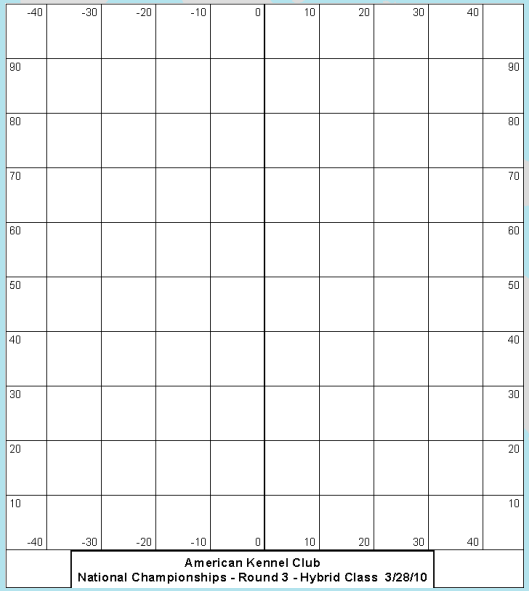
DOG AGILITY IN THE GREATER HOUSTON AREA 2014-2017

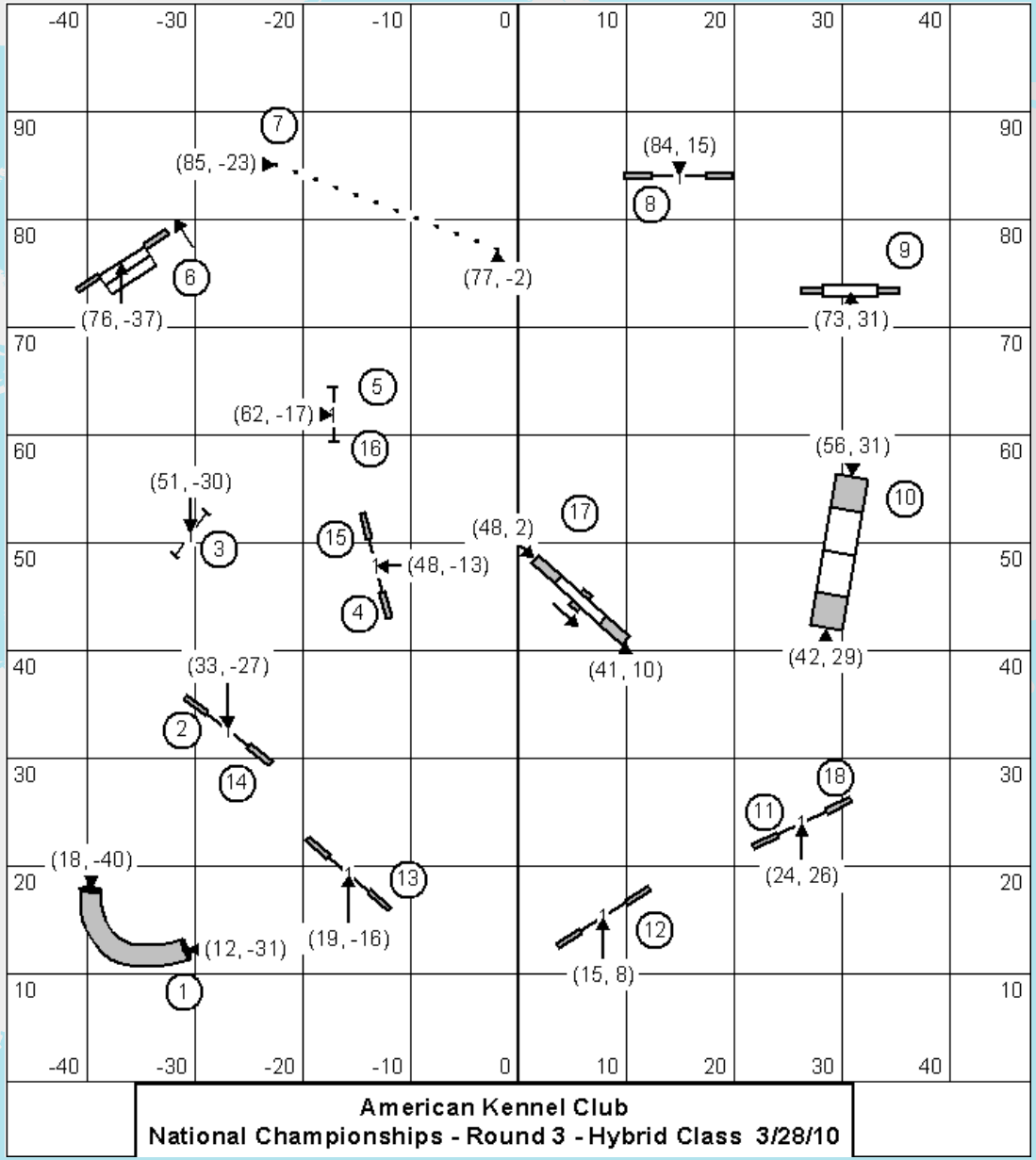
Felicia Whalen's GISC 1411 Final Project, Fall 2017

Dog Agility is a timed and scored event where a handler directs their dog over a series of numbered obstacles. Every course is different. Agility started in England in 1978 and has been a world wide sport since the late 1980s.

Dog Agility utilizes mapping to represent non spatial features, the agility obstacles:

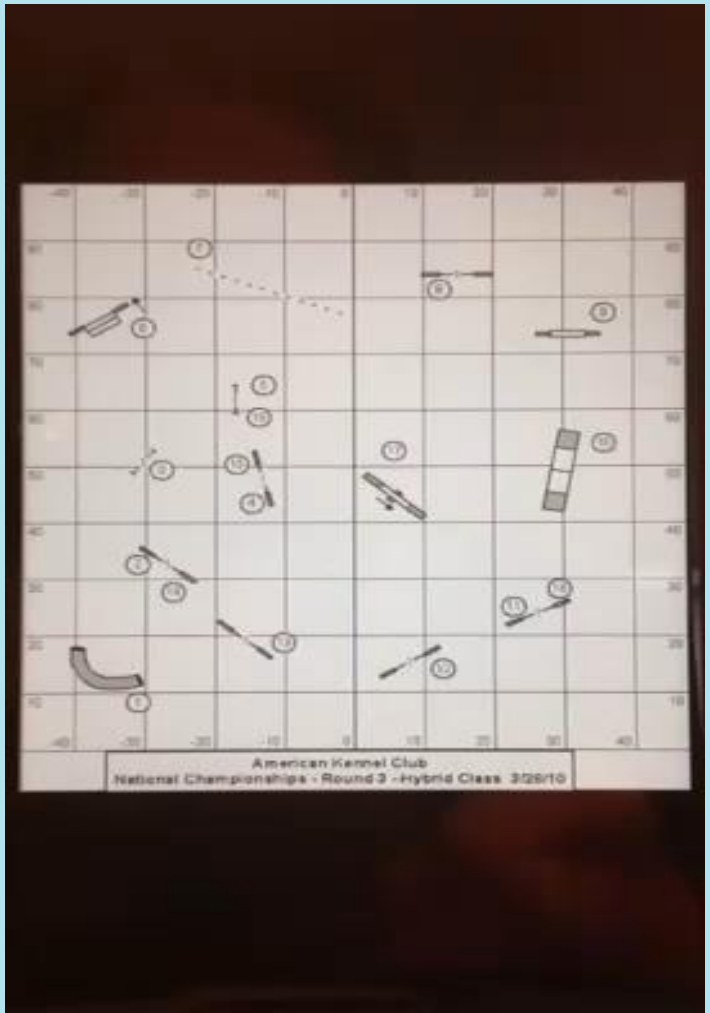
Into a grid coordinate system:




-40
-30
-20
-10
0
10
20
30
40
90
80
70
60
50
40
30
20
10
7
(85, -23)
(77, -2)
(84, 15)
8
6
(76, -37)
9
(73, 31)
5
(62, -17)
16
(56, 31)
(51, -30)
3
15
(48, 2)
17
(48, -13)
4
10
(42, 29)
(41, 10)
(33, -27)
2
14
18
11
(24, 26)
(18, -40)
13
(19, -16)
12
(15, 8)
(12, -31)
1
American Kennel Club
National Championships - Round 3 - Hybrid Class 3/28/10

