

January 20, 2014

AMERICAN STRAYS PROJECT **PRELIMINARY DATA RELEASE OF SURVEY RESULTS FROM AMERICAN STRAYS VOLUNTEER CANINE SURVEY OF LOOSE DOGS IN DETROIT.**

1. Based on volunteer citizen research conducted in the city of Detroit by the American Strays Project Team from February 2011 through January 2014, the World Animal Awareness Society has gathered enough data to suggest there are fewer than 3,000 loose dogs on the streets within the city of Detroit on any given day. (see - Simulated combined numbers of dogs on the street) (see - Category listing of the manner in which the dogs were observed, ie. L = Loose dog, etc)

- 23 regions out of 42 were surveyed between September 21, & November 21, 2013 by volunteer data collectors. The 23 regions represent 1,150 points out of a possible 2,100. (see - Data Collection Methodology)

- It is our belief that as we better define our data collection and analysis, the actual number of looseDogs on Detroit streets will be under 1,000 on any given day.

2. Over the course of 3 years of visual observation American Strays Project members have been able to observe no more than 10 packs of 3 or more “wild” or “feral” loose dogs on the streets of Detroit on any given day. These are dogs that do not allow any direct contact with people and appear to have a much greater territory in which they roam than dogs that are more recently on the street (lost/abandoned/dumped).

3. Abandoned/dumped dogs are a principal contributor to the number of dogs on the street. The vast majority of abandoned/dumped dogs are still being “used” by people in the community in some way. Example: empty dwellings are used by people to house dogs to breed for fighting.

4. The problems that are experienced by dogs and people in the city of Detroit have not changed or diminished because the number of loose dogs is more defined. Although there are not tens of thousands of loose dogs on the streets of Detroit, the abuse, bites, surrenders, fighting, breeding, neglect, and over-crowded shelters leading to high euthanization rates indicate substantial problems on a large scale. When there are 1,200 reported dog bites per year for the city of Detroit, people take notice.

5. The American Strays Project Team has been able to identify the number of loose dogs in the city of Detroit, and while gathering empirical data, observed what we believe to be the chief source of most of the problems that effect the city's pets. Specifically, a collective lack of good guardianship knowledge.



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6. REMEDIATION:

The World Animal Awareness Society has begun to discuss programs with the city's stakeholders and has commenced work on a series of pet specific video-based lesson plans to assist in the transfer of pet guardianship skills. These lesson plans are being created for Detroit's 5th graders. This lesson plan series is being created in cooperation with teachers from Pinckney, MI schools and will be available the fall of 2014 leading up to the 2014 Detroit canine survey. The 5th graders will be learning good pet guardian skills while learning how to assess the health of dogs in their own neighborhood through observation and reporting.

7. **American Strays: 2030.** The American Strays Project Team has created a 16 year plan through 2030 which includes an annual national canine survey every 3rd weekend in September. Look for a detailed road map to be released in the second quarter of 2014. The culmination of American Strays 2030 is the addition of the following question on the 2030 US census; "How many pets do you have living with you and what are they?"

8. American Strays Project Assets:

- American Strays Project website (from program inception to current):
<http://www.WA2S.org/american-strays>

- American Strays Project photos on flickr (1,000+ images):
<http://www.flickr.com/photos/wa2sorg/> &
<http://www.flickr.com/photos/wa2sorg/map/>

- American Strays the series playlist on youtube (20+ videos):
<https://www.youtube.com/watch?v=Le0D15Vp5F4&list=PLYERe63qNi0z7JecHmJ2IKtXKXi2PDvnB>

- American Strays Project edited and raw clips of street dogs (25+ videos):
<https://www.youtube.com/watch?v=tSITeIMFQLk&list=PL58D763A4E527B626>

- American Strays Canine Survey animated map:
<https://www.youtube.com/watch?v=9lzpmyl4jNE>

- American Strays Canine Survey volunteer tracks on Google Earth:
To be released when ready.

