



HUMANE SOCIETY OF BERKS COUNTY

BERKS COUNTY'S LEADER IN ANIMAL WELFARE

Introduction:

In recent meetings of Reading City Council it became clear that there was a lack of solid facts regarding the actual state of dogs in Reading. Many questions were raised regarding the population, breeds, and sterilization status of dogs in the city, as well as how those numbers have changed over time. The Humane Society of Berks County (HSBC) was asked to provide some of these facts so that decisions regarding the best approaches to curbing the recent upturn in reported bites could be made on an informed, rather than an anecdotal, basis.

The questions addressed in this document include:

- How many dogs live in Reading?
- How many of these dogs are pit bulls?
- What is a “pit bull terrier”?
- What is the sterilization status of licensed dogs in Reading?
- How have the above numbers changed over time?
- What types of dogs enter the HSBC and what is their sterilization status?
- Is there a relationship between dog numbers, breeds, sterilization status and bites?
- What breed of dog is most likely to have a reportable bite (broken skin serious enough for medical or police intervention), numerically and statistically?
- Is the “bite problem” better or worse?
- Are there any indicators that determine “poor” ownership and a propensity to bite more than breed?
- Will the institution of the sterilization requirements under the Dangerous Breed Ordinance result in decreased bites?

The figures in this report were obtained from the Berks County Dog License database, the Humane Society of Berks County database, and the database of dog bites maintained for the Reading Animal Control Board. Often these databases do not contain the information exactly as needed, or did not contain the data for some period. Additionally, many of these figures involve *reported* numbers, not necessarily actual numbers. **The figures presented here are intended to serve as a helpful baseline for discussions and are not presented as “perfect.”** Fortunately, all data presented can be easily and quickly checked against the databases in the event of any questions of accuracy.

How many dogs live in Reading? According to data provided by the Berks County Treasurer, the number of dogs *licensed* within the city in 2006 (the last full record year) was 6335. This is clearly not the actual number of dogs, only those with owners choosing (or being forced to) obtain a license. However, it is a reasonable baseline to

consider. This number has varied by as much as 40% in the past decade, ranging from a high of 7304 in 2000 to a low of 5236 in 2004. The actual number of licensed dogs was:

- 1997: 6425
- 1998: 6516
- 1999: 6987
- 2000: 7304
- 2001: 6866
- 2002: 6909
- 2003: 6588
- 2004: 5236
- 2005: 5886
- 2006: 6335

It should again be pointed out that these numbers reflect *licensed dogs only*. It is reasonable to infer that many, many dogs in Reading are not licensed. Based on a random survey of 100 dogs entering the HSBC in 2006, approximately 20% entered with a dog license. This means that as many as 80% of the dogs in Reading could be “undocumented canines” (although that percentage is likely high since the HSBC receives disproportionately high numbers of dogs from “poor” or “mediocre” owners, owners who are less likely to license their dog.).

How many of these dogs are pit bills? The County license database only lists dogs by breed if the license holder lists a single specific breed on the license application. All other dogs are considered “mixed breeds” and the mix of the breeds is indeterminate (without a manual counting of each paper license). In 2006, the County database showed:

- 2006 licenses issued, all dogs, any breed: 6335
- 2006 licenses issued, any mixed breed: 2106 (33% of total)
- 2006 licenses issued, pit bull (listed as single breed): 341 (5% of total)

Of the 6335 licenses issued to Reading residents, the HSBC issued 2084 of them. The HSBC database tracks all license fields, including primary and secondary breeds. For 2006 licenses issued by the HSBC to Reading residents, the HSBC database showed:

- 2006 licenses issued, all dogs, any breed: 2084
- 2006 licenses issued, any mixed breed: 681 (33% of total)
- 2006 licenses issued, pit bull (listed as single breed): 204 (10% of total)
- 2006 licenses issued, pit mixes (listed as multiple breeds): 44 (2% of total)

The numbers of the two databases track extremely closely on general mixed breeds. However, the HSBC database shows a significantly higher percentage (double) of pit bulls licensed. This greater figure could be a result of enforcement activities and the HSBC policy of requiring licensing of dogs at the time of adoption. Based on an extrapolation of the licenses in both databases, it is reasonable to assume that of the 2106 licenses issued to “mixed breed” dogs in 2006, statistically at least 133 of the dogs listed as “mixed breed” in the county database are “pit bull mixes”. Additionally, many people choose to list pit bull mixes as simply “mixed breed” on license application for reasons of social stigma.

