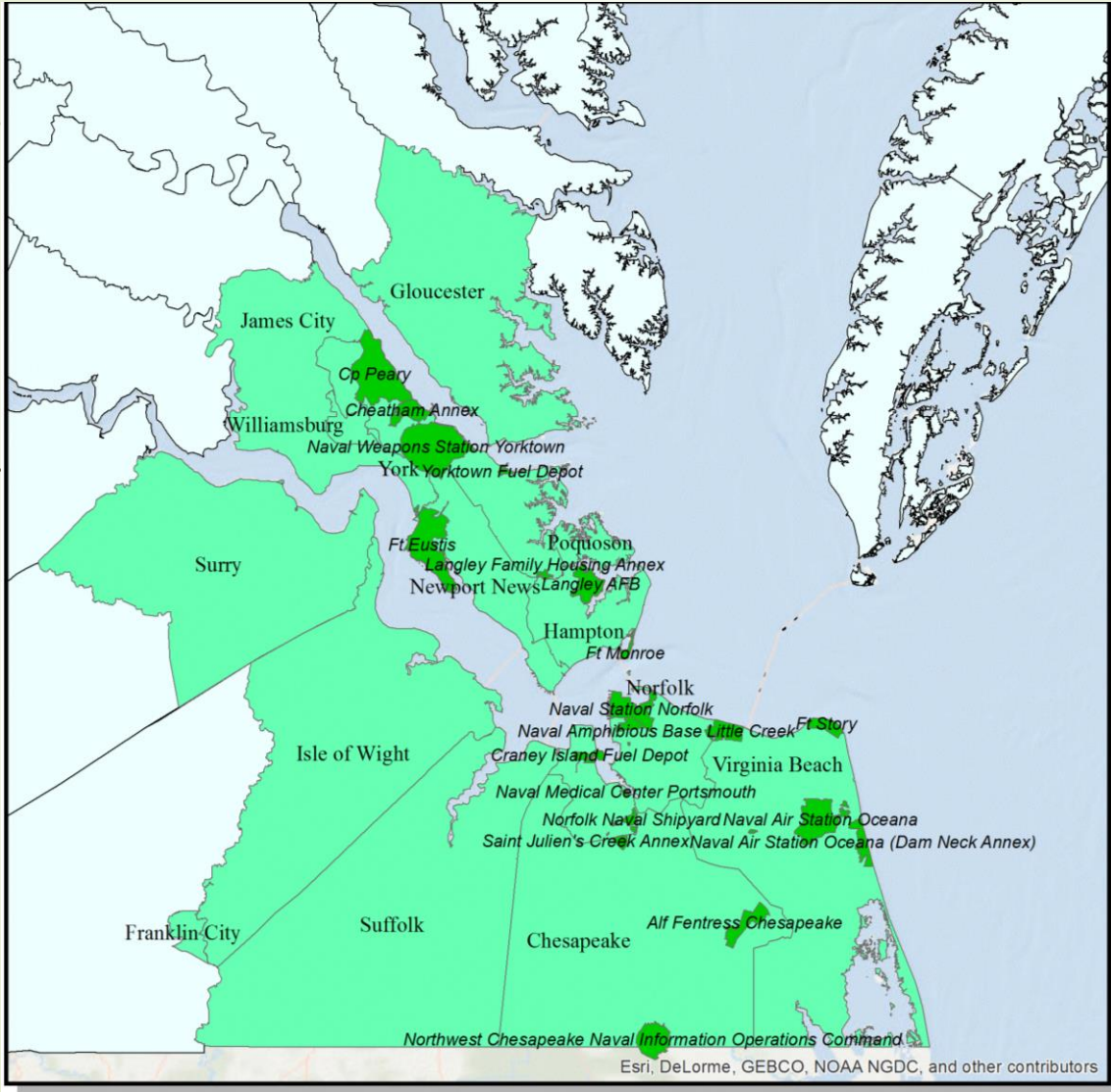
# Background

- ▶ Payday Lenders charge extremely high interest rates and have historically preyed on junior service members
- ▶ 2005 Graves and Peterson “Predatory Lending and the Military: The Law and Geography of ‘Payday’ Loans in Military Towns”
  - ▶ Looked at 20 states, 109 military installations, and 15,000 payday lenders
  - ▶ Found greater concentrations of payday lenders per capita near military installations

# Federal & State Measures

- ▶ Congress passes Military Lending Act in 2006
  - ▶ Caps interest rate at 36%
  - ▶ Requires rights disclosure
  - ▶ Prohibits arbitration
  - ▶ Can't waive Service member's Civil Relief Act (2015)
- ▶ Service Response
  - ▶ Varies by Service
- ▶ Virginia (2009)
  - ▶ Restricted loans to one at a time per borrower
  - ▶ Established tracking database to determine eligibility
  - ▶ Created mandatory longer repayment times
  - ▶ Capped interest rate at 36%
  - ▶ Limited fees to 20% of loan
  - ▶ May not make loans to military members, spouses or dependents
  - ▶ \$1,000 fine *per violation*
  - ▶ 29.41% decrease in Payday Lenders in 2009