METHODOLOGY:

Part 1: Analysis of early canine surveys in Detroit by WA2S team prior to creation of the American Strays Canine Survey (by MSU CSTAT)

Upon receiving all survey materials from the World Animal Awareness Society (WA2S), each data sheet was reviewed to determine the content of each survey.

At this time all survey sheets were ordered chronologically. Using these hand written data sheets, an excel spreadsheet was created, each tab in this documented represented a single survey's data sheet. Tabs were kept in chronological order. Data sheets with the same date were considered unique surveys if observer initials denoted on the sheets were different, if the streets surveyed were on opposite sides of the city, or no apparent indication of connection was present. Only essential observations particular to ascertaining how many stray and non - stray dogs were observed during the WA2S's volunteer surveys between February 2011 and April 2012, conducted within the city limits of Detroit, MI were transferred to an excel spreadsheet.

The transferred observations included location information and sighting information. Location information included; date, zip code, time, street names, and direction streets were traveled (as some were driven both directions). Sighting information included; abandoned houses, cat sightings, beware of dog signs, free roaming dogs, fenced dogs, tethered dogs, dogs observed inside a yard. Sighting information was originally recorded using tally marks which were totaled for the purpose of the excel spreadsheet. When tally marks were unclear or notes contradicted tallies both subsequent totals were included in the spreadsheets, the conservative total was used for any future representation of the information. Every attempt was made to keep all tabs uniform, however, throughout the duration of the surveys the data sheets evolved and altered slightly. This variation in design and observations among data sheets was corrected whenever possible. All additional notes found on any of the data sheets were carefully read and any additional information from the above categories were included in the excel spreadsheets.

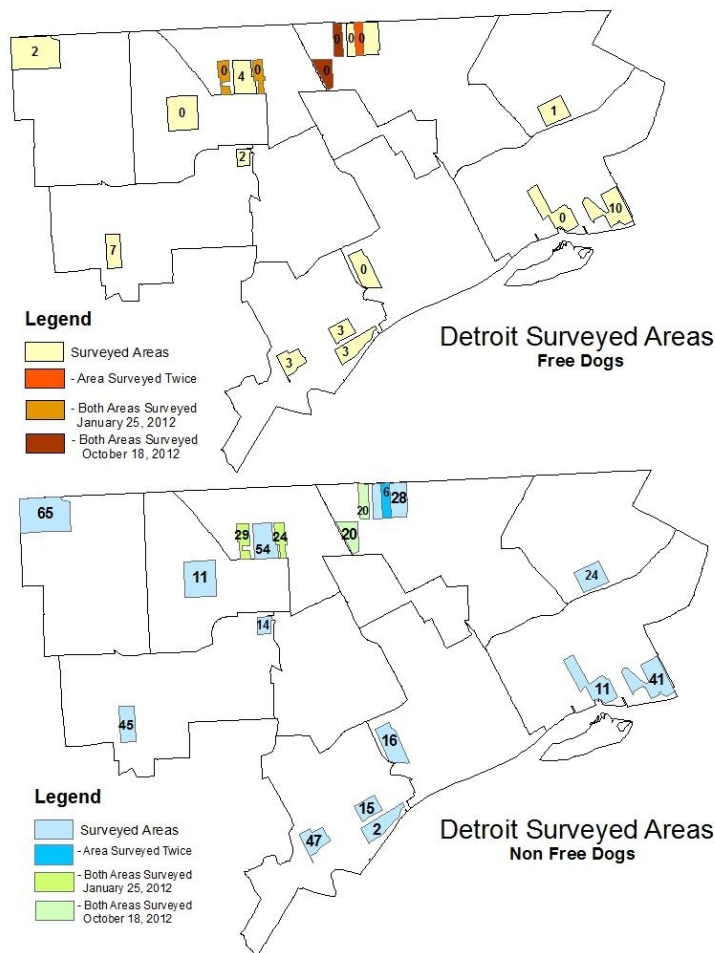
Once all tabs were created and the data checked for errors, locations of surveys were identified on a map of Detroit. To do this the whole length of any street recorded on a survey sheet was located and highlighted. The lengths of the highlighted streets were then methodically narrowed to just where the surveys were conducted. Due to the variation in data sheet information this was completed in one of two ways. Many of the streets surveyed on one survey sheet included both North - South streets and East - West streets or contained notes indicating what intersection created the end point for a street, when this occurred the highlighted areas of those streets were localized to just those blocks of the streets that were observed. The later data sheets had a spot where the boundary streets were documented, again this information was used to narrow the location of the observations. This allowed us to create sectors of Detroit's streets where the WA2S's surveys were performed.

