Camelthorn and Tamarisk Projects in Northern Arizona

By Northern A“rez”ona Partners

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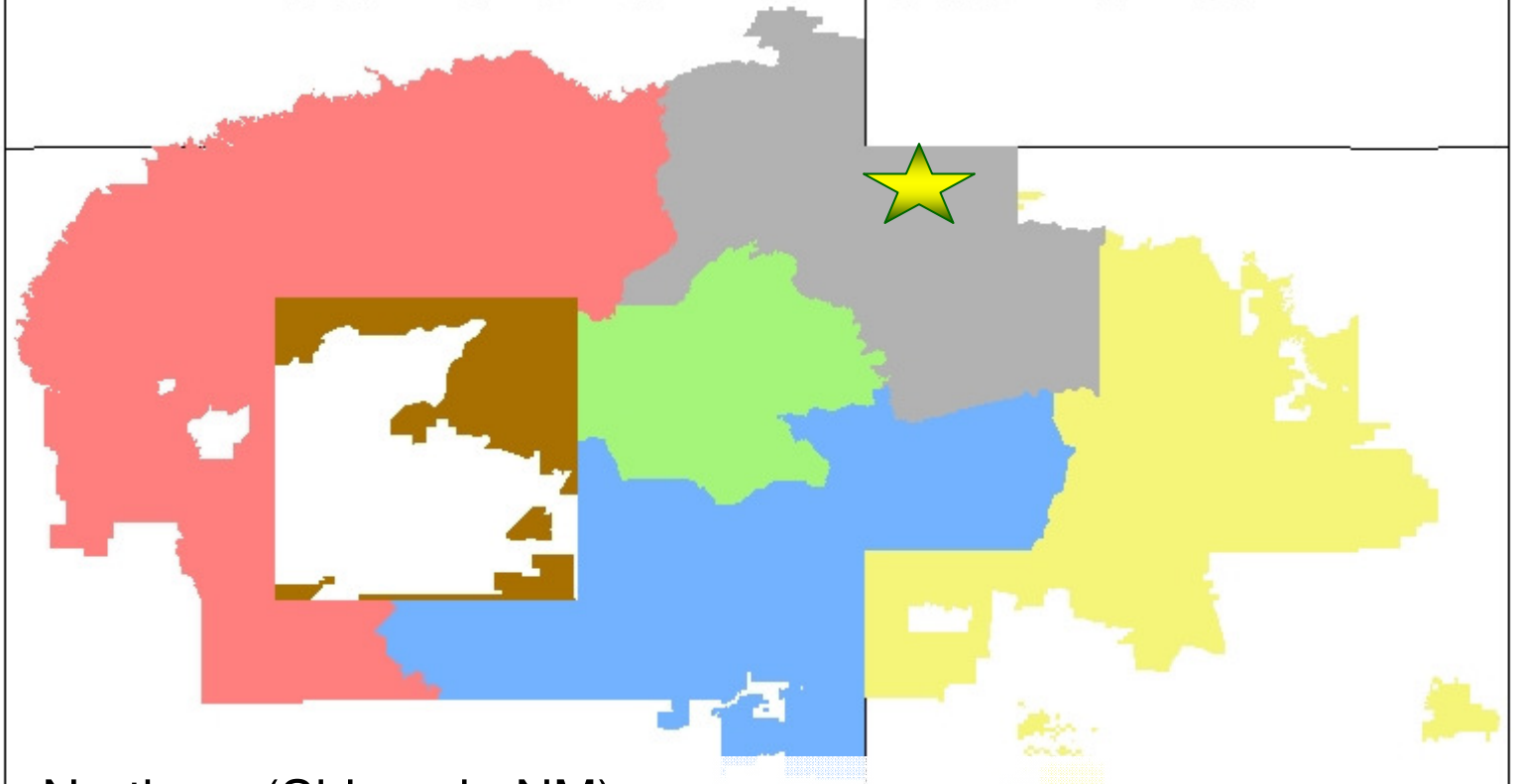
Northern Arizona Partnerships

- Boundaries and concerns
  - Public worry about their livestock loss from the Monsoon floods, the livestock hide when it comes to tally season, habitat degradation, farmers worry about water when it comes to irrigation season
  - Invite impacted individuals from Federal, County, State, Tribal, and private; Save time and effort; Build a stronger community; Cost-sharing is a big plus for all programs involved; and Start educating the public, communicate and support the Tribal programs and initiatives