In light of the demonstration that a supermajority of dogs entering the HSBC are unlicensed, the accuracy of the 5% to 12% pit bull percentage has to be questioned. Approximately 20% of dogs entering the HSBC from Reading as strays or surrendered pets are pit bulls (17% of surrenders,

21% of strays.) It seems probable that pit bulls are less likely to be licensed and are therefore under-represented in the license database. This may also bear on the drastic decrease in licensed pit bulls over several years leading up to 2003. Owners may simply have been choosing not to report their dogs to the State and City licensing authorities. The variation in licensing numbers is a key issue, as it could mean that pit bulls bite at a rate substantially lower than their percentage of the general dog population.

What is a “pit bull terrier”? The discussion of breeds and mixes leads to another question that has come up in discussions: What exactly is a pit bull terrier? Various national and international breed registries recognize different breeds of dogs ranging from American Pit Bull Terriers, American Staffordshire Terriers, and American Bulldogs—or not at all. For reporting purposes, the HSBC has generally cast a fairly wide net and has included all breeds of dogs that could arguably be a “pit bull”. Since not all breed registries agree on several of these breeds (as, for example they do with Labrador Retrievers or Chihuahuas), the HSBC has traditionally lumped these “pit bull type” breeds together for reporting purposes.

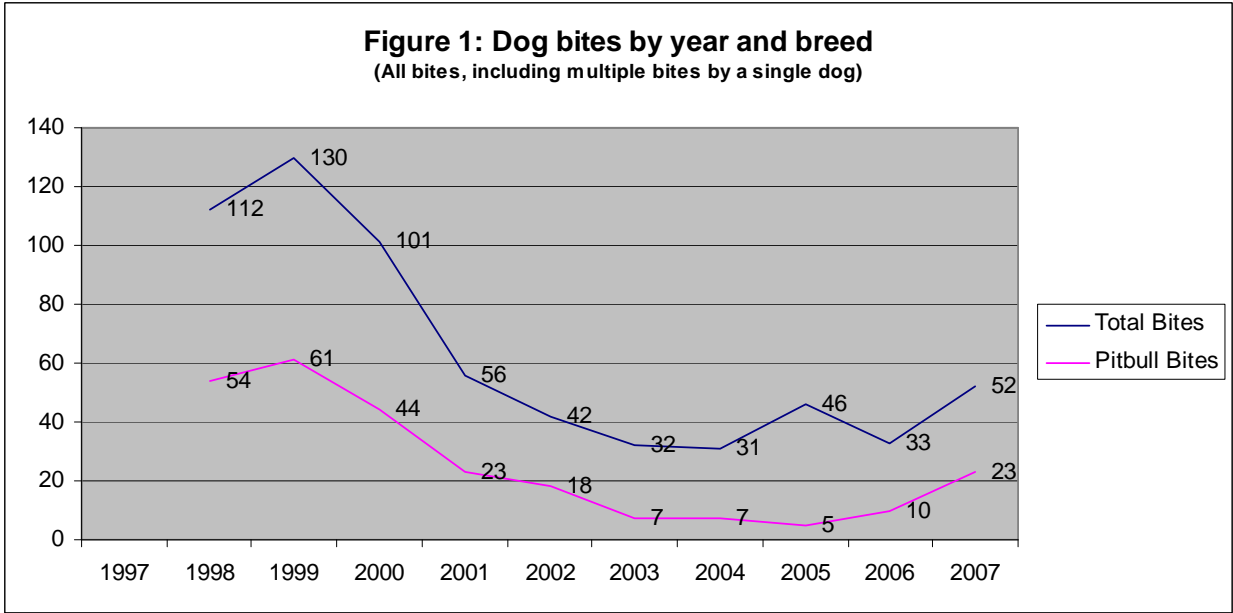
What is the sterilization status of licensed dogs in Reading? The county database provides the following sterilization rate figures for 2006 for dog with licenses:

- All dogs: 65% sterilized
- Mixed breeds (all): 69% sterilized
- Pit bulls (single breed listed): 29% sterilized
- All other pure breeds: 50% sterilized

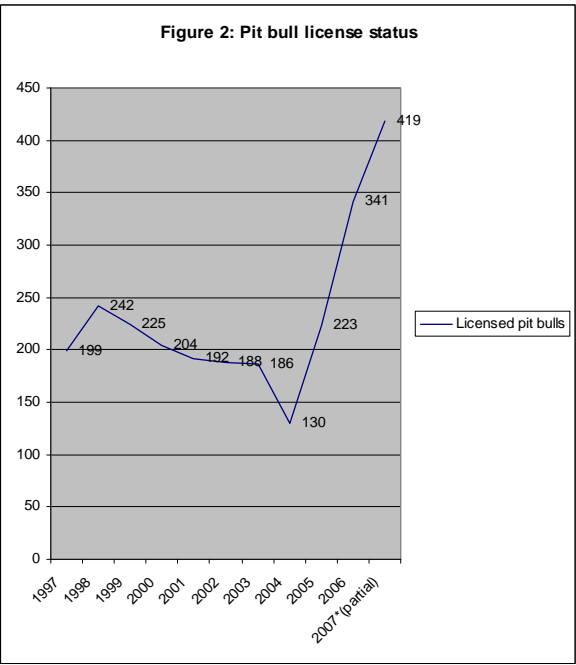
Clearly, pit bull owners are less likely to have their pet sterilized than the owners of all dogs as a group or than owners of all pure bred dogs as a group. However, sterilization status varies widely among breeds and may be more a factor of the population owning a given breed. For example, Chihuahuas only have a 30% sterilization rate while cocker spaniels have a 73% sterilization rate and Schipperkes have an 82% sterilization rate.

How have the above numbers changed over time? The statistics show striking patterns in changes to key numbers over time. Although the number of dogs licensed in Reading has varied as much as 40% between the ten year high and low, the percentage of mixed breed dogs has remained more constant (26%-33%). However, the percentage of pure bred pit bulls licensed has more than doubled since 1997 from 3% of licensed dogs to 5% in 2006 and 7% of licensed dogs so far in 2007. Also, the percentage of pit bulls sterilized has varied significantly, ranging from a high of 79% sterilized (2002) to a low of 14% sterilized (1998).

Perhaps more interestingly, the numbers show lockstep trends in the ratio of bites by pit bulls and the number of bites by all dogs combined over the decade. Bites by both groups have essentially risen and fallen together (figure 1). The upward trend this year applied to non-pit bulls as well and implies that there is not a “crisis of pit bull bites” but a “crisis of an overall increase in bites”. In fact, if all pit bulls bites were removed from the statistics for 2007, non-pit bull bites already *exceed the number of pit bull bites in 2001, 2002, and 2003*—the last years the Dangerous Breed Ordinance was activated.



There are other trends that stand out, as well. The number of pit bulls licensed within Reading increased by 322% (figure 2) between 2004 and 2007. It appears that bites by pit bulls have *exactly tracked the increase in the numbers of pit bulls in Reading*. In other words, there may be three times as many bites but there are also three times as many pit bulls. Statistically, there is little or no difference in the pit bull *bite rate* (how many pit bulls bite compared to the number of pit bulls) between this year and the years with the lowest number of pit bulls. This trend extends into 2007. In the late 1990's, *both the number and rate* of pit bull bites were significantly (five times) higher.