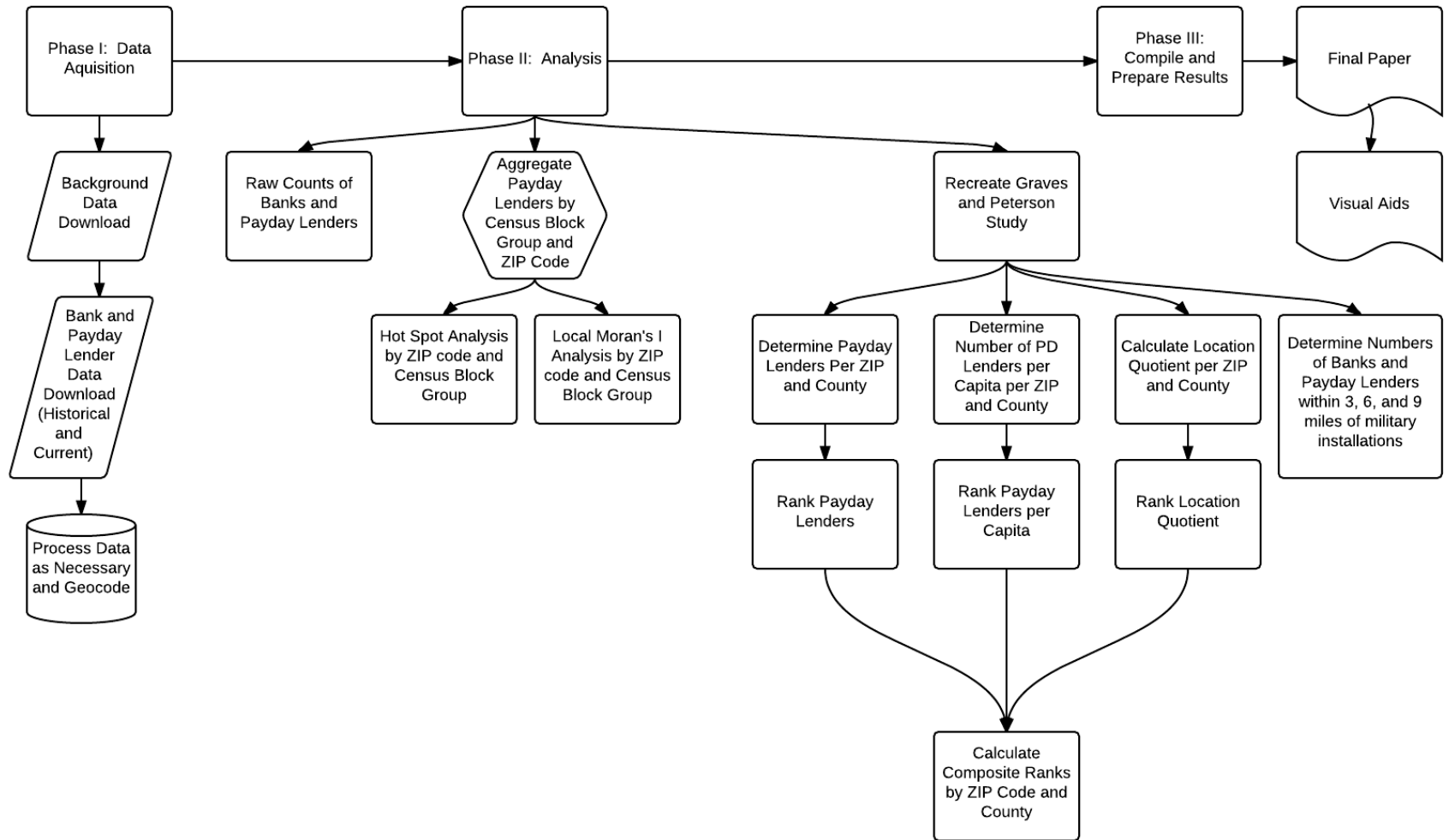
# Hampton Roads



# Goals and Objectives

- Determine if numbers of payday lenders have decreased since 2005
- Determine if Military has continued to be a target

# Methodology



# Methodology: Phase I

- ▶ Obtained Data
- ▶ Background data
  - ▶ US Census Bureau TIGER
  - ▶ US Geological Survey
  - ▶ ESRI ArcGIS Online
- ▶ Payday Lenders/Banks
  - ▶ American Factfinder (historical numbers)
  - ▶ Virginia State Corporation Commission
    - ▶ Geocode
  - ▶ FDIC



# Methodology: Phase II

## ➤ Compared Raw Counts

- Compare historical numbers and current numbers of payday lenders and banks
- Accomplished by ZIP code & county
- Overlay 3, 6, 9 mile buffers from military installations
  - Why? Payday lending industry wants locations w/in 3 miles of the populations they serve
  - Counts of payday lenders, people, and banks in the zones

# Raw count county result

2005

2016

|                | <u>3 Miles</u> | <u>6 Miles</u> | <u>9 Miles</u> |
|----------------|----------------|----------------|----------------|
| Banks          | 216            | 312            | 326            |
| PayDay Lenders | 26             | 37             | 39             |

| County/City    | Number Banks | Number PD  |
|----------------|--------------|------------|
| Chesapeake     | 50           | 18         |
| Franklin       | 15           | 2          |
| Gloucester     | 15           | 2          |
| Hampton        | 29           | 16         |
| Isle of Wight  | 6            | 4          |
| James City     | 20           | 0          |
| Newport News   | 38           | 21         |
| Norfolk        | 77           | 30         |
| Poquoson       | 1            | 1          |
| Portsmouth     | 19           | 14         |
| Suffolk        | 15           | 5          |
| Surry          | 2            | 0          |
| Virginia Beach | 91           | 51         |
| Williamsburg   | 14           | 1          |
| York           | 13           | 3          |
|                | <b>405</b>   | <b>168</b> |

| County/City    | Number Banks | Change     | Number PD | Change      |
|----------------|--------------|------------|-----------|-------------|
| Chesapeake     | 47           | -3         | 4         | -14         |
| Franklin       | 4            | -11        | 1         | -1          |
| Gloucester     | 12           | -3         | 1         | -1          |
| Hampton        | 23           | -6         | 4         | -12         |
| Isle of Wight  | 8            | 2          | 1         | -3          |
| James City     | 21           | 1          | 0         | 0           |
| Newport News   | 31           | -7         | 6         | -15         |
| Norfolk        | 48           | -29        | 12        | -18         |
| Poquoson       | 2            | 1          | 0         | -1          |
| Portsmouth     | 14           | -5         | 5         | -9          |
| Suffolk        | 21           | 6          | 3         | -2          |
| Surry          | 1            | -1         | 0         | 0           |
| Virginia Beach | 91           | 0          | 6         | -45         |
| Williamsburg   | 10           | -4         | 0         | -1          |
| York           | 15           | 2          | 0         | -3          |
|                | <b>348</b>   | <b>-57</b> | <b>43</b> | <b>-125</b> |

