

# Vegetation Management on Clark County MSHCP Properties



Curt Deuser

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Lake Mead Inter-Regional Invasive Plant Management Team

MSHCP Annual Project Progress Report Symposium

August 15, 2022

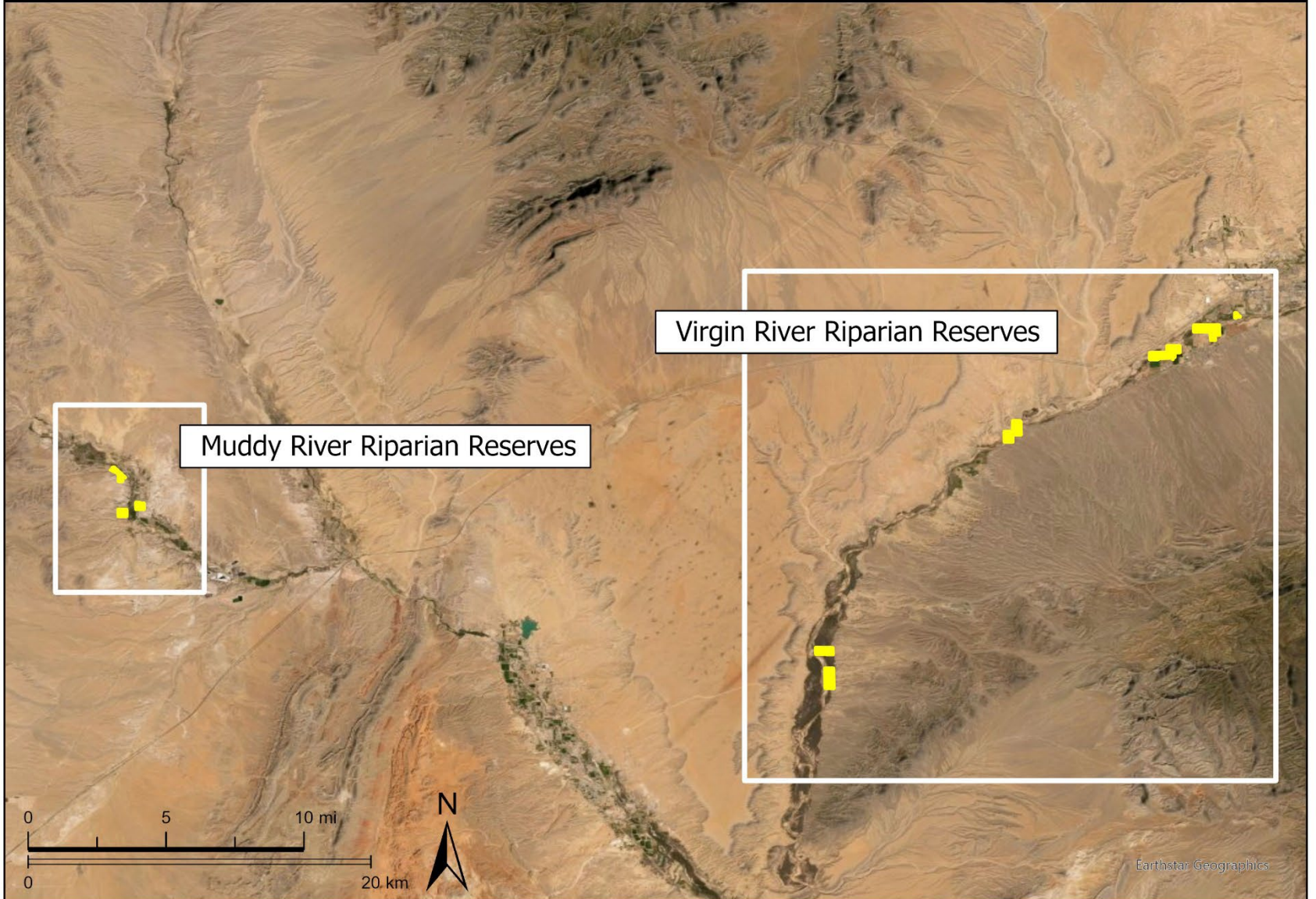
Riparian Reserves Vegetation Management  
2022 MSHCP Annual Project Progress Symposium  
(2019-NPS-1910C)



# Project Information

- Awarded late April 2021 through July 2023
- Purpose: Conduct inventory and weed treatments of non-native invasive vegetation
- Prioritization: Early detection rapid response
- Prioritize treatments of well establish more widespread species

