

Appendix H-5

**Project-US 50**  
**Grand Junction/Delta**  
**Date: 8/22/2014**

Plot/Transect #	Original Seed Mix	1	2	3	4	5	6
Background/Off ROW		Background					
General Location		Third Street South Side	HWY 50 MP 40.5 North Side	HWY 50 MP 39.25 North Side of Road	HWY 50 MP 39.1 South Side of road	HWY 50 MP 39.5 South Side of road	HWY 50 MP 41.1
Top Canopy/Other Layers/ID from Transects							
Dominant Species #1	Shadscale Saltbush (ATCO)	ATCO	BRTE	BRTE	BASC	ATCO4	DISP
Dominant Species #2	Mat Saltbush (ATCO4)	HAGL	PLJA	BASC	HAGL	AGCR	POSE
Dominant Species #3	Valleto Viva/James galleta (PLJA)	ATCO4	SPCR	HAGL	ECCR	THIN6	SPAI
Dominant Species #4	Indian Ricegrass (ACHY)	ERNA10	CHFR3	AGCR		HAGL	ERNA10
Dominant Species #5	Sand Dropseed (SPCR)	BRTE	SPAI	PLJA			BASC
Dominant Species	(REGREEN) Triticum aestivum X Elytrigia elongata	THP07	POSE				SAVE4
Dominant Species		ALYSSUM	CHFR3				
Dominant Species		AGCR	SATR				
Dominant Species			ASSP				
Dominant Species			GRSQ				
Dominant Species							
Vegetative Stage of Dominant Sp		Seedlings, flowering, fruiting	Seedlings, flowering, fruiting	Seedlings, flowering, fruiting	Seedlings, flowering, fruiting	Seedlings, flowering, fruiting	Seedlings, flowering, fruiting
Total pounds seed/acre	27						
Total PLS #/ acre	4.3						
Seeded Acres (native)	0.2						
Mulch Acres	0.2						
Mulch Tackifier	40 lbs						
Mulch Application (tons/acre)	1.5						
Percent Seed Mix Species Identified	Mean = 20%	40%	40%	20%	0%	20%	0%
Grazing (1-5)		3	3	2	1	2	4
Overall Health Value (1-5)		2.5	2	1.5	2	2	3

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Noxious Weeds Observed		BRTE	BRTE	BRTE	HAGL	BRTE	ELAN
Noxious Weeds Observed		CADR	COAR4	COAR4		COAR4	TARA
Noxious Weeds Observed		COAR4	HAGL	HAGL		HAGL	
Noxious Weeds Observed		ELAN					
Noxious Weeds Observed		HAGL					
Noxious Weeds Observed							
<b>Seed Mix Observed</b>							
Observed Species		ACHY	PLJA	PLJA	ATCO4	ATCO4	ACHY
Observed Species		ATCO	SPCR			PLJA	ATCO
Observed Species		ATCO4					ATCO4
Observed Species		ERNA10					
Observed Species		PASM					
Observed Species		PLJA					
Observed Species		POSE					
Observed Species		SPAI					
<b>Native Plant Abundance (1-5)</b>		<b>3</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>5</b>
<b>Introduced Species</b>							
Non-Native Species		AGCR	BASC	AGCR	BASC	AGCR	AGCR
Non-Native Species		LASE	LASE	BASC	ECCR	BASC	BASC
Non-Native Species		MEOF	SATR	LASE		BRRR	SATR
Non-Native Species		SATR		SATR		ECCR	THPO7
Non-Native Species		THPO7				THIN6	
Non-Native Species						THPO7	
Non-Native Species						TRHY	
Non-Native Species						TRRE3	
<b>Native Species</b>							
Native Species		ACHY	ASSP	GRSQ	CHFR	ATCO	ACHY
Native Species		ACMI2	ATCA2	HEAN3	ERCI6	ATTR	ASSP
Native Species		ALYSSUM	ATTR	PLJA	KRLA2	PLLA	ASTER1
Native Species		ATCO	BOGR2		SEVI4	SAVE4	ATCO
Native Species		ATCO4	CHFR3				ATCO4
Native Species		ERNA10	ERNA10				ATGA
Native Species		GRSQ	GRSQ				DISP
Native Species		LEPIDIUM	HEAN3				ERNA10