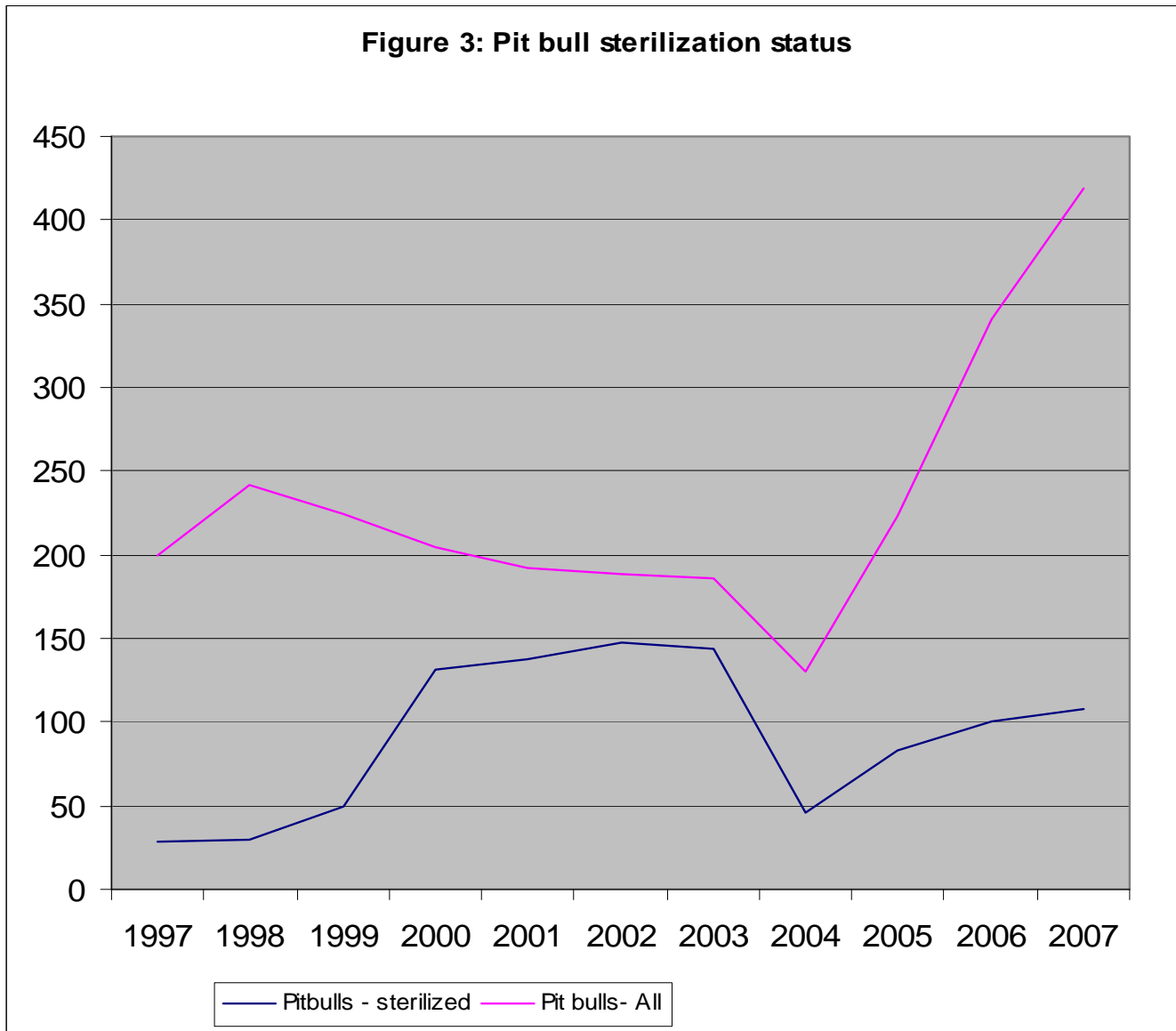


If bites are counted by individual dogs (rather than “per bite”) the pit bull bite percentages change considerably since three pit bulls accounted for 8 of the 23 pit bull bites so far in 2007. In fact, if bites were tracked by dog rather than by bite incident, the percentage of total bites by pit bulls would drop from 45% to 35% - **below the triggering percentage for the ordinance**.

