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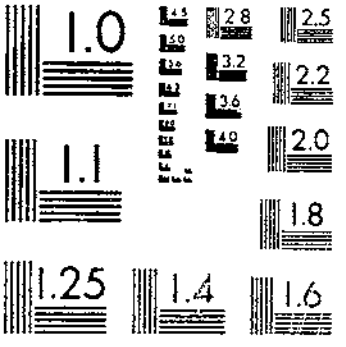

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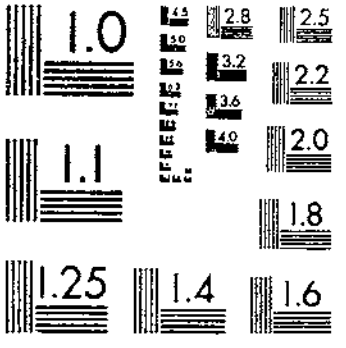

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United States Department of Agriculture

Agricultural Research Service

Technical Bulletin Number 1651

Alfalfa-Growing Areas of the Western United States

Their Climates and Similarities

MAY 28 1982

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ABSTRACT

U.S. Department of Agriculture, Agricultural Research Service. 1982. Alfalfa-growing areas of the Western United States--their climates and similarities. U.S. Department of Agriculture, Technical Bulletin No. 1651, 68 pp.

Alfalfa-growing areas of the Western United States are often small and widely scattered. Different climatic conditions prevail in different areas. Being able to identify the growing areas and to define those with similar climatic conditions will greatly assist extension and industry workers in decision-making regarding alfalfa variety development and variety use recommendations. This bulletin includes a map of the alfalfa-growing areas of the Western United States. They are subdivided into 14 climatically distinct zones by using a cluster analysis procedure on 30-year weather data for 243 weather stations in or near the growing areas. In addition, these 243 locations are ranked in the tables by increasing latitude, longitude, elevation, frost-free days, mean temperature, mean maximum temperature, mean minimum temperature, annual precipitation, and two calculated climatological index values. The information in this bulletin should greatly benefit alfalfa workers in identifying growing areas of the Western United States and understanding their climatological similarities and differences.

KEYWORDS: Alfalfa, climatological data, growing areas, Western United States.

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PREFACE

The information in this bulletin was assembled by the Western Alfalfa Improvement Conference, "Committee to Establish Ecological Zones for Alfalfa Production in the Western United States." Members of the committee and contributors to this report are--

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ALFALFA-GROWING AREAS OF THE WESTERN UNITED STATES—THEIR CLIMATES AND SIMILARITIES

Alfalfa-growing areas of the Western United States are often small and widely scattered. Some are in high mountain valleys and others in low desert lands. Most often they are dependent on the availability of irrigation, particularly in the Southwest. Temperatures may vary greatly. Because these areas are scattered and their climates differ, they are difficult to characterize. When selecting varieties or establishing variety trials in one area, one never knows in what other areas the results may be applicable. To be able to define localities of similar climatic and ecological conditions will greatly assist those in extension and industry when recommending variety use.

In 1973, the Western Alfalfa Improvement Conference appointed the "Committee to Establish Ecological Zones for Alfalfa Production in the Western United States," with the assignment to map the growing areas of the Western States, to collect and assemble climatological data peculiar to those areas, and to develop a system whereby similar areas could be identified. The committee included a representative from each of 11 Western States. The information in this bulletin is the result of that committee's efforts and is intended for use by alfalfa workers in identifying growing areas of the Western United States and understanding their climatological similarities and differences.

The alfalfa-growing areas of the Western United States are shown on the map (inside back cover). Information regarding these areas in each State was supplied by the committee member from that State. The growing areas are widely scattered and often in narrow river valleys where irrigation is available. Their size is not intended to indicate alfalfa acreage but only where alfalfa is grown. Estimates of alfalfa hay and seed acreage, yield, and production are listed by State in table 1. It is readily apparent that approximately one-third and three-fourths of the total U.S. alfalfa hay and seed production, respectively, are produced in 11 Western States.

Climatological data, including latitude, longitude, elevation, frost-free days, mean temperature, mean maximum temperature, mean minimum temperature, and annual precipitation, were collected from 30-year (1941-70) weather records of the National Oceanic and Atmospheric Administration for 243 weather stations in or near the alfalfa-growing areas (table 2). Weather station locations where climatological data were obtained are indicated on the map. The data for each station in each State can be easily found by locating the number of the weather station on the map and referring to the number (LOC_NO) for that State in table 2. The location of each weather station can be easily found by following the reverse procedure.

Table 1.--Average acreage, yield, and production estimates for alfalfa hay and seed in 11 Western States for 1977-79 1/

State	Hay			Seed		
	Acreage	Yield	Production	Acreage	Yield	Production
	1,000 acres	Tons per acre	1,000 tons	1,000 acres	Pounds per acre	1,000 pounds
Arizona	207	6.40	1,325	---	---	---
California	1,093	5.77	6,303	63.6	458	27,913
Colorado	683	2.92	1,990	---	---	---
Idaho	1,073	3.58	3,844	39.3	388	15,137
Montana	1,227	2.25	2,763	35.6	105	3,867
Nevada	183	3.40	623	16.8	430	7,185
New Mexico	233	4.40	1,024	---	---	---
Oregon	412	3.53	1,455	13.6	372	5,047
Utah	470	3.62	1,701	15.3	277	4,250
Washington	503	3.63	1,828	34.0	310	10,398
Wyoming	533	2.25	1,201	---	---	---
Western U.S.	6,617	3.80	24,057	218.2	334	73,797
U.S.	27,417	3.09	84,861	477.8	204	96,215

1/ From Agricultural Statistics 1980, USDA.

In tables 3-10, the climatological data are listed in order by each of the variables recorded, such as latitude, frost-free days, and mean temperature, so that locations throughout the 11 States with similar variables can be identified. In addition, as an aid to identifying areas with similar overall climatic conditions, two simple indexes, CLIMEX and CLDEX, were computed. CLIMEX (table 11) is the sum of the frost-free days, mean temperature, mean maximum temperature, and mean minimum temperature. CLDEX (table 12) is the sum of the frost-free days and the mean temperature. Locations with similar indexes should have somewhat similar climates, and an alfalfa variety should perform similarly in areas of similar CLIMEX or CLDEX values except for photoperiod differences associated with latitude.

As a further aid in identifying locations with similar climates, a cluster analysis procedure was employed. Data for latitude, frost-free days, and mean temperature from each of the 243 locations were standardized and subjected to cluster analysis using BMDP program P2M.1/ This program groups locations according to euclidean distances. Fourteen such groups with similar climates were identified using the cluster analysis procedure (table 13). These groups, or climatic zones, were symbolically coded and are shown on the map. Locations with the same symbol should have similar climates. Variation among locations within each climatic zone should be smaller than the variation among zones. Characteristics of each climatic zone are presented in table 14.

Latitude, a variable used with the cluster analysis procedure, was not used in either the CLIMEX or CLDEX indexes. Thus, the climatic zones developed by the cluster analysis procedure and shown on the map are strongly oriented by latitude. The authors believe that using latitude in the cluster procedure is probably the most realistic approach to identifying climatically similar areas, since, because of dormancy differences conditioned by photoperiod, one would not expect the same alfalfa variety to be planted at locations widely separated in latitude in spite of similar frost-free days and mean temperature.

1/ Engelman, L. 1979. Cluster analysis of cases. In Dixon, W. J., and Brown, M. B., eds., BMDP-79 biomedical computer programs P-series, pp. 633-642. California Press, Berkeley.

GUIDE TO INTERPRETING VARIABLE NAMES USED IN TABLES 2-12

LOCATION = name given by National Oceanic and Atmospheric Administration to weather station
LOC_NO = location number within each State to be used in identifying weather stations shown on map
LAT = latitude
LONG = longitude
ELEV = elevation in feet
FFD = frost-free days
MEANTEMP = mean temperature (F)
MEAN_MAX = mean maximum temperature (F)
MEAN_MIN = mean minimum temperature (F)
ANN_PREC = annual precipitation in inches
CLIMEX = sum of frost-free days, mean temperature, mean maximum temperature, and mean minimum temperature
CLDEX = sum of frost-free days and mean temperature
. = no data available

Except for the CLIMEX and CLDEX indexes, the climatological data in tables 2-12 were taken from "Climatography of the United States No. 81 (By State), Monthly Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1941-70," U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service, National Climatic Center, Asheville, N.C.

Table 2.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/

ARIZONA

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
AJO	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
BENSON	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
CASA GRANDE	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
CLIFTON	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
DOUGLAS	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
FLAGSTAFF	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
GILA BEND	7	N3257	W11243	737	266	72	89	55	5.76	482	338
GLOBE	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
HOLBROOK	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
KINGMAN	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
NOGALES	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
PARKER	12	N3410	W11417	425	272	72	88	57	3.82	489	344
PHOENIX WSO	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
PRESCOTT	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
ST JOHNS	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
TUCSON UOFA	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
WICKENBURG	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
WINSLOW	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
YUMA WSO	19	N3240	W11436	194	350	74	88	61	2.67	573	424

CALIFORNIA

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
ALTURAS RS	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
BAKERSFIELD WSO	2	N3525	W11903	475	295	65	78	51	5.72	489	360
BISHOP WSO	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
BLYTHE	4	N3337	W11436	268	290	72	88	55	3.50	505	362
CEDARVILLE	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
COLUSA 1 SSW	6	N3912	W12201	60	267	61	75	47	16.03	450	328
CRESCENT CITY 1 N	7	N4146	W12412	40	249	53	60	44	71.06	406	302
EL CENTRO 2 SSW	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
ESCONDIDO	9	N3307	W11705	660	270	62	76	48	14.05	456	332
FRESNO WSO	10	N3646	W11943	328	285	62	76	50	10.24	473	347
HAT CREEK PH #1	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
HOLLISTER 1 SW	12	N3650	W12125	279	279	58	73	44	13.27	454	337
INDIO USDG	13	N3344	W11615	11	292	73	89	57	3.00	511	365
MERCED FS 2	14	N3718	W12029	169	251	61	76	46	12.22	434	312
PALMDALE	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
PASO ROBLES	16	N3538	W12041	700	204	59	77	41	14.17	381	263
PORTOLA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
POTTER VALLEY PH	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
RED BLUFF WSO	19	N4009	W12215	342	227	63	74	50	22.06	414	290
RIVERSIDE FS #3	20	N3357	W11723	840	257	63	79	47	9.92	446	320
SACRAMENTO WSO	21	N3831	W12130	17	282	60	73	48	17.22	463	342
SALINAS FAA AP	22	N3640	W12136	75	262	58	68	45	13.81	433	320
SANTA MARIA WSO	23	N3454	W12027	236	269	57	68	45	12.25	439	326
SCOTIA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
STOCKTON WSO	25	N3754	W12157	22	257	61	74	47	14.17	439	318
SUSANVILLE AP	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
TULELAKE	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
TWENTYNINE PALMS	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
VICTORVILLE PP	29	N3432	W11718	2858	202	60	77	43	5.06	382	262