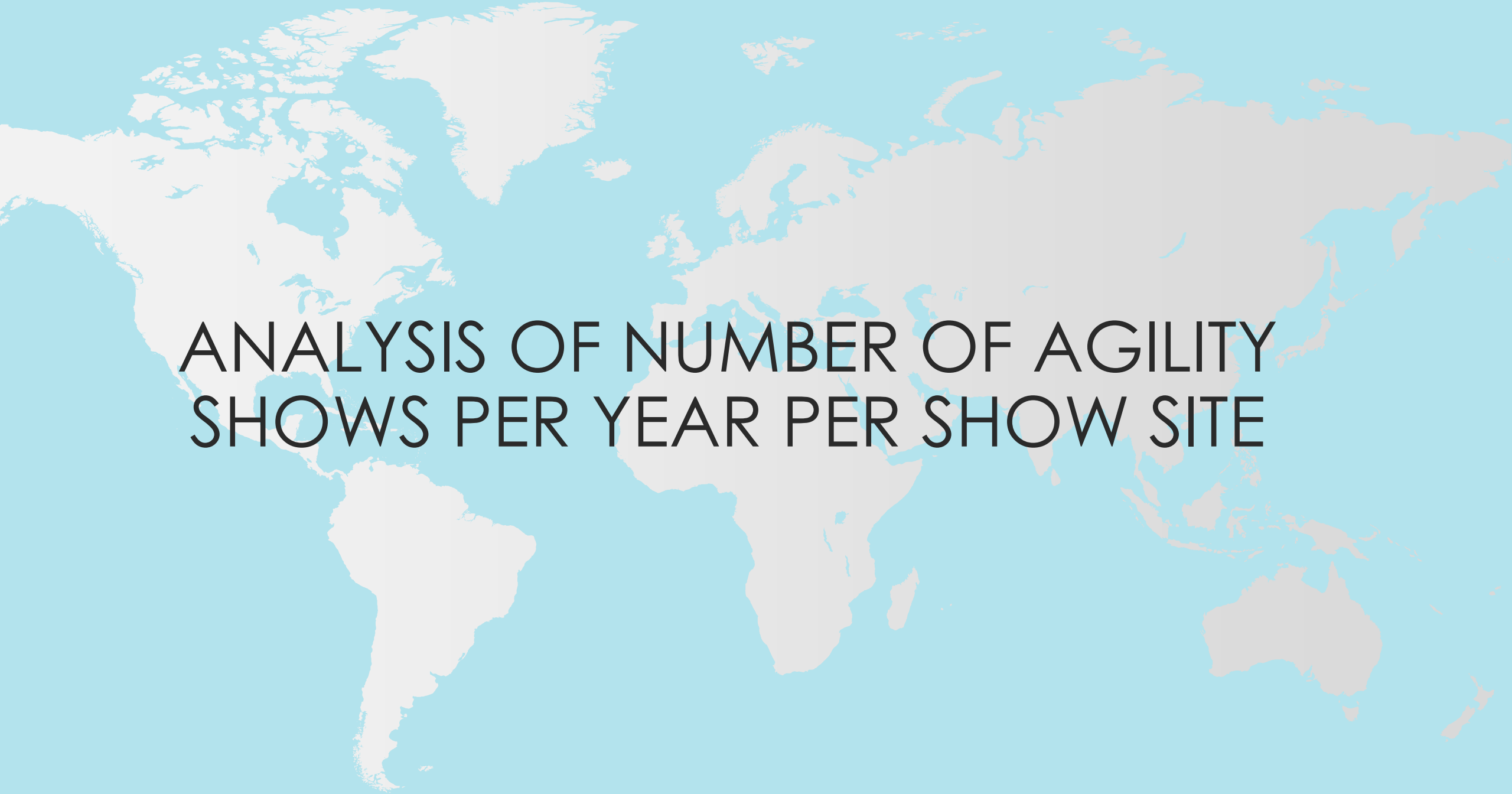
Felicia and "Oliver"
AKC Agility Nationals, March 2010

My intent was for both of these videos to play simultaneously, but I couldn't figure out how to make it happen in PowerPoint. So please watch the left video first, so see the order of the agility course, then watch the video on the right of me running that exact course.

