Muddy River Reserve Weed Management (2011-NPS-915A)

2013 MSHCP Annual Project Progress Report Symposium

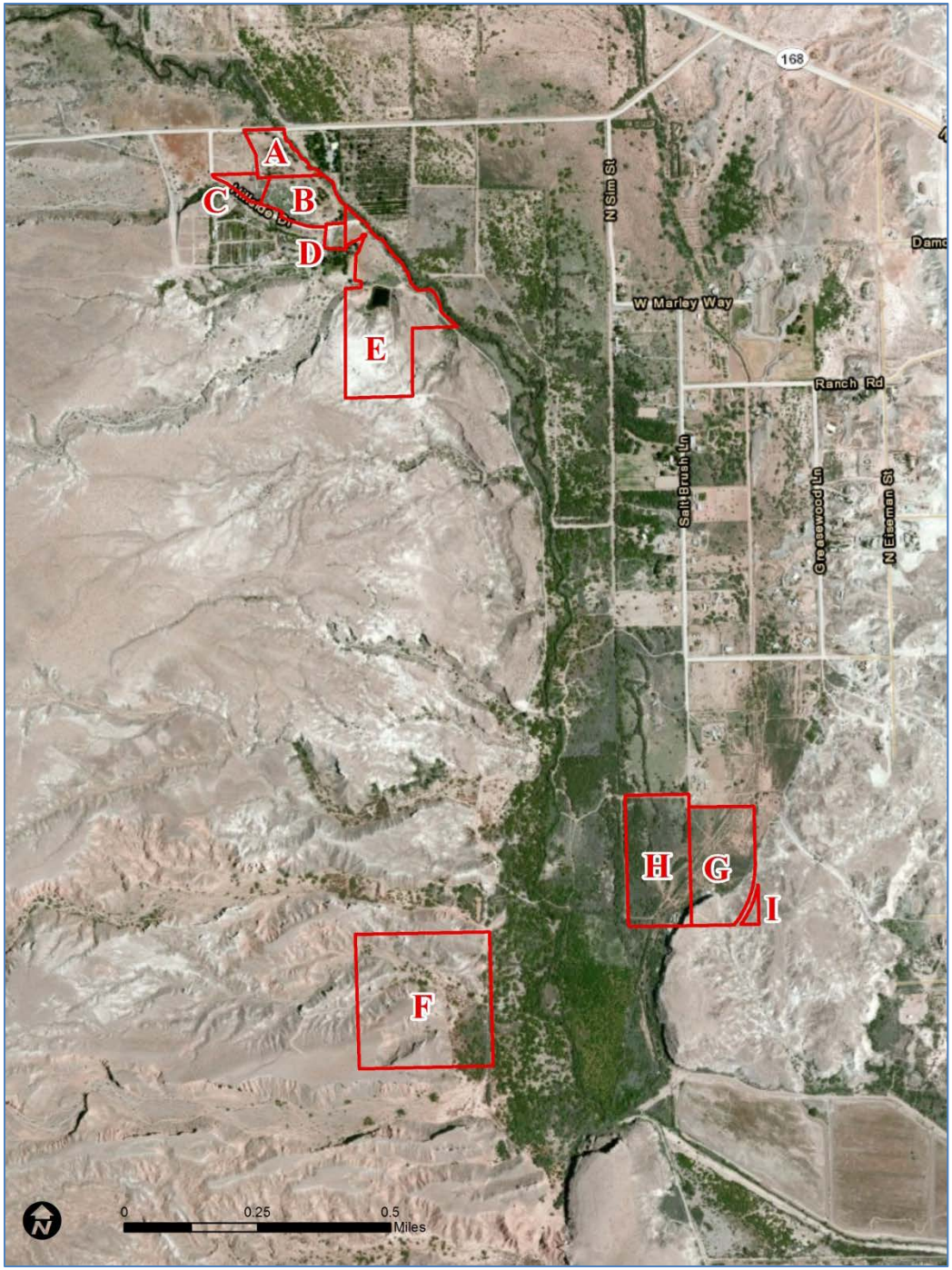
Presenter: Curt Deuser, National Park Service
Lake Mead Exotic Plant Management Team

