

Supplemental Material

Laris, P., et al. (2021). Where Have the Native Grasses Gone?: What a Long-Term, Repeat Study Can Tell Us about California's Native Prairie Landscapes. *Rural Landscapes: Society, Environment, History*, X(X): X, 1–13. DOI: <https://doi.org/10.16993/rl.61>

APPENDIX A FISHER'S EXACT TESTS RESULTS

Fisher's Exact Test for Count Data for increase/decrease in cover of grasses and forbs by quadrat from 1981 to 2015.

p-value = 0.0001157

alternative hypothesis: true odds ratio is not equal to 1

95 percent confidence interval:

4.268043 2505.233273

sample estimates:

odds ratio

45.18712

Fisher's Exact Test for Count Data for increase/decrease in cover of native and nonnative grasses by quadrat from 1981 to 2015.

p-value = 0.08357

alternative hypothesis: true odds ratio is not equal to 1

95 percent confidence interval:

0.00251916 1.41111259

sample estimates:

odds ratio

0.1341017

APPENDIX B

QUADRAT LOCATION DATA

	Upper-left	Upper-right	Lower-left	Lower-right
Quadrat 1	34.100318, - 119.050387	34.100120, - 119.050371	34.100333, - 119.050571	34.131569, - 119.091563
Quadrat 2	34.104232, - 119.043858	34.168739, - 118.984915	34.104358, - 119.043883	34.104136, - 119.044170
Quadrat 3	34.105474, - 119.038024	34.105370, - 119.038282	34.105545, - 119.038091	34.105478, - 119.038328
Quadrat 4	34.105632, - 119.055078	34.105609, - 119.054796	34.105479, - 119.055010	34.105474, - 119.054793
Quadrat 5	34.100723, - 119.054223	34.100746, - 119.054451	34.100868, - 119.054183	34.100927, - 119.054423
Quadrat 6	34.107069, - 119.035331	34.106861, - 119.035402	34.107104, - 119.035451	34.106930, - 119.035609
Quadrat 7	34.095498, - 119.050682	34.095420, - 119.050529	34.095415, - 119.050778	34.095274, - 119.050623
Quadrat 8	34.094377, - 119.049799	34.094191, - 119.049578	34.094210, - 119.049546	34.133370, - 119.070453
Quadrat 9	34.097148, - 119.046896	34.097150, - 119.046766	34.096913, - 119.046945	34.096897, - 119.046814
Quadrat 10	34.132799, - 119.070059	34.107717, - 119.052777	34.107874, - 119.053073	34.107705, - 119.052950
Quadrat 11	34.105971, - 119.040681	34.105748, - 119.040535	34.105870, - 119.040808	34.105683, - 119.040663
Quadrat 12	34.109381, - 119.032427	34.109217, - 119.032520	34.109442, - 119.032547	34.109278, - 119.032652
Quadrat 13	34.101822, - 119.048342	34.101762, - 119.048156	34.111793, - 119.055444	34.101635, - 119.048207
Quadrat 14	34.106791, - 119.049892	34.106859, - 119.049591	34.106629, - 119.049856	34.106716, - 119.049555
Quadrat 15	34.102848, - 119.053277	34.102658, - 119.053348	34.102836, - 119.053504	34.125661, - 119.066123

Coordinates of each quadrat's corners.

	Orientation:
Quadrat 1	Back to main streambed
Quadrat 2	Back to trail
Quadrat 3	Back to trail
Quadrat 4	Back to trail
Quadrat 5	Back to trail connection/shady lunch spot
Quadrat 6	Front to trail

Quadrat 7	Back to trail
Quadrat 8	Front to trail
Quadrat 9	Back to trail
Quadrat 10	Back to stream bed
Quadrat 11	Back to downhill
Quadrat 12	Back to stream bed
Quadrat 13	Back to oak ditch
Quadrat 14	Back to trail
Quadrat 15	Back to trail

How the researcher should orient him or herself to assure proper assignment of corners as upper-left, et cetera.

	Upper-left	Upper-right	Lower-left	Lower-right
Quadrat 1	At least rocks	Rebar	At least rocks	Rebar
Quadrat 2	Rocks, maybe angle iron		At least rocks	
Quadrat 3	Only rocks	Angle Iron, metal pole	Angle Iron	Only rocks
Quadrat 4	Only rocks	Only rocks	Only rocks	Only rocks
Quadrat 5	Rebar	Angle Iron	Angle Iron	Angle Iron
Quadrat 6	At least rocks	At least rocks	Metal Pole	Rebar
Quadrat 7			Rebar	
Quadrat 8	Rebar	Rebar	Rebar	Rebar
Quadrat 9	Angle iron		Rebar	Rebar
Quadrat 10	Rebar	At least rocks	Rebar	Rebar, white rocks
Quadrat 11		Only rocks	Only rocks	Angle Iron
Quadrat 12	Angle iron	Angle Iron	Only rocks	Angle iron/metal pole
Quadrat 13		At least rocks	At least rocks	Angle iron
Quadrat 14	At least rocks	At least rocks	At least rocks	At least rocks
Quadrat 15	Angle iron, white rocks	Angle iron, white rocks	Angle iron	Angle Iron

Corner markers for each quadrat.

APPENDIX C

COVER DATA BY QUADRAT

Cover Data by Quadrat- Grass Species

Quadrat 1	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	2.00	28.67	1333.33	95.24	40.78	42.26	2.11
Bromus diandrus	11.00	0.42	-96.21	-6.87	0.00	-100.00	-5.00
Bromus hordeaceus	1.00	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Bromus madritensis	1.00	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Festuca perennis	42.00	45.67	8.73	0.62	2.84	-93.79	-4.69
Hordeum murinum	2.00	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Stipa lepida	0.00	0.00	n/a	n/a	1.06	Undef.	n/a
Stipa pulchra	42.00	19.00	-54.76	-3.91	1.42	-92.53	-4.63
Vulpia myuros	0.25	0.08	-66.80	-4.77	0.00	Still Zero	n/a

Quadrat 2	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	5.00	4.67	-6.67	-0.48	0.00	-100.00	-5.00
Bromus diandrus	5.00	6.00	20.00	1.43	0.00	-100.00	-5.00
Bromus hordeaceus	11.00	0.42	-96.21	-6.87	0.00	-100.00	-5.00
Bromus madritensis	0.00	4.08	Undef.	n/a	0.00	-100.00	-5.00
Festuca perennis	7.00	17.33	147.62	10.54	0.00	-100.00	-5.00
Phalaris aquatica	18.00	21.00	16.67	1.19	3.08	-85.35	-4.27
Stipa lepida	0.00	0.00	n/a	n/a	1.92	Undef.	n/a
Stipa pulchra	40.00	19.67	-50.83	-3.63	3.85	-80.44	-4.02

Quadrat 3	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	2.00	22.33	1016.67	72.62	61.02	173.23	8.66
Bromus diandrus	0.00	1.33	Undef.	n/a	0.00	-100.00	-5.00
Bromus hordeaceus	11.00	0.08	-99.25	-7.09	0.00	-100.00	-5.00
Bromus madritensis	7.25	0.42	-94.25	-6.73	0.00	-100.00	-5.00
Festuca perennis	14.00	50.00	257.14	18.37	0.32	-99.36	-4.97
Stipa pulchra	54.00	22.00	-59.26	-4.23	15.34	-30.29	-1.51
Vulpia myuros	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a

Quadrat 4	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.25	27.67	10966.67	783.33	53.19	92.26	4.61
Bromus diandrus	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Festuca perennis	66.00	56.67	-14.14	-1.01	4.56	-91.95	-4.60
Stipa pulchra	34.00	7.00	-79.41	-5.67	11.55	65.00	3.25

Vulpia myuros	0.00	0.08	Undef.	n/a	0.00	-100.00	-5.00
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Quadrat 5	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.25	3.67	1366.67	97.62	0.00	-100.00	-5.00
Bromus diandrus	12.00	0.75	-93.75	-6.70	0.00	-100.00	-5.00
Bromus hordeaceus	1.00	2.00	100.00	7.14	0.00	-100.00	-5.00
Bromus madritensis	1.00	3.33	233.33	16.67	0.00	-100.00	-5.00
Festuca perennis	4.00	23.33	483.33	34.52	0.00	-100.00	-5.00
Hordeum murinum	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Phalaris aquatica	20.00	36.00	80.00	5.71	17.62	-51.05	-2.55
Stipa lepida	0.00	0.00	n/a	n/a	0.82	Undef.	n/a
Stipa pulchra	57.00	18.33	-67.84	-4.85	6.56	-64.23	-3.21
Vulpia myuros	0.00	1.33	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 6	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	13.00	26.00	100.00	7.14	66.93	157.41	7.87
Bromus diandrus	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus hordeaceus	4.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	4.00	3.33	-16.67	-1.19	0.00	-100.00	-5.00
Festuca perennis	1.00	43.67	4266.67	304.76	8.56	-80.40	-4.02
Stipa pulchra	25.00	19.00	-24.00	-1.71	11.28	-40.61	-2.03
Vulpia myuros	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a

