



Lake Meredith National Recreation Area

Southern Plains Network and Southern Plains Fire Group 2013 Vegetation Monitoring Data Summary



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ON THE COVER

Overlook at Lake Meredith NRA. NPS Photo.

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Introduction

This report contains a data summary of results from all vegetation monitoring conducted by the Southern Plains Network (SOPN) and the Southern Plains Fire Group (SPFG) during 2013 at Lake Meredith National Recreation Area (LAMR). Data summaries are used to impart current monitoring data until enough years of data have been collected to facilitate trend analysis. A more detailed synthesis report is scheduled to be produced in 2015.

Grassland Monitoring Results

Grassland monitoring occurred during late August and early September of 2013 (Table 1). Data from twenty (20) permanent transects (Figures 2 and 3) were collected following the established monitoring protocol *Grassland Monitoring Protocol and Standard Operating Procedures for the Southern Plains I&M Network and Fire Group* (Folts-Zettner et al.) (Figure 1). The protocol calls for a series of permanent 50-meter transects containing five 2x1-meter plots. Species composition, relative cover and ground strata are collected during annual visits.

Table 1. Plant community and sampling dates for each transect at Lake Meredith NRA in 2013.

Group	Transect	Plant community	Date
Bottomland	BLAND-LT01	Perennial Bottomland	09/11
	BLAND-LT02	Perennial Bottomland	09/04
	BLAND-LT03	Perennial Bottomland	09/01
Cottonwood	CWOOD-LT01	Cottonwood	09/02
	CWOOD-LT02	Cottonwood	09/04
	CWOOD-LT04	Cottonwood	09/04
Honey-Mesquite	HONEY-01	Honey Mesquite Shrubland	09/01
	HONEY-LT02	Honey Mesquite Shrubland	09/02
	HONEY-LT06	Honey Mesquite Shrubland	09/01
	HONEY-LT07	Honey Mesquite Shrubland	08/31
	HONEY-LT09	Honey Mesquite Shrubland	08/30
	HONEY-LT10	Honey Mesquite Shrubland	08/30
Upland	ULAND-02	Upland Grass	09/03
	ULAND-03	Upland Grass	07/24
	ULAND-LT02	Upland Grass	08/30
	ULAND-LT03	Upland Grass	09/02
	ULAND-LT05	Upland Grass	08/07
	ULAND-LT06	Upland Grass	08/31
	ULAND-LT07	Upland Grass	08/31
Fire	FPRGL1G0402	Fire Program	09/12
	FPRGL1G0404	Fire Program	09/12

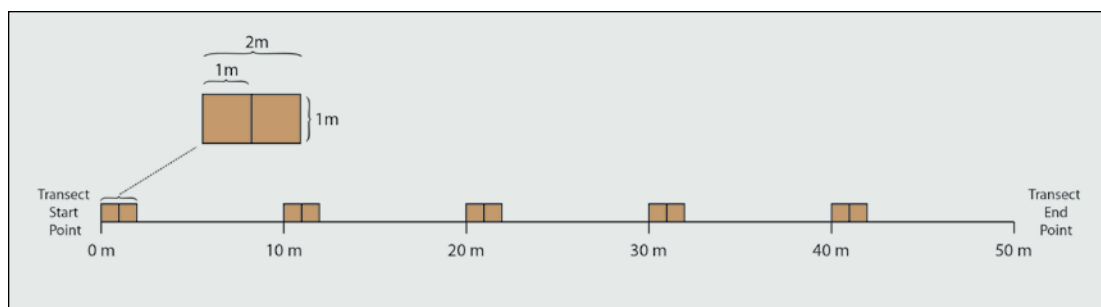


Figure 1. Layout of plots within each permanent transect.

Lake Meredith NRA Grassland Monitoring
Upper Region: 7/24, 8/7, 8/30 - 9/3/2013

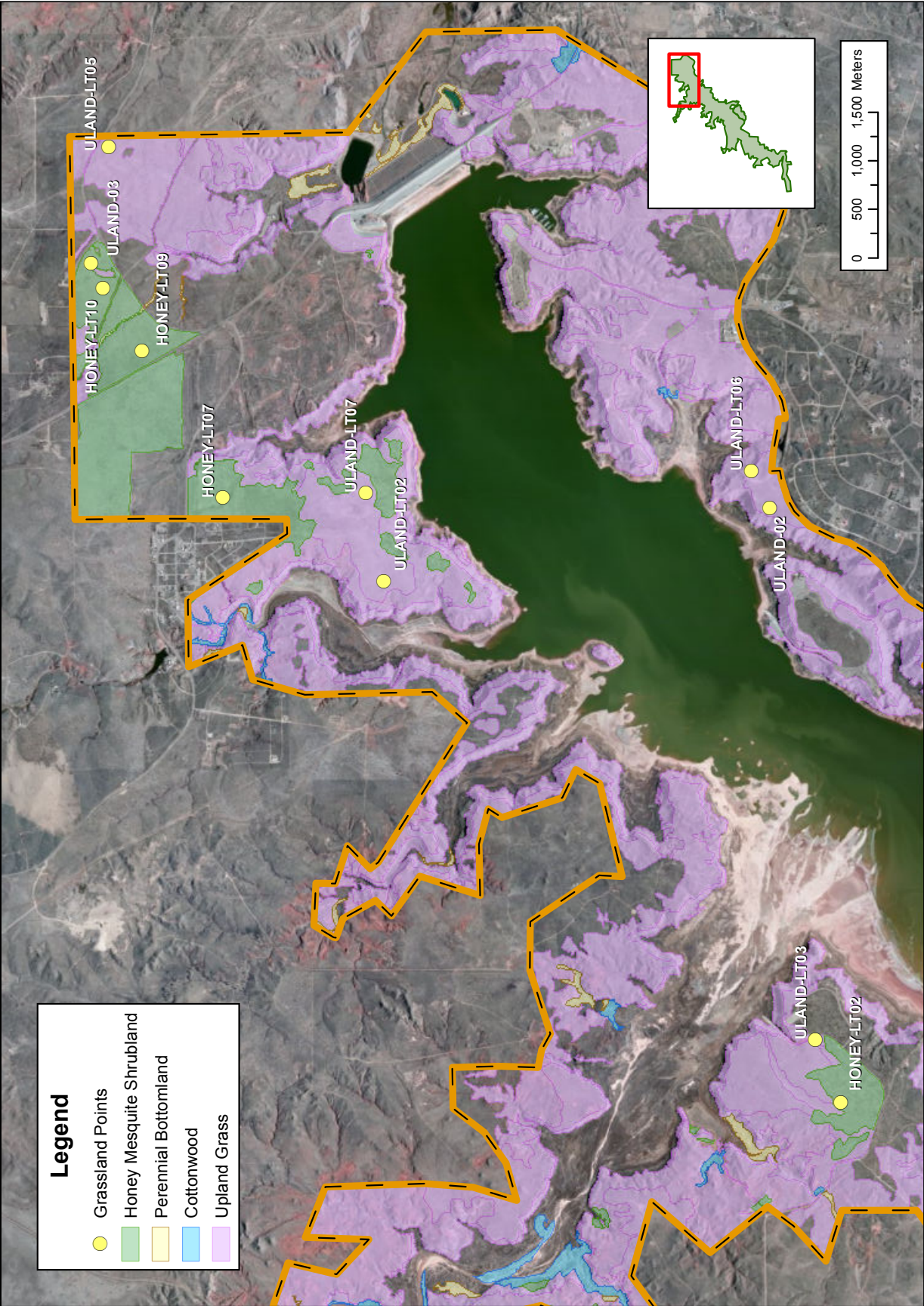


Figure 2. Location of each upper region permanent plot at LAMR monitored in 2013.