Table 2.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/--Continued

CALIFORNIA --Continued

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
YREKA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195

COLORADO

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
ALAMOSA WSO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
CORTEZ	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
FORT COLLINS	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
FORT MORGAN	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
GRAND JUNCTION WSO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
JULESBURG	6	N4100	W10245	3469	143	51	63	36	14.94	293	194
LAMAR	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
LONGMONT 2 ESE	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
MONTROSE NO 1	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
PUEBLO WSO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
RIFLE	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
ROCKY FORD 2 ESE	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
SPRINGFIELD	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
STERLING	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
WRAY	15	N4004	W10213	3575	143	51	67	38	18.51	299	194

IDAHO

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BURLEY FAA AP	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
CALDWELL	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
COEUR D'ALENE 1 E	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
DRIGGS	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
DUBOIS EXP STA	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
GRAND VIEW 2 W	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
HILL CITY	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
IDAHO FALLS FAA AP	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
MALAD	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
MAY RS	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
MONTPELIER RS	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
MOUNTAIN HOME	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
NEZPERCE	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
PARMA EXP STA	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
POCATELLO WSO	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
POTLATCH 3 NNE	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
PRESTON 3 NE	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
SALMON 1 N	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
SUGAR	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
TWIN FALLS 2 NNE	20	N4235	W11428	3690	133	50	63	36	9.20	282	183

Table 2.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/--Continued

MONTANA

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BILLINGS WB AP	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
BOZEMAN MONT ST UNIV	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
BUTTE CAA AP	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
CASCADE 5 S	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
CHINOOK	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
CHOTEAU AP	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
CONRAD AP	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
CROW AGENCY	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
CULBERTSON	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
DILLON AMCE	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
FORSYTH 2 E	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
GLASGOW WB AP	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
GLENDIVE	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
HAMILTON	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
HAVRE WB CITY	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
HELENA WB AP	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
KALISPELL WB AP	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
MALTA	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
MILES CITY CAA AP	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
MISSOULA WB AP	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
POLSON	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
ROUNDUP	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
SAINT IGNATIUS	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
TOWNSEND	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
WHITE SULPHUR SPRS	25	N4633	W11055	5157	97	41	54	29	17.51	221	138

NEW MEXICO

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
ARTESIA 6 S	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
CARRIZOZO	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
CERRO 4 NE	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
CLAYTON WSO AP	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
CLOVIS	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
DEMING	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
ESPANOLA	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
ESTANCIA	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
FARMINGTON 4 NE	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
FORT SUMNER	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
HOBBS	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
LAS CRUCES ST UNIV	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
LAS VEGAS FAA AP	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
LORDSBURG 4 SE	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
LOS LUNAS 3 SSW	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
MOUNTAIN PARK	16	N3257	W10551	6720	177	53	66	40	17.80	336	230
ROSWELL WSO	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
SOCORRO	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
SPRINGER	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
TRUTH OR CON FAA AP	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
TUCUMCARI 3 NE	21	N3512	W10341	4096	190	58	73	43	15.09	364	244
ZUNI FAA AP	22	N3506	W10847	6440	151	50	66	35	11.33	302	201

Table 2.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/ --Continued

NEVADA

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
ADAVEN	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
AUSTIN	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
BEATTY	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
BOULDER CITY	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
CALIENTE	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
CARSON CITY	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
ELKO WSO	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
ELY WSO	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
FALLON EXP STA	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
GERLACH	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
HAWTHORNE	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
LAS VEGAS WSO	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
LEHMAN CAVES	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
LOVELOCK	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
MINA	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
MINDEN	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
OROVADA	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
OVERTON	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
OWYHEE	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
PAHRUMP	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
RENO WSO	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
RUBY LAKE	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
SAND PASS	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
SEARCHLIGHT	24	N3528	W11456	3540	257	63	74	50	6.62	444	320
SHELDON	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
SMOKEY VALLEY	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
WELLS	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
WINNEMUCCA WSO	28	N4054	W11748	4301	125	48	64	32	8.47	269	173

OREGON

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BAKER KOKW	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
BURNS WSO	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
CAVE JUNCTION	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
CHEMULT	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
CORVALLIS ST COL	5	N4438	W12312	225	210	52	63	42	39.70	367	262
DANNER	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
DAYVILLE	7	N4428	W11932	2364	123	50	65	36	12.18	274	173
DUFUR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
ELKTON 3 SW	9	N4336	W12335	114	202	54	66	42	54.18	364	256
GRANTS PASS	10	N4226	W12319	925	167	54	68	41	32.40	330	221
HERMISTON 2 S	11	N4549	W11917	624	159	53	66	40	8.93	318	212
HOOD RIVER EXP STA	12	N4541	W12131	500	170	50	61	40	30.65	321	220
KLAMATH FALLS 2 SSW	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
LA GRANDE	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
LAKEVIEW	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
MADRAS	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
MALHEUR BRA EXP STA	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
MEDFORD WSO AP	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
PAISLEY	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
REDMOND FAA AP	20	N4416	W12109	3075	75	47	63	33	9.03	218	122

Table 2.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/ --Continued

OREGON --Continued

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
ROSEBURG	21	N4312	W12321	465	219	54	65	42	33.85	380	273
SALEM WSO	22	N4455	W12301	196	192	52	63	41	41.08	348	244
WALLOWA	23	N4534	W11732	2923	67	45	59	31	18.52	202	112

UTAH

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BLANDING	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
BRIGHAM CITY	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
CEDAR CITY AP	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
COALVILLE	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
DELTA	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
EMERY	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
FARMINGTON USU	7	N4101	W11154	4340	157	52	66	38	19.95	313	209
FILLMORE	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
GREEN RIVER	9	N3900	W11010	4070	156	52	69	34	6.11	313	208
HANKSVILLE	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
LEWISTON	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
LOGAN USU	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
MANTI	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
NEPHI	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
PANGUITCH	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
PARK VALLEY	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
ROOSEVELT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
ST GEORGE	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
UTAH LAKE LEHI	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
WOODRUFF	20	N4132	W11109	6343	56	39	54	23	9.26	172	95

WASHINGTON

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
CENTRALIA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
COLFAX 1 NW	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
COLVILLE AP	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
ELLENBURG	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
EPHRATA FAA AP	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
GOLDENDALE	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
NEWPORT	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
ODESSA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
OMAK	9	N4825	W11932	850	175	50	63	38	12.26	326	225
OROVILLE 1 S	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
OTHELLO 6 ESE	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
PROSSER 4 NE	12	N4615	W11945	903	161	51	64	38	7.88	314	212
PUYALLUP 2 W EXP STA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
REPUBLIC	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
SEDRO WOOLLEY	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SEQUIM	16	N4805	W12306	180	197	50	59	40	16.15	346	247
VANCOUVER 4 NNE	17	N4541	W12239	210	233	53	63	44	40.23	393	286
WALLA WALLA WSO AP	18	N4602	W11820	949	202	54	64	45	16.01	365	256
WINTHROP 1 WSW	19	N4828	W12011	1755	127	44	59	30	14.70	260	171

Table 2.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. BY STATE 1/ -- Continued

WASHINGTON --Continued

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
YAKIMA WB AP	20	N4634	W12032	1064	177	50	64	36	8	327	227

WYOMING

LOCATION	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
AFTON	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
BIG PINEY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
BUFFALO	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
CHUGWATER	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
CODY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
DOUGLAS	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
FARSON	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
GILLETTE	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
JACKSON	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
KAYCEE	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
LARAMIE FAA AP	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
LOVELL	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
LUSK	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
PINE BLUFFS	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
POWELL	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
RAWLINS	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
RIVERTON	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
SHERIDAN	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
THERMOPOLIS	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
TORRINGTON EXP FARM	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
WORLAND	21	N4401	W10758	4061	133	44	60	29	7.40	266	177

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 3.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LATITUDE 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320

Table 3.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LATITUDE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
EMERY	UT	6	N3855	W11115	6200	419	46	60	33	7.55	258	165
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193

Table 3.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LATITUDE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
JERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	66	33	18.98	263	162
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
ONYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
MONTPELIER WS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
GRAND VIEW 2 N	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136

Table 3.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LATITUDE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
ELLENSBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238

Table 3.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LATITUDE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
JOESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	198
CHOTEAU AP	MT	6	N4749	W11210	3940	105	44	57	30	12.09	236	149
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
NEAPORT	WA	7	N4811	W11703	2135	79	45	59	31	29.30	214	124
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
REPUBLIC	WA	14	N4839	W11844	2620	96	44	58	30	13.60	228	140
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 4.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LONGITUDE 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
MORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245

Table 4.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LONGITUDE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRO	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
CHINOOK	MT	5	N4636	W10914	2350	119	43	57	29	11.95	248	162
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.62	402	275
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
CHOTEAU AP	MT	6	N4749	W11210	394	105	44	57	30	12.09	236	149
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193

Table 4.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LONGITUDE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
JILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	450	332
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320

Table 4.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY LONGITUDE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	9.93	318	212
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
PASO ROBLES	CA	16	N3538	W12041	700	284	59	77	41	14.17	381	263
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	53	68	33	18.98	263	162
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48

Table 4.--CLIMATOLOGICAL DATA OF ALFALFA GROWING-AREAS OF WESTERN U.S. RANKED BY LONGITUDE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 5.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ELEVATION 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328

Table 5.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ELEVATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
KALISPELL WS AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183

Table 5.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ELEVATION 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
TULELAKE	CA	27	N4156	W12128	4035	82	46	63	30	10.91	221	128
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180

Table 5.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ELEVATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
RIFLE	CO	11	N3932	W10748	5480	91	47	60	29	11.24	227	138
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165

Table 5.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ELEVATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 6.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY FROST-FREE DAYS 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
CRENULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162

Table 6.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY FROST-FREE DAYS 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.[illegible]2	281	182
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187