Quadrat 7	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.25	21.67	8566.67	611.90	0.00	-100.00	-5.00
Bromus diandrus	1.00	0.42	-58.30	-4.16	0.00	-100.00	-5.00
Bromus hordeaceus	2.00	2.33	16.67	1.19	0.00	-100.00	-5.00
Bromus madritensis	1.25	14.00	1020.00	72.86	0.00	-100.00	-5.00
Festuca perennis	0.00	1.67	Undef.	n/a	0.00	-100.00	-5.00
Phalaris aquatica	0.00	0.00	n/a	n/a	0.35	Undef.	n/a
Stipa lepida	13.00	15.33	17.95	1.28	0.00	-100.00	-5.00
Stipa pulchra	45.00	6.33	-85.93	-6.14	1.74	-72.59	-3.63
Vulpia myuros	0.25	4.33	1633.33	116.67	0.00	-100.00	-5.00

Quadrat 8	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	8.00	31.67	295.83	21.13	1.11	-96.49	-4.82
Bromus carinatus	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus diandrus	1.00	3.33	233.33	16.67	0.00	-100.00	-5.00
Bromus hordeaceus	14.00	3.33	-76.19	-5.44	0.00	-100.00	-5.00
Bromus madritensis	24.00	15.75	-34.38	-2.46	0.00	-100.00	-5.00
Festuca perennis	0.00	0.08	Undef.	n/a	0.00	-100.00	-5.00

Stipa pulchra	33.00	19.33	-41.41	-2.96	1.85	-90.42	-4.52
Vulpia myuros	0.25	3.33	1233.33	88.10	0.00	-100.00	-5.00

Quadrat 9	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	3.00	8.00	166.67	11.90	0.00	-100.00	-5.00
Bromus hordeaceus	0.25	0.13	-50.00	-3.57	0.00	-100.00	-5.00
Bromus madritensis	0.25	0.13	-50.00	-3.57	0.00	-100.00	-5.00
Elymus condensatus	0.25	1.50	500.00	35.71	0.00	-100.00	-5.00
Phalaris aquatica	0.00	0.00	n/a	n/a	5.04	Undef.	n/a
Stipa lepida	25.00	20.00	-20.00	-1.43	2.52	-87.41	-4.37
Stipa pulchra	0.00	0.50	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 10	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus hordeaceus	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	3.25	2.00	-38.46	-2.75	0.00	-100.00	-5.00
Festuca perennis	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Gastridium phleoides	0.00	0.33	Undef.	n/a	0.00	-100.00	-5.00
Stipa lepida	0.00	0.00	n/a	n/a	1.35	Undef.	n/a
Stipa pulchra	64.00	36.67	-42.71	-3.05	4.05	-88.94	-4.45
Vulpia myuros	0.00	0.67	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 11	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	15.00	20.00	33.33	2.38	55.97	179.85	8.99
Bromus carinatus	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus diandrus	1.00	2.00	100.00	7.14	0.00	-100.00	-5.00
Bromus hordeaceus	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	0.00	2.50	Undef.	n/a	0.00	-100.00	-5.00
Festuca perennis	6.00	39.50	558.33	39.88	1.12	-97.17	-4.86
Melica imperfecta	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Phalaris aquatica	0.00	0.13	Undef.	n/a	0.00	-100.00	-5.00
Stipa lepida	4.00	0.50	-87.50	-6.25	0.00	-100.00	-5.00
Stipa pulchra	17.00	15.50	-8.82	-0.63	26.87	73.33	3.67

Quadrat 12	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	23.00	36.67	59.42	4.24	56.48	54.03	2.70
Bromus hordeaceus	25.00	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Bromus madritensis	0.25	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Festuca perennis	2.00	39.00	1850.00	132.14	15.95	-59.11	-2.96
Stipa pulchra	33.00	22.67	-31.31	-2.24	3.32	-85.34	-4.27

Quadrat 13	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.00	12.67	Undef.	n/a	25.78	103.49	5.17
Festuca perennis	99.00	67.00	-32.32	-2.31	15.53	-76.82	-3.84
Phalaris aquatica	0.25	16.67	6566.80	469.06	0.00	-100.00	-5.00

Quadrat 14	1981	1990s	% Change	%/Year	2015	%Change	%/Year
Avena sp.	0.25	53.50	21300.00	1521.43	78.41	46.57	2.33
Bromus diandrus	59.00	7.00	-88.14	-6.30	0.00	-100.00	-5.00
Bromus hordeaceous	0.25	0.00	-100.00	-7.14	0.00	Still Zero	n/a
Bromus madritensis	0.00	10.00	Undef.	n/a	0.00	-100.00	-5.00
Festuca perennis	0.00	0.50	Undef.	n/a	0.00	-100.00	-5.00
Hordeum murinum	0.25	0.00	-100.00	-7.14	0.00	Still zero	n/a
Phalaris aquatica	1.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Stipa lepida	0.00	0.00	n/a	n/a	4.41	Undef.	n/a
Stipa pulchra	39.00	7.50	-80.77	-5.77	0.00	-100.00	-5.00
Vulpia myuros	0.00	11.00	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 15	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	1.30	0.00	-100%	-7.14%	0.00	Still Zero	n/a
Bromus diandrus	62.5	0.00	-100.00	-7.14%	0.00	Still Zero	n/a
Bromus hordeaceous	0.20	0.00	-100.00	-7.14%	0.00	Still Zero	n/a
Hordeum murinum	0.10	0.00	-100.00	-7.14%	0.00	Still Zero	n/a

Cover Data by Quadrat- Shrub Species

Quadrat 1	1981	1994	1995	1996	2015
Grindelia camporum	0.25	1.00	1.00	0.25	0.00
Hazardia squarrosa	0.00	0.00	0.00	0.00	0.35
Salvia leucophylla	0.00	0.00	0.00	0.00	1.77

Quadrat 2	1981	1994	1995	1996	2015
Artemisia californica	2.00	2.00	2.00	2.00	3.08
Corethrogyne filaginifolia	7.00	0.00	0.00	0.00	0.00
Grindelia camporum	2.00	0.00	1.00	0.00	0.00
Hazardia squarrosa	0.00	0.25	0.00	0.00	0.00
Malmosa laurina	0.00	0.00	0.00	0.00	0.38
Salvia leucophylla	0.00	6.00	7.00	15.00	1.54
Solanum xanti	0.00	0.00	0.00	0.00	1.15

Quadrat 3	1981	1994	1995	1996	2015
Corethrogyne filaginifolia	1.00	0.00	0.00	0.00	0.00
Grindelia camporum	0.00	0.25	0.00	0.00	0.00
Hazardia squarrosa	2.00	1.00	0.25	1.00	0.00
Salvia leucophylla	0.00	1.00	0.00	0.00	0.00

Quadrat 4	1981	1994	1995	1996	2015
Baccharis pilularis	0.00	0.00	1.00	1.00	0.00
Grindelia camporum	0.25	0.00	0.00	0.00	0.00

Quadrat 5	1981	1994	1995	1996	2015
Baccharis pilularis	0.00	0.25	1.00	1.00	3.28

Quadrat 6	1981	1994	1995	1996	2015
Artemisia californica	3.00	0.00	0.00	0.00	0.00
Corethrogyne filaginifolia	2.00	0.00	0.00	0.00	0.00
Grindelia camporum	1.00	0.00	0.00	0.00	0.00
Hazardia squarrosa	16.00	3.00	2.00	5.00	1.17

Quadrat 7	1981	1994	1995	1996	2015
Artemisia californica	8.00	0.00	0.00	1.00	0.00
Baccharis pilularis	0.00	0.00	0.00	0.00	1.04
Eriogonum cinereum	2.00	0.25	1.00	0.25	4.51
Hazardia squarrosa	1.00	0.00	0.00	0.25	0.00
Malmosa laurina	0.25	1.00	1.00	1.00	0.00
Opuntia	0.25	0.00	0.25	0.00	0.35
Salvia leucophylla	12.00	1.00	3.00	4.00	3.13

Quadrat 8	1981	1994	1995	1996	2015
Artemisia californica	11.00	0.25	0.25	1.00	0.00
Corethrogyne filaginifolia	2.00	0.00	0.00	0.00	0.00
Eriogonum cinereum	2.00	7.00	1.00	1.00	1.85
Hazardia squarrosa	0.25	0.00	0.00	0.25	0.00
Malmosa laurina	0.00	0.00	0.00	(blank)	5.93
Quercus	0.00	0.00	0.00	0.00	1.11
Salvia leucophylla	0.25	0.00	0.00	0.00	1.11

Quadrat 9	1981	1994	1995	1996	2015
Artemisia californica	13.00	n/a	1.00	0.25	0.72
Corethrogyne filaginifolia	0.25	n/a	0.00	0.00	0.00
Encelia californicum	0.00	n/a	0.25	0.00	1.80

Eriogonum cinereum	10.00	n/a	10.00	9.00	6.12
Grindelia camporum	0.25	n/a	0.00	0.00	0.00
Hazardia squarrosa	0.25	n/a	0.00	0.00	0.00
Malmosa laurina	5.00	n/a	2.00	4.00	2.16
Salvia leucophylla	14.00	n/a	1.00	0.25	1.08

Quadrat 10	1981	1994	1995	1996	2015
Artemisia californica	1.00	0.00	1.00	2.00	0.00
Baccharis pilularis	7.00	0.00	1.00	1.00	0.00
Encelia californicum	0.00	0.00	0.00	0.00	0.45
Eriogonum cinereum	0.00	7.00	4.00	5.00	4.50
Hazardia squarrosa	7.00	0.00	0.00	0.00	1.35
Malmosa laurina	0.00	1.00	4.00	2.00	11.71
Mimulus aurantiacus	0.00	0.00	2.00	5.00	2.25
Salvia leucophylla	1.00	0.25	0.00	0.00	0.00
Salvia mellifera	0.00	0.00	0.00	1.00	0.00

Quadrat 11	1981	1994	1995	1996	2015
Ademostoma fasciculatum	0.25	n/a	0.00	0.00	0.00
Artemisia californica	0.25	n/a	0.00	0.00	0.00
Corethrogyne filaginifolia	5.00	n/a	0.25	0.00	0.00
Grindelia camporum	1.00	n/a	2.00	0.00	0.00
Hazardia squarrosa	3.00	n/a	2.00	3.00	1.87
Malmosa laurina	1.00	n/a	0.00	0.25	0.00
Quercus	0.25	n/a	4.00	10.00	0.00
Ribes malvaceum	1.00	n/a	0.00	0.00	0.00
Ribes speciosum	0.25	n/a	0.00	0.00	0.00
Salvia leucophylla	1.00	n/a	0.00	0.00	0.00
Toxicodendron diversiloba	0.25	n/a	pr	pr	0.00

Quadrat 12	1981	1994	1995	1996	2015
Grindelia camporum	6.00	0.25	0.00	0.25	0.00
Hazardia squarrosa	1.00	0.00	0.00	0.00	0.00

No shrubs in quadrat 13.

