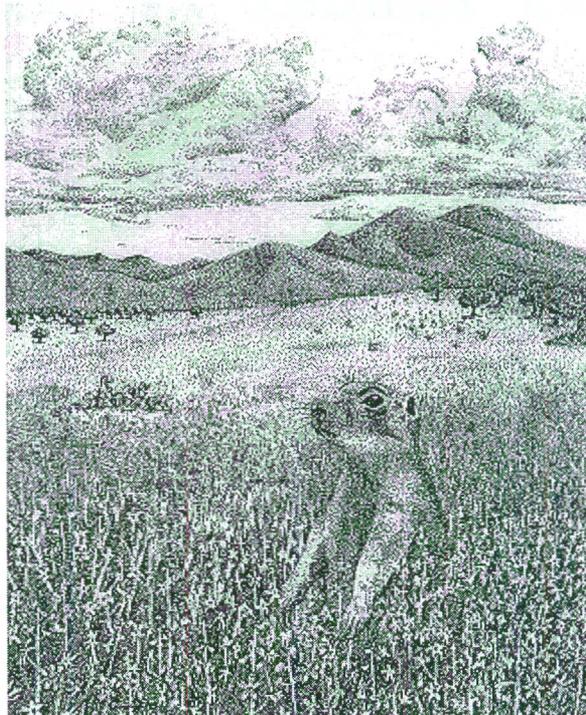


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# Utah Prairie Dog Recovery Efforts

## 1999 Annual Report



**Publication No. 00-35**

Utah Division of Wildlife Resources  
1470 North Airport Road  
Cedar City, Utah 84720

December 2000

Utah Prairie Dog Recovery  
Efforts

1999 Annual Report

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December 2000

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## UTAH PRAIRIE DOG RECOVERY EFFORTS - 1999 ANNUAL REPORT

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*Abstract* - Utah prairie dog recovery efforts in 1999 consisted of conducting annual spring counts, administering the translocation and control programs, conducting habitat vegetation studies, and implementing a county-wide Habitat Conservation Plan (HCP) for Iron County. A total of 5,114 adult Utah prairie dogs were counted rangewide, an increase of one animal over 1998 figures. Counts on public lands increased to 1,229 adults, while counts on private lands decreased to 3,885. Utah prairie dogs on private lands comprised 76% of the total population. Counts in the West Desert Recovery Area increased 2% from 1998 and counts in the Paunsaugunt Recovery Area increased 6%. Counts in the Awapa Plateau Recovery Area decreased 43% from 1998, the fourth consecutive year of decrease. In the Paunsaugunt Recovery Area, 182 Utah prairie dogs were translocated from 4 different colonies to the Johnson Bench translocation site. A total of 201 Utah prairie dogs in the West Desert Recovery Area were translocated from 9 different colonies to the Dominguez-Escalante translocation site. Weekly counts revealed that at least 195 prairie dogs persisted into September at the 1996-98 Adams Well translocation site. Fifty-nine control permits allowing take of 2,496 Utah prairie dogs were issued to 35 individuals. Reported take was 1,233 prairie dogs.

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### INTRODUCTION

The Utah prairie dog (*Cynomys parvidens*), a burrowing member of the squirrel family, inhabits arid grasslands and occurs only in southwestern Utah. It is one of three species of white-tailed prairie dogs in the United States and is the western-most member of the genus *Cynomys*. Utah prairie dogs were estimated to occupy about 700 sections (as delineated by cadastral mapping) in southwestern Utah and number more than 95,000 individuals in the 1920's (Turner 1979). By the 1960's, distribution of Utah prairie dogs was greatly reduced due to intensive control campaigns, disease (sylvatic plague), and loss of habitat (U.S. Fish and Wildlife Service 1991a). Studies by Collier and Spillett (1972) indicated that Utah prairie dogs had declined in, or had been eliminated from, major portions of their historic range. They estimated only 3,300 Utah prairie dogs remained in 37 separate colonies, and the species would be extinct by the year 2000 (Collier and Spillett 1973,

U.S. Fish and Wildlife Service 1991a). Due to the dramatic decline in numbers and distribution, the Utah prairie dog was classified as an endangered species on June 4, 1973 (38 F.R. 14678). The total number of prairie dogs and number of colonies subsequently increased to a point where they were causing damage on private lands and were considered a nuisance. Because of the improved status of the species and large increases of prairie dogs on private lands, the U.S. Fish and Wildlife Service (Service) reclassified the species from endangered to threatened on May 29, 1984 (U.S. Fish and Wildlife Service 1984). A recovery plan for delisting Utah prairie dogs by the year 2000 was approved by the U.S. Fish and Wildlife Service in 1991 (U.S. Fish and Wildlife Service 1991a).

A high percentage of prairie dogs (76% in 1999) are on privately owned lands, resulting in a large number of complaints by landowners suffering damage due to prairie dogs. In 1972, the Utah Division of Wildlife Resources (Division) initiated a translocation program to move Utah prairie dogs from private lands to areas of historical occupancy on public lands. It was felt that reestablishment of prairie dog populations on public lands, where greater protection is afforded, was crucial to the continued viability and eventual recovery of the species. Specific guidelines were developed for translocation methods and selection of translocation sites (Jacquart et al. 1986, Coffeen and Pederson 1993). These guidelines are modified as new information becomes available. Translocations continued annually each summer from 1972 through 1992, were halted in 1993 and resumed in 1996. From 1972 through 1999, over 18,377 Utah prairie dogs were live-trapped from private lands and translocated to lands managed by the Bureau of Land Management (Bureau), U.S. Forest Service, National Park Service, and state of Utah.

The Division has been censusing adult Utah prairie dogs at every known colony site each spring since 1976. Counts are conducted in the spring between mid-March and June 1, before young

are above ground, so that only adult animals that survive the winter are counted. Crocker-Bedford (1975) indicate that only 40 to 60% of the total prairie dog numbers are above ground at any one time. Thus, the spring population counts may underestimate the total population by as much as 60%. Approximately 2/3 of the spring adult population is female (Wright-Smith 1978). The skewed sex ratio is thought to be due to a higher juvenile male mortality rate resulting from conflicts with adult males and greater dispersal. Females generally give birth in April to litters averaging 4.1 young (Wright-Smith 1978, Mackley et al. 1988). Therefore, the summer population of Utah prairie dogs approximately triples once the young are born and emerge from their dens.

The large population explosion following emergence of young from their dens creates serious conflicts between Utah prairie dogs and human agricultural interests. Crop damage and damage to equipment was estimated to cost farmers more than \$1.5 million annually (U.S. Fish and Wildlife Service 1991a). The translocation program alleviated some of the nuisance complaints, but did not satisfy all landowners having prairie dog problems. Therefore, in conjunction with the reclassification to threatened status in 1984, the Service enacted a special rule allowing "take" of Utah prairie dogs on agricultural lands in Cedar and Parowan Valleys in Iron County (U.S. Fish and Wildlife Service 1984). The number of prairie dogs that could be taken was limited to 5,000 animals annually and was confined to the period between 1 June and 31 December. Take is considered to be compensatory because juvenile Utah prairie dogs, the primary source of the nuisance complaints, experience an estimated 73% natural mortality rate over the fall and winter and most would perish anyway (U.S. Fish and Wildlife Service 1991a). The control program was considered a success because it increased cooperation between landowners and conservation agencies, provided landowners a means to alleviate localized problems, reduced incentive to illegally kill prairie dogs,

and did not appear to negatively impact the population. The rule allowing take was amended by the Service in June 1991 to allow take to include private agricultural land throughout the range of the Utah prairie dog, and increased the total annual allowable take from 5,000 to 6,000 animals (U.S. Fish and Wildlife Service 1991b).