Table 6.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY FROST-FREE DAYS 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
HAVRE NB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
RENO NSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
POCATELLO NSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
NRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
BISHOP NSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
CLAYTON NSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225

Table 6.—CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY FROST-FREE DAYS 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
OROVILLE 1 S	CA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.81	365	256
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328

Table 6.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY FROST-FREE DAYS 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 7.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN TEMPERATURE 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LORDSBURG 4 SE	NM	14	N3218	W10839	4259	197	.	.	.	10.32	.	.
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
PARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11045	6244	50	38	54	22	14.83	164	88
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
ROBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
GLASGOW AB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
KALISPELL AB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
HAVRE AB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
HELENA AB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
CHOTEAU AP	MT	6	N4749	W11210	3915	105	44	57	30	12.09	236	149
MISSOULA AB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
GILLETTE	WY	8	N4417	W10523	4556	130	45	58	33	14.00	266	175
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74

Table 7.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	174
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186

Table 7.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN TEMPERATURE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
FORT MORGAN	CO	4	N4015	W10344	4321	147	49	64	34	13.20	294	196
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
MOUNTAIN HOME	ID	12	N4309	W11543	3165	127	50	65	36	9.60	278	177
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
ZUNI FAA AP	NM	22	N3504	W10847	6440	151	50	66	35	11.33	302	201
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
PRESCOTT	AZ	14	N3434	W11128	5510	140	53	70	40	18.04	303	193
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203

Table 7.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290

Table 7.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN TEMPERATURE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 8.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MAXIMUM TEMPERATURE 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
NOGALES	AZ	11	N3122	W11053	3890	229	60	.	.	15.60	.	289
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112

Table 8.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MAXIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRO	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
ONYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
ENERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
LENISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74

Table 8.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MAXIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	135
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194

Table 8.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MAXIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	314
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262

Table 8.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MAXIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 9.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MINIMUM TEMPERATURE 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
SMOKEY VALLEY	NV	26	N3645	W11710	5600	109	50	.	.	6.00	.	159
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
COALVILLE	UT	4	N4055	W11124	5550	410	44	62	27	14.78	243	154
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
KAYCEE	WY	10	N4343	W10638	4660	410	44	61	28	11.55	243	154
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129

Table 9.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MINIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
HALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137

Table 9.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MINIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
NEZPERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.24	297	198
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
BILLINGS NB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
GOLDENDALE	WA	6	N4546	W12050	1650	121	48	61	36	17.61	266	169
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
ELLENSBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
BUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
YAKIMA NB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230

Table 9.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MINIMUM TEMPERATURE 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
WINA	NV	15	N3823	W11806	4562	159	54	67	39	4.23	319	213
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
CENTRALIA	WA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342

Table 9.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY MEAN MINIMUM TEMPERATURE 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDCX
ESCONDIDO	CA	9	N3301	W11705	660	270	62	76	48	14.05	456	332
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 10.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ANNUAL PRECIPITATION 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424
INDIO USDG	CA	13	N3344	W11615	-11	292	73	89	57	3.00	511	365
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
YAKIMA WB AP	WA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
EPHRATA FAA AP	WA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164

Table 10.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ANNUAL PRECIPITATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
RANLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
OROVILLE 1 S	WA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176

Table 10.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ANNUAL PRECIPITATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	167
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
OMAK	WA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170

Table 10.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ANNUAL PRECIPITATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRO	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
ONYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	164	71
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
PRESTON 3 NE	ID	17	N4203	W11150	4820	118	46	.	.	15.67	.	164
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
WALLA WALLA WSO AP	WA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
SEQUIM	WA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
PRESCOTT	AZ	14	N3434	W11228	5010	140	53	70	40	18.04	303	193
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
PONTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74

Table 10.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY ANNUAL PRECIPITATION 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLIDEX
MEDFORD	OR	13	N4219	W12253	3145	113	46	57	35	22.20	291	159
POTLATCH 3 SSE	ID	16	N4656	W11653	2530	106	47	60	34	24.49	247	153
CHEWELAH	WA	4	N4814	W11747	4760	6	42	58	26	25.64	132	48
CLEAR CREEK RS	ID	3	N4741	W11645	2154	133	48	60	36	26.03	277	181
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	26.30	214	124
HOOD RIVER EXP STA	OR	12	N4541	W12131	550	170	50	61	40	30.65	321	220
GRANTS PASS	OR	10	N4226	W12319	929	167	54	68	41	32.40	330	221
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	340	273
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	347	262
ROYALLOP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
VANCOUVER 4 NNE	WA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
POTTER VALLEY PH	CA	18	N3922	W12309	1015	192	58	75	42	45.66	367	250
CENTRALIA	WA	1	N4643	W12257	195	142	52	63	42	45.76	339	234
SEDRO WOOLLEY	WA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
ELGIN 3 SW	OR	9	N4536	W11835	114	202	54	66	42	54.18	364	256
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 11.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLIMEX 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
HAWTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.80	.	229
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	5.95	.	404
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	16.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
PARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	9.60	173	104
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
CULBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153

Table 11.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLIMEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
POTLATCH 3 NNE	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
NEZ PERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
POWELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182

Table 11.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLIMEX 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FRD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
GLENDIVE	MT	17	N4706	W10443	2076	139	46	59	32	13.82	276	185
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
DUFUR	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
LOVELOCK	NV	14	N4011	W11828	3975	136	52	67	36	5.76	290	187
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
CAVE JUNCTION	OR	3	N4211	W12343	1300	136	52	66	38	65.61	291	187
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
ELLENBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214

Table 11.—CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLIMEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
OROVILLE 1 S	nA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220
OMAK	nA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
YAKIMA nB AP	nA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
CARRIZOZO	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
CENTRALIA	nA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
EPHRATA FAA AP	nA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
LOS LUNAS 3 SSW	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
SEDRO WOOLLEY	nA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SEQUIM	nA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
ELKTON 3 SW	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
WALLA WALLA WSO AP	nA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
VANCOUVER 4 NNE	nA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320

Table 11.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLIMEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
COLUSA 1 SW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 12.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLDEX 1/

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
LORDSBURG 4 SE	NM	14	N3218	W10839	4250	197	.	.	.	10.32	.	.
CHEMULT	OR	4	N4314	W12147	4760	6	42	58	26	25.64	132	48
HILL CITY	ID	7	N4318	W11503	5000	30	41	57	26	15.49	154	71
MAY RS	ID	10	N4436	W11355	5110	30	42	58	27	7.92	157	72
PORTOLA	CA	17	N3948	W12028	4838	28	46	63	28	22.12	165	74
SHELDON	NV	25	N4151	W11938	6500	40	42	55	29	12.07	166	82
AFTON	WY	1	N4244	W11056	6210	50	38	54	21	18.47	163	88
JACKSON	WY	9	N4328	W11046	6244	50	38	54	22	14.83	164	88
WOODRUFF	UT	20	N4132	W11109	6343	56	39	54	23	9.26	172	95
FARSON	WY	7	N4207	W10927	6591	59	37	55	20	7.61	171	96
BIG PINEY	WY	2	N4232	W11007	6821	70	34	52	17	8.60	173	104
DRIGGS	ID	4	N4344	W11107	6116	65	40	55	26	15.81	186	105
WELLS	NV	27	N4107	W11458	5650	61	44	57	27	10.58	189	105
MADRAS	OR	16	N4438	W12108	2230	61	48	64	35	10.19	208	109
WALLOWA	OR	23	N4534	W11732	2923	67	45	59	31	18.52	202	112
BUTTE CAA AP	MT	3	N4557	W11230	5526	81	38	52	24	12.17	195	119
DANNER	OR	6	N4256	W11720	4397	72	47	63	30	11.81	212	119
MONTPELIER RS	ID	11	N4219	W11118	5960	80	41	56	26	14.64	203	121
REDMOND FAA AP	OR	20	N4416	W12109	3075	75	47	63	33	9.03	218	122
NEWPORT	WA	7	N4811	W11703	2135	79	45	59	31	28.30	214	124
SHERIDAN	WY	18	N4451	W10652	3800	80	45	59	31	15.71	215	125
PANGUITCH	UT	15	N3749	W11227	6720	83	44	62	25	9.90	214	127
TULELAKE	CA	27	N4158	W12128	4035	82	46	63	30	10.91	221	128
ALTURAS RS	CA	1	N4130	W12033	4400	82	47	63	30	13.27	222	129
ELKO WSO	NV	7	N4050	W11547	5075	89	45	59	31	9.78	224	134
THERMOPOLIS	WY	19	N4339	W10812	4327	90	46	63	30	11.01	229	136
PAISLEY	OR	19	N4242	W12032	4360	89	48	62	34	11.18	233	137
WHITE SULPHUR SPRS	MT	25	N4633	W11055	5157	97	41	54	29	17.51	221	138
RIFLE	CO	11	N3932	W10748	5400	91	47	60	29	11.24	227	138
LAKEVIEW	OR	15	N4211	W12021	4774	92	46	59	33	16.01	230	138
REPUBLIC	WA	14	N4839	W11844	2650	96	44	58	30	13.60	228	140
SALMON 1 N	ID	18	N4511	W11354	3970	97	44	.	.	9.61	.	141
OWYHEE	NV	19	N4157	W11606	5396	95	46	59	32	14.71	232	141
ALAMOSA WSO	CO	1	N3727	W10552	7536	100	42	60	23	6.94	225	142
DILLON WMCE	MT	10	N4512	W11238	5228	99	43	58	29	11.22	229	142
ELY WSO	NV	8	N3917	W11451	6253	100	44	58	27	8.70	229	144
BUFFALO	WY	3	N4421	W10641	4645	100	45	59	30	13.95	234	145
RUBY LAKE	NV	22	N4012	W11530	6012	99	46	61	31	12.49	237	145
CHUGWATER	WY	4	N4145	W10449	5282	102	46	63	31	16.38	242	148
TOWNSEND	MT	24	N4619	W11131	3833	103	46	57	29	11.44	235	149
CHOTEAU AP	MT	6	N4749	W11210	3945	105	44	57	30	12.09	236	149
CASCADE 5 S	MT	4	N4713	W11143	3390	103	46	58	33	15.18	240	149
BOZEMAN MONT ST UNIV	MT	2	N4540	W11103	4856	107	43	55	31	18.66	236	150
CONRAD AP	MT	7	N4810	W11158	3537	109	43	57	29	12.24	238	152
RAWLINS	WY	16	N4148	W10712	6736	110	43	56	30	10.43	239	153
MISSOULA WB AP	MT	20	N4655	W11405	3190	109	44	56	32	13.34	241	153
POTLATCH 3 WNW	ID	16	N4658	W11653	2500	106	47	60	34	24.49	247	153
LARAMIE FAA AP	WY	11	N4119	W10541	7266	113	41	55	31	10.06	240	154
KAYCEE	WY	10	N4343	W10638	4660	110	44	61	28	11.55	243	154
COALVILLE	UT	4	N4055	W11124	5550	110	44	62	27	14.78	243	154
GILBERTSON	MT	9	N4809	W10431	1920	114	41	55	27	14.18	237	155
DOUGLAS	WY	6	N4246	W10525	4853	110	45	59	31	13.50	245	155
AUSTIN	NV	2	N3930	W11705	6605	108	47	59	33	11.90	247	155
OROVADA	NV	17	N4134	W11747	4310	106	49	63	35	11.22	253	155
CODY	WY	5	N4433	W10904	5002	110	46	60	32	9.35	248	156
MINDEN	NV	16	N3857	W11946	4720	107	49	65	30	8.51	251	156