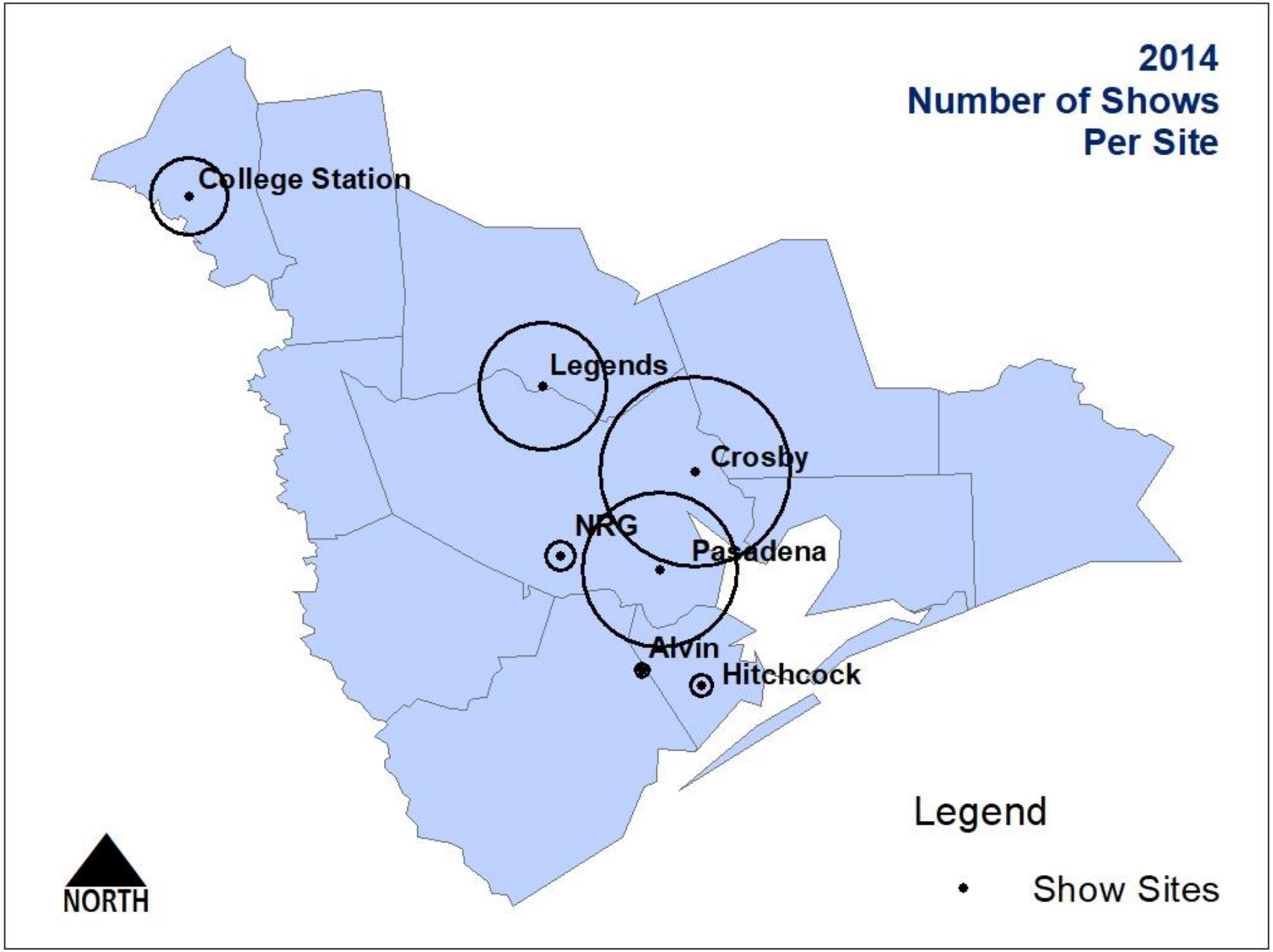


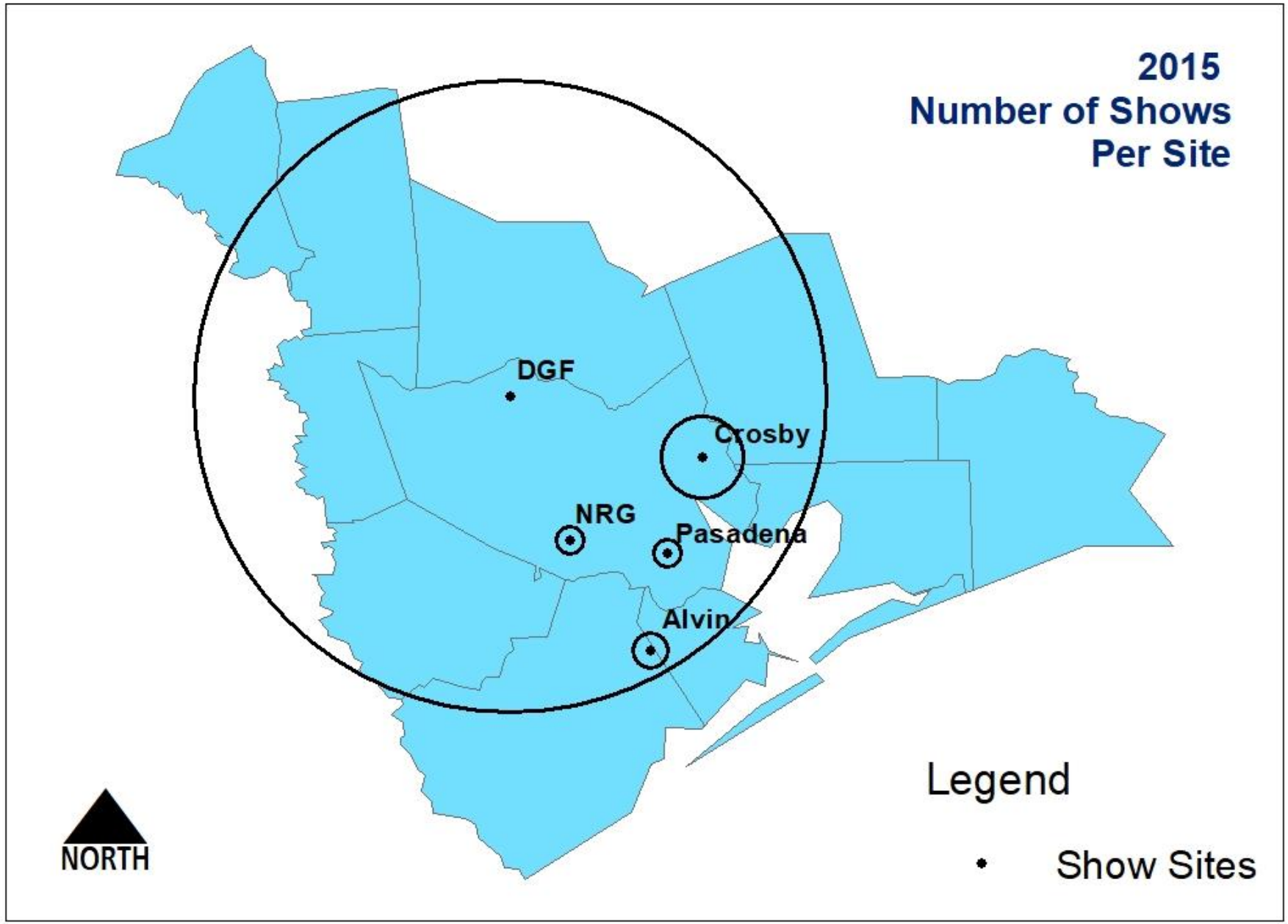
My geographic questions are:

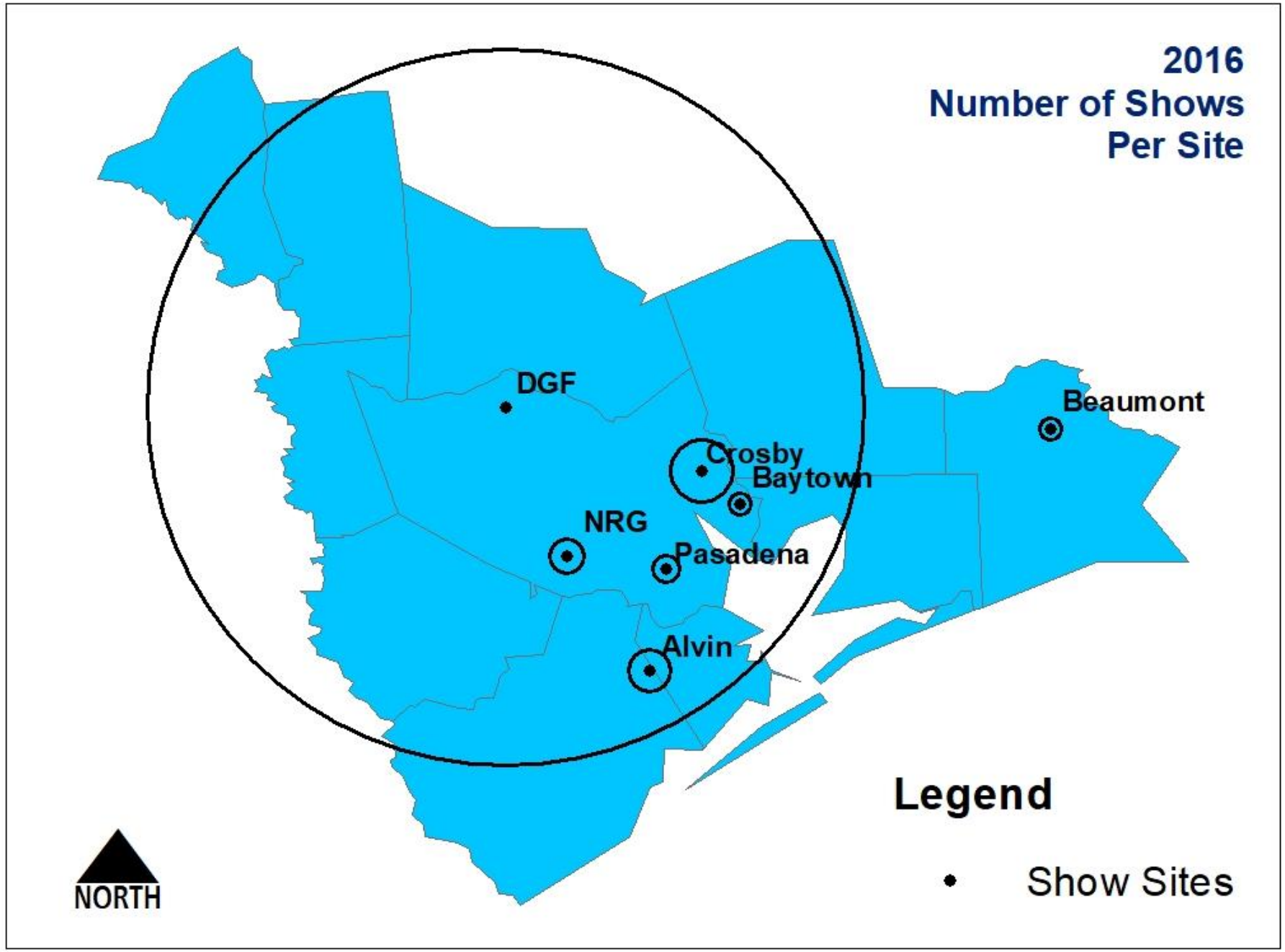
1. In the Greater Houston area, where are the different show sites, how many days of showing per year at each one over the last four years, and how many agility runs were at each one per year over the last four years.
2. In the Greater Houston area, where do the agility competitors live in relation to the show sites, and has this distribution changed since Jan. 1, 2015 when the majority of shows started being held at one location rather than at multiple locations throughout the year.