# Clark County Riparian Reserves



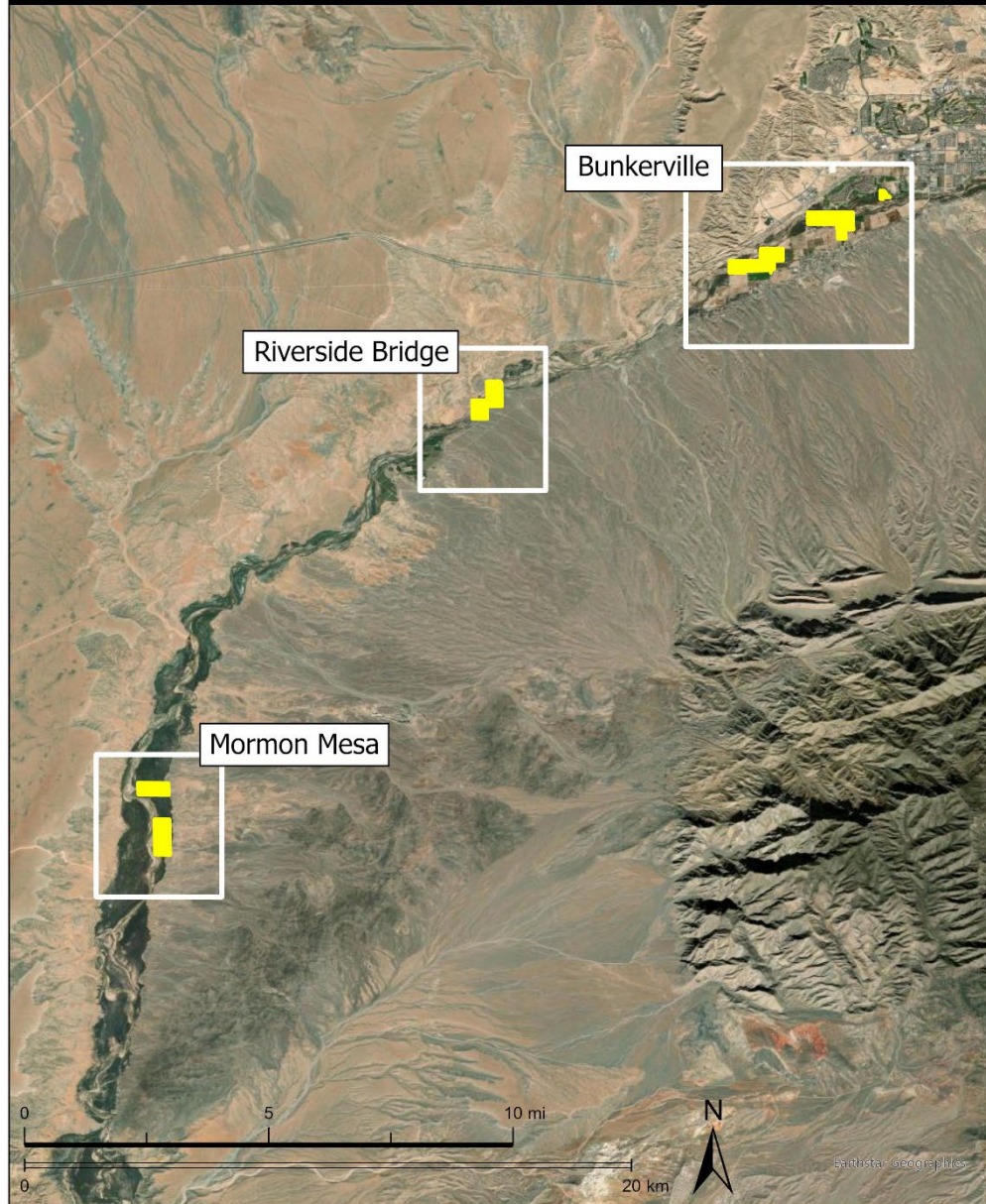
Muddy River Riparian Reserves

Virgin River Riparian Reserves



Earthstar Geographics

# Virgin River Reserves



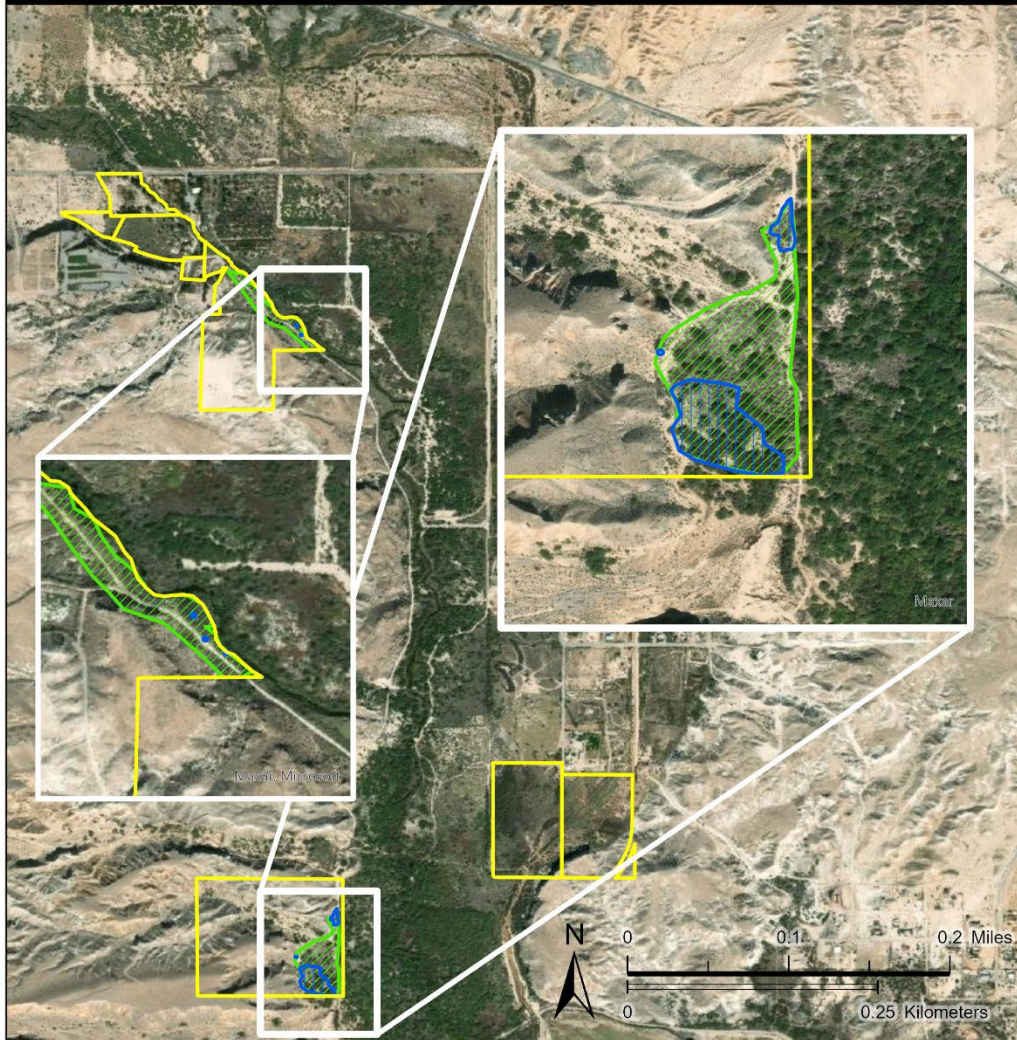
# Virgin River County Parcels








# Muddy River Reserve Unit F. Fall 2021-Spring 2022 Treatments

Lake Mead IPMT  
National Park Service  
U.S. Department of the Interior



## Legend

-  Riparian Reserves
-  Survey for *Tamarix ramosissima* and *Acroptilon repens*: 5.330 acres
-  *Tamarix ramosissima* treated with 20% Garlon 4 Ultra: 1.8 gross acres, 0.057 net acres

Compiled by Carlee Coleman LAKE IPMT Data Manager 5/31/2022  
Contact Curt Deuser, [curt\\_deuser@nps.gov](mailto:curt_deuser@nps.gov)

# Priority Weeds of Concern

## Present

- Tall Whitetop (*Lepidium latifolium*)
- Camelthorn (*Alhagi maurorum*)
- *Tamarix species* (*Tamarix aphylla/ramosissima*)
- Malta Starthistle (*Centaura melitensis*)
- Russian Olive (*Elaeagnus angustifolia*)
- Palm trees (date and fan palm)
- Giant Cane Grass (*Arundo donax*)
- Russian knapweed (*Acroptilon repens*)



# Tall Whitetop



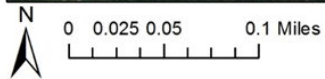
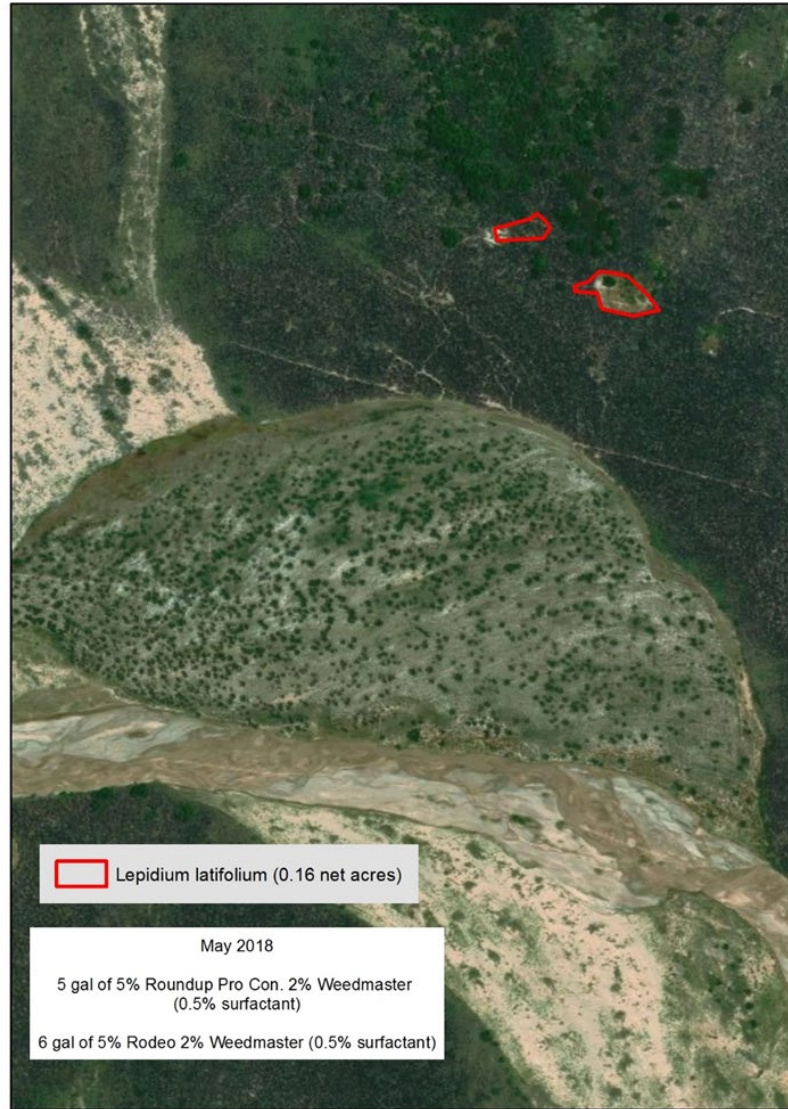
# Tall Whitetop/Perennial Pepperweed Mormon Mesa Unit