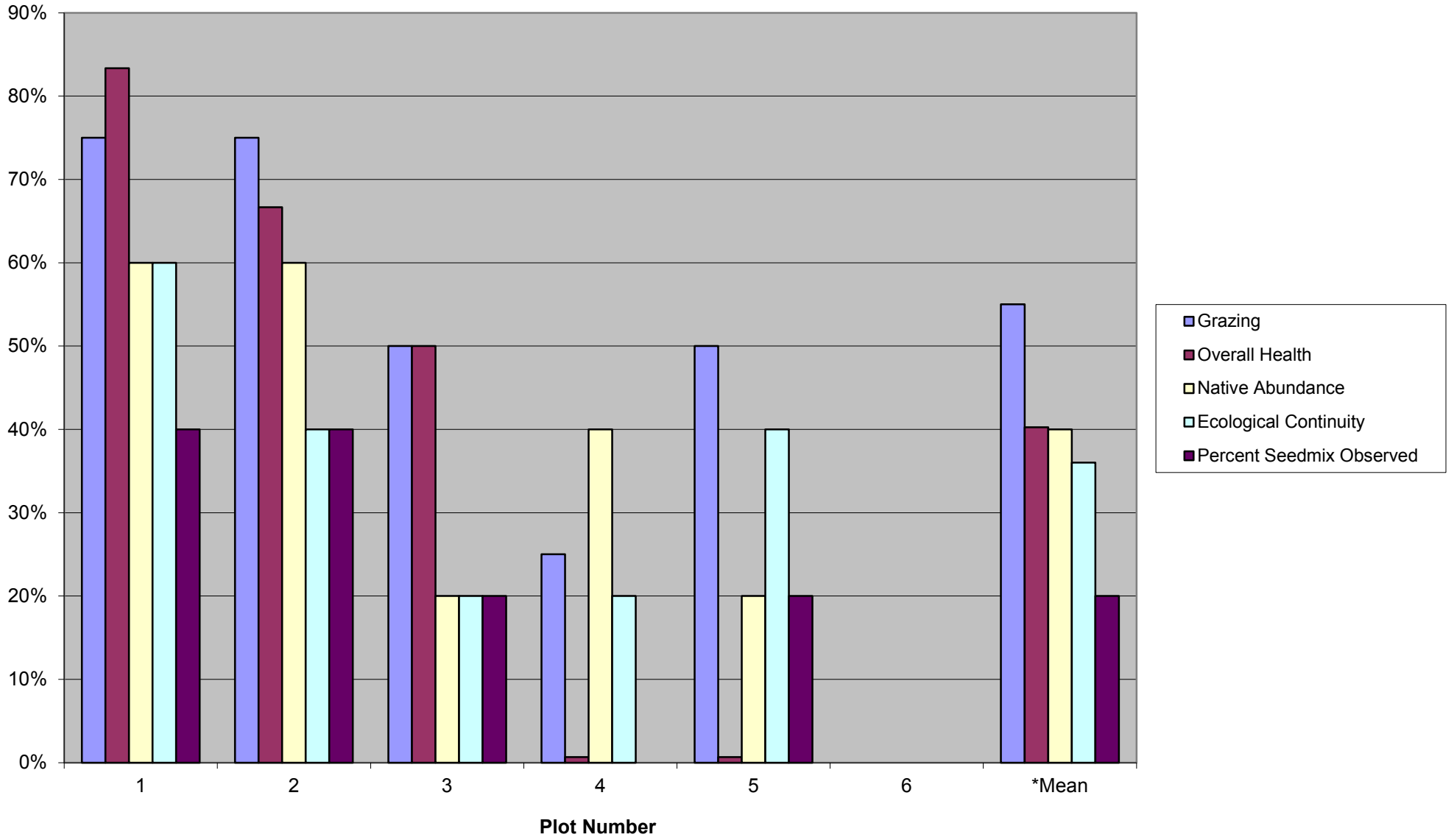
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Native Species		PASM	LEPIDIUM				GRSQ
Native Species		PLJA	OPPO				KRLA2
Native Species		POSE	PLJA				POSE
Native Species		SPAI	PLLA				SAVE4
Native Species			POSE				SPAI
Native Species			PPLA				SUMO
Native Species			SATR				
Native Species			SAVE4				
Native Species			SPAI				
Native Species			SPCR				
<b>Ecological Continuity Value (1-5)</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>5</b>
<b>Diversity</b>		average	pretty good	none; very weedy	poor; very weedy; does not blend	poor; very weedy; does not blend	Same across ROW
<b>Topography</b>		Parallel across slope	10 ft from road; parallel from road	20% slope; to ditch	sloping down transect to ROW	Angle from road downslope	10 foot from barbed wire fencing
<b>Hydrology</b>		good drainage; dry cracked clay dirt	soft soil, dry on slope	rocky and sandy well drained above culvert	dry, sandy, well drained some clays	poor drainage/dry/bare/clays	
<b>Percent Vegetation Cover</b>							
Percent canopy (foliar) Cover		100%	100%	90%	80%	40%	70%
Percent Bare Ground		0%	0%	10%	20%	50%	20%
Percent Basal/Soil Surface Cover		0%	40%	20%	10%	0%	30%
<b>Amendments</b>							
Fertilizer (yes/no)		No					
Biological nutrient organic based fertilizer (lbs/acre)		see compost					
Humate (lbs/acre)		200					
Compost (cys/acre)		3 CY/1000 sq ft					