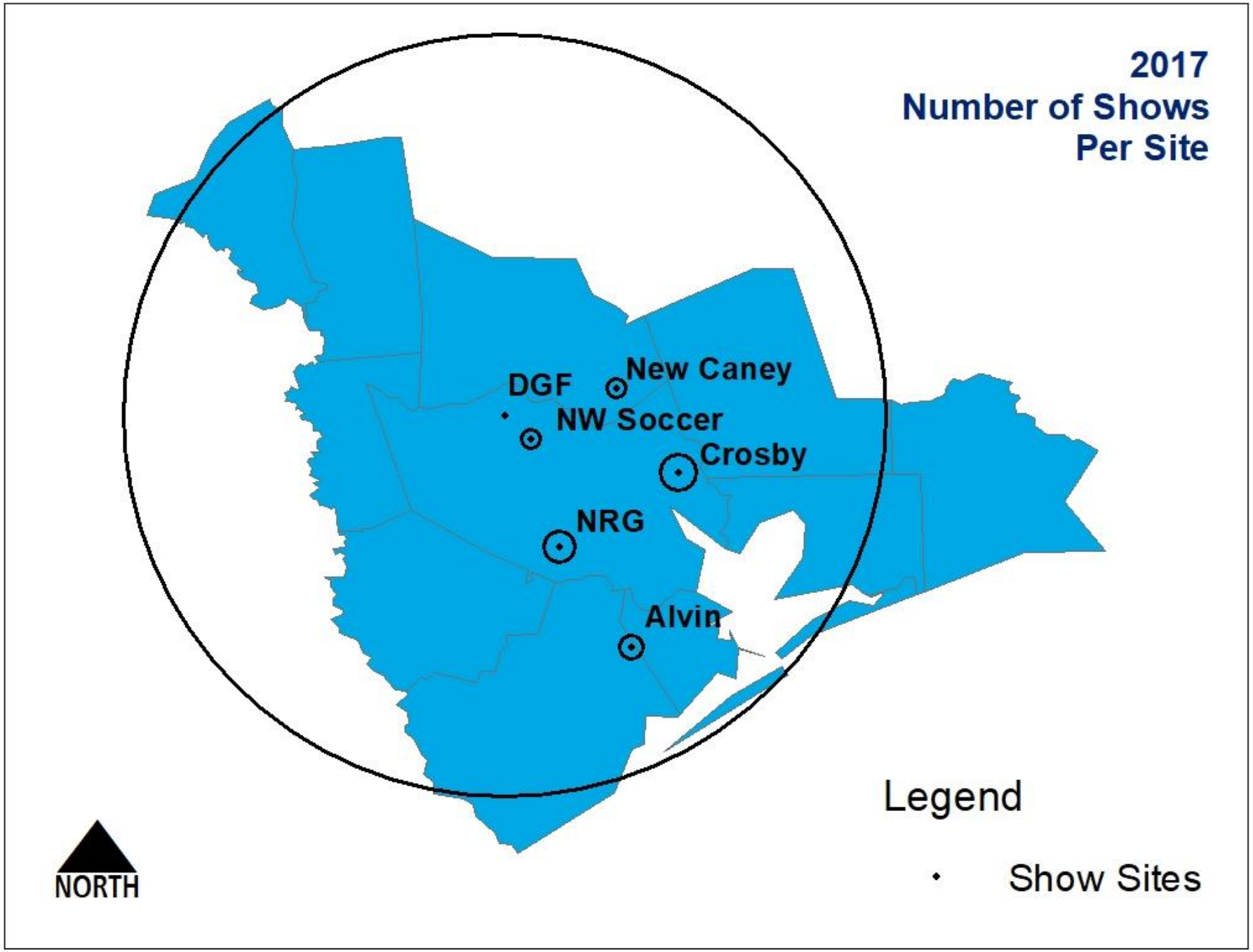


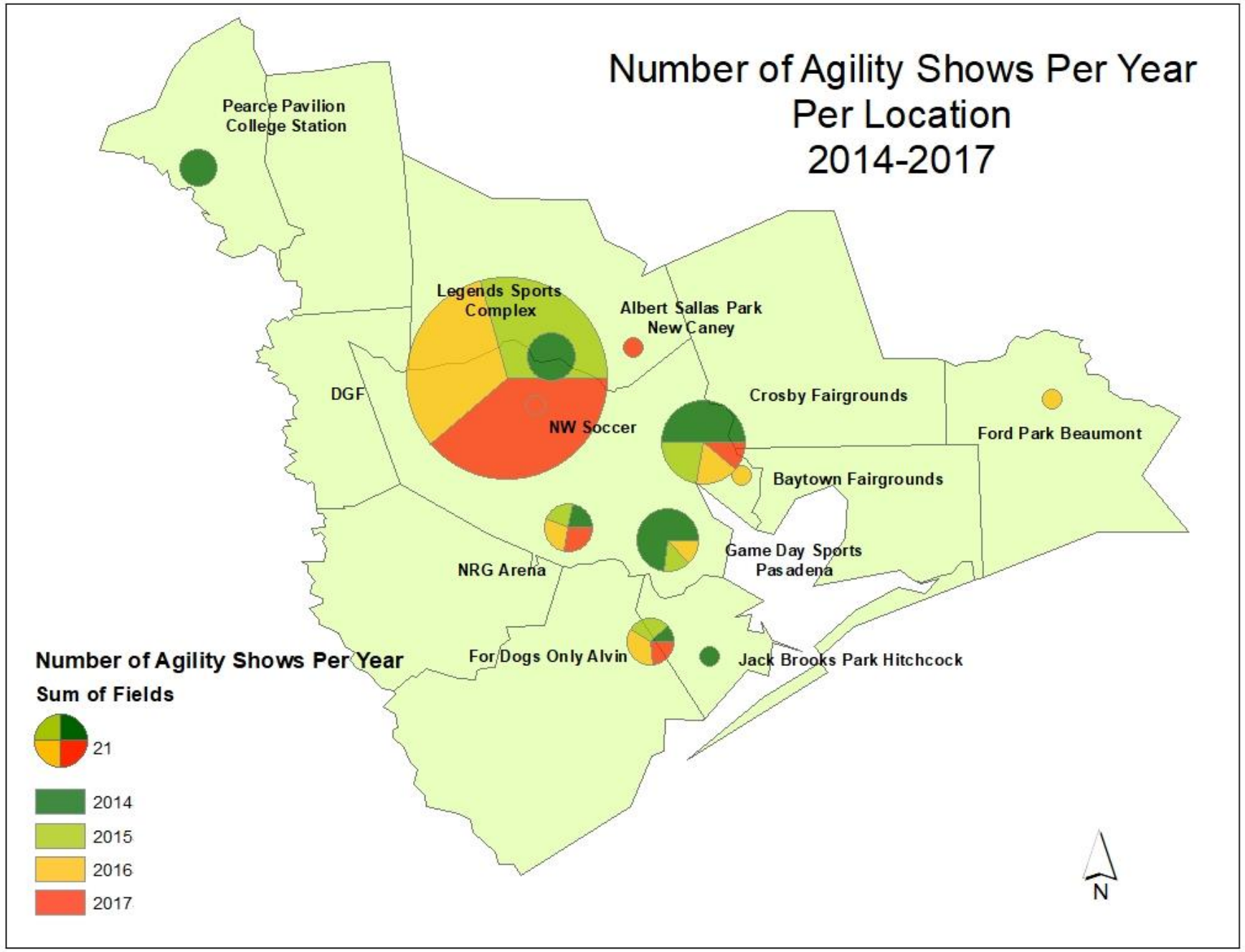
ANALYSIS OF NUMBER OF AGILITY SHOWS PER YEAR PER SHOW SITE

