



C. Coplin 2008

The Nature
Conservancy 
Protecting nature. Preserving life.

**Muddy River Property Management, Acquisition, and
Partner Coordination; 2005-TNC-561-P**
MAURICIA M.M. BACA AUGUST 11, 2009

- ❖ Why is The Nature Conservancy (TNC) working on the Upper Muddy River
 - Who is TNC?
 - TNC Priority Landscapes in Nevada
 - Upper Muddy River as a priority landscape
 - Stresses & threats to the upper Muddy River

- ❖ Property Management Contract
 - Project Goals and Objectives
 - Methods
 - What has been implemented since entering into the contract in April 2008

Who is The Nature Conservancy?

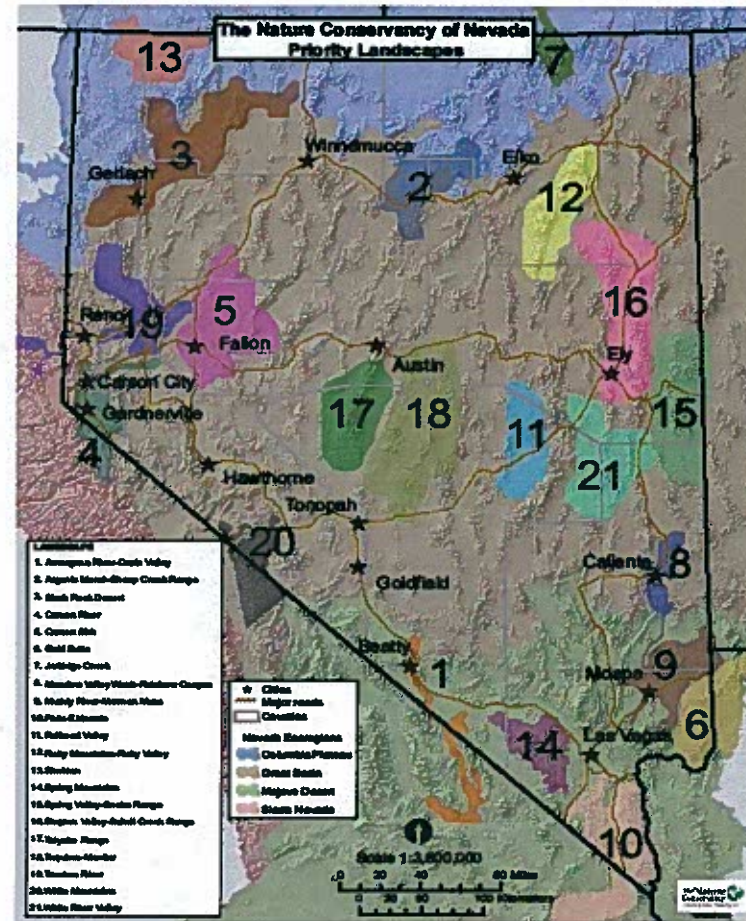
- ❁ The Nevada Chapter of The Nature Conservancy is part of a larger organization. Founded in 1951, TNC has chapters throughout the United States and the world.
- ❁ The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.
- ❁ TNC 2015 Goal:
By 2015, The Nature Conservancy will work with others to ensure the effective conservation of places that represent at least 10% of every major habitat type on earth.

TNC- Priority Landscapes

TNC-NV 2015 Goal

Conserve 12 highest priority landscapes that represent Nevada's biological diversity.

- Upper Muddy River / Mormon Mesa is one of these priority landscapes.

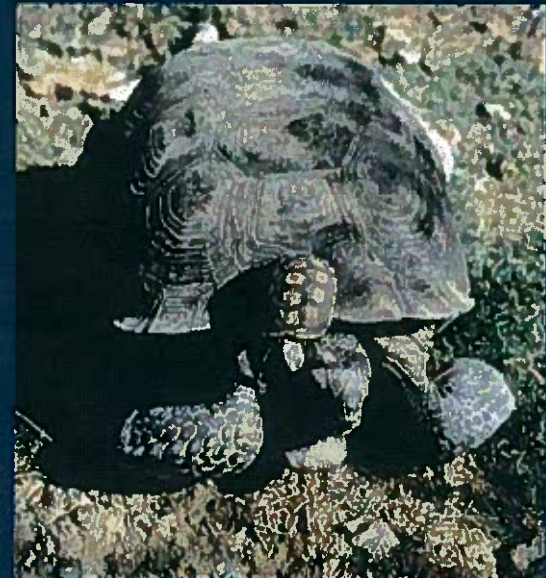


TNC- Priority Landscapes – 12 Highest Priority

- ❖ Capture multiple eco-systems & embedded species
- ❖ High Quality Examples of *all* ecological systems in the Mojave Desert, Great Basin & Columbia Plateau
- ❖ Intact or restorable ecological processes
- ❖ Public & private lands
- ❖ May cross state borders



Protection and conservation of the 12 highest Priority Landscapes will capture over 50% of all globally imperiled or significantly declining species present in Nevada.