The location of each dog observation was specific only to the street on which it was observed, the exact addresses or locations of observed dogs were not provided. Therefore these sectors or localizations of where surveys were conducted is as specific as possible. These sectors were usually relatively small only covering a few square blocks. In order to show how many dogs were located within each sector some of the dog observations were combined. All streets with free dog

observations were totaled for that survey to create one total number of free dogs for each tab in the excel spreadsheet.

To help increase the readability of the maps, all dog categories indicating an observed dog was directly owned were combined (i.e. dog in yard, tethered dog, dog tethered and in yard) to create a total tally of all non - free dogs found during a survey. Two maps were created one showing all the sectors of Detroit and how many free dogs were documented in each sector (observation location) and one showing the same sectors and how many non - free dogs were documented in each survey location.

Two maps were created allowing for comparisons between observed free and non - free roaming dogs identified during WA2S's surveys. These maps also allowed WA2S to recognize where exactly they surveyed and how much of the city was covered during the 2011 and 2012 surveys. This assisted us in developing methods for future surveys that uniformly covered the whole city so future observation totals can be representative of all the dogs residing in the city of Detroit.



Part 2: Creating Updated Sampling Method – the American Strays Canine Survey

After mapping WA2S's first round of surveys, although much of the city had been driven, only a small portion of the city of Detroit was effectively covered. This makes it harder to ascertain the true population of stray dogs residing within the city limits of Detroit.

To improve WA2S's estimation ability of the true number of strays, a new sampling method was created. After communicating with WA2S it was clear that as much of Detroit as possible should be included. Therefore the new survey method incorporates two smaller cities (Hamtramck and Highland Park) which are landlocked within Detroit. These two cities were considered because their separation from the city of Detroit is a political separation and has no bearing on whether strays will cross the borders between them. A stratified random sampling method was chosen for these surveys because it was an easy way to break the city down into manageable units and to make sure that the survey efforts were evenly distributed throughout the whole sampling area.

To the sample, ArcGIS was used to create sampling units which included a map of the cities (Detroit, Hamtramck, and Highland Park), streets, and sampling points within each sampling unit. All strata in this new method are based off of the city of Detroit's already established neighborhoods (see Fig. 2). Due to the addition of both Hamtramck and Highland Park, which are much smaller than the established neighborhoods, the Detroit neighborhoods needed to be divided into smaller units. Hamtramck was the smaller of the two landlocked cities and therefore its area was used as the guideline for the division of the Detroit neighborhoods. Hamtramck is approximately 2 square miles.

Therefore the divisions of each neighborhood ranged from 2 - 4 square miles, each neighborhood having 3 - 4 divided units called sampling units. These allowed for divisions to maintain as close to a square or rectangular shape as possible, based on the shape of the larger neighborhood. Once the sampling units were determined streets were placed within each sampling unit, used to help guide the placement of the sampling points.

Based on resources WA2S was able to dedicate to this task and the need for full and even sampling coverage of the whole city 50 sampling points per created for each sampling unit. Equaling 2,100 sampling points across the whole city, this would provide a robust set of observations for evaluating the approximate number of stray dogs in the city, while still being a manageable number of sampling points for the man power, monetary cost, and time frame desired by the WA2S. Using ArcGIS's toolbox (random point generator) 50 points were randomly assigned locations within each sampling unit. Criteria used for placement of the points were: (1) they had to be at least 150 ft. apart from each other; and (2) no points could be placed inside buildings, highways, and in backyards.