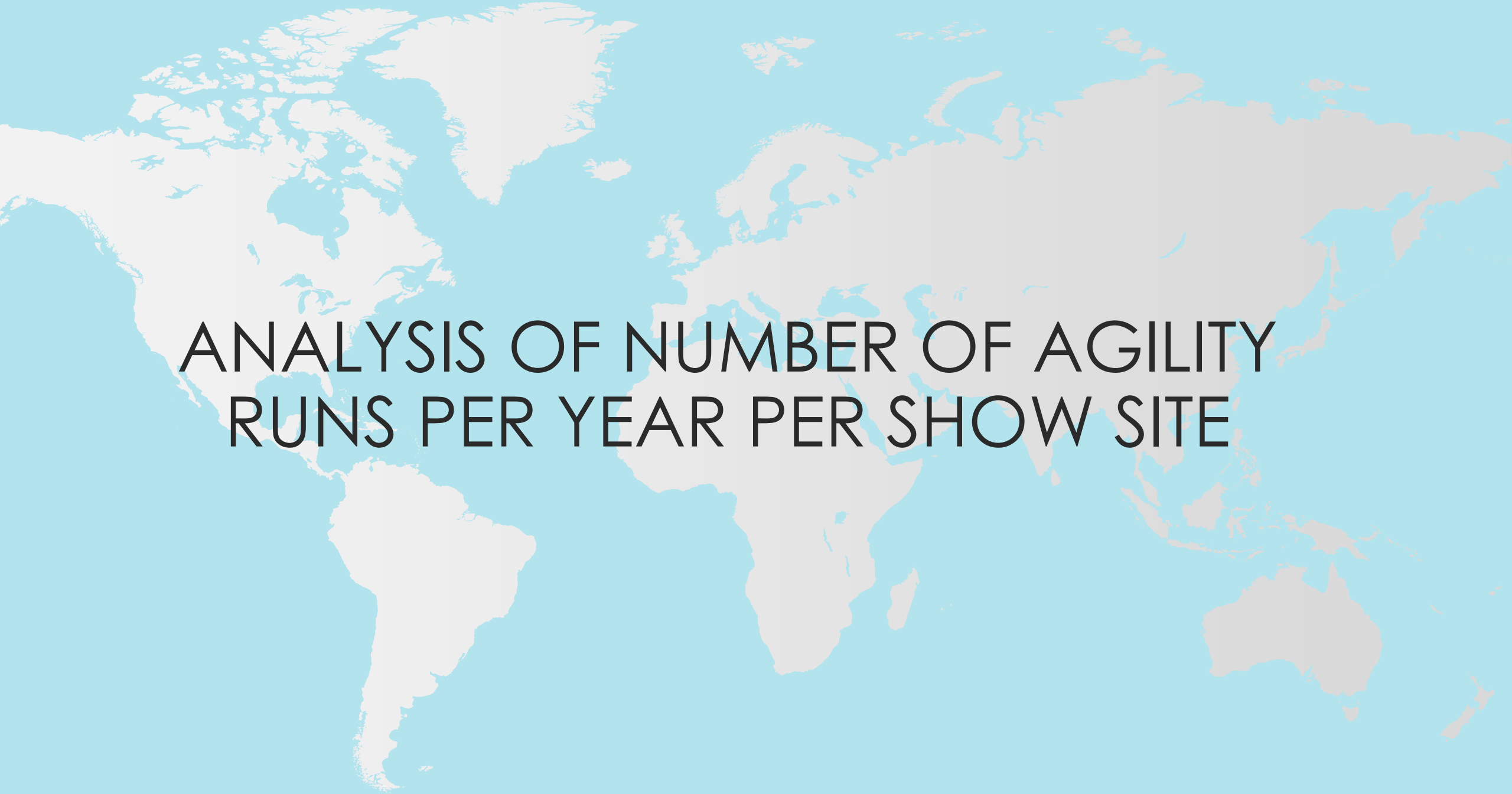

2014
Number of Shows
Per Site
College Station
Legends
Crosby
NRG
Pasadena
Alvin
Hitchcock
NORTH
Legend
Show Sites


2015
Number of Shows
Per Site
DGF
Crosby
NRG
Pasadena
Alvin
NORTH
Legend
Show Sites

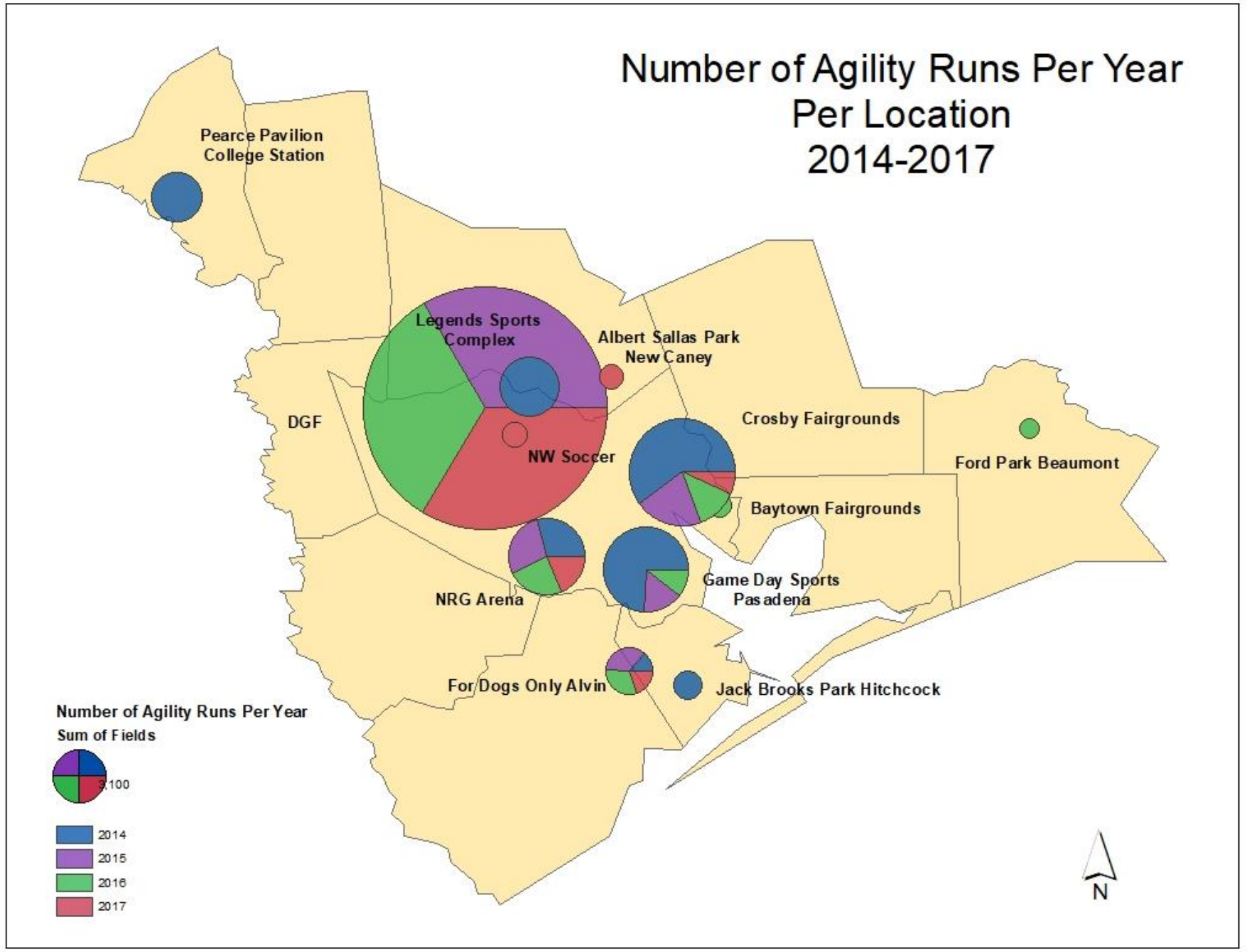

2016
Number of Shows
Per Site
DGF
Beaumont
Crosby
Baytown
NRG
Pasadena
Alvin
Legend
Show Sites
NORTH


2017
Number of Shows
Per Site
DGF
New Caney
NW Soccer
Crosby
NRG
Alvin
NORTH
Legend
Show Sites