Project Overview

- Three year project interlocal agreement approved in late February 2013
- Conduct inventories of non-native vegetation and implement weed treatments
- Goal and Objective: Support vegetation mgt and maintenance activities along the Muddy River for enhancement of native riparian species of concern within the MSHCP

Project Activities

- March/April 2013: Conducted winter weed surveys and weed treatments
- June/July 2013: Conducted spring/summer weed surveys and treatments
- Mapping plant populations with GPS and processing into GIS (NAWMA Standards)
- Entering Data
- Labeling Photos



Clark County Muddy River Reserve Properties

On the ground survey on foot

Upland

Terrace/Edge/Breaks

Unit E

View of Unit H/G

Looking West from Unit G into H

Unit F looking East

Weed Information

- 18 exotic plant species detected
- Applied a total of 7.47 gallons of herbicide (242.5 gallons of mix)
- Selectively applied to targeted plants/spot foliar application with backpack sprayers
- Herbicides: Round-up Pro, Weedmaster, Weedar 64

Muddy River Reserve
Weed Species List

Species	Total Inventoried Acres	Infested Acres	Gross Infested Acres	Treated Acres
Acroptilon repens Russian knapweed	117	0.005	20.9	0.005
Atriplex semibaccata Australian saltbush	117	0.16	12.9	0.15
Bassia hyssopifolia fivehook bassia	117	0.001	3.2	0.001
Bromus rubens red brome	117	2.0	38.1	N/A
Bromus tectorum cheat grass	117	0.36	11.2	N/A
Centaurea melitensis Malta starthistle	117	0.02	22.9	0.02
Chorispora tenella blue mustard	117	0.0002	0.1	N/A
Convolvulus arvensis field bindweed	117	0.05	9.7	0.05
Cynodon dactylon Bermudagrass	117	0.27	21.0	N/A
Erodium cicutarium redstem stork's bill	117	0.21	17.0	0.21
Lactuca serriola prickly lettuce	117	0.004	9.3	0.004
Malcolmia africana African mustard	117	1.76	73.6	0.52
Salsola kali Russian thistle	117	0.14	10.8	0.14
Sisymbrium irio London rocket	117	1.65	18.3	1.65
Tamarix ramosissima saltcedar	117	7.1	43.1	0.01
TOTAL SPECIES ACRES	**117**	**13.7**	**312.1**	**2.8**