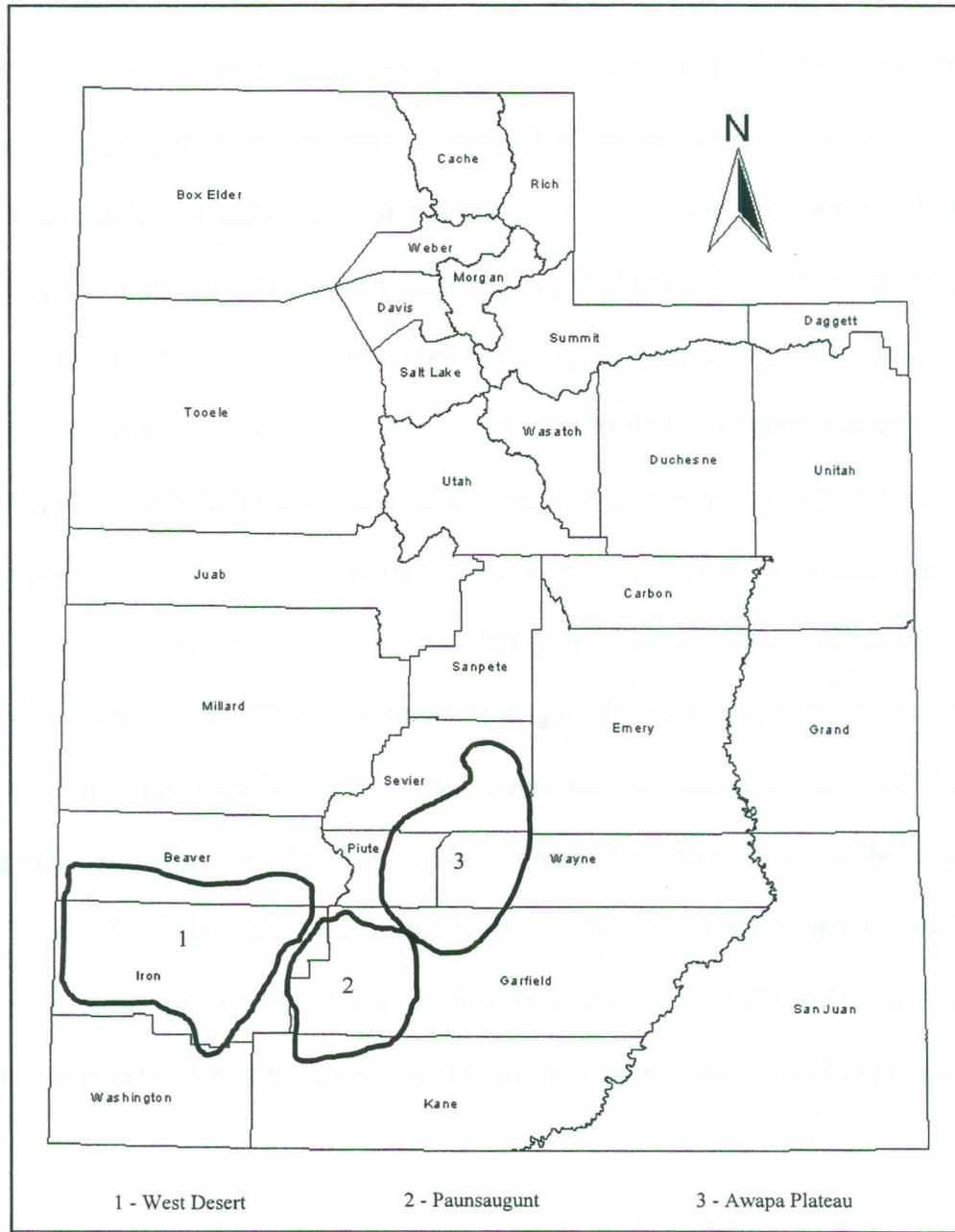
### **Recovery Plan Objectives**

As presented in the Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991a), the criteria required to achieve delisting are: 1) establishing and maintaining one population each on public lands in the West Desert, Paunsaugunt, and Awapa Plateau Recovery Areas (Fig. 1); 2) maintaining each population with a minimum number of 813 adult animals in the annual spring census for five consecutive years; and 3) establishing and implementing a formal Memorandum of Understanding for long-term management of each population, including the transfer of animals between populations for genetic purposes. It was felt that these steps would be necessary to establish and maintain the species as a self-sustaining, viable unit with retention of 90 percent of its genetic diversity for 200 years.

However, preliminary results of an analysis of count data conducted to examine population trends and ascertain whether population crashes could be predicted suggest that local populations of Utah prairie dogs exhibit nonlinear density dependence and experience population fluctuations that are not related to colony size (Richie 1995). Colonies exhibit frequent extinctions that appear to be primarily deterministic, rather than stochastic. Therefore, it has been recommended that, based on these results, recovery goals be revised to more fully incorporate metapopulation theory and its application to Utah prairie dog population dynamics and recovery (Richie 1995).

Based on analysis of population data and translocation success, it has become apparent that recovery goals in the current Utah Prairie Dog Recovery Plan are too vague, making recovery

Fig. 1 Map showing the three Utah prairie dog recovery areas as described in the Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991a).



essentially unachievable based on those goals (McDonald 1993). For example, the recovery plan calls for maintaining a minimum of 813 adult prairie dogs in each recovery area for five consecutive years. However, it is unclear whether this should be one complex of 813 animals, or if it can be 27 separate complexes of 30 animals. Also, the recovery plan does not take into consideration the proximity of colonies to other colonies, or frequent fluctuations in local population numbers. Therefore, it has been recommended that the current recovery plan be revised to take into consideration more current data on the biology and habitat needs of the Utah prairie dog, as well as the latest principles of conservation biology (McDonald 1993). Because data is still lacking on specific habitat requirements of Utah prairie dogs, an Interim Conservation Strategy has been implemented to direct recovery efforts for the next several years (Utah Prairie Dog Recovery Implementation Team (UPDRIT) 1997). The Conservation Strategy proposes three-phases for recovery: 1) improving habitat at existing complexes, 2) monitoring translocation success and reevaluating recovery goals, and 3) developing a collaborative educational program to help resolve conflicts and foster local cooperation in Utah prairie dog recovery. Habitat manipulation is proposed to reduce woody shrubs, restore productive grasslands, and provide additional habitat in areas on public lands where Utah prairie dogs already occur. Habitat manipulation also will occur on at least eight new translocation sites where research will be conducted to determine how habitat improvement and grazing practices might improve the persistence of translocated prairie dogs.

## **METHODS**

### **Annual Counts/Colony Occupancy**

Adult Utah prairie dogs are counted annually in April and May. Lower elevation sites in the West Desert are counted first each spring and progress in elevation to the Paunsaugunt and Awapa Plateau. Counts involved driving to all known colonies, scanning the colony with binoculars or a spotting scope, and taking the highest number of at least three counts of all visible adult prairie dogs. Colonies were mapped on 1:24,000 USGS topographical maps and count data were recorded by colony location. Land ownership was determined for each colony. Counts were conducted on clear, calm days, and were discontinued on cloudy and excessively windy days.

### **Translocation**

Recovery of Utah prairie dogs is based upon establishment of new Utah prairie dog colonies on public lands. To accommodate this, Utah prairie dogs are translocated annually from agricultural, recreational, and sensitive (e.g., cemetery) areas where they are causing damage and from approved development areas to sites previously prepared by the Bureau and the Forest Service. Each translocation site can receive up to 200 Utah prairie dogs annually for three consecutive years. Prairie dogs are captured in Tomahawk live traps baited with peanut butter and oats. All captured prairie dogs are dusted with flea powder at the location of capture and are kept in the shade and transported to the release site mid- to late afternoon on the same day, unless weather conditions prevent release until the following morning. At the release site, they are weighed, sexed, and tagged with #1 monel ear tags before being placed in release cages. Release cages are placed in grassy, inconspicuous areas at each translocation site. Release cages measure 0.6 x 1.0 x 1.2 meters

(2' x 3' x 4'), and cover paired holes drilled into the ground at a forty five degree angle to a depth of approximately two meters using a portable hydraulic auger. Additional dispersal holes are drilled outside of the outer perimeter of cages. The release cages and holes provide temporary shelter to translocated prairie dogs, and are supplied with alfalfa pellets and water. Five-gallon poultry guzzlers are also placed in the release area to provide a source of water for prairie dogs that dispersed from their release cages.

Weekly counts of prairie dogs are made at translocation sites from September through October to monitor Utah prairie dog establishment and dispersal. Signs of predation are also monitored and predator control conducted when necessary.

At the Adams Well site, prairie dogs were recaptured in mid-September, to determine overall condition, weight, and dispersal distance of prairie dogs. One hundred Sherman live traps also were set in a 10m x 10m grid in each plot to determine species composition and abundance of other small mammals inhabiting the site.

### **Vegetation Monitoring**

Vegetation monitoring was conducted at both the Dominguez-Escalante and Adams Well translocation sites. Nested frequency data and vegetation structure (cover board) were measured at both sites, while primary productivity data was monitored at the Adams Well site only. A higher level of monitoring occurred at the Adams Well site because it is a demonstration site rather than a translocation site. With intensive monitoring and data collection, this site is expected to demonstrate the response of translocated prairie dogs to areas where winter/spring grazing is allowed on a rotational basis and where grazing is excluded. The Adams Well site is divided into two 40-

acre plots, one of which is fenced to exclude livestock. The fenced plot is further divided into two 20-acre plots to allow limited controlled grazing in half of the 40-acre plot, while excluding grazing in the other half, although neither of the fenced plots were grazed in 1999.

Primary productivity was measured by establishing twenty 1 m x 2 m (3.3 ft x 6.6 ft) vegetation subplots within the Adams Well study area. Ten vegetation subplots were randomly located within the fenced/no grazing plot; five were randomly located within the fenced/controlled grazing plot; and five were randomly located within the unfenced plot. Five of the ten vegetation subplots in the fenced/no grazing plot were covered by rodent-proof cages and served as controls. A 10 cm x 2 m (4 inches x 6.6 feet) strip was clipped from each of the subplots bi-monthly from April through October. Plants were separated by species, and both wet and dry weights were measured to determine primary production by species and species composition by weight for each plot.

Species composition and percent cover were determined by conducting five, 20-point nested frequency transects in each of the three plots (100 points total in each plot) at the Adams Well site and a total of five transects at the Dominguez-Escalante site. The southern terminus of each transect was located using random numbers and transects extended northward 18 meters (60 feet) from that point. A 10-point nested frequency quadrat was placed every 0.9 meters (3 feet) along each transect and characteristic substrate (e.g., plant species, bare ground, rock, pavement, litter) at each of the 10 points (tips) was recorded.

A 1.2 m x 30 cm (48 in x 12 in) vertical cover board with 12 alternating, 10 cm high (4 in) black and white painted rectangles was used to measure the average vertical height of vegetation within the sites throughout the growing season (Nudds 1977). The rectangles were labeled as Daubenmire cover class numbers one through 12, starting at the bottom. At each sampling point,

the board was placed perpendicular to, and 15 m (50 feet) from, the transect. Vegetation height was determined by viewing across a level plane approximately 0.7 to 0.9 m (2.5 to 3.0 feet) above ground level, and recording the number of cover classes overlapped by vegetation.

### **Control Program**

Landowners suffering agricultural damage due to Utah prairie dogs were able to obtain a Certificate of Registration at the Division's Southern Region Office in Cedar City, Utah, allowing them to kill nuisance prairie dogs on their agricultural land by trapping or shooting (Appendix V). Permits were available beginning 1 June and could be obtained through December. Complainants were required to come to the Division office, identify the location where damage was occurring, and then sign a permit agreeing to all rules of the control program. The permit allowed the landowner to control only the number of Utah prairie dogs specified. Permits were issued for a 30-day period, at the end of which a report indicating the number of prairie dogs killed was required. Upon completion of the report, landowners could request another permit for additional prairie dog control. The total number of prairie dogs which could be taken from a colony did not exceed the estimated production for that year. The Division determines the estimated production from the current year's annual spring count of a colony.

## **RESULTS**

### **Population Counts**

Prairie dog counts were conducted in 547 separate colonies in 69 complexes spanning the three different recovery populations during 1999. Rangewide, counts increased from 5,113 adults

in 1998 to 5,114 in 1999 (Table 1, Appendices I-IV). Populations on School and Institutional Trust Land Administration property (Trust Lands) and private lands decreased from 3,980 in 1998 to 3,885 in 1999 and accounted for 76% of the total population (Appendix I). Counts of Utah prairie dogs on public lands increased from 1,133 to 1,229, but constituted only 24% of the total population (Table 1; Appendix I). Counts on public lands exceeded the existing recovery goal in the West Desert Recovery Area, but were well below the goal in the other two recovery areas.