Quadrat 14	1981	1994	1995	1996	2015
Artemisia californica	1.00	n/a	0.25	1.00	0.00
Eriogonum cinereum	0.00	n/a	0.00	3.00	0.88
Hazardia squarrosa	0.00	n/a	1.00	2.00	0.00
Malmosa laurina	0.00	0.00	0.00	0.00	1.76

Quadrat 15	1981	1994	1995	1996	2015
Artemisia californica	0.10	n/a	n/a	n/a	0.00
Baccharis pilularis	n/a	n/a	n/a	n/a	1.74
Malmosa laurina	n/a	n/a	n/a	n/a	1.74
Nicotiana glauca	1.50	n/a	n/a	n/a	0.00
Sambucus nigra	0.60	n/a	n/a	n/a	2.17

Cover Data by Quadrat- Forb Species

Quadrat 1	1981	1994	1995	1996	2015
Acmispon glaber	0.00	0.00	0.00	0.00	1.77
Anagallis arvensis	0.00	0.00	1.00	0.25	0.00
Calochortus catalinae	0.25	0.25	0.00	0.00	0.35
Calystegia macrostegia	0.25	0.00	1.00	0.00	6.38
Centaurea melitensis	0.25	0.00	0.00	0.00	7.09
Daucus pusilus	0.00	0.00	0.00	0.00	0.35
Deinandra fasciculata	0.25	3.00	5.00	0.00	14.89
Dichelostemma capitatum	0.00	0.00	0.00	0.00	2.13
Erodium cicutarium	0.25	0.00	0.00	0.00	16.31
Hypochaeris glabra	0.00	0.00	0.25	0.00	0.00
Medicago polymorpha	0.25	0.00	0.00	0.00	0.00
Pseudognaphalium californicum	0.25	0.00	0.00	0.00	0.00
Sanicula arguta	0.25	0.00	0.00	0.00	0.00
Silene gallica	0.25	0.00	0.00	0.00	0.00
Sisyrinchium bellum	0.25	0.25	3.00	4.00	0.00

Quadrat 2	1981	1994	1995	1996	2015
Acmispon glaber	0.00	0.00	0.00	0.00	3.46
Anagallis arvensis	0.00	0.00	0.00	0.25	0.00
Astragalus trichopodus	0.25	0.00	0.00	0.00	0.00
Calochortus catalinae	0.00	6.00	0.00	0.00	1.15
Calystegia macrostegia	0.00	0.00	0.00	0.00	3.46
Castilleja affinis	0.00	0.00	0.00	1.00	0.00
Centaurea melitensis	0.00	2.00	0.25	1.00	6.15
Deinandra fasciculata	0.25	4.00	0.00	0.00	55.38
Dichelostemma capitatum	0.00	0.00	0.25	0.00	5.77
Galium nuttallii	0.00	0.00	1.00	1.00	1.15
Lupinus succulentus	0.00	0.00	0.00	0.00	1.15
Medicago polymorpha	0.00	0.00	0.00	0.00	1.54

<i>Sanicula arguta</i>	0.25	1.00	1.00	3.00	0.00
<i>Silene gallica</i>	0.25	0.00	0.00	0.00	0.00
<i>Silybum marianum</i>	1.00	0.00	0.00	0.00	0.00
<i>Sisyrinchium bellum</i>	0.00	0.00	0.25	1.00	0.00
<i>Sonchus asper/oleraceus</i>	0.00	0.00	0.00	0.00	1.92

Quadrat 3	1981	1994	1995	1996	2015
<i>Anagallis arvensis</i>	0.25	0.00	0.00	0.00	0.00
<i>Calochortus catalinae</i>	0.25	0.25	0.25	0.00	0.32
<i>Calystegia macrostegia</i>	0.25	3.00	2.00	2.00	19.17
<i>Centaurea melitensis</i>	1.00	0.00	0.00	0.00	0.00
<i>Deinandra fasciculata</i>	0.25	1.00	0.00	0.00	0.96
<i>Dichelostemma capitatum</i>	0.25	0.00	0.00	0.00	0.00
<i>Erodium cicutarium</i>	1.00	0.00	0.00	0.00	2.56
<i>Galium nuttallii</i>	0.00	0.00	0.00	0.00	0.32
<i>Medicago polymorpha</i>	1.00	0.00	0.00	0.00	0.00
<i>Plantago erecta</i>	0.25	0.00	0.00	0.00	0.00
<i>Sanicula arguta</i>	0.25	1.00	0.25	1.00	0.00
<i>Sonchus asper/oleraceus</i>	0.25	0.00	0.00	0.00	0.00
<i>Stebbinsoseris hertocarpa</i>	0.25	0.00	0.00	0.00	0.00

Quadrat 4	1981	1994	1995	1996	2015
<i>Calochortus catalinae</i>	0.25	0.00	0.00	0.00	0.00
<i>Convolvulus simulans</i>	0.00	0.00	0.00	0.00	16.72
<i>Cynara cardunculus</i>	0.00	11.00	10.00	3.00	0.00
<i>Deinandra fasciculata</i>	0.00	2.00	0.00	0.00	0.00
<i>Dichelostemma capitatum</i>	0.25	0.00	0.00	0.00	7.60
<i>Euphorbia spathulata</i>	0.00	0.00	0.00	0.00	0.30
<i>Sonchus asper/oleraceus</i>	0.00	0.00	0.00	0.00	5.78

Quadrat 5	1981	1994	1995	1996	2015
<i>Anagallis arvensis</i>	0.00	0.00	0.00	0.00	0.41
<i>Brassica nigra</i>	0.00	1.00	1.00	0.00	0.00
<i>Calystegia macrostegia</i>	0.25	0.00	0.00	0.00	0.00
<i>Centaurea melitensis</i>	0.25	0.00	0.00	0.00	0.00
<i>Deinandra fasciculata</i>	0.00	10.00	6.00	1.00	51.23
<i>Dichelostemma capitatum</i>	0.25	0.00	0.00	0.00	0.00
<i>Emmenanthe peduliflora</i>	0.00	0.00	0.00	0.00	0.41
<i>Erodium cicutarium</i>	0.00	4.00	0.00	0.00	9.02
<i>Medicago polymorpha</i>	0.25	0.00	0.25	0.00	0.00
<i>Sanicula arguta</i>	0.25	0.00	0.00	0.00	0.00

Silene gallica	0.25	0.00	0.00	0.00	0.00
Sonchus asper/oleraceus	0.00	0.25	0.00	0.00	1.23

Quadrat 6	1981	1994	1995	1996	2015
Bloomeria crocea	2.00	1.00	1.00	0.25	1.95
Brassica nigra	1.00	0.00	0.00	0.00	0.00
Calochortus catalinae	0.25	0.00	0.00	1.00	0.39
Calystegia macrostegia	0.25	4.00	2.00	2.00	1.56
Centaurea melitensis	0.00	0.00	0.00	0.00	2.33
Chorizanthe staticoides	0.00	0.00	0.25	0.00	0.00
Convulvus simulans	0.00	0.00	0.00	0.00	1.56
Daucus pusilus	0.00	0.00	0.00	1.00	0.00
Deinandra fasciculata	0.25	0.25	0.00	0.00	1.56
Emmenanthe peduliflora	0.00	0.00	0.00	0.00	0.00
Erodium cicutarium	0.25	4.00	0.00	0.00	0.00
Lupinus succulentus	0.25	0.00	0.25	0.00	1.17
Sisyrinchium bellum	0.25	0.00	0.00	1.00	0.00
Sonchus asper/oleraceus	0.25	0.00	0.00	0.00	0.00

Quadrat 7	1981	1994	1995	1996	2015
Acmispon glaber	0.25	0.00	0.00	0.25	1.39
Apiastrum angustifolium	0.00	0.00	0.25	0.00	0.00
Brassica nigra	0.00	0.25	0.00	0.00	0.00
Calochortus catalinae	0.25	4.00	3.00	0.25	3.47
Calystegia macrostegia	0.25	11.00	13.00	7.00	11.81
Castilleja affinis	0.00	0.00	1.00	2.00	0.00
Chlorogalum pomeridianum	1.00	0.00	0.00	0.00	0.00
Daucus pusilus	0.00	0.25	1.00	2.00	0.35
Deinandra fasciculata	0.25	13.00	6.00	0.25	22.57
Dichelostemma capitatum	0.00	0.25	0.25	0.00	4.51
Dichondra occidentalis	1.00	0.25	1.00	2.00	1.39
Erodium cicutarium	0.00	1.00	2.00	0.00	28.47
Galium aparine	0.00	0.00	2.00	2.00	0.00
Galium nuttallii	0.00	1.00	1.00	1.00	0.69
Lupinus succulentus	0.00	0.25	0.00	0.00	2.43
Medicago polymorpha	0.00	0.00	1.00	0.25	0.00
Oxalis albicans	0.25	0.00	0.00	0.00	0.00
Silene gallica	0.25	0.00	1.00	0.00	0.00
Sonchus asper/oleraceus	0.25	0.25	1.00	1.00	0.69
Trifolium gracilentum	0.00	0.00	0.25	0.00	0.00
Yabea microcarpa	0.25	0.00	0.00	0.00	0.00