# Good Restoration/Habitat



## 2018 Mormon Mesa ACEC Lake Mead EPMT Treatments



Compiled by Rachel Skoza 8/27/2019  
Contact Curt Deuser [curt\\_deuser@nps.gov](mailto:curt_deuser@nps.gov)

# Mormon Mesa Post Tamarisk Mastication



# Tamarisk Resprouts After Mastication



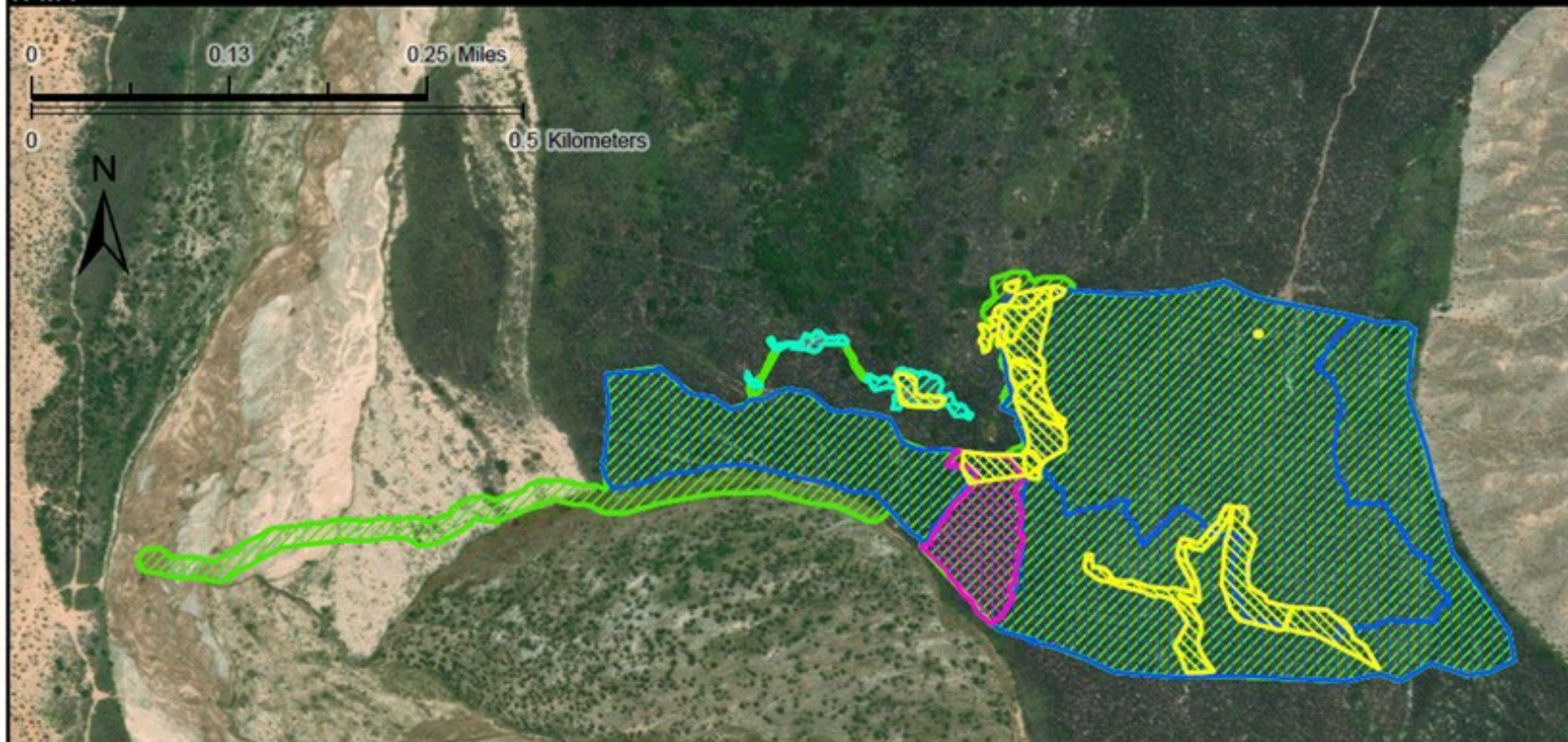
# Treating Tamarisk Resprouts










# Lower Mormon Mesa Treatments

Lake Mead Invasive Plant Management Team  
National Park Service  
U.S. Department of the Interior



## Legend

-  *Lepidium latifolium* treated with 1g/gal Escort: 0.56 gross acres, 0.017 net acres
-  *Lepidium latifolium* treated with 1% Polaris: 4.232 gross acres, 0.262 net acres
-  *Tamarix ramosissima* treated with 20% Garlon 4 Ultra + JLB Oil Plus Improved: 37.9 gross acres, 1.14 net acres
-  *Tamarix ramosissima* treated with 20% Garlon 4 Ultra + Impel: 2.119 gross acres, 0.064 net acres
-  Survey for *Alhagi maurorum*, *Arundo donax*, *Elaeagnus angustifolia*, *Lepidium latifolium*, and *Tamarix ramosissima* : 45.731 gross acres

Compiled by Carlee Coleman LAKE IPMT Data Manager 5/31/2022  
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# Cattle Impacts