#### West Desert Recovery Area

Counts in the West Desert population increased from 3,660 adult Utah prairie dogs in 1998 to 3,740 in 1999 (Appendix II). Prairie dogs on public lands in the West Desert Recovery Area numbered 834 adults occupying 20 colonies within 14 complexes. Counts on public lands exceeded 10 animals at twelve colonies and exceeded 50 animals at five colonies. Utah prairie dogs on Trust Lands and private lands comprised 78% of the total number counted in the West Desert Recovery Area.

In late June, a graduate student from Utah State University conducting research at the Bureau administered Buckskin Valley complex noticed prairie dogs staggering about and dying above ground. Two dead prairie dogs were brought to the Division office by the researcher. These animals were sent to the Utah Department of Health, Bureau of Epidemiology to be tested for plague. On July 2, the Bureau of Epidemiology confirmed sylvatic plague in the tested prairie dogs. Plague warning signs were printed immediately and posted on all access points into the Buckskin Valley. The next week, USDA APHIS Wildlife Services treated the burrows with 5% carbaryl garden dust to control the vectors of plague (fleas), as a precaution to prevent human exposure.

Table 1. Spring counts of Utah prairie dogs by Recovery Area and land ownership.

Recovery Area	76 Count	77 Count	78 Count	79 Count	80 Count	81 Count	82 Count	83 Count	84 Count	85 Count	86 Count	87 Count
West Desert Private	605	890	1854	1692	1871	3003	3672	2825	2239	2097	3028	2195
West Desert Public	306	170	63	31	99	125	312	194	273	277	413	580
West Desert State												
West Desert Total	911	1060	1917	1723	1970	3128	3984	3019	2512	2374	3441	2775
Paunsaugunt Private	754	680	500	411	626	897	726	528	479	744	931	1431
Paunsaugunt Public	17	94	326	215	197	315	250	246	426	598	635	758
Paunsaugunt State												
Paunsaugunt Total	771	774	826	626	823	1212	976	774	905	1342	1566	2189
Awapa Plateau Priv.	173	103	79	73	99	145	138	31	60	126	157	102
Awapa Plateau Pub.	95	315	466	457	220	181	246	170	243	271	344	408
Awapa Plateau State												
Awapa Plateau Total	268	418	545	530	319	326	384	201	303	397	501	510
Gunnsion Total												
Borden/Millard Co.												
Total Private	1532	1673	2433	2176	2596	4045	4536	3384	2778	2967	4116	3728
Total Public	418	579	855	703	516	621	808	610	942	1146	1392	1746
Total State												
Total All	1950	2252	3288	2879	3112	4666	5344	3994	3720	4113	5508	5474

Table I continued. Spring counts of Utah prairie dogs by Recovery Area and land ownership.

Recovery Area	88 Count	89 Count	90 Count	91 Count	92 Count	93 Count	94 Count	95 Count	96 Count	97 Count	98 Count	99 Count
West Desert Private	3601	3898		1927	1204	907	1410	1620	1945	2456	2955	2868
West Desert Public	688	945	375	478	476	474	477	490	450	393	688	834
West Desert State							112	1	0	1	17	38
West Desert Total	4289	4843	375	2405	1680	1381	1999	2111	2395	2850	3660	3740
Paunsaugunt Private	977	936		733	795	975	974	889	994	927	880	853
Paunsaugunt Public	406	524	494	624	573	773	250	95	136	189	217	298
Paunsaugunt State							154	19	23	34	3	22
Paunsaugunt Total	1383	1460	494	1357	1368	1748	1378	1003	1153	1150	1100	1173
Awapa Plateau Priv.	131	106	65	341	417	358	201	304	109	156	114	78
Awapa Plateau Pub.	282	1013	292	88	47	44	130	152	244	190	228	97
Awapa Plateau State								4	16	11	11	26
Awapa Plateau Total	413	1119	357	429	464	402	331	460	369	357	353	201
Gunnsion Total									43	NC	NC	NC
Borden/Millard Co.									1	NC	NC	0
Total Private	4709	4940	65	3001	2416	2240	2585	2813	3091	3539	3949	3799
Total Public	1376	2482	1161	1190	1096	1291	857	737	831	772	1133	1229
Total State							266	24	39	46	31	86
Total All	6085	7422	1226	4191	3512	3531	3708	3574	3961	4357	5113	5114

In the weeks that followed the confirmed plague outbreak, Division technicians conducted population counts not only in the Buckskin complex, but all surrounding complexes as well. Three prairie dogs survived the disease in the Buckskin complex. After monitoring prairie dog activity and populations in the surrounding complexes, it appeared that the Buckskin complex was the only complex affected by plague.

#### Paunsaugunt Recovery Area

Utah prairie dog counts in the Paunsaugunt Recovery Area increased slightly between 1998 (1,100 adults) and 1999 (1,179 adults). Counts on private lands remained at 883 adults in 1999, and still comprise the vast majority (75%) of prairie dogs found in the Paunsaugunt Recovery Area. Counts on public lands rose from 217 in 1998 to 296 in 1999, but accounted for only 25% of the population in the Paunsaugunt Recovery Area (Table 1, Appendix III).

#### Awapa Plateau Recovery Area

Counts in the Awapa Plateau Recovery Area decreased from 353 in 1998 to 201 in 1999 (Table 1; Appendix IV). This represents an 82% decrease from the high count of 1,013 Utah prairie dogs in 1989. Counts have steadily declined for the past four years, decreasing from 460 prairie dogs counted in 1995. One hundred four Utah prairie dogs were counted on Trust Lands and private lands in this recovery area. The remaining 97 (48%) were found on public lands. The counts on public lands are the lowest since 1993 when 44 prairie dogs were counted. The prairie dogs in this recovery area live in very small colonies spread out over an extensive area. Unfavorable weather conditions and lack of access onto several private lands played a role in the drastically low counts this year.

#### Other

Two additional Utah prairie dog colonies were documented in 1996 outside of existing

recovery area boundaries. During 1996 counts, 43 Utah prairie dogs were found in a colony located on private property at Gunnison, Sanpete County. In addition, one Utah prairie dog was observed amidst an extensive system of mounds and burrows covering several square kilometers near the Cricket Mountains in Millard County during late summer of 1996. Due to time constraints and limited personnel, counts were not conducted at either site in 1999.

### **Translocation**

One translocation site each was available for use in the West Desert and Paunsaugunt Recovery Areas. The West Desert translocation site, named Dominguez-Escalante, was burned by the Bureau in 1998 to reduce shrub cover and was approved for use from 1999 to 2001 by the Utah Prairie Dog Recovery Implementation Team in November of 1998 (Bureau, 1998 Annual Report).

The Forest Service also burned and seeded a site on Johnson Bench in the Paunsaugunt Recovery Area. Although the site had 4% shrub cover rather than 0-3% recommended in the guidelines of the Interim Conservation Strategy, the Service and Division approved the site for translocations beginning 1999. Based on a previous commitment to Panguitch City, the Division moved prairie dogs from the Panguitch Sewer Pond and sensitive sites within the city to the Johnson Bench site.

From 4 May through 21 May, 25 adult male Utah prairie dogs were trapped and translocated to Dominguez-Escalante to establish a burrow system. In July and August, an additional 171 adult and juvenile Utah prairie dogs of both sexes were captured and released at the Dominguez-Escalante site. Under the *Habitat Conservation Plan for Utah Prairie Dogs, in Iron County, Utah* (HCP), the Iron County Commission (Commission) prioritizes trapping efforts within the county. At the Commission's request, the Division removed Utah prairie dogs from cemeteries, airports, baseball

parks, permanent take areas (development) and private residences. In addition, five wandering prairie dogs trapped in local businesses or private residences were also released at Dominguez-Escalante. A total of 201 prairie dogs were translocated from nine colonies within Iron County during 2,512 trap days (Table 2).

The Johnson Bench translocation site was not approved for use until late June, which precluded translocation of adult males in May to establish a burrow system. Division technicians augered additional dispersal holes in the area, to try to compensate for lack of burrow system. A total of 182 Utah prairie dogs were moved to the site from 21 July to 31 August. These Utah prairie dogs were translocated from four separate colonies in Garfield County during 1,957 trap days (Table 2).

Table 2. Summary of Utah prairie dog translocation efforts in 1999.

**Dominguez-Escalante Translocation Site**

Colony Where Trapped	Total No. Traps Days	UPD's moved by age and sex				Total
		AM	AF	JM	JF	
Cedar City Airport	490	6	2	9	8	25
Private Residence	25	1	1	0	1	3
Black Rock Subdivision	66	2	2	0	0	4
Enoch Ball Field	134	1	5	11	4	21
Cedar City Cemetery	789	8	5	17	5	35
Private Residence	32	4	2	0	1	7
Industrial Development	623	7	6	7	8	28
Cedar City Ball Field	121	16	12	21	15	64
Parowan Airport	232	9	0	0	0	9
Wandering prairie dogs	NA	0	1	3	1	5
<b>Total</b>	<b>2,512</b>	<b>54</b>	<b>36</b>	<b>68</b>	<b>43</b>	<b>201</b>

Table 2 continued.

**Johnson Bench Translocation Site**

Colony Where Trapped	Total No. Traps Days	UPD's moved by age and sex				Total
		AM	AF	JM	JF	
Panguitch Sewer Pond	871	25	23	18	10	76
Private Subdivision	185	6	3	12	12	33
Old Sawmill	393	2	0	13	2	17
Near Panguitch Cemetery	508	7	13	25	11	56
<b>Total</b>	<b>1957</b>	<b>40</b>	<b>39</b>	<b>68</b>	<b>35</b>	<b>182</b>

Population counts conducted in September and October revealed that at least 195 prairie dogs remained above ground at the Adams Well site (Table 3). This was an increase of 107% from the high count conducted in September of 1998. More than 82% of those counted were found outside of the study plots, dispersing primarily towards the south and west. Only two counts were conducted at the Johnson Bench site, revealing at least 18 prairie dogs remaining in the area. Several counts were also conducted at the DE site, however no prairie dogs were counted.

Table 3. Count summary of Utah prairie dogs

Site	Date	Count
Adams Well	7 September	195
	23 September	122
	14 October	66
	25 October	39
Dominguez-Escalante	7 September	0
	23 September	0
	14 October	0
Johnson Bench	7 October	18
	14 October	18

Fifty-five individual Utah prairie dogs were recaptured a total of 98 times at the Adams Well site between 13 and 22 September, 1999. Of those, fifty-two had no sign of, or were missing, ear tags, resulting in a total of three individuals for which recapture data could be used. Two had been translocated to Adams Well in 1998 and one had been captured and tagged during retrap efforts in the fall of 1998. Recaptured Utah prairie dogs had been at the release site an average of 414 days (range 363-442 days), and had gained an average of 0.69 g/day since being released (Table 4).