Camelthorn Treatments

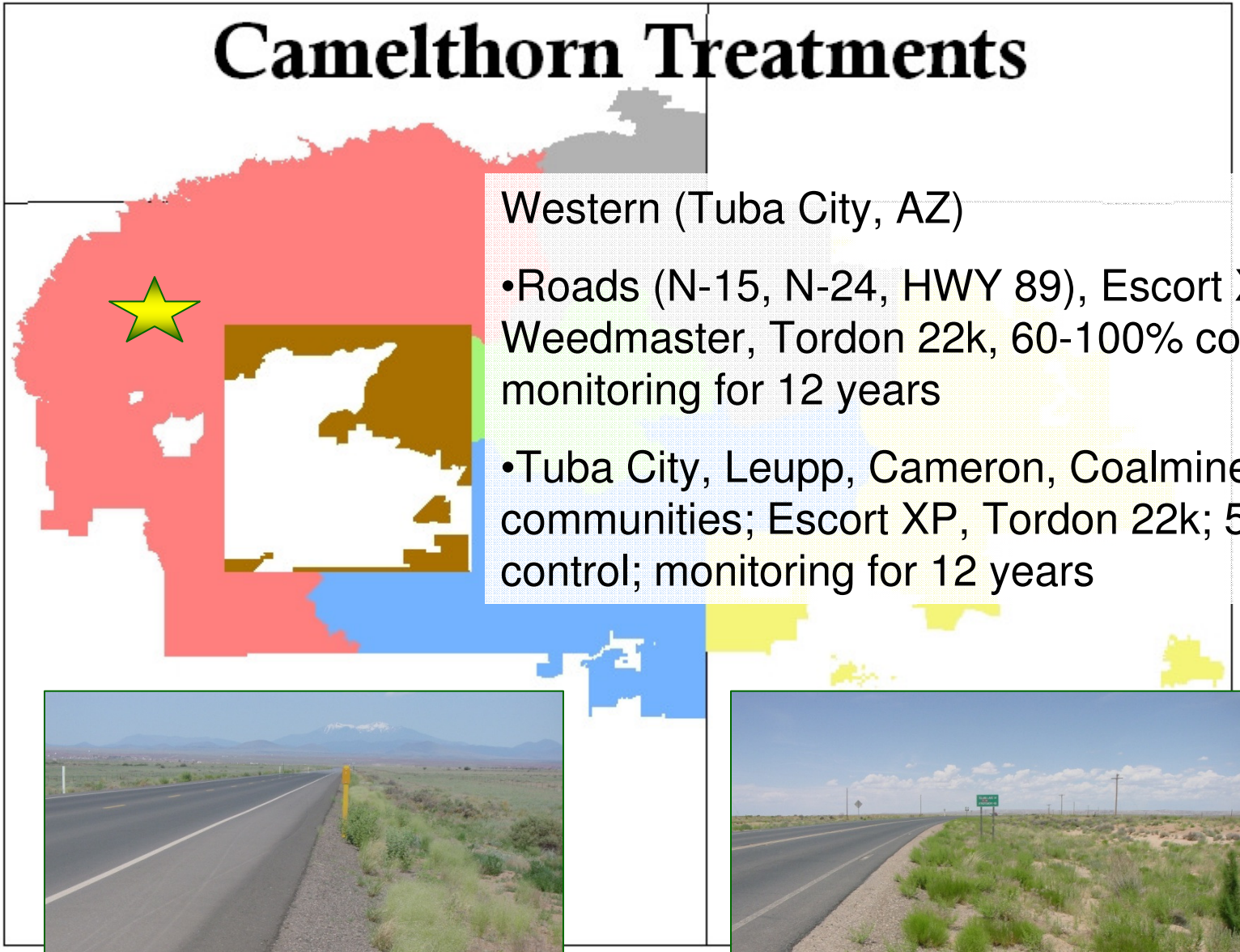


Northern (Shiprock, NM)

