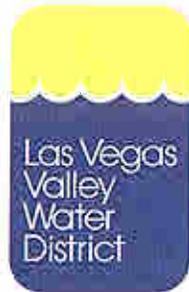




ENVIRONMENTAL REPORT
COVERING SELECTED HYDROGRAPHIC BASINS IN
CLARK, LINCOLN, NYE AND WHITE PINE COUNTIES, NEVADA

1994



COOPERATIVE WATER PROJECT
Water for Nevada's Future
Report No. 14



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By

Woodward-Clyde Consultants

Dames & Moore

Las Vegas Valley Water District

its known limits; areas where a relict population of species has remained unaltered over long periods of time; and unique ecotypes which contain species that normally occur in different habitats. Wetlands are also considered sensitive communities. In this report, discussion is limited to sensitive vegetation of lower elevations.

A unique ecotype of juniper (*Juniperus scopulorum*) known as "swamp cedar" (Billings 1954) occurs in Spring Valley. This species forms a woodland in the moist, saline valley floor, as much as 600 feet below the lower limit of the more xerophytic Utah juniper. This population is thought to be a unique living vestige of the early Holocene woodland (Wells 1983) and exists because of special microclimatic conditions.

A population of pygmy sage (*Artemisia pygmaea*), a rare woody herb, is located in the Shoshone Pygmy Sage Natural Area (Bostick and Niles 1975) within Spring Valley. This species occurs on about one acre in an opening of the dense sagebrush community.

3.2.4 Vegetation Zones within Specific Valleys

Table 3-1 provides the number of acres of each vegetation zone present in each hydrologic basin as mapped from the satellite imagery for purposes of this report.

Spring Valley

Vegetation zones within Spring Valley are shown on Figure 3-10 and major vegetation communities within the valley, in order of decreasing acreage, include sagebrush (385,400 acres), pinyon-juniper (203,200 acres), saltbush (180,100 acres), and greasewood (159,300 acres) (Table 3-1). Over 94 percent of the valley is occupied by these four vegetation zones. Areas mapped as saltbush in Spring Valley are mainly shadscale and areas mapped as greasewood are variable in density and composition, containing a large amount of saltgrass and other grasses in some areas, and big sagebrush and rabbitbrush. A large playa, Yelland Lake, exists in the northern part of the valley. Approximately 13,700 acres of agriculture (irrigated and fallow) and wetland areas are also located in the valley.