Table 4. Recapture data for Utah prairie dogs at the Adams Well translocation site.

Ear Tag Number		Age	Sex	Date Released	Date Recaptured	Number of Days Since Released	Weight Gain/Loss (grams)	Weight Gain/Loss Per Day
Right	Left							
**	1228	A	F	07/06/98	09/14/99	436	50	0.115
**	1355	A	M	07/1/98	09/15/99	442	450	1.018
**	3677	A	F	*09/15/98	09/13/99	363	350	0.964
<b>MEAN</b>						413.667	283.333	0.699

\*Captured and tagged during retrap effort in September of 1998.

\*\* Right ear tag was missing or prairie dogs were only tagged with one.

Small mammal trapping at the Adams Well translocation site occurred from 13 through 17 September 1999, between the new moon and first quarter. Ten individuals representing two species were captured in 1,500 trap nights, including: four deer mice (*Peromyscus maniculatus*), and six northern grasshopper mice (*Onychomys leucogaster*). One northern grasshopper mouse was found dead in a Sherman trap. Ninety percent of the sexed individuals were males.

## **Vegetation Monitoring**

Nested frequency data (species composition) was collected in May and September while vegetation structure (cover board) data was gathered in May, July and September at Adams Well demonstration site and Dominguez-Escalante translocation site. Primary production data was collected bi-monthly at the Adams Well site only. All raw data sheets are available for review at the Bureau's Cedar City Field Office or at the Division's Southern Region Office (Bonebrake 1999). Due to time constraints, the Bureau was not able to convert the 1999 primary production data to pounds per acre.

Population counts at the Adams Well site show that the prairie dogs have moved primarily to the unfenced, winter/spring grazed portion of the site. The two plots in which grazing is restricted support a significantly lower number of prairie dogs, only 7.5% of the total. The fall only grazed plot harbored 4.7% of Adams Well prairie dogs and only 2.8% were found within the ungrazed plot. Vegetation monitoring data must be analyzed before a determination can be made concerning whether what vegetation characteristics affect the tendency of the prairie dogs to move outside of the fenced plots.

## **Control Program**

Fifty-nine control permits were issued to 35 persons in 1999, allowing take of 2,496 Utah prairie dogs from 33 colonies. The West Desert Recovery Area accounted for 30 of the 40 permits (75%), the Paunsaugunt Recovery Area for seven permits (17.5%), and the Awapa Plateau Recovery Area for three permits (7.5%). The 1999 reported take was 1,233 Utah prairie dogs; a success rate of 49%. This is the lowest success rate since 1992 and a decrease from the 1998 rate of 59% (Table

5). The average permitted take was 42 Utah prairie dogs per permit, and the average actual take was 21 prairie dogs per permit. The number of control permits has increased consistently since 1996, indicating that Utah prairie dogs may be becoming more of a nuisance on agricultural lands. However, this increase does not appear to be directly correlated to Utah prairie dog population growth (Figure 1.)

Table 5. Summary of the Utah prairie dog control program, 1992-1999.

	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
Control Permits Issued:	59	32	43	17	11	23	31	59
Persons Issued Permits:	44	24	33	15	9	13	19	35
Allowed Take:	3,520	1,050	1,190	680	520	1,065	1,220	2516
Actual Take:	1,543	599	739	460	436	589	717	1233
Success Rate:	44%	58%	62%	68%	84%	55%	59%	49%
Location of Permittee:								
West Desert:	17 (39%)	14 (58%)	19 (58%)	6 (40%)	5 (56%)	7 (54%)	14 (70%)	30 (75%)
Paunsaugunt:	25 (57%)	7 (29%)	12 (36%)	8 (53%)	3 (33%)	4 (31%)	3 (15%)	7 (17.5%)
Awapa Plateau:	2 (4%)	3 (13%)	2 (6%)	1 (7%)	0 (0%)	2 (15%)	2 (10%)	3 (7.5%)
Gunnison:					1 (11%)		1 (5%)	
Location of Take:								
West Desert:	556	266	505	171	253	327	569	1064
Paunsaugunt:	937	243	198	290	133	187	69	152
Awapa Plateau:	50	90	36	0	0	75	67	17
Gunnison:					50		12	

## DISCUSSION

Utah prairie dog counts remain at levels well below recovery goals and are not much higher than 1984 counts, when they were reclassified from endangered to threatened. The Paunsaugunt and Awapa Plateau recovery populations identified in the Utah Prairie Dog Recovery Plan are well below the recovery goal of 813 adults counted on public lands, while the West Desert recovery area exceeded the goal for the first year with a count of 834 animals. The West Desert recovery population consisted of 14 active complexes on public lands which contained an average of 60, and median of 25.5, adult Utah prairie dogs (range 3 to 424). The Paunsaugunt population consisted of eight active complexes on public lands containing an average of 36, and median of 28, prairie dogs (range 1 to 90). The Awapa Plateau population consisted of seven occupied public lands complexes, containing an average of 14, and a median of 10, prairie dogs (range 1 to 31). Only seven public land complexes throughout Utah prairie dog range contained more than 50 individuals and only one complex contained more than 100 (See Appendices II - IV). Although these data seem to indicate recovery successes in the West Desert Recovery Area, they point out the need for more aggressive actions in the Paunsaugunt and Awapa Plateau Recovery Areas.

Although halted in 1992, Utah prairie dog translocations recommenced in 1996 with the introduction of 430 Utah prairie dogs to the Adams Well demonstration site. The prairie dog population at this site has increased annually since then. Twenty-one prairie dogs were observed at the Adams Well site during the 1997 spring count, 40 were counted during 1998, and 76 counted during the spring of 1999. In addition, a great number of untagged prairie dogs with unscathed ears, were retrapped at Adams Well in September 1998 and 1999, suggesting that Adams Well now supports a self-sustaining population. Prairie dogs have dispersed from Adams Well and have established burrow systems almost 3.2 km (two miles) away.

Two new translocation sites received 383 Utah prairie dogs this year. Burrow establishment was observed at the Johnson Bench site and at least 18 prairie dogs remained at the site into October. The 201 prairie dogs moved to the Dominguez-Escalante site, established only a few burrows and many of these collapsed within a few weeks. Predation may have been a problem at this site. One badger was taken after signs of predation and many raptors were also observed at the site. Further study and monitoring will be needed at both sites to give insight into successes and failures.

Weight gain of prairie dogs translocated to Adams Well averaged 0.69 grams per day in 1999, 1.20 g/day in 1998, 1.05 g/day in 1997 and 1.73 g/day in 1996. Although primary production was not determined for 1999, productivity in July 1998 averaged 659 lbs/acre, up from 559 lbs/acre averaged in July 1997. This was a large increase from 176 lbs/acre averaged in July 1996, and down slightly from 678 lbs/acre in July 1995. Vegetation data collected in 1995-1999 does not reveal any evident correlation between primary production (lbs/acre) and weight gain in translocated prairie dogs.

The number of control permits issued in 1999 was nearly double that issued in 1998, although over time, it does not appear that number of requests for control permits increase as prairie dog populations increase. Conversely, reported "take" numbers of Utah prairie dogs seem to follow the population trends as they rise and fall. Since 1996, "take" numbers and population counts have both been increasing, however, population counts are increasing at a much faster rate than the number of prairie dogs killed annually.

Management recommendations over the past few years have suggested that several public land sites with established colonies be treated to reduce woody shrubs and increase grasses and herbaceous vegetation. In October, the Bureau began treatment with a contracted sagebrush "V"

tool at both established colonies as well as future research sites. Two hundred eighty acres at the Minersville #3 Complex were treated with the "V" tool and two seed mixtures drilled on 268 acres. Approximately 200 acres at the Buckskin Complex were also treated with the "V" tool to reduce sagebrush encroachment. This site was not seeded due to the high crested wheatgrass component in the understory. The Buckskin Complex will be disked in the future to allow native grasses and forbs to establish. The Coyote Pond Research Site was also treated with the "V" tool to make the site suitable for research in accordance with the *Utah Prairie Dog Interim Conservation Strategy* (Bonebrake 1999). In the Paunsaugunt Recovery Area, the Forest Service burned 900 acres in the Berry Springs Complex and 200 acres in the Coyote Hollow Complex in efforts to reduce shrub cover. Neither of these sites required seeding due to a high base of grass and forbs in the understory.

Utah prairie dog habitat is jeopardized and further fragmented every year due to rapid growth and development occurring throughout prairie dog range. In July of 1998, the Service issued an incidental take permit to Iron County and the Division for implementation of the *Habitat Conservation Plan for Utah Prairie Dogs, in Iron County, Utah* (HCP). The purpose of the HCP is to allow limited development and growth in the county while protecting and preserving the Utah prairie dog and its habitat. The loss of 29 acres of prairie dog habitat resulted from development of several areas in the county in 1999. Although developers are encouraged to plan ahead and incorporate prairie dog removal into their schedules, most prefer not to wait and choose to pay a mitigation fee for the loss of habitat. A total of 47 Utah prairie dogs were "taken" by development at ten sites before trapping and removal could occur. There are "take" limits on both Utah prairie dogs and acres of habitat that can be approved for development each year. Several other parcels of Utah prairie dog habitat await development in January of 2000. The results of the Habitat Conservation Plan implementation are presented in another report.

## MANAGEMENT RECOMMENDATIONS

1. A better understanding of habitat requirements of Utah prairie dogs is required to allow managers to identify translocation sites and manage habitat in a manner suitable for prairie dogs. Guidelines contained in the Utah Prairie Dog Recovery Plan are vague and have never been tested scientifically. The research protocol outlined in the Utah Prairie Dog Conservation Strategy should be implemented without delay. This research will allow for better understanding of habitat needs of Utah prairie dogs, particularly the preferred vegetative composition. In addition, the research should provide information to increase success of translocation efforts.
2. All affected agencies should allocate the necessary personnel and resources to fully implement and complete tasks outlined in the recovery implementation schedule in the Utah Prairie Dog Recovery Plan and the Utah Prairie Dog Conservation Strategy or continue to do so and guarantee future support.
3. A Habitat Conservation Plan for the Paunsaugunt Recovery Area is being prepared in Garfield County and should be implemented in 2001. A plan for the Awapa Recovery Area should be developed and implemented as soon as possible as well.
4. An agreement for long-term management of all prairie dog complexes must be developed and implemented between all affected local, state, and federal management agencies, as required in the recovery plan. The necessary resources must be allocated to carry out that agreement.
5. Populations on both public and private lands must continue to be closely monitored to ensure that dramatic declines do not continue. Populations suspected to be in decline due to human depredation must be monitored closely.