Quadrat 8	1981	1994	1995	1996	2015
<i>Achillea millefolium</i>	0.25	0.00	0.00	0.00	0.00
<i>Acmispon glaber</i>	0.00	0.00	0.00	0.00	0.37
<i>Anagallis arvensis</i>	0.00	0.00	0.00	0.00	0.74
<i>Calochortus catalinae</i>	0.25	0.00	0.00	0.00	0.00
<i>Calystegia macrostegia</i>	2.00	6.00	9.00	5.00	30.37
<i>Daucus pusilus</i>	0.00	0.00	2.00	1.00	0.00
<i>Deinandra fasciculata</i>	0.25	8.00	1.00	0.25	3.70
<i>Dichelostemma capitatum</i>	0.25	0.00	0.00	0.25	4.44
<i>Erodium cicutarium</i>	0.25	9.00	4.00	0.00	31.11
<i>Galium aparine</i>	0.00	0.00	0.25	4.00	0.00
<i>Galium nuttallii</i>	0.25	0.00	0.25	1.00	0.00
<i>Lupinus succulentus</i>	0.00	0.00	0.00	0.25	0.00
<i>Malacothrix saxatilis</i>	0.00	0.00	0.00	0.25	0.74
<i>Medicago polymorpha</i>	0.25	0.00	0.00	0.00	0.37
<i>Oxalis albicans</i>	0.00	0.00	0.25	0.25	0.00
<i>Pseudognaphalium californicum</i>	1.00	0.00	0.00	0.00	0.00
<i>Sanicula arguta</i>	0.25	0.00	1.00	0.25	0.74
<i>Silene gallica</i>	0.00	0.00	0.00	0.25	0.00
<i>Silybum marianum</i>	0.25	0.00	0.00	0.00	0.00
<i>Sonchus asper/oleraceus</i>	1.00	3.00	0.00	1.00	0.00
<i>Yabea microcarpa</i>	0.25	0.00	0.00	0.00	0.00

Quadrat 9	1981	1994	1995	1996	2015
<i>Acmispon glaber</i>	1.00	n/a	9.00	22.00	6.12
<i>Acmispon maritimus</i>	0.00	n/a	0.00	0.00	0.36
<i>Astragalus trichopodus</i>	0.25	n/a	2.00	14.00	0.00
<i>Calochortus catalinae</i>	0.00	n/a	0.00	0.00	0.36
<i>Calystegia macrostegia</i>	1.00	n/a	26.00	18.00	29.14
<i>Castilleja affinis</i>	0.25	n/a	0.00	0.00	0.00
<i>Cryptantha intermedia</i>	0.00	n/a	0.25	0.00	0.00
<i>Daucus pusilus</i>	0.00	n/a	4.00	22.00	3.24
<i>Deinandra fasciculata</i>	0.25	n/a	0.00	20.00	6.47
<i>Dichelostemma capitatum</i>	0.00	n/a	2.00	0.00	1.08
<i>Dichondra occidentalis</i>	0.25	n/a	0.25	4.00	0.00
<i>Emmenanthe peduliflora</i>	0.00	n/a	0.25	0.00	0.00
<i>Erodium cicutarium</i>	0.00	n/a	0.00	4.00	0.00
<i>Galium nuttallii</i>	4.00	n/a	7.00	22.00	0.36
<i>Lactuca serriola</i>	0.00	n/a	0.00	0.00	4.68
<i>Lupinus succulentus</i>	0.00	n/a	2.00	0.00	11.87

Malacothrix saxatilis	0.00	n/a	0.00	4.00	0.00
Marah macrocarpa	0.00	n/a	2.00	0.00	0.00
Oxalis albicans	0.25	n/a	0.25	0.00	0.00
Sanicula arguta	0.25	n/a	0.25	0.00	0.00
Sonchus apser/oleraceus	0.00	n/a	0.00	0.00	2.16
Stephanomaria virgata	0.00	n/a	0.00	8.00	0.00

Quadrat 10	1981	1994	1995	1996	2015
Acmispon glaber	0.00	3.00	12.00	20.00	4.05
Acmispon maritimus	0.00	2.00	0.00	0.25	11.26
Acmispon strigosus	0.00	1.00	0.00	0.25	0.00
Anagallis arvensis	0.00	3.00	9.00	1.00	0.00
Calochortus catalinae	0.25	0.00	0.00	0.00	0.00
Calystegia macrostegia	0.00	15.00	18.00	47.00	3.60
Centaurea melitensis	0.00	0.00	0.00	1.00	0.90
Crassula connata	0.00	0.00	0.25	1.00	0.00
Cryptantha microstacys	0.00	0.00	0.00	0.00	0.45
Cryptantha muricata	0.00	0.00	1.00	0.00	0.00
Daucus pusilus	0.00	0.00	0.00	0.25	0.00
Deinandra fasciculata	0.00	1.00	2.00	0.25	5.41
Dichelostemma capitatum	0.00	1.00	0.00	0.00	9.01
Emmenanthe peduliflora	0.00	0.00	0.00	0.00	0.45
Eremocarpus setigerus	0.00	2.00	0.00	0.00	0.00
Erigeron canadensis	0.00	0.00	1.00	0.00	0.00
Erodium cicutarium	0.00	2.00	5.00	1.00	9.46
Eulobus californicus	0.00	0.00	0.00	0.00	0.45
Lupinus succulentus	0.00	0.00	0.00	0.00	0.45
Phacelia viscida	0.00	0.00	0.00	0.00	0.45
Pseudognaphalium californicum*	0.25	0.00	0.25	0.25	0.00
Sanicula arguta	0.25	0.00	0.00	0.00	0.00
Solanum xanti	0.00	0.25	1.00	3.00	0.00
Sonchus apser/oleraceus	0.25	0.00	0.00	4.00	0.45

Quadrat 11	1981	1994	1995	1996	2015
Bloomeria crocea	0.25	n/a	0.00	0.00	0.00
Brassica nigra	0.25	n/a	2.00	0.00	1.49
Calochortus catalinae	0.00	n/a	1.00	0.00	2.24
Calystegia macrostegia	0.25	n/a	0.00	0.00	0.00
Deinandra fasciculata	0.25	n/a	0.00	0.00	0.00
Dichelostemma capitatum	0.25	n/a	0.25	0.00	5.22
Galium nuttallii	1.00	n/a	1.00	1.00	0.00

Hypochaeris glabra	0.00	n/a	0.25	0.00	0.00
Marrubium vulgare	0.25	n/a	0.00	0.00	0.00
Medicago polymorpha	0.25	n/a	0.00	0.00	0.00
Melilotus albus	0.00	n/a	0.25	0.00	0.00
Pseudognaphalium californicum*	0.25	n/a	0.00	0.25	0.00
Silene gallica	0.00	n/a	0.25	0.00	0.00
Sisyrinchium bellum	2.00	n/a	3.00	5.00	0.00
Solidago confinis	8.00	n/a	0.00	0.00	0.00
Sonchus asper/oleraceus	0.00	n/a	0.00	0.25	0.37
Stachys bullata	0.25	n/a	3.00	3.00	0.00
Vicia sp.	0.00	n/a	1.00	0.00	0.00

Quadrat 12	1981	1994	1995	1996	2015
Brassica nigra	1.00	2.00	0.25	8.00	1.33
Calochortus catalinae	0.25	0.25	1.00	10.00	2.66
Calystegia macrostegia	0.25	0.25	0.25	6.00	0.00
Centaurea melitensis	0.00	0.00	0.00	0.00	0.66
Convolvulus simulans	0.00	0.00	0.00	0.00	17.28
Deinandra fasciculata	0.25	0.00	0.00	0.00	0.00
Dichelostemma capitatum	0.25	0.00	0.00	4.00	1.33
Sonchus asper/oleraceus	0.25	0.00	0.00	8.00	0.00

Quadrat 13	1981	1994	1995	1996	2015
Brassica nigra	1.00	8.00	1.00	0.25	0.00
Convolvulus simulans	0.00	0.00	0.00	0.00	30.12
Dichelostemma capitatum	0.00	0.00	0.00	0.00	1.86
Erodium cicutarium	0.00	0.00	0.00	0.00	0.62
Euphorbia spathulata	0.00	0.00	0.00	0.00	4.66
Medicago polymorpha	0.00	0.00	0.00	0.00	0.62
Nicotiana glauca	0.00	0.00	0.25	0.00	0.00
Sonchus asper/oleraceus	0.00	0.00	0.00	0.00	19.88