**-14%**

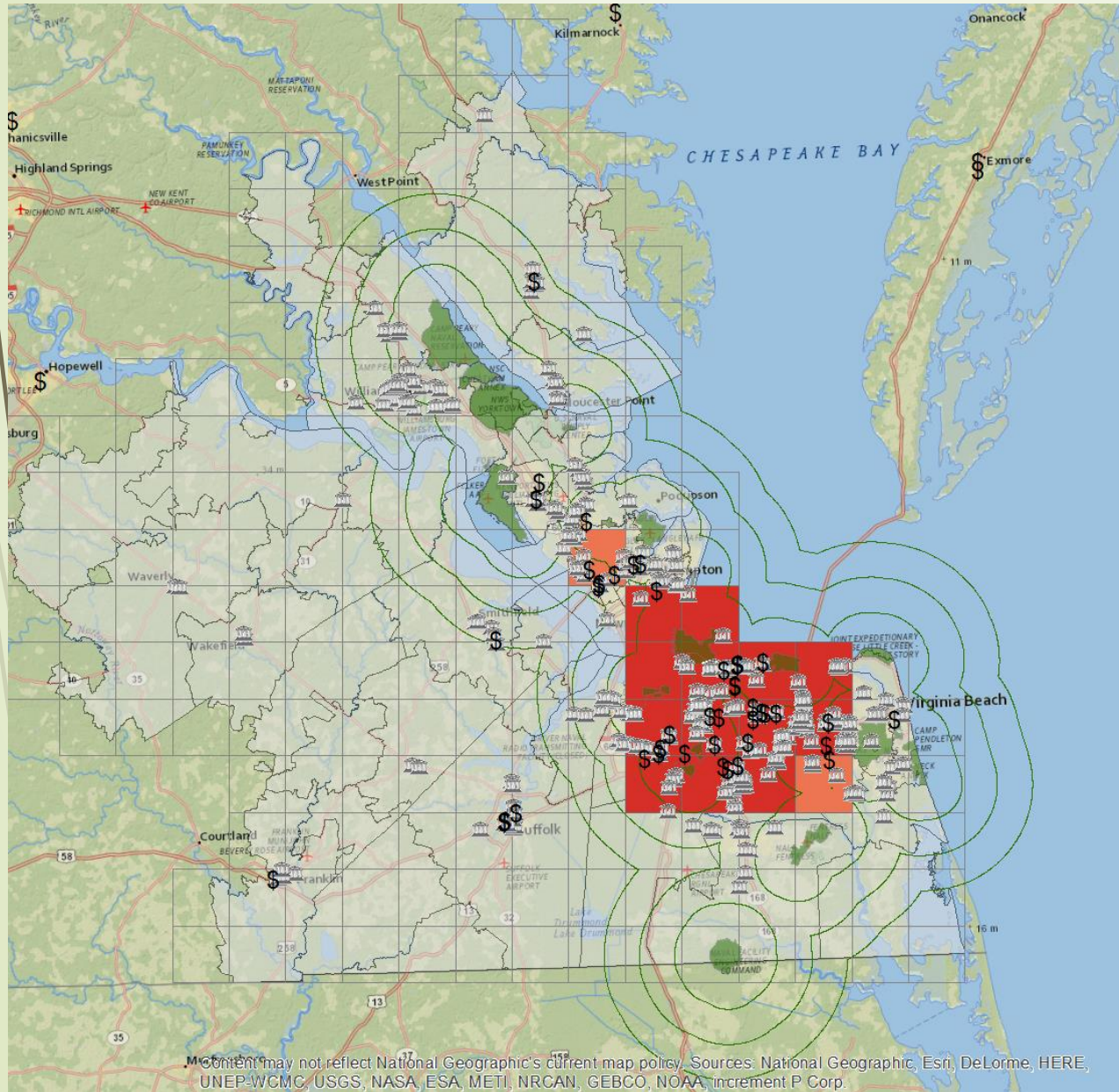
**-74%**

Source Data: FDIC, U.S. Census Bureau 2005 Business Pattern Survey, and Virginia State Corporation Commission

# Phase II: Complete Hot Spot Analysis

- Aggregated current point data by census block group & ZIP code
  - ZIP Code Analysis Inconclusive, created a fish net instead
- Identified statistically significant clusters of high and low values of payday lenders
- Overlaid 3, 6, 9 mile buffers from military installations