6. All aspects of recovery implementation must involve public participation to garner the necessary local support for recovery to occur.
7. Utah prairie dogs should be released the same day they are trapped to reduce stress on the animals. Efforts should be made to release family groups together.
8. Precise surveys and mapping should occur at the two new colonies (Millard and San Pete Counties) discovered outside of the recovery areas in 1996.

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**APPENDICES**

**Appendix I. Counts of Utah Prairie Dogs on Private and Public Lands**

**Appendix II. Counts of Utah Prairie Dogs in the West Desert Recovery Area**

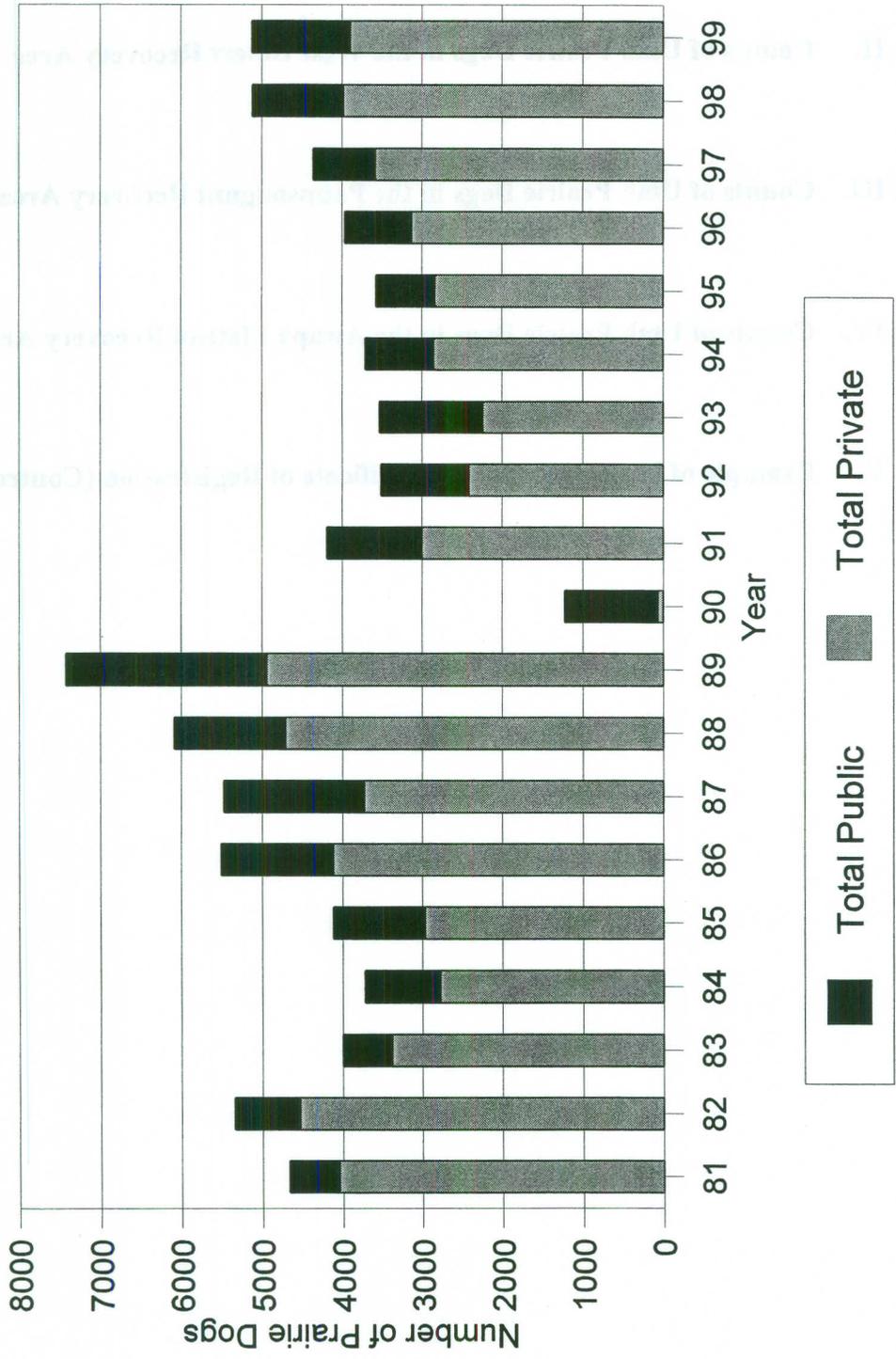
**Appendix III. Counts of Utah Prairie Dogs in the Paunsaugunt Recovery Area**

**Appendix IV. Counts of Utah Prairie Dogs in the Awapa Plateau Recovery Area**

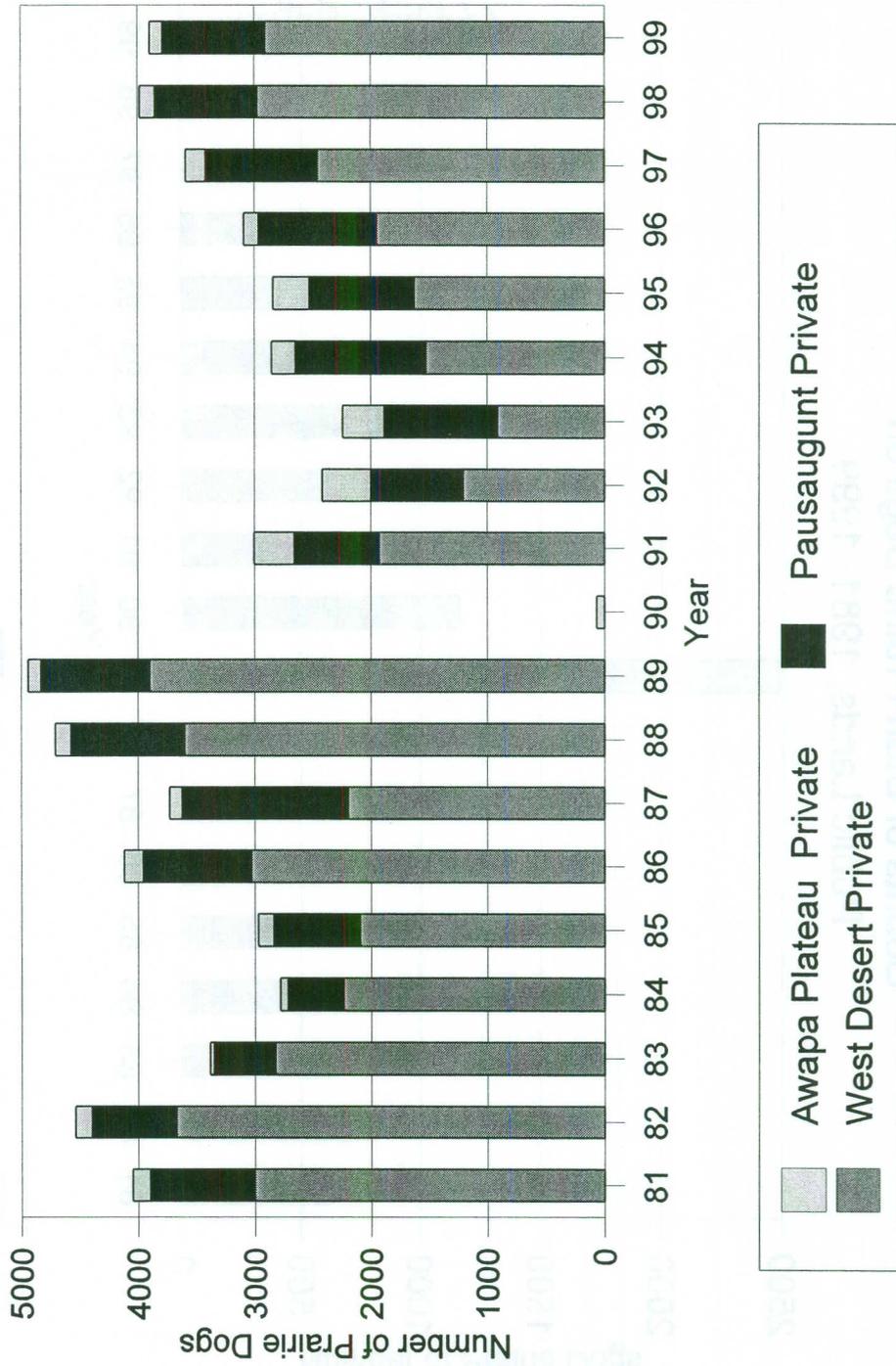
**Appendix V. Example of Utah Prairie Dog Certificate of Registration (Control Permit)**

Appendix I.

Counts of Utah Prairie Dogs on Private and Public Lands, 1981-1999.