Quadrat 14	1981	1994	1995	1996	2015
Astragalus trichopodus	0.00	n/a	0.00	0.25	0.00
Brassica nigra	0.25	n/a	1.00	0.00	0.00
Calystegia macrostegia	0.00	n/a	2.00	2.00	8.37
Deinandra fasciculata	0.00	n/a	3.00	0.25	1.32
Dichelostemma capitatum	0.00	n/a	0.00	0.25	0.00
Eremocarpus setigerus	0.00	n/a	0.25	0.00	0.00
Mirabilis laevis	0.00	n/a	0.00	1.00	0.00
Oxalis albicans	0.00	n/a	0.00	0.25	0.00

Sanicula arguta	0.00	n/a	0.25	0.00	0.00
Silene gallica	0.00	n/a	0.00	0.25	0.00
Sonchus asper/oleraceus	0.00	n/a	1.00	1.00	0.44
Stephanomaria virgata	0.00	n/a	0.25	1.00	0.00
Vicia sp.	0.00	n/a	0.00	1.00	0.00

Quadrat 15	1981	1994	1995	1996	2015
Acemispom glaber	0.00	n/a	n/a	n/a	0.43
Brassica nigra	3.84	n/a	n/a	n/a	0.00
Calystegia macrostegia	0.00	n/a	n/a	n/a	2.61
Centaurea melitensis	0.00	n/a	n/a	n/a	3.04
Emmenanthe peduliflora	0.00	n/a	n/a	n/a	8.70
Erodium cicutarium	0.00	n/a	n/a	n/a	6.96
Malva parviflora	0.00	n/a	n/a	n/a	25.65
Marrubium vulgare	23.59	n/a	n/a	n/a	0.00
Medicago polymorpha	0.00	n/a	n/a	n/a	10.00
Melilotus indicus	0.00	n/a	n/a	n/a	0.43
Rumex crispus	0.00	n/a	n/a	n/a	0.87
Silybum marianum	6.47	n/a	n/a	n/a	0.00
Sonchus asper/oleraceus	0.00	n/a	n/a	n/a	13.48

*= includes other psuedognaphalium species

Cover Data by Quadrat- Bare Ground

	1981	1995	2015
Quadrat 1	0.00	0.00	2.48
Quadrat 2	2.00	0.33	3.85
Quadrat 3	6.00	0.33	0.00
Quadrat 4	0.25	0.00	0.30
Quadrat 5	5.00	3.00	9.43
Quadrat 6	32.00	0.67	1.56
Quadrat 7	12.00	1.00	11.11
Quadrat 8	1.00	0.67	14.44
Quadrat 9	24.00	0.00	14.75
Quadrat 10	13.00	8.67	27.93
Quadrat 11	30.00	0.00	4.85
Quadrat 12	9.00	0.33	1.00
Quadrat 13	0.00	0.67	0.93
Quadrat 14	0.00	0.00	4.41
Quadrat 15	0.00	n/a	22.17

APPENDIX D

FREQUENCY DATA BY QUADRAT

Percent Frequency by Quadrat- Grass Species

Quadrat 1	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	26.00	71.33	174.36	12.45	78.00	9.35	0.47
Bromus diandrus	60.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus hordeaceus	34.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	4.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Festuca perennis	78.00	91.33	17.09	1.22	16.00	-82.48	-4.12
Stipa lepida	0.00	0.00	n/a	n/a	8.00	Undef.	n/a
Stipa pulchra	82.00	58.00	-29.27	-2.09	18.00	-68.97	-3.45

Quadrat 2	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	40.00	6.67	-83.33	-5.95	0.00	-100.00	-5.00
Bromus carinatus	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus diandrus	84.00	18.67	-77.78	-5.56	0.00	-100.00	-5.00
Bromus hordeaceus	38.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	2.00	6.00	200.00	14.29	0.00	-100.00	-5.00
Festuca perennis	40.00	18.00	-55.00	-3.93	2.00	-88.89	-4.44
Phalaris aquatica	18.00	29.33	62.96	4.50	14.00	-52.27	-2.61
Stipa lepida	0.00	4.00	Undef.	0.00	4.00	0.00	0.00
Stipa pulchra	68.00	46.00	-32.35	-2.31	10.00	-78.26	-3.91
Vulpia myuros	0.00	0.67	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 3	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	67.00	85.33	27.36	1.95	96.00	12.50	0.63
Bromus diandrus	3.00	8.00	166.67	11.90	0.00	-100.00	-5.00
Bromus hordeaceus	86.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	74.00	1.33	-98.20	-7.01	0.00	-100.00	-5.00
Festuca perennis	37.00	92.67	150.45	10.75	4.00	-95.68	-4.78
Stipa pulchra	91.00	64.67	-28.94	-2.07	40.00	-38.14	-1.91
Vulpia myuros	9.00	0.00	-100.00	-7.14	0.00	Still zero	n/a

Quadrat 4	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	26.00	74.00	184.62	13.19	96.00	29.73	1.49
Bromus diandrus	8.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Festuca perennis	100.00	96.00	-4.00	-0.29	26.00	-72.92	-3.65
Phalaris aquatica	2.00	2.67	33.33	2.38	0.00	-100.00	-5.00
Stipa pulchra	84.00	24.00	-71.43	-5.10	14.00	-41.67	-2.08

Quadrat 5	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	10.00	16.00	60.00	4.29	0.00	-100.00	-5.00
Bromus diandrus	76.00	2.67	-96.49	-6.89	0.00	-100.00	-5.00
Bromus hordeaceus	14.00	10.67	-23.81	-1.70	0.00	-100.00	-5.00
Bromus madritensis	6.00	4.00	-33.33	-2.38	0.00	-100.00	-5.00
Festuca perennis	42.00	32.67	-22.22	-1.59	0.00	-100.00	-5.00
Hordeum murinum	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Phalaris aquatica	24.00	56.67	136.11	9.72	38.00	-32.94	-1.65
Stipa pulchra	86.00	47.33	-44.96	-3.21	2.00	-95.77	-4.79
Vulpia myuros	0.00	4.00	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 6	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	88.00	86.67	-1.52	-0.11	96.00	10.77	0.54
Bromus diandrus	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus hordeaceus	62.00	0.67	-98.92	-7.07	0.00	-100.00	-5.00
Bromus madritensis	56.00	2.67	-95.24	-6.80	0.00	-100.00	-5.00
Festuca perennis	26.00	97.33	274.36	19.60	32.00	-67.12	-3.36
Stipa pulchra	80.00	70.67	-11.67	-0.83	30.00	-57.55	-2.88
Vulpia myuros	4.00	0.00	-100.00	-7.14	0.00	Still zero	n/a

Quadrat 7	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	8.00	46.00	475.00	33.93	0.00	-100.00	-5.00
Bromus diandrus	6.00	5.33	-11.11	-0.79	0.00	-100.00	-5.00
Bromus hordeaceus	20.00	14.00	-30.00	-2.14	0.00	-100.00	-5.00
Bromus madritensis	48.00	41.33	-13.89	-0.99	0.00	-100.00	-5.00
Festuca perennis	2.00	8.00	300.00	21.43	0.00	-100.00	-5.00
Stipa lepida	28.00	22.00	-21.43	-1.53	0.00	-100.00	-5.00
Stipa pulchra	74.00	25.33	-65.77	-4.70	8.00	-68.42	-3.42
Vulpia myuros	6.00	7.33	22.22	1.59	0.00	-100.00	-5.00

Quadrat 8	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	58.00	65.33	12.64	0.90	0.00	-100.00	-5.00
Bromus diandrus	12.00	19.33	61.11	4.37	0.00	-100.00	-5.00
Bromus hordeaceus	76.00	2.67	-96.49	-6.89	0.00	-100.00	-5.00
Bromus madritensis	88.00	40.00	-54.55	-3.90	0.00	-100.00	-5.00
Festuca perennis	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Stipa pulchra	64.00	42.67	-33.33	-2.38	8.00	-81.25	-4.06
Vulpia myuros	4.00	4.00	0.00	0.00	0.00	-100.00	-5.00

Quadrat 9	1981	1990s	% Change	%/Year	2015	% Change	%/Year
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Avena sp.	20.00	5.00	-75.00	-5.36	0.00	-100.00	-5.00
Bromus madritensis	14.00	1.00	-92.86	-6.63	0.00	-100.00	-5.00
Elymus condensatus	0.00	1.00	Undef.	n/a	0.00	-100.00	-5.00
Phalaris aquatica	0.00	0.00	n/a	n/a	4.00	Undef.	n/a
Stipa lepida	86.00	45.00	-47.67	-3.41	14.00	-68.89	-3.44

Quadrat 10	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	18.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus diandrus	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus hordeaceus	44.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	48.00	4.67	-90.28	-6.45	0.00	-100.00	-5.00
Festuca perennis	6.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Stipa lepida	10.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Stipa pulchra	84.00	60.67	-27.78	-1.98	16.00	-73.63	-3.68
Vulpia myuros	4.00	0.67	-83.33	-5.95	0.00	-100.00	-5.00

Quadrat 11	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	54.00	63.00	16.67	1.19	94.00	49.21	2.46
Bromus diandrus	2.00	7.00	250.00	17.86	0.00	-100.00	-5.00
Bromus hordeaceus	4.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Festuca perennis	42.00	88.00	109.52	7.82	4.00	-95.45	-4.77
Melica imperfecta	2.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Stipa lepida	4.00	1.00	-75.00	-5.36	0.00	-100.00	-5.00
Stipa pulchra	54.00	36.00	-33.33	-2.38	42.00	16.67	0.83