# Fish Net Hot Spot Results










\$ PayDay Lenders

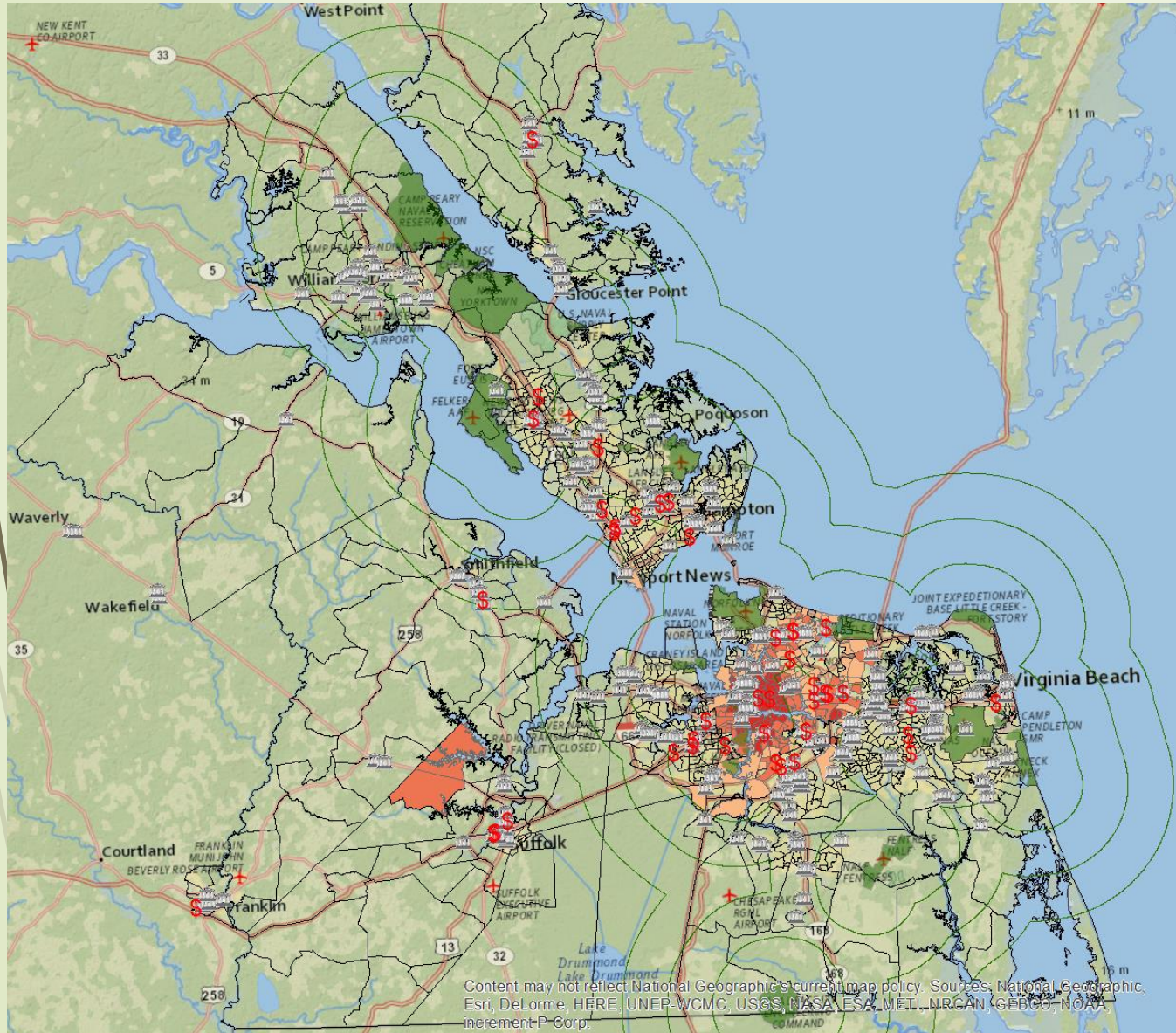
🏦 Banks

## Hot Spot Analysis

### Gi\_Bin

-  Cold Spot - 99% Confidence
-  Cold Spot - 95% Confidence
-  Cold Spot - 90% Confidence
-  Not Significant
-  Hot Spot - 90% Confidence
-  Hot Spot - 95% Confidence
-  Hot Spot - 99% Confidence

