Craigslist as a measurement of pet overpopulation

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How can the effectiveness of a spay/neuter program be measured? Is there a way to take the "temperature" of an area's pet overpopulation problem be taken in a timely way, independent of shelter data, which may be unavailable, inaccurate, or easily distorted by changes in shelter policy?

Can measurements be taken of Craigslist ads to produce statistically significant results to either 1) measure changes in the pet overpopulation problem in an area over time, or 2) measure differences between areas of the pet overpopulation problem?

The most likely first effect to be seen from a spay/neuter program is a decrease in "Kitten Season" that period of summer and fall when kittens born in the spring are looking for homes.

In 2008 we attempted to count the number of kittens looking for homes on the Eugene, Oregon CL, eliminating duplicate ads. This proved to be very time consuming, but informative, with 39-72 new kittens advertised each week. At the same time, the local county shelter was taking in less than 100 cats per month.

Beginning weekly in February 2009, less frequently later, 2 counts were taken for each area being monitored of CL ads in the Community Pets section that come up in searches for the words) "kittens" (K) and "dog" (D). Areas kept being added when this method began to look promising, and subtracted when results showed it's limitation in some areas.

Craigslist Kitten Index (CLKI) = (K/D) * 10

An annual figure is calculated by taking an average of the CLKI from mid-May to the first week of October. By using the Seamonkey browser with the ability to set up these searches as a set of bookmarked tabs, it requires only about 15 minutes a week to monitor 42 different areas and enter them into a spreadsheet.

CL areas have no definable geographic area, and their activity level is affected by many things outside of the size of the area served. An effort to estimate the population along county lines and measure posts/1000 shows a wide range in Oregon.

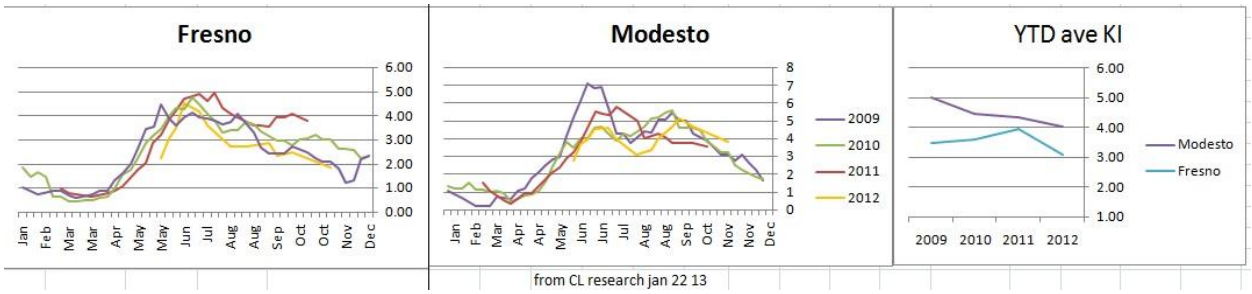
city	Average dog posts	dog posts/1000 pop	population[1]	area
Medford	245.29	1.24	197,071	Jackson
Eugene*	360.57	1.07	337,870	lane county
Bend Prineville (SNIP)	175.71	0.88	199,321	central Oregon
Corvalis	110.29	0.58	190,086	Benton/Linn
Salem	160.86	0.52	311,304	Marion
Portland	503.57	0.32	1,562,150	Portland (Multnomah, Washington and Clackamas Counties)
Roseburg	26.43	0.25	105,117	Douglas

Therefore, we consider the count for "dog" searches to be a good measure of that CL's pet section activity level and therefore dividing by it allows for comparison of areas rather than any attempt to divide by human population. Only about half of the ads that come up on such a search are dogs available for adoption (others being lost and found, grooming and pet sitting services offered) while 75-94% of ads that come up in the "kittens" search are multiple kittens needing homes.

The results are very encouraging. Graphing the CLKI shows the expected peak for Kitten Season.

Using the shelter data from California, available online[2] and CLKI numbers for 15 CL areas, including 17 counties, the CLKI correlates very strongly with the commonly used "shelter deaths per 1000 human population" metric, although more highly if only cat deaths/1000 are checked. It correlates most highly with that figure for the same year, than for the year before or after, suggesting it's a very timely measurement, available much sooner than shelter data.