Quadrat 12	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	92.00	96.67	5.07	0.36	80.00	-17.24	-0.86
Bromus diandrus	0.00	0.67	Undef.	n/a	0.00	-100.00	-5.00
Bromus hordeaceus	82.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Bromus madritensis	24.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Festuca perennis	34.00	74.67	119.61	8.54	58.00	-22.32	-1.12
Stipa pulchra	42.00	43.33	3.17	0.23	42.00	-3.08	-0.15
Vulpia myuros	4.00	0.00	-100.00	-7.14	0.00	Still zero	n/a

Quadrat 13	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	0.00	42.67	Undef.		0.00	-100.00	-5.00
Festuca perennis	100.00	94.00	-6.00	-0.43	64.00	-31.91	-1.60
Phalaris aquatica	2.00	15.33	666.67	47.62	54.00	252.17	12.61

Quadrat 14	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	26.00	88.00	238.46	17.03	96.00	9.09	0.45

Bromus diandrus	94.00	8.00	-91.49	-6.53	0.00	-100.00	-5.00
Bromus madritensis	0.00	23.00	Undef.	n/a	0.00	-100.00	-5.00
Hordeum murinum	18.00	0.00	-100.00	-7.14	0.00	Still zero	n/a
Lamarchia aurea	0.00	1.00	Undef.	n/a	0.00	-100.00	-5.00
Stipa lepida	0.00	0.00	n/a	n/a	12.00	Undef.	n/a
Stipa pulchra	64.00	31.00	-51.56	-3.68	4.00	-87.10	-4.35
Vulpia myuros	0.00	20.00	Undef.	n/a	0.00	-100.00	-5.00

Quadrat 15	1981	1990s	% Change	%/Year	2015	% Change	%/Year
Avena sp.	22.00	n/a	n/a	n/a	0.00	n/a	n/a
Bromus diandrus	76.00	n/a	n/a	n/a	0.00	n/a	n/a
Bromus hordeaceus	8.00	n/a	n/a	n/a	0.00	n/a	n/a
Hordeum murinum	26.00	n/a	n/a	n/a	0.00	n/a	n/a

Percent Frequency by Quadrat- Shrub Species

Quadrat 1	1981	1994	1995	1996	2015
Baccharis pilularis	2	0	0	0	0
Corethrogyne filaginifolia	2	0	4	2	0
Grindelia camporum	0	0	0	4	0
Hazardia squarrosa	0	0	2	0	0
Salvia leucophylla	0	0	0	0	8

Quadrat 2	1981	1994	1995	1996	2015
Artemisia californica	2	0	12	0	20
Corethrogyne filaginifolia	30	0	0	0	0
Eriogonum cinereum	6	0	0	0	0
Grindelia camporum	8	0	0	0	0
Hazardia squarrosa	0	0	2	2	0
Lupinus longifolius	0	4	0	0	0
Malacothamnus fasciculatus	0	2	0	0	0
Malmosa laurina	0	0	0	0	2
Ribes malvaceum	0	0	2	0	0
Salvia leucophylla	4	14	22	12	14

Quadrat 3	1981	1994	1995	1996	2015
Corethrogyne filaginifolia	0	2	0	1	0
Hazardia squarrosa	0	0	2	0	0

Quadrat 4 contained no shrub species.

Quadrat 5	1981	1994	1995	1996	2015
Baccharis pilularis	0	2	2	12	0

Quadrat 6	1981	1994	1995	1996	2015
Artemisia californica	2	0	0	0	0
Corethrogyne filaginifolia	6	0	0	0	0
Grindelia camporum	6	0	0	0	8
Hazardia squarrosa	36	12	6	8	14

Quadrat 7	1981	1994	1995	1996	2015
Artemisia californica	28	4	0	6	2
Baccharis pilularis	0	0	0	0	4
Eriogonum cinereum	6	2	6	8	0
Hazardia squarrosa	8	2	4	14	0
Opuntia	2	2	0	2	0
Salvia leucophylla	12	1	0	6	4

Quadrat 8	1981	1994	1995	1996	2015
Artemisia californica	16	6	0	10	8
Corethrogyne filaginifolia	14	0	0	0	0
Eriogonum cinereum	4	0	0	0	4
Malmosa laurina	0	0	2	4	2
Salvia leucophylla	4	0	0	0	2

Quadrat 9	1981	1994	1995	1996	2015
Artemisia californica	18	n/a	0	6	0
Encelia californicum	0	n/a	0	0	8
Eriogonum cinereum	32	n/a	28	28	34
Malmosa laurina	6	n/a	6	2	2
Salvia leucophylla	18	n/a	2	0	4

Quadrat 10	1981	1994	1995	1996	2015
Artemisia californica	10	2	10	10	4
Baccharis pilularis	2	4	12	16	0
Encelia californicum	0	0	0	0	6
Eriogonum cinereum	2	8	8	18	64
Hazardia squarrosa	10	0	0	0	0
Malmosa laurina	0	22	16	16	18
Mimulus aurantiacus	0	0	44	36	0
Ribes malvaceum	0	0	0	0	6
Salvia leucophylla	6	0	0	2	0

Salvia mellifera	0	6	2	2	4
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Quadrat 11	1981	1994	1995	1996	2015
Baccharis pilularis	0	n/a	0	2	0
Corethrogyne filaginifolia	32	n/a	4	0	0
Grindelia camporum	4	n/a	8	14	0
Hazardia squarrosa	12	n/a	12	4	2
Malmosa laurina	4	n/a	0	0	0
Quercus	4	n/a	4	2	0
Ribes malvaceum	2	n/a	0	0	0
Ribes speciosum	2	n/a	0	0	0
Toxicodendron diversiloba	0	n/a	0	2	0

Quadrat 12	1981	1994	1995	1996	2015
Grindelia camporum	18	0	2	2	0
Hazardia squarrosa	4	0	2	0	0

Quadrat 13	1981	1994	1995	1996	2015
Grindelia camporum	2	0	0	0	0

Quadrat 14	1981	1994	1995	1996	2015
Artemisia californica	2	n/a	2	2	0
Eriogonum cinereum	0	n/a	2	6	2
Hazardia squarrosa	0	n/a	2	6	4

Quadrat 15	1981	1994	1995	1996	2015
Malmosa laurina	0	n/a	n/a	n/a	6
Nicotiana glauca	2	n/a	n/a	n/a	0
Sambucus nigra	0	n/a	n/a	n/a	4

Percent Frequency by Quadrat- Forb Species

Quadrat 1	1981	1994	1995	1996	2015
Acmispon glaber	0	0	0	0	2
Anagallis arvensis	0	14	12	4	0
Calochortus catalinae	2	0	0	0	2
Calystegia macrostegia	0	2	2	0	14
Centaurea melitensis	0	4	0	0	44
Daucus pusilus	0	0	0	0	6
Deinandra fasciculata	6	48	58	2	84
Dichelostemma capitatum	0	0	0	0	10
Erigeron canadensis	0	0	2	0	0

<i>Erodium cicutarium</i>	0	6	0	0	62
<i>Hypochaeris glabra</i>	0	0	2	0	0
<i>Pseudognaphalium californicum</i>	0	0	0	6	0
<i>Sanicula arguta</i>	0	0	4	0	0
<i>Silene gallica</i>	4	0	0	0	0
<i>Sisyrinchium bellum</i>	0	0	2	6	0
<i>Sonchus apser/oleraceus</i>	0	0	16	2	8

Quadrat 2	1981	1994	1995	1996	2015
<i>Acmispon glaber</i>	0	0	0	0	16
<i>Anagallis arvensis</i>	0	0	0	4	2
<i>Bloomeria crocea</i>	0	6	10	0	0
<i>Brassica nigra</i>	0	0	0	0	10
<i>Calochortus catalinae</i>	0	28	8	0	4
<i>Calystegia macrostegia</i>	2	2	0	2	8
<i>Castilleja affinis</i>	0	2	2	12	0
<i>Centaurea melitensis</i>	0	0	0	0	42
<i>Daucus pusilus</i>	0	0	8	4	12
<i>Deinandra fasciculata</i>	0	18	14	0	94
<i>Dichelostemma capitatum</i>	0	0	0	0	46
<i>Dodecatheon clevelandii</i>	0	0	0	2	0
<i>Emmenanthe peduliflora</i>	0	0	0	0	10
<i>Erodium cicutarium</i>	4	0	0	0	22
<i>Galium nuttallii</i>	0	6	6	4	0
<i>Lupinus succulentus</i>	0	0	0	0	2
<i>Medicago polymorpha</i>	10	0	0	0	4
<i>Sanicula arguta</i>	12	8	8	14	0
<i>Silybum marianum</i>	2	0	0	0	0
<i>Sisyrinchium bellum</i>	0	4	0	2	0
<i>Sonchus apser/oleraceus</i>	0	0	2	0	24

Quadrat 3	1981	1994	1995	1996	2015
<i>Calochortus catalinae</i>	14	4	0	2	12
<i>Calystegia macrostegia</i>	0	8	10	2	38
<i>Deinandra fasciculata</i>	6	4	0	0	10
<i>Erodium cicutarium</i>	11	12	0	0	4
<i>Galium nuttallii</i>	0	0	0	0	4
<i>Lactuca serriola</i>	0	0	0	0	4
<i>Medicago polymorpha</i>	17	0	0	0	0
<i>Sanicula arguta</i>	0	6	14	16	0
<i>Sonchus apser/oleraceus</i>	9	0	6	0	10