•Mexican Water, Escort, 3-5 acres, 100% control but respouts 2 years later

•Red Mesa, AZ; Escort, 2.5 acres, 50% control, monitoring

Camelthorn Treatments

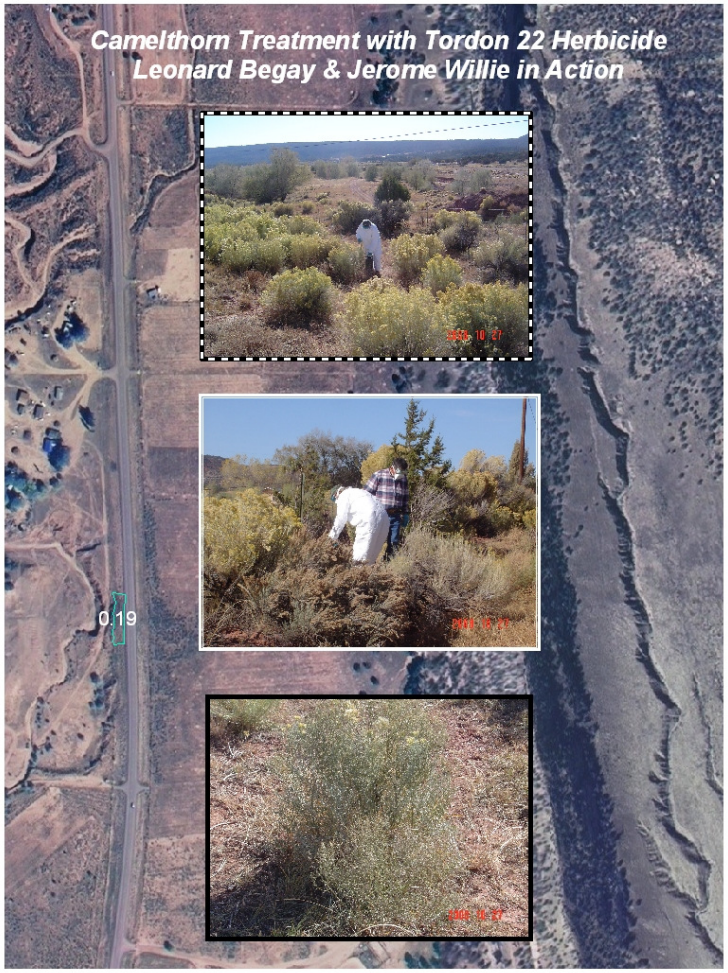


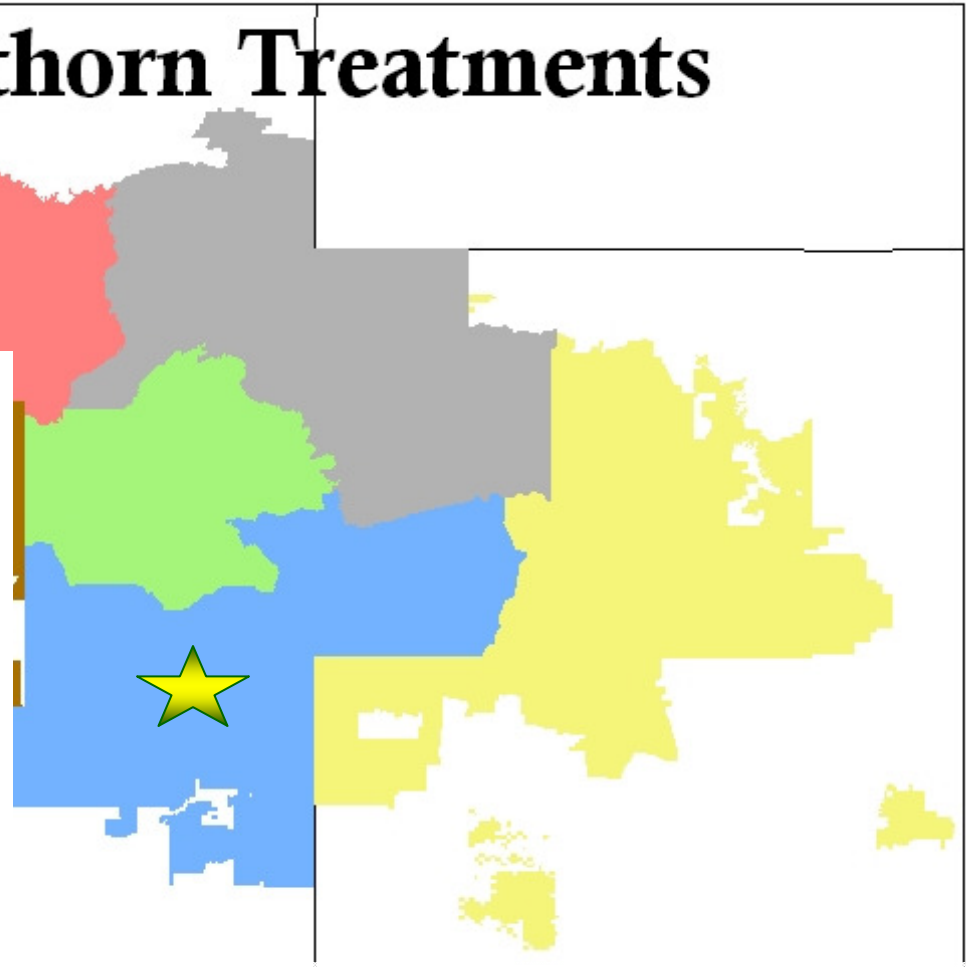
Western (Tuba City, AZ)

•Roads (N-15, N-24, HWY 89), Escort XP, Weedmaster, Tordon 22k, 60-100% control, monitoring for 12 years

•Tuba City, Leupp, Cameron, Coalmine communities; Escort XP, Tordon 22k; 50% control; monitoring for 12 years

Camelthorn Treatments

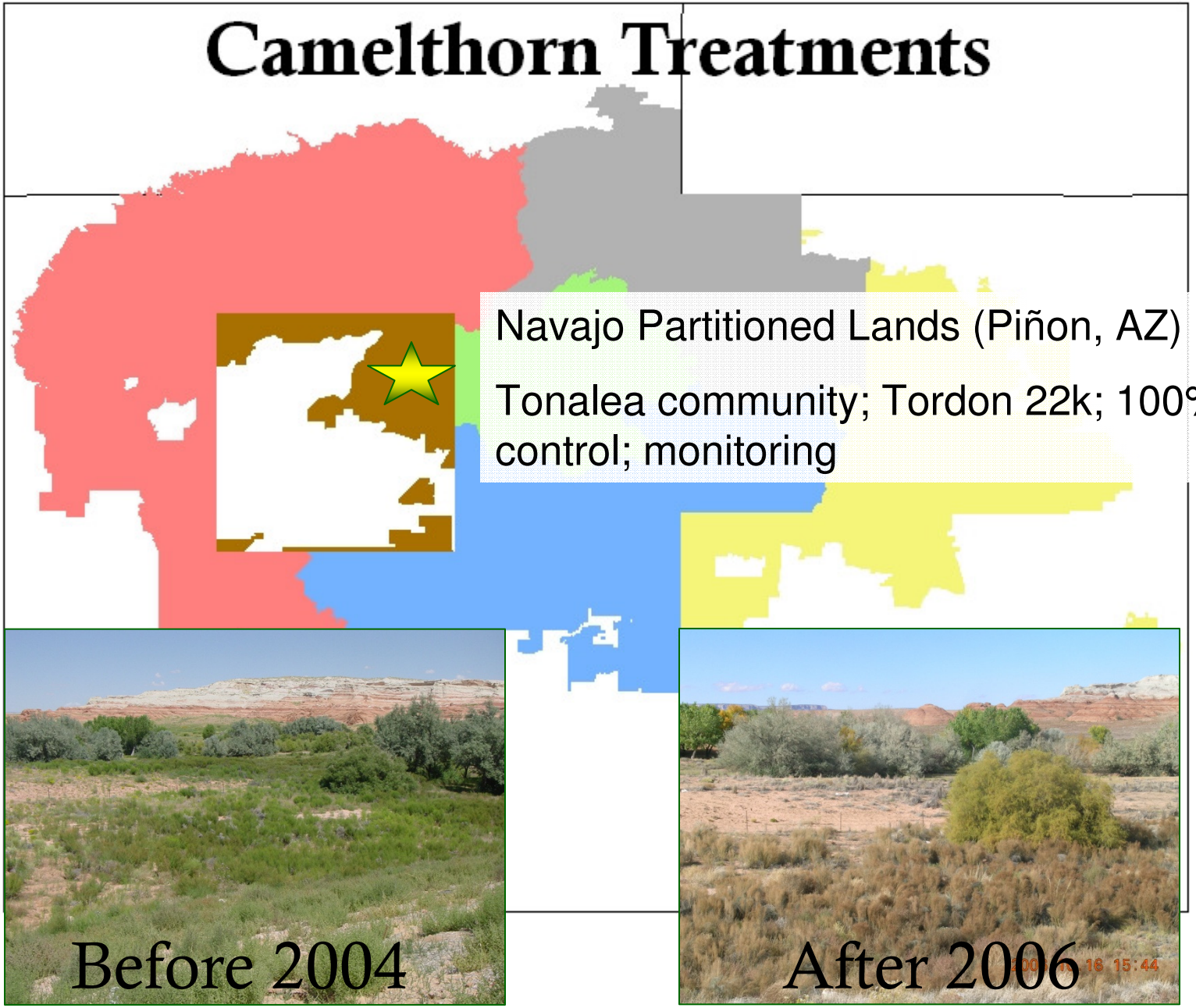




Ft. Defiance (Ft Def., AZ)

