

Statistically Speaking

STATISTICS FOLLOWING 46 MONTANA SPAY/NEUTER TASK FORCE VISITS TO MONTANA COMMUNITIES

In gathering the statistics (where records are kept) from the Montana Spay/Neuter Task Force visits to communities throughout Montana over the past seven years, we have arrived at a number of conclusions. In every instance, the spay/neuter event has had a major impact on those communities in which statistics were available. In larger urban areas, the immediate impact is about a 19% drop in animals impounded and about a 24% drop in animals destroyed. Dog bites decreased by 33%. In almost every case, the impact on animals destroyed is greater than for animals impounded. In smaller, more compact areas, such as in Native American Nations, the immediate and long-term impact was greater, varying from a decrease of 20% to over 50%, in the animals impounded or destroyed. The effect of the decrease is generally most notable about six months after the spay/neuter event and, in almost all instances, there is a steady drop in animals impounded or destroyed for one to two years after the spay/neuter event. The impact of additional visits is to bring about a steady decrease in animals impounded or destroyed (70% to 75% below what was occurring before the first Task Force visit). All of the differences (before versus after) were significant at the .01 level of significance (Chi Square). In Montana, most animals are impounded from May to October. Consequently, wherever possible, the statistics were corrected for seasonal variations. Many communities issue spay and neuter certificates, some aggressively. However, we have found little or no evidence for the positive impact of these certificates. Increasing the number of certificates lead to an increase in animals impounded for that year almost as often as decreasing the certificates. Using a Spearman Rank Order Correlation, we found no significant relationships between intake or animals destroyed and the number of certificates issued. Sign Tests comparing changes in the number of certificates in a given year and changes in intake again were non-significant.

The larger the spay/neuter event (in some cases over 1,000 surgeries), or the smaller and more compact the community, the greater the impact. Repeated visits lead to a long term and more permanent control of animal overpopulation. The cost effectiveness of one large- scale clinic on the operation of a shelter, the cost of impounding, caring for, and destroying animals, was shown to be between \$104,000 and \$147,000. Large clinics followed by three or four visits seem to be much more effective than the issuance of spay/neuter certificates or occasional surgeries.

IMPACT STATISTICS TO MONTANA COMMUNITIES FOLLOWING 46 MONTANA SPAY/NEUTER TASK FORCE VISITS SUMMARY: ANALYSES OF IMPACTS

In gathering the statistics (where records are kept) from the Task Force visits to communities throughout Montana over the past seven years, we have arrived at a number of generalizations. Each Task Force visit helped a community bring together its resources to create a pet care event, the centerpiece of which was a free, demonstration spay/neuter clinic, to help solve a community problem, and, in doing so, own the solution. The Task Force brought a small van carrying supplies and equipment to set up in an existing building a spay/neuter clinic with from 2 to 6 or more surgery tables. In every instance, a pet care and spay/neuter event sponsored by the Task Force with and at the invitation of local authorities has had a major impact on those communities in which statistics were available. In larger urban areas, the immediate impact is about a 19% drop in animals impounded and about a 24% drop in animals destroyed. In almost every case, the impact on animals destroyed is greater than for animals impounded. In smaller, more compact areas, such as in Native American Nations, the immediate and long-term impact was greater, varying from a 20% to over a 50% decrease in the animals impounded or destroyed. The effect of the decrease is generally most notable about six months after the spay/neuter event, a drop of 35% to 60%. In almost all instances,

there is a steady drop in animals impounded or destroyed for one to two years after the spay/neuter event. The impact of additional visits is to bring about a steady decrease in animals impounded or destroyed (70% to 75% below what was occurring before the first Task Force visit). In some cases, this steady decline over time might best be accountable by a change of attitudes toward animals within the community.

In Montana, most animals are impounded from May to October. Late fall, winter and early spring, the colder months, are the slow periods. Consequently, wherever possible, the statistics were corrected for seasonal variations by comparing the same months before the event with the same months after the event. Many communities issue spay and neuter certificates, some aggressively. However, we have found little evidence for the positive impact of these certificates. Increasing the number of certificates lead to an increase in animals impounded for that year almost as often as decreasing the certificates. Using a Spearman Rank Order Correlation, we found non-significant relationships between intake or animals destroyed and the number of certificates issued. Rs varied from a negative 0.49 to 0.43 in different communities. Most correlations were slightly positive in the neighborhood of .20. Sign Tests comparing changes in the number of certificates in a given year and changes in intake again were non-significant ($p > .50$ one-tailed test). It can be concluded that the observed values differ from zero only by chance.

The larger the size of the spay/neuter event, the longer the event, or the smaller and more compact the community, the greater was the likelihood for change. Repeated visits or increasing the likelihood of more spay/neuter services by greater veterinary participation can lead to a long term and more permanent control of animal overpopulation.

BILLINGS, MONTANA ANIMAL SHELTER IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISIT

Billings Animal Shelter: intake and destroy peak from May through October each year.

The impact of the Task Force spay/neuter event seems to be a 9% to 12% drop in intake and in the number of animals destroyed. The immediate impact on intake is a drop of 9.2% (2 months before the event compared to 2 months after). At three months this drop is 9.8%. At 5 months, when you compare 5 months before to 5 months after, the drop in intake is 18.4%. For the year immediately preceding the event, the average monthly intake was 401 animals. For the month immediately following the event the intake was 314 animals for the month, a drop of 14.2%. In the next month, there is a sharp rise in intake to 480 animals, a gain of 19.7%. After this spike, intake declines for the next three months when compared to the yearly average, varying from a 6% to a 32% decrease each month. However, if you take the monthly average for the 5 preceding years, 1997-2001, average monthly intake is 444 animals per month, and the drop after the event would be 22.5% ; 5 months later the drop would be 29.3%. To account for seasonal variation, 5 months after the event in 2002-03 was compared with the same 5 month period in 2001-2002; a drop of 9.1% was found.

Spay/Neuter Certificates were given for the period from 1997 to 2002; there seems to be a slight but non-significant correlation between the number of certificates handed out and the yearly intake. Spearman Rank-order correlation equals 0.43. A Sign Test showed no relationship. As for animals destroyed, there was a small negative, but non-significant, correlation between number of certificates dispersed and number of animals destroyed each year.

The impact of the spay/neuter event seems to be greater for animals destroyed, although there is greater variation than for intake. The immediate impact is a drop of 14.7% (2 months before to 2 months after). At three months this drop is 7.1%. When you compare 5 months after to 5 months before, the drop in animals destroyed is 19.2%. If you compare the monthly average for the 5 years prior to 2002, the decrease in number of animals destroyed is more pronounced after the event, dropping 43% in the month following the

event to a drop of 55% 5 months later. To account for seasonal variation, the 5 months after the event in 2002-03 was compared to the same 5 months during 2001-02. In this case, the drop was 11.6%.

We can safely conclude that the spay/neuter event (a 2 day clinic in which 619 animals were spayed or neutered) in late August, 2002 did have an immediate and a more lasting effect. The number of animals taken in dropped 9 - 29%. The number of animals destroyed dropped 15 to 55%. Corrected for seasonal variations in the number of animals, the number of animals taken in dropped 9% during the 5 month followup period, the number of animals destroyed dropped 12% during the same period. These latter two measures are probably the best indication of the impact of the event.

WOLF POINT DOG POUND, MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISITS NUMBER OF DOGS IMPOUNDED HAS DROPPED

Most animals (dogs, no cats) generally were impounded in late winter and in August each year.

At Fort Peck, as on most Native American reservations where records are kept, the only statistics gathered were for dogs impounded at the only facility for animals in the area. At the Wolf Point Dog Pound, statistics were kept monthly, thus giving a better picture of seasonal variations in dogs impounded and destroyed. Most animals generally were either impounded or destroyed in late winter and in August. Each Task Force spay/neuter clinic markedly decreased the number of dogs impounded or destroyed. After the first event in 1999, corrected for seasonal variation (comparison of the first five months after the clinic in 1999 with the same five months after the clinic in 1998) the drop in dogs impounded was 36%, for animals destroyed, the drop was 37%. (Fig.2)

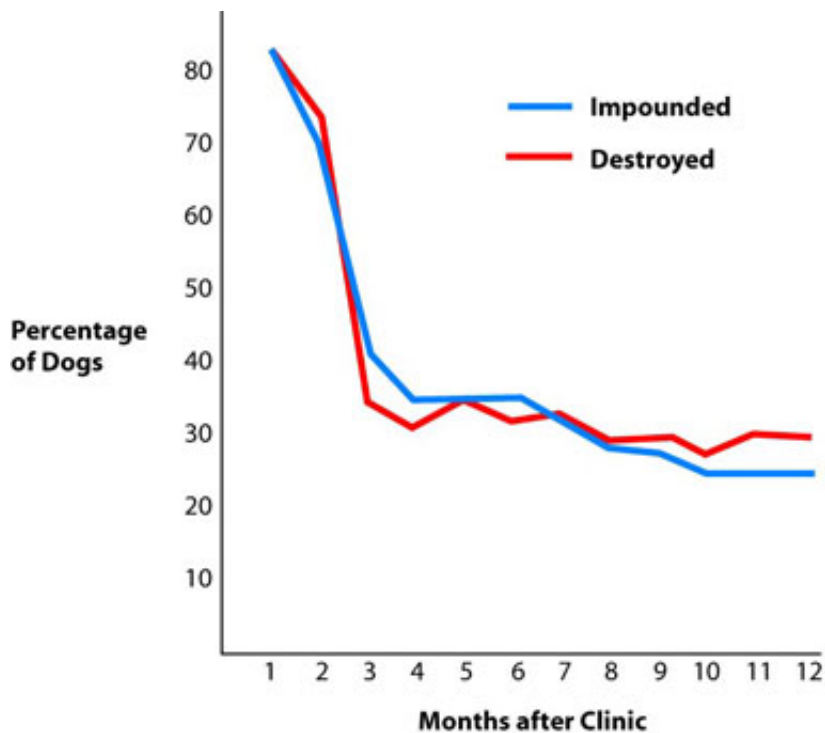


Fig.2 Percentage drop in Dogs impounded and in dogs destroyed after the 1st S/N in 1999 (Wolf Point Pound)

After the second Task Force event in 2000, the seasonal impact was a drop in dogs impounded of 20% and in dogs destroyed of 20%. After the third event in 2001, the impact, corrected for seasonal variations, was a drop of 29% in dogs impounded and 21% in dogs destroyed... After the fourth Task Force event in 2002,

the number of animals impounded decreased by 21% and the number of animals destroyed decreased by 9%. The most striking effect, however, was the steady decline in the yearly average intake from 1998 (the year before the clinic events) to 2002 (the year of the fourth successive spay/neuter event. During this time, the average monthly intake of dogs each year dropped 76% and the number of dogs destroyed dropped 68%...

Number of Animals Destroyed and Impounded following Task Force Visits

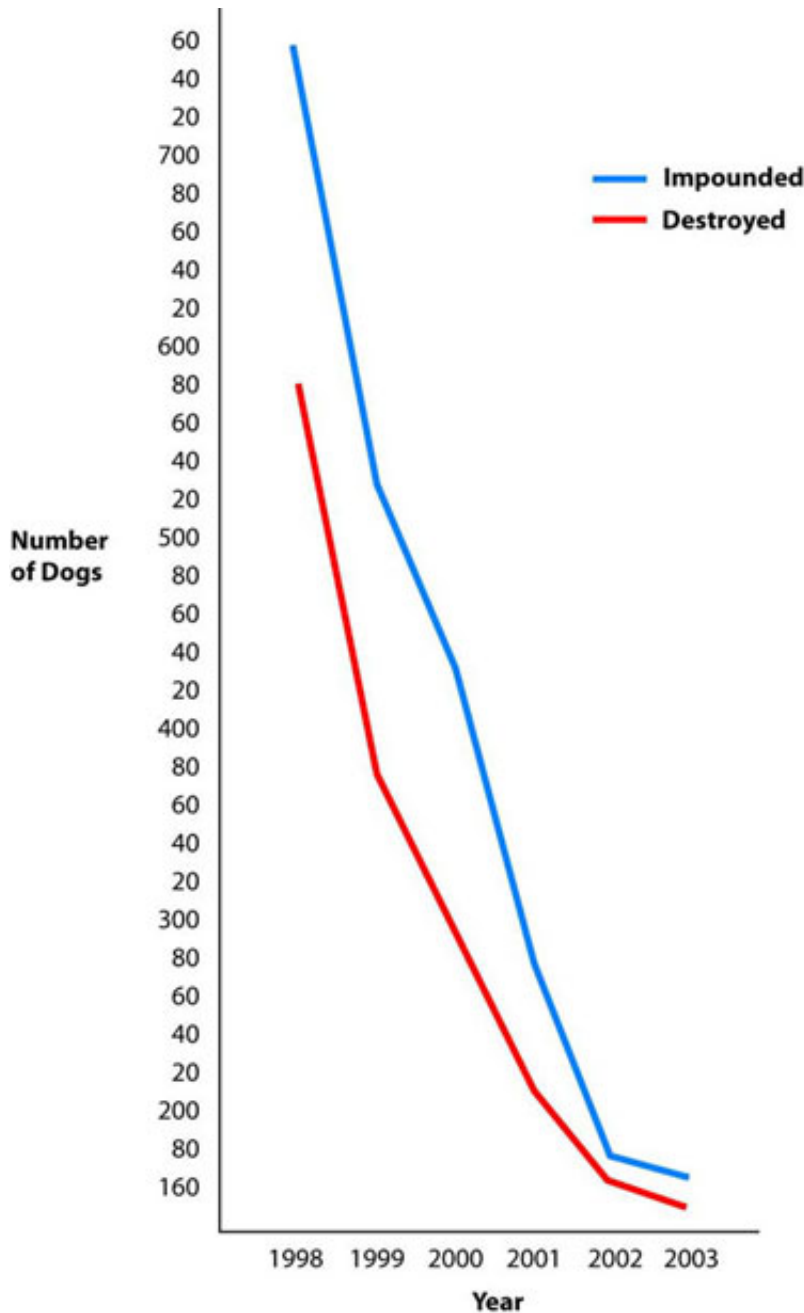


Fig.1 Yearly Change in dogs impounded and destroyed for Wolf Point Dog Pound- MSNTF

The impact of 4 successive spay/neuter events on the impoundment of dogs at the Wolf Point Pound was very noticeable as was the number of dogs destroyed. The savings in the cost of handling 62 dogs per month in 1998 as compared to 15 in 2002 would be very great. The reduction of dogs destroyed of 68% creates a social climate of greater care and less violence.