Table 12.-- CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLDEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
BURNS WSO	OR	2	N4335	W11903	4140	111	46	61	33	11.83	251	157
SMOKEY VALLEY	NV	26	N3845	W11710	5600	109	50	.	.	6.00	.	159
NEZ PERCE	ID	13	N4615	W11615	3145	113	46	57	35	22.20	251	159
DUBOIS EXP STA	ID	5	N4415	W11212	5452	118	43	54	31	11.93	246	161
FLAGSTAFF	AZ	6	N3508	W11140	6993	116	45	59	30	19.31	250	161
CHINOOK	MT	5	N4836	W10914	2350	119	43	57	29	11.95	248	162
HAT CREEK PH #1	CA	11	N4056	W12133	3015	112	50	68	33	18.98	263	162
SUGAR	ID	19	N4353	W11145	4890	121	42	57	28	12.40	248	163
PRESTON 3 NE	ID	17	N4208	W11150	4820	118	46	.	.	15.67	.	164
RIVERTON	WY	17	N4301	W10823	4954	121	43	60	27	8.56	251	164
CERRO 4 NE	NM	3	N3649	W10535	7685	120	45	61	29	11.54	255	165
SAINT IGNATIUS	MT	23	N4719	W11406	2900	119	46	58	34	16.36	257	165
EMERY	UT	6	N3855	W11115	6200	119	46	60	33	7.55	258	165
GLASGOW WB AP	MT	12	N4813	W10637	2284	124	42	54	30	10.87	250	166
IDAHO FALLS FAA AP	ID	8	N4331	W11204	4730	122	44	57	31	8.89	254	166
PONELL	WY	15	N4445	W10846	4378	120	46	59	32	6.09	257	166
ROOSEVELT	UT	17	N4018	W10959	5094	120	46	63	31	7.44	260	166
CARSON CITY	NV	6	N3909	W11946	4651	116	50	66	33	11.50	265	166
HAMILTON	MT	14	N4615	W11409	3529	122	46	58	33	12.99	259	168
ADAVEN	NV	1	N3807	W11535	6250	119	49	60	34	12.34	262	168
BAKER KBKR	OR	1	N4447	W11750	3444	122	47	60	34	11.25	263	169
GOLDENDALE	WA	6	N4545	W12050	1650	121	48	61	36	17.61	266	169
SUSANVILLE AP	CA	26	N4023	W12034	4148	121	49	63	35	14.49	268	170
WINTHROP 1 WSW	WA	19	N4828	W12011	1755	127	44	59	30	14.70	260	171
LEHMAN CAVES	NV	13	N3900	W11413	6825	123	48	57	34	12.89	262	171
CROW AGENCY	MT	8	N4536	W10727	3030	125	46	62	30	14.87	263	171
PINE BLUFFS	WY	14	N4111	W10404	5045	124	47	63	32	15.25	266	171
COLFAX 1 NW	WA	2	N4653	W11723	1955	123	48	61	36	20.37	268	171
CORTEZ	CO	2	N3721	W10834	6177	123	49	62	31	12.90	265	172
COLVILLE AP	WA	3	N4832	W11753	1874	126	46	59	34	16.85	265	172
FORSYTH 2 E	MT	11	N4616	W10637	2722	130	43	59	32	12.13	264	173
WINNEMUCCA WSO	NV	28	N4054	W11748	4301	125	48	64	32	8.47	269	173
DAYVILLE	OR	7	N4428	W11932	2364	123	50	65	36	12.10	274	173
MALTA	MT	18	N4821	W10752	2255	131	43	56	29	12.44	259	174
LOVELL	WY	12	N4450	W10824	3837	129	45	59	29	6.95	262	174
KLAMATH FALLS 2 SSW	OR	13	N4212	W12147	4098	126	48	60	35	14.34	269	174
GILLETTE	WY	8	N4417	W10528	4556	130	45	58	33	14.00	266	175
MALAD	ID	9	N4212	W11215	4600	128	47	60	33	14.32	268	175
LUSK	WY	13	N4246	W10426	5000	130	46	60	32	15.64	268	176
ROUNDUP	MT	22	N4627	W10832	3227	129	47	62	32	11.64	270	176
KALISPELL WB AP	MT	17	N4818	W11416	2965	135	42	54	31	16.24	262	177
HELENA WB AP	MT	16	N4636	W11200	3828	134	43	56	31	11.38	264	177
WORLAND	WY	21	N4401	W10758	4061	133	44	60	29	7.40	266	177
MANTI	UT	13	N3915	W11138	5740	129	48	62	33	12.93	272	177
MOUNTAIN HOME	ID	12	N4309	W11543	3185	127	50	65	36	9.60	278	177
LEWISTON	UT	11	N4158	W11150	4480	133	45	61	31	17.64	270	178
BILLINGS WB AP	MT	1	N4548	W10832	3567	132	46	58	36	14.15	272	178
TORRINGTON EXP FARM	WY	20	N4205	W10413	4098	130	48	64	32	13.93	274	178
NEPHI	UT	14	N3943	W11150	5133	127	52	67	37	13.89	283	179
HAVRE WB CITY	MT	15	N4833	W10946	2584	138	42	55	30	11.55	265	180
CEDARVILLE	CA	5	N4132	W12010	4670	131	49	64	35	14.20	279	180
COEUR D'ALENE 1 E	ID	3	N4741	W11645	2158	133	48	60	36	26.03	277	181
FALLON EXP STA	NV	9	N3927	W11847	3965	130	51	65	34	4.72	280	181
PARK VALLEY	UT	16	N4149	W11319	5520	135	47	59	34	10.47	275	182
ODESSA	WA	8	N4720	W11840	1540	132	50	63	36	10.42	281	182
GRAND VIEW 2 W	ID	6	N4300	W11608	2400	130	52	68	37	7.26	287	182

Table 12.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLDEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
TWIN FALLS 2 NNE	ID	20	N4235	W11428	3690	133	50	63	36	9.20	282	183
GLENDIVE	MT	13	N4706	W10443	2076	139	46	59	32	13.82	276	185
UTAH LAKE LEHI	UT	19	N4022	W11154	4497	137	49	62	35	10.75	283	186
STERLING	CO	14	N4037	W10312	3939	139	48	63	34	14.96	284	187
BURNS	OR	8	N4527	W12108	1330	137	50	63	36	12.53	286	187
ESTANCIA	NM	8	N3445	W10604	6107	137	50	68	33	11.16	288	187
LOVELOCK	NV	14	N4011	W11828	3975	135	52	67	36	5.76	290	187
CAVE JUNCTION	OR	3	N4211	W12343	1300	135	52	66	38	65.61	291	187
POLSON	MT	21	N4741	W11414	2935	142	46	.	.	14.66	.	188
POCATELLO WSO	ID	15	N4255	W11236	4454	142	47	60	34	10.80	283	189
LONGMONT 2 ESE	CO	8	N4010	W10504	4950	140	49	64	33	12.74	286	189
RENO WSO	NV	21	N3930	W11947	4404	141	49	66	31	7.20	287	190
ESPANOLA	NM	7	N3557	W10605	5800	139	51	68	34	12.08	292	190
DELTA	UT	5	N3925	W11232	4759	140	51	66	36	6.63	293	191
LA GRANDE	OR	14	N4519	W11805	2755	142	50	62	37	20.14	291	192
FORT COLLINS	CO	3	N4035	W10505	5001	145	48	63	36	17.44	292	193
PRESCOTT	AZ	14	N3434	W11228	5510	140	53	70	40	18.04	303	193
JULESBURG	CO	6	N4100	W10215	3469	143	51	63	36	14.94	293	194
PARMA EXP STA	ID	14	N4348	W11657	2215	144	50	65	36	10.78	295	194
FILLMORE	UT	8	N3857	W11219	5160	142	52	66	38	14.78	298	194
WRAY	CO	15	N4004	W10213	3575	143	51	67	38	18.51	299	194
MILES CITY CAA AP	MT	19	N4626	W10552	2629	150	45	58	33	13.93	286	195
BURLEY FAA AP	ID	1	N4232	W11346	4146	147	48	61	34	9.73	290	195
YREKA	CA	30	N4143	W12238	2625	143	52	67	37	18.83	299	195
ELLENSBURG	WA	4	N4700	W12032	1540	147	49	61	36	8.36	293	196
FORT MORGAN	CO	4	N4015	W10348	4321	147	49	64	34	13.20	294	196
GERLACH	NV	10	N4038	W11921	3900	146	51	.	.	5.00	.	197
CALDWELL	ID	2	N4340	W11641	2370	146	51	65	37	10.77	299	197
LAS VEGAS FAA AP	NM	13	N3539	W10509	6857	149	49	64	35	15.28	297	198
BLANDING	UT	1	N3737	W10928	6036	148	50	64	36	11.82	298	198
MALHEUR BRA EXP STA	OR	17	N4359	W11701	2240	147	51	64	38	9.93	300	198
SAND PASS	NV	23	N4018	W11947	3900	148	51	.	.	7.00	.	199
CEDAR CITY AP	UT	3	N3742	W11306	5601	150	50	65	36	10.33	301	200
MONTROSE NO 1	CO	9	N3829	W10753	5830	152	49	62	33	9.51	296	201
ZUNI FAA AP	NM	22	N3506	W10847	6440	151	50	66	35	11.33	302	201
SPRINGER	NM	19	N3623	W10436	5857	150	51	69	32	15.91	302	201
FARMINGTON 4 NE	NM	9	N3645	W10810	5395	151	51	67	39	8.07	308	202
ST JOHNS	AZ	15	N3430	W10922	5730	149	53	71	35	10.64	308	202
CALIENTE	NV	5	N3737	W11431	4402	150	53	71	36	8.72	310	203
OTHELLO 6 ESE	WA	11	N4648	W11903	1190	153	51	63	37	8.08	304	204
HANKSVILLE	UT	10	N3822	W11043	4308	151	53	69	38	5.20	311	204
BISHOP WSO	CA	3	N3722	W11822	4108	148	56	74	37	5.72	315	204
LOGAN USU	UT	12	N4145	W11149	4785	157	48	60	36	17.59	301	205
GREEN RIVER	UT	9	N3900	W11010	4070	156	52	69	34	6.11	311	208
FARMINGTON USU	UT	7	N4101	W11154	4340	157	52	66	38	19.96	313	209
PROSSER 4 NE	WA	12	N4615	W11945	903	161	51	64	38	7.88	314	212
HERMISTON 2 S	OR	11	N4549	W11917	624	159	53	66	40	8.93	318	212
BRIGHAM CITY	UT	2	N4129	W11202	4335	162	51	63	40	19.31	316	213
MINA	NV	15	N3823	W11806	4552	159	54	67	39	4.23	319	213
ROCKY FORD 2 ESE	CO	12	N3802	W10342	4178	160	53	70	36	12.53	319	213
LAMAR	CO	7	N3807	W10236	3617	160	53	71	38	15.33	322	213
SPRINGFIELD	CO	13	N3724	W10237	4405	161	53	68	38	15.36	320	214
PUYALLUP 2 W EXP STA	WA	13	N4712	W12220	50	165	51	62	40	39.71	318	216
CLAYTON WSO AP	NM	4	N3627	W10309	4970	166	53	67	40	15.91	326	219
HOOD RIVER EXP STA	OR	12	N4541	W12131	500	170	50	61	40	30.65	321	220
PUEBLO WSO	CO	10	N3817	W10431	4639	167	53	68	37	11.91	325	220