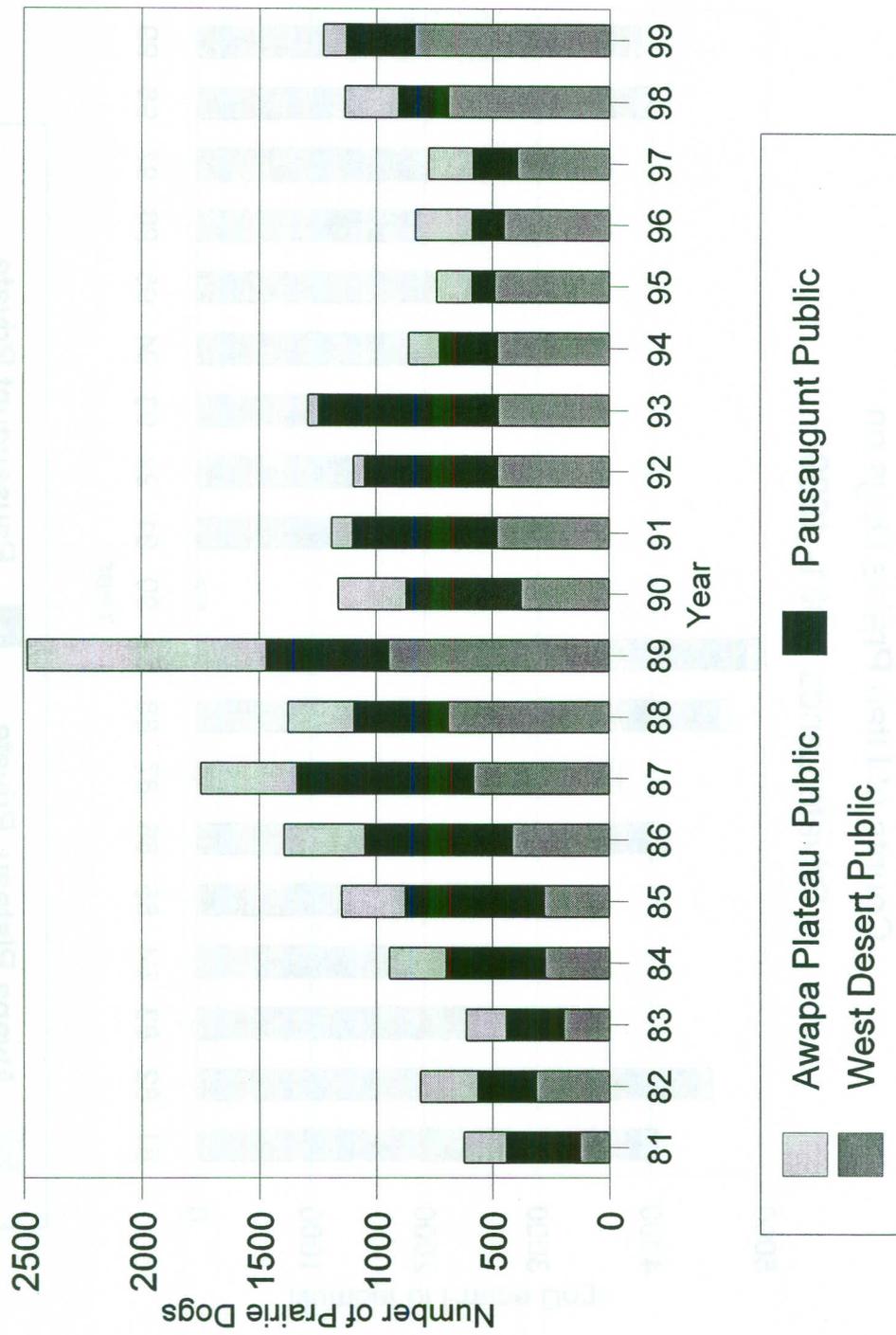


Counts of Utah Prairie Dogs on Private Lands, 1981 - 1999.



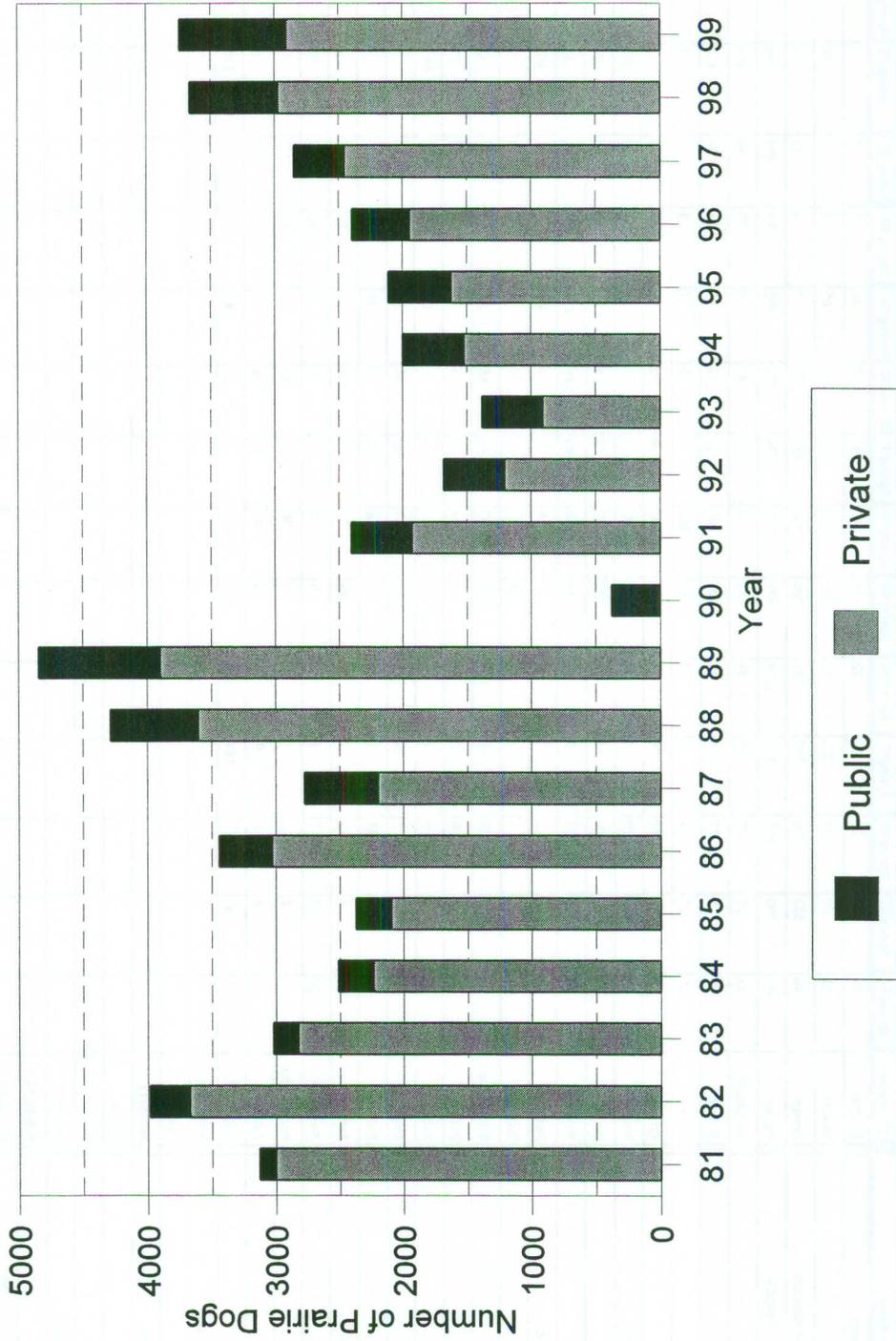
Appendix I.

Counts of Utah Prairie Dogs on Public Lands, 1981- 1999.



Appendix II.

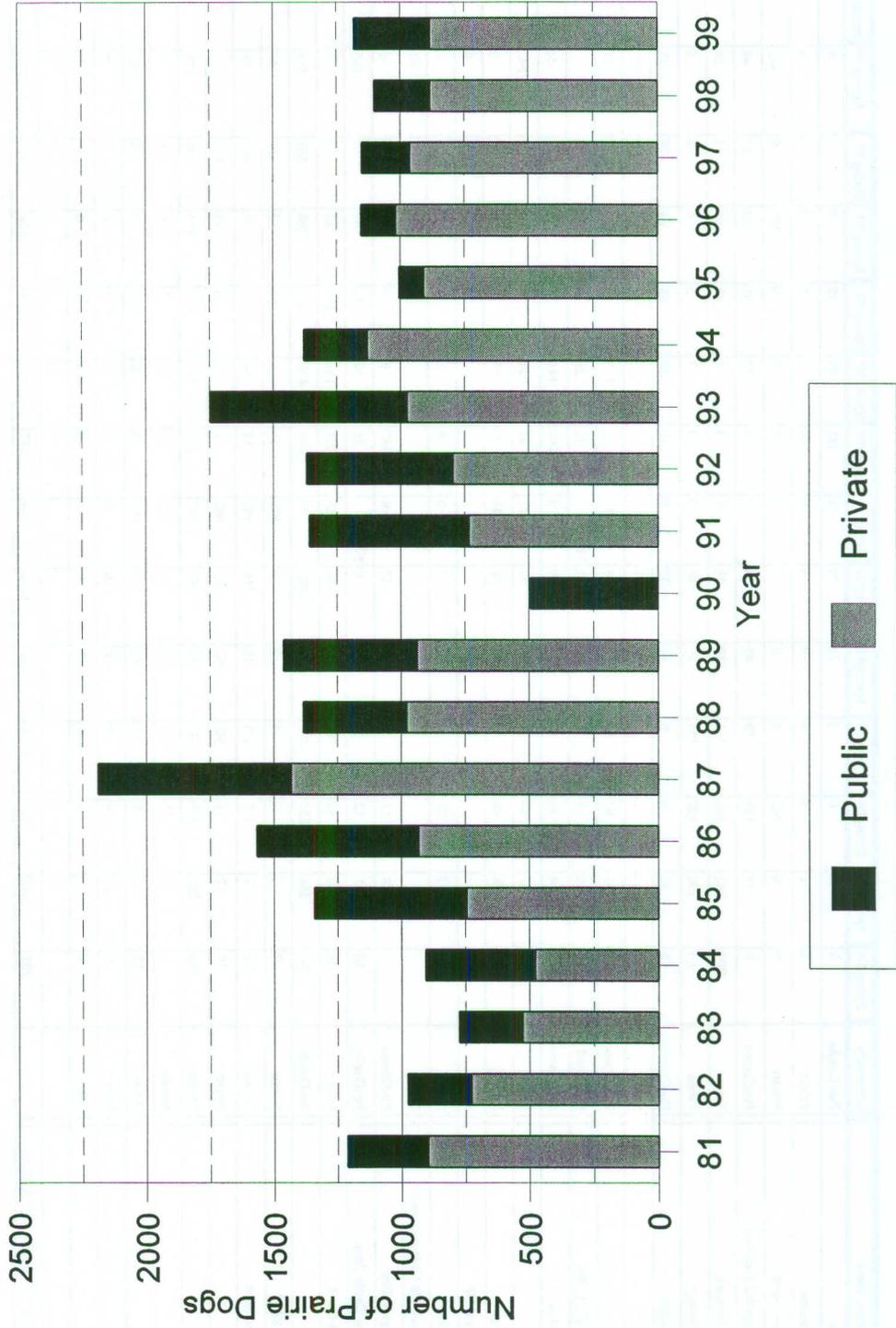
Counts of Utah Prairie Dogs  
in the West Desert Recovery Area



Appendix II. Counts of Utah Prairie Dogs in the West Desert Recovery Area, 1999.