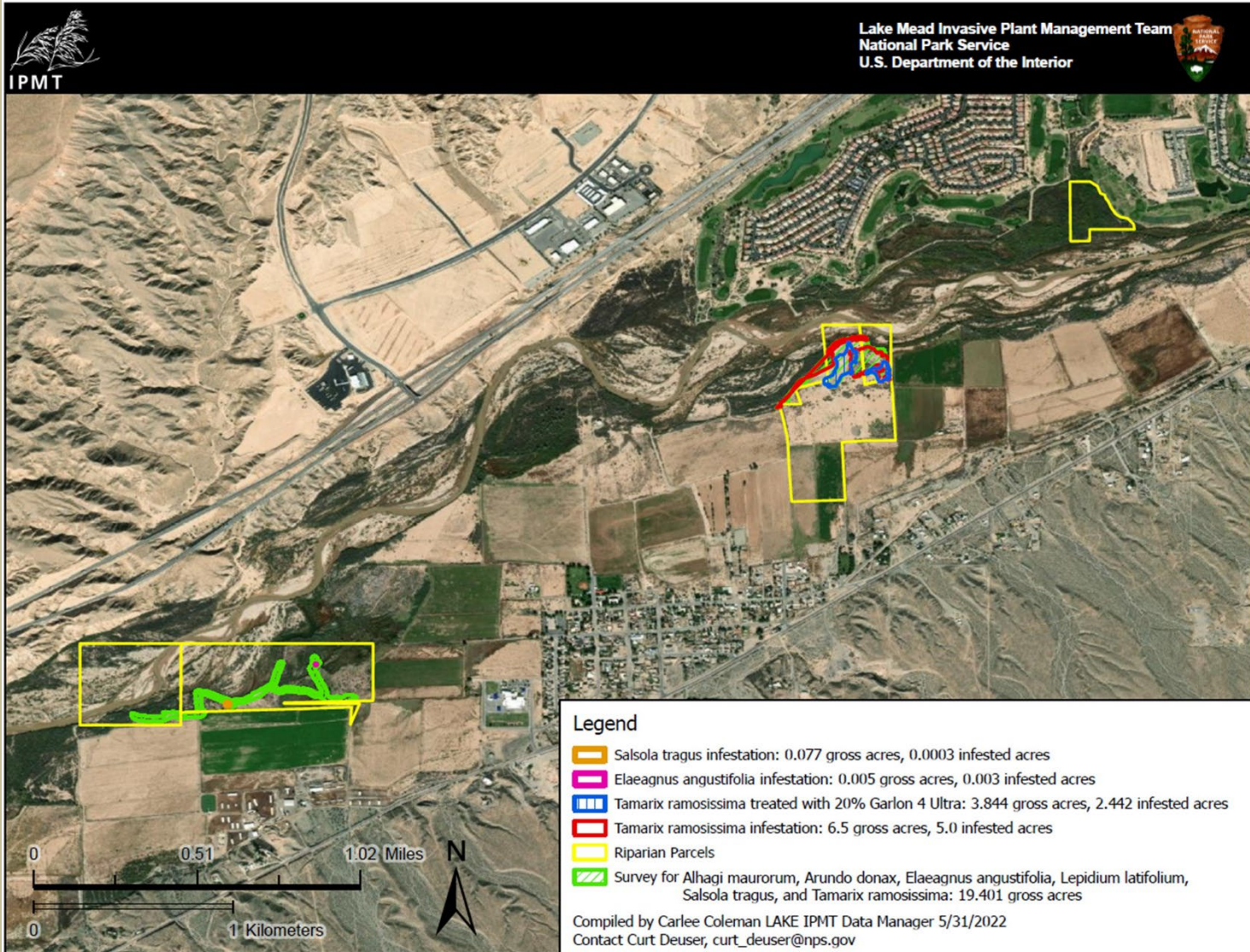
# Site Recovery (*Atriplex* sp)



# Honey Mesquite Tree Recruitment



# Virgin River Units near Mesquite



# Bunkerville West Unit Tamarisk Control

## 33 Acres basal spray treatment

2019 Virgin River Lake Mead EPMT Treatments



# Malta Starthistle

*Centaurea melitensis*



# Athel Trees at Riverside Bridge Unit

## *Tamarix aphylla*



# Camelthorn

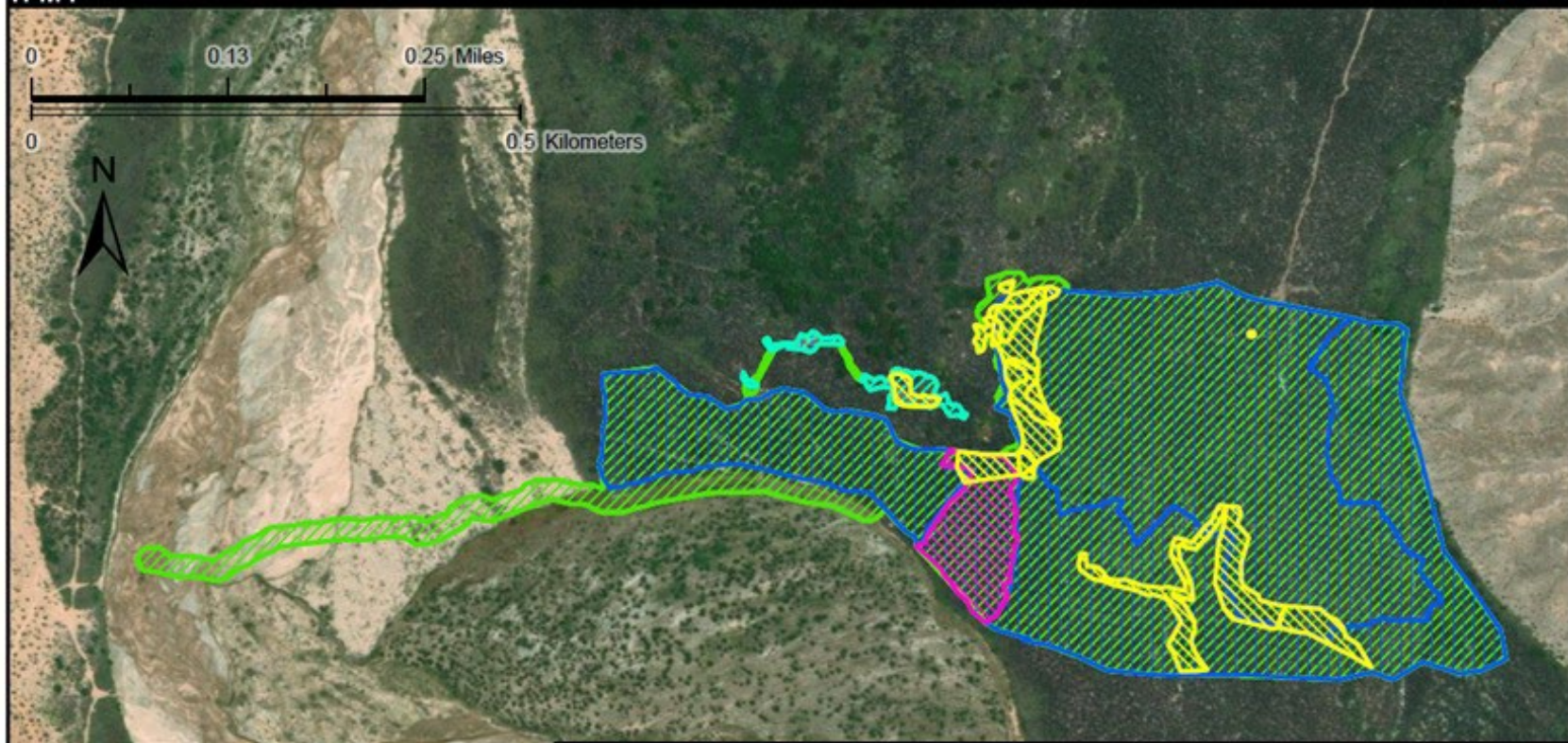











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# Future Work

- Floodplain treatments (tamarisk)
- Athel Control at Riverside Bridge area
- Re-treat maintain previous treatment areas
- Tall Whitetop monitoring and retreatments
- Camelthorn monitoring and treatments
- Bunkerville West tamarisk control
- Additional revegetation

**Boulder City Conservation Easement Weed Survey  
MSHCP Annual Project Review 2022  
Project 2021-NPS-2005D**



# Project Overview

- Inter-local Agreement between Clark County and NPS (January 2022 to December 2023 Close out)
- Conduct surveys of routes within the BCCE to detect non-native (exotic) invasive vegetation/weeds
- Conduct targeted weed treatments
- Note native plants observed
- Up to 95 miles of roads, 10 meters on either side of road edge
- Winter and Summer surveys
- Control incipient weeds/early detection rapid response

# Project Goal

Support vegetation management and maintenance activities in the BCCE to maintain and improve desert tortoise habitat.