Table 12.— CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLDEX 1/ --Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
GRANTS PASS	OR	10	N4226	W12319	925	167	54	68	41	32.40	330	221
OROVILLE 1 S	nA	10	N4858	W11930	1060	175	50	61	38	11.46	324	225
OMAK	nA	9	N4825	W11932	850	175	50	63	38	12.26	326	225
CARRE=O=O	NM	2	N3339	W10553	5438	169	56	71	40	12.11	336	225
YAKIMA nB AP	nA	20	N4634	W12032	1064	177	50	64	36	8.00	327	227
HanTHORNE	NV	11	N3831	W11842	4100	175	54	.	.	4.00	.	229
MOUNTAIN PARK	NM	16	N3257	W10551	6780	177	53	66	40	17.80	336	230
HOLBROOK	AZ	9	N3454	W11010	5069	175	55	72	38	7.37	340	230
WINSLOW	AZ	18	N3501	W11044	4895	176	55	70	40	7.33	341	231
LOS LUNAS 3 SSn	NM	15	N3445	W10645	4840	177	56	73	38	7.90	344	233
CENTRALIA	nA	1	N4643	W12257	185	182	52	63	42	45.76	339	234
MEDFORD WSO AP	OR	18	N4222	W12252	1312	184	53	65	41	20.64	343	237
EPHRATA FAA AP	nA	5	N4719	W11934	1360	186	52	63	42	8.26	343	238
SEDRO nOOLLEY	nA	15	N4830	W12214	50	193	50	60	41	45.92	344	243
SALEM WSO	OR	22	N4455	W12301	196	192	52	63	41	41.08	348	244
GRAND JUNCTION WSO	CO	5	N3907	W10832	4855	192	53	84	40	8.41	369	245
SEQUIM	nA	16	N4805	W12306	180	197	50	59	40	16.15	346	247
SOCORRO	NM	18	N3405	W10653	4585	189	58	74	42	7.90	363	247
TUCUMCARI 3 NE	NM	21	N3512	W10341	4096	190	58	73	43	15.09	364	248
POTTER VALLEY PH	CA	18	N3922	W12308	1015	192	58	75	42	45.66	367	250
FORT SUMNER	NM	10	N3428	W10415	4030	193	59	75	42	12.99	369	252
CLOVIS	NM	5	N3426	W10312	4280	198	57	73	41	17.07	369	255
BEATTY	NV	3	N3655	W11645	3300	195	60	76	44	4.59	375	255
ELKTON 3 Sn	OR	9	N4336	W12335	114	202	54	66	42	54.18	364	256
WALLA WALLA WSO AP	nA	18	N4602	W11820	949	202	54	64	45	16.01	365	256
ST GEORGE	UT	18	N3707	W11334	2760	196	62	78	46	7.56	382	258
ARTESIA 6 S	NM	1	N3246	W10423	3320	199	61	76	42	10.44	378	260
DEMING	NM	6	N3216	W10746	4332	200	60	82	46	8.56	388	260
LAS CRUCES ST UNIV	NM	12	N3217	W10645	4000	200	60	85	49	8.01	394	260
CORVALLIS ST COL	OR	5	N4438	W12312	225	210	52	63	42	39.70	367	262
VICTORVILLE PP	CA	29	N3432	W11718	2858	202	60	77	43	5.06	382	262
PAHRUMP	NV	20	N3611	W11600	2800	201	61	79	47	5.00	388	262
PASO ROBLES	CA	16	N3538	W12041	700	204	59	77	41	14.17	381	263
BENSON	AZ	2	N3158	W11018	3600	200	63	80	46	11.74	389	263
ROSWELL WSO	NM	17	N3324	W10432	3636	208	59	76	43	10.61	386	267
PALMDALE	CA	15	N3435	W11806	2596	207	62	76	46	7.87	391	269
KINGMAN	AZ	10	N3510	W11404	3333	211	62	.	.	10.60	.	273
ROSEBURG	OR	21	N4312	W12321	465	219	54	65	42	33.85	380	273
TRUTH OR CON FAA AP	NM	20	N3314	W10716	4820	213	60	74	46	8.33	393	273
DOUGLAS	AZ	5	N3121	W10935	3937	212	63	80	47	11.82	402	275
HOBBS	NM	11	N3242	W10308	3615	220	62	76	47	14.36	405	282
VANCOUVER 4 NNE	nA	17	N4541	W12239	210	233	53	63	44	40.23	393	286
NOGALES	AZ	11	N3122	W11053	3800	229	60	.	.	15.60	.	289
GLOBE	AZ	8	N3323	W11047	3550	228	62	78	46	15.53	414	290
RED BLUFF WSO	CA	19	N4009	W12215	342	227	63	74	50	22.06	414	290
WICKENBURG	AZ	17	N3358	W11244	2095	226	65	83	47	10.76	421	291
CRESCENT CITY 1 N	CA	7	N4146	W12412	40	249	53	60	44	71.06	406	302
LAS VEGAS WSO	NV	12	N3605	W11510	2162	245	66	78	53	3.76	442	311
MERCED FS 2	CA	14	N3718	W12029	169	251	61	76	46	12.22	434	312
TUCSON UOFA	AZ	16	N3215	W11057	2444	245	69	84	53	10.73	451	314
OVERTON	NV	18	N3630	W11427	1200	247	68	80	46	4.00	441	315
STOCKTON WSO	CA	25	N3754	W12157	22	257	61	74	47	14.17	439	318
CASA GRANDE	AZ	3	N3253	W11145	1405	249	70	87	51	8.11	457	319
SALINAS FAA AP	CA	22	N3640	W12136	75	262	58	68	45	13.81	433	320
SEARCHLIGHT	NV	24	N3528	W11455	3540	257	63	74	50	6.62	444	320
RIVERSIDE FS #3	CA	20	N3357	W11723	840	257	63	79	47	9.92	446	320

Table 12.--CLIMATOLOGICAL DATA OF ALFALFA-GROWING AREAS OF WESTERN U.S. RANKED BY CLDEX 1/--Continued

LOCATION	STATE	LOC_NO	LAT	LONG	ELEV	FFD	MEANTEMP	MEAN_MAX	MEAN_MIN	ANN_PREC	CLIMEX	CLDEX
SANTA MARIA WSO	CA	23	N3454	W12027	236	269	57	68	45	12.25	439	326
COLUSA 1 SSW	CA	6	N3912	W12201	60	267	61	75	47	16.03	450	328
TWENTYNINE PALMS	CA	28	N3408	W11602	1975	260	68	83	52	3.79	463	328
ESCONDIDO	CA	9	N3307	W11705	660	270	62	76	48	14.05	456	332
HOLLISTER 1 SW	CA	12	N3650	W12125	279	279	58	73	44	13.27	454	337
GILA BEND	AZ	7	N3257	W11243	737	266	72	89	55	5.76	482	338
CLIFTON	AZ	4	N3303	W10917	3460	272	67	82	51	12.06	472	339
SACRAMENTO WSO	CA	21	N3831	W12130	17	282	60	73	48	17.22	463	342
PARKER	AZ	12	N3410	W11417	425	272	72	88	57	3.82	489	344
FRESNO WSO	CA	10	N3646	W11943	328	285	62	76	50	10.24	473	347
BOULDER CITY	NV	4	N3559	W11451	2525	286	67	75	55	5.15	483	353
SCOTIA	CA	24	N4029	W12406	139	302	54	62	46	50.36	464	356
BAKERSFIELD WSO	CA	2	N3525	W11903	475	295	65	78	51	5.72	489	360
BLYTHE	CA	4	N3337	W11436	268	290	72	88	55	3.50	505	362
INDIO USDG	CA	13	N3344	W11615	11	292	73	89	57	3.00	511	365
EL CENTRO 2 SSW	CA	8	N3246	W11534	-30	297	72	90	56	2.30	515	369
PHOENIX WSO	AZ	13	N3326	W11201	1117	317	70	86	53	7.05	526	387
AJO	AZ	1	N3222	W11252	1763	333	71	.	.	8.95	.	404
YUMA WSO	AZ	19	N3240	W11436	194	350	74	88	61	2.67	573	424

1/ FOR INFORMATION ON INTERPRETING VARIABLE NAMES, SEE P. 4.