To rectify this problem each point was moved so that it was positioned directly on top of the nearest spot on the closest road. If this resulted in the points being within 150ft of another point or the edge bordering two sampling units it was moved slightly further down the road or to the next closest road.

Ultimately all 50 points within each sampling unit were located on roads, which are easily accessible by the volunteer surveyors enlisted by WA2S. No order for the points was determined as this does not affect directly the likely hood of observing a stray dog, however it is important that all points within

every sampling unit has observations documented from it. This provides even survey effort across the whole city so that there is no bias for any particular portion of the city.

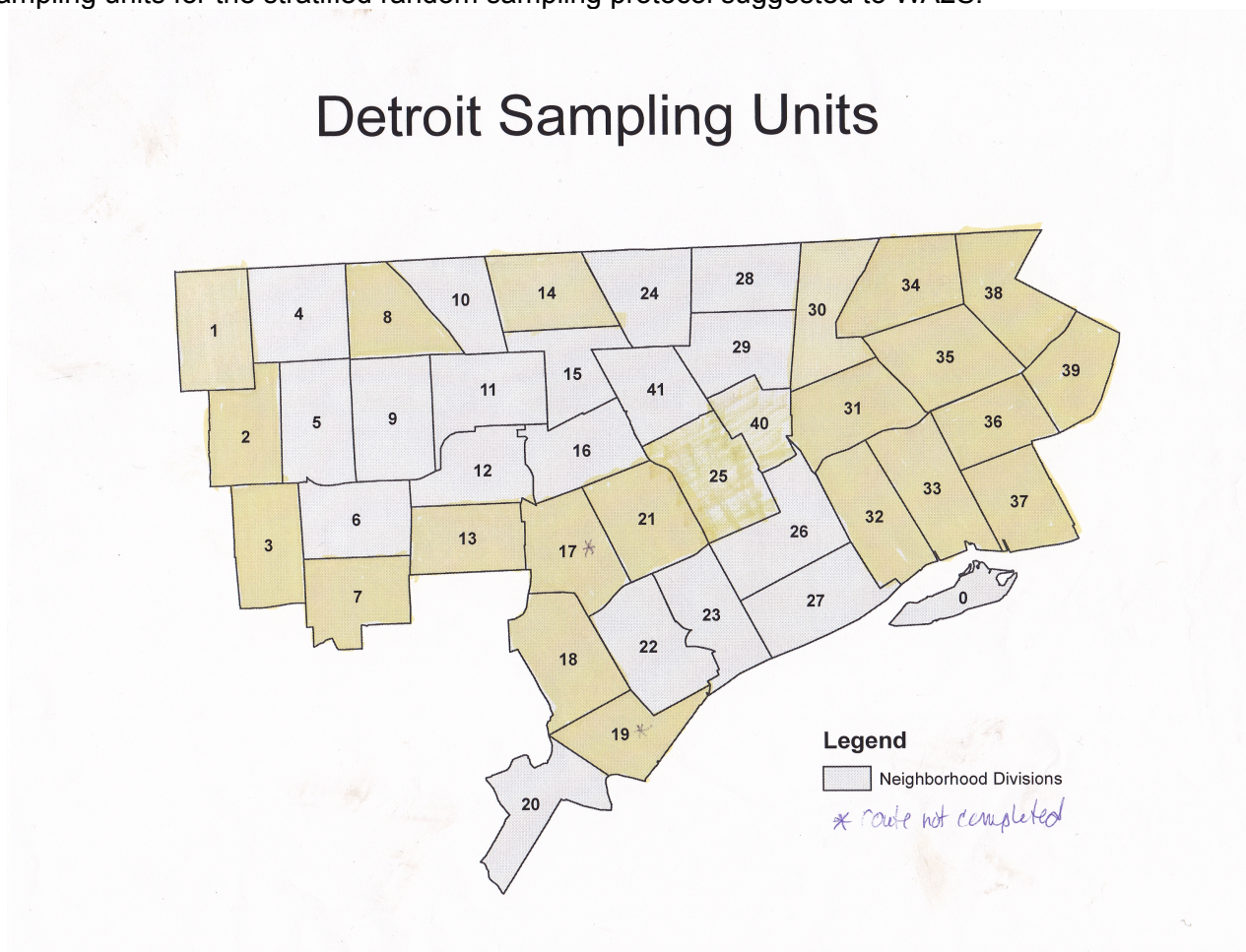
American Strays Canine Survey Dog Sampling Procedure:

http://www.wa2s.org/uploads/5/8/8/9/5889479/dog_sampling_procedure_.pdf

American Strays Canine Survey Dog Sampling Training Presentation:

http://www.wa2s.org/uploads/5/8/8/9/5889479/as_cs_training.pdf

Sampling units for the stratified random sampling protocol suggested to WA2S:



Dog Classifications

Dog Type	Code	Description
Loose Dog	L	Free roaming dog with no collar or visible attachment to a human
Tethered Dog	T	Dog that is tethered to a specific address but not in a fenced area
Loose with Human And Collar	LHC	Dog that is seen in the company of a human but not in a house or yard, and is not attached to human (through leash or tether) but has a collar
Loose With Collar	LC	Free roaming dog with a collar but has no visible attachment to a human (i.e. leash or tether)
Owned Dog	OW	Dog seen within a fence even if it is tethered, or a dog seen within a house
Walked Dog	W	Dog seen outside house or yard but attached to a human through leash or tether of some sort
Loose with Human no collar	LHNC	Free roaming dog seen with a human but not tethered to human without a collar
Other Dog	O	Any dog that does not fit into the above descriptions, please provide a description for this dog.

Total Number of Dogs Observed during the 2013 Volunteer Canine Survey:

L = 22

T = 13

LHC = 13

LC = 8

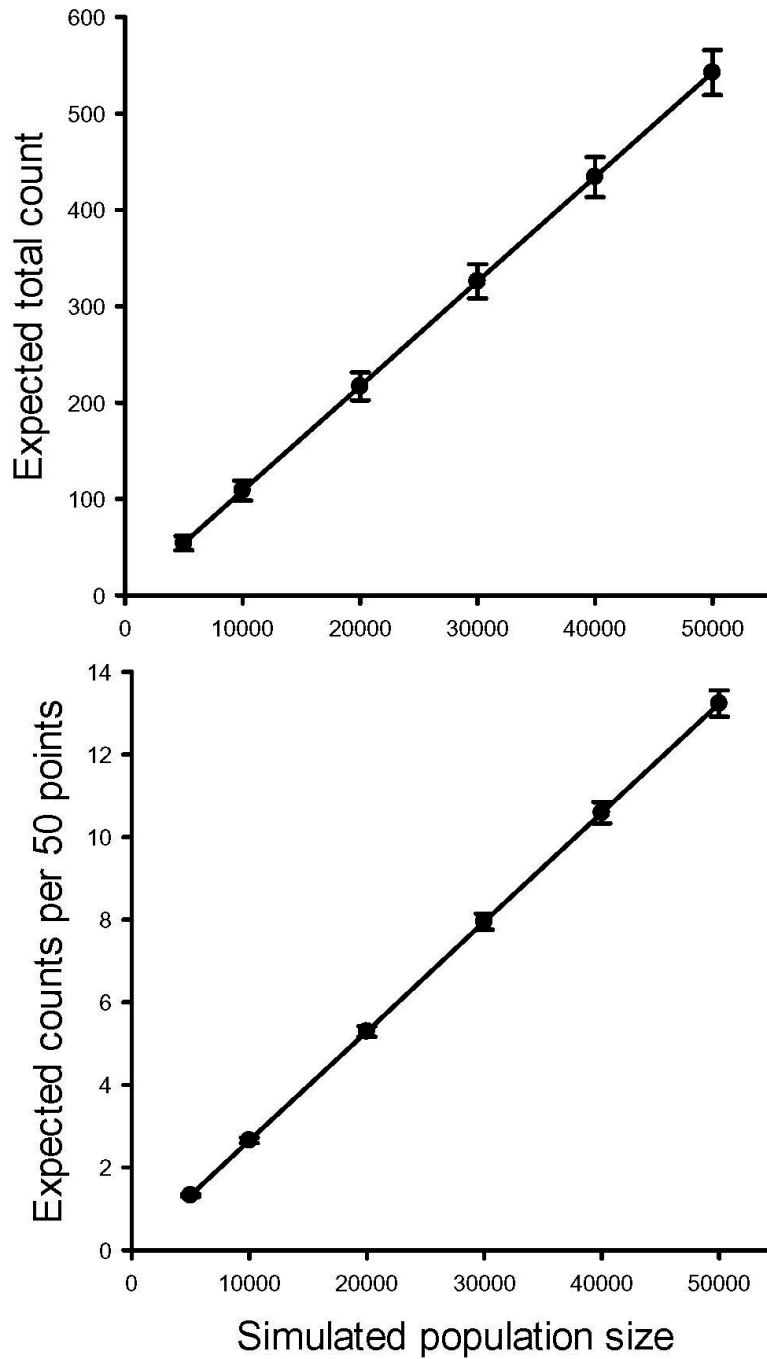
OW = 136

W = 30

LHNC = 10

O = 41

MSU CSTAT estimated count vs simulated population size image can be found here:



PROJECT SUMMARY:

The purpose of this project is to make theoretical and methodological advances in understanding emerging urban risks caused by complex forces. The rapid deterioration of quality of life in many older industrial cities has been driven by multiple causes including globalization, deindustrialization, and depopulation. The changes wrought by these forces are complex, and in some cases, new for US cities. Given the complex nature of the causes of urban crises, theories and methods for understanding and ameliorating urban problems cannot rest on a single discipline. One such problem is changes in urban Eco-systems that result in increases in the number of roaming, stray and feral dogs.

The research focuses on this issue by examining the complex chain of events from objective conditions of change, to citizen and elite perceptions of risks associated with those changes, to the necessary conditions for neighborhood readiness to engage in collective action, and to the development of an organizational network for policy action.