INCIDENTS OF DOG BITES

A final measure of the effect of the four events is a report from Fort Peck Animal Control Officer, Dusty Menz. In his jurisdiction, the incidents of dog bites monthly has dropped from an average of 15 per month to 3 per month (drop of 80%)

BITTER ROOT HUMANE ASSOCIATION SHELTER, RAVALLI COUNTY, MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISITS

Most animals come into the shelter during the months of June through October and, thus, most animals are destroyed during that time.

Due to the nature of the records kept, our data is not as complete or reliable before 2001. There was a steady increase in admissions from 1994 to 1997 even with the issuance of spay/neuter certificates and the inclusion of Spay Day USA in which 203 to 547 were spayed or neutered. In 1998, four small spay/neuter clinics were conducted within Ravalli County and a total of 110 additional animals spayed or neutered. The result was a decrease in new admissions of 9%. In June of 1999, a 3 day spay/neuter clinic was conducted by the Task Force and 224 animals were spayed or neutered. The impact was a drop in new admissions of 8% for 1999 and a drop of 6.5% in 2000 from 1998. The results, although showing a small drop, were not impressive. At the same time, Ravalli County was experiencing an increase in population growth of about 4.5% per year. The impact on animals destroyed, however, was more impressive. From 1997 to 1998, the number of animals destroyed decreased by 14% and from 1998 to 1999 the number of animals destroyed dropped 21%. From 1999 to 2000, there was a 7% rise in the numbers of animals destroyed. However, from 1997 to 2000, the number of animals destroyed decreased by 27%, suggesting that there was a cumulative impact of all the spay/neuter clinics over time, but that the effect was hard to sustain.

For the 2001 event, the records are more complete, and we can demonstrate the impact of the spay/neuter event of September. The immediate impact (2 months before versus 2 months after) was a drop in intake of 19.6%. Three months later, the impact was a drop of 35.6% and six months later a drop of 38.4%. The long range effect (9 months before versus nine months after) was a drop of 22.6%. By taking the average monthly rate for the nine months before the clinic and comparing that figure with the average monthly rate for the 3 months, 6 months, 9 months, and 13 months after the event, we can determine the impact over time in yet another way. At 3 months, the impact was a drop of 12.8%, 6 months later a drop of 27.6%, 9 months later a drop of 20.4% and 13 months later a drop of 13.5%. The 2001 event was a bigger and more dramatic spay/neuter event lasting 3 days and spay/neutering 788 animals. It had a significant immediate impact which increased in amount over 6 months and was still apparent 13 months later (13.5%).

The number of animals destroyed follow a similar pattern. The immediate impact of the 2001 spay/neuter event was a drop of 37%. Three months later, the drop increased to 52.7% and 6 months later to 62%. After 9 months, the impact was a drop of 48%. Again, taking the monthly average of the 9 months before the clinic and comparing that with the monthly average of the 2, 3, 6, 9 and 13 months after the clinic, we see an increasing impact through 6 months (from 21.1% to 52.5%) and slowly declining through 13 months. The impact at 13 months was still a drop of 39% in the number of animals destroyed. Comparing three months before the event to the three months after, the drop was 53%; a comparison of 6 months before and after showed a 62% drop.

It appears that the bigger and more dramatic the spay/neuter event the longer the effect and that the main impact is around 6 months after the event. We need to obtain additional records to correct more effectively for seasonal factors. There does not seem to be any significant correlation between the issuance of spay/neuter certificates and the number of animals taken into the shelter or destroyed. A Spearman Rank-

order Correlation (Rs) between the number of certificates and a decrease in new admissions was 0.15. It can be concluded that the observed value of Rs differs from zero only by chance. A Sign Test reaches the same conclusion.

MISSION VALLEY ANIMAL SHELTER, LAKE COUNTY MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISITS TO CONFEDERATED SALISH AND KOOTENAI TRIBES

Most animals come into the shelter, which is located just over the border of tribal lands and midway between the northern and southern borders, during the summer months (May through October), correlated with the birth of kittens and puppies. Animals destroyed followed the same seasonal variations in most instances, starting a little later in June and remaining high through October. The effect of the spay/neuter certificates cannot be determined because of the small number recorded (3); however no correlation was evidenced.

The impact of the first spay/neuter event in 1998 seems to be more pronounced than the second event in 2001. The year after the first event, a drop in intake of 34.7% was evidenced; whereas in the year after the 2001 event, a drop of 13.5% resulted. In both the second and third years after the 1998 event, there was a rise of 31% to 47% respectively, suggesting that in the fast growing county (an average rate of 2.6% per year through the year 2000 and of 1.5% thereafter) the effect does not last for over 2 years. In 2000, however, 2 years after the November 1998 spay/neuter the effect was still a drop of 14%. The data from the 2001 spay/neuter event can be followed more precisely due to the increase in record-keeping. The immediate impact of the clinic (comparing the 2 months before the clinic with the 2 months after the clinic) was a drop of 18%. This drop in intake slowly increased through 6 months after the clinic to a 27% drop and then diminished to a 12.5% drop after 9 months. Part of the decrease could be due to variation in intake at different times of the year. When we correct for seasonal variation, there seems to be no effect for the first 6 months after the event (increasing 28% to 15%) and then decreasing to 30% in the third and fourth quarters after the spay/neuter event when compared to the same times one year before. The impact of the 2001 clinic can best be shown by comparing quarters rather than months due to the large variations in values from month to month. Comparing the average monthly value of the quarter (3 months) before the clinic to the first through fifth quarters after the spay/neuter event, we see a drop of 25%, 51%, 40%, 23% and 31% respectively, suggesting that the maximum effect of the spay/neuter event was between 3 and 6 months later. However, 13 to 15 months after the clinic intake was still down 31%.

Correction for seasonal variation is probably affected by the continued drop through the year 2000 due in part to the November 1998 event and for an influx of animals in the latter half of 2001 due to a special project at the shelter which brought in an additional 182 animals. Nevertheless, we can say that there was a significant impact of both the spay/neuter events of 1998 and 2001 on the numbers of animals taken in to the shelter. The impact seems to be greatest around six months after the spay/neuter event, but does persist for up to two years.

The impact on the number of animals destroyed follows much the same pattern as intake, although the effect of the first spay/neuter event was more pronounced. The number of animals destroyed drop 51% the first year and an additional 20% the second year. When we compared the 3 months before the spay/neuter event to the first through fifth quarters after the clinic, we find a drop of 20%, 65%, 53%, 24% and 20% respectively. The data for The Confederated Salish and Kootenai Tribes Animal Control Unit in South Lake County after two events at the Confederated Salish and Kootenai Flathead Nation seemed to have been even greater, although the record-keeping was not as extensive. In the 11 months before the first spay/neuter event, a total of 600 dogs were destroyed by the Tribal Animal Control Officer, In the 10 months after the event, a total of only 23 animals was destroyed, a drop of 96% in the number of animals destroyed. The impact of the clinics upon the attitude toward animals is much more pronounced in the smaller, more

compact Native American community.

FORT BELKNAP ANIMAL CONTROL, MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISITS

The Task Force made 3 trips to Fort Belknap Indian Community. The first spay/neuter event was August 1-2, 1999. Prior to the clinic (1/1/99 to 8/1/99), 245 dogs and 9 cats were destroyed. After the clinic (8/3/99 to 12/31/99), 43 dogs and no cats were destroyed, a drop of 76% in the number of animals destroyed. The statistics after 1999 were somewhat erratic; however, from 1999 to 2002, the number of animals destroyed dropped from 297 to 193, a decrease of 42%. A total of 310 animals were spayed or neutered in August 1991, 216 in July of 2000 and 132 in July of 2001. The three clinics have brought about a greater awareness of the animal problem as well as a 42% drop in animals destroyed in a 4 year period.

EUREKA ANIMAL CONTROL SHELTER, MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISIT

The data from the City and County Shelter in Eureka, Lincoln County shows a definite drop in the number of animals impounded after the Task Force visit and spay/neuter event. A drop of 34% occurs in the year following the event when compared to the year before. This figure shows a drop of 52% the second year after the event and a drop of 70% by the third year after the event. To reduce the impact of comparing the year previous to the event, which was quite high, we compared the 3 years before the event to the year after. The drop was 25%. The drop at the end of the second year was 45%, and at the end of the third year after the spay/neuter clinic, the drop was 66%. The results show an immediate decrease in intake after the spay/neuter event which continues to decline over a 3 year period. At the end of 3 years, the decrease in the number of animals impounded was 66% to 70%.

The results were similar for the number of animals destroyed. The immediate impact varied between 23% and 34%. The drop in the number of animals destroyed steadily decreased over 3 years. At the end of the third year, the decrease was 71% to 75%.

The local Friends of the Shelter started an aggressive campaign of issuing spay/neuter certificates in 1996. Spearman Rank-order correlation shows a slight but non-significant correlation between the variation in certificates when compared to the number of animals impounded. A sign Test also was non-significant for the hypothesis that the issuing of spay/neuter certificates lead to a decrease in animals impounded. The steady and dramatic decline in animals impounded and destroyed is probably due to a attitude changes in the community, the shelter and veterinary resources as a result of the spay/neuter event.

CROW NATION, MONTANA IMPACT STATISTICS FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISITS

The Task Force has visited Crow Nation 4 times in July or August since 1999, twice in Lodge Grass (501 total spay/neuter surgeries) and twice in Crow Agency (698 spay/neuter surgeries). While there are many reports in visual sighting of the reduction in numbers of dogs, there is no animal control program, no shelter, and no record kept.

One statistic that demonstrates the impact of Task Force efforts is the report by Indian Health Services that the number of dog bites dropped 33% from 2001 to 2002.

LEWISTOWN, MONTANA IMPACT STATISTICS

PAWS in Lewistown Montana, after inviting the Task Force to their community in April 2000, cancelled the event because their four local veterinarians wanted to provide a free spay /neuter event themselves in their own clinics.

A three day clinic in 2000 resulted in 160 surgeries, in 2001 during a one day clinic, 60 surgeries resulted, and in 2002 a one day clinic resulted in 57 surgeries.

The shelter reports a drop in numbers of kittens and puppies taken in. Total animals taken in for 2001 was 94 compared to 70 in 2002, a drop in intake of 25.5%.

March 17, 2002.

MONTANA SPAY/NEUTER TASK FORCE TOTAL VISITS AND SURGERIES

Community	Year	Cats	Dogs	Total
Ft. Belknap	3 visits, 1999-2001	358	301	659
Fort Peck	4 visits, 1999-2002	1,130	746	2060
Crow Nation	4 visits, 1999-2002	623	572	1,195
Salish / Kootenai	2 visits, 1998 and 2001	1,509	878	2,387
Ravalli County	5 visits, 1998, 1999, 2001	718	375	1,468
Billings	1 visit, 2002	437	180	617
Eureka	1 visit, 1998	47	69	116

MISSOULA CITY/COUNTY, MONTANA ANIMAL CONTROL SHELTER IMPACT STATISTICS, March 4, 2004 FOLLOWING ONE MONTANA SPAY/NEUTER TASK FORCE VISIT

I. GENERAL CONSIDERATIONS

A large, community spay/neuter event was held between June 14-19, 2003 at the Missoula County Fairgrounds, 207 dogs and 428 cats were spayed or neutered at the County fairgrounds and a waiting list of 91 dogs and 235 cats were sterilized during this period and some during several weeks thereafter. A total of 961 animals were spayed or neutered.

Throughout Montana, most animals are taken into the shelters from late spring through early fall, peaking in the summer months. This was also true for the Missoula Animal Control Shelter (fig. 1).