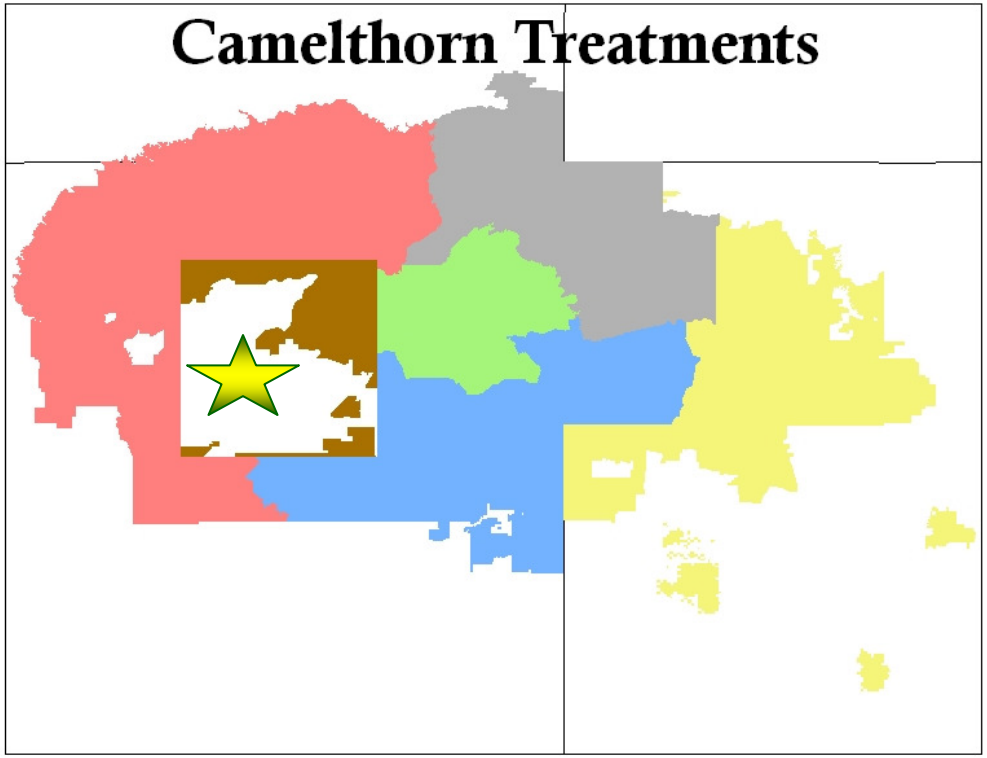
Roads (N-15 joint effort); Tordon 22k; ~150 acres since 2005; 50-100% control; monitoring for 8 years

Camelthorn Treatments



Hopi Department of Natural Resources
2008 Invasive Weed Mgmt. Projects

- Received BIA Noxious Weed Grant to conduct Herbicide applications at 7 sites. Project sites ranged from 0.02 Acre to 3.5 Acres
- Target species: Russian knapweed and Camelthorn
- Utilized 4 gallon Backpack Sprayers
- Utilized Herbicide Escort XP (2 oz/Acre), Kinetic surfactant, Dye



EgloffStein Butte
Camelthorn (1.1 Acre)

June 24, 2008

July 31, 2008

Toreva R.U.
Camelthorn (1.9 Acre)

June 16, 2008

July 31, 2008

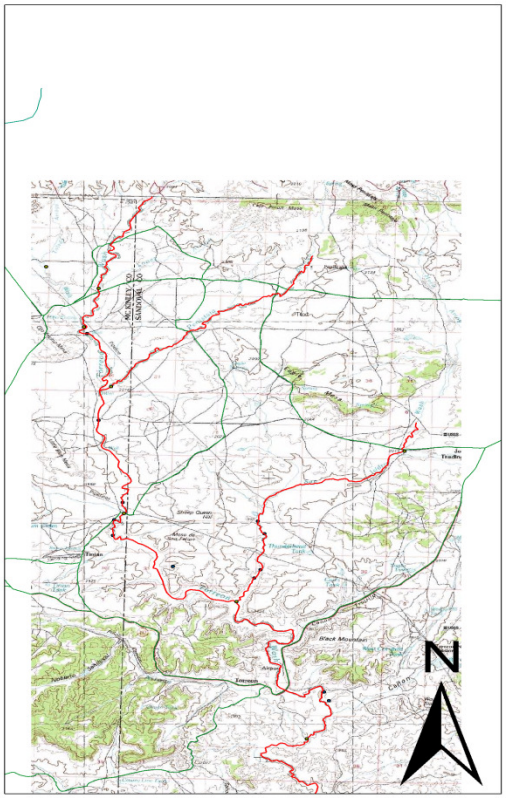
Next Steps/Conclusion

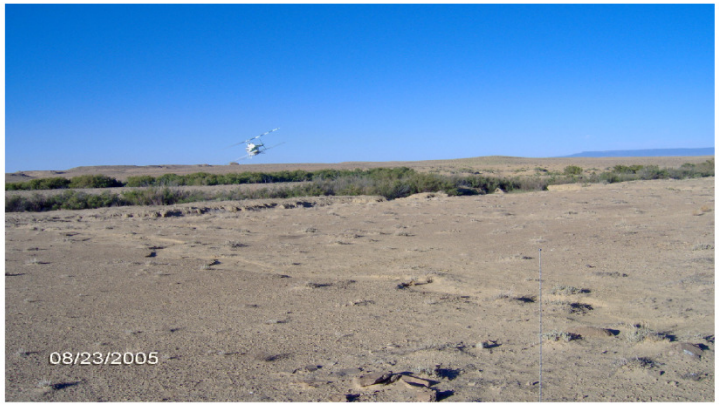
- Continue to seek and obtain FUNDING
- Continue to build the capacity of DNR field staff :
  - Continual training
  - Technical support from outside entities (i.e. tribal, federal, and state agencies).
- Finalization of Programmatic EA
- Initial efforts at Noxious/ Invasive weed management considered successful. Many lessons learned.