Tracking by dog rather than by bite would seem a reasonable consideration since it is possible that one dog, of any breed, could go on biting spree and bring down the weight of the ordinance on all other dogs of that breed.

There has been one area that has shown a dramatic shift: sterilization rates among licensed pit bulls. During the same period when the pit bull population was rising in Reading the number and percentage of pits bulls that were being sterilized was changing radically (figure 3). While

the rates of bites by any pit bull followed the increasing trend of the pit bull population, **the bites were coming from a specific slice of the pit bull population: unsterilized pit bulls**. Each of the two years with the greatest decline in bites and the lowest bite numbers (2004 and 2005), were preceded by the two years with the highest sterilization rates among pit bulls (2002 and 2003). Since younger adult dogs account for the vast majority of reported bites and sterilized dogs are less likely to bite, it seems probable that the dogs sterilized on 2002 and 2003 became a population of dogs that did, in fact, bite less in 2004 and 2005. This supposition is bolstered by



the trend shown in figure 3 starting in 2004. Large numbers of **unsterilized** pit bulls began being added to the license rolls, driving down sterilization rates, and two years later bites spike up in a similar, but inverse, fashion as they had following the years with the highest sterilization rates.

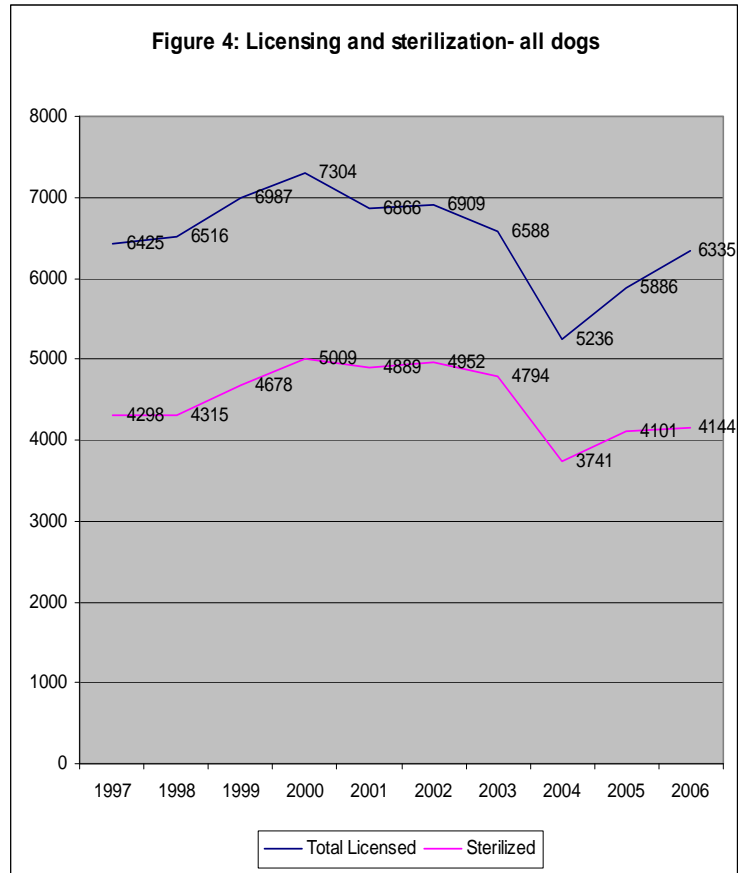
This trend is also seen in the general dog population. The years with the highest number of dog bites were also the years with the lowest percentage of sterilization of dogs in Reading. As the

sterilization rate increased, bites overall decreased, with **the years with the lowest number of bites being the years with the highest percentage of sterilization of dogs**. Beginning in 2004, a new trend is seen: the number of dogs begins to increase but the number of sterilized dogs increase at a far slower rate (figure 4). Since 2003, the licensed dog population has increased by 1099, however, only 403 of that increase included sterilized dogs- only 36% compared to an overall sterilization rate for all dogs of 68%. These new dogs are *half* as likely to be sterilized.