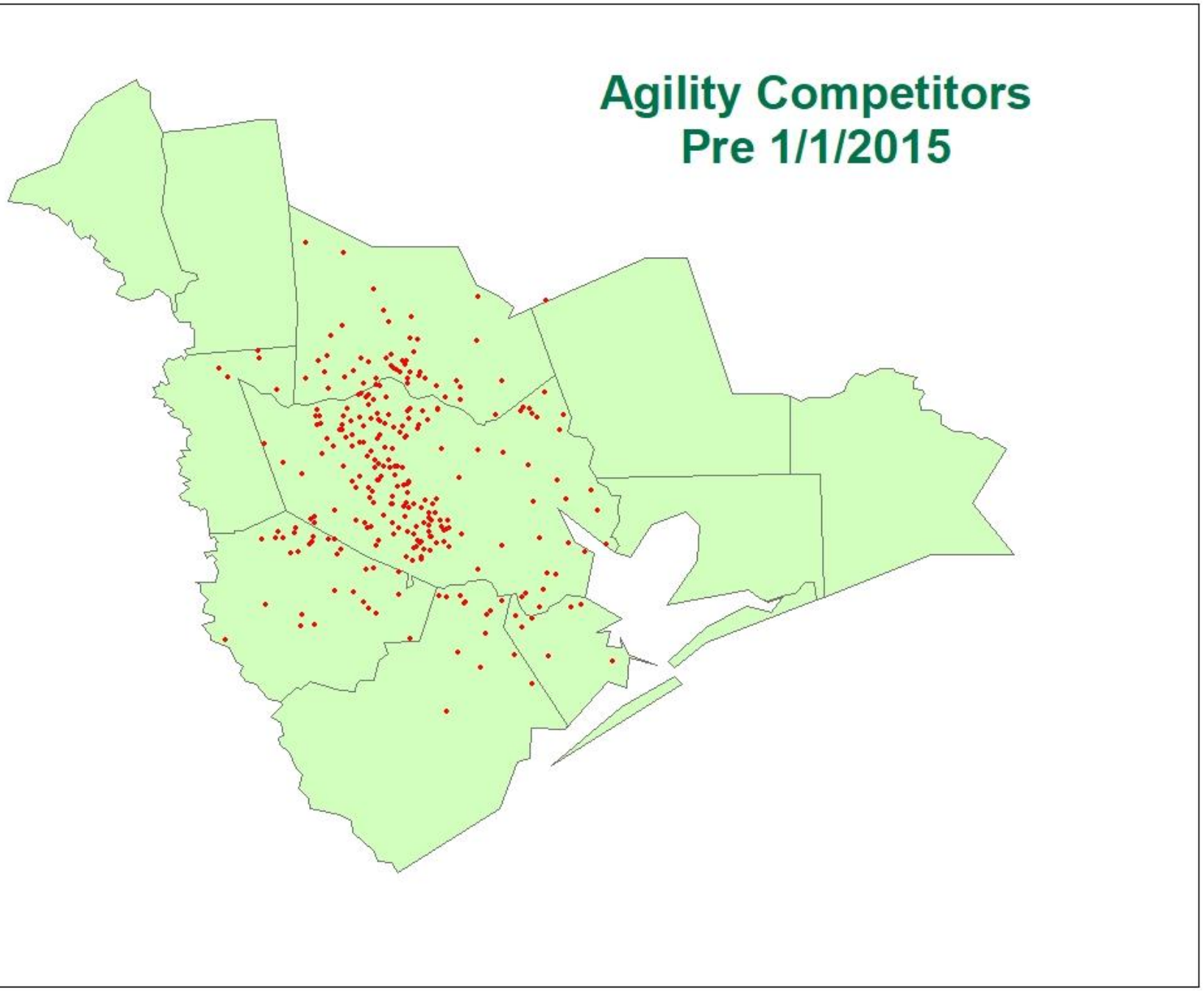

Number of Agility Shows Per Year
Per Location
2014-2017
Pearce Pavilion
College Station
Legends Sports
Complex
Albert Sallas Park
New Caney
DGF
NW Soccer
Crosby Fairgrounds
Ford Park Beaumont
Baytown Fairgrounds
NRG Arena
Game Day Sports
Pasadena
For Dogs Only Alvin
Jack Brooks Park Hitchcock
Number of Agility Shows Per Year
Sum of Fields
21
2014
2015
2016
2017
N



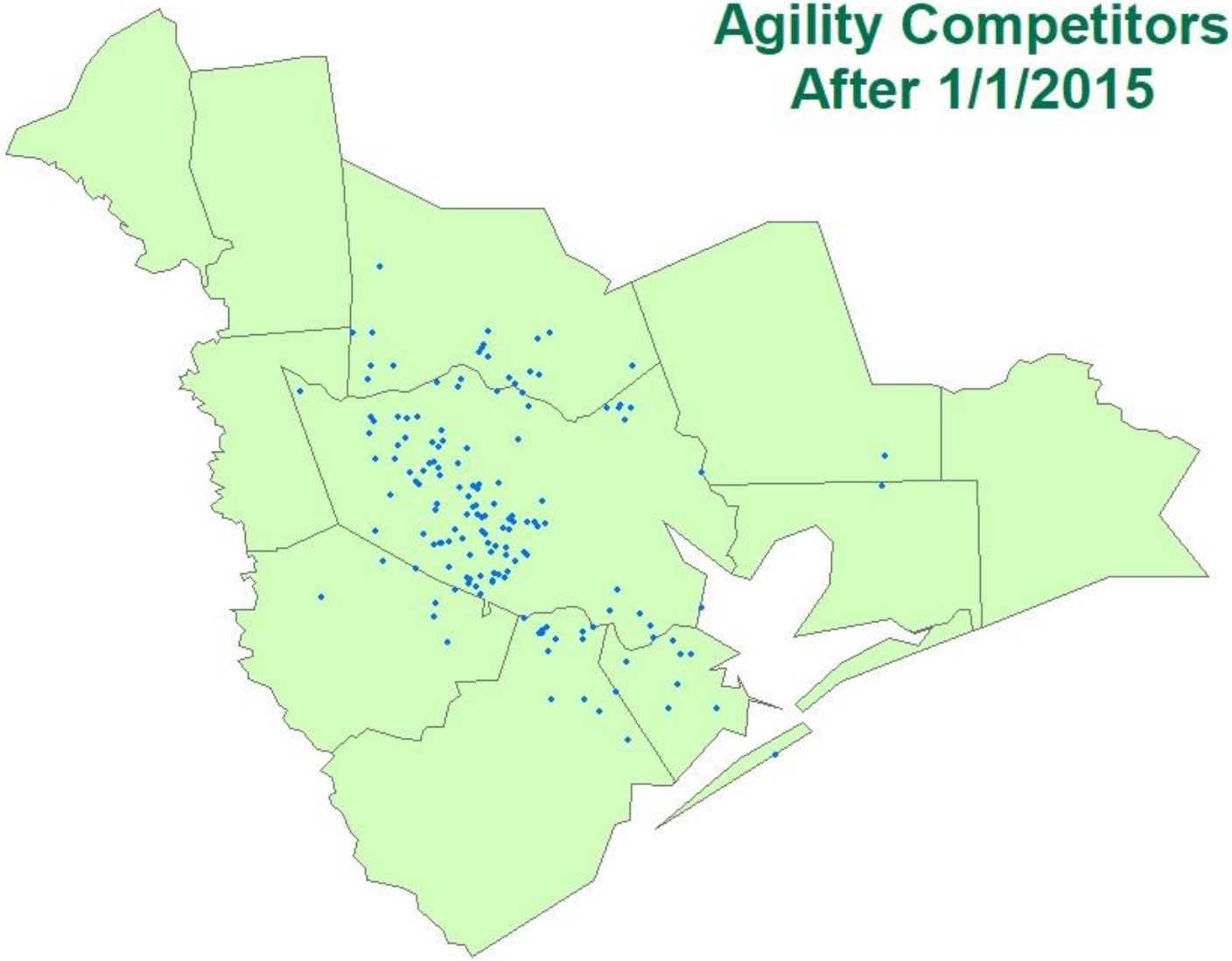
ANALYSIS OF NUMBER OF AGILITY RUNS PER YEAR PER SHOW SITE