Missoula Animal Control

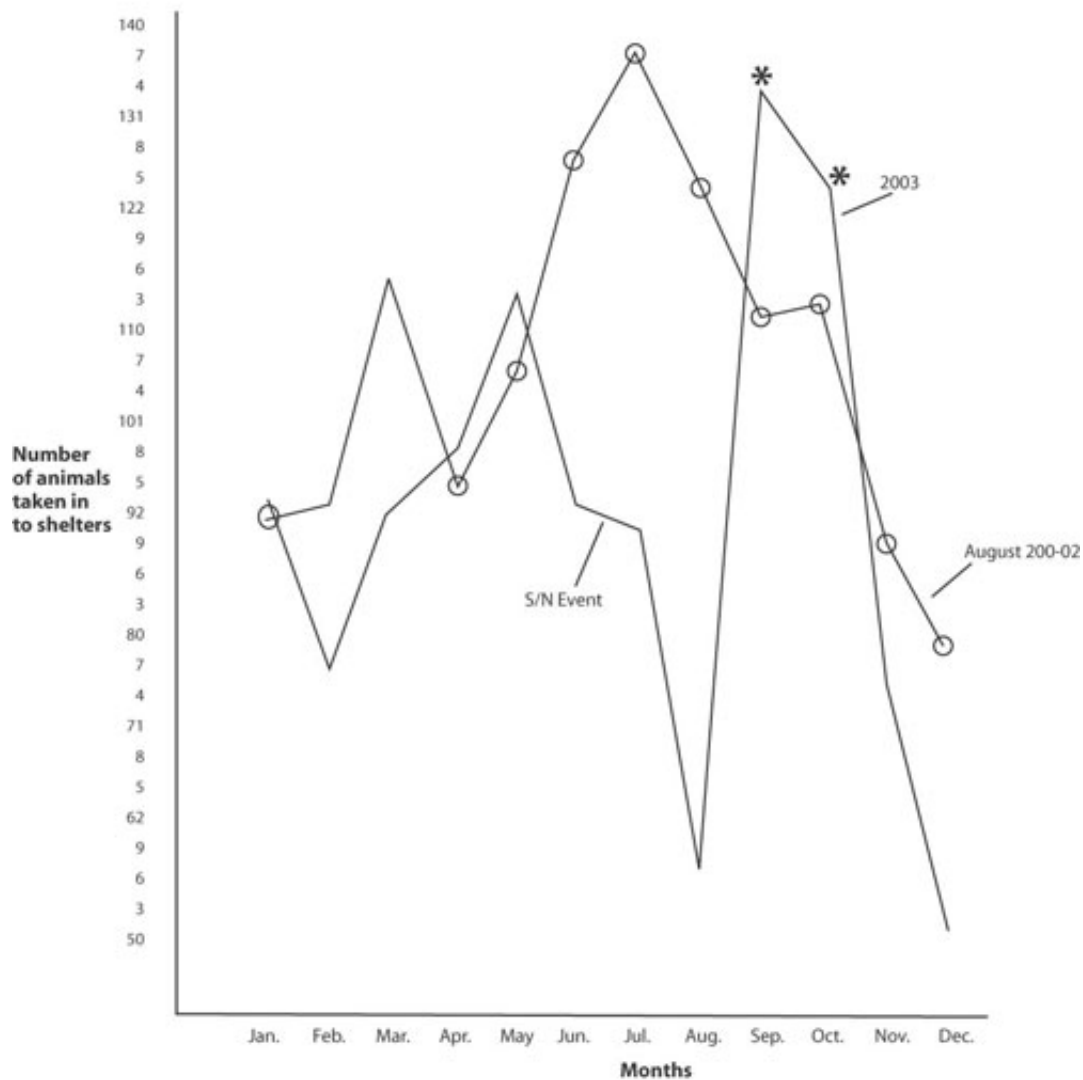


Fig. 1 Average Monthly Intake of all animals 200-02 compared to 2003 showing seasonal and random variations.
 * Increase in cats due to enlarged facility and new policy.

The number of animals taken in each month varied from 51 to 148. Therefore, any comparisons of the impact of spay/neuter clinics should be corrected for seasonal variations.

Figure one also shows a few unexplained or random spikes and troughs. Those random variations can be dampened and a more reliable estimate developed by averaging data over a number of years whenever possible. In the year 2002, there is a sharp decline in intake (fig 2).

Missoula Animal Control

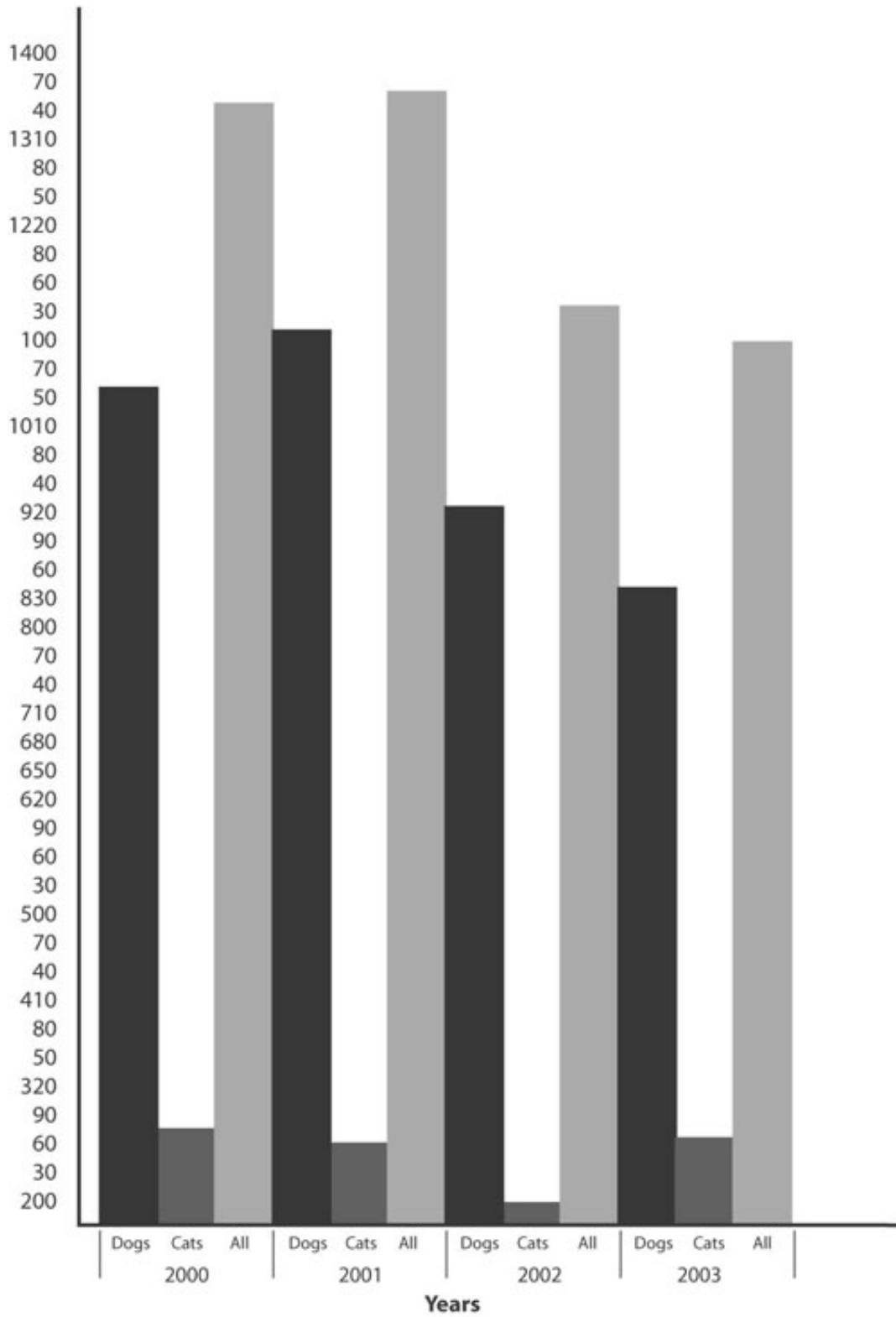


Fig. 2 The numbers of dogs and cats taken into the shelter each year.

And in mid-July of 2003 the shelter was moved to a new location and cat cages increased by 28 spaces which accounts for a much larger number of animals taken in and destroyed in September and October of 2003 (see fig 1 and 3).

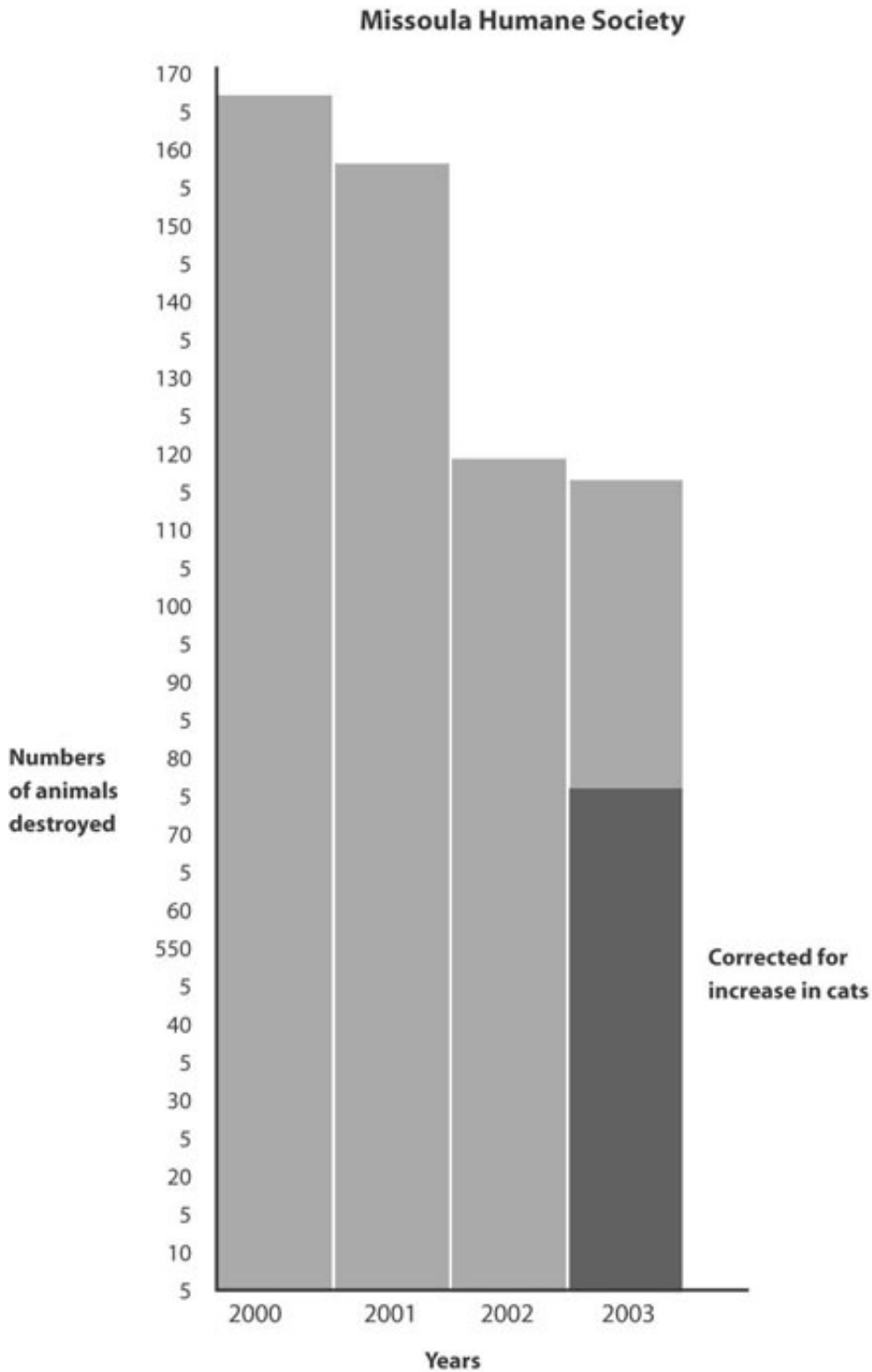


Fig. 3 Number of animals destroyed per year
Missoula Animal Control

Both of these happenings will have a tendency to reduce the amount of impact. If we focus only on dogs we can mediate the effect of an increase in cats, and comparing year 2002 with year 2003 we can account for the sharp decline in 2002.

II GENERAL STATISTICS

In the years 2000 to 2002, the average yearly number of cats and dogs taken in was 1,282 animals. Dogs taken in outnumbered cats by 62% (81% to 19%). In the year 2003, the intake of cats jumped by 5%. The number of cats destroyed was 72% of all animals destroyed.

II IMPACT STATISTICS

A.. The immediate impact of the large spay/neuter event on the intake of all animals was quite significant. * In comparing the intake of animals one month before the spay/neuter event and one month after, a drop of 19.5% was observed. Combining the two months before and after the spay/neuter event and comparing the two, a drop of 30% was observed.

B. Correcting for both seasonal and random variations in intake, a marked decrease in all animals was found. At one month after the clinic, the drop was 33 1/2%, and at two months the decrease was 43%. At 3 months and 6 months after the event, the decrease in all animals taken in was 24 % and 18 1/2% respectively. **(see fig 4).

