

# Tamarisk Management Overview in the National Park Service



- Curt Deuser, Restoration Ecologist, National Park Service
- Lake Mead Exotic Plant Management Team
- Southwest Vegetation Management Association
- Flagstaff, AZ November 13, 2008

# NPS History of Tamarisk Mgt

- Most started in 1970's (Natural Bridges NM 1958)
- Tamarisk Conference @ University of AZ, Tucson, AZ. September 2-3, 1987
- 1974 Survey showed 95% of springs at Lake Mead NRA had tamarisk. Lake Mead shoreline since 1941
- Big Bend NP, Texas 1976 survey found 41% of 181 water sources infested then 1986 found 66% of 227 water sources infested
- Grand Canyon NP, first reported in 1933-38, widespread for 30 years. tolerance on the Colorado River after the Glen Canyon Dam



# Park Programs

- Many parks controlling with collateral duty rangers and project funded crews in late 1970 through 1980's
- Mostly funded by small internal competitive project dollars
- Death Valley, Petrified Forest, Zion, Canyonlands, Wupatki among other NPS Units



# Strategy

- Springs and seeps
- Tributaries/Side drainages of large rivers
- Isolated patches and individuals
- Small to moderate size scale projects
- Selective methods
- Mostly natural recovery but many active revegetation projects have occurred



# Control Methods

- Cut Stump
- Low Volume Basal Spray (Williamson and Parker, USFS tech report)
- Hand pulling
- Heavy Equipment  
Bulldozers/Graders/Backhoes
- Prescribed Fire followed by basal spray
- Aerial Foliar (Lake Meredith, TX)
- Bio-Control (Dinosaur NM)



# Herbicide

- Triclopyr (Garlon 4,3A)
  - 20% mixed with JLB Vegetable Oil
- Imazapyr (Habitat, Arsenal)



# NPS: Exotic Plant Management Teams

- Prototype model developed at Lake Mead from 1996-2000
- Professionalize weed management
- Base funded in 2000
- 2004 16 EPMT's established in the NPS



# Map of EPMT's



# Tamarisk and EPMT

- 3 teams tamarisk is primary species focus
- 4 other teams have targeted for early detection rapid response



# Tamarisk Eradicated/Eliminated in NPS Units\*

- Bent's Old Fort NHS, Colorado (Arkansas River)
- Colorado NM, Mesa Verde NM, Co
- Hubbell Trading Post NHS, AZ
- Joshua Tree NP, California
- Mojave NP, California
- Natural Bridges NM, Utah
- Zion NP, Utah
- Bandelier NM, New Mexico
- Scotts Bluff NM, Nebraska
- others

\*Managed to maintenance levels, if populations are detected control is immediately planned

# Status of Ongoing Programs

- Big Bend NP, Lake Meredith, Texas
- Arches and Canyonlands NP's, Utah
- Death Valley NP, CA
- Lake Mead NRA, AZ/NV
- Canyon de Chelly NM, AZ
- Grand Canyon NP, AZ
  - 67 tributaries