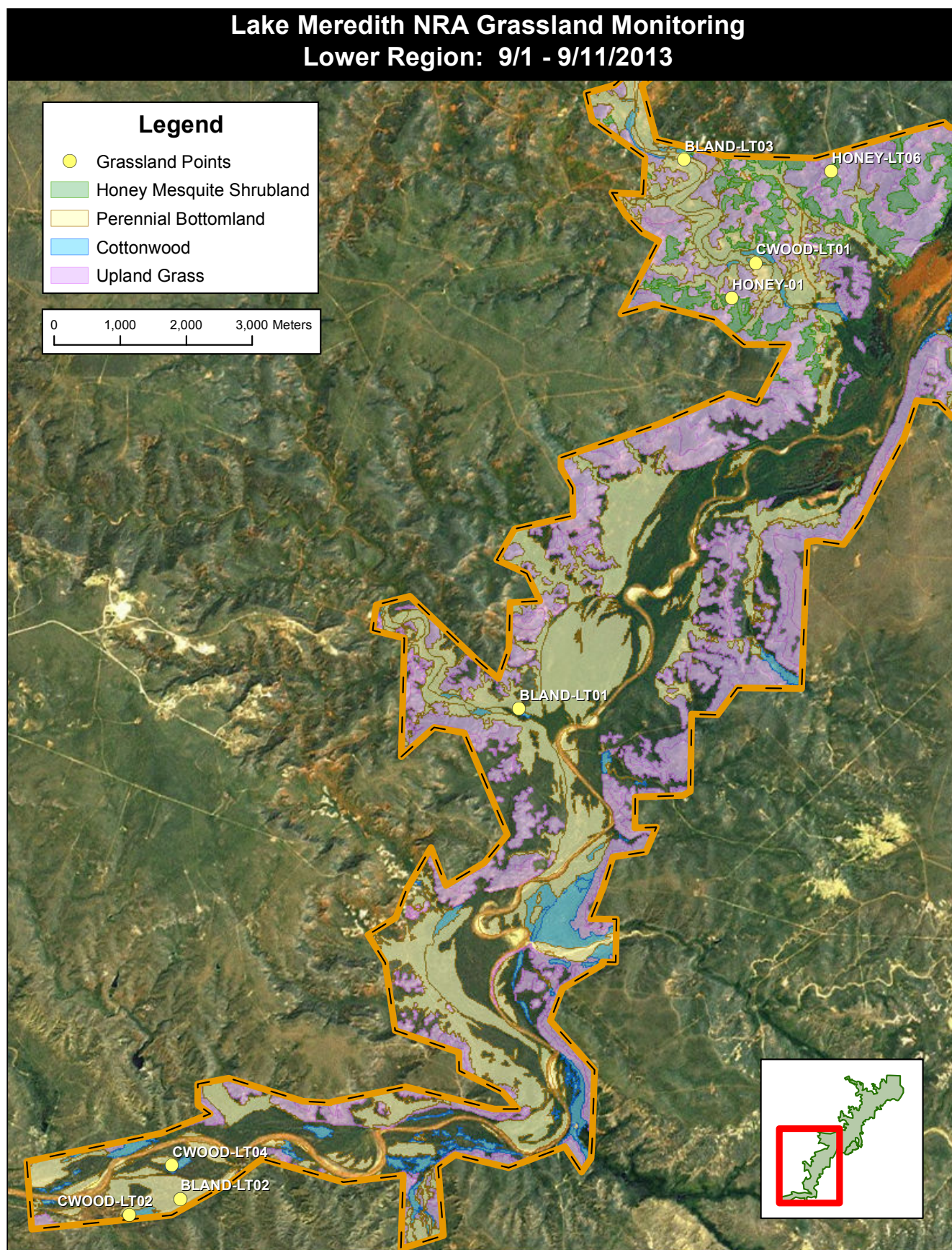


Figure 3. Location of each lower region permanent plot at LAMR monitored in 2013.

The type and amount of ground strata (bare soil, litter, rock) influences many aspects of grassland health. The benefits of these influences vary along an east-west gradient. Litter accumulation, for example is considered more beneficial in the western parts of the Southern Great Plains because it protects the soil from erosion by wind and rain, and keeps soil root-zones cooler. These same benefits accrue in the eastern area, but because higher rainfall results in higher vegetative production, the greater accumulation of litter can negatively impact a grassland by limiting seedling recruitment. Ground strata estimates for each transect monitored at LAMR in 2013 can be found in Table 2.

Table 3 contains numerical results of 2013 grassland monitoring at LAMR. Each transect contains five plots. Frequency reflects the number of plots in each transect where a particular species was detected. Exotic plant species are highlighted in pink. Scientific and common names for each plant code, as well as that species attributes can be found in Table 4.

Table 2. Ground strata type and percentage for each transect monitored at LAMR in 2013.

Cover	Bottomland Community			Cottonwood Community			Fire Program
	BLAND-LT01	BLAND-LT02	BLAND-LT03	CWOOD-LT01	CWOOD-LT02	CWOOD-LT04	FPRGL1G0402
SOIOPEN	26.8	67.2	50.6	5.8	1.6	31	13.2
SOILUNDER	6.8	6	10.8	31.2	1	4.75	3.4
LITTER	64	26.8	37.4	62.8	89.4	64	83.2
WOOD	2.4	0	1.2	1.2	8	0.25	0
ROCKSM	0	0	0	0	0	0	0
ROCKLG	0	0	0	0	0	0	0
LICHEN	0	0	0	0	0	0	0
MOSS	0	0	0	0	0	0	0
CRUST	1.8	0	0	0	0	0	0

Cover	Fire Program	Honey Mesquite Community					
	FPRGL1G0404	HONEY-01	HONEY-LT02	HONEY-LT06	HONEY-LT07	HONEY-LT09	HONEY-LT10
SOIOPEN	35.8	21.6	18.8	24.6	40.2	42	35
SOILUNDER	3.8	4.4	4.6	5	7.2	4.4	6
LITTER	57.4	67.8	73.8	58.4	47.4	40.4	51
WOOD	2.4	3	0	2	3.6	12	7.4
ROCKSM	0	2.6	1.6	4.8	1.6	1.2	0.6
ROCKLG	0	0	0	2.2	0	0	0
LICHEN	0	0	0	0	0	0	0
MOSS	0	0	0	0	0	0	0
CRUST	0.6	0.6	1.2	4	0	0	0

Cover	Upland Community						
	ULAND-02	ULAND-03	ULAND-LT02	ULAND-LT03	ULAND-LT05	ULAND-LT06	ULAND-LT07
SOIOPEN	42.4	30.4	31.4	26	35	26	55.2
SOILUNDER	5.4	5.8	3.2	4.6	5.8	4.2	4.4
LITTER	48.2	57.2	61.4	69	52.6	42.8	38.4
WOOD	0.2	2	3	0	0.8	0.4	1
ROCKSM	2.8	0.6	1	0.2	3	21.6	1
ROCKLG	0	0	0	0	0	4.4	0
LICHEN	0	0	0	0	0	0	0
MOSS	0	0	0	0	0	0	0
CRUST	1	0	0	0.2	2.8	0.6	0

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink.

Species Code	Bottomland Community						Cottonwood Community					
	BLAND-LT01		BLAND-LT02		BLAND-LT03		CWOOD-LT01		CWOOD-LT02		CWOOD-LT04	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
Forb												
AMBPSI			8	4					8	2	20	5
AMPDRA												
ASCENG					0.5	1						
ASTMIS1									2	3		
ASTNUT					1	1						
CHAERI												
CHAGLY												
CHALAT1												
CHAMAC			0.5	1	3.5	2						
CHAMIS											3.5	2
CHAPRO												
CHASOR												
CIRUND									0.5	1	2	3
CROGLA												
CROTEX												
DALCAN			0.5	1								
DESCOO												
DESILL1			0.5	1								
ENGPER												
ERIANN2												
ERILON												
EUPDAV	11	2										
EVONUT												
FRBLNG					0.5	1						
GAIPIN												
GAUCOC									3	1		
GAUVIL									0.5	1		
GLYLEP			3	1							2	2
GUTSAR												
HELPET												
HETSTE												
IVAXAN					1	1						
KOCSCO	55	2										
KRALAN1												
MACPIN												
MACTAN												
MELLEU												
MENDEC												
MIMNUT												
MIMRUP			1	1								
MIRLIN			1	1								
OENPAL												
PARJAM												

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Bottomland Community						Cottonwood Community					
	BLAND-LT01		BLAND-LT02		BLAND-LT03		CWOOD-LT01		CWOOD-LT02		CWOOD-LT04	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
PENALB												
PENFEN												
PHYHIS												
POROLE			0.5	1								
RATCOL												
SALTRA			19.5	5					1	2	6.5	3
SOLELA	24.5	4										
SOLSSP									1	2		
SPHCOC												
SPHFEN												
SYMERI			3.5	2	0.5	1	1	1	18	4	7	5
TETSCA												
THEFIL												
THEMEG			0.5	1								
TIDLAN	5	1										
TRAOCC												
TRARAM												
ZINGRA												
Grass												
ANDGER			1	1	5	1			1	1	13	3
ANDHAL												
ARIPUR			1	2	4	3					0.5	1
BOTISC												
BOTLAG			0.5	1					1	1		
BOUCUR			26	3	97	4	0.5	1	34	4	2.5	3
BOUERI												
BOUGRA			0.5	1								
BOUHIR												
BROJAP							0.5	1				
BUCDAC			8	2								
DISSPI					1	2	60	1			3	1
ELYELY												
EQULAE			2.5	4							3.5	5
ERASPE											0.5	1
ERIPIL												
MONSQU					3.5	2						
MUHASP												
MUHTOR												
PANHAL	0.5	1										
PANOBT									2.5	3		
PANVIR			12	4	0.5	1			1.5	3	10	4
PASSMI	44.5	4			13	2	76	5	1	1		
SCHSCO			3	1					8.5	3	36.5	4
SETLEU												

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Bottomland Community						Cottonwood Community					
	BLAND-LT01		BLAND-LT02		BLAND-LT03		CWOOD-LT01		CWOOD-LT02		CWOOD-LT04	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
SORHAL					1	1	99	3				
SORNUT			0.5	1			31	4				
SPOAIR					3	1	11	3			12	4
SPOCRY	0.5	1			45.5	4					1	2
TRIMUT					0.5	1						
Shrub												
ARTFIL												
ATRCAN												
DALFOR												
MIMBOR												
YUCGLA												
Subshrub												
ECHREI												
ECHVIR												
OPUPHA											4	2
OPUPOL												
Tree												
CELLAE	100	1										
CELOCC							2	3				
POPDEL							120.5	4	20	2		
PROGLA												
POLCON												
VICAME					0.5	1						

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Honey Mesquite Community											
	HONEY-01		HONEY-LT02		HONEY-LT06		HONEY-LT07		HONEY-LT09		HONEY-LT10	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
Forb												
AMBPSI												
AMPDRA												
ASCENG												
ASTMIS1												
ASTNUT												
CHAERI			2.5	3	2	4	1	1	2.5	5		
CHAGLY												
CHALAT1	4.5	3	0.5	1	2.5	4	0.5	1				
CHAMAC												
CHAMIS												
CHAPRO												
CHASOR												
CIRUND												
CROGLA												
CROTEX							0.5	1			0.5	1
DALCAN												
DESCOO							1	1	0.5	1		
DESILL1												
ENGPOR											0.5	1
ERIANN2												
ERILON					2.5	3			0.5	1		
EUPDAV	1	2	0.5	1								
EVONUT							0.5	1			0.5	1
FRBLNG												
GAIPIN												
GAUCOC												
GAUVIL												
GLYLEP												
GUTSAR			3	1	2	3						
HELPET							0.5	1				
HETSTE												
IVAXAN												
KOCSO												
KRALAN1											1	1
MACPIN									0.5	1	0.5	1
MACTAN							4	2				
MELLEU					0.5	1						
MENDEC												
MIMNUT											0.5	1
MIMRUP												
MIRLIN												
OENPAL												
PARJAM												

