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# IMPACTS OF A DAILY TRAP CHECK LAW ON THE CALIFORNIA ADC PROGRAM

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**ABSTRACT:** Effective January 1, 1990 California law required that all steel-jawed leghold traps be inspected at least daily and all animals in such traps be removed. The inspection and removal could be performed by the individual who set the traps, the landowner, or an agent of either. Prior to the passage of this law, California Animal Damage Control (ADC) personnel were exempt from Department of Fish and Game trap checking regulations. The data suggest that a decrease in trap use occurred after the implementation of the daily trap check. Where the program could effectively substitute other control tools or methods for the leghold trap, impacts to cooperators serviced and coyotes taken per unit of effort were minimal.

**KEY WORDS:** efficacy, leghold traps, vertebrate pest control

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## INTRODUCTION

Public concerns about animal welfare, animal rights, and wildlife as a public resource have increased scrutiny of the methods and strategies used by the Federal ADC program to control wildlife damage. Various attempts have been made, in a number of states in recent years, to ban leghold traps, or require modifications to the basic trap or the way it is used, in order to make the device more "humane." The amount of time that a captured animal spends in a trap, or other type of restraining device, is considered a humaneness issue by some animal welfare organizations. Some members of the public feel traps and other restraining devices should be checked twice a day while others feel twice a week is adequate. What is economically feasible may differ from the public's perception of "humane."

The mission of the ADC program is to provide Federal leadership in resolving problems caused by wildlife. The ADC program strives to develop and use wildlife damage management strategies that are biologically, environmentally, and socially sound. In many cases the ADC program is faced with difficult decisions related to delivering a cost-effective program versus adopting control tools or strategies considered to be more humane, but more expensive to implement. Program funding frequently influences the outcome of these decisions.

On March 1, 1989 California Senator Milton Marks introduced Senate Bill 756 in the Legislature. As originally written the bill would have prohibited the use of all steel-jawed leghold traps. However, after hearings and numerous amendments in both the Senate and Assembly, the final bill allowed for the use of steel-jawed leghold traps with a specific provision that required daily inspection. Allowances were made for property owners or their agents to assist in the checking of traps placed by government personnel. On September 6, 1989 SB-756 was passed by the Legislature, on September 27, 1989 it was signed into law. This statute became effective January 1, 1990.

Another major change in California trapping regulations occurred in the 1991-1992 trapping year. To

reduce potentially adverse impacts on endangered species, the Department of Fish and Game modified its trapping regulations to require that commercial and recreational trappers use padded-jaw traps statewide. The new regulations also prohibited the use of conibear type traps, snares, and deadfall traps in the ranges of the San Joaquin kit fox (*Vulpes macrotis*) and the Sierra Nevada red fox (*Vulpes vulpes*). In 1992-93, the regulations were further modified to allow the use of un-padded leghold traps, for certain aquatic sets, outside the fox protection zones (Figure 1). Although it was legally exempt from these



Figure 1. Fox protection zones.

restrictions, the California ADC program implemented the use of padded-jaw traps in the ranges of both fox species, on October 1, 1991. EPA use restrictions, and California ADC policy, already in place at the time, prohibited ADC program personnel from using M-44's or neck snares in the range of the San Joaquin kit fox. Impacts of these regulation changes are not considered in this analysis with the exception of a discussion on how the program could not adapt other control methods in the fox protection zones.

The purpose of this paper is to evaluate some of the impacts of SB-756 on the California ADC program, specifically impacts to the program's ability to mitigate problems associated with coyote depredation on livestock.

## METHODS

Data from the Management Information System (MIS) were used to analyze the impact of SB-756 on the California ADC program (Blaney 1990). The MIS system has been functional in California since August 1980 and stores a variety of information on program activities such as number of properties worked, time spent on these properties, status of these lands (Federal, State, private, etc.), confirmed and reported damage, control tools placed or removed, numbers and species of animals taken, and control recommendations made to landowners by ADC personnel.

In preparing this paper, data were selected from counties in which ADC historically has done the most coyote damage control work. Specific data sets examined coyotes taken by method, the number of rural cooperators serviced, the staff time spent on each of these cooperators, and numbers of coyotes taken per staff day or month.

