

Population Status of Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*) based on 2006-2007 data

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At the request of the Nevada Division of Forestry, the Nevada Natural Heritage Program (NNHP) undertook a GIS analysis of all known historical data on Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii* Reveal) to determine the current threats to and status of the species in Nevada. The known spatial footprints for all current and historical reports of the species as of September 2007 were extracted from the Nevada Natural Heritage Program databases. These were overlaid with summer-2006 1-meter resolution aerial imagery for Clark and Lincoln counties from the National Agricultural Imagery Program (NAIP) and, where gaps existed in the NAIP imagery, from the OpenWeb Info Mapper (<http://gisgate.co.clark.nv.us/openweb/>) of the Clark County Geographic Information Systems Management Office (GISMO). These were also overlaid with the most recent (2003) land ownership data available to NNHP as one indication of likely future land uses affecting Las Vegas buckwheat populations. Also considered were known ongoing land-use proposals and projects, such as the Upper Las Vegas Wash Conservation Transfer Area (CTA), the 233 acre conservation easement recently established at Nellis Air Force Base, the Coyote Springs Valley development, and the Toquop Energy project in Lincoln County.

The results of this analysis are present in table 1. Based on information currently available to NNHP, about 68% of the estimated 1805 acres historically occupied by the species are private lands and 32% are public lands, the latter including about 4.3% under protective management (Wilderness, ACEC), and about 1% on a military reservation (Nellis AFB, of which about half is in a conservation easement). The total known historical population of the species is estimated to have been about 47,375 individuals. Based on evidence of clearing and/or building on the habitat footprint seen in the aerial imagery used, about 63% of the total known historical population has been extirpated, and another 8% is expected to be lost in the near future, or may already have been lost since the imagery used in this analysis was captured. The remaining 29% is located mainly north and east of Las Vegas Valley (map figures 1 and 2), and is apparently secure for the foreseeable future, with some uncertainty about the future direct or indirect effects of the Coyote Springs Valley and Toquop Energy projects.

Table 1. History, Size, Status, and Ownership of the known populations of Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii* Reveal).

POPULATION	Dates of Ground Surveys		Population Size		PERCENT OF EACH POPULATION									
	First	Last	Acres	% total	2006-2007 Status*			Land Ownership/Management						
					Apparently Secure	Extirpation Imminent	Extirpated	Wilderness	BLM ACEC	BLM General	Nellis	UNLV	Private	
01 - Alexander & Revere NW	1998-11-12	1998-11-12	6.48	.36			100.00							100.00
02 - Centennial Pkwy N	1998-10-06	2005-04-12	27.68	1.53		52.46	47.54			52.43				47.57
03 - Flamingo Wash	1998-10-06	2006-11-11	18.97	1.05		100.00				99.99				.01
04 - Garden Spring	1997-10-03	1997-10-03	7.72	.43	100.00				100.00					
05 - Craig & Simmons	1998-11-12	2000-12-11	38.85	2.15		23.15	76.85							100.00
06 - Ann Road bluff	1998-11-12	2001-01-10	506.86	28.08		1.67	98.33							100.00
07 - Elkhorn & Jones NE	1998-09-30	2005-01-02	63.94	3.54		95.28	4.72			95.28				4.72
08 - Nellis AFB/Lamb Blvd	1998-10-16	2006	67.49	3.74	16.46	17.37	66.17				26.70			73.30
09 - Upper Las Vegas Wash	1998-09-30	2005-04-30	137.70	7.63	99.87		.13			99.87				.13
10 - 5th & Lone Mountain N	1998-11-12	1998-11-12	14.65	.81			100.00							100.00
11 - Tropicana Wash	1998-10-06	1998-10-06	3.00	.17			100.00							100.00
12 - Patrick & Pecos	1982-11-13	1998-10-14	496.69	27.52		1.76	98.24							100.00
13 - Tropicana Wash	1998-10-06	2004-05-11	23.50	1.30		20.83	79.17							100.00
14 - White Basin NE	1999-10-15	2005-10-22	165.33	9.16	100.00					81.92				18.08
15 - Tropicana Wash	1998-10-06	1998-10-06	2.65	.15		27.50	72.50							100.00
16 - Ann & 5th NE	1998-11-12	1998-11-12	4.50	.25		48.42	51.58							100.00
17 - Toquop Wash	2005-04	2006-11-07	72.30	4.01	**100.00					100.00				
18 - Coyote Springs W	2005-03-03	2005-03-03	7.15	.40		100.00				15.33				84.67
19 - Coyote Springs E	2005-03-02	2005-03-02	18.16	1.01	**100.00					.06				99.94
20 - Coyote Springs Valley N	2005-03-03	2005-03-03	4.80	.27	**100.00					100.00				
21 - Coyote Springs Valley S	2005-03-03	2005-04-26	57.58	3.19	**100.00					100.00				
22 - Lovell Wash	2005-10-28	2005-12-05	7.75	.43	100.00				100.00					
23 - White Basin SW	1980-09-27	2005-10-22	.03	T	100.00					100.00				
24 - Patrick & Maryland	1998-10-05	1998-10-05	5.50	.30			100.00							100.00
25 - Bitter Spring Valley	2002-11-26	2005-02-12	41.30	2.29	100.00					100.00				
26 - UNLV	1970-10-23	1974-10-07	4.51	.25			100.00						.67	99.33
27 - Centennial & Decatur	2005-01-04	2005-01-04	.07	T		100.00				100.00				
TOTAL POPULATION:	1970-10-23	2006-11-11	1805.14	100.00	29.01	8.16	62.83	.43	3.88	26.71	1.00	T	67.98	