Tortoise photo courtesy of National Park Service





# Native Big Galleta Grass

## *Pleuraphis rigida*



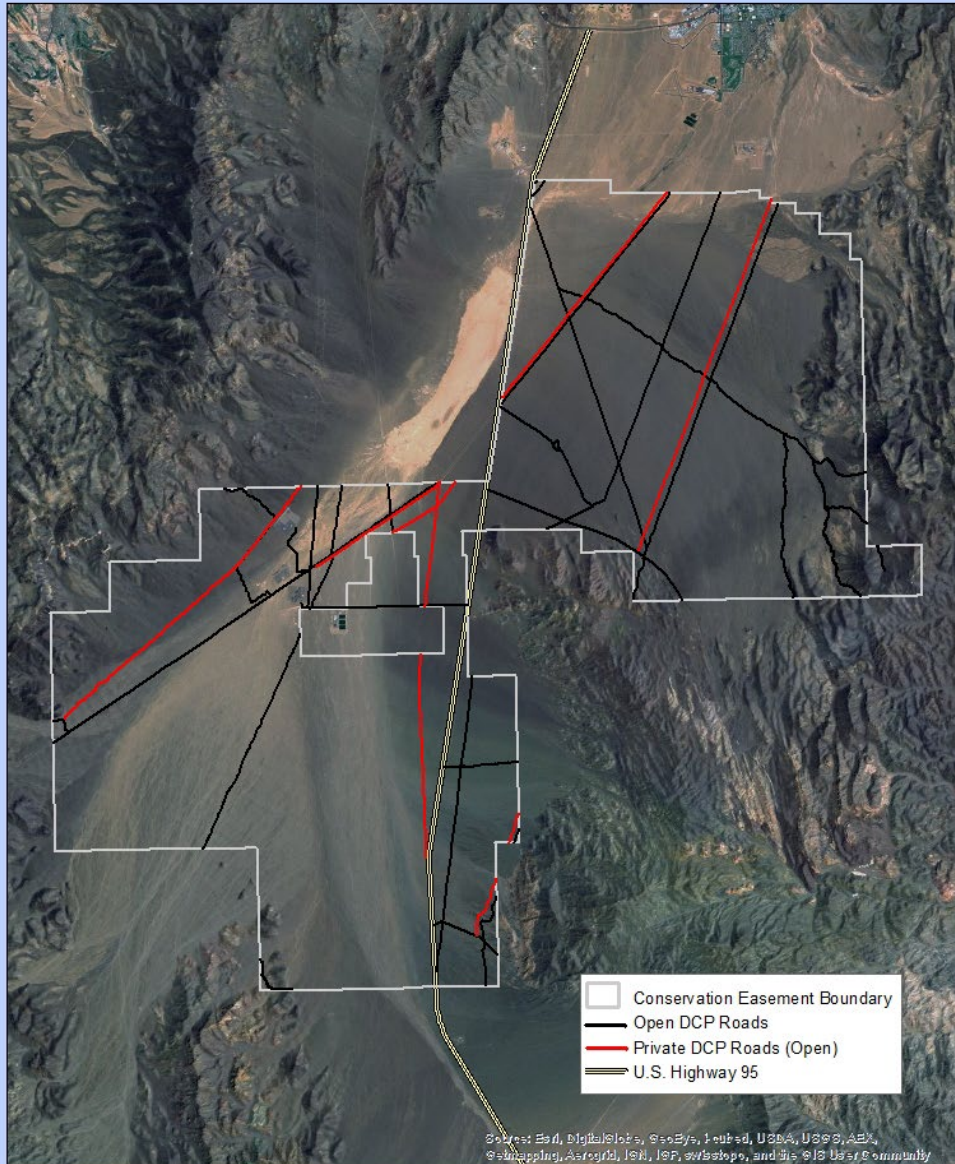
# Native Dune primrose

*Oenothera deltoides* var. *deltoides*



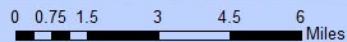


# Boulder City Conservation Easement



Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, Aero, Swire, Bing, Mapbox, 2012, IGN, Intermap, and the GIS User Community