### Impacts on Coyotes Taken by Method

Two sets of data were analyzed to evaluate the impact of SB-756 on the number of coyotes taken by method. One set consisted of statewide data on annual coyote take by method for fiscal years 1985 to 1995. The other set, a subset of the statewide data, consisted of information from 25 rural counties where ADC funding and manpower were relatively constant during the years analyzed. Data from FY 1990 were not evaluated as that was the year of transition to the daily trap check which began one-fourth of the way through the fiscal year.

### Program Delivery

A theoretical analysis was performed on the impact to the number of rural cooperators that could be provided trapping service and the number of trap service nights<sup>1</sup> that could be provided, in changing from a twice a week check to a daily check. Three was arbitrarily selected, for the purpose of this analysis, as the average number of rural properties a single ADC specialist could service with leghold traps in one day.

An actual analysis of the impact of SB-756 on the number of rural cooperators provided service, and the average number of staff days provided to each, was done

using a separate subset of 20 counties. Fiscal years 1988, 1989, 1991, 1992 and 1993 were evaluated. These 20 counties were selected on the basis of program type (emphasis on coyote control) and the continuity of the program during the period of time analyzed.

### Coyotes Taken Per Staff Day or Staff Month

Two subsets of counties were analyzed to see if there was any difference in the number of coyotes taken per unit of effort before and after SB-756. One subset consisted of 20 counties where the time evaluated was that which was spent on properties with cattle or sheep listed as a resource. The other subset consisted of 25 counties where the majority of time recorded was spent protecting livestock, primarily sheep and cattle, from coyote depredation.

## RESULTS

### Coyotes Taken by Method

Table 1 shows the take of coyotes in the state from fiscal years 1985 to 1995 by each of six methods: M-44's, leghold traps, neck snares, denning/dogs, calling/shooting, and aerial hunting. During the five years preceding passage of SB-756, the California ADC program averaged taking 4,009, or 51% of its coyotes, per year, in leghold traps. During the five years following passage, the average take was 1,923, or 30%, per year. Thus, the average annual coyote take in leghold traps decreased 52%. Average statewide coyote take per year by all methods was 7,890 during the five years preceding passage of SB-756 and 6,495 during the five years following.

A further analysis was conducted on a subset of 25 counties considered to be rural. This analysis considered the two years preceding the passage of SB-756 and the three years following, excluding FY 1990. The average number of coyotes taken in leghold traps during the two years preceding SB-756 was 3,101 per year and the three years following was 1,356 per year, a decline of 56%.

### Impacts on Program Delivery

Figures 2 and 3 depict a hypothetical model which illustrates the expected magnitude of decreased trap service nights and cooperators serviced in going from a biweekly trap check to a daily trap check. Figure 3 indicates the results if cooperators were not allowed to assist with trap checking and specialists did not work on weekends. Traps would have to be covered or sprung on Friday and reset on Monday. Using the scenario prior to the passage of SB-756 (Figure 2), one specialist could provide 42 trap service nights to six cooperators per week. Following passage of SB-756 the same specialist could provide 12 trap service nights to three cooperators (Figure 3). This would represent a 71% decrease in the number of trap service nights provided and a 50% decrease in cooperators that were provided trap service.

Figure 4 indicates the average number of staff days spent on each rural cooperator, per year, in 20 agricultural counties for FY 1988, 1989, 1991, 1992, and 1993. The data indicates a gradual decrease in this average over a five year period. The number of cooperators provided service also decreased slightly during this period. When only the year before passage of

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<sup>1</sup>Trap service night is defined as a night with any number of traps on a cooperator's property.

Table 1. Coyotes taken by method, statewide, fiscal years 1985 to 1995

FY	Neck Snares	Denning/ Dogs	M-44	Calling/ Shooting	Leghold Traps	Aerial Hunting	Total
1985	496	554	451	1686	4390	787	8364
1986	485	639	754	1488	3835	274	7475
1987	582	625	877	1707	4069	0	7860
1988	717	701	638	1865	4075	0	7996
1989	687	679	1107	1510	3677	94	7754
1990	710	933	1539	1826	2708	68	7784
1991	616	914	1908	2108	1910	100	7556
1992	539	401	1251	1435	1746	76	5661
1993	547	731	1061	642	1021	231	4834
1994	487	731	1615	515	567	1392	6750
1995	576	567	1463	1317	436	1635	7675

## TRAP SERVICE SCENARIO

Prior To SB-756

Ranch	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1		x		x		x	
2		x		x		x	
3		x		x		x	
4			x		x		
5			x		x		
6			x		x		

"x" indicates traps set / checked

42 trap service nights to 6 cooperators per week

■ trap service night

## TRAP SERVICE SCENARIO

Following SB-756

Ranch	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1		x	x	x	x		
2		x	x	x	x		
3		x	x	x	x		

"x" indicates traps set / checked

12 trap service nights to 3 cooperators per week

■ trap service night

Figure 2. Trap service nights and number of cooperators served prior to SB-756.