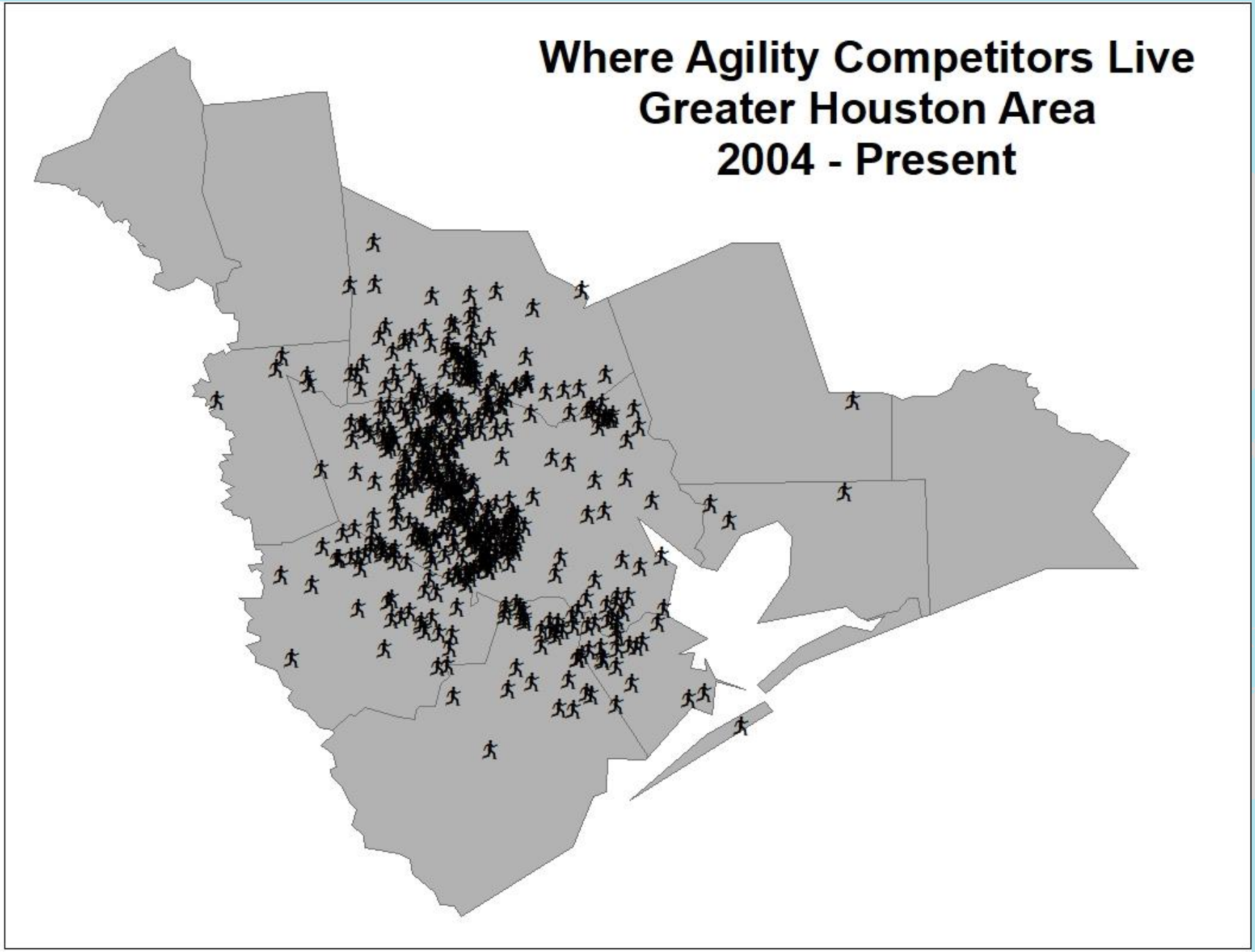

Number of Agility Runs Per Year
Per Location
2014-2017
Pearce Pavilion
College Station
Legends Sports
Complex
Albert Sallas Park
New Caney
DGF
NW Soccer
Crosby Fairgrounds
Ford Park Beaumont
Baytown Fairgrounds
NRG Arena
Game Day Sports
Pasadena
For Dogs Only Alvin
Jack Brooks Park Hitchcock
Number of Agility Runs Per Year
Sum of Fields
3100
2014
2015
2016
2017
N

ANALYSIS OF WHERE AGILITY COMPETITORS LIVE IN IN THE 8 COUNTY GREATER HOUSTON AREA, USING ZIP CODE BOUNDARIES AS THE PLACEMENT AREAS FOR DOT DENSITY