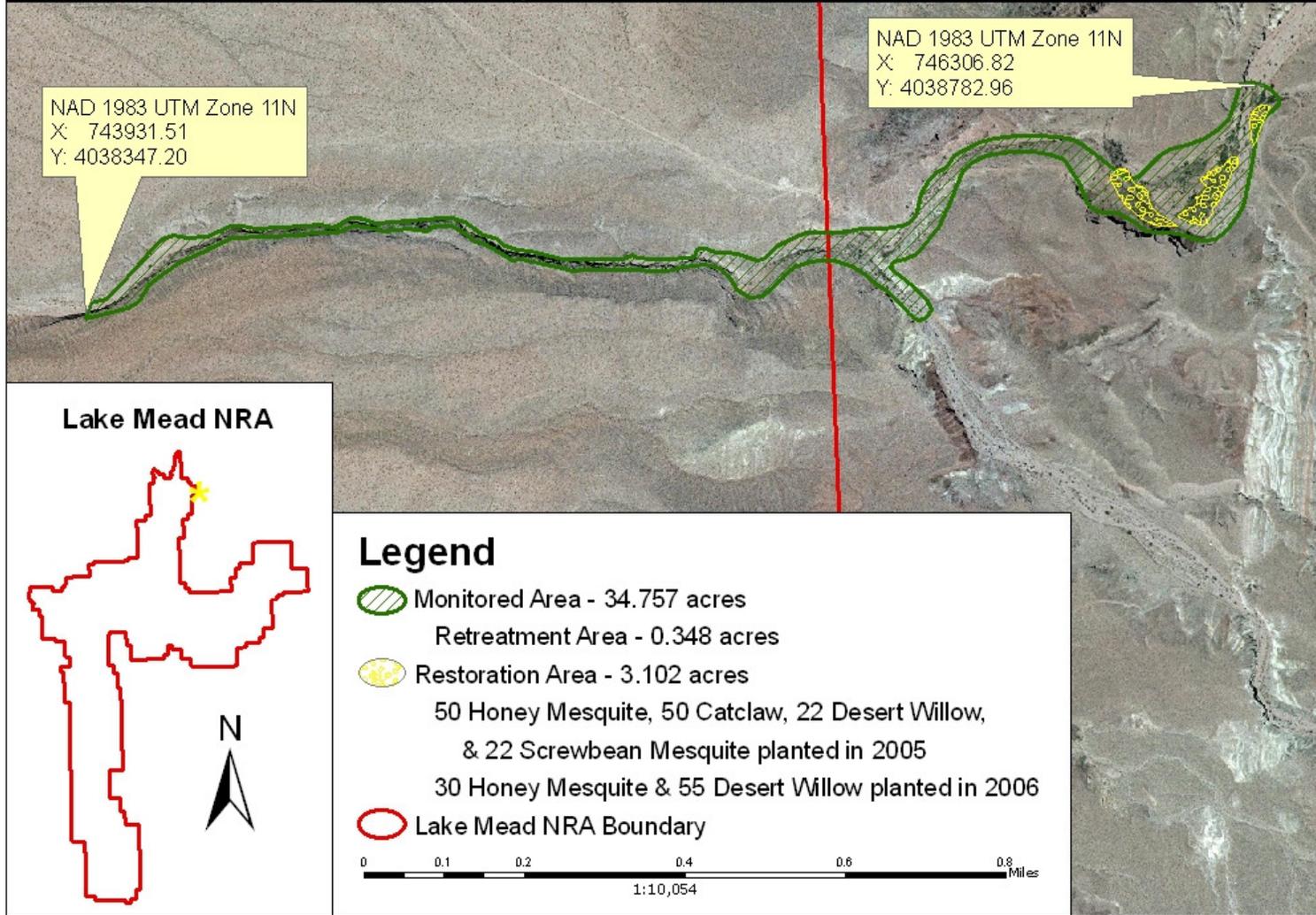
# Interagency Project Coordination Examples

- Mancos River @ Mesa Verde NP/BLM  
Colorado
- Death Valley NP/BLM: Hunter Canyon in  
Saline Valley
- Lake Mead NRA: Valley of Fire Wash NV  
State Parks, Numerous shared  
watersheds with BLM, NV

# Red Bluff Spring

Lake Mead EPMT Revegetation January 2006

National Park Service  
U.S. Department of the Interior



Source: USGS DOQQ Overton Beach

Produced on 10/3/2006 by: Bonnie M. Waggoner, Data Manager Lake Mead EPMT

# Cataract Wash

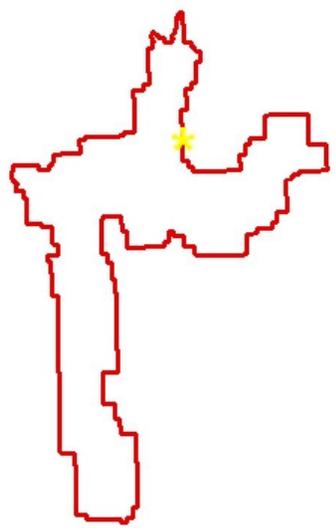
Lake Mead EPMT Treatments December 2005

National Park Service  
U.S. Department of the Interior

NAD 1983 UTM Zone 11N  
X: 737739.31  
Y: 4013106.53

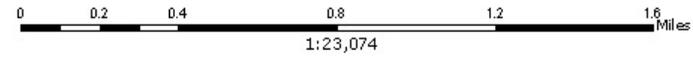
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## Lake Mead NRA



## Legend

-  Inventoried Area - 186.073 acres
-  Gross Infested Area - 21.294 acres
-  Treated Area - 7.109 acres
-  Untreated Infested Area - 2.244 acres
-  Lake Mead NRA Boundary



Source: USGS DOQQ Garrett Butte

Produced on 10/3/2006 by Bonnie M. Waggoner, Data Manager Lake Mead EPMT

# Echo Wash, Lake Mead NRA

LAME EPMT Echo Wash Treatments and Retreatments  
Oct 31st & Nov 21st, 2005; March 13 & Nov 18, 2006

National Park Service  
U.S. Department of the Interior



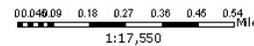
## Legend

-  2003 Inventoried Area
-  Tamarix ramosissima
-  Park Boundary

### Retreated Areas      Acres

-  Gross Infested Area    16.2
-  Gross Infested Area    .1760
-  Tamarix ramosissima    .4769

Lake Mead NRA  
Lake Mead EPMT



# Prescott NF Verde River

- Interagency Agreement b/w NPS and USFS
- 3 large crew mobilizations on Upper Verde River
- 3 year agreement



# Future

- Monitor and Maintain previous control areas
- Complete ongoing projects
- Initiate new projects
- Consider large scale projects and methods



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