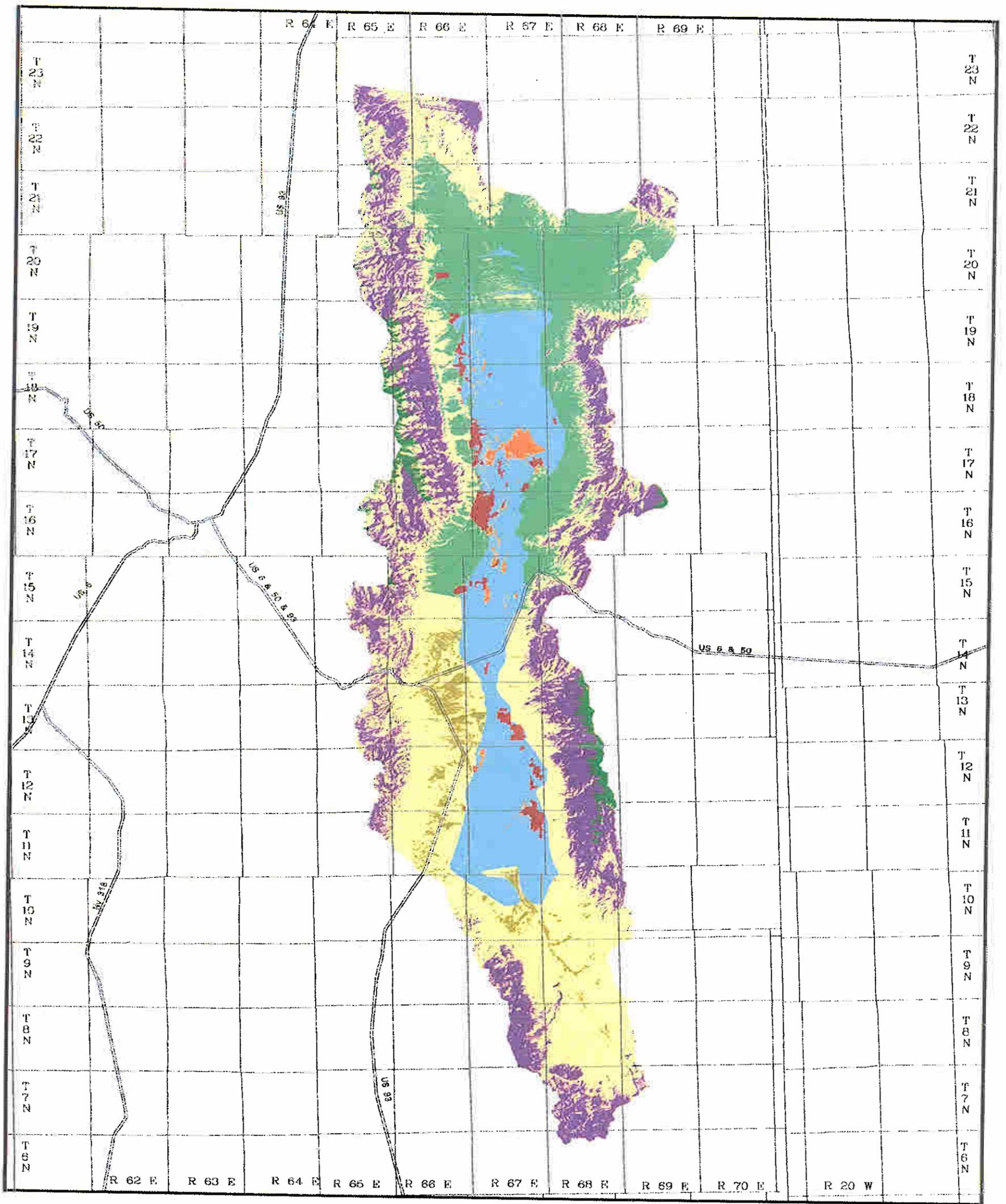


Figure 3-10. -- Vegetation classification in Spring Valley

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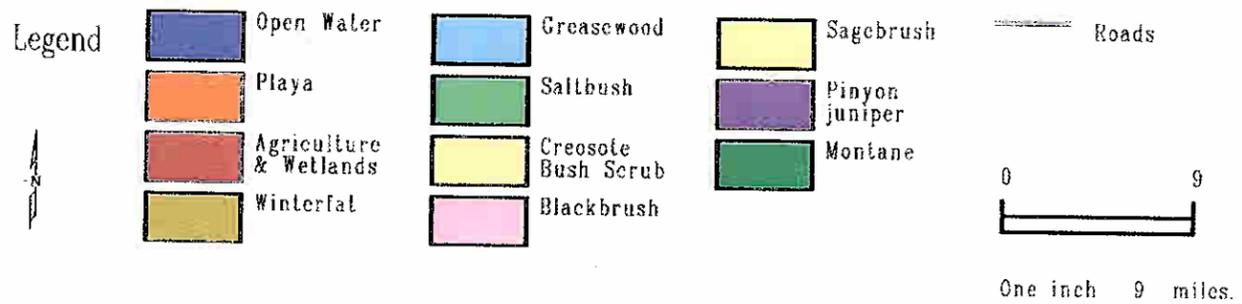


TABLE 3-1
ACREAGE OF VEGETATION ZONES IN BASINS
WITHIN THE CWP AREA

Valley/Vegetation Zone	Acreage	Percent
Spring Valley*		
Playa	9,500	1.0
Agriculture and Wetlands	13,700	1.4
Winterfat	17,900	1.8
Greasewood	159,300	16.2
Saltbush	180,100	18.3
Sagebrush	385,400	39.1
Pinyon-Juniper	203,200	20.6
Montane	16,200	1.6
TOTAL	985,300*	100.0
Snake Valley*		
Open Water	2,000	0.1
Playa	20,900	1.4
Agriculture and Wetlands	25,500	1.7
Greasewood	177,200	11.5
Saltbush	681,100	44.1
Sagebrush	399,400	25.9
Pinyon-Juniper	210,100	13.6
Montane	26,800	1.7
TOTAL	1,543,000*	100.0
Hamlin Valley		
Winterfat	32,100	6.4
Sagebrush	300,200	60.0
Pinyon-Juniper	167,800	33.6
TOTAL	500,100	100.0
Lake Valley		
Agriculture and Wetlands	3,700	1.0
Sagebrush	186,700	52.6
Pinyon-Juniper	160,600	45.2
Montane	4,300	1.2
TOTAL	355,300	100.0
Patterson Valley		
Agriculture and Wetlands	100	0.1
Sagebrush	167,600	62.5
Pinyon-Juniper	88,300	33.0
Montane	11,900	4.4
TOTAL	267,900	100.0
Dry Lake Valley		
Playa	16,400	2.8
Winterfat	182,700	31.8
Sagebrush	287,900	50.1
Pinyon-Juniper	88,200	15.3
TOTAL	575,200	100.0

TABLE 3-1
(Continued)