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Spray on organic amendments (lbs/acre)	NA						
<b>Soil Chemistry</b>							
Soil pH		7.1/7.4	7.3/7.8	7.5	7.8	7.9	8.4
Soil EC		2.4/1.5	3.5/1.2	2.1	1.4	3.1	2.1
Surface Depth		2	2	4	4	4	6
Surface Color		10YR 5/3	10YR 4/3	2.5Y 5/3	2.5Y 4/4	5Y 5/2	10YR 4/4
Subsurface Color		2.5Y 4/4	2.5Y 4/3	--	--	--	--
	*prioritized per lbs/ac						
	Roadside Mix						

## Relative Health Evaluations



## Summary Scores for US 50 Grand Junction/Delta

Plot	Reference	Canopy Cover	Bare Ground	Basal Cover	Grazing	Overall Health	Native Abundance	Ecological Continuity
1		100%	0%	0%	3	2.5	3	3
2		100%	0%	40%	3	2	3	2
3		90%	10%	20%	2	1.5	1	1
4		80%	20%	10%	1	2	2	1
5		40%	50%	0%	2	2	1	2
6	Reference	70%	20%	30%	4	3	5	5
<b>*Mean</b>		<b>82%</b>	<b>16%</b>	<b>14%</b>	<b>2.2</b>	<b>2</b>	<b>2</b>	<b>1.8</b>

1-low

5-high

## Relative Heath Evaluations

Plot	Grazing	Overall Health	Native Abundance	Ecological Continuity	Percent Seedmix Observed
1	75%	83%	60%	60%	40%
2	75%	67%	60%	40%	40%
3	50%	50%	20%	20%	20%
4	25%	1%	40%	20%	0%
5	50%	1%	20%	40%	20%
6					0%
<b>*Mean</b>	<b>55%</b>	<b>40%</b>	<b>40%</b>	<b>36%</b>	<b>20%</b>

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Hwy 50 Grand Junction TerraLogic for CDOT  
 USDA Codes for Plants