Figure 3. Trap service nights and number of cooperators serviced following SB-756.

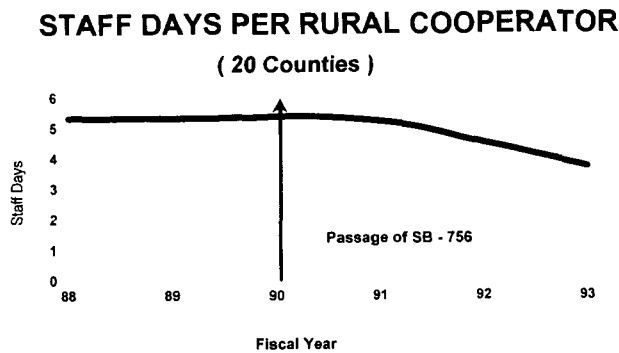


Figure 4. Staff days per rural cooperator.

SB-756 and the year after are examined, the average number of staff days spent on each rural cooperator and the number of cooperators serviced only slightly changed, 5.4 to 5.3 and 1,304 to 1,324.

#### Coyotes Taken Per Staff Day or Staff Month

Figure 5 indicates the total coyote take per staff day in a set of 25 rural counties during fiscal years 1988 to 1993. With the exception of FY 1992, these data suggest a gradual increase. Closer examination of the data used to generate this figure revealed a large increase in M-44 take during FY 1988, 1989 and 1991. It also revealed increases in the calling/shooting take and denning/dog take from FY 1989 to FY 1991. Neck snare and leghold trap take decreased between FY 1989 and 1991. It appears that the increased take with M-44's, calling/shooting, and denning/dogs, resulted in an analogous increase in the coyote capture/take rate per unit of effort. Another possibility would be that there were more coyotes to capture/take. The author considers this to be unlikely.

A second subset of data were evaluated in 20 counties where all of the staff time analyzed was spent on properties where sheep or cattle were listed as a resource. The total number of coyotes taken per staff month increased from 23 in FY 1989 to 29 in FY 1992, a 26% increase.

These data also suggest an increase in the number of coyotes captured/taken per unit of effort after passage of SB-756. A closer examination showed an increase in the number of coyotes taken per unit of effort in 12 of the 20 counties evaluated. In six of the eight counties where the number of coyotes taken per unit of effort decreased, a portion of the county was located in San Joaquin kit fox range.

#### **DISCUSSION**

Although reliable data were not available on numbers of leghold traps placed or removed before or after passage of SB-756, the author believes fewer were placed after implementation of SB-756. There is no reason to believe that the decrease in coyotes caught in leghold traps could be attributed to anything other than less trap use.

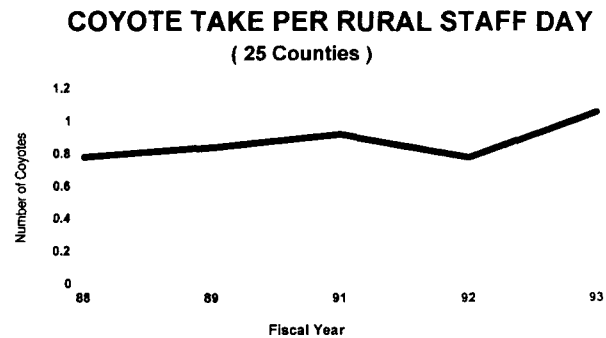


Figure 5. Coyote take per rural staff day FY 1988, 1989, 1991, 1992, and 1993.

The decrease in the total number of coyotes taken, statewide, by all methods in fiscal years 1992 and 1993 can be attributed to a number of factors such as decreases in staffing, due to a state budget reduction, the daily trap check, decreases in certain resources protected (specifically sheep), and changes in program emphasis. Most of the increase in fiscal years 1994 and 1995 can be attributed to an expansion of the aerial hunting program.