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Honey Mesquite Community											
	HONEY-01		HONEY-LT02		HONEY-LT06		HONEY-LT07		HONEY-LT09		HONEY-LT10	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
PENALB												
PENFEN												
PHYHIS												
POROLE												
RATCOL												
SALTRA	5	1	42	5	58	4			1.5	2	22.5	5
SOLELA	4	5	3.5	5	0.5	1	0.5	1				
SOLSSP												
SPHCOC			1.5	3			1	2				
SPHFEN	1	1										
SYMERI												
TETSCA					1	2						
THEFIL												
THEMEG												
TIDLAN												
TRAOCC												
TRARAM					8.5	5						
ZINGRA											0.5	1
Grass												
ANDGER												
ANDHAL												
ARIPUR			1	1	1	1			0.5	1	1	1
BOTISC												
BOTLAG												
BOUCUR	30.5	4			35.5	5	0.5	1			0.5	1
BOUERI	5	1										
BOUGRA			28.5	4	6	2	55	5	3	1	22	5
BOUHIR					0.5	1			1.5	2		
BROJAP												
BUCDAC			2.5	4								
DISSPI												
ELYELY	0.5	1							0.5	1		
EQU LAE												
ERASPE												
ERIPIL												
MONSQU												
MUHASP												
MUHTOR	1	1							13	5		
PANHAL	3	1	11	4	0.5	1						
PANOBT	30	1										
PANVIR												
PASSMI												
SCHSCO												
SETLEU												

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Honey Mesquite Community											
	HONEY-01		HONEY-LT02		HONEY-LT06		HONEY-LT07		HONEY-LT09		HONEY-LT10	
	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency	Cover Sum	Frequency
SORHAL												
SORNUT												
SPOAIR												
SPOCRY	5.5	4	5.5	4	1	2	26.5	4	5.5	4	3.5	2
TRIMUT	1	2			4	3						
Shrub												
ARTFIL												
ATRCAN												
DALFOR												
MIMBOR					59	3			1	2		
YUCGLA	11	3	23	3	11	2			1	1	1	1
Subshrub												
ECHREI					0.5	1						
ECHVIR					0.5	1						
OPUPHA	3	1	15	1	12.5	2						
OPUPOL			6	2								
Tree												
CELLAE												
CELOCC												
POPDEL												
PROGLA	10	1	60	1			25.5	3	68	4	42	3
POLCON												
VICAME												

Table 3. Species cover sum and frequency for each permanent transect monitored at LAMR in 2013. Exotic species are highlighted in pink (continued).

Species Code	Fire Program				Species Code	Fire Program				Species Code	Fire Program				
	FPRGL-1G0402		FPRGL-1G0404			FPRGL-1G0402		FPRGL-1G0404			FPRGL-1G0402		FPRGL-1G0404		
	Cover Sum	Fre-quency	Cover Sum	Fre-quency		Cover Sum	Fre-quency	Cover Sum	Fre-quency		Cover Sum	Fre-quency	Cover Sum	Fre-quency	
Forb					PARJAM					SCHSCO					
AMBPSI					PENALB					SETLEU					
AMPDRA	1	2			PENFEN					SORHAL					
ASCENG					PHYHIS					SORNUT					
ASTMIS1					POROLE					SPOAIR					
ASTNUT					RATCOL					SPOCRY	7.5	4	5	4	
CHAERI	1	2	1	1	SALTRA	3.5	4	2.5	3	TRIMUT	0.5	1			
CHAGLY			0.5	1	SOLELA	2	3	1	2	Shrub					
CHALAT1			1	2	SOLSSP					ARTFIL					
CHAMAC					SPHCOC	1	2	1.5	3	ATRCAN	26	3	0.5	1	
CHAMIS					SPHFEN					DALFOR					
CHAPRO					SYMERI					MIMBOR					
CHASOR					TETSCA					YUCGLA	49.5	5			
CIRUND					THEFIL					Subshrub					
CROGLA					THEMEG					ECHREI					
CROTEX					TIDLAN			0.5	1	ECHVIR					
DALCAN					TRAOCC					OPUPHA					
DESCOO					TRARAM					OPUPOL					
DESILL1					ZINGRA					Tree					
ENGPER					Grass						CELLAE				
ERIANN2					ANDGER					CELOCC					
ERILON					ANDHAL					POPDEL					
EUPDAV	1	2			ARIPUR					PROGLA			7	1	
EVONUT					BOTISC					POLCON					
FRBLNG					BOTLAG					VICAME					
GAIPIN					BOUCUR	16.5	4	9.5	4						
GAUCOC					BOUERI										
GAUVIL					BOUGRA			13.5	4						
GLYLEP					BOUHIR										
GUTSAR			1	1	BROJAP										
HELPET					BUCDAC										
HETSTE					DISSPI										
IVAXAN					ELYELY										
KOCSCO					EQULAE										
KRALAN1					ERASPE										
MACPIN					ERIPIL										
MACTAN					MONSQU										
MELLEU					MUHASP										
MENDEC					MUHTOR	1	1								
MIMNUT					PANHAL										
MIMRUP					PANOBT	0.5	1								
MIRLIN					PANVIR										
OENPAL					PASSMI			1	2						

Table 4. All plant species detected during grassland monitoring in 2010 and exotic monitoring in 2010 and 2013 at LAMR. Exotic species are highlighted in pink.

Species Code	LifeForm	Scientific Name	Common Name	Primary Duration
AMBPSI	Forb	<i>Ambrosia psilostachya</i>	western ragweed	Perennial
AMPDRA	Forb	<i>Amphiachyris dracunculoides</i>	prairie broomweed	Annual
ANDGER	Grass	<i>Andropogon gerardii</i>	big bluestem	Perennial
ANDHAL	Grass	<i>Peperomia hirtipetiola</i>	sand bluestem	Perennial
ARIPUR	Grass	<i>Aristida purpurea</i>	purple threeawn	Perennial
ARTFIL	Shrub	<i>Artemisia filifolia</i>	sand sagebrush	Perennial
ASCENG	Forb	<i>Asclepias engelmanniana</i>	engelmann's milkweed	Perennial
ASTMIS1	Forb	<i>Astragalus missouriensis</i>	missouri milkvetch	Perennial
ASTNUT	Forb	<i>Astragalus nuttallianus</i>	nuttalls milkvetch	Annual/Perennial
ATRCAN	Shrub	<i>Atriplex canescens</i>	fourwing saltbush	Perennial
BOTISC	Grass	<i>Bothriochloa ischaemum</i>	kr bluestem	Perennial
BOTLAG	Grass	<i>Bothriochloa laguroides</i>	silver bluestem	Perennial
BOUCUR	Grass	<i>Bouteloua curtipendula</i>	sideoats grama	Perennial
BOUERI	Grass	<i>Bouteloua eriopoda</i>	black grama	Perennial
BOUGRA	Grass	<i>Bouteloua gracilis</i>	blue grama	Perennial
BOUHIR	Grass	<i>Bouteloua hirsuta</i>	hairy grama	Perennial
BROCAT	Grass	<i>Bromus catharticus</i>	rescue grass	Annual/Perennial
BROJAP	Grass	<i>Bromus japonicus</i>	japanese brome	Annual
BROTEC	Grass	<i>Bromus tectorum</i>	cheatgrass	Annual
BUCDAC	Grass	<i>Buchloe dactyloides</i>	buffalograss	Perennial
CELLAE	Tree	<i>Celtis laevigata</i>	sugarberry	Perennial
CELOCC	Tree	<i>Celtis occidentalis</i>	common hackberry	Perennial
CHAERI	Forb	<i>Chaetopappa ericoides</i>	baby white aster	Perennial
CHAGLY	Forb	<i>Chamaesyce nutans</i>	rib-seed sandmat	Annual
CHALAT1	Forb	<i>Chamaesyce lata</i>	hoary sandmat	Perennial
CHAMAC	Forb	<i>Chamaesyce maculata</i>	spotted sandmat	Annual
CHAMIS	Forb	<i>Chamaesyce missurica</i>	prairie sandmat	Annual
CHAPRO	Forb	<i>Chamaesyce prostrata</i>	prostrate sandmat	Annual
CHASOR	Forb	<i>Chamaesaracha sordida</i>	hairy five eyes	Perennial
CIRUND	Forb	<i>Cirsium undulatum</i>	wavyleaf thistle	Biennial
CONARV	Forb	<i>Convolvulus arvensis</i>	field bindweed	Perennial
CROGLA	Forb	<i>Croton glandulosus</i>	vente conmigo	Annual
CROTEX	Forb	<i>Croton texensis</i>	texas croton	Annual
CYNDAC	Grass	<i>Cynodon dactylon</i>	Bermudagrass	Perennial
DALCAN	Forb	<i>Dalea candida</i>	slender white prairie clover	Perennial
DALFOR	Shrub	<i>Dalea formosa</i>	feather dalea	Perennial
DESCOO	Forb	<i>Desmanthus cooleyi</i>	cooleys bundleflower	Perennial
DESILL1	Forb	<i>Desmanthus illinoensis</i>	illinois bundleflower	Perennial
DIGSAN	Grass	<i>Digitaria sanguinalis</i>	hairy crabgrass	Annual
DISSPI	Grass	<i>Distichlis spicata</i>	inland saltgrass	Perennial
ECHREI	Subshrub	<i>Echinocereus reichenbachii</i>	lace hedgehog cactus	Perennial
ECHVIR	Subshrub	<i>Echinocereus viridiflorus</i>	nylon hedgehog cactus	Perennial

Table 4. All plant species detected during grassland monitoring in 2010 and exotic monitoring in 2010 and 2013 at LAMR. Exotic species are highlighted in pink. (continued).