Table 13.--Locations within 14 climatic zones identified by cluster analysis procedure 1/

Climatic zone symbol	Location	State	LOC_NO
⊛	Ajo	AZ	1
	Phoenix	AZ	13
	Yuma	AZ	19
	Gila Bend	AZ	7
	Parker	AZ	12
	El Centro	CA	8
	Indio	CA	13
	Blythe	CA	4
	Clifton	AZ	4
	Twenty-nine Palms	CA	28
	Tucson	AZ	16
	Casa Grande	AZ	3
●	Bakersfield	CA	2
	Boulder City	NV	4
	Searchlight	NV	24
	Riverside	CA	20
	Escondido	CA	9
	Overton	NV	18
	Las Vegas	NV	12
	Hollister	CA	12
	Salinas	CA	22
	Santa Maria	CA	23
	Fresno	CA	10
	Merced	CA	14
	Stockton	CA	25
	Sacramento	CA	21
	Colusa	CA	6
	Red Bluff	CA	19
▲	Kingman	AZ	10
	Palmdale	CA	15
	St. George	UT	18
	Pahrump	NV	20
	Beatty	NV	3
	Clovis	NM	5
	Tucumcari	NM	21
	Socorro	NM	18
	Fort Sumner	NM	10
	Victorville	CA	29
	Paso Robles	CA	16

Table 13.--Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
▲	Wickenburg	AZ	17
	Nogales	AZ	11
	Globe	AZ	8
	Hobbs	NM	11
	Roswell	NM	17
	Truth or Consequences	NM	20
	Deming	NM	6
	Las Cruces	NM	12
	Artesia	NM	1
	Douglas	AZ	5
	Benson	AZ	2
	Scotia	CA	24
	Crescent City	CA	7
◉	Alturas	CA	1
	Tulelake	CA	27
	Chugwater	WY	4
	Lakeview	OR	15
	Owyhee	NV	19
	Elko	NV	7
	Paisley	OR	19
	Danner	OR	6
	Laramie	WY	11
	Rawlins	WY	16
	Coalville	UT	4
▣	Salmon	ID	18
	Dillon	MT	10
	Bozeman	MT	2
	White Sulphur Springs	MT	25
	Burns	OR	2
	Douglas	WY	6
	Thermopolis	WY	19
	Buffalo	WY	3
	Baker	OR	1
	Powell	WY	15
	Cody	WY	5
	Worland	WY	21
	Lovell	WY	12
	Gillette	WY	8
	Kaycee	WY	10

Table 13.--Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
▣	Idaho Falls	ID	8
	Riverton	WY	17
	Sugar	ID	19
	Dubois	ID	5
	Wallowa	OR	23
	Sheridan	WY	18
	Redmond	OR	20
	Madras	OR	16
◆	Newport	WA	7
	Chinook	MT	5
	Glasgow	MT	12
	Winthrop	WA	19
	Malta	MT	18
	Kalispell	MT	17
	Havre	MT	15
	Culbertson	MT	9
	Republic	WA	14
	Conrad	MT	7
	Choteau	MT	6
	Colville	WA	3
▲	Nezperce	ID	13
	Hamilton	MT	14
	Crow Agency	MT	8
	Billings	MT	1
	Goldendale	WA	6
	Colfax	WA	2
	Roundup	MT	22
	Missoula	MT	20
	Saint Ignatius	MT	23
	Townsend	MT	24
	Cascade	MT	4
	Potlatch	ID	16
	Glendive	MT	13
	Polson	MT	21
	Miles City	MT	19
	Helena	MT	16
	Forsyth	MT	11
	Ellenburg	WA	4

Table 13.—Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
▲	Odessa	WA	8
	Coeur D'Alene	ID	3
	Hat Creek	CA	11
	Orovada	NV	17
	Susanville	CA	26
	Rifle	CO	11
	Ruby Lake	NV	22
	Austin	NV	2
	Ely	NV	8
♦	Lehman Caves	NV	13
	Manti	UT	13
	Emery	UT	6
	Roosevelt	UT	17
	Carson City	NV	6
	Smokey Valley	NV	26
	Minden	NV	16
	Adaven	NV	1
	Cortez	CO	2
	Fort Collins	CO	3
	Sterling	CO	14
	Longmont	CO	8
	Utah	UT	19
	Fort Morgan	CO	4
	Reno	NV	21
	Fallon	NV	9
■	Nephi	UT	14
	Lovelock	NV	14
	Fillmore	UT	8
	Delta	UT	5
	Wray	CO	15
	Sand Pass	NV	23
	Gerlach	NV	10
	Julesburg	CO	6
	Farmington	UT	7
	Brigham City	UT	2
■	Yreka	CA	30
	Cave Junction	OR	3
	Mountain Home	ID	12

Table 13.—Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
	Twin Falls	ID	20
	Grand View	ID	6
	Dayville	OR	7
	La Grande	OR	14
	Dufur	OR	8
	Parma	ID	14
	Malheur	OR	17
	Caldwell	ID	2
	Burley	ID	1
	Pocatello	ID	15
■	Logan	UT	12
	Preston	ID	17
	Lusk	WY	13
	Lewiston	UT	11
	Winnemucca	NV	28
	Pine Bluffs	WY	14
	Malad	ID	9
	Torrington	WY	20
	Klamath Falls	OR	13
	Park Valley	UT	16
	Cedarville	CA	5
	Oroville	WA	10
	Hermiston	OR	11
	Othello	WA	11
	Prosser	WA	12
	Puyallup	WA	13
	Yakima	WA	20
	Hood River	OR	12
	Ephrata	WA	5
	Centralia	WA	1
✸	Sedro Woolley	WA	15
	Sequim	WA	16
	Omak	WA	9
	Grants Pass	OR	10
	Medford	OR	18
	Vancouver	WA	17
	Elkton	OR	9
	Roseburg	OR	21
	Walla Walla	WA	18
	Salem	OR	22
	Corvallis	OR	5

Table 13.--Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
▲	Driggs	ID	4
	Afton	WY	1
	Jackson	WY	9
	Farson	WY	7
	Woodruff	UT	20
	Montpelier	ID	11
	Wells	NV	27
	Sheldon	NV	25
	May RS	ID	10
	Hill City	ID	7
	Big Piney	WY	2
	Butte	MT	3
	Chemult	OR	4
	Portola	CA	17
♦	Holbrook	AZ	9
	Winslow	AZ	18
	Los Lunas	NM	15
	Carrizozo	NM	2
	Mountain Park	NM	16
	Bishop	CA	3
	Montrose	CO	9
	Blanding	UT	1
	Cedar City	UT	3
	Farmington	NM	9
	Clayton	NM	4
	Hawthorne	NV	11
	Green River	UT	9
	Caliente	NV	5
	Hanksville	UT	10
	Springfield	CO	13
	Mina	NV	15
	Pueblo	CO	10
	Rocky Ford	CO	12
	Lamar	CO	7
	Espanola	NM	7
●	Las Vegas	NM	13
	Zuni	NM	22
	Estancia	NM	8
	St. Johns	AZ	15

Table 13.--Locations within 14 climatic zones identified by cluster analysis procedure 1/--Continued

Climatic zone symbol	Location	State	LOC_NO
	Prescott	AZ	14
	Grand Junction	CO	5
	Potter Valley	CA	18
	Springer	NM	19
●	Alamosa	CO	1
	Panguitch	UT	15
	Cerro	NM	3
	Flagstaff	AZ	6
	Lordsburg	NM	14

1/ See map and table 14.

Table 14.--Characteristics of 14 climatic zones identified by cluster analysis procedure, using frost-free days, mean temperature, and latitude as parameters 1/

Climatic zone symbol	Frost-free days	Mean temperature (°F)	Latitude
	50 + 5.98	40 + 0.85	N 42° 44' + 30'
	94 + 3.52	45 + 0.54	N 42° 05' + 19'
	105 + 4.47	45 + 0.38	N 44° 20' + 13'
	115 + 4.86	43 + 0.41	N 48° 20' + 4'
	115 + 3.40	48 + 0.43	N 39° 26' + 16'
	125 + 3.19	47 + 0.41	N 46° 27' + 18'
	136 + 5.85	49 + 0.40	N 43° 06' + 23'
	142 + 2.13	50 + 0.33	N 40° 26' + 15'
	144 + 10.08	49 + 1.34	N 36° 04' + 34'
	160 + 0.74	53 + 0.67	N 36° 55' + 23'
	181 + 5.87	51 + 0.54	N 45° 45' + 27'
	209 + 5.44	61 + 0.56	N 34° 41' + 35'
	256 + 6.15	62 + 0.75	N 36° 16' + 31'
	278 + 8.60	74 + 0.57	N 33° 08' + 12'

1/ See map and table 13 for locations in each climatic zone.