Quadrat 4	1981	1994	1995	1996	2015
Convulvus simulans	0	0	0	0	64
Cynara cardunculus	0	12	22	6	0
Deinandra fasciculata	0	4	4	2	0
Dichelostemma capitatum	0	0	0	0	44
Euphorbia spathulata	0	0	0	0	8
Medicago polymorpha	0	0	0	0	4
Pseudognaphalium californicum (sp)	0	0	2	0	0
Sonchus asper/oleraceus	0	0	6	0	46

Quadrat 5	1981	1994	1995	1996	2015
Anagallis arvensis	0	0	0	0	2
Brassica nigra	0	12	8	0	0
Calochortus catalinae	0	0	2	0	0
Calystegia macrostegia	0	0	0	0	2
Daucus pusilus	0	0	0	0	2
Deinandra fasciculata	0	40	66	24	96
Erodium cicutarium	0	26	0	0	26
Medicago polymorpha	0	0	2	0	0
Oxalis albicans	0	0	0	0	2
Pseudognaphalium californicum	0	0	0	4	0
Sanicula arguta	0	6	2	0	0
Silene gallica	0	0	8	0	0
Sonchus asper/oleraceus	0	2	16	8	32

Quadrat 6	1981	1994	1995	1996	2015
Acmispon glaber	0	0	0	2	0
Bloomeria crocea	0	0	8	2	8
Brassica nigra	2	0	0	0	0
Calochortus catalinae	0	8	4	2	14
Calystegia macrostegia	2	0	0	0	4
Centaurea melitensis	0	0	0	0	8
Convulvus simulans	0	0	0	0	12
Deinandra fasciculata	2	0	0	0	6
Dichelostemma capitatum	0	0	0	0	6
Erodium cicutarium	4	0	0	0	0
Lactuca serriola	0	0	0	0	2
Lupinus succulentus	0	0	0	0	8
Sonchus asper/oleraceus	2	0	0	0	2

Quadrat 7	1981	1994	1995	1996	2015
<i>Acmispon glaber</i>	0	0	0	0	6
<i>Calochortus catalinae</i>	0	0	14	2	28
<i>Calystegia macrostegia</i>	10	18	18	14	42
<i>Castilleja affinis</i>	0	0	2	6	2
<i>Daucus pusilus</i>	0	0	14	22	0
<i>Deinandra fasciculata</i>	0	0	0	6	84
<i>Dichelostemma capitatum</i>	0	0	0	0	40
<i>Dichondra occidentalis</i>	2	4	0	6	10
<i>Emmenanthe peduliflora</i>	0	0	0	0	2
<i>Erodium cicutarium</i>	0	0	14	0	92
<i>Galium aparine</i>	0	0	12	8	0
<i>Galium nuttallii</i>	0	0	4	2	2
<i>Hypochaeris glabra</i>	0	0	4	0	0
<i>Lupinus succulentus</i>	0	0	14	0	14
<i>Medicago polymorpha</i>	0	0	0	0	2
<i>Oxalis albicans</i>	0	0	0	2	0
<i>Silene gallica</i>	0	0	0	4	0
<i>Sonchus asper/oleraceus</i>	10	4	12	6	12

Quadrat 8	1981	1994	1995	1996	2015
<i>Acmispon glaber</i>	0	0	0	0	8
<i>Acmispon maritimus</i>	0	0	0	0	12
<i>Bloomeria crocea</i>	0	0	8	0	0
<i>Calystegia macrostegia</i>	20	20	58	34	76
<i>Daucus pusilus</i>	0	0	4	6	4
<i>Deinandra fasciculata</i>	4	2	0	18	48
<i>Dichelostemma capitatum</i>	4	0	2	0	42
<i>Erodium cicutarium</i>	10	26	44	6	98
<i>Galium aparine</i>	0	0	2	2	0
<i>Galium nuttallii</i>	0	0	2	2	0
<i>Lactuca serriola</i>	0	0	0	0	12
<i>Lupinus succulentus</i>	0	0	0	0	18
<i>Malacothrix saxatilis</i>	0	0	0	2	0
<i>Oxalis albicans</i>	0	0	2	0	0
<i>Pseudognaphalium californicum</i>	4	0	0	2	0
<i>Sanicula arguta</i>	4	0	2	6	4
<i>Silene gallica</i>	0	0	0	2	0
<i>Sonchus asper/oleraceus</i>	10	6	0	20	4

Quadrat 9	1981	1994	1995	1996	2015
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<i>Acmispon glaber</i>	0	n/a	2	0	26
<i>Acmispon maritimus</i>	0	n/a	10	0	0
<i>Astragalus trichopodus</i>	0	n/a	0	0	6
<i>Calochortus catalinae</i>	0	0	0	0	2
<i>Calystegia macrostegia</i>	14	n/a	42	0	88
<i>Daucus pusilus</i>	0	n/a	34	0	28
<i>Deinandra fasciculata</i>	14	n/a	22	0	38
<i>Dichelostemma capitatum</i>	0	n/a	14	0	18
<i>Dichondra occidentalis</i>	4	n/a	0	0	14
<i>Emmenanthe peduliflora</i>	0	n/a	0	0	2
<i>Erodium cicutarium</i>	0	n/a	4	0	0
<i>Galium nuttallii</i>	18	n/a	18	0	8
<i>Lupinus succulentus</i>	0	n/a	24	0	50
<i>Malacothrix saxatilis</i>	0	n/a	2	0	0
<i>Sanicula arguta</i>	0	n/a	2	0	0
<i>Sonchus asper/oleraceus</i>	0	n/a	2	0	18
<i>Trifolium gracilentum</i>	0	n/a	4	0	0

Quadrat 10	1981	1994	1995	1996	2015
<i>Acmispon glaber</i>	0	6	0	20	42
<i>Acmispon maritimus</i>	0	4	0	0	22
<i>Acmispon strigosus</i>	0	4	0	0	0
<i>Anagallis arvensis</i>	0	6	22	10	0
<i>Calochortus catalinae</i>	0	2	0	8	4
<i>Calystegia macrostegia</i>	2	16	8	12	36
<i>Camissonia sp.</i>	0	0	2	0	0
<i>Centaurea melitensis</i>	0	0	0	6	10
<i>Chaenactis artemisisifolia</i>	0	0	0	0	4
<i>Chamaesyce polycarpa</i>	0	0	0	0	4
<i>Cryptantha microstacys</i>	0	0	0	0	12
<i>Daucus pusilus</i>	0	0	4	0	4
<i>Deinandra fasciculata</i>	0	0	10	2	28
<i>Dichelostemma capitatum</i>	2	2	0	0	14
<i>Emmenanthe peduliflora</i>	0	0	0	0	2
<i>Eremocarpus setigerus</i>	0	4	0	0	0
<i>Erigeron canadensis</i>	0	0	0	2	0
<i>Erodium cicutarium</i>	0	2	18	6	40
<i>Eulobus californicus</i>	0	0	0	0	6
<i>Lactuca serriola</i>	0	0	0	0	4
<i>Phacelia viscida</i>	0	0	0	0	4
<i>Pseudognaphalium californicum*</i>	2	0	2	6	0

Solanum xanti	0	0	2	0	0
Sonchus asper/oleraceus	0	0	4	2	0

Quadrat 11	1981	1994	1995	1996	2015
Bloomeria crocea	0	n/a	0	0	30
Brassica nigra	2	n/a	4	2	0
Calochortus catalinae	0	n/a	2	0	18
Centaurea melitensis	0	0	0	0	2
Convulvus simulans	0	0	0	0	4
Deinandra fasciculata	0	n/a	0	0	8
Dichelostemma capitatum	0	n/a	0	0	32
Galium nuttallii	14	n/a	2	8	0
Lactuca serriola	0	0	0	0	6
Marrubium vulgare	2	n/a	0	0	0
Pseudognaphalium californicum*	4	n/a	0	0	0
Silene gallica	0	n/a	2	0	0
Sisyrinchium bellum	38	n/a	6	6	0
Solidago confinis	4	n/a	0	0	0
Sonchus asper/oleraceus	0	n/a	2	0	0
Stachys bullata	0	n/a	4	4	0
Toxicodendron diversiloba	0	n/a	0	2	0

Quadrat 12	1981	1994	1995	1996	2015
Anagallis arvensis	0	0	2	0	0
Brassica nigra	20	34	16	8	8
Calochortus catalinae	6	2	2	10	28
Calystegia macrostegia	4	0	8	6	12
Centaurea melitensis	0	0	0	0	26
Convulvus simulans	0	0	0	0	62
Deinandra fasciculata	0	0	0	0	2
Dichelostemma capitatum	0	0	0	4	30
Pseudognaphalium californicum	2	0	0	0	0
Sisyrinchium bellum	2	0	0	0	0
Sonchus asper/oleraceus	4	0	6	8	2

Quadrat 13	1981	1994	1995	1996	2015
Brassica nigra	24	30	14	2	0
Calochortus catalinae	0	0	0	0	4
Convulvus simulans	0	0	0	0	76
Deinandra fasciculata	0	0	0	0	6
Dichelostemma capitatum	0	0	0	0	6

<i>Euphorbia spathulata</i>	0	0	0	0	30
<i>Lactuca serriola</i>	0	0	0	10	0
<i>Medicago polymorpha</i>	0	0	10	0	4
<i>Sonchus apser/oleraceus</i>	0	0	0	0	44