UWIN #	Letter	Town Location Name	Ownership	Spring 84	Spring 85	Spring 86	Spring 87	Spring 88	Spring 89	Spring 90	Spring 91	Spring 92	Spring 93	Spring 94	Spring 95	Spring 96	Spring 97	Spring 98	Spring 99
0100	TOTAL	Rest Stop-Kanarra	Private	31	20	26	10	22	18	NC	37	48	40	6	5	1	14	20	58
0101	TOTAL	Kanarrville	Private	63	60	83	205	90	564	NC	267	143	65	38	42	49	76	90	80
0102	TOTAL	Duncan Creek-Quichipah	Private	146	553	770	363	551	569	NC	342	73	7	2	17	21	37	68	73
0103	TOTAL	CEDAR CITY - ENOCH	Private	648	590	877	862	1114	1993	NC	734	700	492	788	856	996	1352	1634	1536
0104	TOTAL	RUSH LAKE	Pri-Combo	23	20	27	10	79	141	0	55	45	2	39	84	103	54	114	117
0105	TOTAL	South Summit	Private	18	7	27	10	61	105	NC	23	13	41	115	94	127	160	111	81
0106	TOTAL	Roadside	Private	26	7	4	2	10	13	NC	1	0	2	3	0	0	0	0	0
0107	TOTAL	Mortenson's	Private	0	5	12	24	62	281	NC	374	16	42	172	224	381	418	545	556
0108	TOTAL	Parowan Airport	Private	99	6	10	16	34	NC	NC	37	36	76	82	76	104	32	82	108
0109	TOTAL	Paul Miller	Private	10	19	69	14	97	124	NC	2	85	19	10	86	121	188	183	124
0110	TOTAL	Buckskin	Public	50	80	133	9	0	13	110	165	216	232	199	0	31	52	101	95
0111	TOTAL	Rocky Reservoir	Public	0	3	5	17	9	0	0	3	0	NC	NC	NC	NC	0	NC	0
0112	TOTAL	Shurtz Canyon	Private	-	-	-	-	14	34	NC	44	19	6	5	4	5	11	9	22
0113	TOTAL	Buckhorn Flat	Pri-Combo	-	17	67	32	164	128	NC	41	45	123	265	157	52	52	72	108
0114	TOTAL	Long Hollow	Public	6	6	6	10	11	7	9	33	15	13	10	9	17	11	10	12
0115	TOTAL	Willow Spring	Public	18	9	6	12	9	0	NC	0	0	NC	NC	NC	NC	NC	NC	0
0116	TOTAL	Horse Hollow	Public	0	5	3	20	43	35	27	36	18	23	30	68	1	0	9	19
0117	TOTAL	Three Peaks	Public	43	21	23	17	11	13	6	10	14	11	7	6	1	0	0	0
0118	TOTAL	Jockey Springs	Public	4	4	9	13	37	39	57	33	56	54	29	21	4	3	3	5
0119	TOTAL	Bear Valley	Pri-Combo	23	37	7	5	6	0	0	0	0	0	NC	NC	20	107	66	34
0120	TOTAL	Pine Valley	Pub-Combo	17	2	2	7	11	37	96	64	43	25	17	7	0	4	14	10
0121	TOTAL	West Lund	Public	5	9	8	19	12	36	47	85	66	23	13	19	0	2	43	35
0122	TOTAL	Minersville #3	Pub-Combo	53	68	117	384	308	627	23	4	29	85	169	306	324	211	367	424
0123	TOTAL	West of Rush Lake	Pub-Combo												30	34	34	49	80
0124	TOTAL	Adams Well	Public													-	21	40	76
0125	TOTAL	Wild Pea Hollow	Pub-SITLA													3	9	19	46
0126	TOTAL	Horse Valley	Public														2	1	3
0127	TOTAL	Water Hollow	SITLA														8	15	
0128	TOTAL	Lower Bear Valley	Private															2	C
0129	TOTAL	Coyote Pond	Pub-BLM																13
0130	TOTAL	Domingus Escalante (DE)	Pub-BLM																C
0131	TOTAL	Tebbs Pond	Pub-BLM																C
OTHER	TOTAL	OTHER	Private	1187	742	1014	521	981	0	0	15	0	0	0	0	0			2868
OTHER	TOTAL	OTHER	Public	28	26	90	65	199	66	0	0	0	0	0	0	0			834
OTHER	TOTAL	OTHER	SITLA																17
TOTAL		WEST DESERT RECOVERY AREA		2498	2316	3395	2647	3935	4843	375	2405	1680	1381	1999	2111	2395	2850	3660	3740

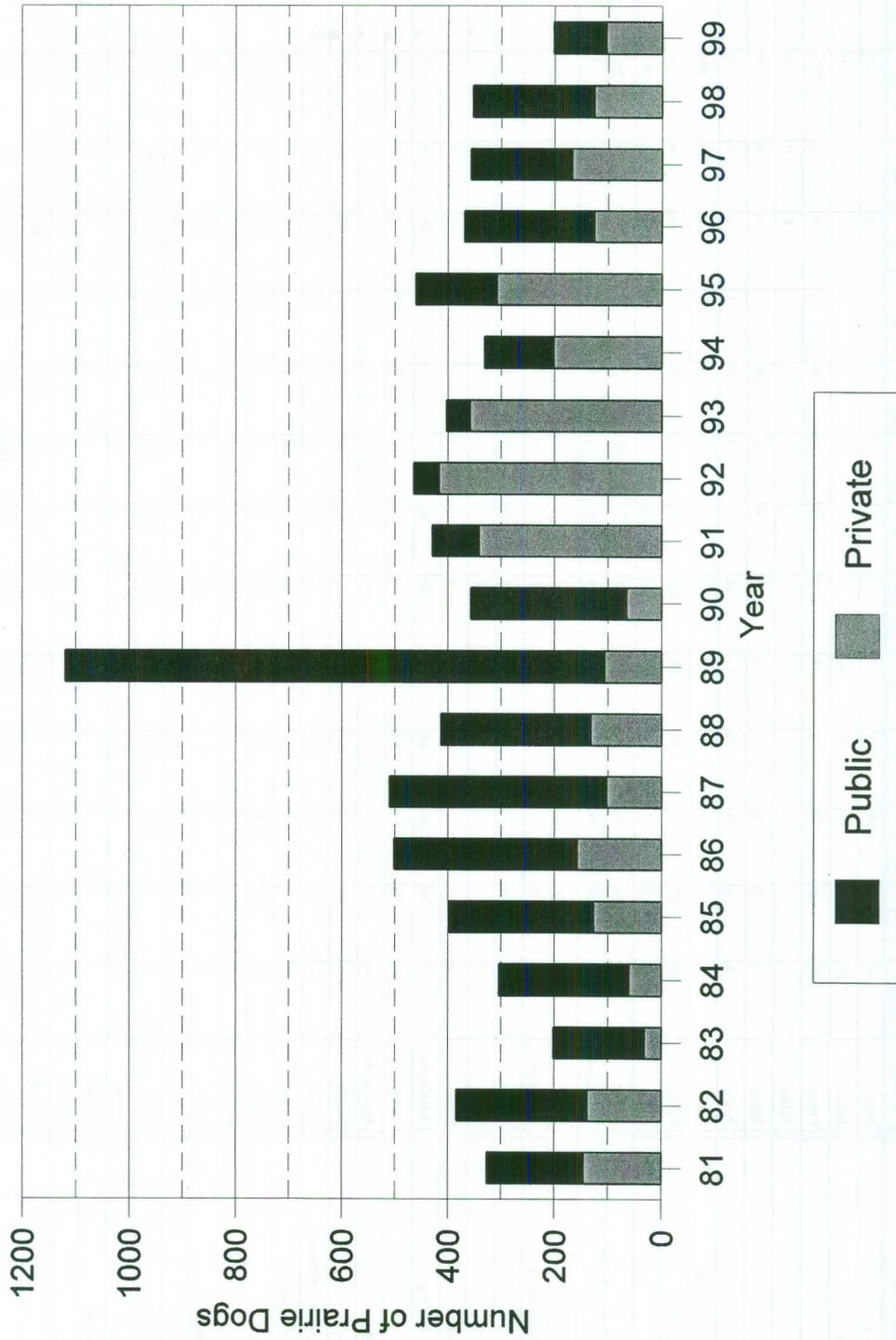
### Counts of Utah Prairie Dogs in the Paunsaugunt Recovery Area



Appendix III. Counts of Utah Prairie Dogs in the West Desert Recovery Area, 1999.