# Census Block Group Hot Spot Results



\$ PayDay Lenders

🏦 Banks

## Census Blocks Hot Spots

### Gi\_Bin

■ Cold Spot - 99% Confidence

■ Cold Spot - 95% Confidence

■ Cold Spot - 90% Confidence

□ Not Significant

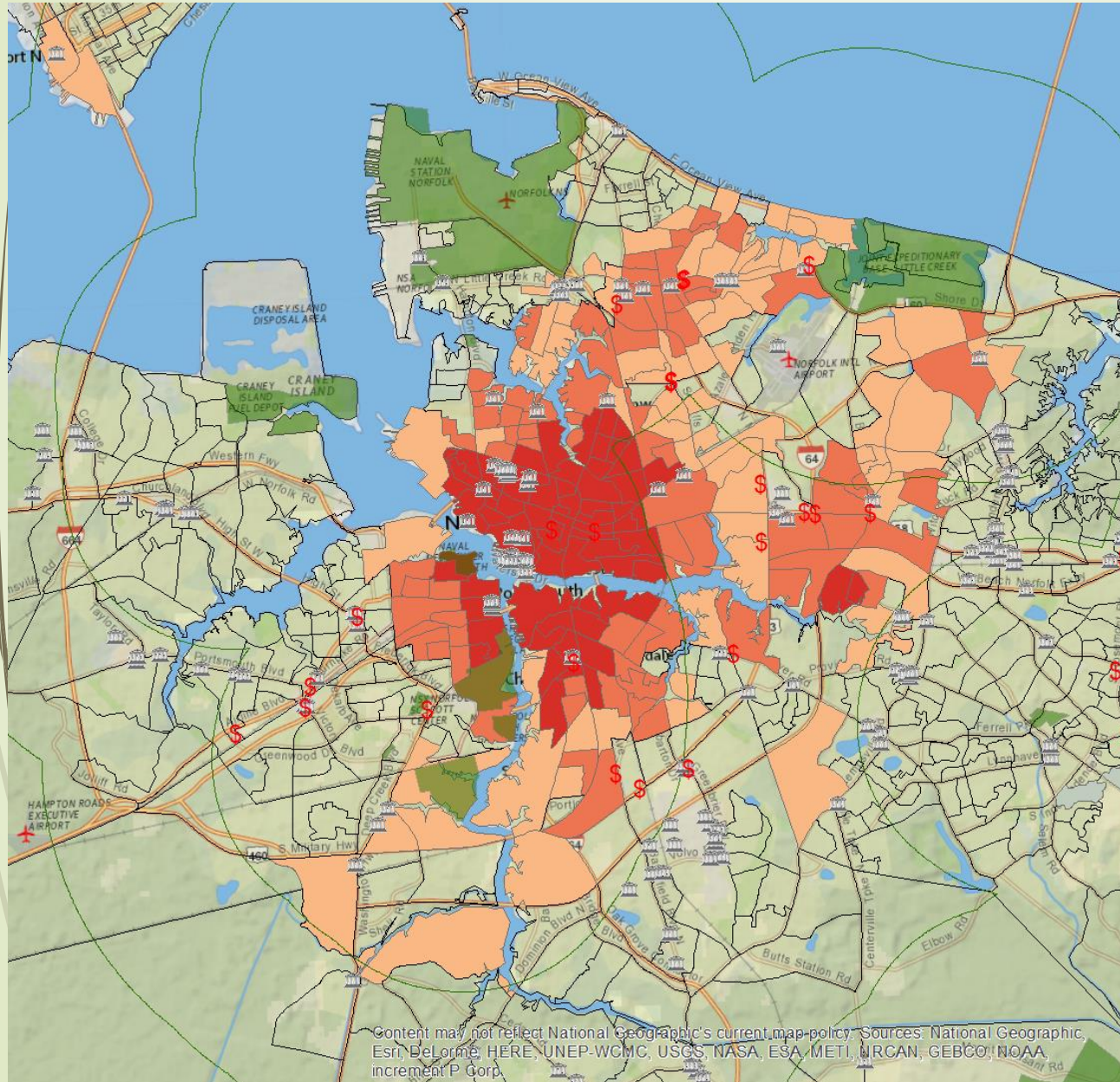
■ Hot Spot - 90% Confidence

■ Hot Spot - 95% Confidence

■ Hot Spot - 99% Confidence

Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

# Census Block Group Hot Spot Results



\$ PayDay Lenders

🏦 Banks

## Census Blocks Hot Spots

### Gi\_Bin

🟦 Cold Spot - 99% Confidence

🟡 Cold Spot - 95% Confidence

🟠 Cold Spot - 90% Confidence

⬜ Not Significant

🟠 Hot Spot - 90% Confidence

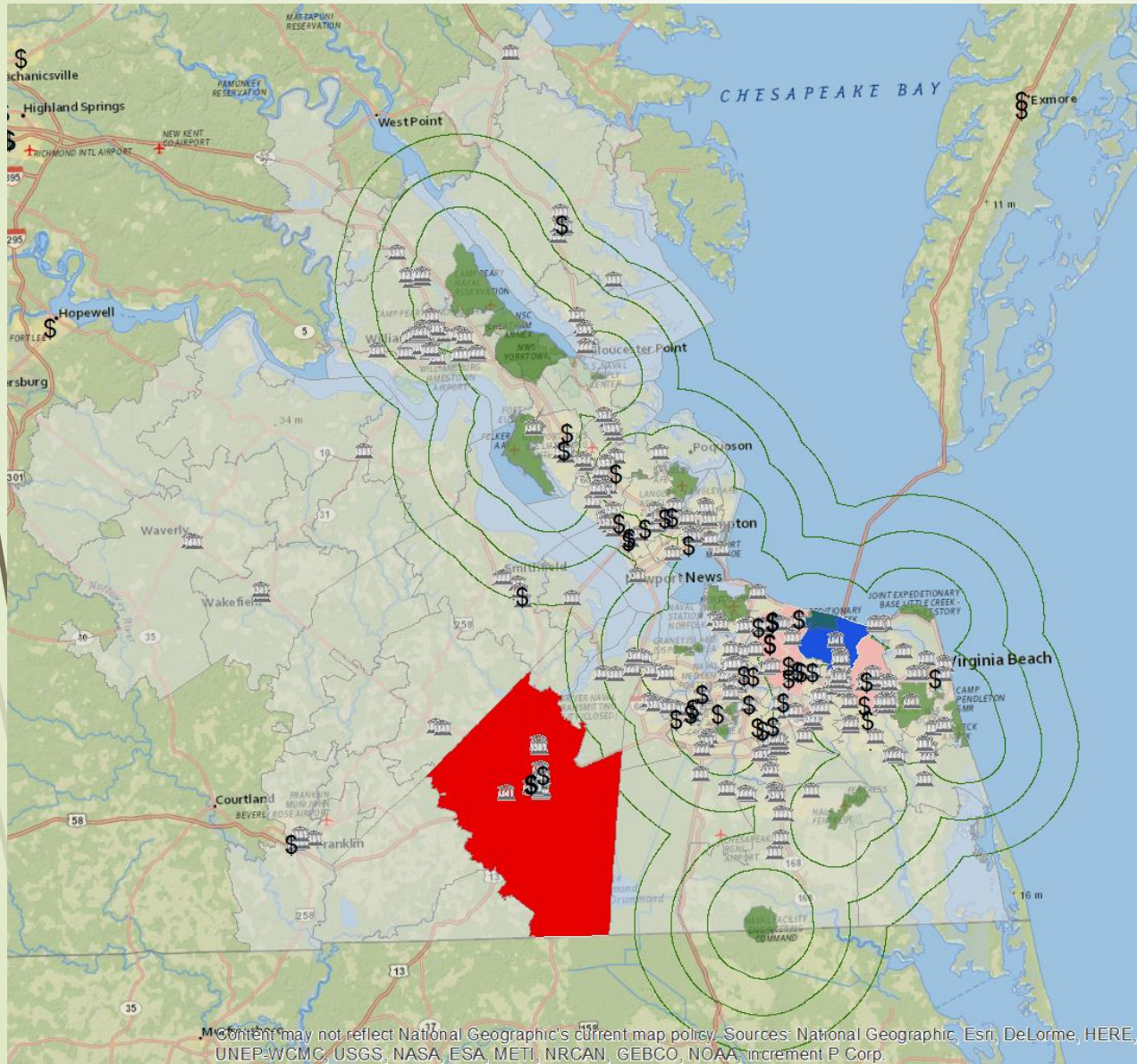
🔴 Hot Spot - 95% Confidence