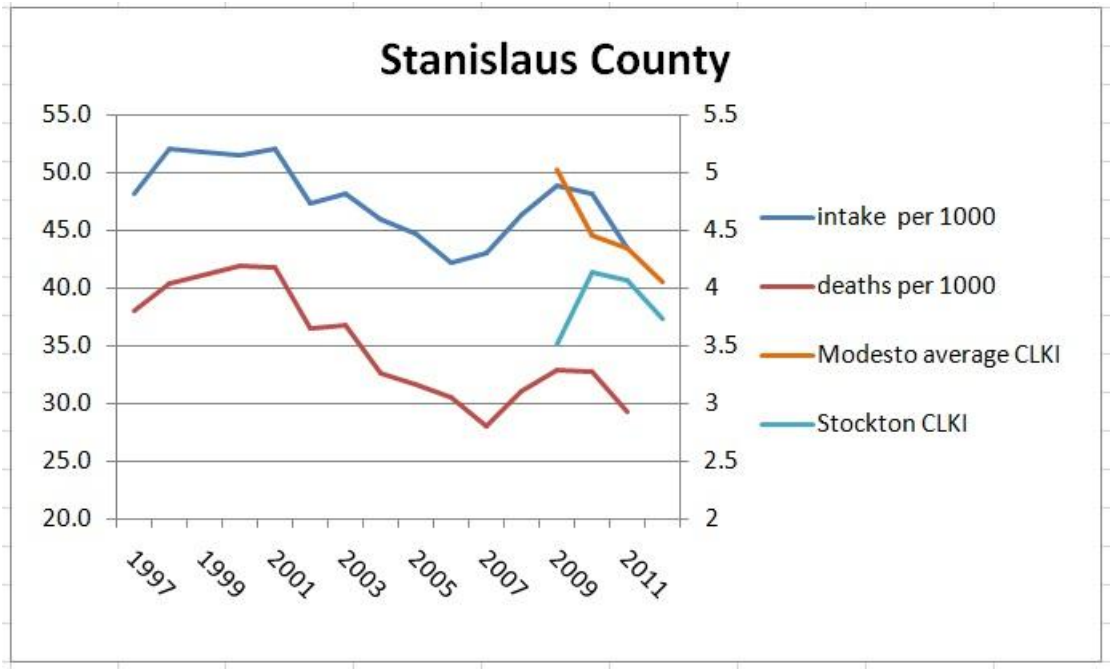
Only 8 of the 15 areas were monitored from 2008-12, and CA shelter data is only available to 2011 at present, so there's limited data to check for correlation of CLKI and deaths/1000 for the same area over time, but data so far shows a moderate correlation.



Here is a sample from data gathered so far for the CLKI from two California areas.

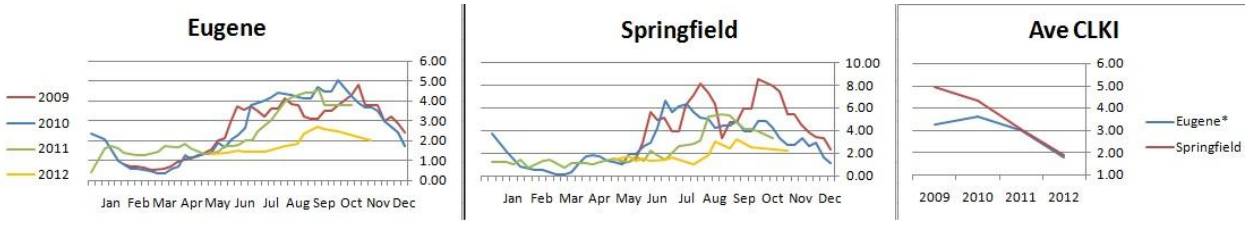
[1] from US Census estimates of population by county each year http://factfinder.census.gov/

[2] http://www.cdph.ca.gov/HealthInfo/discond/Pages/LocalRabiesControlActivities.aspx



Modesto, in Stanislaus County is about 30 miles from Stockton, in San Joaquin County. The ACT spay/neuter clinic opened in Stockton in 2007. Lodi which had a Maddie's Grant from 2000-2005 is 40 miles from Modesto. Both these factors probably affected shelter stats. For readability, the CLKIs were multiplied by 5.