Salt Cedar Treatments in Northern Arizona

Tanner Wash: Cut stump, Garlon 4 & JBL oil (3:1), 80-100% kill, monitoring for respouts, 2007 to present, less than 5 acres

Saltcedar projects 05 & 06





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Indian Creek Salt Cedar Project 2006 (Whiterock Chapter)

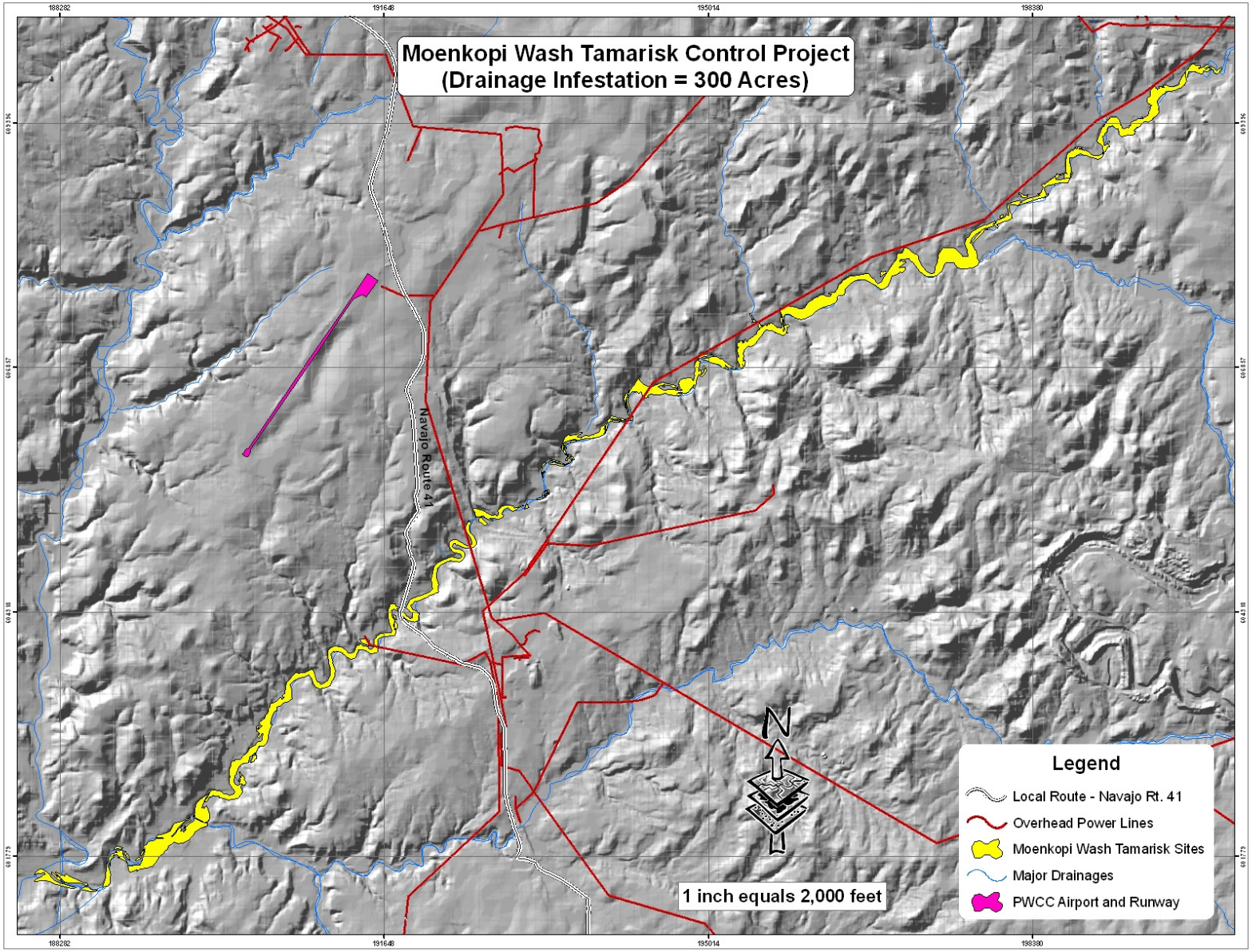
Habitat – aerial application
total of 540 acres

Project coordinated w/ NRCS(USDA) & BIA ENA
Contractor: Northstar Helicopter (~250 acres treated)
Land Board District 15 Chairman Irwin Jim Coordinated the project.

Russian olive & Tamarisk (Collaborative Forestry Restoration Project and Shiprock San Juan River Restoration Project)

- 101 acres at 3 locations for wildfire protection, riparian restoration, and accessibility to San Juan River
  Partners included Waster Water Treatment Plant, Elementary School, and river walk
- Started in June 2008 for baseline monitoring of plants and wildlife, continues monitoring for 4 years; completed by 2011
- Used mechanical control – hydro mulch and cut-stump, treated the stump with triclyphor; respouts will be treated; Cottonwood & willows will be favored

Peabody Western Coal Company



Tamarisk – Aerial Application

Habitat, 140 acres, treated in September 2008

Tamarisk Biological Control

Defoliation

Beetles feeding on the leaves of saltcedar destroy vascular cells, causing a visually apparent change in color.