Species Code	LifeForm	Scientific Name	Common Name	Primary Duration
ELAANG	Tree	<i>Elaeagnus angustifolia</i>	Russian olive	Perennial
ELYELY	Grass	<i>Elymus elymoides</i>	bottlebrush squirreltail	Perennial
ENGPER	Forb	<i>Engelmannia peristenia</i>	engelmann's daisy	Perennial
EQULAE	Grass	<i>Equisetum laevigatum</i>	smooth scouting rush	Perennial
EROCIC	Forb	<i>Erodium cicutarium</i>	redstem stork's bill	Annual
ERASPE	Grass	<i>Eragrostis spectabilis</i>	purple lovegrass	Perennial
ERIANN2	Forb	<i>Eriogonum annuum</i>	annual buckwheat	Annual/Biennial
ERILON	Forb	<i>Eriogonum longifolium</i>	longleaf buckwheat	Perennial
ERIPIL	Grass	<i>Erioneuron pilosum</i>	hairy tridens	Perennial
EUPDAV	Forb	<i>Euphorbia davidii</i>	davids spurge	Annual
EVONUT	Forb	<i>Evolvulus nuttallianus</i>	shaggy dwarf morning glory	Perennial
FRBLNG	Forb	<i>Forb seedling</i>	forb seedling	N/A
GAIPIN	Forb	<i>Gaillardia pinnatifida</i>	red dome blanketflower	Perennial
GAUCOC	Forb	<i>Gaura coccinea</i>	scarlet guara	Perennial
GAUVIL	Forb	<i>Gaura villosa</i>	wooly gaura	Perennial
GLYLEP	Forb	<i>Glycyrrhiza lepidota</i>	wild licorice	Perennial
GUTSAR	Forb	<i>Gutierrezia sarothrae</i>	broom snakeweed	Perennial
HELPET	Forb	<i>Helianthus petiolaris</i>	prairie sunflower	Annual
HETSTE	Forb	<i>Heterotheca stenophylla</i>	stiffleaf false goldenaster	Perennial
IVAXAN	Forb	<i>Iva xanthifolia</i>	burrweed marshelder	Annual
KOCSCO	Forb	<i>Kochia scoparia</i>	kochia	Annual
KRALAN1	Forb	<i>Krameria lanceolata</i>	trailing ratany	Perennial
LACSER	Forb	<i>Lactuca serriola</i>	prickly lettuce	Annual
MACPIN	Forb	<i>Machaeranthera pinnatifida</i>	lacy tansyaster	Perennial
MACTAN	Forb	<i>Machaeranthera tanacetifolia</i>	tansyleaf tansyaster	Annual
MEDMIN	Forb	<i>Medicago minima</i>	burr medic clover	Annual
MELLEU	Forb	<i>Melampodium leucanthum</i>	blackfoot daisy	Perennial
MELOFF	Forb	<i>Melilotus officinalis</i>	yellow sweetclover	Annual
MENDEC	Forb	<i>Mentzelia decapetala</i>	ten-petal blazingstar	Biennial/Perennial
MIMBOR	Shrub	<i>Mimosa borealis</i>	fragrant mimosa	Perennial
MIMNUT	Forb	<i>Mimosa nuttallii</i>	catclaw sensitivebriar	Perennial
MIMRUP	Forb	<i>Mimosa rupertiana</i>	prickly sensitivebriar	Perennial
MIRLIN	Forb	<i>Mirabilis linearis</i>	narrowleaf four o'clock	Perennial
MONSQU	Grass	<i>Monroa squarrosa</i>	false buffalograss	Annual
MUHASP	Grass	<i>Muhlenbergia asperifolia</i>	alkali muhly	Perennial
MUHTOR	Grass	<i>Muhlenbergia torreyi</i>	ring muhly	Perennial
OENPAL	Forb	<i>Oenothera pallida</i>	pale evening primrose	Perennial
OPUPHA	Subshrub	<i>Opuntia phaeacantha</i>	brwnspine pricklypear cactus	Perennial
OPUPOL	Subshrub	<i>Opuntia polyacantha</i>	plains pricklypear cactus	Perennial
PANHAL	Grass	<i>Panicum hallii</i>	hall's panicgrass	Perennial
PANOBT	Grass	<i>Panicum obtusum</i>	vine mesquite	Perennial
PANVIR	Grass	<i>Panicum virgatum</i>	switchgrass	Perennial

Table 4. All plant species detected during grassland monitoring in 2010 and exotic monitoring in 2010 and 2013 at LAMR. Exotic species are highlighted in pink. (continued).

Species Code	LifeForm	Scientific Name	Common Name	Primary Duration
PARJAM	Forb	<i>Paronychia jamesii</i>	james nailwort	Perennial
PASSMI	Grass	<i>Pascopyrum smithii</i>	western wheatgrass	Perennial
PENALB	Forb	<i>Penstemon albidus</i>	white penstemon	Perennial
PENFEN	Forb	<i>Penstemon fendleri</i>	Fendler's beardtongue	Perennial
PHYHIS	Forb	<i>Physalis hispida</i>	prairie groundcherry	Perennial
POAPRA	Grass	<i>Poa pratensis</i>	Kentucky bluegrass	Perennial
POLCON	Vine	<i>Polygonum convolvulus</i>	climbing buckwheat	Annual
POLMON	Grass	<i>Polypogon monspeliensis</i>	annual rabbitsfoot grass	Annual
POPDEL	Tree	<i>Populus deltoides</i>	plains cottonwood	Perennial
POROLE	Forb	<i>Portulaca oleracea</i>	common purslane	Annual
PROGLA	Tree	<i>Prosopis glandulosa</i>	honey mesquite	Perennial
RATCOL	Forb	<i>Ratibida columnifera</i>	redspike mexican hat	Perennial
SALCOL	Forb	<i>Salsola collina</i>	slender Russian thistle	Annual
SALTRA	Forb	<i>Salsola tragus</i>	prickly russian thistle	Annual
SCHSCO	Grass	<i>Schizachyrium scoparium</i>	little bluestem	Perennial
SCOLAC	Forb	<i>Scorzonera laciniata</i>	cutleaf vipergrass	Perennial
SETLEU	Grass	<i>Setaria leucopila</i>	plains bristlegrass	Perennial
SOLELA	Forb	<i>Solanum elaeagnifolium</i>	silverleaf nightshade	Perennial
SOLSSP	Forb	<i>Solidago ssp.</i>	goldenrod	N/A
SORHAL	Grass	<i>Sorghum halepense</i>	johnsongrass	Perennial
SORNUT	Grass	<i>Sorghastrum nutans</i>	indiangrass	Perennial
SPHCOC	Forb	<i>Sphaeralcea coccinea</i>	scarlet globemallow	Perennial
SPHFEN	Forb	<i>Sphaeralcea fendleri</i>	fendlers globemallow	Perennial
SPOAIR	Grass	<i>Sporobolus airoides</i>	alkali sacaton	Perennial
SPOCRY	Grass	<i>Sporobolus cryptandrus</i>	sand dropseed	Perennial
SYMERI	Forb	<i>Symphyotrichum ericoides</i>	white heath aster	Perennial
TAMCHI	Tree	<i>Tamarix chinensis</i>	chinese saltcedar	Perennial
TAROFF	Forb	<i>Taraxacum officinale</i>	common dandelion	Perennial
TETSCA	Forb	<i>Tetraneuris scaposa</i>	stemmy four-nerve daisy	Perennial
THEFIL	Forb	<i>Thelesperma filifolium</i>	stiff greenthread	Annual/Perennial
THEMEG	Forb	<i>Thelesperma megapotamicum</i>	hopi tea greenthread	Perennial
TIDLAN	Forb	<i>Tidestromia lanuginosa</i>	wooly tidestromia	Annual
TRADUB	Forb	<i>Tragopogon dubius</i>	western salsify	Annual
TRAOCC	Forb	<i>Tradescantia occidentalis</i>	prairie spiderwort	Perennial
TRARAM	Forb	<i>Tragia ramosa</i>	branched noseburn	Perennial
TRIMUT	Grass	<i>Tridens muticus</i>	slim tridens	Perennial
VICAME	Vine	<i>Vicia americana</i>	american deervetch	Perennial
YUCGLA	Shrub	<i>Yucca glauca</i>	soft soapweed yucca	Perennial
ZINGRA	Forb	<i>Zinnia grandiflora</i>	plains zinnia	Perennial

Exotic Monitoring Results

Exotic plant monitoring followed the protocol *Multi-Network Exotic Plant Monitoring Protocol and Standard Operating Procedures* (Folts-Zettner et al. 2013). Methodology requires a series of discreet 50-meter blocks along designated vectors chosen for high-probability of introduction. Exotic species detected within each block are assigned densities, and their proximity to the vector itself is divided into various Distance Classes (Figure 4).

Monitoring occurred June 11-12, 2013 and included paved roads at Bugbee, Cedar Canyon and Sanford-Yake (Figure 5). These vectors have been previously monitored June 16-17, 2010. It should be noted that 2010 was a year of average to above average precipitation, followed by consecutive years of extreme drought, including 2013. Data summarized in this report compares the results of 2013 monitoring to that detected in 2010.