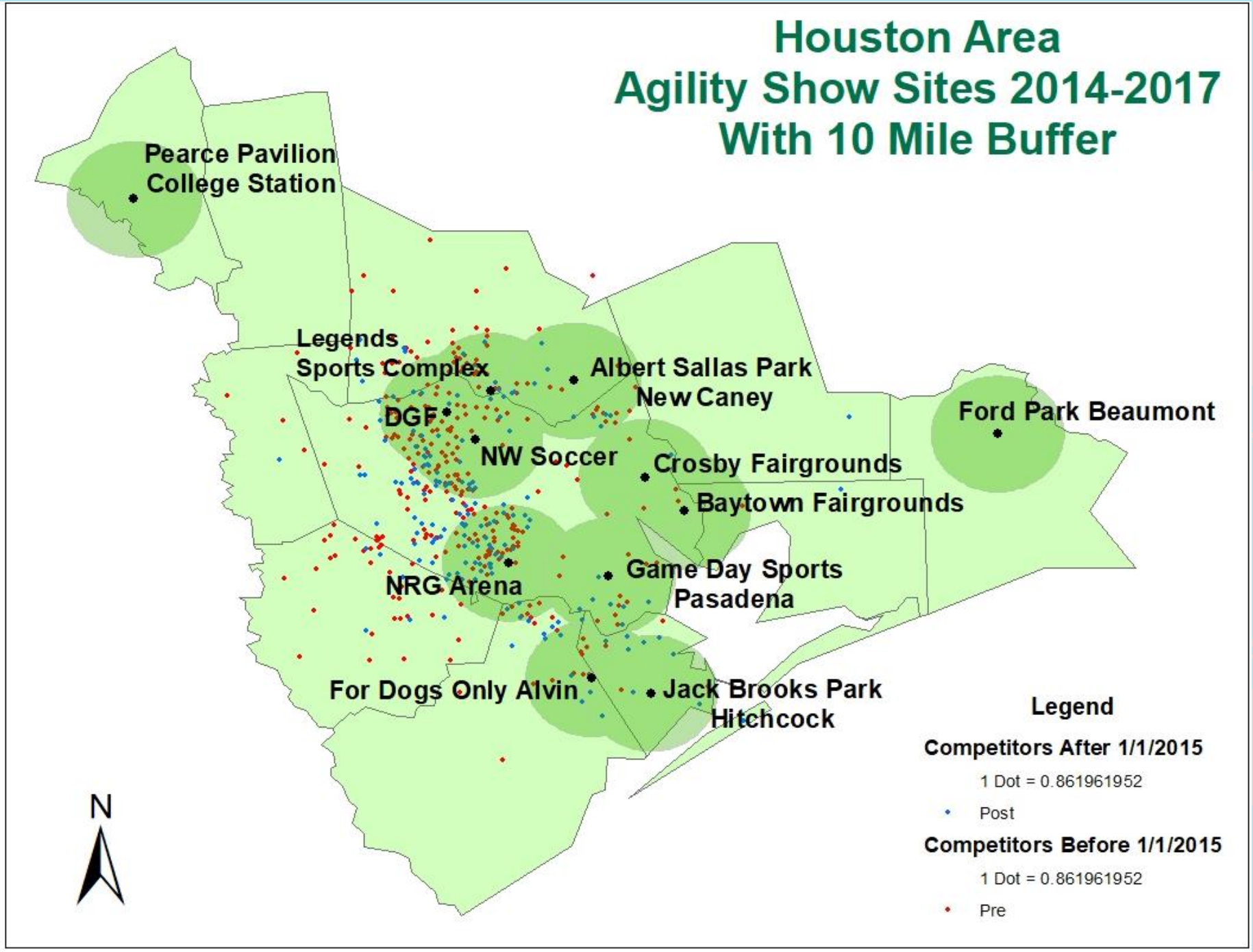

Agility Competitors
Pre 1/1/2015

Agility Competitors After 1/1/2015




Where Agility Competitors Live
Greater Houston Area
2004 - Present

ANALYSIS OF WHERE AGILITY COMPETITORS LIVE IN RELATION TO THE VARIOUS SHOW SITES FROM 2014 - PRESENT


Houston Area
Agility Show Sites 2014-2017
With 10 Mile Buffer
Pearce Pavilion
College Station
Legends
Sports Complex
Albert Sallas Park
New Caney
DGF
NW Soccer
Crosby Fairgrounds
Ford Park Beaumont
Baytown Fairgrounds
NRG Arena
Game Day Sports
Pasadena
For Dogs Only Alvin
Jack Brooks Park
Hitchcock
N
Legend
Competitors After 1/1/2015
1 Dot = 0.861961952
Post
Competitors Before 1/1/2015
1 Dot = 0.861961952
Pre


DOCUMENTATION

What question or observations originally gave you the idea for your project?

I've been competing in dog agility since 1989. I have observed the various changes the sport has undergone as it gained in popularity. I noticed within a year or so of most of the events taking place in one location, that the number of competitors at each event had dropped off noticeably. I wondered if competitors who lived further away were competing less than people who live closer

What did you expect to find?

I expected to find that while competitors are still spread out over the greater Houston area, there are more who live closer to the frequently used site. I also expected to find that in 2014 the shows were pretty evenly spread out among show sites, and from 1/1/2015 on they were concentrated mostly in one location.

How did you gather your data?

COORDINATES

To get the coordinates for the show sites, I typed the name or address into Google and selected their "Map" option. What showed up in the URL bar was a long string that contained the coordinates. I copied and pasted the coordinates for each site into a Word document until I had them all, then transferred that information into Excel.

For example, here is the URL bar for Pearce Pavilion, TAMU

https://www.google.com/maps/place/Louis+Pearce+Pavilion/@30.5995329,-96.3458179,17z/data=!3m1!4b1!4m5!3m4!1s0x8646838832 3bc115:0x204acc0b41d5450e!8m2!3d30.5995329!4d-96.3436292

SHOW SITE STATISTICS

To gather the number of show days and competitors per show site per year, I searched the AKC website and searched for agility events for the past 48 months (as far back as their search allows: https://www.apps.akc.org/apps/events/search/blocks/dsp_event_list.cfm?active_tab_row=2&active_tab_col=4&fixed_id=12&states=TX&club_name=&date_range=PRVMO48&event_grouping=AG&save_as_default=Y&saved_states=&select_all=

They are listed by day, so I painstakingly clicked through every single show day for the Greater Houston area, and entered into an Access database the date, location, and number of entries. I then used quarries to total the number of show days per location per year, and the number of competitors per location per year.

DOT DENSITY

I wanted to show the distribution of where agility competitors lived without showing actual addresses. I decided to use Zip codes, and let ArcMap randomly distribute the dots into the Greater Houston area Zip code areas. I have a friend who does some of the show entries for our area. She shared her database with me (as a text file) so I had the Zips as well as the date that they last competed

DOT DENSITY (CONTINUED)

The database contained information for everyone who has competed in this area even if they live other places. I got a list of Greater Houston area Zip codes from the Houston Area Realtors website: http://web.har.com/zipcode So that I would know which of the ones I had were local. I imported the text file of addresses etc. into Access, and used queries to sort out jut the Houston area Zips, group them by whether or not they had competed after 1/1/2015, and ran a count of the number of occurrences of each zip. I then exported this information to an Excel file.

OTHER INFO GATHERING

This is not specifically a data gathering answer, but I want to acknowledge the help I received in creating slides 3-5. Even though not part of the "mapping" assignment, I wanted to include this information to show what dog agility is for those not familiar with it. I had the video of myself competing, but I couldn't locate my copy of the course map. I asked on Facebook, and a friend located her map and sent me a photo of it. The photo was not of a quality that I wanted to include in my project, so I sent it to another friend who is an agility judge and had the course design software. She redrew the course for me as we normally get them at shows with the gridlines, obstacles, and obstacle numbers. She also sent me a map with just the grid lines and no obstacles, and one with both the obstacles, numbers, and the extra coordinate pairs that are used by the people who move the obstacles into the correct positions for each different course run.

When did you gather your data?

I gathered my data starting mid-October through the end of November. I started early since I knew I had a lot of information to gather. I also started working on my PowerPoint slides then since I have very little experience with the software and wanted the time to learn how to use it.

Did you face any difficulties gathering your data?

One problem I had was in gathering the show statistics (number of shows per year and number of dogs competing per year). I knew there were a lot of shows, but it turned out to be over 400 over the last four years. I had to by hand, click on each one, scroll down and find the stats, and individually enter into my database that I was using to collect the info. I know that there is a way to data mine the website, but I don't know how to do it.

How did you choose the limits of your dataset?

I decided to limit my dataset to the eight county greater Houston Area since that is the area I compete in so am most interested in. In my maps I also included Brazos county since one of the show sites was in College Station, but I didn't use that county's zip codes for finding where local competitors live.

What did you find (also…did you find what you expected to find, did any unusual patterns emerge, etc.)?

For the distribution of competitors, I expected to find that agility competitors were more evenly spread out in the area, especially in Harris county. I was surprised that most live in the Western half of the county.
For the number of shows and agility runs per year, per show site, the maps showed what I expected to see – that in 2014 everything was more evenly distributed, and from 1/1/2015 on that most were concentrated in one location. It was interesting seeing it mapped out though. The maps with the proportional symbols dramatically showed the differences. The maps with the proportional pie charts do a great job of showing the year to year comparisons for both the number of shows per year at each site and the number of agility runs per year at each site.

State your conclusions

Agility competitors generally live in the same areas as they always have, though there are fewer now than there were four years ago.

At the most frequently used show site for the past three years (labeled "DGF" on the maps), the number of agility shows and runs per year has stayed pretty much the same, while at the other sites there has been are mostly noticeable differences in both from year to year.


PROBLEMS

Problem #1: This one turned out to be a huge problem. I didn't know how to save my work. I spend around three hours in the classroom after my class working on my maps. I thought I saved them both to my cloud drive and in the temp student folder. I turns out that I just saved the maps and not any of the layers. So when I had a chance to work on them again, nothing was there. Very disappointing, but lesson learned. I doubt I make that mistake again. It turned out to be good practice for me, and redoing the maps went much quicker the second time.

Problem #2: I picked my map topic because dog agility is something I have been actively involved in for more than 25 years, and I was genuinely curious about both the distribution of my fellow competitors, and the show site statistics. The show information was readily available on the AKC website, but I had to go through each show date one at a time and find and enter the information into my database. There were 478 individual days of shows that I gathered information on. It took me over 15 hours of work. I know there is a way to "mine" the AKC database, I just don't know how to do it. Any future projects I do I will try to pick a topic that has all the information I will need already readily available.

Problem #3: I was working in the student computer lab in the TECH building on the Monday before the project was due. I made more maps, and thankfully exported and saved them to my student "One Drive" as I finished each one. I spent several hours in the lab, and wanted to work on them more and "clean up" the legends on a couple of them. But, a fire alarm went off and they made us all leave, and I'm not sure how much of my work was saved to be able to go back and work on it later. We weren't given a chance to do much more than just hurriedly log off of the computers and gather up our belongings and leave the building.


THE END