Lake Mead Exotic Plant Management Team, Feb. 2014



# GPS Mapping



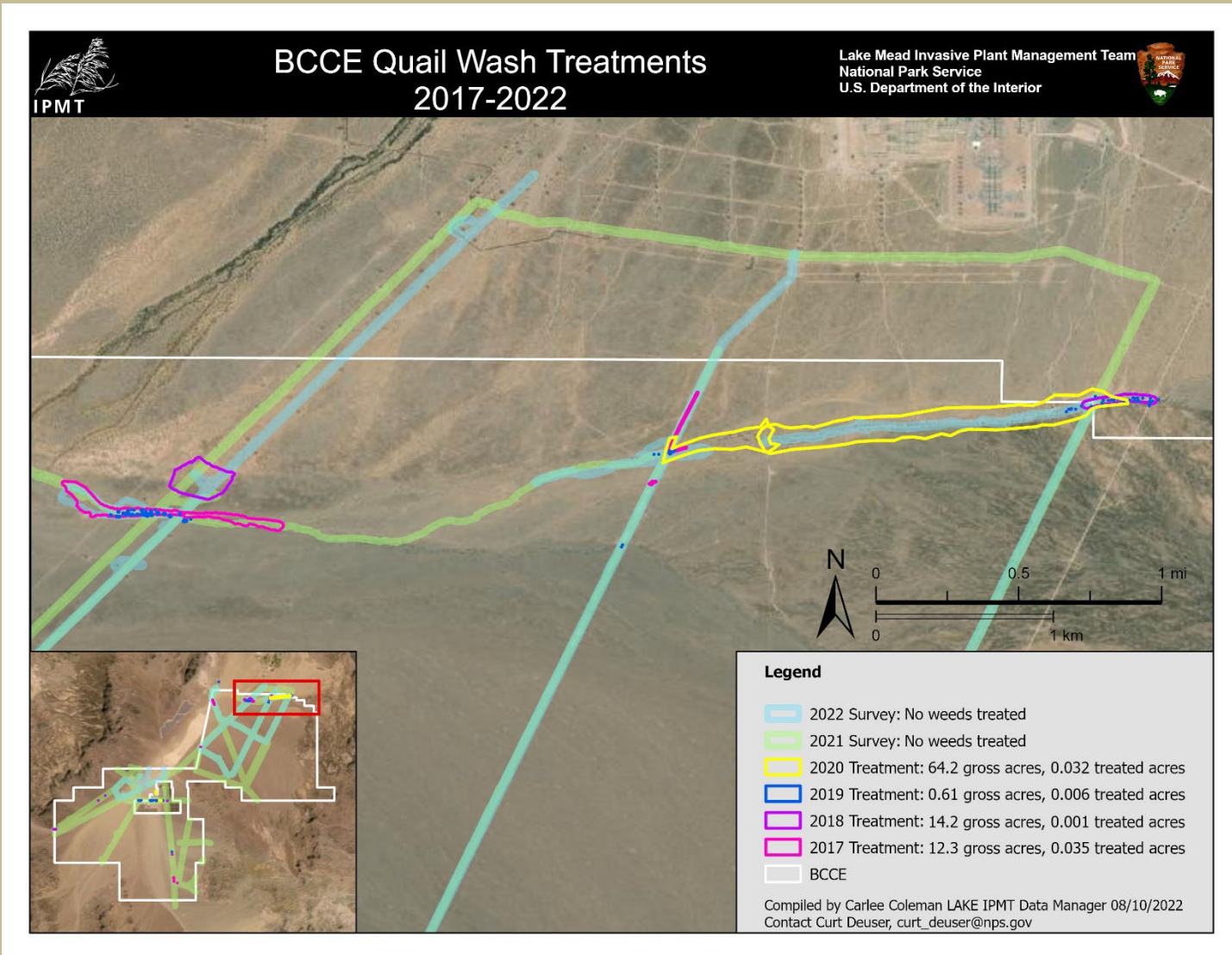
# Roadside Weed Control



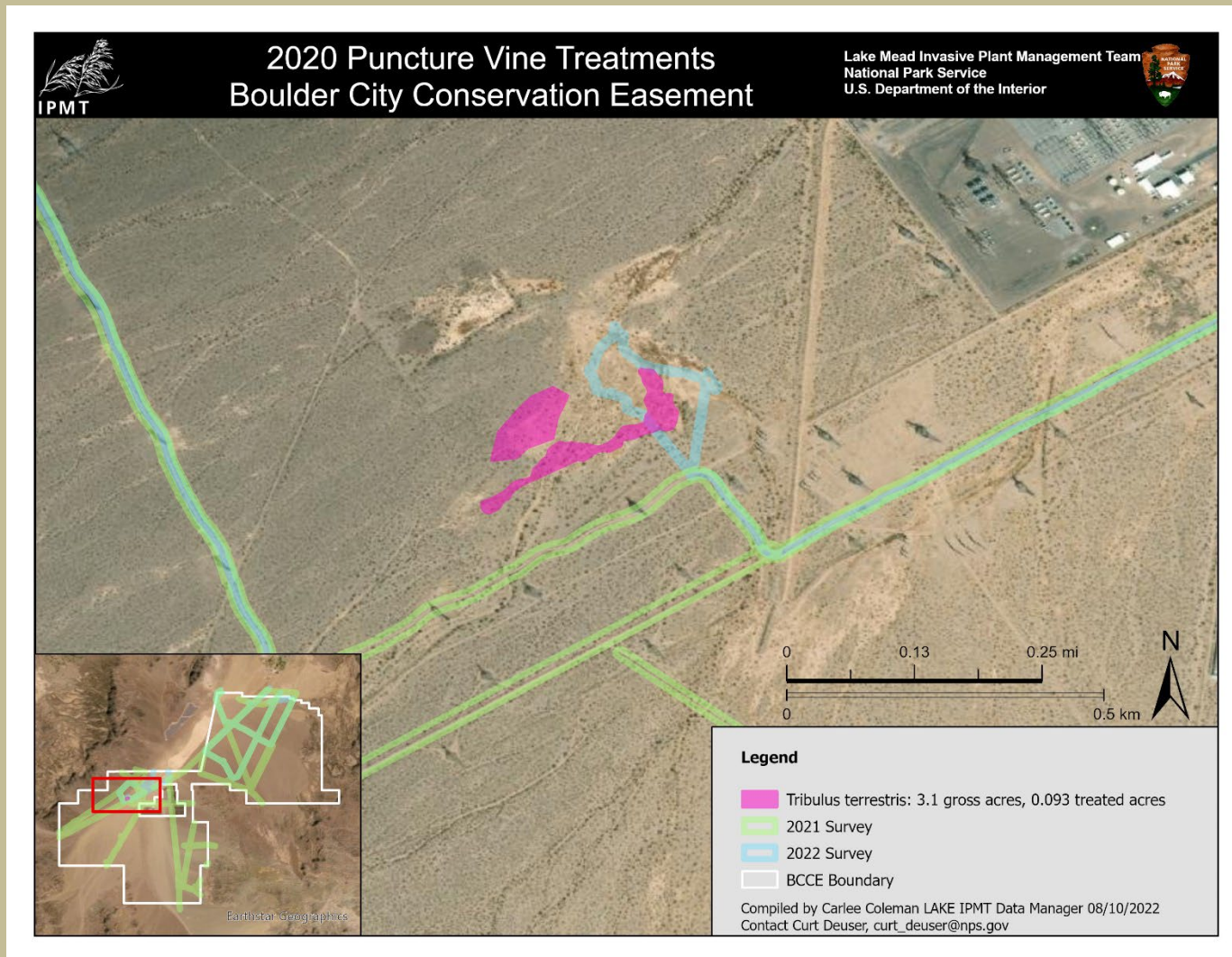
# Summary of Accomplishments

- Conducted weed surveys and treatments
- Buffel grass detected and treated

# Northern Section Weed Threat



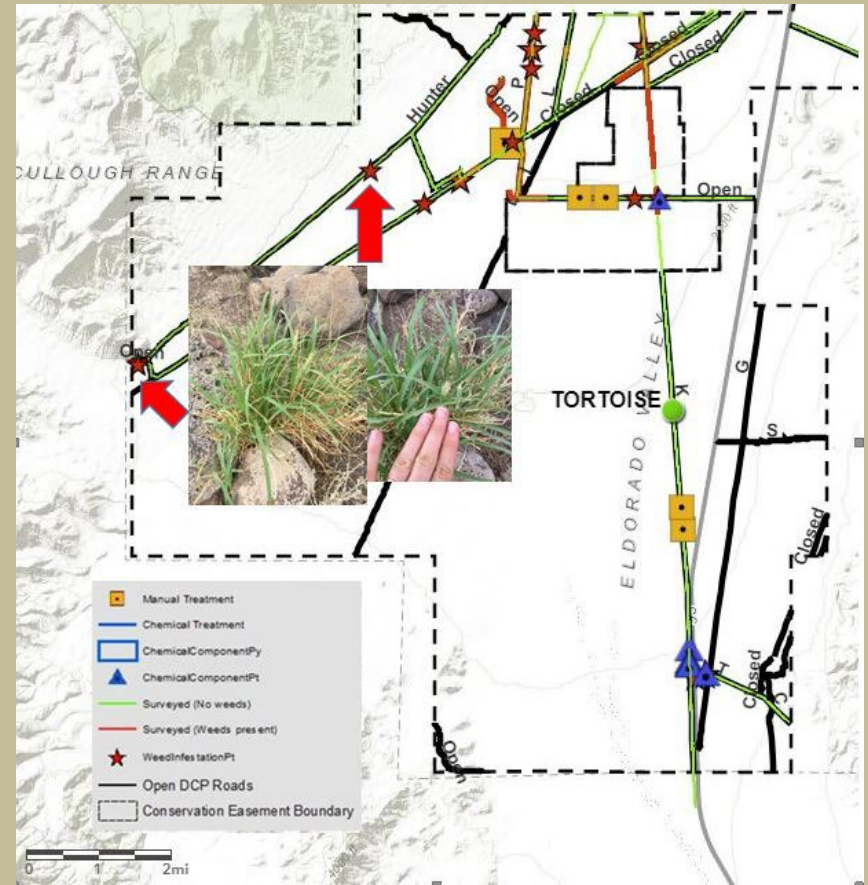
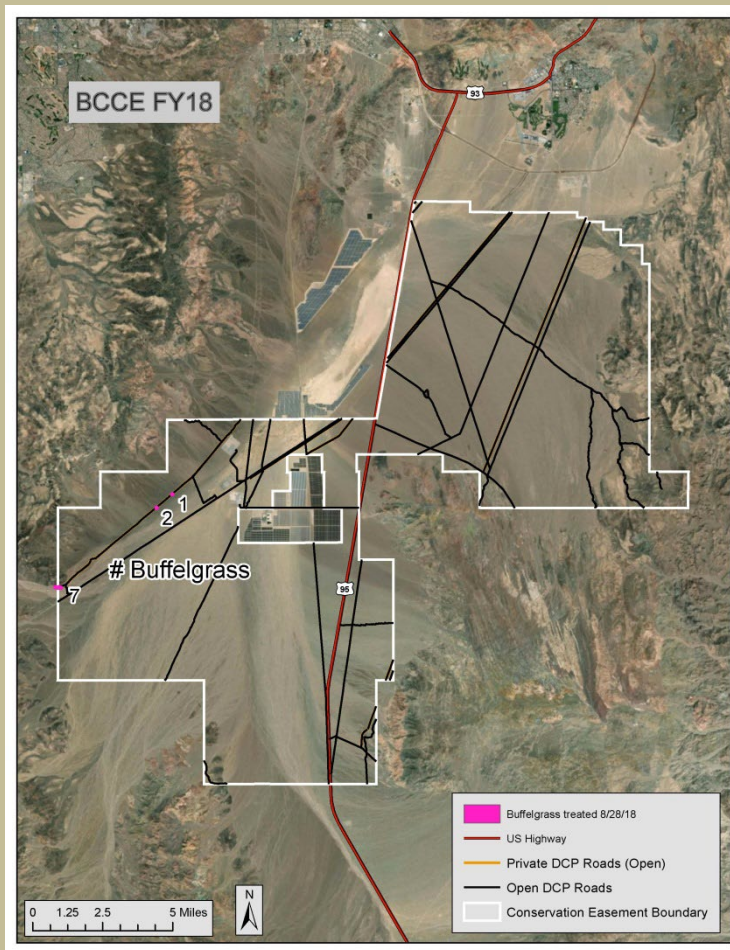
# Southern Unit Weed threat “Hot Spot”