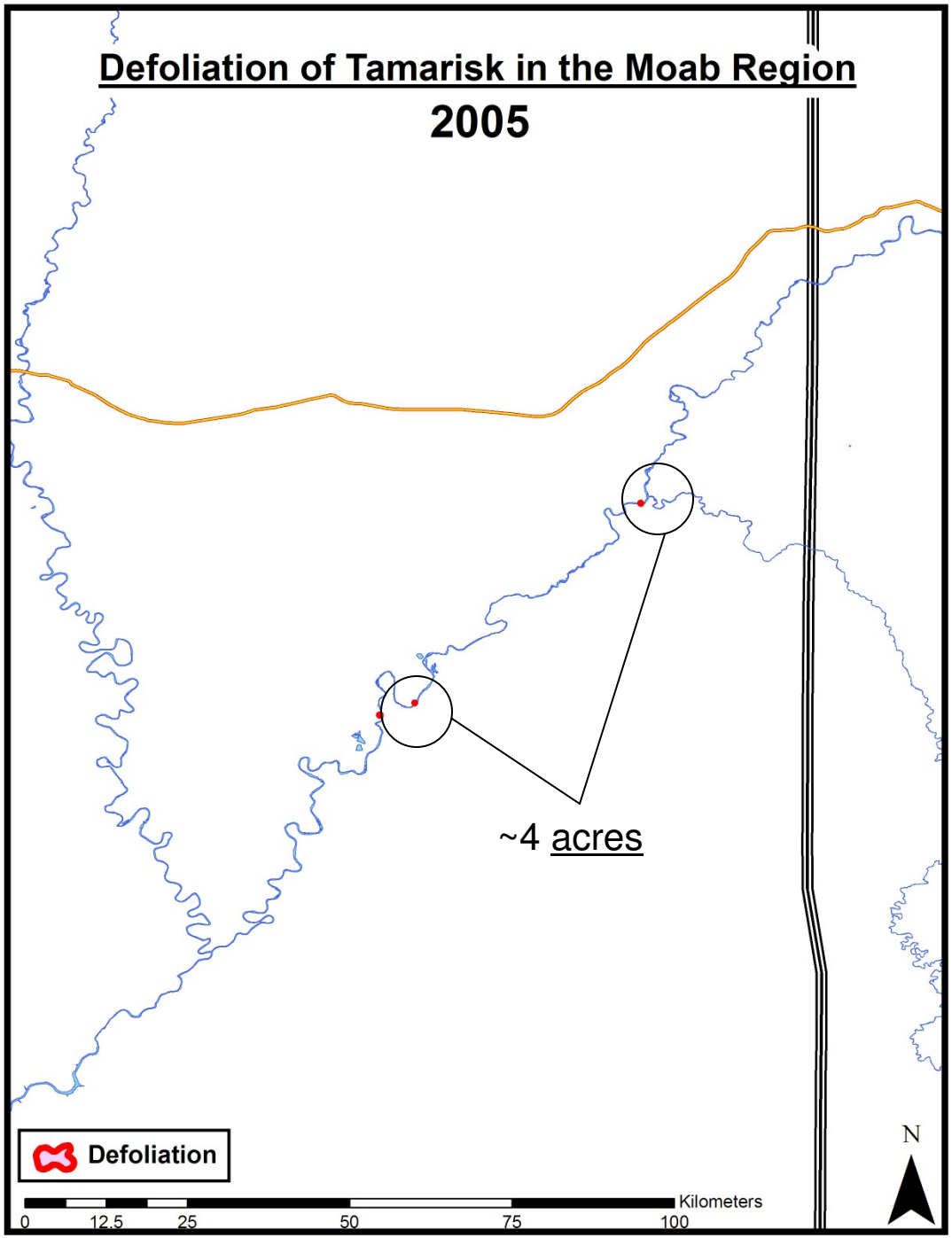
Defoliation also stress plants, inhibiting flowering during defoliation.

