Using GIS to Improve Animal Welfare in Virginia
Overview

- Why am I doing this project?
- Two aspects of the project
  - 1. Chained dogs
    - Why people chain
    - State of current laws
    - How data helps
    - Smartphone application
  - 2. Dogs in custody
    - Factors
    - Reasons for custody
    - Disposition
Chained dogs
Reasons people chain their dogs

- “Protection”
- Bad behavior
- Runs away / escapes
- New partner who doesn’t like / allergic
- Doesn’t get along with other pets
- Aggressive behavior
State of current anti-tethering laws

Data courtesy of PETA
Map courtesy of ArcGIS
State of current anti-tethering laws

Data courtesy of PETA
Map courtesy of ArcGIS
Legislation

- How can data help?
- Who would use the data?
- To whom would the data be presented?
No Chained Dog Application

Add Location
Move map to refine location.

Add Photo
Add up to 6 photos. Larger images will be resized to 1024 pixels.

Add Details
Address
Enter some text

Date
Pick a Date

Number_of_dogs
Enter a number (1-99)

Condition
Critical

Remarks
Enter some text

Save
Submit
No Chained Dog Application Output
No Chained Dog Application Detail
No Chained Dog Application Image
Ethics / Privacy Concerns

- No personal data released to general public
- No addresses will be collected.
- Pictures showing people will be removed
- Database will be designed to be searchable by public for general statistics
Issues to be addressed

- Application still not able to be made public
- Progress using ArcGIS stopped
- Will switch to open source option if necessary
Dogs in custody

Image courtesy of www.people.com
Factors

- Factors possibly affecting treatment of dogs in Virginia.
  - Per capita
  - Population
- Shelter data retrieved from the Virginia Department of Agriculture and Consumer Services (VDACS)
Reasons for custody

- Stray
- Seized
- Surrendered by owner
- Received from another in-state agency
- Received from out-of-state agency
- Bite case / Quarantine
- Miscellaneous (i.e. dogs born in custody)
Reasons dogs are no longer in custody

- Positive outcome
  - Reclaimed by owner
  - Adopted
- Negative outcome
  - Died in custody
  - Euthanization
- Neutral
  - Transferred to another in-state agency
  - Transferred to an out-of-state agency
Per Capita
Disposition by County based on Per Capita

Disposition of dogs

- Reclaimed/Adopted
- Transferred
- Died/Euthanized

Animal Data courtesy of VDACS
Per Capita retrieved from estimated 2016 Census
Results

- Is there a correlation between per capita, population, and the number of dogs that end up in the county shelter?
- Is there a correlation between per capita, population, and the number of dogs that are chained?
- The data acquired from this software application will hopefully be used as a tool to bring awareness to the issue of 24/7 tethering
Conference Venues

- PA GIS in State College in May, 2018,
- Animal Rights National Conference
Resources

- VA counties map retrieved 12 Oct 17 from https://vgin.maps.arcgis.com/home/item.html?id=777890ecdb634d18a02ee604db522c6
- Animal statistics retrieved on 12 Oct 17 from https://ar.vdacs.com/Reports06
- Data for median income retrieved from 25 Oct 17 https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S2001&prodType=table
- Per capita/median income statistics retrieved on 25 Oct 17 from https://www.census.gov/quickfacts/
- Source of United States map retrieved on 12 Dec 17 from https://www.arcgis.com/home/item.html?id=f7f805eb65eb4ab787a0a3e1116ca7e5
Questions?