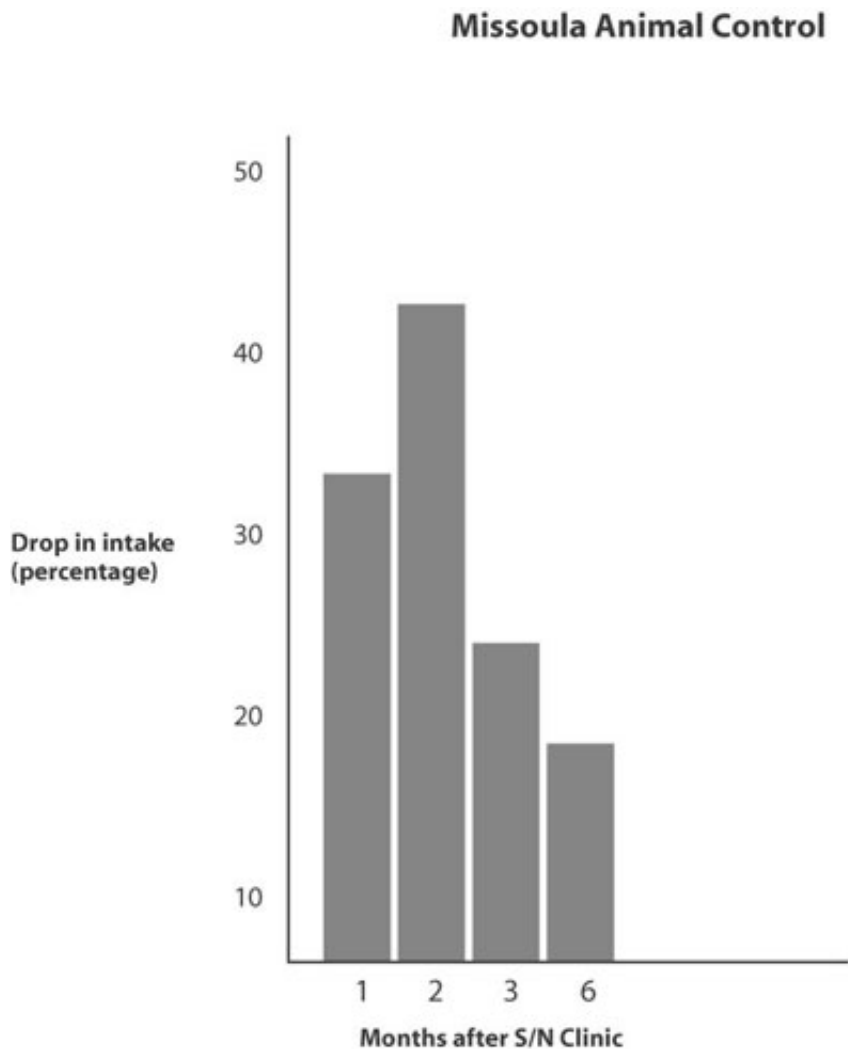


Fig. 4 Percentage decrease in intake for dogs after S/N Event, corrected for all animals. Corrected for seasonal and random variations.

However, these latter values do not take into account the sharp increase in the number of cats in the third and fourth months after the spay/neuter event due to an enlarged facility.

C. By looking only at dogs, the increase in cats taken in, due to an enlarged facility and a new policy of taking both City and County cats can be remediated. At one, two, three and six months after the spay/neuter event, the drop in intake of dogs, corrected for seasonal and random variations, was 35 1/2%, 43 1/2%, 31% and 26 1/2%, respectively (fig. 5a below).

Missoula Animal Control

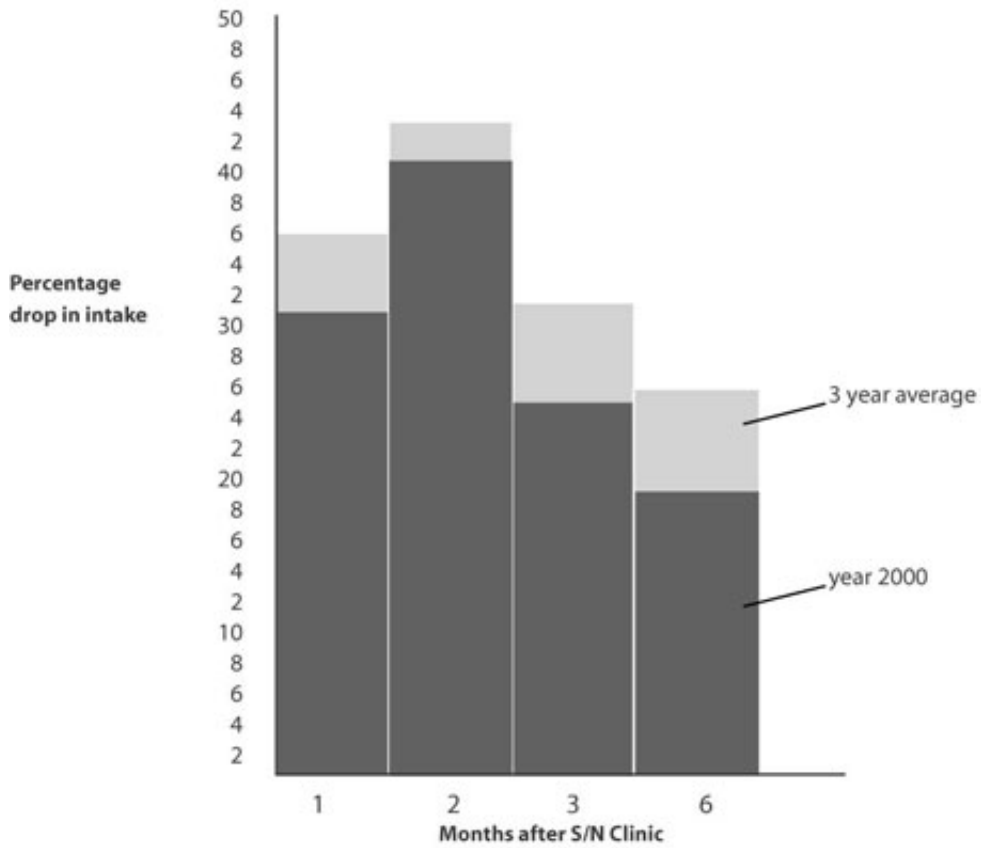


Fig. 5 Percentage decrease in intake for dogs after S/N Event, corrected for seasonal and random variations. One year and the 3-years average before the clinic compared to 6 months after clinic.

Even taking into account the sharp decline in intake in 2002, the drop in intake of dogs was quite significant. At one month the decrease was 30 1/2%; at 2 months after the clinic (corrected for seasonal variations) the drop was 40 1/2 %, at 3 months after it was 24% and at six months 19%** (see fig. 5b below).

Missoula Animal Control

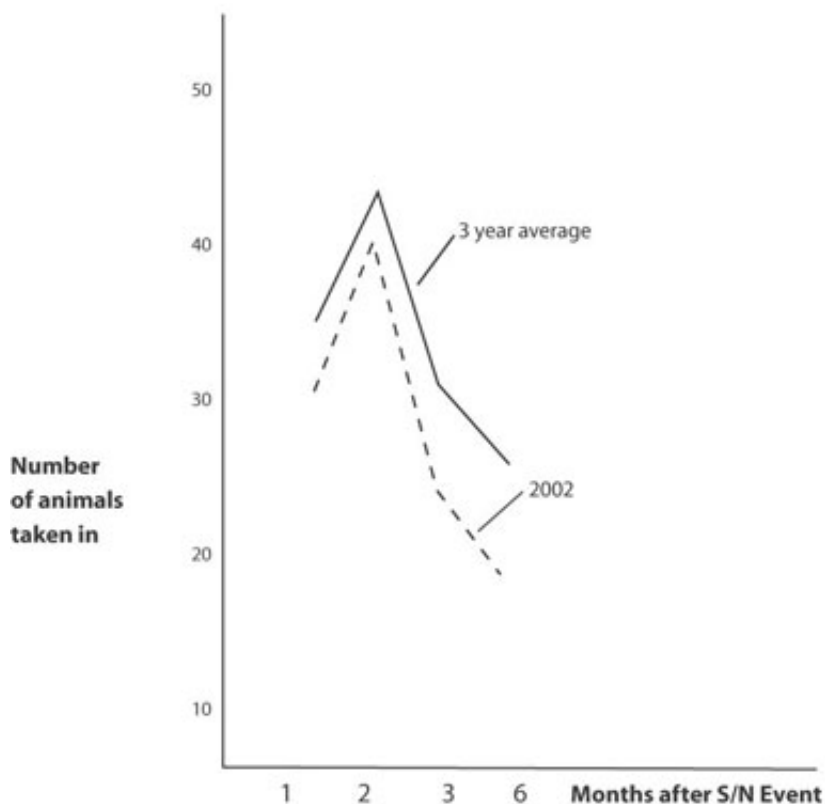


Fig. 5 Percentage decrease in intake for dogs after S/N Clinic corrected for seasonal and random variations One and 3 years before clinic compared to months after clinic.

D. Because of the small numbers involved and that we have only monthly data for 2003, the impact of the spay/neuter event on the number of animals destroyed is not as reliable. The immediate impact on the number of animals destroyed one month and two months before and after the spay/neuter event was a drop of 20% and 17%, but neither decrease reached significance.

E. By comparing the average number of animals destroyed each year from, 2000 to 2002 with the year of the spay/neuter event, a drop of 21% in animals destroyed was observed (fig 3). Corrected for the enlarged number of cats in September and October, 2003, the decrease in animals destroyed was 50%.**

F. There are no estimates of the cost of impounding, adopting out, or destroying an animal in Missoula. However, the costs of handling and destroying animals at the Billings Shelter can serve as an approximation. In Billings the cost of handling an animals was estimated to be \$125 per animal, and the cost of destroying an animal was estimated to be \$55 per animal. For the 6 month period after the Missoula spay/neuter event compared to the average 6 month period from 2000 to 2002, there was a drop in intake of 167 animals and a drop of 74 animals destroyed (corrected for seasonal variations and enlarging the Missoula City/County Animal Control shelter). This resulted in an estimated savings of \$22,920 over 6 months.

G. In summary, the impact of the large, community spay/neuter event in June 2003 brought about a marked decrease in the number of animals taken into the Shelter (30% to 40%) which was maintained at 20% to 30% over 6 months. For the 6 month followup period, the cost savings was estimated to be \$23,000 at the Animal Control Shelter. The impact on the number of animals destroyed, although less in number and having fewer monthly records, is in the same direction.

* P>.02 and P>.001 level of significance (Chi Square)

**P>.001 in all comparisons (Chi Square)

MISSOULA HUMANE SOCIETY, MISSOULA, MONTANA IMPACT STATISTICS, March 10, 2004

FOLLOWING ONE MONTANA SPAY/NEUTER TASK FORCE VISIT

I. GENERAL CONSIDERATIONS

A large community spay/neuter event was held June 14-19, 2003. Six hundred thirty-five animals were spayed or neutered and a waiting list of 326 animals were sterilized during the period and several weeks thereafter.

Most cats and dogs were taken into the Missoula Humane Society Shelter from late spring through early fall, especially from June to October (see fig 1).

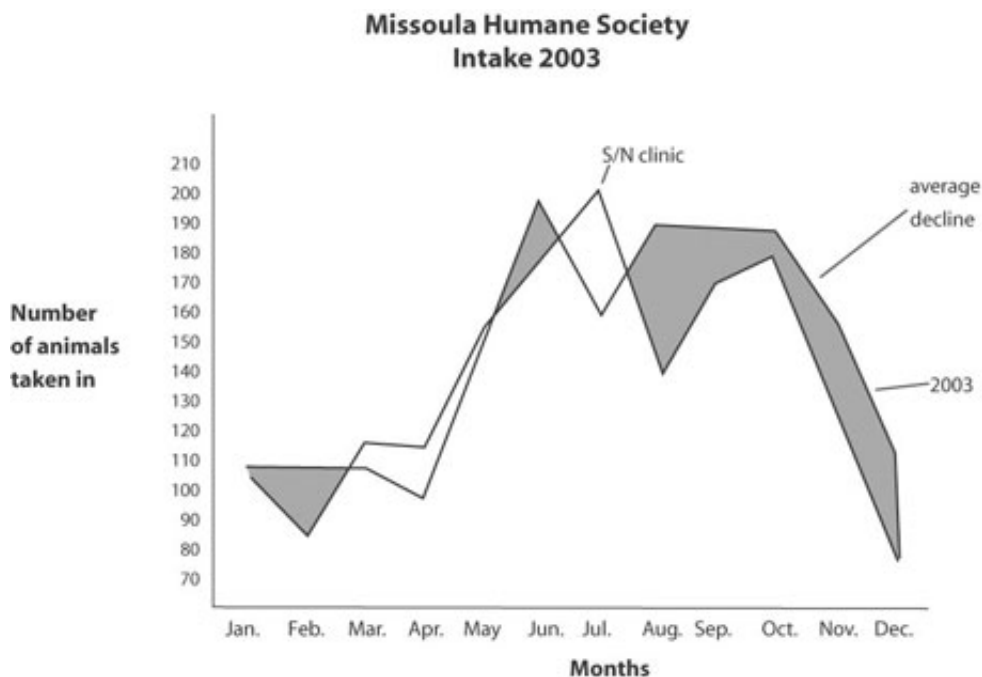


Fig. 1 Monthly Intake for 2003 and the average monthly intake for years 2000-2003 indicating seasonal and random variations. Shaded areas indicate drop in intake after S/N clinic.

The number of animals taken in each month varied from 76 to 200. Therefore, any comparisons of the impact of the spay/neuter clinic should take into account seasonal variations.

Fig 1 also shows a few spikes, as in July 2003, and troughs. These random variations can be dampened and a more reliable estimate developed by averaging data over a number of years whenever feasible. The large increase in animals taken in in July 2003 is largely due to a marked influx of kittens at that time.

II GENERAL STATISTICS

In the years 2000 to 2003, the average yearly number of cats and dogs taken into the Shelter was 1,697 animals. Cats taken in outnumbered dogs two to one (68% to 32%). Fig 2 shows a small but significant decrease in intake from the previous 3 years to the clinic year (a drop of 5 1/2%). The number of cats destroyed was more than four times that of dogs (82% to 18%).