Australian saltbush (*Atriplex semibaccata)*

Clark County
Muddy River Reserve
March 2013

Atriplex semibaccata

Australian saltbush

Gross Infested: 12.9 acres

Infested: 0.16 acres

Treated: 0.15 acres

0 0.1 0.2 Miles

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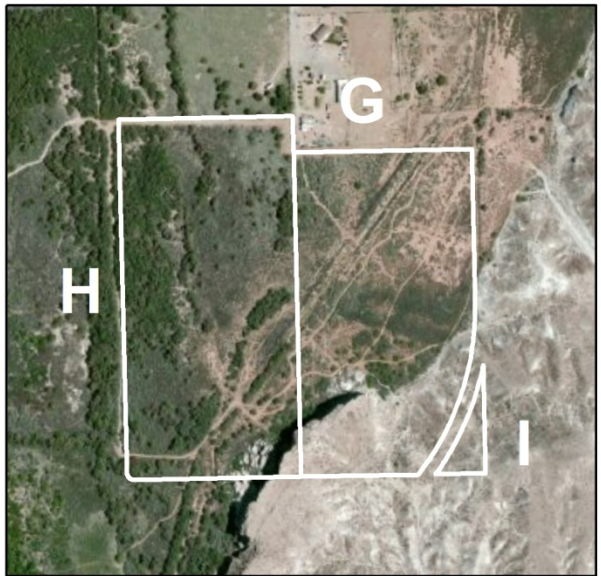
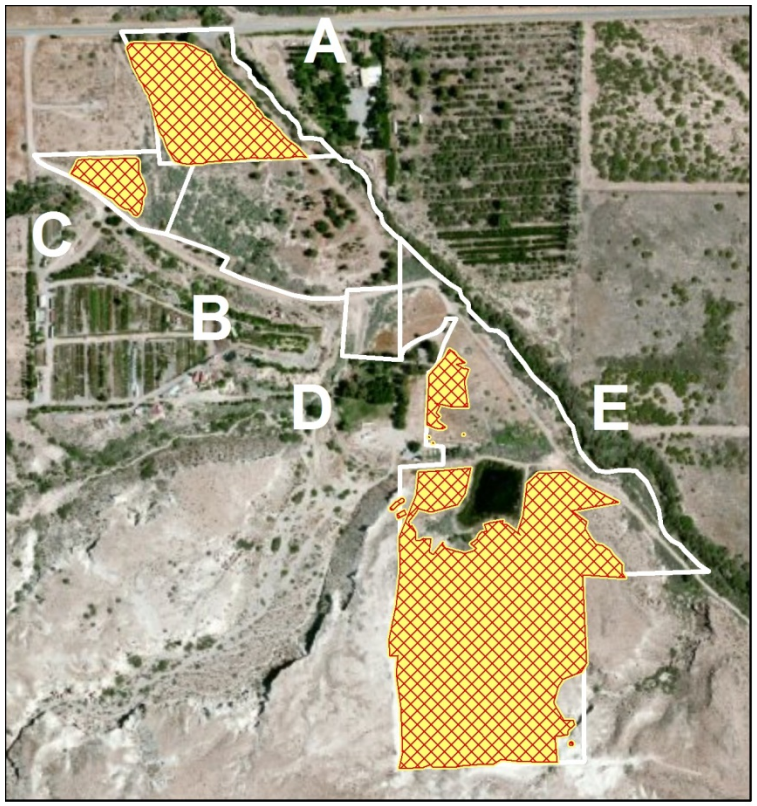


African Mustard (*Malcomia africana*)

Clark County
Muddy River Reserve
March 2013



Malcolmia africana

African mustard

Gross Infested: 73.6 acres

Infested: 1.76 acres

Treated: 0.52 acres

N

0 0.1 0.2 Miles

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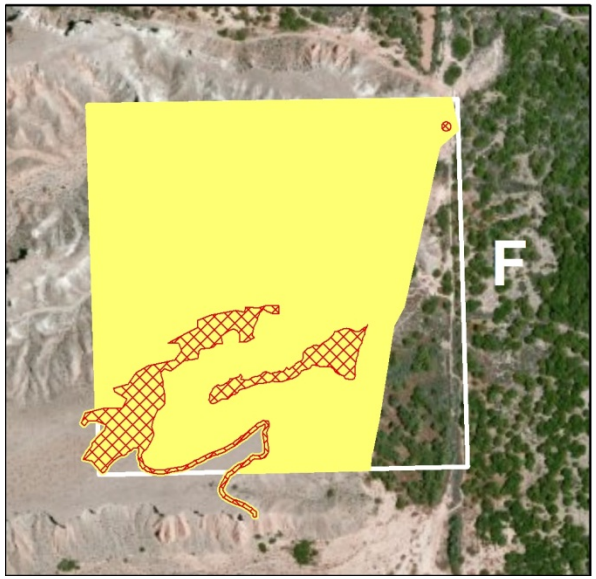