*2006-2007 Status: based on 2006-2007 1-meter aerial imagery, and known or anticipated land uses. T = less than 0.005.

**Possible future threats exist for these populations, depending on the effects of developments proposed nearby (Toquop Energy Project and Coyote Springs Community).

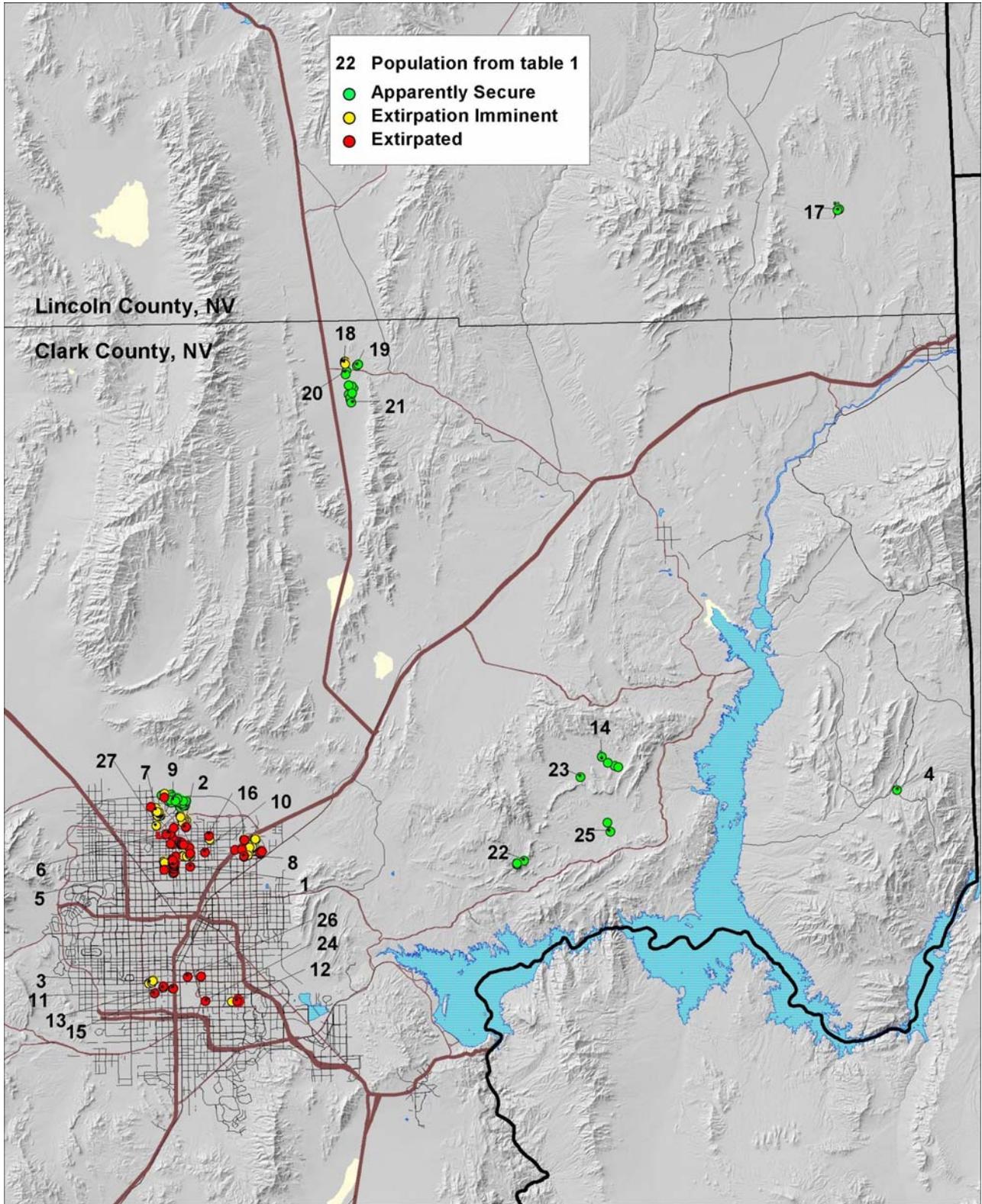


Figure 1. Current and Historical Global Distribution of Las Vegas buckwheat, *Eriogonum corymbosum* var. *nilesii*. Compiled by the Nevada Natural Heritage Program, September 2007.