This trend is even more disturbing since 2005. Between 2005 and 2006, the number of dogs licensed increased by 449 but the number of sterilized dogs increased by 43. **90% of these licensed dogs were not sterilized.**

What types of dogs enter the HSBC and what is their sterilization status?

The HSBC maintains a detailed database of all animals it serves. In 2006, the HSBC took in 1372 dogs from Reading. These include stray dogs, dogs surrendered by their owners, and humane acquisitions (emergency or law enforcement related housing). Statistically, that means that more than *one in six* dogs licensed in Reading passed through our shelter last year.



<u>Population (2006)</u>	<u>Total number of dogs</u>	<u>Sterilization percentage</u>
All licensed dogs	6335	65%
Dogs surrendered to HSBC	567	43%
Stray dogs entering HSBC	764	24%
All dogs biting (2007 YTD)	44	9%

(2007 bites shown for sterilization comparison. Sterilization status of biting dogs was not tracked until 2007)

Dogs that have demonstrably worse owners (those allowing dogs to stray) or demonstrably unsuccessful owners (who have chosen to give up their pet) are vastly less likely to be sterilized. In fact, the trend is clear: “irresponsible” owners have their dogs sterilized only a third as often as the “responsible” general dog owning population. Those who surrender a dog to the HSBC are twice as likely to have their dog sterilized as stray dog owners but are still only about two-thirds as likely to have their dog sterilized as the general dog owner population.

When the sterilization percentage of biting dogs in 2007 is compared, the trend becomes stunning: **91% of dogs biting in 2007 were unsterilized**. While 65% of the general dog population is sterilized, only 9% of biting dogs are sterilized.

One question that arises, given the focus on breeds: Are these rates different among pit bulls receiving HSBC services?

<u>Population (2006)</u>	<u>Total number of dogs</u>	<u>Sterilization percentage</u>
Dogs surrendered to HSBC	567	43%
Pit bulls surrendered	99	45%
Stray dogs entering HSBC	764	24%
Stray pit bulls entering the HSBC	167	26%