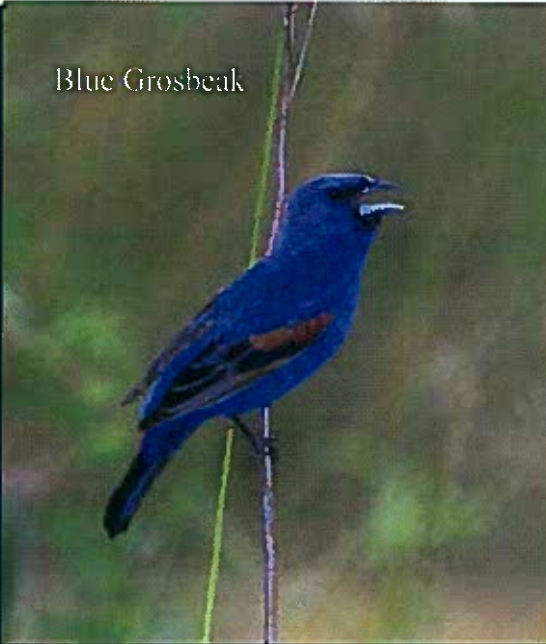
Why is the upper Muddy River a Priority for TNC?

The upper Muddy River area is home to 232 species, including 4 federally-listed endangered species (e.g. southwestern willow flycatcher, Moapa dace), 1 threatened species (Mojave desert tortoise), and 1 candidate species (blue diamond cholla). There are 76 breeding bird species, including all Clark County priority species.