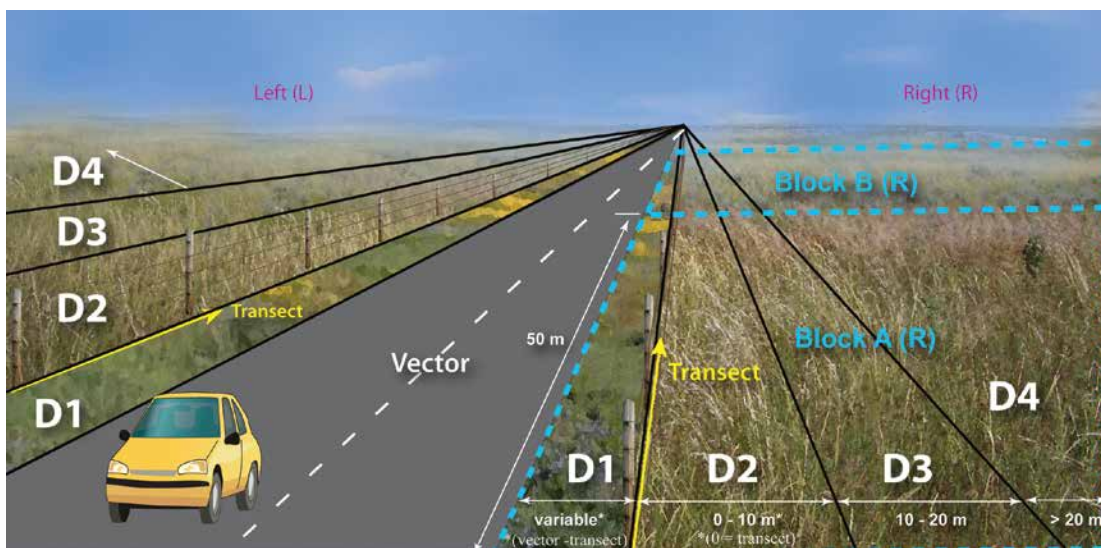


Figure 4. Layout of Vector Blocks and Distance Classes along a vector.

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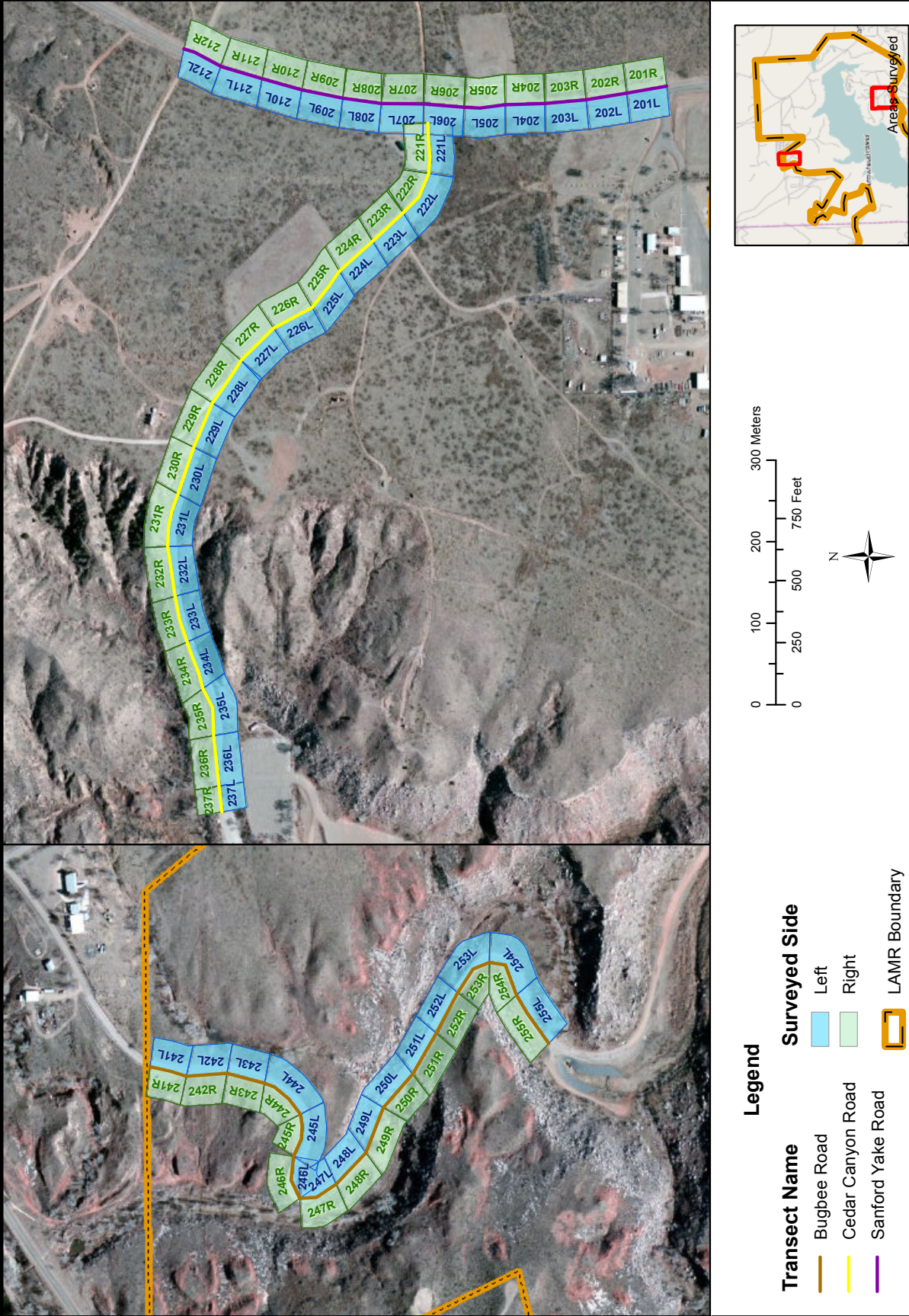


Figure 5. Panel 2 numbered vector blocks monitored at LAMR in both 2010 and 2013.

Table 5 presents all exotic species detected during both exotic and grassland (secondary transects) monitoring in both years as well as the number and percentage of vector blocks (N=88) and transects (N=21)(Figures 6 and 7) in which these species were found. The effect of drought is easily seen.

Table 5. Number and percentage comparison of unit detections of exotic species found in repeated monitoring of vector blocks and permanent transects at LAMR.

Scientific Name	Common Name	2010		2013		2010		2013	
		Primary Blocks (N=88)		Primary Blocks (N=88)		Secondary Transects (N=27)		Secondary Transects (N=21)	
		Total	% Blocks	Total	% Blocks	Total	% Blocks	Total	% Blocks
<i>Bothriochloa ischaemum</i>	King Ranch bluestem	–	–	34	39%	–	–	1	5%
<i>Bromus catharticus</i>	rescuegrass	–	–	4	5%	–	–	–	–
<i>Bromus japonicus</i>	Japanese brome	52	59%	30	34%	–	–	1	5%
<i>Bromus tectorum</i>	cheatgrass	1	1%	–	–	–	–	–	–
<i>Convolvulus arvensis</i>	field bindweed	4	5%	3	3%	–	–	–	–
<i>Cynodon dactylon</i>	Bermudagrass	25	28%	–	–	–	–	–	–
<i>Digitaria sanguinalis</i>	hairy crabgrass	49	56%	–	–	–	–	–	–
<i>Elaeagnus angustifolia</i>	Russian olive	–	–	2	2%	–	–	–	–
<i>Erodium cicutarium</i>	redstem stork's bill	3	3%	–	–	–	–	–	–
<i>Euphorbia dentata</i>	toothed spurge	10	11%	–	–	–	–	5	24%
<i>Kochia scoparia</i>	kochia	23	26%	17	19%	12	44%	1	5%
<i>Lactuca serriola</i>	prickly lettuce	–	–	1	1%	–	–	–	–
<i>Medicago minima</i>	burr medic clover	1	1%	5	6%	–	–	–	–
<i>Melilotus officinalis</i>	yellow sweetclover	38	43%	2	2%	–	–	–	–
No Plant	No Plant	–	–	14	16%	–	–	–	–
<i>Poa pratensis</i>	Kentucky bluegrass	3	3%	–	–	–	–	–	–
<i>Polygonum convolvulus</i>	climbing buckwheat	–	–	–	–	–	–	1	5%
<i>Polypogon monspeliensis</i>	annual rabbitsfoot grass	1	1%	–	–	–	–	–	–
<i>Salsola collina</i>	slender Russian thistle	2	2%	–	–	–	–	–	–
<i>Salsola tragus</i>	prickly Russian thistle	54	61%	44	50%	21	78%	15	71%
<i>Scorzonera laciniata</i>	cutleaf vipergrass	1	1%	–	–	–	–	–	–
<i>Sorghum halepense</i>	Johnsongrass	2	2%	1	1%	2	7%	2	10%
<i>Tamarix chinensis</i>	Chinese saltcedar	3	3%	5	6%	–	–	–	–
<i>Taraxacum officinale</i>	common dandelion	4	5%	–	–	–	–	–	–
<i>Tragopogon dubius</i>	western salsify	14	16%	14	16%	–	–	–	–