Missoula Humane Society

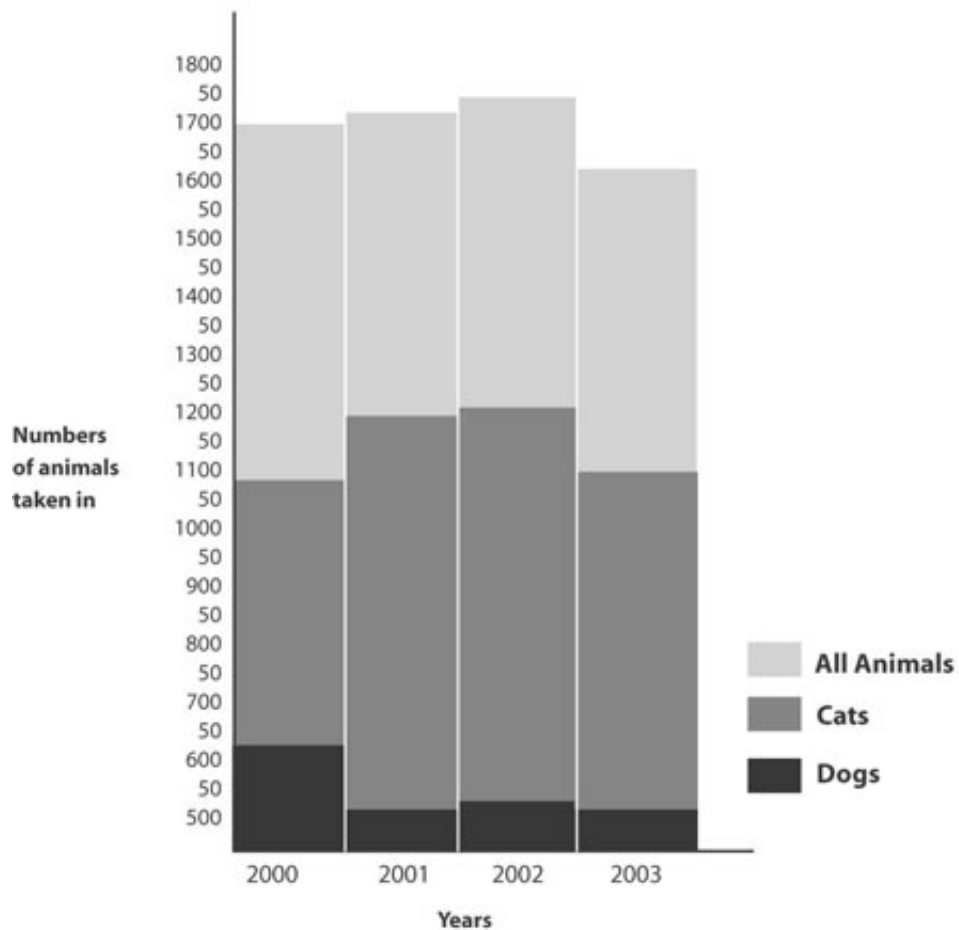


Fig.2 Yearly numbers of animals taken in from 2000 to 2003

Fig 4 shows a small but non-significant decrease in the number of animals destroyed. However, the number of cats destroyed dropped 20% from 2002 to 2003.

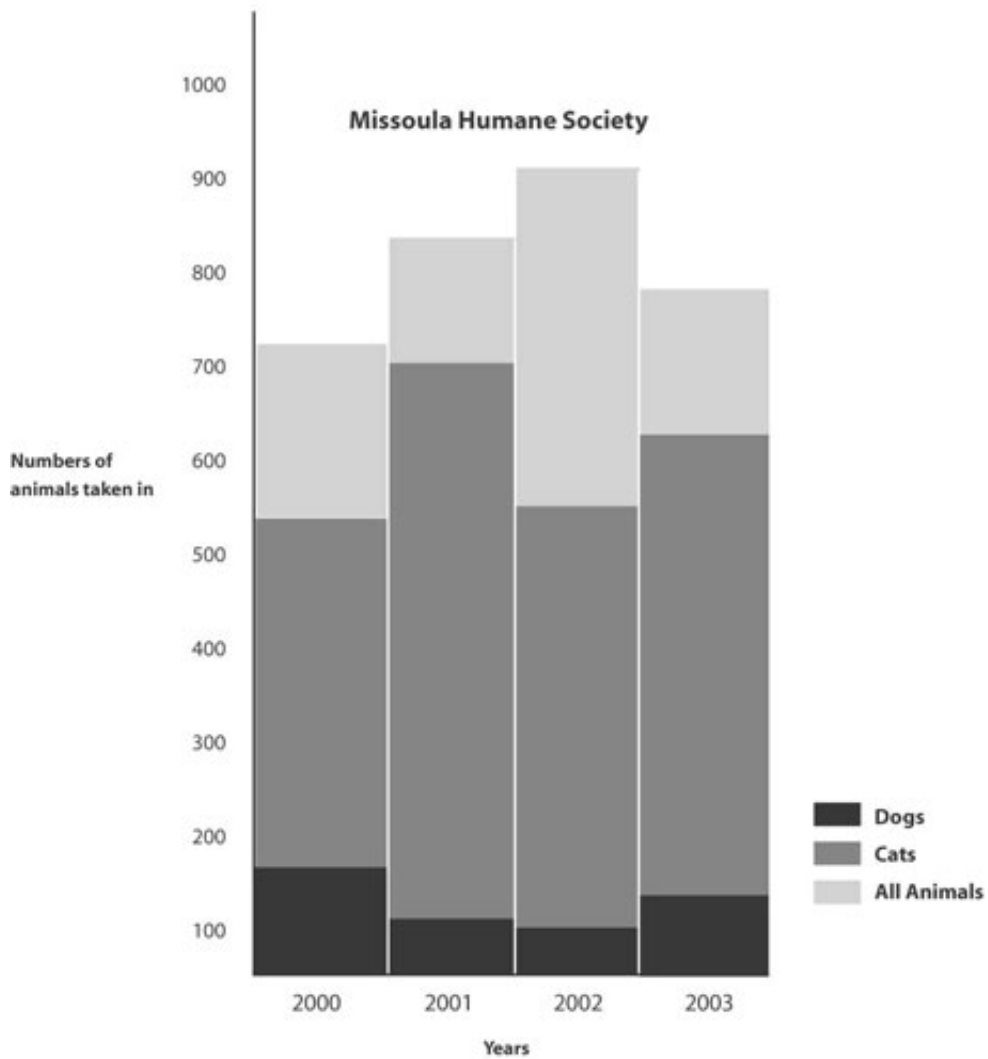


Fig.4 Numbers of animals destroyed each year 2002-2003

II IMPACT STATISTICS

B. Due to the marked increase of kittens in the month after the spay/neuter event, there is no initial decrease in the intake of animals. No decrease is shown until the second and third months after the clinic (fig. 3).

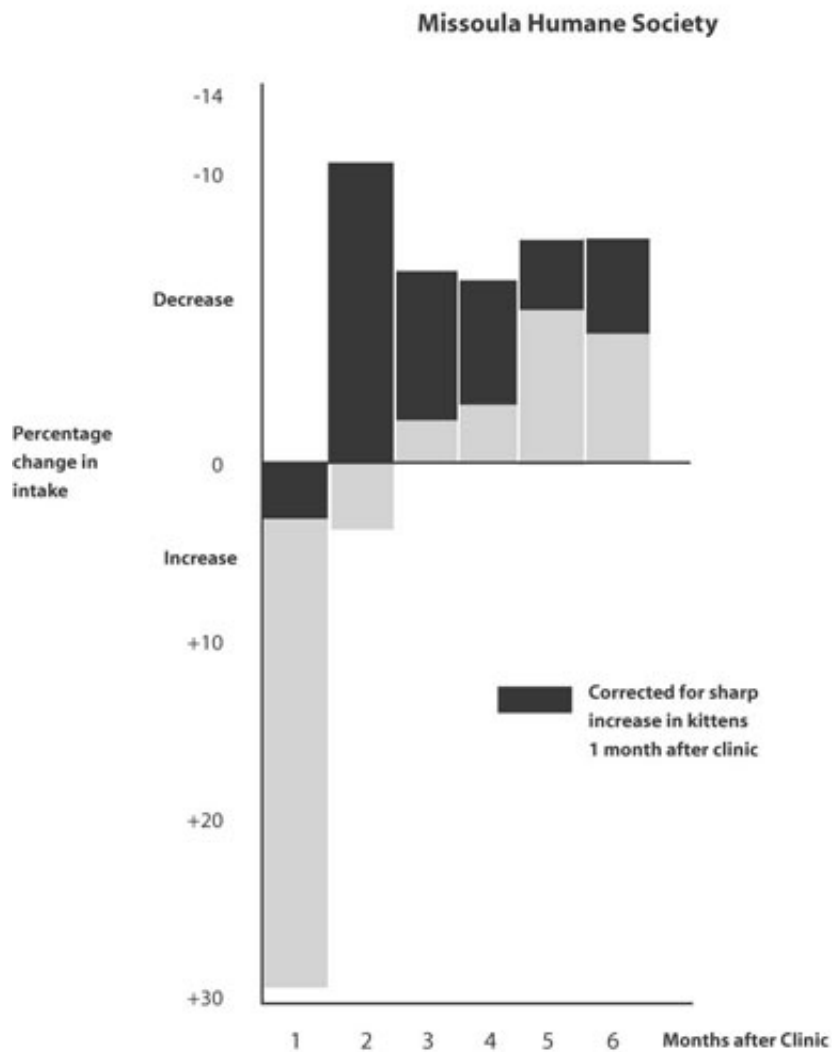


Fig. 3 Percentage change in intake corrected for seasonal and random variations for the 6 months period after the S/N event.

Fig 1 shows the sharp rise in intake in the month after the clinic and the small but steady drop in intake from the second to the sixth month after the clinic (shaded areas).

The drop in intake is also shown by the decrease in animals taken into the Shelter in the year 2003 (see fig 2). The drop was 5 1/2% compared to the 3 previous years and 7% compared to the previous year.*

B. Fig 3 shows a small decrease in the intake of all animals from the third to the sixth month after the clinic varying from 3 1/2 to 8 1/2%. However, if the sharp increase in intake in July is averaged over the next three months, the data shows a drop of 8 1/2% to 12 1/2% from the second to the sixth month after the spay/neuter clinic.

B. The number of animals destroyed varied considerably from 2000 to 2003 peaking in 2002 and dropping sharply in 2003 largely due to a 20% decrease in cats destroyed (fig 4).

B. As with intake, the number of animals destroyed showed a marked increase in the month after the spay/neuter event. A decrease was not registered until the third month. Fig 5 (below) shows the impact of the spay/neuter event on the number of animals destroyed which is similar to that seen in intake, varying

from a decrease of 3% after 3 months to 9% at six months. When a correction for the sharp increase in July is applied, the drop in animals destroyed dropped significantly from the second month after the clinic to the sixth month, varying from 11 1/2% to 18 1/2%.

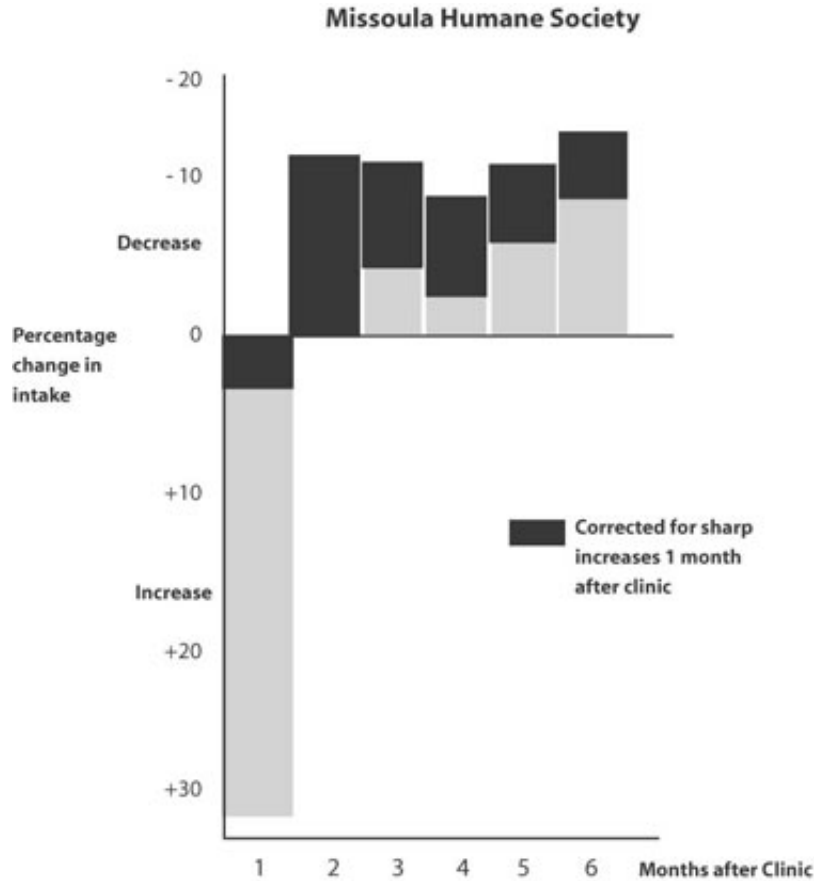


Fig. 5 Percentage change in intake corrected for seasonal and regional variations for the 6 month period after the S/N Event

B. Estimating the cost of taking in one animal at \$125 and the cost of destroying one animal as \$55 (based on Billing's Shelter data) and comparing the average intake and animals destroyed for 2000 to 2002 with the number taken in and destroyed for the six month period after the spay/neuter event, corrected for the one month influx of kittens, comes to an estimated savings of \$19,015 in six months.

B. In summary, the impact of the spay/neuter event in June, 2003 resulted in a small but significant decrease in the number of animals taken into the Missoula Humane Society Shelter and in the number of animals destroyed. The immediate impact was an increase in intake and in the number of animals destroyed during the first month after the clinic. The initial increase was followed by a small but significant decrease in intake and animals destroyed of 3 to 4% in the second and third months. This drop in intake and animals destroyed increased through 6 months after the spay/neuter event - a drop of 8% to 14% at 6 months. For the six month follow-up period, the cost savings was estimated to be \$19,000.