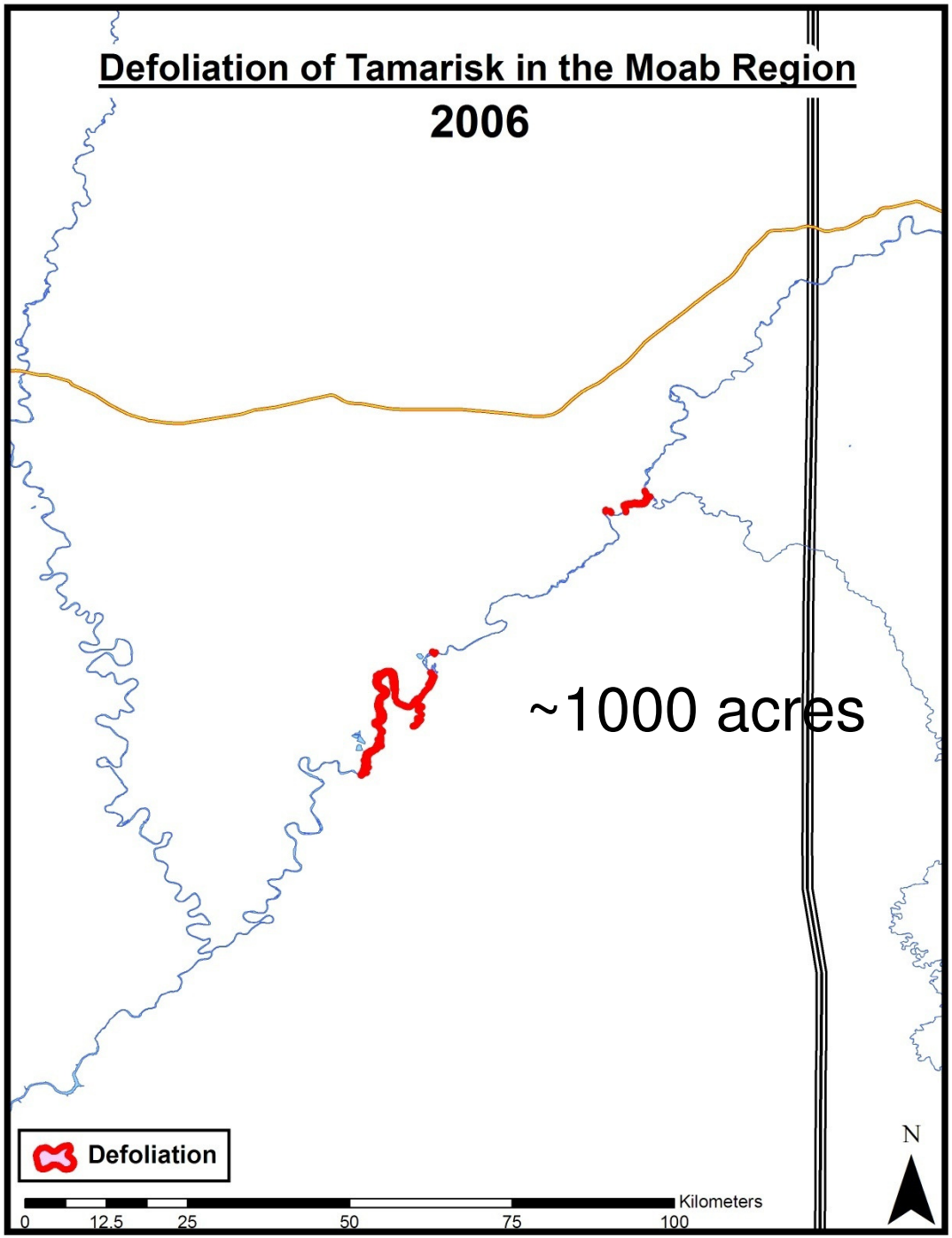
Defoliation

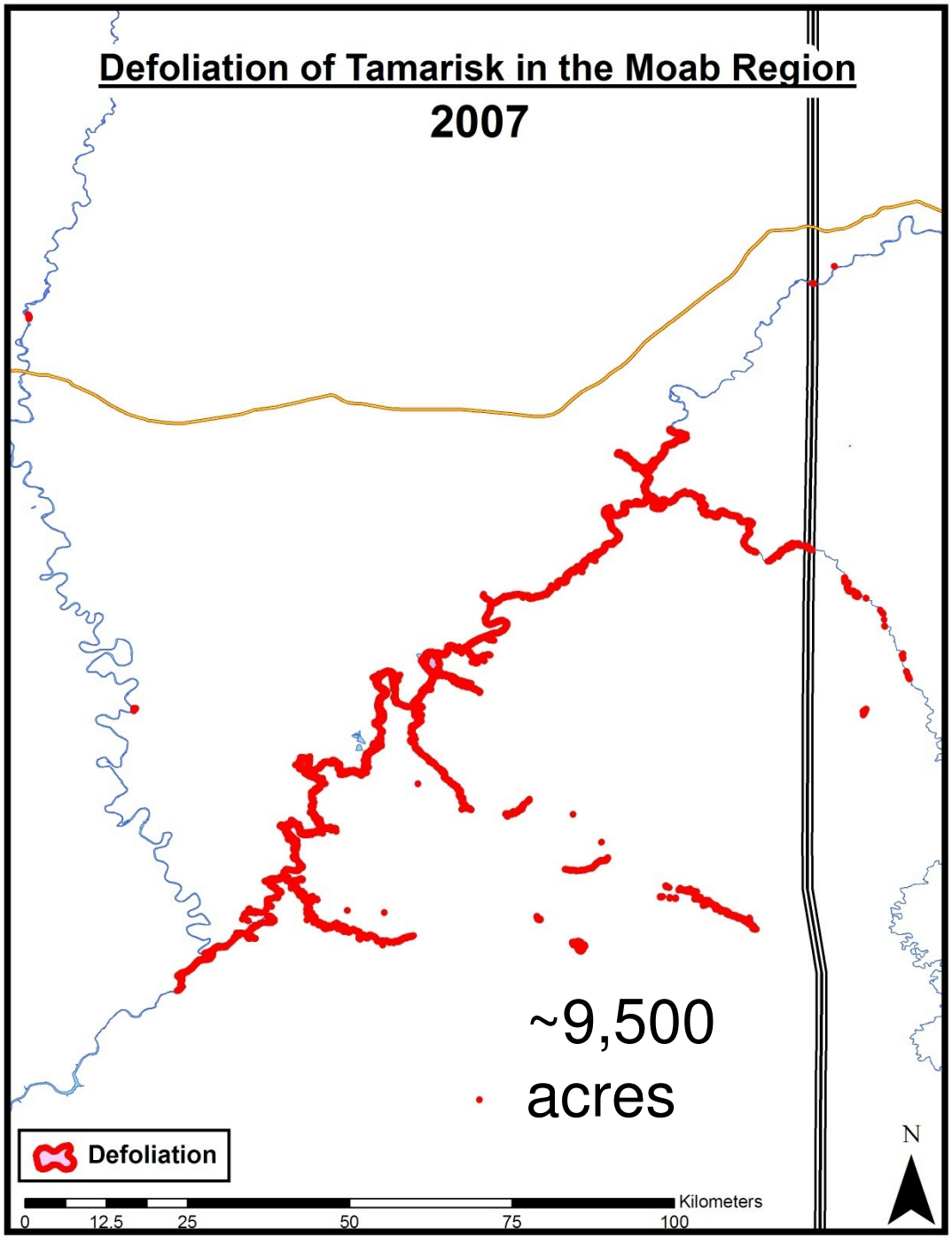
Colorado River August, 2006

Defoliation damages the plants ability to photosynthesize. Forcing plants to utilize root reserves.

Repeated defoliation events deplete roots and eventually can lead to mortality.