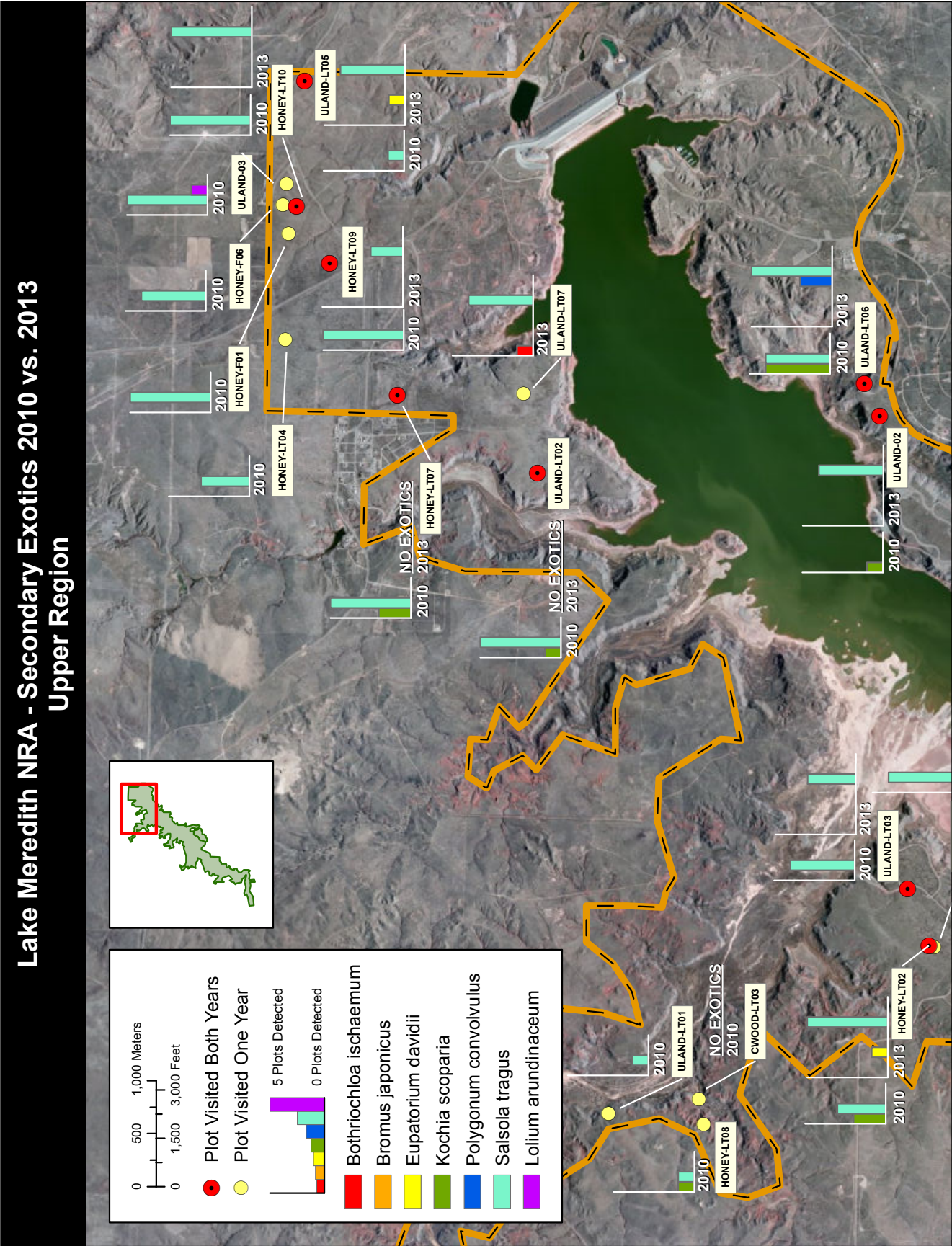


Figure 5. Comparison of exotics detected in 2010 and 2013 upper region grassland monitoring permanent transects at LAMR.

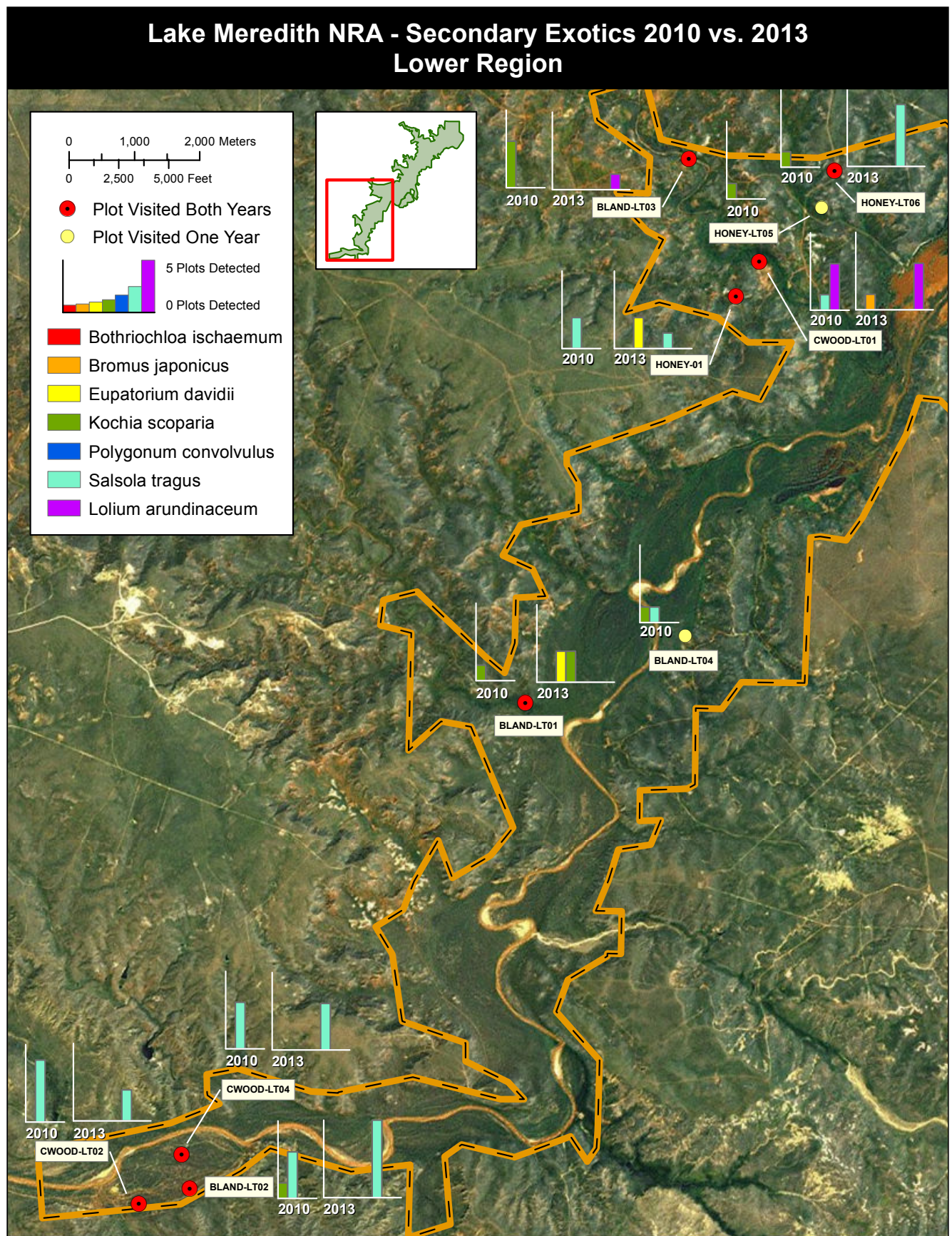


Figure 6. Comparison of exotics detected in 2010 and 2013 lower region grassland monitoring permanent transects at LAMR.

The density of a detection of any given exotic species informs us of the invasion stage of that area. A Density Code of 1 will point to either a new introduction in an area or a lack of suitable resources for that species to establish and spread. Conversely, a Density Code of 4 denotes a matrix of the exotic species that has successfully colonized the site and pushed out all native species. Table 6 is a comparison of the number of blocks containing that density in 2010 and 2013 in two Distance Classes. Distance Class 1 is from immediately along the vector to 2 meters into the landscape or the depth of the mowed verge (whichever is greater). Distance Class 2 is a constant 10 meters into the landscape beginning at the interior edge of Distance Class 1. This minimum depth of 12 meters will give the resource manager an idea of the ability of a given exotic species to invade into the interior of a landscape.

Table 6. A comparison of the number of blocks containing a given density in 2010 and 2013 in two Distance Classes.

Species Code	Scientific Name	Common Name	Density Code	Distance Class 1		Distance Class 2	
				2010	2013	2010	2013
BOTISC	<i>Bothriochloa ischaemum</i>	kr bluestem	1	-	7	-	5
			2	-	24	-	12
			3	-	2	-	-
BROCAT	<i>Bromus catharticus</i>	rescue grass	1	-	-	-	1
			2	-	2	-	1
BROJAP	<i>Bromus japonicus</i>	Japanese brome	1	4	7	2	3
			2	11	16	30	9
			3	-	-	6	-
CONARV	<i>Convolvulus arvensis</i>	field bindweed	1	2	1	2	3
			2	-	-	1	-
CYNDAC	<i>Cynodon dactylon</i>	Bermudagrass	1	1	-	-	-
			2	20	-	14	-
			3	1	-	1	-
			4	1	-	-	-
DIGSAN	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	10	-	3	-
			2	36	-	23	-
			3	2	-	-	-
EROCIC	<i>Erodium cicutarium</i>	red stem storksbill	1	2	-	-	-
			2	1	-	-	-
EUPDEN	<i>Euphorbia dentata</i>	toothed spurge	1	6	-	3	-
			2	-	-	3	-
KOCSCO	<i>Kochia scoparia</i>	kochia	1	7	3	7	1
			2	2	4	9	12
LACSER	<i>Lactuca serriola</i>	prickly lettuce	1	-	1	-	-
MEDMIN	<i>Medicago minima</i>	burr medic clover	1	1	2	-	-
			2	-	1	-	3
MELOFF	<i>Melilotus officinalis</i>	yellow sweetclover	1	5	-	7	1
			2	13	1	23	1
			3	2	-	4	-
POAPRA	<i>Poa pratensis</i>	Kentucky bluegrass	2	-	-	3	-
POLMON	<i>Polypogon monspeliensis</i>	rabbitsfoot grass	2	-	-	1	-

Density Code Key: 1 = one to five individual plants; 2 = scattered patches; 3 = evenly distributed patches; 4 = matrix; X = non-detect.