Species of the Upper Muddy River system

Blue Grosbeak



Yellow Warbler



Brian Small



Yellow-billed Cuckoo

Photo by J. A. Spindelow

Vermillion Flycatcher



Crissal Thrasher



Mike Danzenbaker

Species of the Upper Muddy River

Merlin Tuttle



Big free-tailed bat

Townsend's big-eared bat



Merlin Tuttle

California leaf-nosed bat

Merlin Tuttle



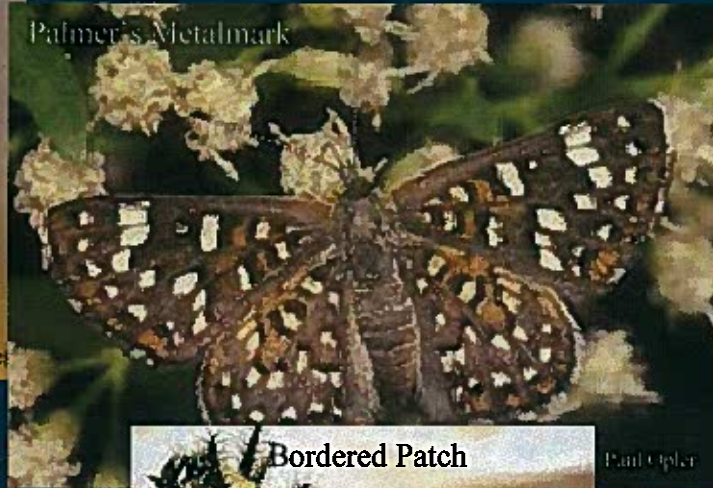
Species of the Upper Muddy River

Bordered Patch



Steve West

Palmer's Metalmark



Paul Opler

Melissa Blue



Paul Opler

Fatal Metalmark



Paul Opler

Bordered Patch



Steve West

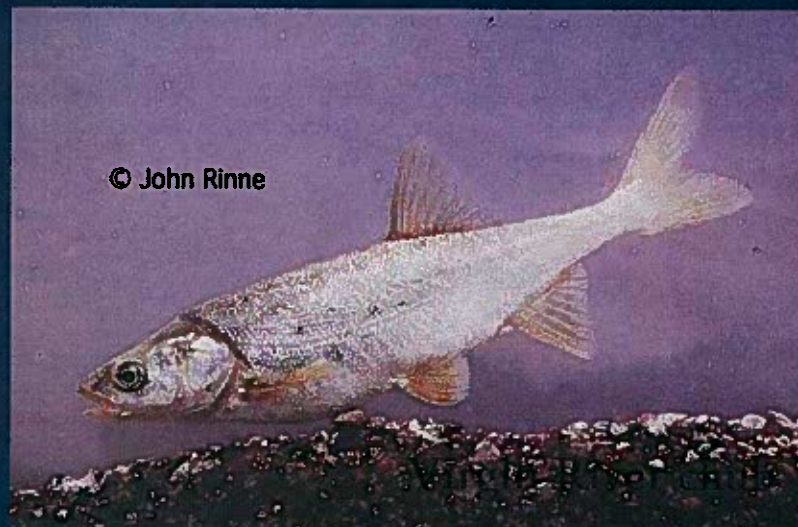
Purple Hairstreak



Paul Opler

Species of the Upper Muddy River are dependent on Desert Riparian Ecological Communities

Warm Springs / Aquatic Communities & Muddy River Aquatic Species



Species of the Upper Muddy River are dependent on Desert Riparian Ecological Communities