Quadrat 14	1981	1994	1995	1996	2015
<i>Brassica nigra</i>	0	n/a	0	10	0
<i>Calystegia macrostegia</i>	2	n/a	4	0	8
<i>Deinandra fasciculata</i>	0	n/a	32	12	4
<i>Dichelostemma capitatum</i>	0	n/a	0	0	4
<i>Eremocarpus setigerus</i>	0	n/a	24	0	0
<i>Erodium cicutarium</i>	0	n/a	4	0	0
<i>Mirabilis laevis</i>	0	n/a	0	2	0
<i>Oxalis albicans</i>	0	n/a	0	2	0
<i>Pseudognaphalium californicum</i>	0	n/a	0	4	0
<i>Silene gallica</i>	0	n/a	12	8	0
<i>Sonchus apser/oleraceus</i>	0	n/a	4	14	4
<i>Stephanomaria virgata</i>	0	n/a	0	6	0

Quadrat 15	1981	1994	1995	1996	2015
<i>Brassica nigra</i>	32	n/a	n/a	n/a	0
<i>Calochortus catalinae</i>	22	n/a	n/a	n/a	0
<i>Calystegia macrostegia</i>	0	n/a	n/a	n/a	8
<i>Centaurea melitensis</i>	0	n/a	n/a	n/a	8
<i>Dichelostemma capitatum</i>	0	n/a	n/a	n/a	2
<i>Dienandra fasciculata</i>	2	n/a	n/a	n/a	0
<i>Emmenanthe peduliflora</i>	0	n/a	n/a	n/a	16
<i>Erodium cicutarium</i>	0	n/a	n/a	n/a	18
<i>Malva parviflora</i>	0	n/a	n/a	n/a	58
<i>Marrubium vulgare</i>	22	n/a	n/a	n/a	0
<i>Medicago polymorpha</i>	0	n/a	n/a	n/a	28
<i>Sonchus apser/oleraceus</i>	0	n/a	n/a	n/a	44

*= includes other psuedognaphalium species

APPENDIX E

SHRUB DENSITY BY QUADRAT

Shrub Density by Quadrat

Quadrat 1	1981	1994	1995	1996	2015
<i>Adenostoma fasciculatum</i>	0	0	0	0	0
<i>Artemisia californica</i>	0	0	0	0	6
<i>Baccharis pilularis</i>	1	2	3	6	0
<i>Corethrogyne filaginifolia</i>	0	0	4	7	0
<i>Grindelia camporum</i>	2	0	0	23	1
<i>Hazardia squarrosa</i>	0	10	6	12	12
<i>Malmosa laurina</i>	0	0	0	0	2
<i>Salvia leucophylla</i>	0	3	7	8	88
<i>Salvia mellifera</i>	0	0	0	0	1

Quadrat 2	1981	1994	1995	1996	2015
<i>Artemisia californica</i>	43	91	49	55	484
<i>Baccharis pilularis</i>	0	0	0	0	3
<i>Corethrogyne filaginifolia</i>	221	0	0	0	0
<i>Encelia californica</i>	0	0	0	0	0
<i>Eriogonum cinerium</i>	14	0	0	0	0
<i>Grindelia camporum</i>	110	27	0	0	0
<i>Hazardia squarrosa</i>	6	10	7	15	3
<i>Heteromeles arbutifolia</i>	0	0	0	0	0
<i>Lupinus longifolius</i>	0	0	0	0	0
<i>Malmosa laurina</i>	0	8	1	3	4
<i>Ribes malvaceum</i>	0	0	4	3	0
<i>Salvia leucophylla</i>	18	154	98	149	164
<i>Solanum xanti</i>	0	0	0	0	12

Quadrat 3	1981	1994	1995	1996	2015
<i>Corethrogyne filaginifolia</i>	39	1	0	0	0
<i>Hazardia squarrosa</i>	9	9	13	9	0

Quadrat 4	1981	1994	1995	1996	2015
<i>Baccharis pilularis</i>	0	27	22	13	0

Quadrat 5	1981	1994	1995	1996	2015
<i>Artemisia californica</i>	0	0	0	0	1

Baccharis pilularis	0	9	4	30	19
Hazardia squarrosa	0	0	0	0	1

Quadrat 6	1981	1994	1995	1996	2015
Artemisia californica	59	3	7	4	11
Corethrogyne filaginifolia	30	0	0	0	0
Hazardia squarrosa	370	259	152	1	98
Malacothamnus fasciculatus	0	0	0	0	7
Salvia leucophylla	1	1	1	161	2

Quadrat 7	1981	1994	1995	1996	2015
Artemisia californica	207	22	41	66	2
Baccharis pilularis	7	0	1	1	24
Corethrogyne filaginifolia	0	1	1	2	0
Eriogonum cinerium	30	20	16	121	38
Hazardia squarrosa	112	50	56	91	0
Malmoosa laurina	1	1	2	2	5
Opuntia	3	0	2	7	0
Quercus	0	0	0	0	10
Salvia leucophylla	95	4	82	76	98

Quadrat 8	1981	1994	1995	1996	2015
Artemisia californica	146	11	15	40	63
Baccharis pilularis	0	0	0	0	1
Corethrogyne filaginifolia	151	3	0	3	0
Eriogonum cinerium	10	1	1	1	13
Grindelia camporum	1	0	0	0	0
Hazardia squarrosa	6	4	3	5	13
Malmoosa laurina	0	1	6	20	16
Mimulus Aurantiacus	8	0	0	0	2
Quercus	0	0	0	0	1
Salvia leucophylla	46	4	3	6	9

Quadrat 9	1981	1994	1995	1996	2015
Artemisia californica	160	n/a	7	15	33
Corethrogyne filaginifolia	4	n/a	0	0	0
Encelia californica	0	0	0	0	16
Eriogonum cinerium	199	n/a	105	131	173
Hazardia squarrosa	4	n/a	1	0	0
Lupinus longifolius	0	0	0	1	0

<i>Malmosa laurina</i>	10	n/a	10	7	15
<i>Opuntia</i>	2	n/a	0	0	1
<i>Salvia leucophylla</i>	115	n/a	10	15	44
<i>Salvia mellifera</i>	2	n/a	0	0	0

Quadrat 10	1981	1994	1995	1996	2015
<i>Artemisia californica</i>	38	11	205	17	8
<i>Baccharis pilularis</i>	12	24	489	14	0
<i>Corethrogyne filaginifolia</i>	1	0	0	0	0
<i>Encelia californica</i>	0	0	0	0	10
<i>Eriogonum cinerium</i>	21	34	83	25	1532
<i>Hazardia squarrosa</i>	132	15	3	2	17
<i>Malacothamnus fasciculatus</i>	0	5	1	2	128
<i>Malmosa laurina</i>	1	187	182	52	91
<i>Mimulus Aurantiacus</i>	0	9	33	93	37
<i>Opuntia</i>	2	0	0	0	0
<i>Salvia leucophylla</i>	35	5	182	8	10
<i>Salvia mellifera</i>	0	21	14	9	19
<i>Solanum xanti</i>	0	0	0	13	1

Quadrat 11	1981	1994	1995	1996	2015
<i>Adenostoma fasciculatum</i>	5	n/a	0	0	0
<i>Artemisia californica</i>	7	n/a	0	0	0
<i>Baccharis pilularis</i>	1	n/a	2	4	0
<i>Corethrogyne filaginifolia</i>	251	n/a	0	19	0
<i>Grindelia camporum</i>	47	n/a	pr	0	8
<i>Hazardia squarrosa</i>	129	n/a	58	41	26
<i>Heteromeles arbutifolia</i>	0	0	3	3	0
<i>Malmosa laurina</i>	43	n/a	2	2	0
<i>Quercus</i>	107	n/a	47	46	0
<i>Rhus integrifolia</i>	0	n/a	0	1	0
<i>Ribes malvaceum</i>	11	n/a	0	0	0
<i>Ribes speciosum</i>	8	n/a	0	0	0
<i>Salvia leucophylla</i>	13	n/a	2	1	0
<i>Toxicodendron diversiloba</i>	4	n/a	4	9	0

Quadrat 12	1981	1994	1995	1996	2015
<i>Artemisia californica</i>	1	0	0	0	0
<i>Baccharis pilularis</i>	0	0	0	0	3
<i>Grindelia camporum</i>	256	1	pr	1	6

Hazardia squarrosa	16	6	5	7	4
Opuntia	0	0	0	0	1

Quadrat 13	1981	1994	1995	1996	2015
Grindelia camporum	3	0	0	0	0

Quadrat 14	1981	1994	1995	1996	2015
Artemisia californica	2	n/a	7	1	1
Eriogonum cinerium	0	0	35	46	30
Grindelia camporum	0	0	pr	0	1
Hazardia squarrosa	0	0	19	20	22
Malmosa laurina	0	0	0	0	1

Quadrat 15	1981	1994	1995	1996	2015
Artemisia californica	0	n/a	n/a	n/a	6
Baccharis pilularis	0	n/a	n/a	n/a	1
Malmosa laurina	0	n/a	n/a	n/a	71
Sambucus nigra	0	n/a	n/a	n/a	4

APPENDIX F

FORB SPECIES PRESENCE

Number of forb species present in cover data.

Quadrat	1981	1994	1995	1996	2015
1	10	3	5	2	8
2	5	4	5	6	10
3	12	4	3	2	5
4	2	2	1	1	4
5	6	4	3	1	5
6	9	4	4	5	7
7	10	11	15	11	11
8	13	4	8	12	9
9	9	n/a	13	10	11
10	4	10	10	13	13
11	12	n/a	10	5	4
12	6	3	3	5	5
13	1	1	2	1	6
14	1	n/a	7	10	3
15	3	n/a	n/a	n/a	10