🔴 Hot Spot - 99% Confidence

# Phase II: Complete Anselin Local Moran's I Analysis

- Aggregated current point data by census block group & ZIP code
- Identified any spatial clusters of features with high or low values
- Only tool that identified statistically significant outliers
- Overlay 3, 6, 9 mile buffers from military installations

# ZIP Anselin Local Moran's I Results

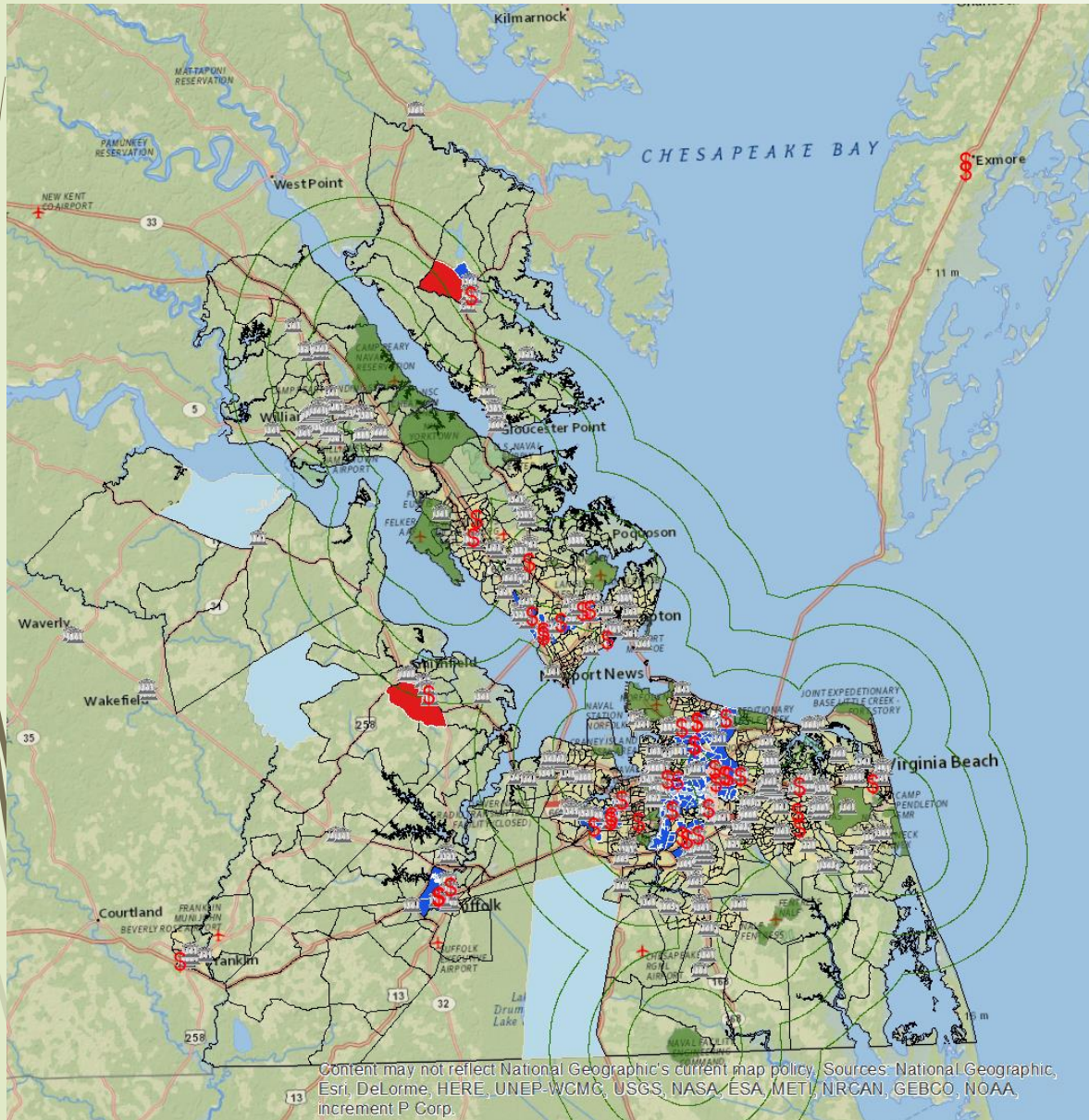







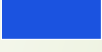
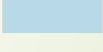
- \$ PayDay Lenders
- 🏛 Banks
- ☐ Not Significant
- 🟠 High-High Cluster
- 🔴 High-Low Outlier
- 🟠 Low-High Outlier
- 🟡 Low-Low Cluster
- ☐ ZIP selection

Map content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Increment P Corp.