Riparian Woodlands



Riparian Shrublands



Riparian Marshes and Seeps

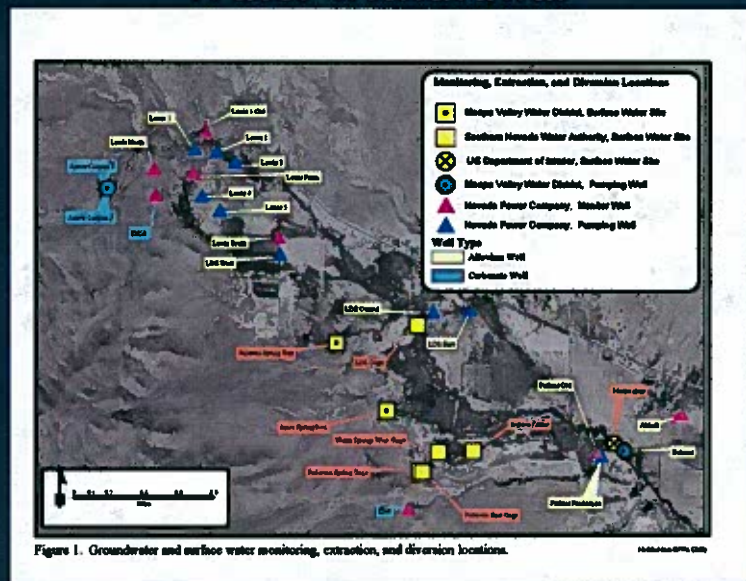


Mesquite Bosque



Upper Muddy River – Stresses and threats

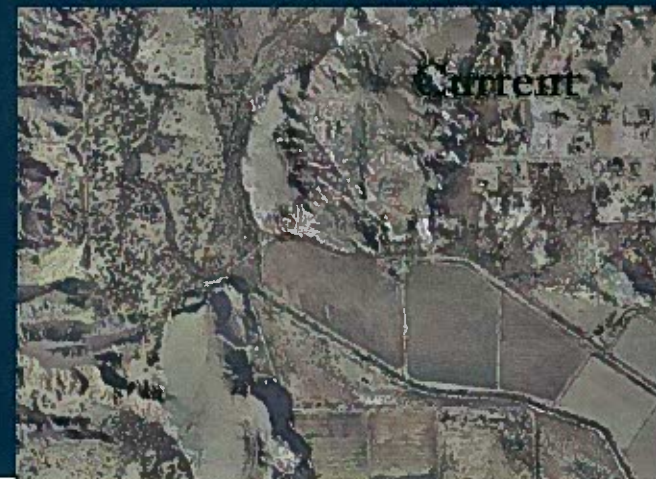
Water withdrawal



River entrenchment

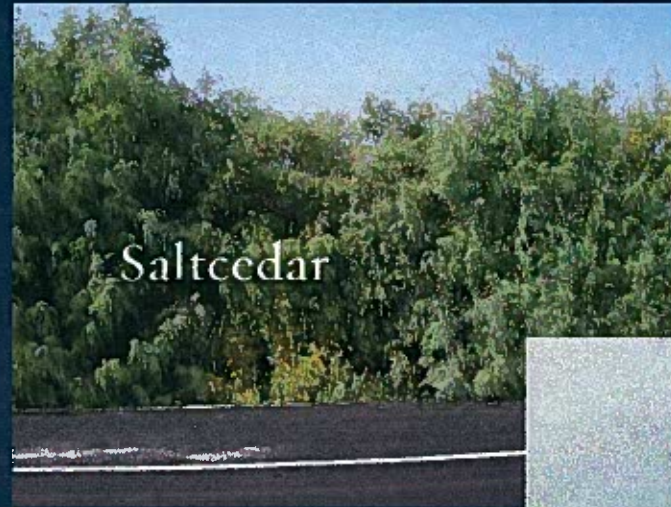


River channelization



Upper Muddy River – Stresses and threats

Invasive plant species



Red swamp
crayfish



Invasive terrestrial and aquatic species



Introduction: TNC Properties on the Upper Muddy River – Project Overview

- ❖ A priority for the Clark County Multiple Species Habitat Conservation Plan (MSHCP) is to take proactive steps to reduce the likelihood of listing of future species or the likelihood of critical habitat determinations by funding projects that provide protection and restoration of habitat for species at risk.
- ❖ The upper Muddy River has the highest concentration of riparian species in Clark County that are endangered and/or regarded as species of concern. This area was identified by the MSHCP as the most ecologically threatened and important area in the Mojave desert.

Introduction: TNC Properties on the Upper Muddy River & Clark County MSHCP

- ❖ At one time, the upper fifteen miles of the Muddy River watershed were primarily in private, corporate, or tribal ownership (with the exception of the Moapa Valley National Wildlife Refuge (106 acres), owned by the US Fish & Wildlife Service). Acquisition by TNC, funded through the Clark County MSHCP, of the Alamo, Shirley Perkins, and Henric properties in 2004 and 2005 added a small but strategic number of acres (118) into conservation ownership along the upper Muddy River and in the floodplain.
- ❖ With these recent acquisitions comes the need to provide for property management.

The Nature Conservancy Properties on the Upper Muddy River

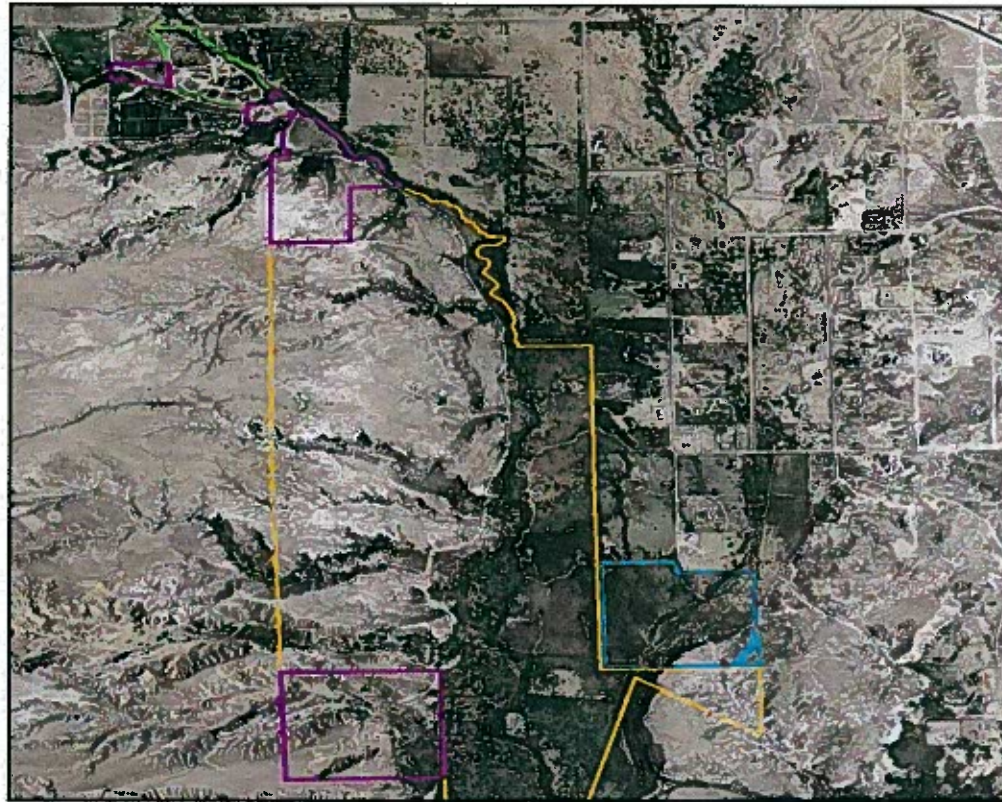
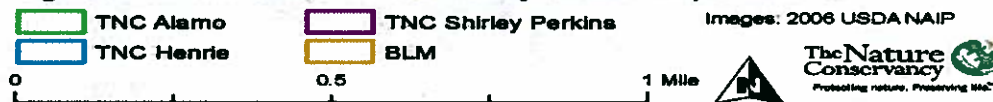