# Puncture Vine



# Buffel Grass Detection and Treatments





# Buffel Grass Treatment

*Cenchrus ciliaris* / *Pennisetum ciliaris*



# Buffel Grass Control

**Before treatment August 2018**

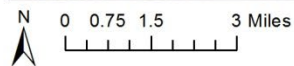
**After treatment Aug 2019**







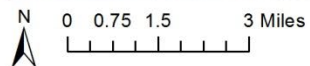
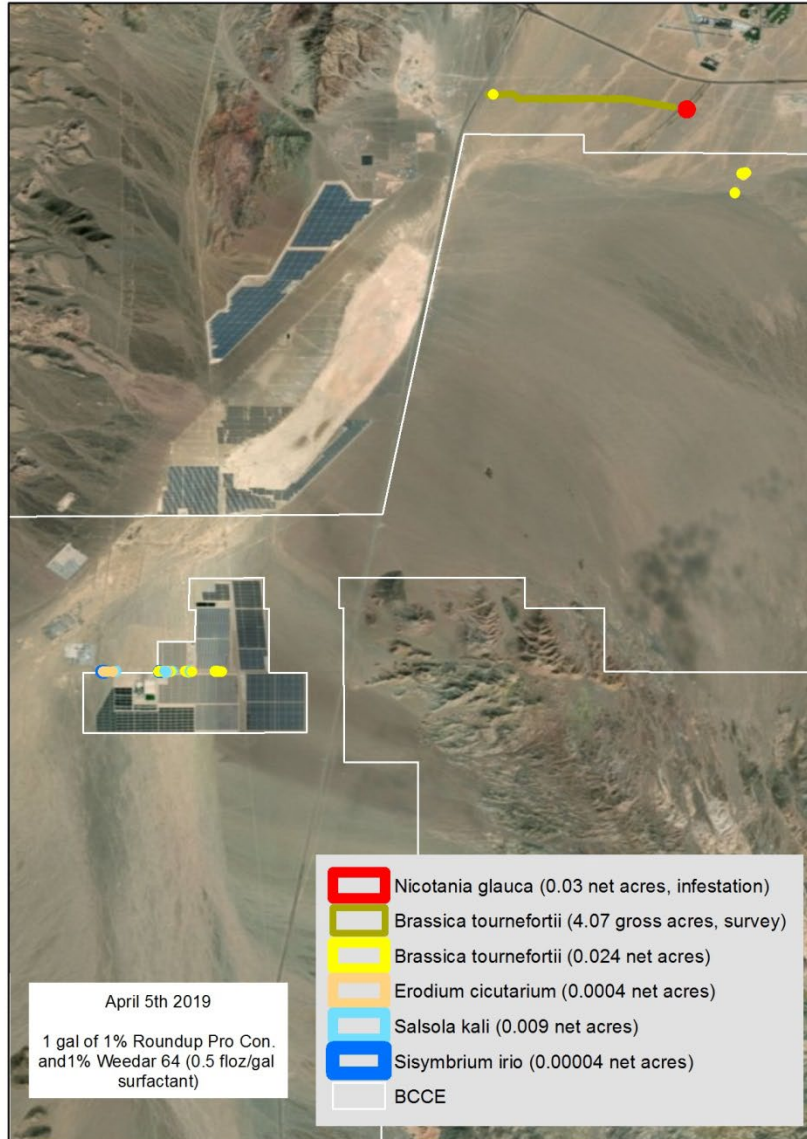
# Boulder City Conservation Easement 2018 - 2019 Lake Mead EPMT Accomplishments



Compiled by Rachel Skoza 8/27/2019  
Contact Curt Deuser [curt\\_deuser@nps.gov](mailto:curt_deuser@nps.gov)



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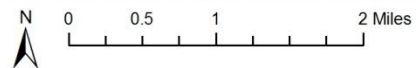
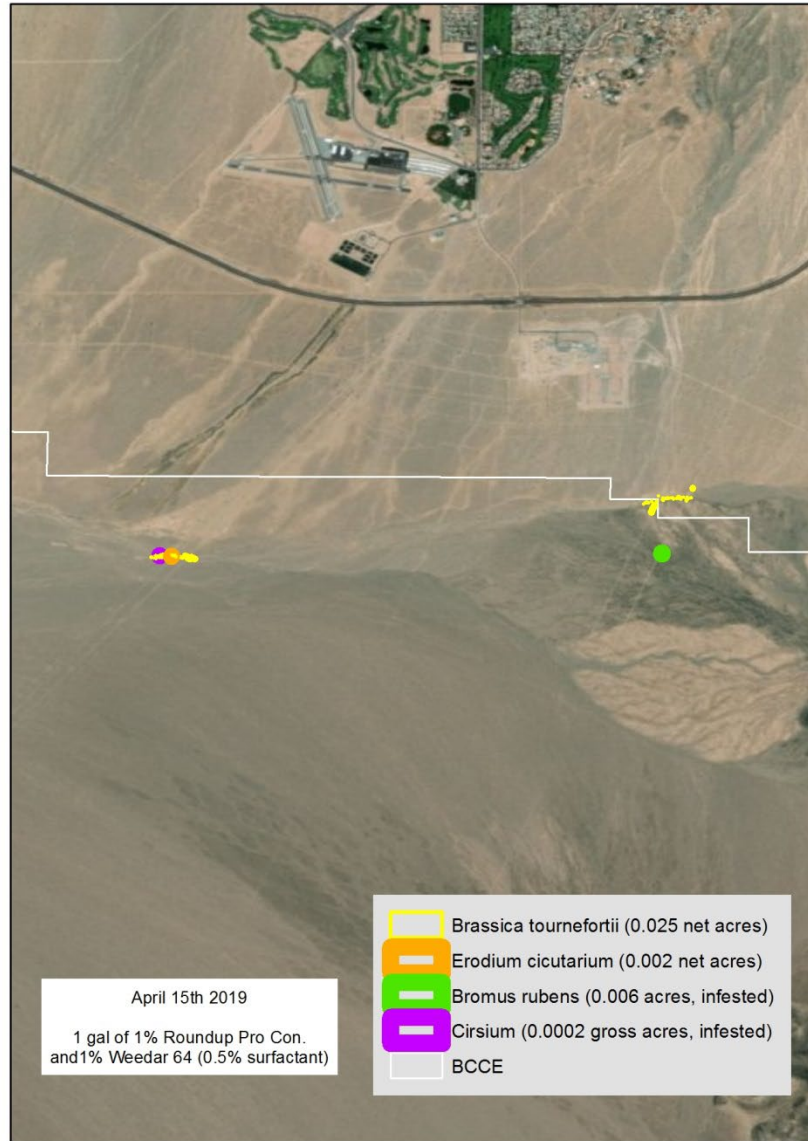
# Sahara Mustard