Seed Mix Species			
Latin Name	Code	Common Name	Notes
<i>Atriplex confertifolia</i>	ATCO	shadscale saltbush	duckbill fruits; blue-gray, oblong, pointed lvs
<i>Atriplex corrugata</i>	ATCO4	mat saltbush	olive gray lvs <1cm succulent, linear-lanceolate; fruits mace-like
<i>Hilaria jamesii</i> - <i>Pleuraphis jamesii</i>	PLJA	James' galleta	many callus long hairs; > floret; 1 awn at mid lemma; dense spike
<i>Oryzopsis hymenoides</i> - <i>Acnatherum hymenoides</i>	ACHY	Indian ricegrass	tufted; open panicle; 1 floret globule; 1 awn from middle of lemma
<i>Sporobolus cryptandrus</i>	SPCR	sand dropseed	globule single seed; open panicle; Bozo hairy ligule
<i>Triticum aestivum</i> x <i>Elytrigia elongata</i>	REGREEN	regreen	wheat/tall wheatgrass hybrid; sterile- should not see any
<b>Weeds</b>			
<i>Bromus tectorum</i>	BRTE	cheat grass; downy brome	dense white down base; easy to pull; lemmas narrow; l
<i>Cardaria draba</i>	CADR	whitetop	4 white petals; clasping serrate lvs w petioles; round wing fruit
<i>Convolvulus arvensis</i>	COAR4	field bindweed	vine along ground, white morning glory flowers
<i>Elaeagnus angustifolia</i>	ELAN	Russian olive	olive-gray lvs; waterside
<i>Halogeton glomeratus</i>	HAGL	salt lover	snail' fruit; succulent terete lvs; red stems when mature
<i>Tamarix ramosissima</i>	TARA	salt cedar	thick stands along river; elongated pink inflorescence; delicate lvs
<b>Introduced</b>			
<i>Agropyron cristatum</i>	AGCR	crested wheatgrass	spikelets with stiffly widely spreading florets
<i>Bassia scoparia</i>	BASC	kochia	small green balled flower heads amid reducing size lvs up stem
<i>Brassica rapa</i>	BRRA	field mustard	tall, many thin branched, yellow 4 petaled; early
<i>Echinochloa crus-galli</i>	ECCR	barnyard grass	mace-like seeds-spikelets; wide, folded, often reddish lvs
<i>Latua serriolla</i>	LASE	prickly lettuce	dandelion red stem, spiny lvs; tiny small yellow flowers
<i>Melilotus officinale</i>	MEOF	sweet clover	yellow, tall, thin clover
<i>Salsola tragus</i>	SATR	prickly russian thistle	tumbleweed; very spikey fruits; red stemmed, succulent spike lvs
<i>Thinopyrum ponticum</i>	THPO77	rush wheatgrass	intermedium' with spikelets overlapping & divergent; ligule angle
<i>Trifolium hybridum</i>	TRHY	Alsike clover	no drought; flw smaller; introduced
<i>Trifolium repens</i>	TRRE3	white clover	a red native clover
<b>Graminoids</b>			

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<i>Distichlis spicata</i>	DISP	saltgrass	ladder-like stem; >6 spikelets in 1 row; lower stature
<i>Poa secunda</i>	POSA	Sandberg bluegrass	somewhat dense spike; ligule membrane w point; tufted
<i>Sporobolus airoides</i>	SPAI	alkali sacaton	open panicle; 1 floret; airy; tufted
<i>Setaria viridiis</i>	SEVI4	green bristlegrass	droopy fluffy-looking dense spike
<b>Forbs</b>			
<i>Achillea millefolium</i>	ACMI2	common yarrow	fern lvs, olive color; tiny white flwrs in a rounded umbel head
<i>Alyssum sp</i>	AlyssumP	baby's breath	unknown alyssum perennial
<i>Asclepias speciosa</i>	ASSP	showy milkweed	milky juice, fleshy entire leaves; fluffy seeds from elongated pod
<i>Aster</i>	ASTER1	perennial aster	unknown and not flowering aster
<i>Chenopodium fremontii</i>	CHFR3	Fremont's goosefoot	arrow shaped lvs; branched head w tiny balled congested flwrs
<i>Grindelia squarrosa</i>	GRSQ	curlycup gumweed	clasped leaves
<i>Helianthus annuus</i>	HEAN3	common sunflower	annual, black center; common roadside plant; hairy triangular lvs
<i>Opuntia polyacantha</i>	OPPO	prickly pear	8+ various length spines from glochid; rivulets and pyramids
<i>Plantago lanceolata</i>	PLLA	narrowleaf plantain	long petiled narrow lvs; stringy anthers < 2 cm long head
<b>Shrubs &amp; Trees</b>			
<i>Atriplex canescens</i>	ATCA2	fourwing saltbush	4 winged fruit; linear lanceolate gray-green lvs
<i>Atriplex gardneri</i>	ATGA	Gardner's saltbush	mace-like fruit; linear-lanceolate lvs, very blue-gray
<i>Atriplex truncata</i>	ATTR	wedgescale saltbush	triangular sessile lvs with stipules; very scaly stems; 'acorn' fruits
<i>Ericameria nauseosa</i>	ERNA10	rubber rabbitbrush	tiny yellow flwrs
<i>Krascheninnikovia lanata</i>	KRLA2	winterfat	white cottony elongated heads; gray foliage
<i>Sarcobatus vermiculatus</i>	SAVE4	greasewood	terete succulent lvs; flying saucer fruit
<i>Suaeda moquinii</i>	SUMO	Mojave seablite	terete succulent lvs, almost pine-like; tiny raceme green flwrs