Valley/Vegetation Zone	Acreage	Percent
Delamar Valley		
Playa	5,300	2.3
Winterfat	33,900	14.6
Blackbrush	184,800	79.7
Pinyon-Juniper	8,000	3.4
TOTAL	232,000	100.0
Coyote Springs Valley		
Blackbrush	144,200	36.8
Creosote Bush Scrub	224,900	57.3
Pinyon-Juniper	23,200	5.9
TOTAL	392,300	100.0
Hidden Valley		
Winterfat	2,000	3.8
Blackbrush	7,800	14.8
Creosote Bush Scrub	42,900	81.4
TOTAL	52,700	100.0
Garnet Valley		
Playa	3,300	3.2
Creosote Bush Scrub	99,100	96.8
TOTAL	102,400	100.0
Railroad Valley North		
Open Water	50	<0.1
Playa	38,800	2.8
Agriculture and Wetlands	14,100	1.0
Greasewood	187,000	13.6
Saltbush	807,050	58.8
Pinyon-Juniper	320,000	23.4
Montane	5,000	0.4
TOTAL	1,372,000	100.0
Railroad Valley South		
Playa	5,500	1.4
Saltbush	235,700	62.3
Sagebrush	88,500	23.3
Pinyon-Juniper	49,400	13.0
TOTAL	379,100	100.0
Penoyer Valley		
Playa	3,300	0.7
Agriculture and Wetlands	700	0.2
Greasewood	6,600	1.5
Saltbush	302,400	67.5
Sagebrush	90,100	20.1
Pinyon-Juniper	44,700	10.0
TOTAL	447,800	100.0

**TABLE 3-1
(Continued)**

Valley/Vegetation Zone	Acreage	Percent
Tikaboo Valley		
Playa	26,800	4.2
Blackbrush	249,000	39.4
Creosote Bush Scrub	126,500	19.9
Saltbush	204,300	32.2
Pinyon-Juniper	27,700	4.3
TOTAL	634,300	100.0
Pahranagat Valley		
Open Water	900	0.1
Agriculture and Wetlands	5,500	1.1
Blackbrush	231,300	46.5
Creosote Bush Scrub	86,100	17.3
Saltbush	126,500	25.4
Pinyon-Juniper	47,700	9.6
TOTAL	498,000	100.0
Cave Valley		
Winterfat	2,000	1.0
Agriculture and Wetlands	1,100	0.5
Greasewood	7,300	3.1
Sagebrush	117,400	51.0
Pinyon-Juniper	97,400	42.2
Montane	5,100	2.2
TOTAL	230,300	100.0
Pahroc Valley		
Winterfat	4,300	1.3
Sagebrush	273,700	84.0
Pinyon-Juniper	48,000	14.7
TOTAL	326,000	100.0
Coal Valley		
Saltbush	81,000	27.8
Sagebrush	164,300	56.6
Pinyon-Juniper	45,200	15.6
TOTAL	290,500	100.0
Garden Valley		
Winterfat	15,400	4.8
Sagebrush	197,500	62.0
Pinyon-Juniper	95,600	30.0
Montane	10,100	3.2
TOTAL	318,600	100.0

**TABLE 3-1
(Continued)**

Valley/Vegetation Zone	Acreage	Percent
Three Lakes South Valley		
Blackbrush	33,000	16.4
Creosote Bush Scrub	131,800	65.7
Saltbush	18,700	9.3
Pinyon-Juniper	17,200	8.6
TOTAL	200,700	100.0
California Wash Valley		
Open Water	55	0.1
Agriculture and Wetlands	1,100	0.5
Creosote Bush Scrub	204,800	99.4
TOTAL	205,955	100.0

* Northernmost extent of basin not included in total acreage (see Figures 3-10 and 3-11).

Snake Valley

Saltbush, sagebrush, pinyon-juniper, and greasewood are the most abundant vegetation communities in Snake Valley (Figure 3-11) and include 681,100, 399,400, 210,100, and 177,200 acres, respectively. Together these four vegetation communities comprise over 95 percent of the valley's vegetation. As shown on Table 3-1, 25,500 acres of agriculture and wetland areas are also located in Snake Valley.

Hamlin Valley

Major vegetation zones within Hamlin Valley include sagebrush (300,200 acres), pinyon-juniper (167,800 acres), and winterfat (32,100 acres) (Figure 3-12). All of the valley is represented by these three vegetation communities (Table 3-1). No areas of sensitive vegetation were identified in Hamlin Valley.

Lake Valley

As shown on Figure 3-13, major vegetation zones in Lake Valley are limited to sagebrush and pinyon-juniper and together they occupy almost 98 percent of the valley (Table 3-1). Small areas of montane (4,300 acres) and agriculture and wetlands (3,700 acres) are also located in Lake Valley.