Species Code	Scientific Name	Common Name	Density Code	Distance Class 1		Distance Class 2	
				2010	2013	2010	2013
SALCOL	<i>Salsola collina</i>	slender Russian thistle	1	1	-	-	-
			2	1	-	-	-
SALTRA	<i>Salsola tragus</i>	prickly Russian thistle	1	14	10	7	2
			2	17	23	35	26
			3	-	-	3	-
SCOLAC	<i>Scorzonera laciniata</i>	cutleaf vipergrass	1	1	-	1	-
SORHAL	<i>Sorghum halepense</i>	Johnsongrass	2	-	-	-	1
TAMCHI	<i>Tamarix chinensis</i>	chinese saltcedar	1	3	1	1	3
TAROFF	<i>Taraxacum officinale</i>	dandelion	1	1	-	2	-
			2	1	-	1	-
TRADUB	<i>Tragopogon dubius</i>	western salsify	1	7	11	8	4

Density Code Key: 1 = one to five individual plants; 2 = scattered patches; 3 = evenly distributed patches; 4 = matrix; X = non-detect.

Table 7 is included for the benefit of those resource managers with an active exotic management program. This table lists the specific species found in each vector block and the Density Code of that species in each Distance Class. The comparison of current detections to that those from 2010 underscores the current drought effect – the more herbaceous species have disappeared, while the drought tolerant exotics (ie: bindweed, kochia, prickly Russian thistle) appear and often have increased.

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class.

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
201L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	0	2	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	2	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	0	2	0				
201R	<i>Cynodon dactylon</i>	Bermudagrass	3	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	1	0	0				
	N/A	No Plant					0	0	0	0
	<i>Polypogon monspeliensis</i>	annual rabbitsfoot grass	0	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	2	0				
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0				
202L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	0	0	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	2	2	2	0	0	0
	<i>Sorghum halepense</i>	Johnsongrass	0	0	0	2				
202R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	0	2				
	<i>Cynodon dactylon</i>	Bermudagrass	4	3	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia	0	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	1	0				
203L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	0	3	0	1	0	0	0
	<i>Bromus tectorum</i>	cheatgrass	0	0	3	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	0	2	0				
	<i>Sorghum halepense</i>	Johnsongrass	0	0	0	2				
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
203R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	0	2	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
203R (cont.)	<i>Kochia scoparia</i>	kochia	0	2	0	0	0	1	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	2	0	0	2	0	0
	<i>Tragopogon dubius</i>	western salsify	1	0	0	0				
204L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	0	2	X				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	X				
	<i>Salsola tragus</i>	prickly Russian thistle	0	0	3	X				
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
204R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	1	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0	1	1	0	0
	<i>Convolvulus arvensis</i>	field bindweed	0	2	0	0				
	<i>Cynodon dactylon</i>	Bermudagrass	0	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia	0	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	2	0				
	<i>Taraxacum officinale</i>	common dandelion	1	0	0	0				
205L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome					2	0	0	0
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	X				
	<i>Kochia scoparia</i>	kochia	0	0	2	X				
	<i>Medicago minima</i>	burr medic clover					2	0	0	0
	<i>Tragopogon dubius</i>	western salsify	0	0	0	X				
205R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	0	0	0	2	2	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Kochia scoparia</i>	kochia	2	0	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	0				
206L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					0	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	3	X	2	0	0	0
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	X				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	3	X				
	<i>Tragopogon dubius</i>	western salsify	1	0	0	X				
206R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0	0	2	2	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Medicago minima</i>	burr medic clover					1	0	0	0
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0				
207L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	0	0
	<i>Bromus catharticus</i>	rescuegrass					0	2	0	0

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
207L (cont.)	<i>Bromus japonicus</i>	Japanese brome	0	0	2	3				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	2	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	2	0				
	<i>Medicago minima</i>	burr medic clover					0	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	0	3	3				
	<i>Taraxacum officinale</i>	common dandelion	2	2	0	0				
207R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	3	3	3	0	2	2	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Kochia scoparia</i>	kochia					0	2	0	0
	<i>Poa pratensis</i>	Kentucky bluegrass	0	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle					0	2	0	0
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0				
208L	<i>Bromus japonicus</i>	Japanese brome	0	2	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	N/A	No Plant					0	0	0	0
	<i>Poa pratensis</i>	Kentucky bluegrass	0	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	0	2	2				
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0				
208R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					3	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	3	3	0	0	2	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	3	2	0	0				
	<i>Erodium cicutarium</i>	redstem stork's bill	1	0	0	0				
	<i>Kochia scoparia</i>	kochia					0	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle					0	2	0	0
	<i>Tragopogon dubius</i>	western salsify	1	1	0	0				
209L	<i>Bromus japonicus</i>	Japanese brome	0	0	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	N/A	No Plant					0	0	0	0
	<i>Poa pratensis</i>	Kentucky bluegrass	0	2	0	0				
209R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					3	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Kochia scoparia</i>	kochia					0	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle					0	2	0	0
210L	<i>Cynodon dactylon</i>	Bermudagrass	1	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	N/A	No Plant					0	0	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	0				
210R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
210R (cont.)	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Kochia scoparia</i>	kochia	0	1	0	0	0	2	2	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	0	0	2	2	0
211L	<i>Bromus japonicus</i>	Japanese brome	0	0	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	0
211R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	0	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	X				
	<i>Erodium cicutarium</i>	redstem stork's bill	2	0	0	X				
	<i>Kochia scoparia</i>	kochia	0	1	0	X	0	2	2	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	X	0	2	2	0
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
212L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia					0	2	0	0
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	2	0	0	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	2	0	0	1	0	0
212R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	X				
	<i>Erodium cicutarium</i>	redstem stork's bill	1	0	0	X				
	<i>Kochia scoparia</i>	kochia					0	2	0	0
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	0	X				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	X				
221L	<i>Bromus catharticus</i>	rescuegrass					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	3	3	3	2	2	2	0
	<i>Cynodon dactylon</i>	Bermudagrass	2	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	2	0	0				
	<i>Euphorbia dentata</i>	toothed spurge	0	1	0	0				
	<i>Kochia scoparia</i>	kochia	0	2	2	0				
	<i>Medicago minima</i>	burr medic clover					0	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	3	3				
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
221R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	1	0
	<i>Bromus catharticus</i>	rescuegrass					0	1	0	0
	<i>Bromus japonicus</i>	Japanese brome					0	2	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	2	0				
	<i>Medicago minima</i>	burr medic clover					1	2	0	0