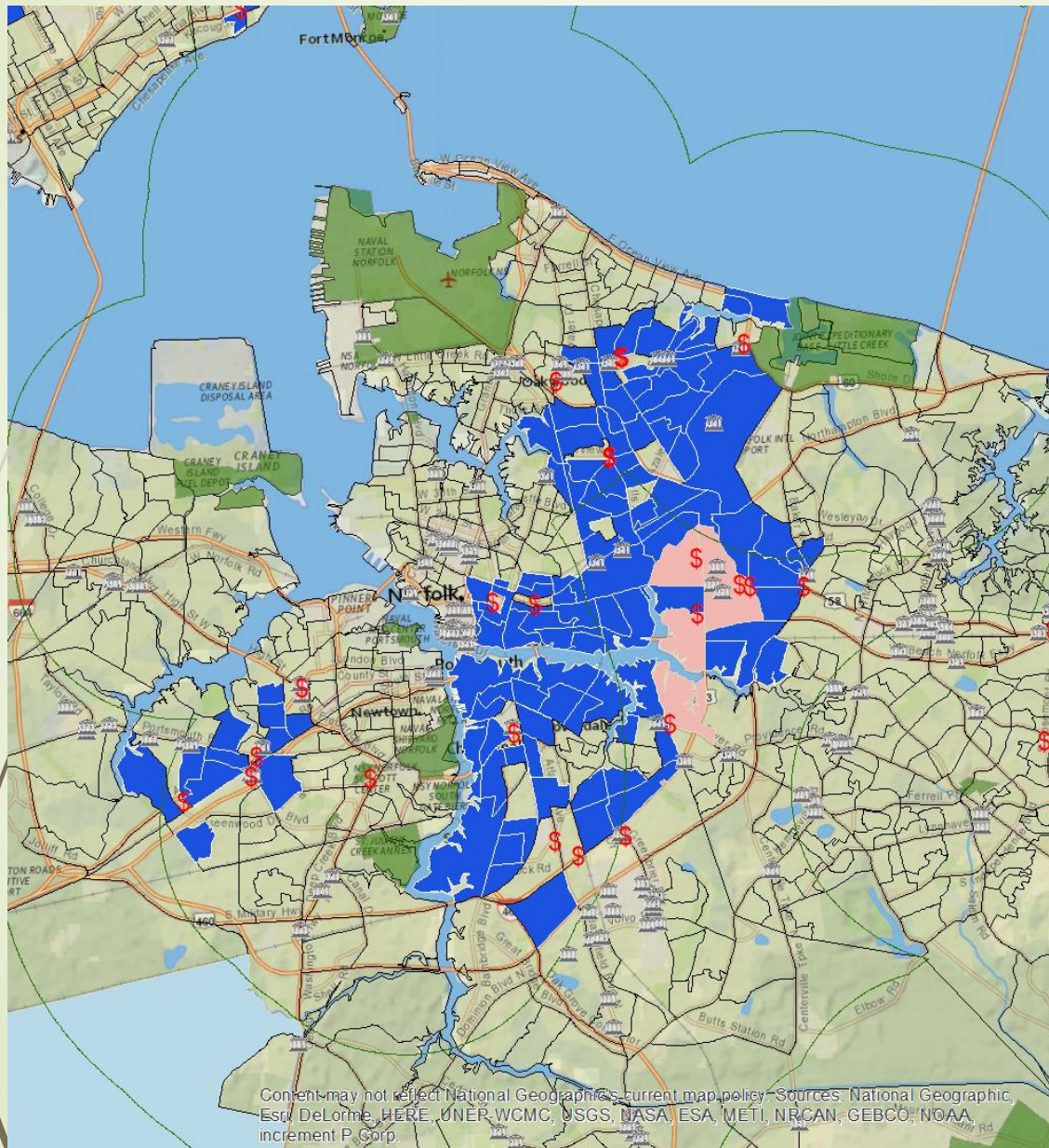
# Census Block Anselin Moran's I Results



-  PayDay Lenders
-  Banks
-  Not Significant
-  High-High Cluster
-  High-Low Outlier
-  Low-High Outlier
-  Low-Low Cluster

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# Census Block Anselin Moran's I Norfolk



# Recreate Graves and Peterson Study

- ▶ Calculate Statewide Average of Payday Lenders Per 100K people
  - ▶ Enables prediction of payday lenders per unit (county or ZIP code)
  - ▶ Allows comparison of predicted numbers vs. actual numbers in any given area
- ▶ Data presented by ZIP Codes and Counties
  - ▶ Rank Payday Lenders
  - ▶ Rank Payday Lenders Per Capita

# Recreate Graves and Peterson Study

## ► Calculate Location Quotient

$$\text{ZIP Code } LQ = \left[ \frac{X}{(X+Y) \times 100} \right] + (X - Y)$$

$$\text{County } LQ = \left[ \frac{X}{Y} \right] \times 100$$

LQ = Location Quotient, X and Y = Banks and Payday Lenders

\* Not standard LQ formula but ones developed by Graves and Peterson

# Recreate Graves and Peterson Study

- ▶ Calculated Composite Index
  - ▶ Average of Rank of Payday Lenders, Payday Lenders per Capita Rank, and Location Quotient for each county and ZIP code
  - ▶ This creates a method for showing proximity of payday lenders to bases with a single number
- ▶ Created 3, 6, 9 mile buffer zones around military installations
- ▶ Ranked results by County and ZIP code