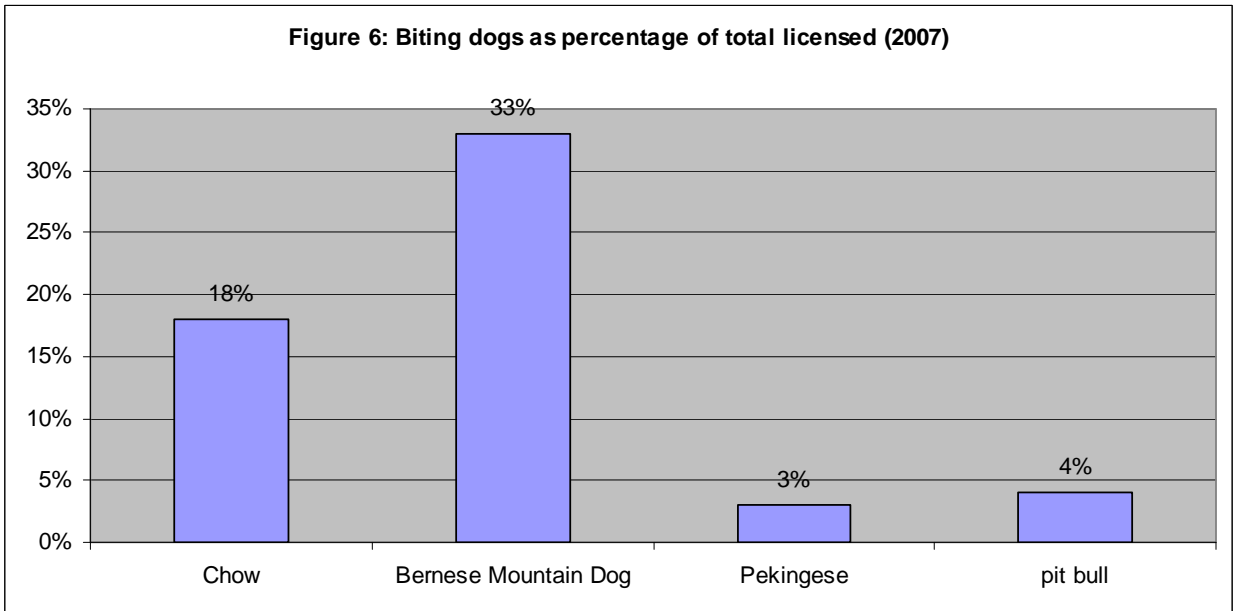
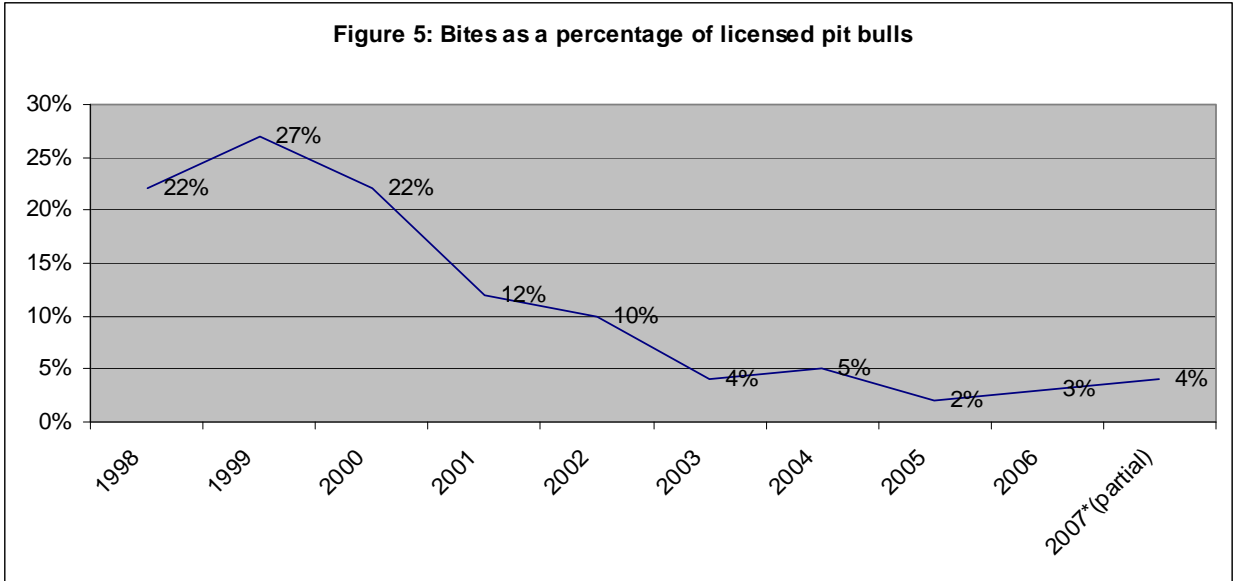
The sterilization percentages for pit bull in these populations fall **exactly in line** with the dog populations entering HSBC as a whole (although interesting, they are slightly more likely to be sterilized). This trend implies that it is the quality of care provided by the owner can determine whether a dog will stray or be relinquished to a shelter. **These numbers also indicate that sterilization status is the single biggest indicator of a dog's behavior.**

Is there a relationship between dog numbers, breeds, sterilization status and bites? Unlike the other questions addressed, this one calls for analysis, not merely a transcription of data. Ultimately, this analysis provides the framework for determining what action will be effective and will that effectiveness be marginal or significant. Here are some answers that can be drawn from the information available:

What breed of dog is most likely to have a reportable bite (broken skin serious enough for medical or police intervention), numerically and statistically? Numerically, pit bulls. Over the past ten years (including 2007 YTD), pit bulls have been responsible for 36% of reported bites, ranging from a high of 48% in 1997 to a low of 11% in 2005. However, that does not mean that they are, individually, the most likely to bite. Bite statistics and license records show that there are other breeds that are statistically much more likely to bite.