We hypothesize that the perception of risk of a new environmental hazard (roaming dogs) is effected by social networks (among residents, nonprofit groups, public and private institutions) via social contagion.

Risk perceptions affect behavioral intentions (stakeholder feelings of efficacy and intent to work cooperatively to address risks) and support for management actions (roaming dogs are a public policy issue that should be on the policy agenda). They can also enhance compliance with laws (regulations to address the roaming animal problem). Social disorganization disrupts the connections between perceptions and action, however, as economic stress, residential dislocation, and family disintegration foster fatalistic cultures, leaving residents without the resources or will to collectively solve community risks (collective efficacy). Perceptions of risk must be coupled with readiness at the neighborhood level for collective action to take place. It is thus necessary to understand the dynamics, strength, and speed of social contagion of risk perception and neighborhood collective efficacy to fully inform risk management and governance of roaming animals and other ecosystem change in deindustrializing cities.

BROADER IMPACTS OF THE PROPOSED ACTIVITIES:

The project will contribute to desired societal outcomes by testing models that enhance understanding of how perceptions of risk are transmitted and can be tied to the development of neighborhood efficacy to take collective action to address disorder thus fostering public-private partnerships in the implementation of policies to address emerging public problems in distressed cities. Identifying neighborhood conditions tied to higher perceptions of risk and/or low efficacy allows nonprofits and public actors to target efforts at education and assistance and in providing resources for community action.

More generally, the findings are urgently needed to address an emerging health and humane problem.

The project brings cutting edge interdisciplinary research methodologies to bear on an important societal problem pushing research in new directions at a more rapid pace to better address emergent urban changes. The project methodology meaningfully engages citizens in the development of risk

WORLD ANIMAL AWARENESS SOCIETY

WA2S.ORG

maps and a community advisory committee can be formed for input in all stages of the research and to help build local capacity

Students will be involved in all aspects of project implementation, data collection, analysis, and publication providing opportunities for training the next generation of scientists in an explicitly interdisciplinary environment.



Thomas E. McPhee Jr.
Executive Director