* P>.02 level of significance (Chi Square)

COMBINED MISSOULA CITY/COUNTY, MONTANA ANIMAL CONTROL SHELTER AND MISSOULA HUMANE SOCIETY SHELTER IMPACT STATISTICS, March 4, 2004 FOLLOWING ONE MONTANA SPAY/NEUTER TASK FORCE VISIT

I. GENERAL CONSIDERATIONS

I. In June of 2003, the Montana Spay/Neuter Task Force spayed or neutered 961 animals. The impact of that 5 day clinic on the Missoula Animal Control shelter and the Missoula Humane Society shelter is the subject of this report.

Most cats and dogs are taken into the shelter from the late spring to the early fall, especially from June to October. From time to time there seem to be sharp increases in animals taken in, especially kittens, and occasional drops, mainly in cats and kittens. For these reasons, any comparison of the impact of the Clinic must take into account seasonal and Random Variations in intake and in animals destroyed. Seasons or months should be compared to each other and yearly averages when available should be computed to increase the reliability of the data. In Missoula County, most of the major swings in the Shelters' statistics are due to the unexpected arrival or departure of kittens. Dogs represent a more consistent and reliable statistic.

II GENERAL STATISTICS

In the years 2000 to 2003, the average yearly number of cats and dogs taken into the two shelters was 2,934 (fig 1 below).

Combined Missoula Shelters

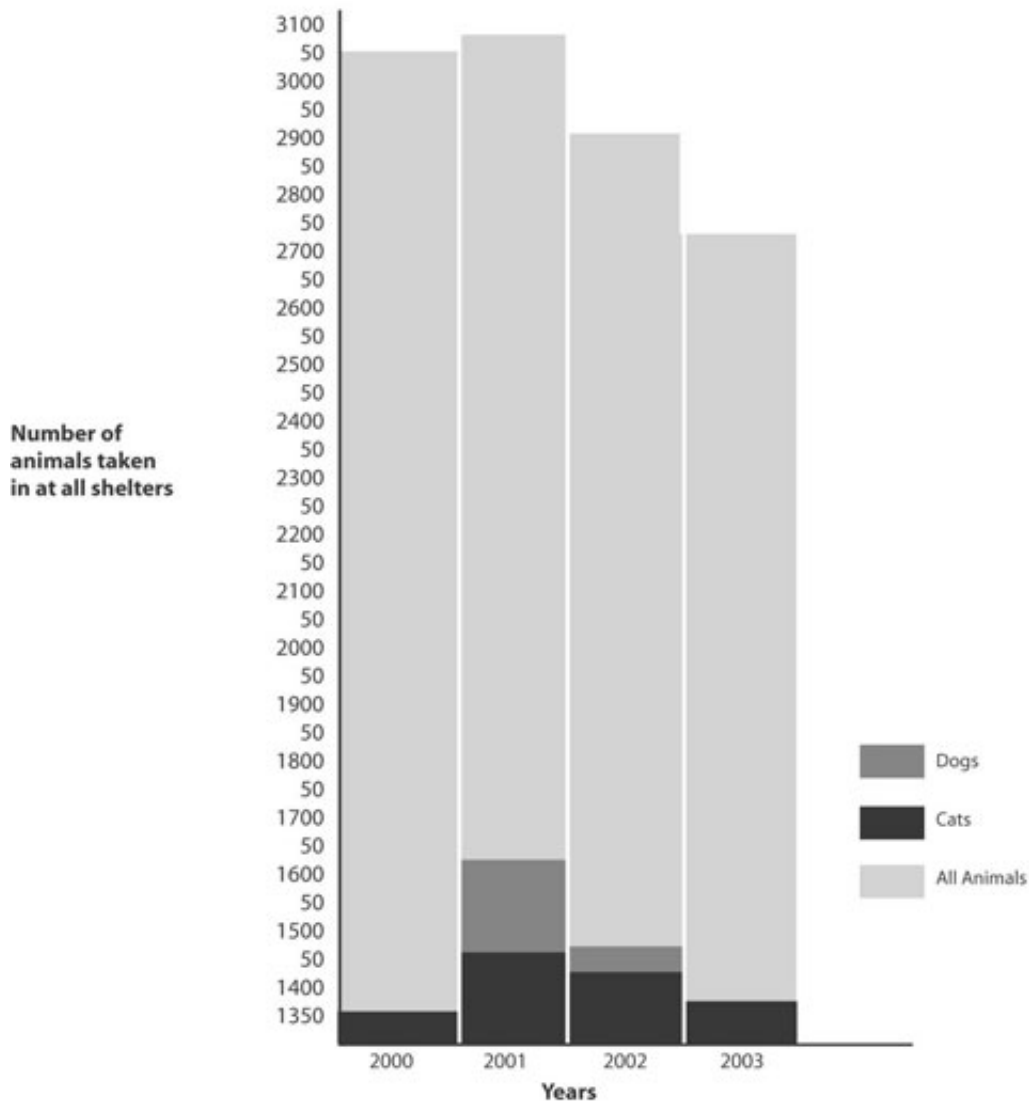


Fig. 1 Yearly number of cats and Dogs and all animals for the 4 year period 2000-2003 taken in all to all Missoula Shelters

Fifty two percent of all the animals taken in were dogs and 48% were cats. Fig 1 shows that the differences in intake between dogs and cats within Missoula City and County Shelters have steadily declined over the past four years so that they are almost identical in 2003. Whereas, more than 4 times as many dogs were taken in by the Animal Control Shelter, at the Humane Society Shelter, cats taken in outnumbered dogs by two to one. Of the 11,734 animals taken in by both shelters during the 4 year period (2000-2003), 2,858 or 33% were destroyed. On an average yearly basis the Animal Control Shelter took in 1,282 animals, mostly dogs, and destroyed 139 animals or 11%. The Humane Society Shelter took in a yearly average of 1,697 animals, mostly cats, and destroyed 824 or 49%. Eighty-two percent of the animals destroyed were cats.

II IMPACT STATISTICS

The impact of the spay/neuter event upon the Animal Control Shelter was quite impressive. The impact of the large, community spay/neuter event in June 2003 brought about a sharp decrease in all animals taken into the Shelter (a 30% to 40% drop) which was maintained for the six months following the clinic at a 20% to 30% decrease, whereas the impact upon the Missoula Humane Society Shelter produced a small but significant drop in intake. When the data of both shelters is combined and corrected for seasonal and random variations, a drop in intake of approximately 18% to 9% is found.* The decrease in intake is

maintained over the 6 month period (see fig 2). No significant difference was found at one month. The immediate impact was muted by a sharp influx of kittens immediately after the clinic. If we focus solely on dogs, the immediate impact is a drop of 21 during the first month after the spay/neuter event and varying between 29% and 19% decrease for the six month period following the clinic (fig 2).

The record-keeping for the number of animals destroyed is not as thorough as for intake; consequently, the data is not as reliable. There does seem to be a significant decrease in the number of animals destroyed (about 10% to 20%) over the six month period following the clinic.

We have no data to indicate the cost-effectiveness of the impact of the spay/neuter event. If we adopt the cost estimate of the Billings Shelter, we can roughly approximate the cost of impounding and destroying cats and dogs. The estimate for the Missoula Animal Control Shelter is approximately \$23,000 and for the Missoula Humane Society \$19,000. Thus, we can roughly approximate the 6 month impact of the large, community spay/neuter event to be a savings of \$42,000.

* $p > .005$ level of significance (Chi Square) for all values.

**BILLINGS, MONTANA ANIMAL SHELTER IMPACT STATISTICS
FOLLOWING ONE MONTANA SPAY/NEUTER TASK FORCE VISIT and ONE PHASE II
EVENT
February 12, 2004**

I. GENERAL CONSIDERATIONS:

This is an update of previously reported statistics. We now have follow-up data for one year after the large, community spay/neuter event, Task Force Phase I on August 26-27, 2002. In addition, we have preliminary data on a smaller spay/neuter clinic (Phase II) held on October 1, 2003. In the larger spay/neuter event, 617 animals (180 dogs and 437 cats) were sterilized. In the Phase II clinic, 173 animals were spayed or neutered.

In the six years during which statistics were kept, the largest number of animals taken to the shelter were in the months of May through October. In the colder months, November through April, the number of animals received at the Shelter appreciatively declined (Fig. 2). This was also true for the number of animals destroyed. The largest number destroyed was from June through October (See fig. 5). The average number of animals received each month varied from 272 to 612. This is generally true throughout Montana. Therefore, any comparison of the impact of spay/neuter clinics should take into account seasonal variations.

Closer examination of figures 2 and 5 shows a few unexplained or random spikes and troughs. By averaging data over a number of years, these random variations can be dampened and a more reliable estimate developed. An examination of figures 1 shows a fairly consistent intake from 1997 through 2001. However, in the year before the spay/neuter event (September 2001 to August 2002) there is a sharp decline in intake (fig 1). These unexplained happenings will have a tendency to reduce the significance of the impact, consequently, our analysis will take into account both seasonal and random variations in the data.

II GENERAL STATISTICS

In the 5 years before the first spay/neuter event, the average yearly intake of dogs and cats was 5,287 animals (see fig. 1) Dogs received outnumbered cats by 16% (58% to 42%) over this period until the year 2003 when an equal number of dogs and cats were taken in. The average number of animals destroyed each year was 2,408 or 46% of all the animals taken in (fig. 4). Whereas 16% more dogs were received each year at the Shelter, 8% more cats were destroyed (54% to 46%).

I. IMPACT STATISTICS

A. The immediate impact of the large, community spay/neuter event (1 month before vs. 1 month after) was a decrease of 24% in the number of animals taken in. Corrected for seasonal and random variation, the decrease in intake one month after the spay/neuter event was 34%.

B. The impact 3 months after the spay/neuter event was a drop of 16 1/2 % in intake. After 6 months the decrease was 19%; after 9 months the drop was 17% and after 12 months the drop was 14 1/2 % (see fig 3a).*

C. Although we have records only for 3 months after the smaller Phase II clinic and any change is in addition to the change in the previous larger spay/neuter event one year earlier, there is a significant drop in intake. One month after the clinic the decrease in intake is 16% Corrected for seasonal and random variation, the decrease in intake at 1, 2 and 3 months after the Phase II spay/neuter clinic is 14%, 19% and 16 1/2 % respectfully (see fig. 3b)

D. The immediate impact of the large spay/neuter event on the number of animals destroyed was even more pronounced. At one month, the drop was 49%, and corrected for seasonal and random variation the drop was 60%.

E. The impact upon the number of animals destroyed after 3, 6, 9 and 12 months were almost identical with the changes in animals taken in. At 3 months the decrease was 15 1/2 %, at 6 months 19%, at 9 months 17%, and at 12 months the decrease was 13 1/2% (see fig. 6a).

F. The impact of the Phase II Spay/Neuter Clinic was not as pronounced. The immediate impact was a drop of 7 1/2% which approaches but was not significant. Corrected for seasonal and random variation, the change in the number of animals destroyed 1 month, 2 months and 3 months after the clinic reaches significance only for the 3rd month. At 1 month, there was a 3 1/2% increase; at 2 months there was a 7 1/2% decrease($P > .075$), and at 3 months the decrease was 10%(see fig 6b).

G. It has been estimated that the cost of taking in one animal is \$125 and the cost of destroying one animal is \$55. By taking the average yearly number of animals received and those destroyed before the spay/neuter event and comparing that with the year after the event, there was a drop in intake of 764 animals and a drop of 331 animals destroyed. Thus, the cost-savings or cost effectiveness of the large, community spay/neuter event was approximately \$113, 705.

H. From 1997 through 2002, spay/neuter certificates were dispensed. We roughly tested whether there was any relationship between the number of certificates redeemed each year and the number of animals taken in or destroyed. Utilizing a Spearman Rank Order Correlation, a slight positive but not significant relationship was found between number of animals taken in and certificates redeemed. However, a slight negative but non-significant relationship was found between certificates and the number of animals destroyed. Simple sign tests also found no significance.

I. Figures 1 and 4 show a steep unexplained decline in both intake and animals destroyed in the year before the first spay/neuter event. If we compare only that year to the year after the spay/neuter event, we see a reduction in impact of about one third (see fig. 3c). However, the impact is still quite significant ($P < .001$).

J. In summary, the impact of the large, community spay/neuter event brought about a significant reduction in intake and animals destroyed at the Billings Shelter and an estimated cost savings of over \$100,000 in the year after the spay/neuter event. This decrease was maintained at a significant level for 12 months. A smaller spay/neuter clinic one year later further reduced the number of animals taken in and, somewhat less, the number of animals destroyed over a 3 month follow-up period.

* All values are significant at the .001 level of probability (Chi Square One Sample Test)

FORT PECK - WOLF POINT MONTANA DOG POUND IMPACT STATISTICS FOLLOWING FOUR MONTANA SPAY/NEUTER TASK FORCE VISITS May 31, 2004

I. GENERAL CONSIDERATIONS

At Fort Peck the only statistics gathered were for dogs impounded at the only facility for animals in the area, the Wolf Point Dog Pound. Statistics were kept monthly from January 1988 through December 2003. Most animals were either impounded or destroyed in late winter or in late summer, although there was considerable variability. Four large community spay/neuter events were held from 1999 to 2002, the first three in July and the fourth in April. In 1999, during a 4 day clinic, 723 animals were sterilized of which 348 were dogs. In 2000, a second clinic was held in 4 days and 587 animals were sterilized of which 215 were dogs. Again, in the summer of 2001 a third 4 day clinic was held and 345 animals were sterilized of which 185 were dogs. The fourth and last clinic was held in April of 2002 for 2 days and 205 animals were sterilized including 86 dogs.