Is the “bite problem” better or worse? *Much, much better.* The use of an overall statistical measure (40% of bites) is seriously flawed if the goal is to determine if bites are out of kilter with the population or determine changes over time. Over time pit bulls have become statistically far less likely to have reported bites compared to the population as a whole. In the highest bite year (when pit bulls accounted for 48% of bites), there were 242 licensed pit bulls accounting for 54 bites, or a bite rate of 22%. In the lowest bite year (when pit bulls accounted for 5 bites or 11% of bites), there were 223 licensed pit bulls, giving them a bite rate of 2%. In fact, even with 2007's upturn in reported bites, all bites combined are still less than or nearly equal to pit bull bites alone in 1998, 1999 and 2000. The number of bites compared to the population of pit bulls shows this dramatic trend graphically in figure 5.

Although pit bulls create the highest number of reported bites numerically, **they are not the dogs that are shown by the data to be the most likely to bite.** Figure 6 shows that Chows and Bernese Mountain Dogs are statistically far more likely to bite when the number of bites is compared to the total licensed population of those breeds. By that measure, the 4% bite rate for pit bulls falls closer to the 3+% rate for Pekingese. If the goal is to target the dogs *most likely to bite*, then Chows and Bernese Mountain Dogs would be much more logical targets and many more breeds would fall within the same range as pit bulls.



Are there any indicators that determine “poor” ownership and a propensity to bite more than breed? Yes, clearly sterilization status is a far more accurate indicator than any other single factor. The average dog in Reading has a 65% chance of being sterilized, the average dog given up to an animal shelter has a 43% chance of being sterilized, a dog that ends up in a shelter as a result of straying has a 24% chance of being sterilized, and a dog that causes a serious bite injury has a 10% chance of being sterilized.

Will the institution of the sterilization requirements under the Dangerous Breed Ordinance result in decreased bites? Almost certainly, among pit bulls or any other breed targeted. However, bites by all other breeds will not be impacted so it is likely to see the same trend as in past years following the institution of the restrictions: The total number of bites by breeds other

than pit bulls will exceed the number of bites by pit bulls (even in the worst years) and meet or exceed the total number of all bites in the best years.

Summary:

The HSBC examined dog bite statistics in Reading over the past ten years and determined:

- In 2007, the bite rate among pit bulls is 4%. That is, we have received reports of 18 pit bulls biting people and 419 pit bulls have been licensed. This contrasts with a bite rate of 33% for Bernese Mountain Dogs (1 biter/3 licensed) and 18% for Chows (3 biters/16 licensed) and 3% for Pekingese (1 biter/29 licensed).
- Taking into account all breeds of dogs, including mixed breeds, bite rate most closely relates to sterilization status. In 2007, 91% of biting dogs were unsterilized. By contrast, 35% of the general dog population is unsterilized.

Data shows that although pit bulls account for a significant overall percentage of bites, it is related to their growing numbers within the dog population and sterilization percentages, not because they are inherently more likely to bite. The actual bite rate among pit bulls has remained flat. If the purpose of the ordinance to prevent bites, targeting one breed will not be as effective as targeting the underlying reason for bites by any breed. *It will only be effective against the bites by the targeted breed.*

If the goal is to try to stop as many bites as possible, a better underlying cause and effect relationship must be found, and the Humane Society of Berks County believes one has been found. Sterilization status is clearly shown to be a better indicator of unacceptable canine behavior of all kinds, up to and including bites. Focusing solely on a breed to “get the bite numbers down”, even when the data does not truly support a designation that a breed is actually more “dangerous” than any other, implies that Reading has made a determination there is an “acceptable” number of bites, just so long as these bites are not given by one particular breed. This sort of breed targeting is unfair to responsible owners of the targeted breed, will not have any impact on the majority of bites, and is unsupportable by any actual data.

65% of the dog biting in 2007 were breeds other than pit bulls. The Humane Society of Berks County feels that there is a better way to make the public safe from *all dog bites*, not just pit bull bites.