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
221R (cont.)	<i>Salsola tragus</i>	prickly Russian thistle					1	0	0	0
	<i>Taraxacum officinale</i>	common dandelion	0	1	0	0				
222L	<i>Bromus japonicus</i>	Japanese brome	0	2	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Euphorbia dentata</i>	toothed spurge	0	2	0	0				
	<i>Kochia scoparia</i>	kochia	0	2	2	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	3	3	2	1	0	0	0
222R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	1	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0	0	1	0	0
	<i>Convolvulus arvensis</i>	field bindweed					0	1	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	0	0				
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
223L	<i>Bromus japonicus</i>	Japanese brome	0	2	2	2				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Euphorbia dentata</i>	toothed spurge	1	2	2	0				
	<i>Kochia scoparia</i>	kochia	2	2	0	0				
	N/A	No Plant					0	0	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	3	3				
223R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	1	X	X
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Convolvulus arvensis</i>	field bindweed	1	0	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	2	0				
	<i>Salvia columbariae</i>	chia	2	0	0	0				
	<i>Tragopogon dubius</i>	western salsify					1	0	X	X
224L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	2	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	3	2				
	<i>Tragopogon dubius</i>	western salsify					1	0	0	0
224R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	1	X	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	3	2	0	0				
	<i>Kochia scoparia</i>	kochia					0	2	X	X
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	2	0				
	<i>Tragopogon dubius</i>	western salsify					0	1	X	X
225L	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia	0	1	0	0	0	0	2	0
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	2	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	3	3	3				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
225R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	2	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	1	1	0				
	<i>Taraxacum officinale</i>	common dandelion	0	1	0	0				
226L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Euphorbia dentata</i>	toothed spurge	0	2	0	0				
	<i>Kochia scoparia</i>	kochia	0	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	2	2				
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0	1	0	0	0
226R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	1	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	1	0	0				
	<i>Kochia scoparia</i>	kochia	0	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	0	0	0				
227L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Convolvulus arvensis</i>	field bindweed	0	1	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia	1	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	3	3	3				
	<i>Salvia columbariae</i>	slender Russian thistle	1	0	0	0				
227R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	0	1	0	0				
	<i>Kochia scoparia</i>	kochia	1	0	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	0	0	0				
228L	<i>Bromus catharticus</i>	rescuegrass					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	3	0	2	2	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Kochia scoparia</i>	kochia	1	2	0	0	1	0	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	2	0	1	0	0	0
	<i>Tragopogon dubius</i>	western salsify	0	1	0	0	1	1	0	0
228R	<i>Bromus japonicus</i>	Japanese brome	0	2	2	2				
	<i>Kochia scoparia</i>	kochia	0	1	0	0	2	2	1	0
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	0	0	1	0	0	0
229L	<i>Bromus japonicus</i>	Japanese brome	2	3	3	X	2	0	0	X
	<i>Kochia scoparia</i>	kochia	0	2	0	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	0	X				
	<i>Salsola tragus</i>	prickly Russian thistle					1	0	0	X
	<i>Tragopogon dubius</i>	western salsify	1	0	0	X	1	0	0	X
229R	<i>Bromus japonicus</i>	Japanese brome	2	2	X	X				
	<i>Convolvulus arvensis</i>	field bindweed	1	1	X	X				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
229R (cont.)	<i>Kochia scoparia</i>	kochia	0	2	X	X	2	2	2	0
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	X	X	1	2	1	0
230L	<i>Bromus japonicus</i>	Japanese brome	2	2	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	X
230R	<i>Bromus japonicus</i>	Japanese brome	2	2	X	X				
	<i>Kochia scoparia</i>	kochia					2	2	X	X
	<i>Salsola tragus</i>	prickly Russian thistle	1	1	X	X	2	2	X	X
231L	<i>Melilotus officinalis</i>	yellow sweetclover	2	0	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					1	0	0	X
	<i>Tragopogon dubius</i>	western salsify	1	0	X	X				
231R	<i>Bromus japonicus</i>	Japanese brome	1	0	X	X	1	0	X	X
	<i>Euphorbia dentata</i>	toothed spurge	1	1	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	X	X	2	2	X	X
232L	<i>Bromus japonicus</i>	Japanese brome	2	2	0	X	1	0	0	0
	<i>Melilotus officinalis</i>	yellow sweetclover	2	1	0	X				
232R	<i>Bromus japonicus</i>	Japanese brome	2	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	1	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	2	X	X
233L	<i>Bromus japonicus</i>	Japanese brome					1	0	0	X
	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	2	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	X
233R	<i>Bromus japonicus</i>	Japanese brome	0	2	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	X	X				
	N/A	No Plant					0	0	X	0
234L	<i>Bromus japonicus</i>	Japanese brome	1	2	0	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	0	X				
	<i>Salsola tragus</i>	prickly Russian thistle					1	0	0	X
234R	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	X	X				
	N/A	No Plant					0	0	X	0
235L	<i>Bromus japonicus</i>	Japanese brome	2	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	1	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	0
235R	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	0	X				
	N/A	No Plant					0	0	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	1	1	0	X				
236L	<i>Bromus japonicus</i>	Japanese brome	2	3	X	X				
	<i>Kochia scoparia</i>	kochia	1	0	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	X	X	2	0	X	X
236R	<i>Melilotus officinalis</i>	yellow sweetclover	1	2	2	X				
	N/A	No Plant					0	0	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	2	1	0	X				
237L	<i>Bromus japonicus</i>	Japanese brome					0	2	0	0
	N/A	No Plant	0	0	0	0				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
237R	<i>Bromus japonicus</i>	Japanese brome	2	2	0	0				
	<i>Kochia scoparia</i>	kochia					2	2	0	0
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	0	0				
241L	<i>Bromus japonicus</i>	Japanese brome	1	0	X	X	2	0	0	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	X	X				
	<i>Kochia scoparia</i>	kochia	1	0	X	X	1	0	0	X
	<i>Melilotus officinalis</i>	yellow sweetclover	0	1	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	X
	<i>Tragopogon dubius</i>	western salsify					1	0	0	X
241R	<i>Bromus japonicus</i>	Japanese brome	0	1	0	0	2	0	0	X
	<i>Cynodon dactylon</i>	Bermudagrass	0	2	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Euphorbia dentata</i>	toothed spurge	1	0	0	0				
	<i>Kochia scoparia</i>	kochia	1	0	0	0	1	0	0	X
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	0	0	2	2	0	X
242L	<i>Bromus japonicus</i>	Japanese brome	0	2	0	0				
	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	0	0	2	2	0	0
	<i>Sorghum halepense</i>	Johnsongrass					0	2	0	0
242R	<i>Bromus japonicus</i>	Japanese brome	0	2	X	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	X	X				
	<i>Euphorbia dentata</i>	toothed spurge	0	1	X	X				
	<i>Kochia scoparia</i>	kochia	1	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	2	0	X	X	2	2	1	X
243L	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	0	0	2	2	0	0
243R	<i>Bromus japonicus</i>	Japanese brome	0	1	X	X	2	0	X	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	3	3	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	1	0	X	X	2	2	X	X
244L	<i>Cynodon dactylon</i>	Bermudagrass	2	0	0	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	2	0				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	0
244R	<i>Bromus japonicus</i>	Japanese brome	1	0	X	X	2	0	X	X
	<i>Melilotus officinalis</i>	yellow sweetclover	3	3	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					1	2	X	X
245L	<i>Bromus japonicus</i>	Japanese brome					1	0	0	X
	<i>Euphorbia dentata</i>	toothed spurge	1	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle					2	0	0	X

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
245R	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	2	3	X	X	2	1	X	X
	<i>Salsola tragus</i>	prickly Russian thistle	0	1	X	X	0	1	X	X
246L	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	X	X				
	N/A	No Plant					0	0	0	X
246R	<i>Elaeagnus angustifolia</i>	Russian olive					0	0	0	1
	<i>Melilotus officinalis</i>	yellow sweetclover	1	2	1	0				
	<i>Salsola tragus</i>	prickly Russian thistle	2	0	0	0	2	2	1	0
	<i>Scorzonera laciniata</i>	cutleaf vipergrass	1	1	0	0				
247L	<i>Euphorbia dentata</i>	toothed spurge	1	0	X	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	2	0	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	X	X	0	2	0	X
247R	<i>Bromus japonicus</i>	Japanese brome	2	2	X	X				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	X	X	2	2	0	0
	<i>Tamarix chinensis</i>	Chinese saltcedar					1	0	0	0
248L	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	X	X				
	N/A	No Plant					0	0	0	X
	<i>Salsola tragus</i>	prickly Russian thistle	2	2	X	X				
	<i>Tragopogon dubius</i>	western salsify	1	0	X	X				
248R	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
	<i>Elaeagnus angustifolia</i>	Russian olive					0	0	0	1
	<i>Salsola tragus</i>	prickly Russian thistle	2	1	0	0	2	2	2	0
249L	<i>Bromus japonicus</i>	Japanese brome					1	0	0	X
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	X	X				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	X	X	0	2	0	X
249R	<i>Bromus japonicus</i>	Japanese brome					2	0	2	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	1	0	0	2	2	1	0
	<i>Tamarix chinensis</i>	Chinese saltcedar					0	0	0	1
	<i>Tragopogon dubius</i>	western salsify					0	1	0	0
250L	<i>Bromus japonicus</i>	Japanese brome	2	0	X	X				
	<i>Lactuca serriola</i>	prickly lettuce					1	0	0	0
	<i>Tamarix chinensis</i>	Chinese saltcedar	1	0	X	X	0	1	0	0
250R	<i>Bromus japonicus</i>	Japanese brome					2	2	0	0
	<i>Melilotus officinalis</i>	yellow sweetclover	2	2	1	0				
	<i>Tamarix chinensis</i>	Chinese saltcedar					0	1	0	0
251L	N/A	No Plant					0	0	0	0
	<i>Tamarix chinensis</i>	Chinese saltcedar	1	0	X	X				
251R	<i>Melilotus officinalis</i>	yellow sweetclover	1	2	1	X				
	N/A	No Plant					0	0	X	X

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

Table 7. Comparison of 2010 vs. 2013 detections for each individual Vector Block, detailing the given Density Code for each Distance Class (continued).

Block	Scientific Name	Common Name	2010				2013			
			D1	D2	D3	D4	D1	D2	D3	D4
252L	<i>Euphorbia dentata</i>	toothed spurge	1	0	X	X				
	<i>Tamarix chinensis</i>	Chinese saltcedar	1	1	X	X	0	1	0	0
252R	<i>Bromus japonicus</i>	Japanese brome					2	0	X	X
	<i>Convolvulus arvensis</i>	field bindweed					0	1	X	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	0	X				
	<i>Medicago minima</i>	burr medic clover	1	0	0	X				
	<i>Melilotus officinalis</i>	yellow sweetclover	1	2	1	X				
	<i>Salsola tragus</i>	prickly Russian thistle					0	2	X	X
253L	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	X	X				
	N/A	No Plant					0	0	0	0
253R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	X	X
	<i>Bromus japonicus</i>	Japanese brome					2	0	X	X
	<i>Convolvulus arvensis</i>	field bindweed					1	1	X	X
	<i>Melilotus officinalis</i>	yellow sweetclover	2	3	2	X				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	X	2	2	X	X
	<i>Tragopogon dubius</i>	western salsify					0	1	X	X
254L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	0	0
	<i>Bromus japonicus</i>	Japanese brome	0	2	2	0				
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	0	0	0				
254R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	X	X
	<i>Bromus japonicus</i>	Japanese brome					2	0	X	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	2	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	1	1	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	0	2	0	0	2	2	X	X
255L	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					2	0	0	0
	<i>Bromus japonicus</i>	Japanese brome					2	0	0	0
	<i>Digitaria sanguinalis</i>	hairy crabgrass	2	2	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	2	0	0	0				
255R	<i>Bothriochloa ischaemum</i>	King Ranch bluestem					1	0	X	X
	<i>Bromus japonicus</i>	Japanese brome	0	3	0	0	2	1	X	X
	<i>Digitaria sanguinalis</i>	hairy crabgrass	1	0	0	0				
	<i>Melilotus officinalis</i>	yellow sweetclover	0	2	0	0				
	<i>Salsola tragus</i>	prickly Russian thistle	1	2	0	0	1	2	X	X
	<i>Tragopogon dubius</i>	western salsify	1	1	0	0				

Distance Class Key: D1 = edge of vector to 2 meters into the landscape (or inner edge of mow line); D2 = interior edge of D1 to 10 meters; D3 & D4 = each additional 10 meters into the landscape.

Density Code Key: 0 = no plants; 1 = 1–5 plants; 2 = scattered patches; 3 = even distributed patches; 4 = matrix; X = non-detect

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