In Eugene, Oregon, Lane County, there are no unlimited-intake shelters, so shelter data is of uncertain value in evaluating pet overpopulation.[3] The Willamette Animal Guild (WAG) spay/neuter clinic opened in 2008, adding its capacity to the City of Eugene spay/neuter clinic and Greenhill Humane Society. All s/n figures except for WAG's are approximations on best available data.

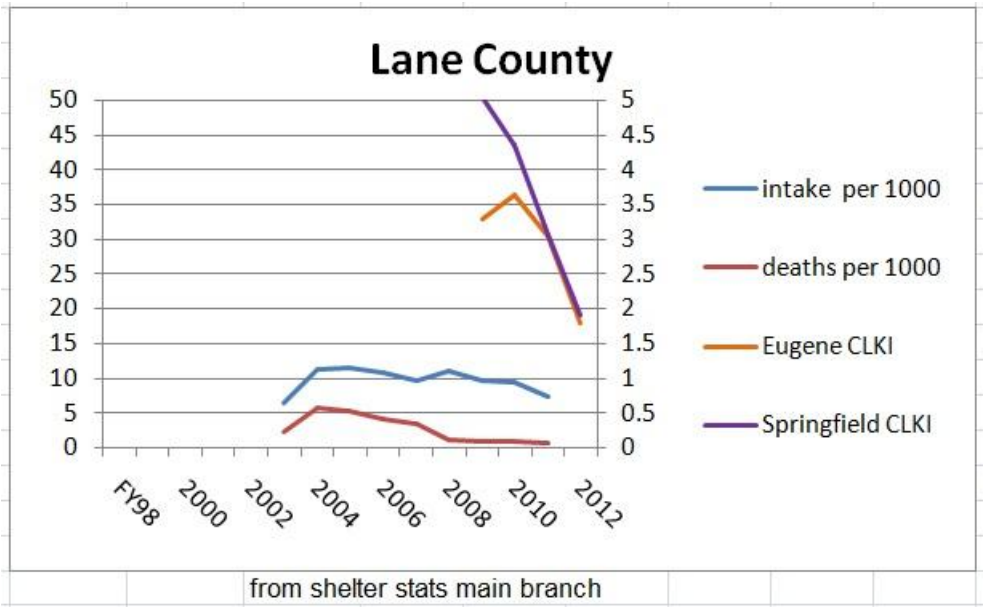


Springfield is adjacent to Eugene, with more poverty and less education. They have not contracted for animal control for cats for many years. All anecdotal evidence is that the pet overpopulation problem in

[3] Greenhill HS shelter stats from http://www.green-hill.org/about.html. Their spay/neuter starts are from annual reports. Lane County Animal Services stats from http://www.lanecounty.org/Departments/PW/Parks/LCAS/Pages, Quarterly Statistical Reports. Spay/Neuter stats from the City of Eugene clinic are from the city's budgets found at http://www.eugene-or.gov. WAG stats from WAG.

Springfield was extreme. The CLKI for Springfield, which does not have a separate CL area, was calculated by adding "Springfield" to the search terms in the Eugene area.

Several groups targeted Springfield for spay/neuter, including a TNR program at Greenhill. The CLKI for Springfield has dropped faster than that for Eugene as a whole and anecdotal evidence confirms this improvement.



Some limitations of the CLKI have been observed. Not all cities or counties have Craigslist areas. Some areas are too broad to have an equivalent in census or shelter data such as "Oregon Coast." In CL areas where there is not a lot of activity, the CLKI is more easily affected by outside variables, such a rescue group that does a lot of posting for a while. In CL areas where the "dog" search exceeds 1000 ads, the search returns the first 1000 only, making the CLKI useless. Recently, CL has changed is searches so that if "too few" matches are made, it adds some from adjacent area, usually to total 100, and a manual count has to be done for the "kitten" value.

Still, the CLKI seems to be a very good and easily-accessible measurement of an area's pet overpopulation problem.