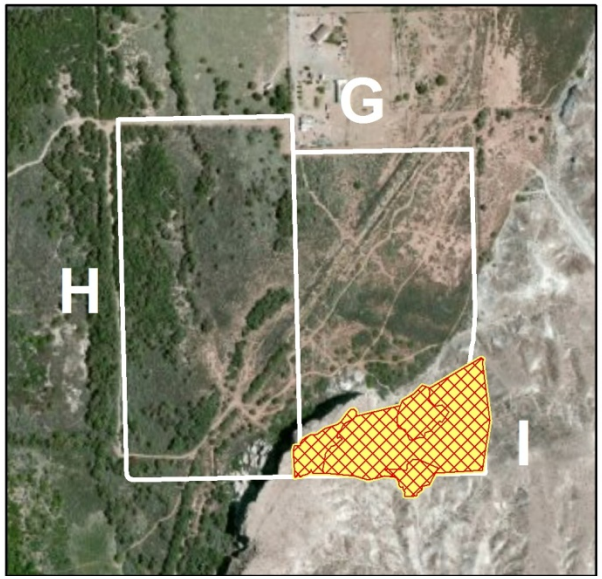

Treating (*MAAF*)

MAAF mixed with natives

Russian Knapweed (*Acroptilon Repens*)

Clark County
Muddy River Reserve
March 2013

Acroptilon repens
Russian knapweed

Gross Infested: 20.9 acres

Infested: 0.005 acres

Treated: 0.005 acres

0 0.1 0.2 Miles
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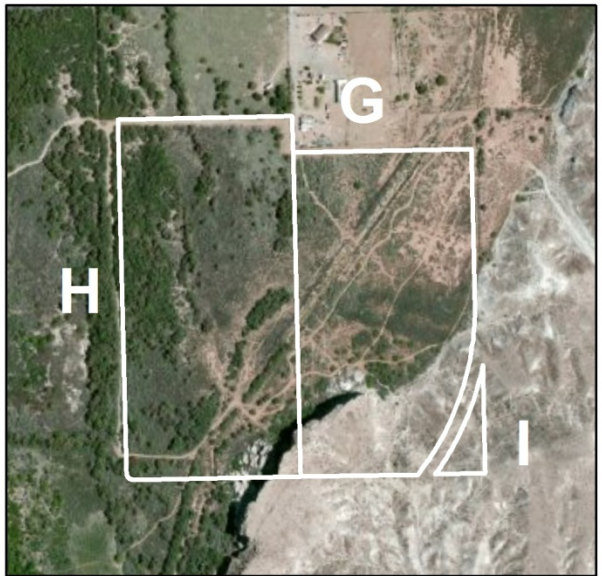

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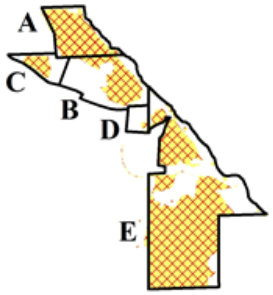
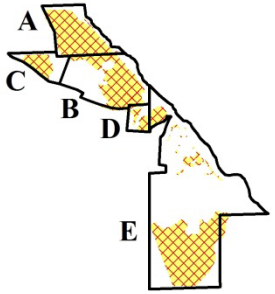
Atriplex semibaccata Australian saltbush	117	0.16	12.9	0.15
Bassia hyssopifolia fivehook bassia	117	0.001	3.2	0.001
Bromus rubens red brome	117	2.0	38.1	N/A
Bromus tectorum cheat grass	117	0.36	11.2	N/A
Centaurea melitensis Malta starthistle	117	0.02	22.9	0.02
Chorispora tenella blue mustard	117	0.0002	0.1	N/A
Convolvulus arvensis field bindweed	117	0.05	9.7	0.05
Cynodon dactylon Bermudagrass	117	0.27	21.0	N/A
Erodium cicutarium redstem stork's bill	117	0.21	17.0	0.21
Lactuca serriola prickly lettuce	117	0.004	9.3	0.004
Malcolmia africana African mustard	117	1.76	73.6	0.52
Salsola kali Russian thistle	117	0.14	10.8	0.14
Sisymbrium irio London rocket	117	1.65	18.3	1.65
Tamarix ramosissima saltcedar	117	7.1	43.1	0.01
TOTAL SPECIES ACRES	**117**	**13.7**	**312.1**	**2.8**