# Results by County

| Nearest Base                     | County/City    | Pop     | Banks | PD Lenders | PD/100K Pop | Exp PD | LQ    | Rank LQ | Rank PD | Rank PC | Sum of Ranks | Composite Rank | Previous Statewide Rank |
|----------------------------------|----------------|---------|-------|------------|-------------|--------|-------|---------|---------|---------|--------------|----------------|-------------------------|
| Multiple Sites                   | Norfolk        | 242,803 | 48    | 12         | 4.94        | 6.31   | 25.00 | 2       | 1       | 2       | 5            | 1              | 7                       |
| Multiple Sites                   | Portsmouth     | 95,535  | 14    | 5          | 5.21        | 2.16   | 35.71 | 1       | 3       | 1       | 5            | 1              | 3                       |
| Ft. Eustis,<br>Langely AFB       | Newport News   | 180,719 | 31    | 6          | 3.31        | 4.08   | 19.35 | 3       | 2       | 4       | 9            | 3              | 5                       |
|                                  | Suffolk        | 84,585  | 21    | 3          | 3.52        | 1.91   | 14.29 | 5       | 5       | 3       | 13           | 4              |                         |
| Langley AFB                      | Hampton        | 167,463 | 23    | 4          | 2.4         | 3.78   | 17.39 | 4       | 4       | 7       | 15           | 5              | 7                       |
|                                  | Franklin       | 56,159  | 4     | 1          | 1.78        | 1.27   | 25.00 | 2       | 6       | 9       | 17           | 6              |                         |
|                                  | Isle of Wight  | 35,270  | 8     | 1          | 2.86        | 0.80   | 12.50 | 6       | 6       | 5       | 17           | 6              |                         |
| Multiple Sites                   | Chesapeake     | 222,209 | 47    | 4          | 1.8         | 5.02   | 8.51  | 7       | 4       | 8       | 19           | 8              | 19                      |
|                                  | Gloucester     | 36,858  | 12    | 1          | 2.7         | 0.83   | 8.33  | 8       | 6       | 6       | 20           | 9              |                         |
| NAS Oceania,<br>Ft Story, Others | Virginia Beach | 437,994 | 91    | 6          | 1.37        | 9.90   | 6.59  | 9       | 2       | 10      | 21           | 10             | 14                      |
| Cp Peary                         | James City     | 67,009  | 21    | 0          | 0           | 1.51   | 0.00  | 10      | 7       | 11      | 28           | 11             |                         |
| Langley AFB                      | Poquoson       | 12,150  | 2     | 0          | 0           | 0.27   | 0.00  | 10      | 7       | 11      | 28           | 11             |                         |
|                                  | Surry          | 7,058   | 1     | 0          | 0           | 0.16   | 0.00  | 10      | 7       | 11      | 28           | 11             |                         |
| Cp Peary                         | Williamsburg   | 14,068  | 10    | 0          | 0           | 0.32   | 0.00  | 10      | 7       | 11      | 28           | 11             |                         |
| Multiple Sites                   | York           | 64,464  | 15    | 0          | 0           | 1.46   | 0.00  | 10      | 7       | 11      | 28           | 11             |                         |

# Top Ten Results by ZIP Code

| <u>Nearby Base</u>                      | <u>ZIP</u> | <u>Town or City</u>  | <u>Payday Lenders</u> | <u>Pop</u> | <u>Exp PD</u> | <u>Banks</u> | <u>PD/100K</u> | <u>LQ</u> | <u>Rank PD</u> | <u>PC</u> | <u>Rank LQ</u> | <u>Sum of Ranks</u> | <u>Composite Rank</u> | <u>Previous Statewide Rank</u> |
|---|------------|----------------------|-----------------------|------------|---------------|--------------|----------------|-----------|----------------|-----------|----------------|---------------------|-----------------------|--------------------------------|
| Naval Base Amphibious Base Little Creek | 23324      | Chesapeake           | 3                     | 22,851     | 0.52          | 1            | 13.13          | 2.01      | 2              | 2         | 1              | 5                   | 1                     | 21                             |
| Multiple                                | 23502      | Norfolk              | 4                     | 20,678     | 0.47          | 9            | 19.35          | -5.00     | 1              | 1         | 8              | 10                  | 2                     | 6                              |
|   | 23701      | Portsmouth           | 3                     | 25,161     | 0.57          | 6            | 11.92          | -3.00     | 2              | 3         | 6              | 11                  | 3                     | 9                              |
|   | 23702      | Portsmouth           | 1                     | 11,424     | 0.26          | 0            | 8.75           | 1.01      | 4              | 5         | 2              | 11                  | 3                     | 4                              |
|   | 23504      | Norfolk              | 2                     | 23,483     | 0.53          | 1            | 8.52           | 1.01      | 3              | 6         | 2              | 11                  | 3                     |                                |
|   | 23518      | Norfolk              | 3                     | 28,095     | 0.63          | 6            | 10.68          | -3.00     | 2              | 4         | 6              | 12                  | 6                     | 10                             |
| Naval Base Amphibious Base Little Creek | 23605      | Newport News/Hampton | 2                     | 13,854     | 0.31          | 1            | 7.22           | 1.01      | 3              | 8         | 2              | 13                  | 7                     | 1                              |
|   | 23513      | Norfolk              | 2                     | 29,595     | 0.67          | 0            | 6.76           | 2.01      | 3              | 10        | 1              | 14                  | 7                     |                                |
|   | 23851      | Franklin City        | 1                     | 13,715     | 0.31          | 4            | 7.29           | -3.00     | 4              | 7         | 6              | 17                  | 9                     | 11                             |
|   | 23707      | Portsmouth           | 1                     | 14,236     | 0.32          | 3            | 7.02           | -2.00     | 4              | 9         | 5              | 18                  | 10                    | 29                             |

# Overall Findings: Is This Still True?

Google Maps Newport News, Virginia



Image capture: Aug 2015 © 2016 Google

Street View - Aug 2015



# Sources

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