UWIN #	Letter	Town Location Name	Ownership	Spring 84	Spring 85	Spring 86	Spring 87	Spring 88	Spring 89	Spring 90	Spring 91	Spring 92	Spring 93	Spring 94	Spring 95	Spring 96	Spring 97	Spring 98	Spring 99
0201	TOTAL	Dog Valley	Pub-Combo	0	0	0	4	38	79	75	181	89	12	0	3	8	2	0	1
0202	TOTAL	Ahlstrum Hollow	Public	7	5	4	4	0	4	0	10	7	3	14	0	3	0	0	0
0203	TOTAL	John's Valley/North	Private	0	0	NC	0	0	0	0	0	0	0	NC	0	NC	NC	NC	NC
0204	TOTAL	John's Valley-W&E of Hwy.	Pri-Combo	9	58	146	89	43	0	0	1	27	56	28	37	44	62	12	38
0205	TOTAL	Pine View/Widuse	Private	204	262	302	311	110	30	0	3	1	85	54	14	24	18	37	26
0206	TOTAL	Tom Best Springs	Public	60	106	100	153	37	86	0	0	7	3	0	0	5	10	23	90
0207	TOTAL	Pangutch Lake	Pri-Combo	13	22	9	8	38	30	0	13	12	65	64	49	47	80	112	102
0208	TOTAL	Coal Pit Wash	Public	-	-	-	-	17	44	NC	8	0	0	0	NC	NC	NC	NC	NC
0209	TOTAL	SR 12-22 Bryce Airport	Pri-Combo	21	65	97	89	121	88	51	68	117	345	190	10	17	46	69	141
0209	TOTAL	Ruby's Inn (K, L, M)	Combined	2	6	6	6	2	21	NC	31	26	39	15			NA	NA	17
0210	TOTAL	Coyote Hollow	Pub-Combo	2	4	16	10	0	0	0	104	144	38	6	17	44	109	19	16
0211	TOTAL	Tropic	Private	64	82	10	38	25	42	37	21	21	0	0	NC	NC	NC	0	0
0212	TOTAL	Berry Springs	Public	17	48	40	53	NC	51	38	35	27	8	0	0	0	2	8	12
0213	TOTAL	Bryce Canyon NP	Public											7	6	6	3	2	1
0214	TOTAL	Dave's Hollow	Public	14	17	21	0	NC	0	0	0	0	0	0	0	0	NC	NC	NC
0215	TOTAL	Bryce Canyon NP Visitor Center	Public											91	76	49	29	66	61
0216	TOTAL	Blue Springs Valley	Pri-Combo	-	4	11	5	NC	27	8	NC	0	3	0	2	0	0	0	0
0217	TOTAL	County Line/Castle Cyn	Pri-Combo	10	11	12	18	0	0	NC	25	30	30	43	77	165	178	241	200
0218	TOTAL	BCNP-East Creek	Public	46	39	45	116	67	144	165	223	181	188	83	28	23	26	58	77
0219	TOTAL	Pangutch	Pri-Combo	186	284	232	475	432	503	10	444	450	441	396	362	354	332	246	239
0220	TOTAL	SR12 near SR89	Private	0	0	0	4	0	0	NC	15	16	83	35	29	48	39	41	30
0221	TOTAL	Y Town-and north	Private	56	71	133	359	16	110	NC	12	54	46	86	107	81	38	51	43
0222	TOTAL	Old Cabin	Private	10	17	14	NC	NC	NC	NC	1	0	10	12	NC	0	0	0	0
0223	TOTAL	Hatch	Private	162	201	337	303	391	187	NC	150	147	190	153	198	228	172	100	66
0224	TOTAL	UE I&II	Private	7	13	31	44	33	14	NC	12	12	12	116	15	9	4	15	13
OTHER	TOTAL	OTHER	Public	15	0	0	0	13	0	165	0	0	0	0	0	NC			298
OTHER	TOTAL	OTHER	Private	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	853
OTHER	TOTAL	OTHER	State	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	22
TOTAL		PAUNSAUGUNT RECOVERY AREA		905	1342	1566	2189	1383	1460	549	1357	1368	1748	1378	1003	1153	1150	1100	1173

### Counts of Utah Prairie Dogs in the Awapa Plateau Recovery Area



Source: U.S. Fish and Wildlife Service, Prairie Dog Recovery Plan, 1991.

Appendix IV. Counts of Utah Prairie Dogs in the Awapa Plateau Recovery Area, 1999.

UWIN #	Letter	Town Location Name	Ownership	Spring 84	Spring 85	Spring 86	Spring 87	Spring 88	Spring 89	Spring 90	Spring 91	Spring 92	Spring 93	Spring 94	Spring 95	Spring 96	Spring 97	Spring 98	Spring 99
0300	TOTAL	Pollywog/Top	Public	29	2	10	7	17	6	1	0	5	2	16	20	25	30	25	31
0301	TOTAL	Lost Knoll E.	Public	20	7	10	8	NC	18	4	0	1	0	0	4	0	0	NC	NC
0302	TOTAL	Dry Lake	Public	0	0	2	4	8	9	14	0	0	0	0	0	NC	NC	NC	NC
0303	TOTAL	Big Lake	Public	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NC	NC
0304	TOTAL	Doctor Ck.	Public	0	0	0	4	2	16	6	32	12	2	0	0	0	0	0	0
0305	TOTAL	Pelican Pt.	Public	0	0	0	0	11	10	3	0	0	1	0	0	0	0	0	0
0306	TOTAL	Square Reservoir Road	Public	4	12	5	5	10	35	2	0	0	0	0	0	NC	0	0	0
0307	TOTAL	Hunt's Reservoir	Public	9	32	32	50	88	322	65	0	2	2	5	16	54	26	67	13
0308	TOTAL	Dog Lake	Public	4	2	0	0	NC	0	0	0	NC	0	0	4	NC	NA	NC	NC
0309	TOTAL	Forsitea Res.	Private	33	36	45	44	NC	68	70	35	3	0	0	0	NC	NC	NC	NC
0310	TOTAL	Flossie Lake	Pri-Combo	11	36	14	14	4	38	21	0	3	2	0	0	2	0	4	5
0311	TOTAL	Hare Lake-Rock Reservoir	Public	5	26	21	12	18	3	0	0	2	1	1	2	0	0	0	10
0312	TOTAL	The Tanks/Cedar Pk.Dr.	Pri-Combo	9	0	6	17	9	26	13	14	0	0	0	15	7	5	9	27
0313	TOTAL	Mud Lake	Public	-	-	-	-	NC	12	0	0	0	0	4	2	12	2	10	0
0314	TOTAL	Smooth Knoll	Public	-	-	-	-	NC	12	4	0	0	0	0	0	0	0	NC	NC
0315	TOTAL	Sage Hen Draw	Public	-	-	-	-	NC	8	2	5	0	0	0	0	0	0	0	NC
0316	TOTAL	Big Hollow-Flat Top	Pub-Combo	31	28	31	86	86	308	78	2	9	15	98	84	129	134	116	27
0317	TOTAL	Terza Flat	Public	65	79	124	117	NC	77	9	0	3	14	2	5	14	0	4	0
0318	TOTAL	Moroni Pk.Res.	Pub-Combo	6	0	0	0	NC	NC	0	0	0	0	0	0	0	0	NC	NC
0319	TOTAL	Horse Valley	Private	6	40	95	37	28	26	40	81	85	47	90	143	15	NC	0	0
0320	TOTAL	LOA-BICKNELL-LYMAN	Private	54	80	37	42	11	14	15	3	14	8	54	34	7	27	14	20
0321	TOTAL	Greenwich-Koosharem	Private	0	6	20	5	81	66	0	46	4	21	7	62	39	26	53	44
0322	TOTAL	Tidwell Slope	Public	17	11	44	40	29	39	0	0	7	5	2	2	1	4	4	NC
0323	TOTAL	Gooseberry	Private	-	-	-	-	11	NC	10	208	223	242	NC	7	18	79	36	NC
0324	TOTAL	So.Koosharem	Private	-	-	-	-	NC	NC	0	3	91	40	50	54	30	20	10	10
0325	TOTAL	Burrville	Private	-	-	5	10	NC	0	0	0	0	NC	0	0	NC	NC	0	0
0326	TOTAL	Capitol Reef N.P.	Public	0	0	NC													
0327	TOTAL	Hare Valley	Private	-	-	-	-	-	-	-	-	-	-	-	4	15	4	1	4
0328	TOTAL	Forsyth Reservoir	Pub-NF	-	-	-	-	-	-	-	-	-	-	2	2	0	0	0	0
0329	TOTAL	Giles Hollow	Pub-NF	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	1
0330	TOTAL	Deer Peak	Pub-NF	-	-	-	-	-	-	NC	0	NC							
OTHER	TOTAL	OTHER	Private	60	126	157	102	131	106	65	341	417	358	201	304	109	156	114	78
OTHER	TOTAL	OTHER	Public	243	271	344	408	282	1013	292	88	47	44	130	152	244	190	228	97
OTHER	TOTAL	OTHER	State																
TOTAL		AWAPA PLATEAU RECOVERY AREA		303	397	501	510	413	1119	357	429	464	402	331	460	369	357	353	201

Certificate No. UPDCR-SRO \_\_\_\_\_

State of Utah  
Division of Wildlife Resources

Utah Prairie Dog Control  
Certificate of Registration

This *Certificate of Registration* authorizes \_\_\_\_\_  
(Name of Registrant)

of \_\_\_\_\_ (Phone: \_\_\_\_\_)  
(Complete Address)

to remove no more than \_\_\_\_\_ prairie dogs by the following method(s):  
(Maximum number)

\_\_\_\_\_ (shooting [during daylight hours] or trapping)  
during the period \_\_\_\_\_ through \_\_\_\_\_

The property situated in Township \_\_\_\_\_, Range \_\_\_\_\_, Section \_\_\_\_\_

Town Name \_\_\_\_\_ has been evaluated by \_\_\_\_\_  
(Name of DWR Personnel)

who has authorized removal for the purpose of \_\_\_\_\_

This property is owned by \_\_\_\_\_  
(Property Owner)

of \_\_\_\_\_ (Phone: \_\_\_\_\_),  
(Complete Address)

1. The above *Certificate of Registration* may be issued on private lands throughout the range of the Utah prairie dog. Taking of Utah prairie dogs on lands other than described on this *Certificate of Registration*, including all public lands, will be deemed to be a violation of state and/or federal laws.
2. The following information must be reported to Utah Division of Wildlife Resources (DWR) every thirty (30) days: name and address of Certificate holder, *Certificate of Registration* number, location and method of take of all Utah prairie dogs taken during the thirty (30) day period, and any other information requested from time to time by DWR.
3. The use of any chemical toxicant including, but not limited to, gas and poison is strictly prohibited.
4. This *Certificate of Registration* is nontransferable, is valid only in the area and for the period specified above, and must be in possession of registrant when exercising any privileges hereunder. Renewals or changes dates and/or area(s) will require obtaining a new *Certificate of Registration*.
5. It is the responsibility of the Certificate holder to abide by all local ordinances.

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, under authority granted by *Wildlife Resources Code of Utah* and through the Director, Utah State Division of Wildlife Resources, 1596 W. North Temple, Salt Lake City, Utah 84116.

By \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

I have read and understand the control restrictions as stated above and in the State of Utah Proclamation of the Wildlife Board for Taking and Possessing Utah Prairie Dogs (*Cynomys parvidens*) and understand that any violation of these regulations may result in the immediate revocation of the Utah prairie dog control *Certificate of Registration* and criminal prosecution under the Endangered Species Act.

White - Registrant's Copy  
Green - Nongame  
Yellow - Regional Office

\_\_\_\_\_  
(Signature of Registrant)