These data suggest that the number of rural cooperators serviced and the number of staff days spent on each cooperator, were insignificantly affected by SB-756. A logical explanation for this would be that either the program was able to compensate for decreased trap service nights with other tools and methods, or cooperators assisted enough with trap checking to make the impacts to program delivery undetectable. It was probably a combination of both. The gradual decrease in staff days provided to cooperators in FY 1992 and 1993 (Figure 4) can be explained mostly by decreases in staffing.

These data suggest that in areas where the program could not substitute other methods such as dogs/denning, calling/shooting, or M-44's for the leghold trap, the coyote take per unit of effort decreased. To program managers and cooperators these data imply that significant impacts could be expected to program effectiveness in areas occupied by endangered species that could be taken by alternate methods when the use of traps is restricted. These same impacts would be expected on some public lands where the use of control tools such as the M-44 are restricted.

SB-756 provided that cooperators could assist ADC personnel with the checking of traps. In theory, if cooperators could provide the additional manpower necessary to check traps in between ADC program checks, there would be few impacts in going from a twice a week check to a daily check. In reality there are other impacts.

The California ADC program, in response to SB-756, has developed what is called a trap liability form. A cooperator may sign one of these forms and agree to check equipment on certain days of the week. Many cooperators do not wish the responsibility of signing the

form, but are willing to assist ADC. The number of cooperators who have actually signed trap liability forms during the last six years was not available.

There are some problems with this system. In several cases cooperators agreed to check traps on specific days but did not. When specialists questioned cooperators, and mentioned what could happen to him/her if the traps were not checked, the cooperator got angry. He/she was willing to help but did not want to be called on the carpet when other responsibilities took precedence. This caused a deterioration in cooperator-specialist relations. More seriously, in one case that the author is aware of, an ADC specialist was almost arrested because a cooperator did not check the traps as agreed and a domestic dog was restrained for a few days.

Many cooperators, at least initially, are willing to help ADC personnel check equipment. In some cases "too" much assistance was provided and traps were checked two to three times a day. Some cooperators will try to reset equipment without proper training or experience and in doing so will "educate" some coyotes or cause the capture of a non-target. Other cooperators are only willing to check equipment and then let the specialist know if a trap has been sprung or an animal captured. Delays in notification about sprung traps or captured animals can cause decreased effectiveness as well as additional trauma for captured animals. If cooperators are not furnished with proper training on release techniques for various non-targets they can become frustrated and kill the animal rather than trying to release it. ADC personnel routinely release non-target animals, but many cooperators have different feelings about what should be considered non-target and will kill animals that ADC personnel would have released.

ADC program costs to furnish cooperators with proper training and adequate release methods can be substantial. A good catch pole, which can be used to release most non-targets, averages \$80.00. The cost to equip each cooperator with a catch pole would be prohibitive in a program as large as California's.

Many specialists in the California program felt that an increased human presence around traps, due to daily checking, would decrease their effectiveness. An analysis of this impact would be interesting, but beyond the scope

of this paper. Such an impact might be offset, in part, by the increased attentiveness resulting in traps being functional for a higher percentage of the time, and therefore taking more target animals. This might be the case in areas where you have a lot of human activity and the coyotes are not affected by it, or in areas where you have a lot of trap interference from non-targets. The author believes that in the more rural areas of California the increased activity probably has a negative effect.

Some people would like to ban the use of leghold traps. Others feel that if the leghold trap is going to be used it should be used as humanely as possible. Many seem to support the use of padded-jaw traps. The ADC program has stated in its "Code of Ethics" that it will support the use of the most humane, selective, and effective control techniques in carrying out its mission. Sometimes the most selective or effective control methods are not necessarily the most humane. As was stated earlier in this paper, ADC program managers have to make difficult decisions when trying to balance cost effectiveness against humaneness. As was also stated earlier, funding has a major bearing in these decisions.

When the public insists, through legislation or the initiative process, that wildlife damage management be conducted using less effective or more expensive control methods or strategies, it would seem logical that some type of compensation be paid either to those trying to mitigate the wildlife damage or to the resource owners experiencing the damage.

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