II IMPACT STATISTICS

A. The impact of each of the four spay/neuter events and of all four events combined was quite significant. The results of the first clinic in 1999 brought about a sharp drop in dogs impounded and destroyed (see figure 2).

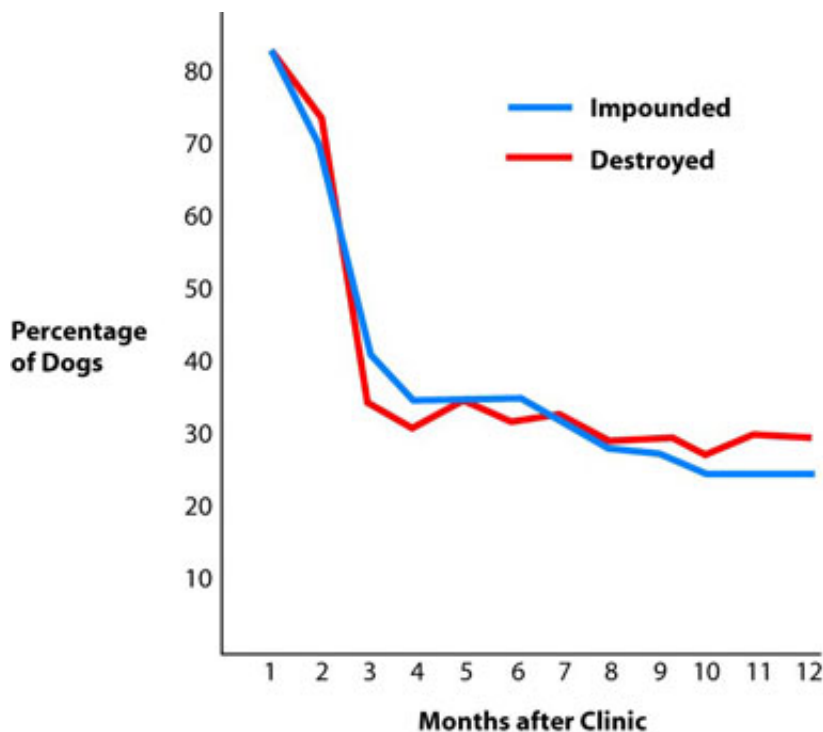


Fig.2 Percentage drop in Dogs impounded and in dogs destroyed after the 1st S/N in 1999 (Wolf Point Pound)

The immediate impact was a drop in intake of 52% comparing the month before the clinic with the month after. Averaging the first two months before with the first two months after the clinic (a more reliable estimate), a drop of 30% was found which was significant at the .01 level. Correcting for seasonal variation

and averaging the first two months after the clinic, the drop in the number of animals impounded was 70%.

B. The impact of the first spay/neuter event in 1999 brought about a significant drop in the number of dogs impounded (see figure 2). After 1 month, a drop of 81% was observed; after 2 months, the drop was 70%; at 3 months, the drop was 41%; at 6 months the drop was 26%; at 9 months, the drop was 28% and after 12 months, the drop in the number of dogs impounded was 25% less than the 12 months before the clinic, averaging 47% over 12 months. After the first spay/neuter event, the results are influenced in part by the earlier clinics and, as such, the impact should be less than it would be otherwise. However, subsequent clinics showed as dramatic or even more dramatic decreases in the number of animals impounded (see figure 3).

Number of Animals Destroyed and Impounded following Task Force Visits

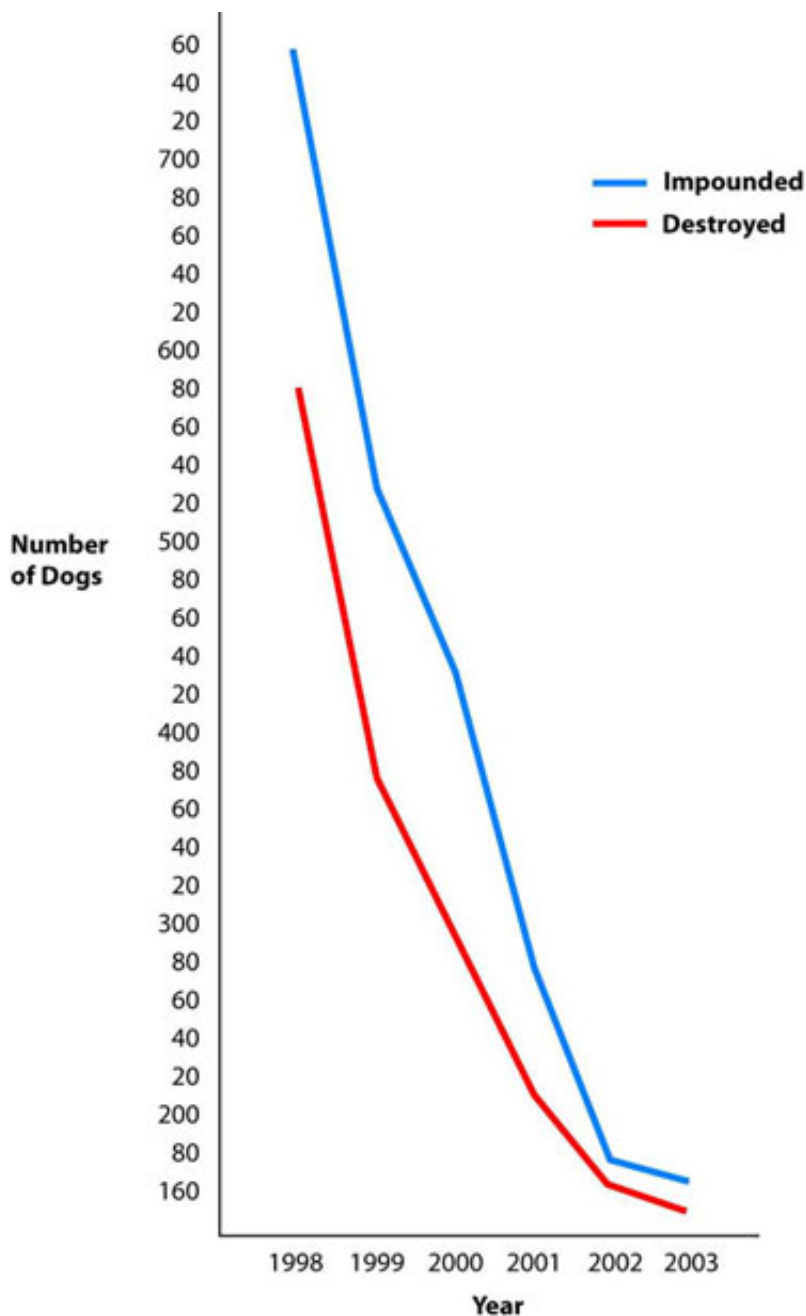


Fig.1 Yearly Change in dogs impounded and destroyed for Wolf Point Dog Pound- MSNTF

After the 2nd spay/neuter event in 2000, the drop in intake varied from 51% after one month to a drop of 41% after 6 and 12 months, averaging 40% over the 12 months. After the 3rd spay/neuter event in 2001, the drop in the number of dogs impounded averaged a decrease of 54% over the 12 months after the clinic, varying from 45% after 1 month to 57% after 12 months. After the 4th spay/neuter event in 2002, due to it being held in April rather than in July as were the 3 previous clinics, we can gather only meaningful data for the first 3 months after the spay/neuter event. The impact after the 4th clinic also can be shown in figure 1. The drop in dogs impounded decreased by 76% from 1998, before any clinic, to 2002, the last clinic.

In the first month after the 4th spay/neuter event, the drop in the number of dogs impounded was 66%. At two and three months after, the drop was 59% and 54% respectfully. The 3 month average decrease was 60%. It can be seen from Figure 3 that the latter 3 clinics sustained and even increased the impact of the clinics over time.*1

C. The most impressive finding is the drop in the number of animals impounded and destroyed at the pound from 1998 to 2003 (see figure 1). In 1998, 742 dogs were impounded and in 2003 only 169 were impounded, a drop of 77%. Each year showed a significant drop (19% to 36%) except between 2002 and 2003 when no clinic was held. During the same period (1998-2003), the drop in dogs destroyed was 75%. As with intake, the numbers dropped significantly (23% 50 26%) each year except for the year no clinic was held. In the year following the last clinic for both the number of dogs impounded and destroyed, the sharp drop in intake and in euthanasia shows signs of leveling off. In 1998, 69% of the animals impounded were destroyed as compared to 89% in 2003.*2

D. The data for the number of dogs destroyed was very similar to those for the number of dogs impounded. The immediate impact of the first spay/neuter event in 1999 was quite significant. The average of the 2 months after compared to the 2 months before the clinic was a drop of 48%, corrected for seasonal and random variation the drop equaled 73%. Corrected for seasonal and random variations, the results of the first clinic showed a drop of 82% after the 1st month, and 30% after 12 months - an average drop of 42% (see figure 2). After the 2nd spay/neuter event, the drop in dogs destroyed after the 1st month was 47% and after 12 months, 37%, an average drop of 38% (see figure 4). After the 3rd spay/neuter event, the average decrease in dogs destroyed was 46%. After the 1st month, the drop in dogs destroyed was 43% and after the 12 months, 47%. After the 4th spay/neuter event, after 1 month, the drop in dogs destroyed is 57%; after 2 months, 56%, and after 3 months, 49%.

E. The impact of 4 successive spay/neuter events year after year on the impoundment and destruction of dogs at the Wolf Point Pound was quite impressive. From 1998 to 2003, the number of dogs impounded decreased by 573 animals, a drop of 77%. The number of dogs destroyed decreased by 364 animals, a drop of 71%. Based on estimates of handling and destroying animals from Animal Control shelters, this would result in a savings of over \$90,000 to the Wolf Point Pound.

F. A report from the Animal Control Officer at Fort Peck indicates that in his jurisdiction the number of dog bites each month has dropped during the period from an average of 15 bites per month to only 3 (a drop of 80%).

G. In Summary: the impact of a number of large community-based spay/neuter events on a small agricultural community resulted in a steady and significant decrease in the number of dogs impounded and in the number destroyed. As the number of clinics increased, the effect became more pronounced and was sustained longer and longer. Not only was there considerable cost-savings in the handling and destruction of animals, but, also, a social climate of greater safety and care resulted.

* 1 All changes are significant at the .001 level of significance or greater (Chi Square)

*2 As Merritt Clifton, Editor of ANIMAL PEOPLE, suggests: if a community gets pet overpopulation under control, then most of the animals entering animal control shelters will not be those that are adoptable or rehabilitatable, but rather the injured, the incurably ill and those that are very aggressive. Therefore, the destroy percentage rate will go up in relation to intake as the intake rate markedly diminishes.

LIVINGSTON/PARK COUNTY, MONTANA - STAFFORD SHELTER IMPACT STATISTICS FOLLOWING ONE MONTANA SPAY/NEUTER TASK FORCE VISIT May 10, 2004

I. GENERAL CONSIDERATIONS:

A large community pet care/spay/neuter event was held September 12-14, 2003 at the Park County Fairgrounds. One hundred seventy-eight dogs and 396 cats were sterilized. A total of 574 animals were spayed or neutered. Most cats and dogs were taken into the local Stafford Shelter from May to October each year. From time to time, there were sharp increases in animals taken in when many cats from one source (hoarder cases) were delivered to the Shelter, and some variations in intake were noted from month to month (see figure 1).

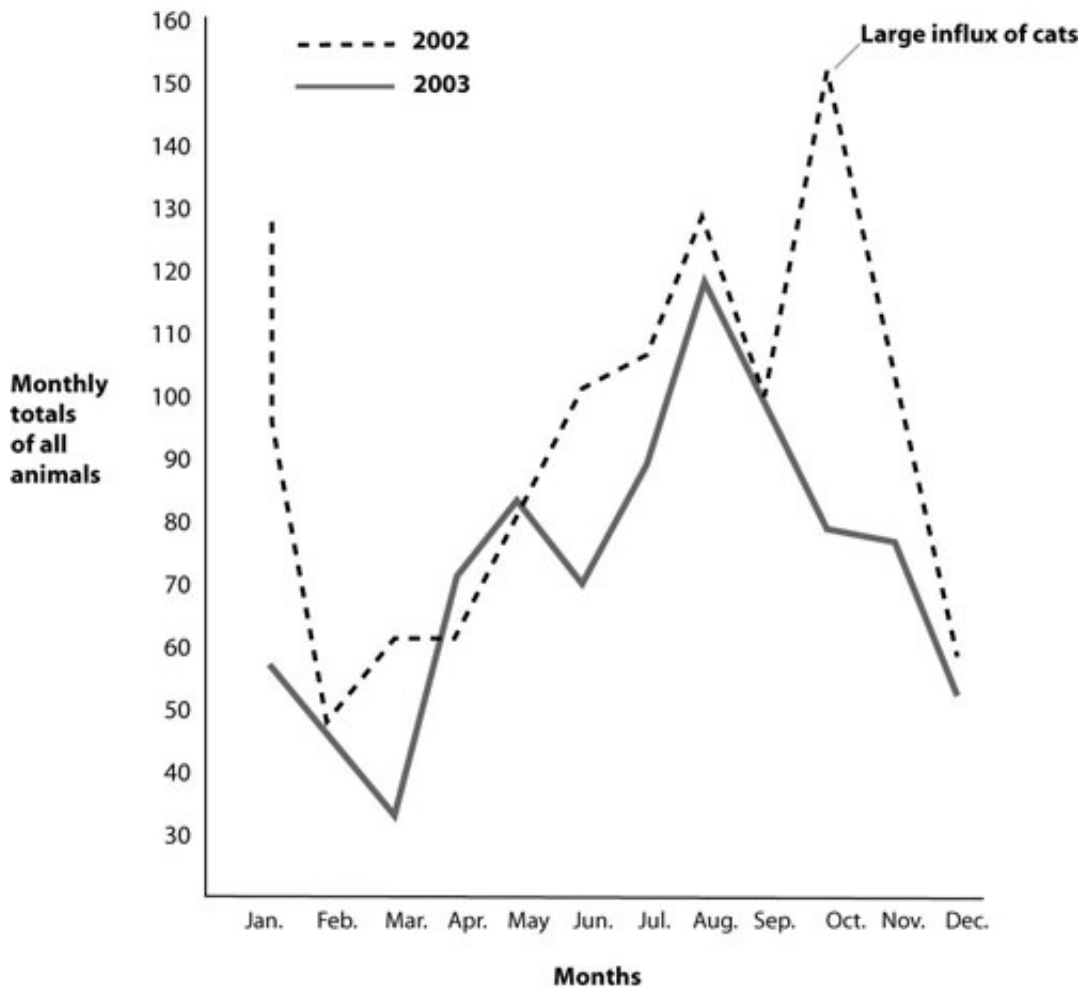


Fig. 1 Monthly changes showing seasonal and number variations for 2002 and 2003 in animals taken in Livingston 2003 Montana Spay-Neuter Task Force

For these reasons, any comparisons of the impact of the clinic should take into account seasonal variations in both animals taken in or destroyed, random variations in monthly totals, and a correction for the arrival of an especially large number of cats in October 2002. The Shelter began taking in animals in early 1999. Our

analysis is based on monthly records from January, 2000 to March of 2004.