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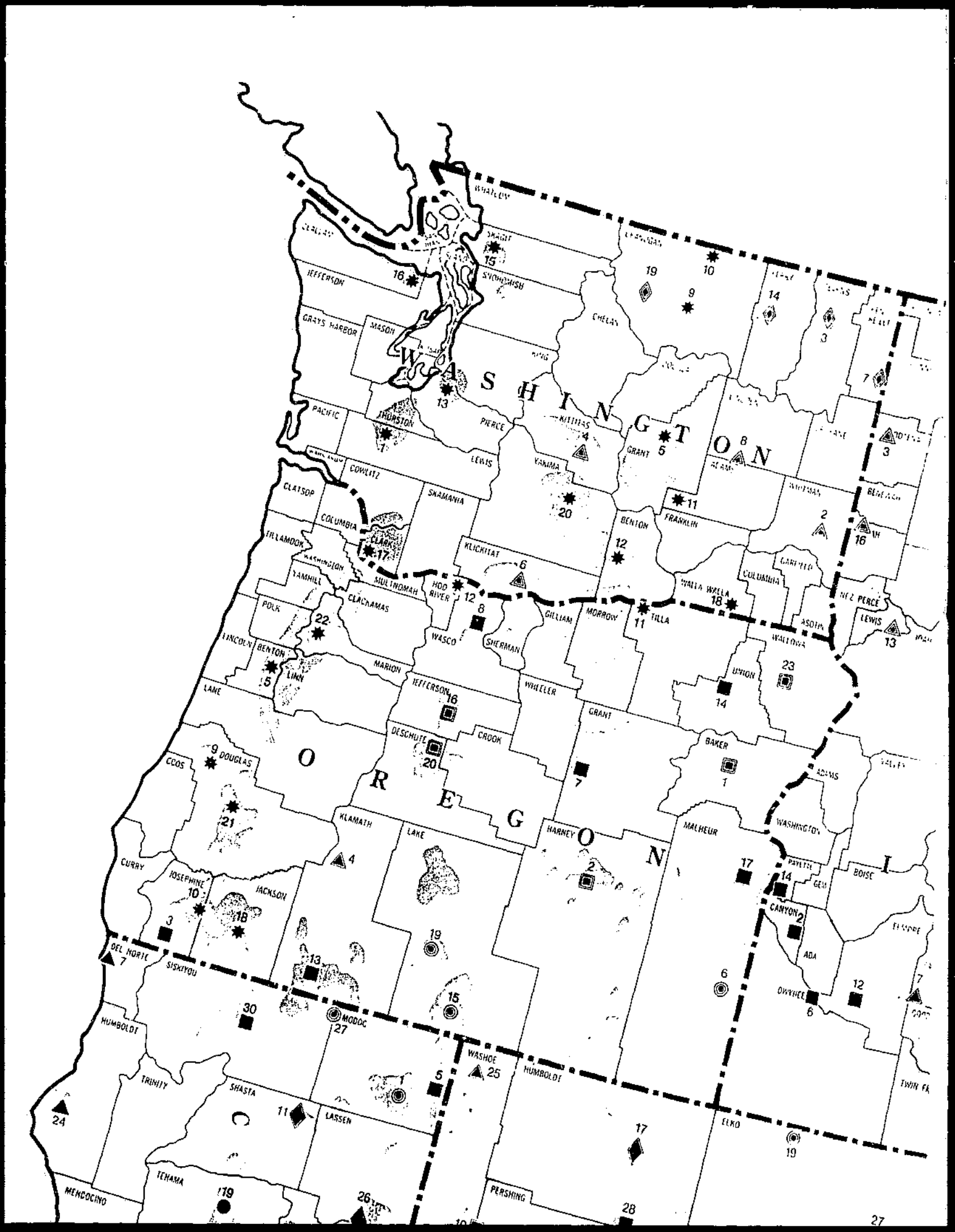
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PIERCE
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CLATSOP
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COLUMBIA
BENTON
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TILLAMOOK
CLARK
KLICKITAT
YAMHILL
MULTNOMAH
HOOD RIVER
WALLA WALLA
COLUMBIA
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POLK
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WASCO
GILLIAM
MORROW
TILLA
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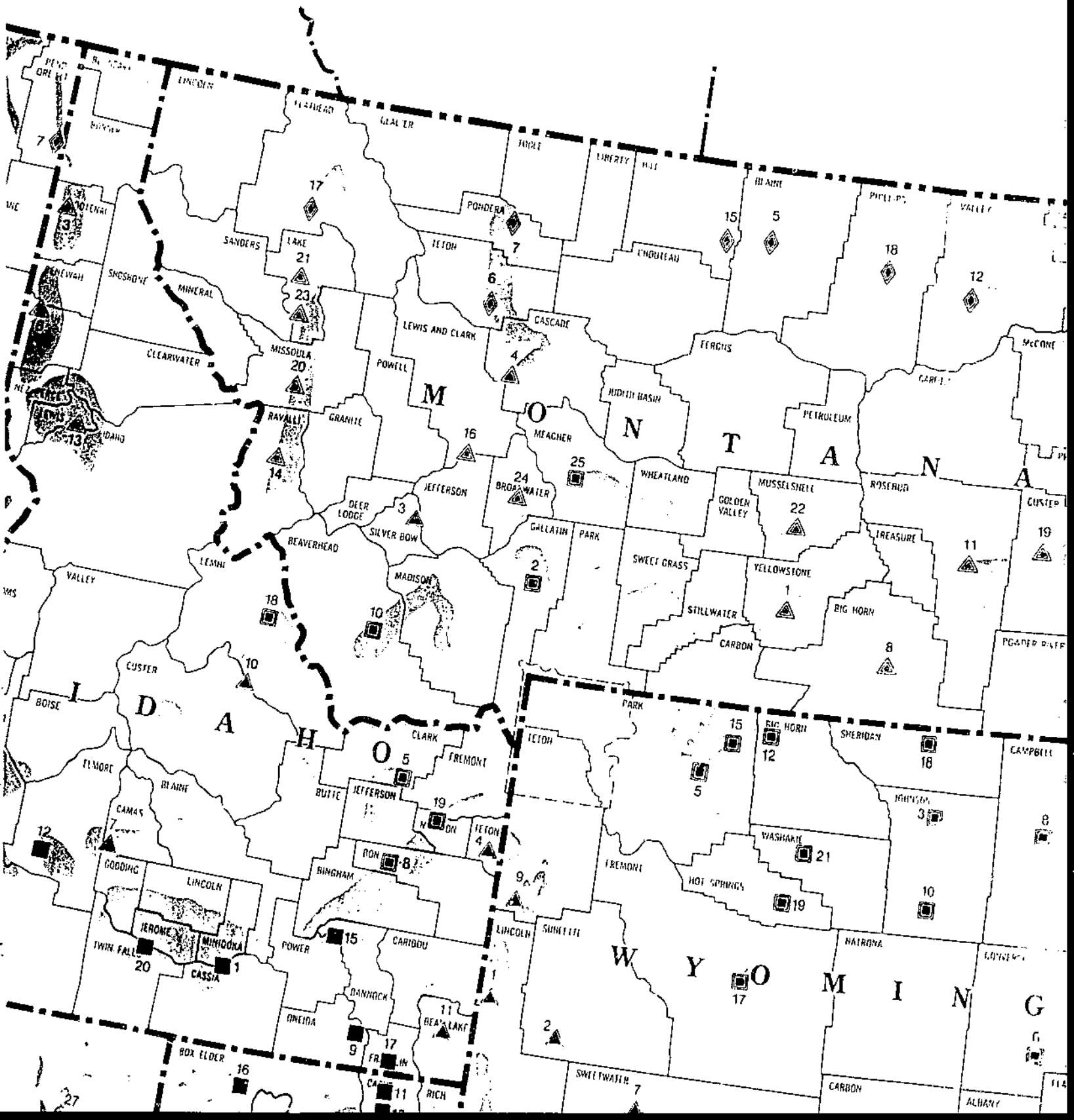
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TOOLE
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FERGUS
McCONE
SHOSHONE
MINERAL
LEWIS AND CLARK
CASCADE
CLEARWATER
MISSOULA
POWELL
JUDITH BASIN
PETROLEUM
RAVALLI
GRANITE
MEAGHER
WHEATLAND
MUSSELSHELL
ROSEBUD
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GOLDEN VALLEY
JEFFERSON
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DEER LODGE
SILVER BOW
GALLATIN