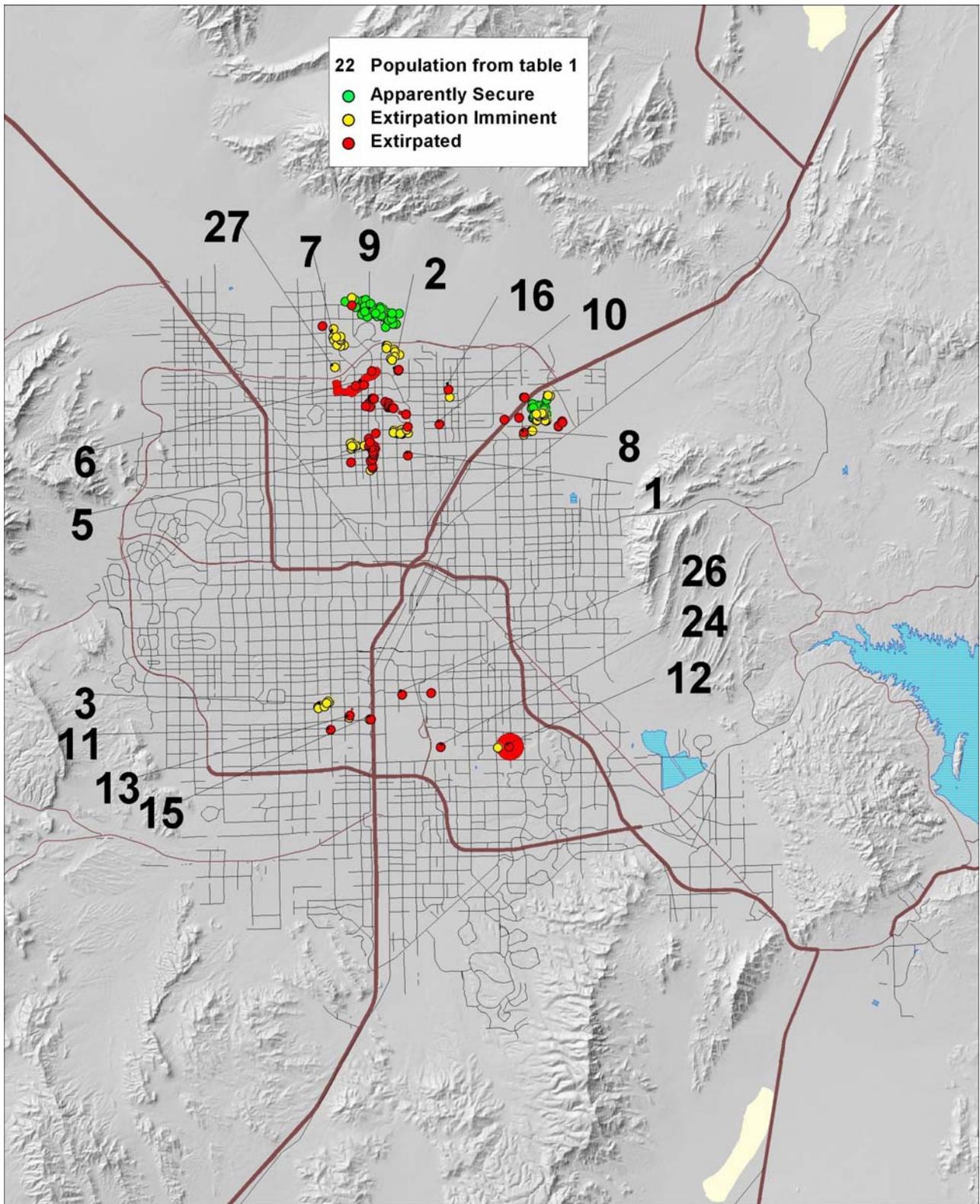


Figure 2. Current and Historical Las Vegas Valley Distribution of Las Vegas buckwheat, *Eriogonum corymbosum* var. *nilesii*. Compiled by the Nevada Natural Heritage Program, September 2007.