II. GENERAL CONSIDERATIONS

In the years 2000 to 2003, the average number of cats and dogs taken into the Stafford Shelter was 993 animals. Fifty-two percent of the animals taken in were cats. In 2003, a drop of 10% in animals taken in was observed when compared to the 3 previous years. A drop of 13% was observed between 2002 and 2003. These differences were significant at beyond the .001 level. Whereas the intake of dogs and cats were similar, the number of cats destroyed outnumbered dogs by 4 to 1 (79 to 21). Of the 3,972 animals taken into the Shelter from January 2000 to December 2003, 710 were destroyed (18%). In 2003, a 15% drop in the number of animals destroyed was observed compared to the three previous years. However, the number of animals destroyed varied considerably from month to month and year to year.

III. IMPACT STATISTICS

A. The impact of the spay/neuter event on the number of animals taken in and destroyed at the Shelter was quite significant. In comparing the immediate impact of the animals taken in one month and two months (combined) after the spay/neuter event compared to one month and two months before the event, a drop of 34% and 25% respectively was observed. ($P > .001$ in both instances).

B. Correcting for both seasonal and random variations in intake, a significant decrease was found over the six month period after the event. If we compare only the year immediately before the event (2002) with the 6 months after the event, we see a marked decrease in intake after one month of 48% and an average drop of 33% from 2 to 6 months. However, if we compare the average of the 3 years before the event with the 6 months after the event, we find the drop in intake, though impressive, is less. After one month, the drop is 37% and from the 2nd to the 6th month an average drop of 23% was observed. Some of the effect is due to the large influx of cats in October 2002. In that month about 110 cats were brought into the shelter from the same source (a court case) resulting in a larger than typical drop in intake for succeeding years. Therefore, by averaging the number of cats for the other 11 months in 2002, we arrive at a conservative, lower and a more reliable estimate of the impact upon the intake of all animals. Corrected for seasonal and random variations and an influx of cats from one source, the decrease in intake is still quite substantial (see figure 2).

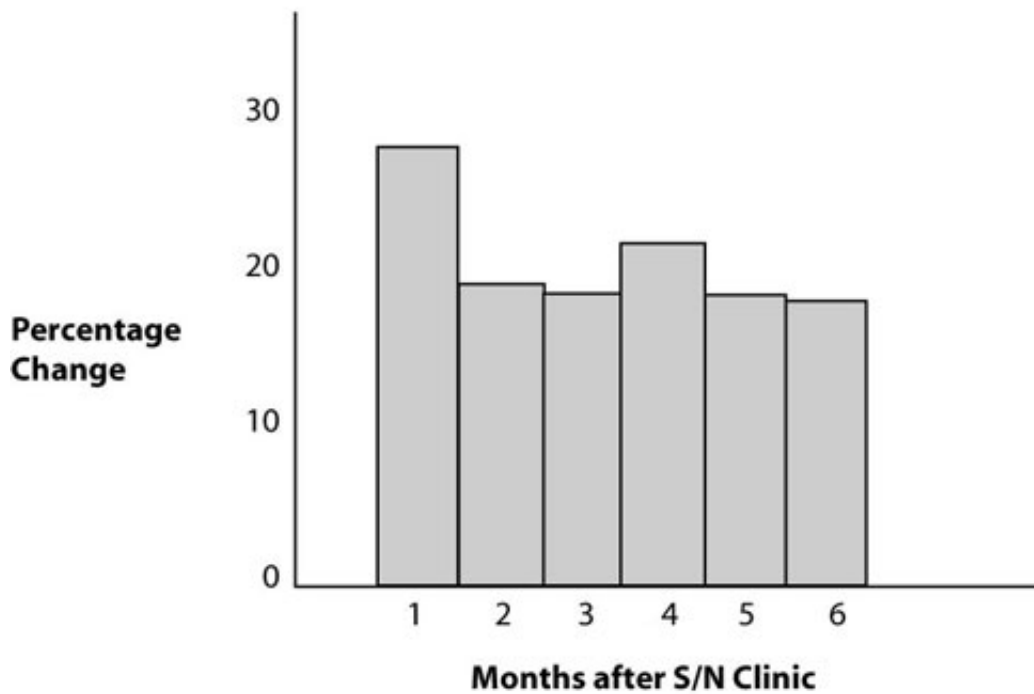


Fig.2 Drop in animals taken for the 6 months following the S/N event Livingston 2003. Montana Spay /Neuter Task Force.

At one month, the drop is 27.6%; at 2 months, 19%; at 3 months, 18%; at 4 months 21%, at 5 months and at 6 months after the event, the drop is 18%. ($P > .001$ and $P > .01$ in all cases)

C. The number of animals destroyed is quite variable and much smaller in total. Correcting for seasonal and random variations only (cats destroyed varied widely from month to month), the number of animals destroyed shows no drop for the first month. At 2 months, the drop is 21%; at 3 months, 19%; at 4 months, 13%; at 5 months, 24%, and at 6 months after the event the drop is 21%. None of the changes (decreases) for the months one to four reached significance ($P > .05$) due to a low number of cases and large variability. At both 5 months and 6 months after the event, the number of animals destroyed reached significance ($P > .02$). (See figure 3)

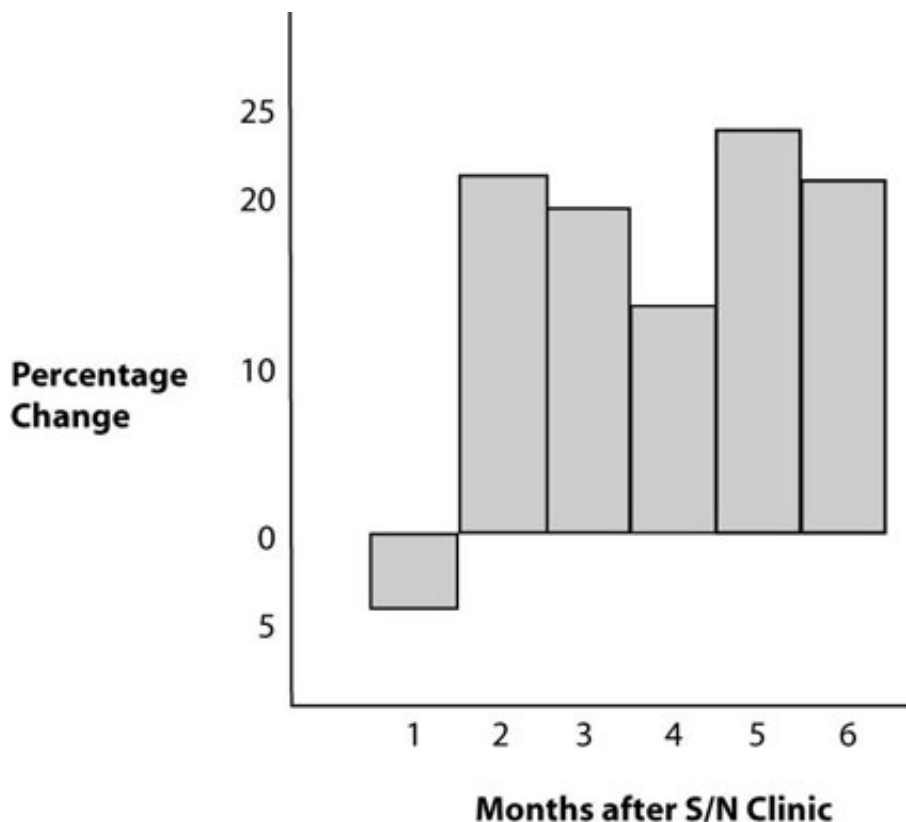


Fig. 3 Months after S/N Event Drop/Change in animals destroyed for the 6 months following the S/N event, Livingston 2003 Montana Spay-Neuter Task Force

D. There are no estimates of the costs of handling and destroying animals at the Park County Shelter. However, the costs of handling one animal is estimated to be \$125 per animal at the Billings Animal Shelter and the cost of destroying one animal was \$55 per animal. For the 6 month period after the spay/neuter event, compared to the averages of the 6 month period from 2000, 2001, and 2002, there was a drop in intake of 80 animals and a drop in animals destroyed of 22 animals. This would result in an estimated cost saving of \$11,210 for 6 months.

E. In summary, the impact of the large, community spay/neuter event in September 2003 brought about a significant decrease in the number of animals taken into the Shelter. The immediate impact was a 34% to a 25% drop in intake. When corrected for attenuating circumstances, after one month the decrease in intake was 27%, and over the remaining 6 month period after the event, the drop in intake averaged 19%. At six months the drop was 18%. Due to the small number of animals destroyed and the variation each month, the impact on the number of animals destroyed is not reliable. However, the decrease in animals destroyed follows a similar pattern as animals taken in, dropping for the 6 month period after the event on the average of 19% to 20%. At 6 months, there was a significant drop in the number of animals destroyed of 21%. An estimate of the cost-savings for the 6 months period after the event was approximately \$11,000.

**BUTTE SILVER BOW ANIMAL SHELTER IMPACT STATISTICS
FOLLOWING MONTANA SPAY/NEUTER TASK FORCE VISIT AUGUST 2-4, 2004, and ONE
PHASE II EVENT
May 31, 2005**

In 2004, the Animal Shelter for Butte Silver Bow changed. The way statistics were kept also changed. Prior to 2004, we were unable to record the number of animals impounded. However, the number of animals handled was recorded for the years 2000 to 2003. The number of animals destroyed were recorded both

before and after the change of shelter. The large differences in the animals destroyed (put-to-sleep) in 2004 as compared to the previous years (2000 - 2003) by a different shelter indicates a markedly different policy toward handling animals. Consequently, the impact statistics are quite limited and not very reliable.

In general, it seems that in the year 2004 the Pintler Pets Animal Shelter and Butte Silver Bow Animal Control handled more animals than did the Chelsea Bailey Animal Shelter plus Butte Silver Bow Animal Control in each of the four previous years (almost doubled the number). Most of the animals handled before 2004 were in the number of animals destroyed.

In 2004 the number of animals destroyed was 75 dogs and 15 cats, 90 animals total. The number of animals destroyed in each of the previous four years varied from 876 in 2000 to 1,037 in 2003, averaging 948 1/2 animals destroyed each year. The Pintler Pets destroyed less than 10 percent of the total number of animals destroyed by the Chelsea Bailey Shelter.

On August 2, 2004 to August 4, 2004, the Montana Spay/Neuter Task Force during the Butte Silver Bow Pet Care Event sterilized 717 dogs and cats in Butte and 106 dogs and cats one month later during a Phase II Task Force event. No intake statistics are provided and we cannot account for seasonal variations in intake or for the marked variation in statistical data. If we look at the number of animals impounded by the Butte Silver Bow Animal Control for 2004 (the only year reported - Chelsea Bailey did not provide 2004 statistics from its shelter), there is no consistency in the data. Differences before and after the two clinics show no impact for the two Task Force clinics. Canines show a drop in the number impounded after the main Task Force clinic, but felines show the reverse trend. However, the inconsistency in how the data was recorded and the differences in the system of recording make it impossible to assess the impact of the Task Force clinics.

The data for the number of animals destroyed is more reliable. However, the small number of animals destroyed in 2004 compared to the large number destroyed before 2003 makes it hard to get significant and reliable results. Both one and two months after the first Task Force clinic, there was a significant drop in the number of animals destroyed.

It can be clearly seen that the change in the animal shelters contracting with Butte Silver Bow produces changes in policy and in how statistics are kept. One of the most important measures of effectiveness both in terms of cost effectiveness and in the impact of any major events, is the number of animals taken into the shelter and the number of animals impounded by animal control.

What has happened in Butte Silver Bow is a change in approach to the euthanasia of cats and dogs, resulting in a marked decrease in animals destroyed. For the comparison of data over time, a more uniform and meaningful system of data collection is needed.

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