Defoliation of Tamarisk in the Moab Region
2005
~4 acres
Defoliation
Kilometers
0
12.5
25
50
75
100
N

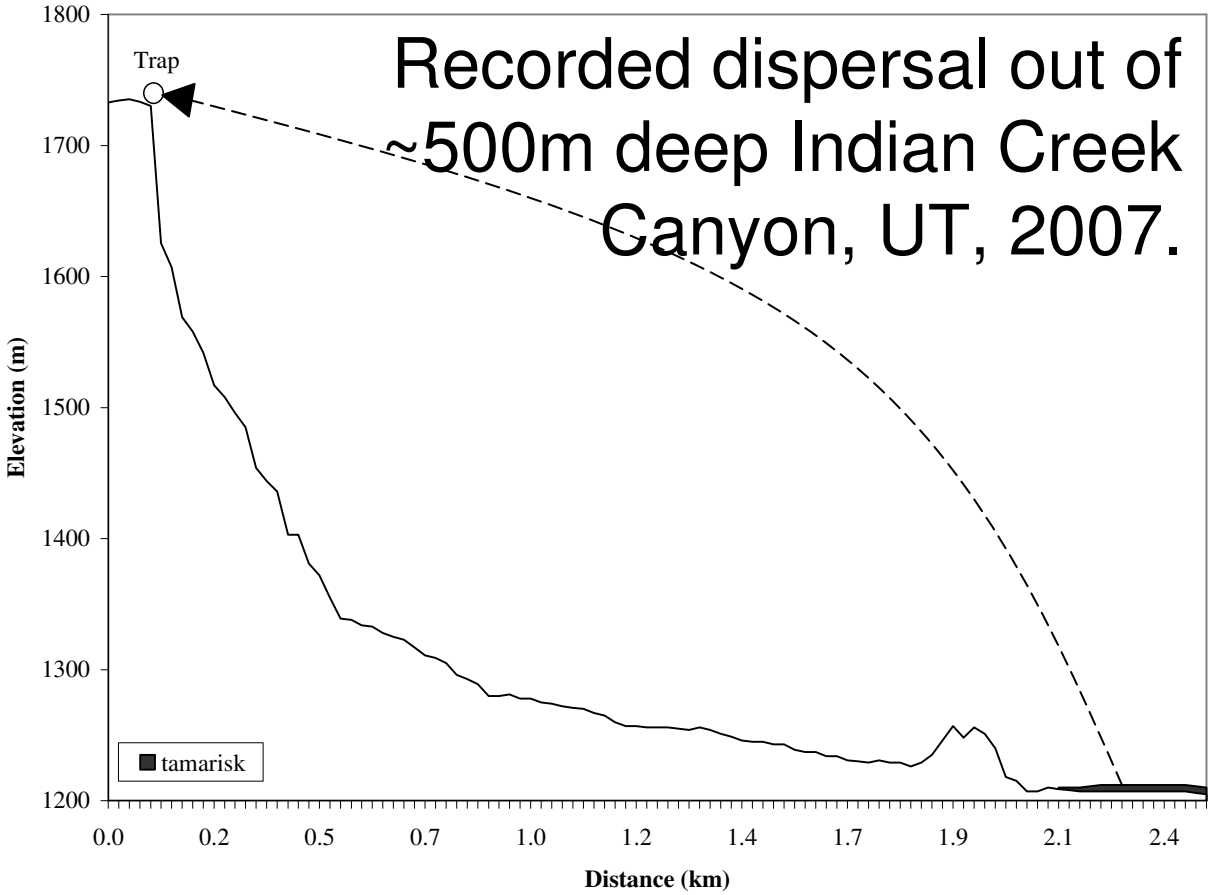

Defoliation of Tamarisk in the Moab Region
2006
~1000 acres
Defoliation
Kilometers
0
12.5
25
50
75
100
N


Defoliation of Tamarisk in the Moab Region
2007
~9,500
acres
Defoliation
Kilometers
0
12.5
25
50
75
100
N

Dispersal

- Largely by flight, beetles can cover vast distances in a short period of time.
- Wind currents, tamarisk location and indirect human dispersal all effect beetle distribution.

Dispersal



Beetles can move over large geographic areas and elevations.

Distribution

- Distribution of *D. elongata* will largely be based on natural dispersal from established sites, and from human mediated releases.
- Controversy with Southwestern Willow Flycatcher habitat will limit distribution into Arizona and New Mexico.
- Successful release sites in multiple states will establish sustaining beetle populations across the West in the next 10-20 years.

Navajo Invasive Plant Committee

- Began January 2006, during a training given by Robin Powell, Tribal Invasive Species Council
- Involvement: NNEPA Pesticide, NNEPA Water Quality/NNPDES, Navajo Fish & Wildlife, BIA, NRCS, National Park Service, Hopi Tribe, Dine College, Navajo Water Resources
- Began having monthly and bi-monthly meetings.
- Set goals and objectives

Hopi Weed Action Committee

- HWAC Established in March 2006
- Current membership consists of:
  - Range Mgmt. Program; Water Resource Program; Office of Hopi land Administration; Wildlife and Ecosystem Management Program; Environmental Protection Office; Local ADOT personnel; BIA roads Dept.

Thank you to:

Bureau of Indian Affairs Navajo Region Western Navajo Agency & Navajo Partitioned Land, Navajo Invasive Plant Committee, Navajo Nation, Hopi Weed Action Committee, Hopi Tribe Arizona Dept of Transportation Natural Resources, Peabody Western Coal Company, U.S.D.A. Natural Resource Conservation Services & R.C. & D., University of Arizona Extension Services, Navajo Nation District Grazing Committee 1-1, 2-2, 3-2; Private citizens.

Various organizations (SJWWII, SWVMA, San Francisco Peaks WMA), individuals from Federal, State, Tribal, private citizens, and private companies in helping us grow like a weed. Colorado Department of Agriculture Conservation Services Biological Control Division