*Brassica tournefortii*





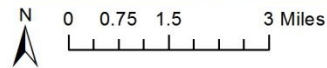
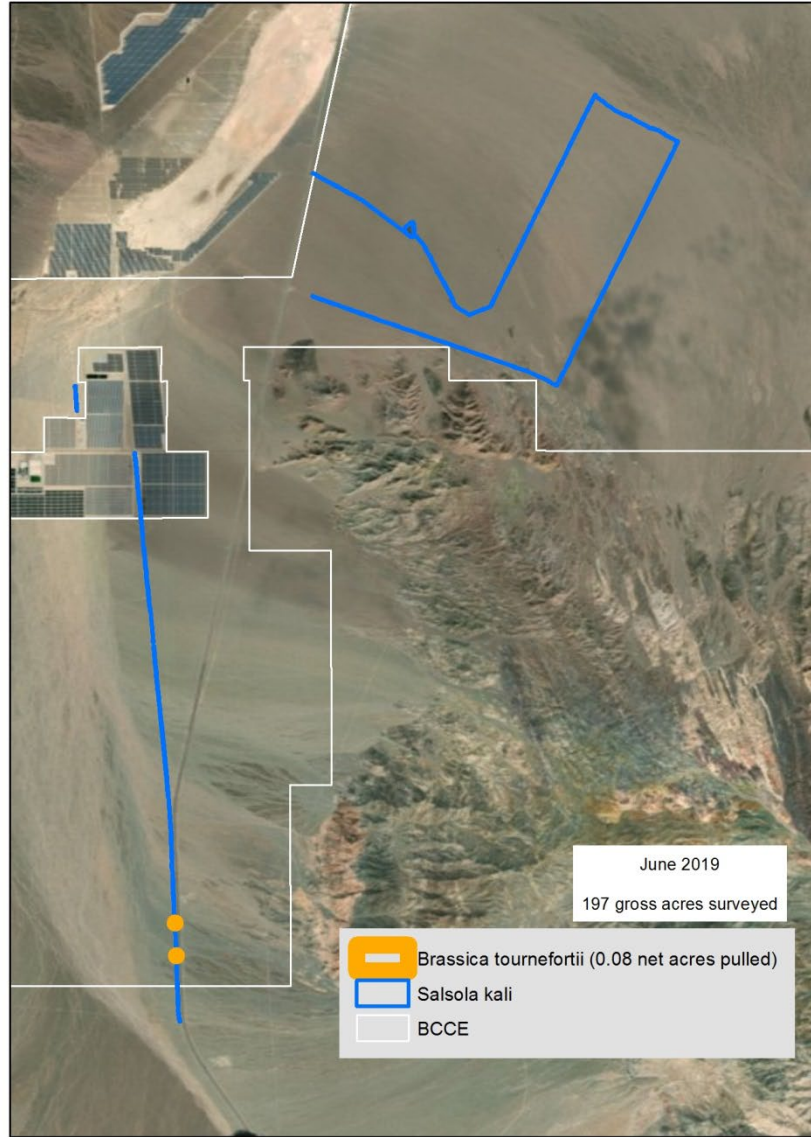
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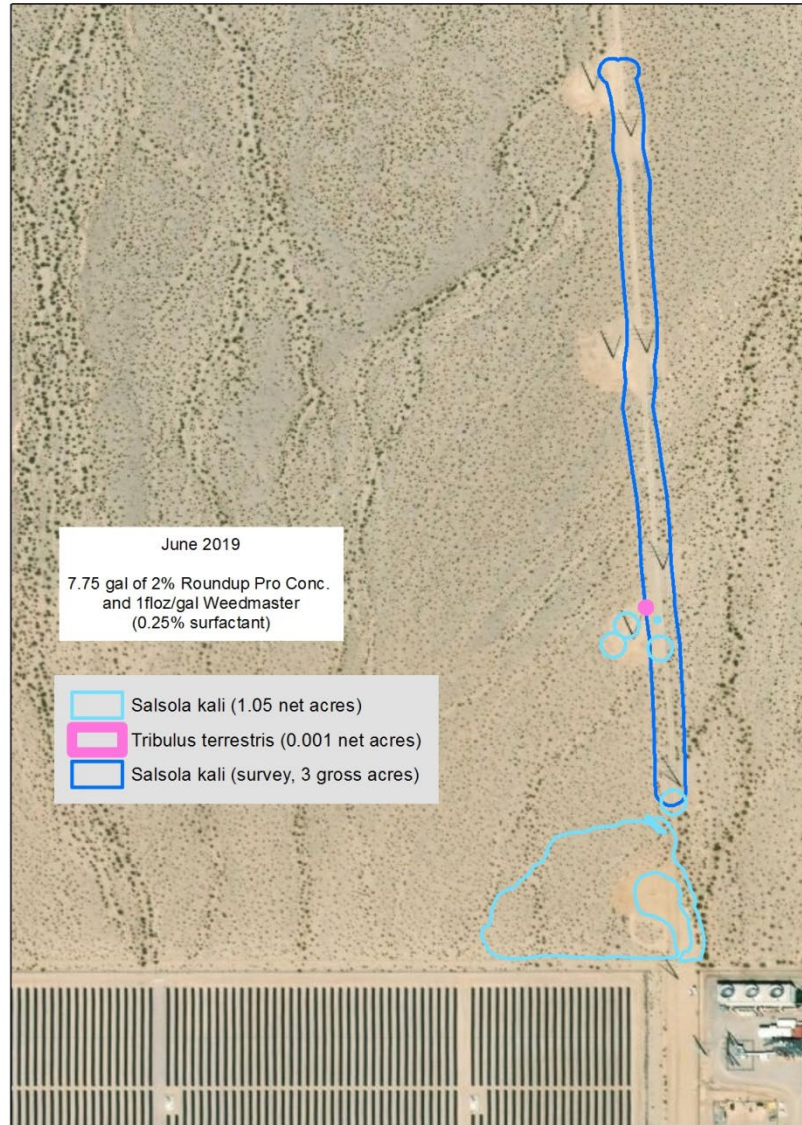


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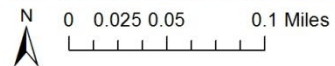


# Boulder City Conservation Easement 2018 - 2019 Lake Mead EPMT Accomplishments



June 2019  
7.75 gal of 2% Roundup Pro Conc.  
and 1 fl oz/gal Weedmaster  
(0.25% surfactant)

- Salsola kali (1.05 net acres)
- Tribulus terrestris (0.001 net acres)
- Salsola kali (survey, 3 gross acres)



Compiled by Rachel Skoza 8/27/2019  
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# Near Future Work

- 2022/Current Monsoons should stimulate warm season plants
- Survey intensely over the next few weeks
- Previous buffel grass and puncture vine areas
- Add to native plant list observed
- I-11 Corridor
- Solar Energy Arrays (I-11 and Eldorado Valley/Lake Beds)
- Boulder Water Reclamation run-off

# Acknowledgements

- *This work was supported by the Clark County Desert Conservation Program and funded by Section 10, to further implement or develop the Clark County Multiple Species Habitat Conservation Plan*
- Caryn Wright, Stefanie Ferrazzano, Sara Carrizal Clark County Dept of Air Quality/Desert Conservation Program
- NPS IPMT Staff: Andy Pigg, James Roberts, Joe Ingram, Grady Workman, Matt Gorentz, Maegan Stephenson and Carlee Coleman, others