Winter Weed Control

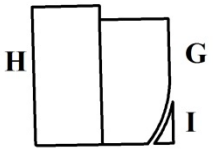


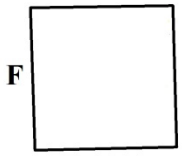
Summer Weed Control

Species	Total Inventoried Acres	Infested Acres	Gross Infested Acres Treated	Treated Acres
Acroptilon repens Russian knapweed	81	0.04	11.8	0.04
Atriplex semibaccata Australian saltbush	81	0.73	11.8	0.73
Convolvulus arvensis field bindweed	81	0.04	9.9	0.04
Kochia prostrata Bassia Prostrata	81	0.04	9.9	0.04
Salsola kali Russian thistle	81	0.15	32.3	0.15
TOTAL SPECIES ACRES	**81**	**1**	**75.7**	**1**



June - Units A, B, C, D, E, F

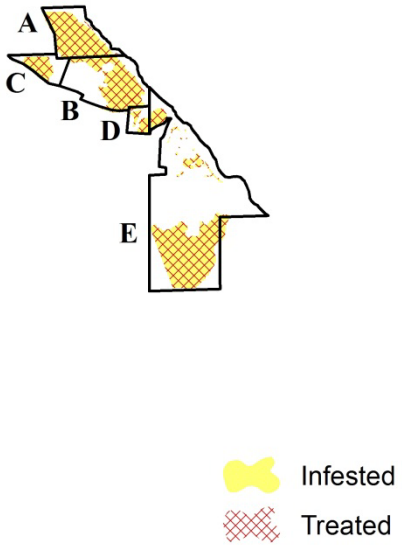




Summer Weed Control

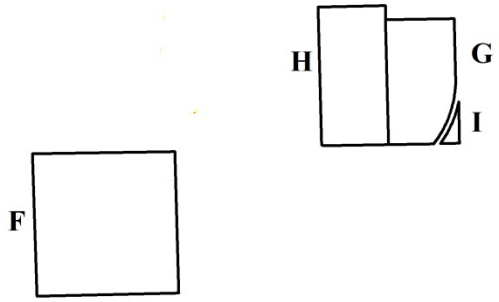
Species	Total Inventoried Acres	Infested Acres	Gross Infested Acres Treated	Treated Acres
Atriplex semibaccata Australian saltbush	37	0.03	6.9	0.03
Convolvulus arvensis field bindweed	37	0.08	5.3	0.08
Salsola kali Russian thistle	37	0.01	6.3	0.01
Sorghum halepense Johnsongrass	37	0.03	0.13	0.03
TOTAL SPECIES ACRES	**37**	**0.15**	**18.63**	**0.15**

July - Units A, B, E



Species	Total Inventoried Acres	Infested Acres	Gross Infested Acres Treated	Treated Acres
Salsola kali Russian thistle	40.7	0.37	40.7	0.37
TOTAL SPECIES ACRES	**40.7**	**0.37**	**40.7**	**0.37**

July - Units A, B, C, D, E



Native plants: *Cryptantha virginensis*

Thank You

- *This work was supported by the Clark County Desert Conservation Program and funded by Section 10, as project #2011-NPS-915A, to further implement or develop the Clark County Multiple Species Habitat Conservation Plan*
- *Liz Bickmore, Clark County/MRR, NV*
- *Vanessa Truitt, NPS Data Manager*
- *EPMT Staff: Daniel Townsend, Joe Castello, Dwayne Coleman, Aimee Ross among others*