PARK
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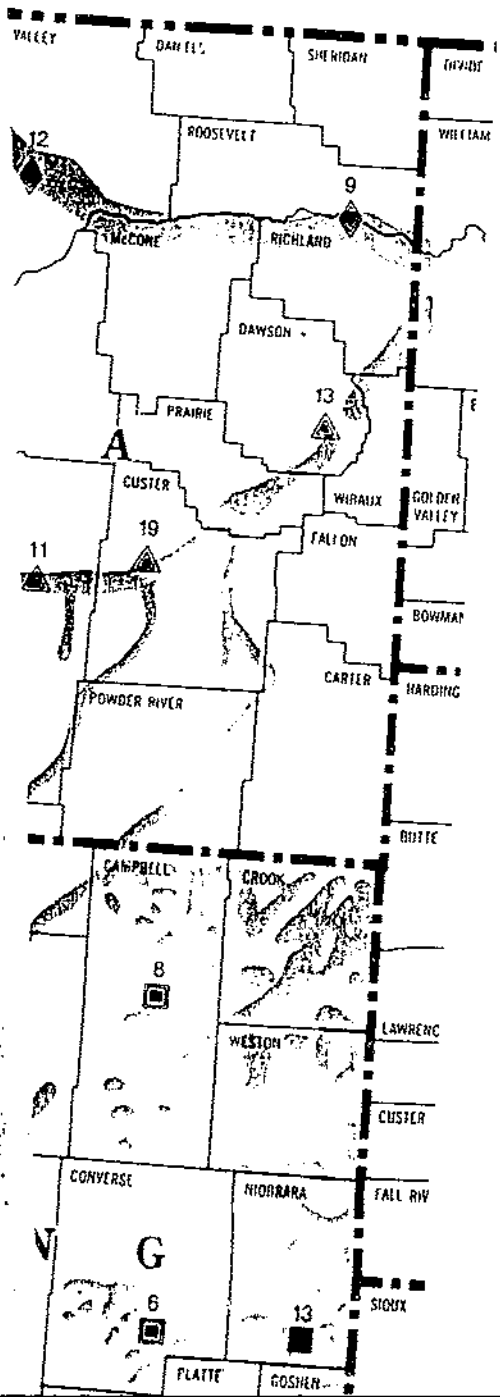
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HARDING
POWDER RIVER
BUTTE
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CROOK
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CUSTER
CONVERSE
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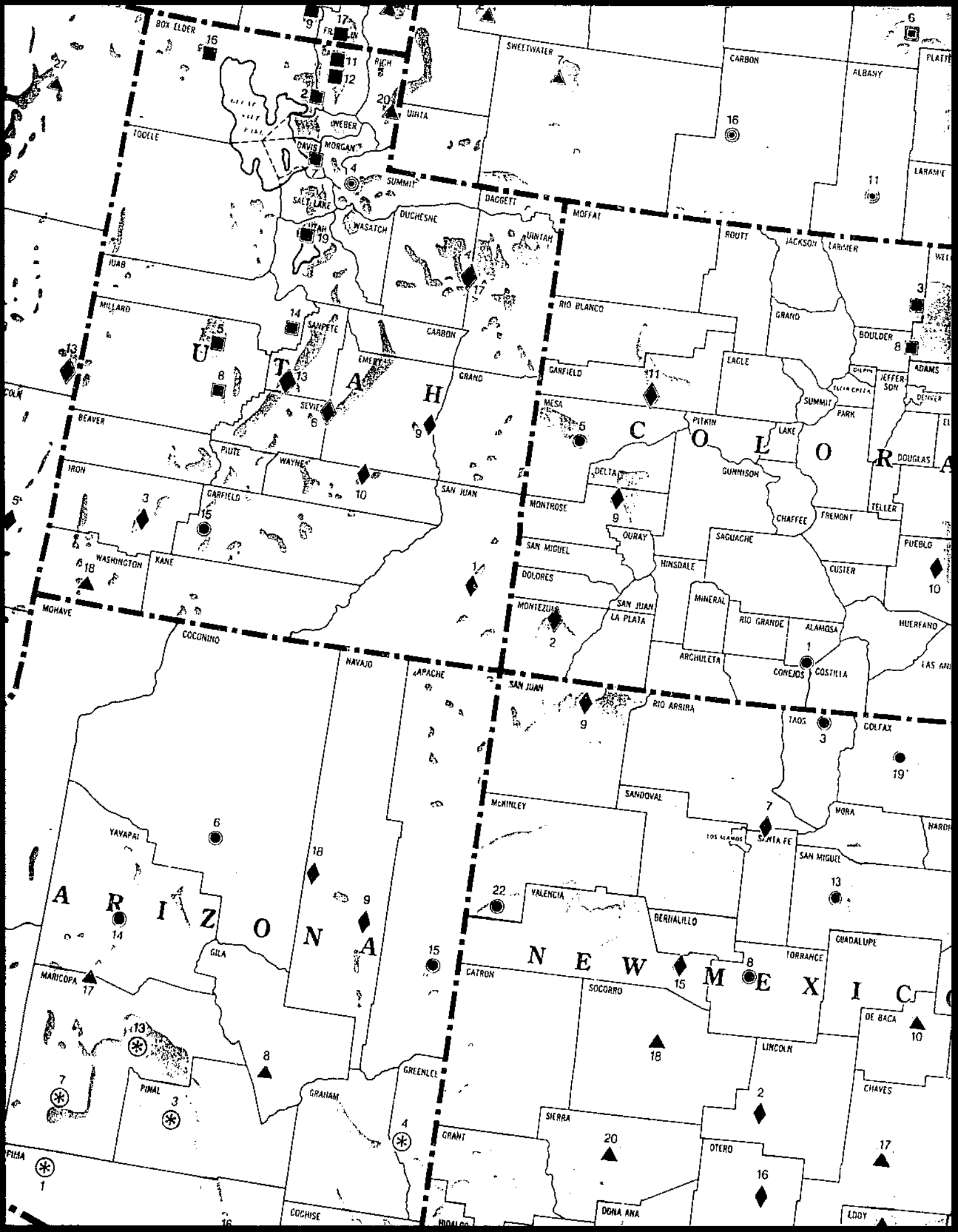
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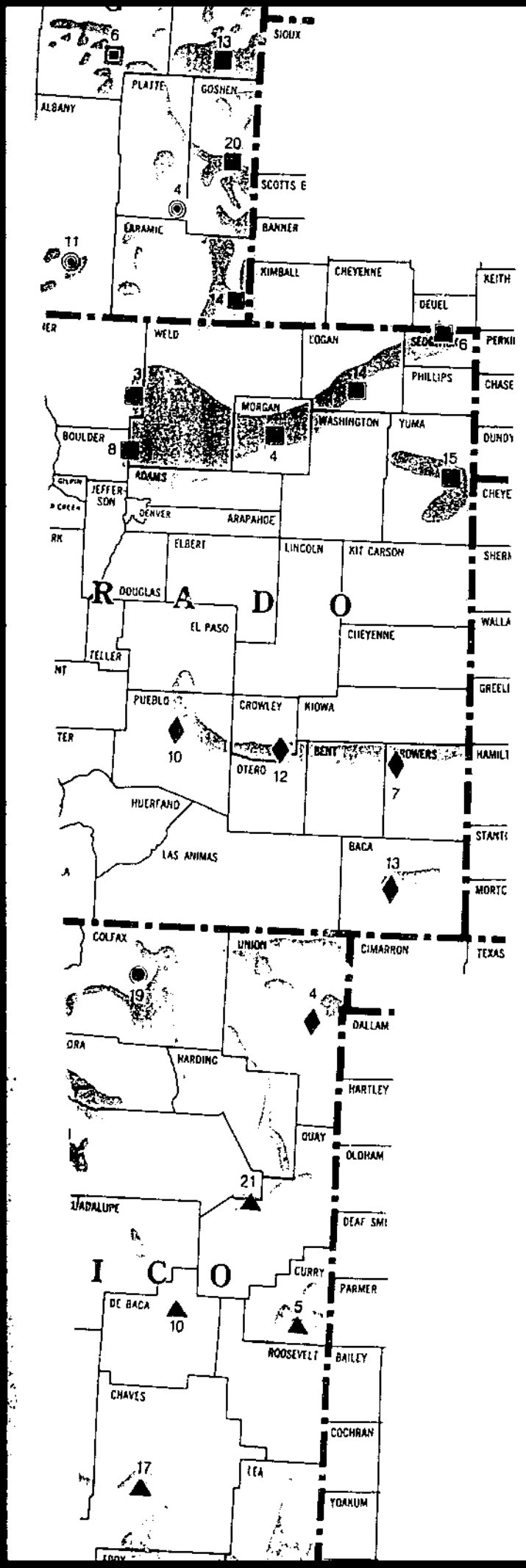
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COCHRAN
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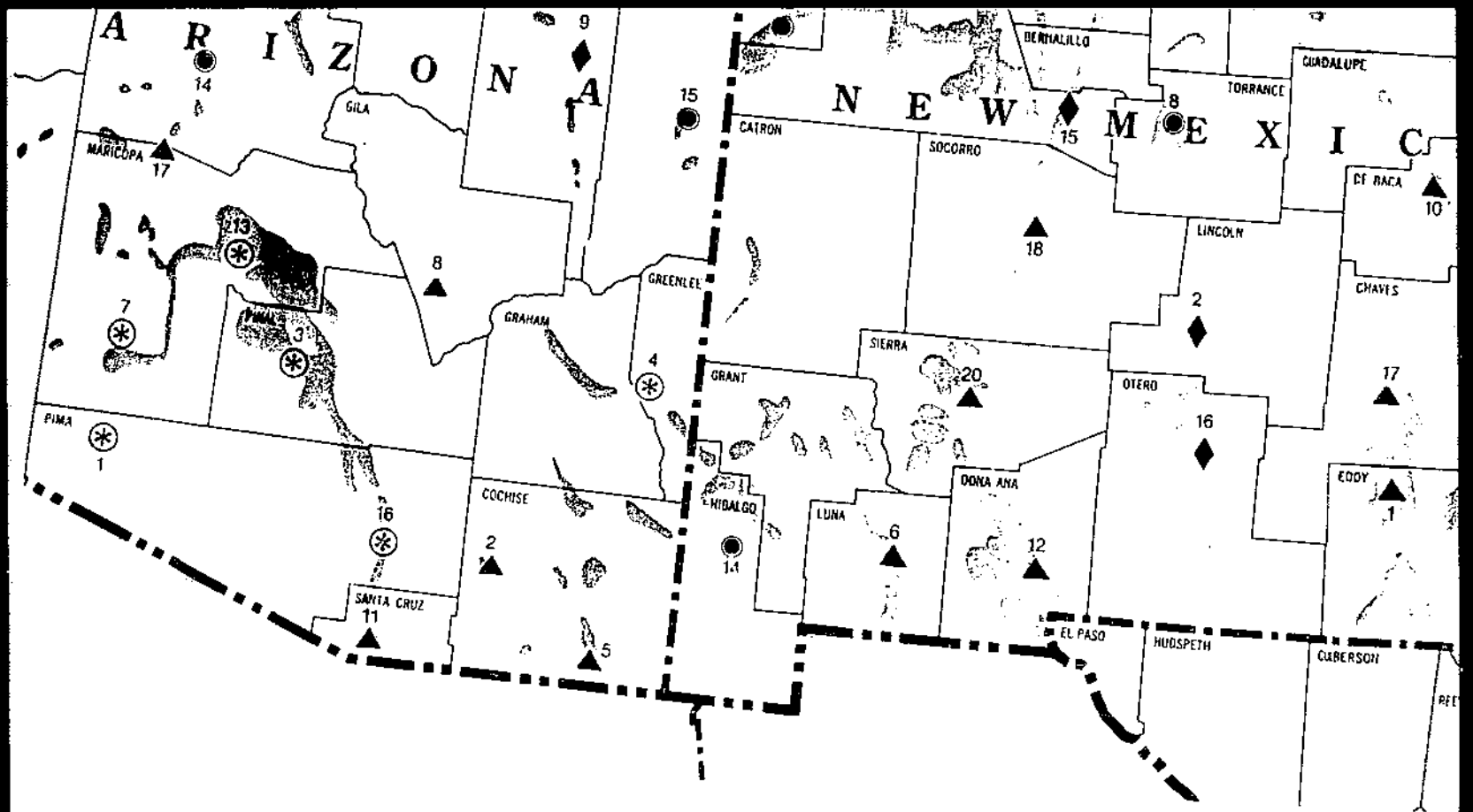
Figure 1.--Alfalfa-growing areas of the Western United States. Symbols mark locations where climatological data are available. Locations with the same symbol should have similar climates. (See tables 2, 13, and 14.)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SANTA CRUZ
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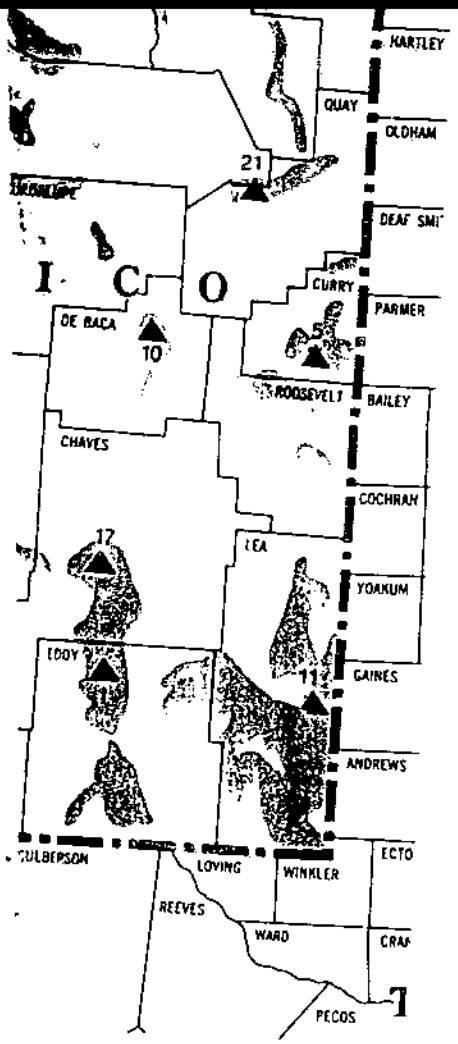
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