Figure 2. The Nature Conservancy and BLM parcels.



Project Goals And Objectives

All private properties, and those public lands managed by the Bureau of Land Management (BLM) that fall within the disposal area in the upper Muddy River, are considered to be Unmanaged Areas (UMA) under the MSHCP, but the protection and restoration of both mesquite / catclaw ecosystems and desert riparian/aquatic ecosystems are included as potential conservation and mitigation activities in the Clark County MSHCP.

The project addresses a number of elements identified in the MSHCP including: creating open water sources, enhancing mesquite and catclaw stands by removing salt cedar, protecting nesting habitats such as mesquite and acacia.

Project Methods

- ❖ Control invasive vegetation
- ❖ Road Maintenance
- ❖ Inspect the Henrie property and the disjointed Shirley Perkins property
- ❖ Maintenance of the Perkins Pond
- ❖ Inspection and maintenance of the Alamo house
- ❖ Tree and nursery maintenance at the Alamo
- ❖ Swimming Hole (Alamo)

Implementation of Methods: Control Invasive Weeds: Salt cedar & knapweed removal on Alamo, Perkins & Henrie (areas not treated as part of 572)



Images: 2006 USDA NAIP

Salt Cedar Not Treated as part of 572

- Salt Cedar Not Treated as part of 572
- Alamo & Perkins Property Boundaries

0 0.03 0.06 Miles

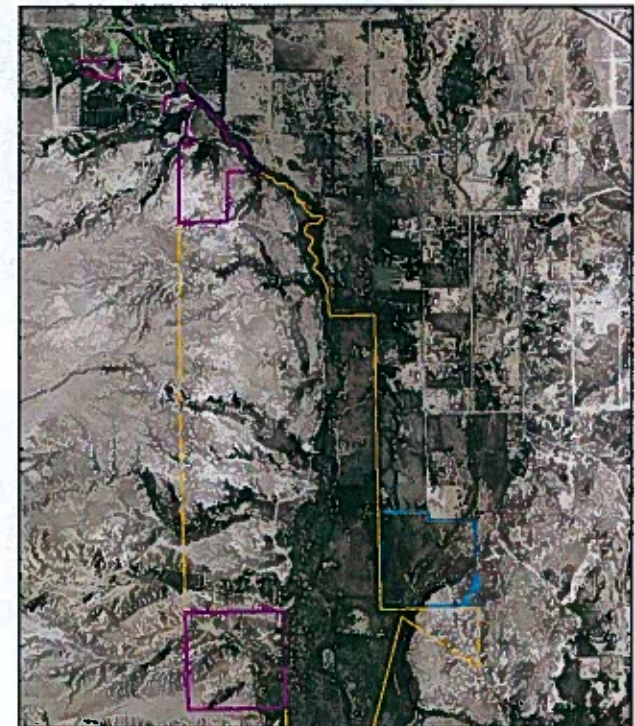


Figure 2. The Nature Conservancy and BLM parcels.

- TNC Alamo
 - TNC Shirley Perkins
 - TNC Henrie
 - BLM
- Images: 2006 USDA NAIP
- 0 0.5 1 Mile

Implementation of Methods: Control Invasive Weeds: Salt cedar & knapweed removal on Alamo, Perkins & Henrie (areas not treated at part of 572)

Contract with MRREIAC for removal of Salt Cedar and Russian Knapweed on Properties not included in TNC-572-P; Alamo



Implementation of Methods: Control Invasive Weeds: Salt cedar & knapweed removal on Alamo, Perkins & Henrie (areas not treated at part of 572)

Contract with MRREIAC for removal of Salt Cedar and Russian Knapweed on Properties not included in TNC-572-P; Perkins



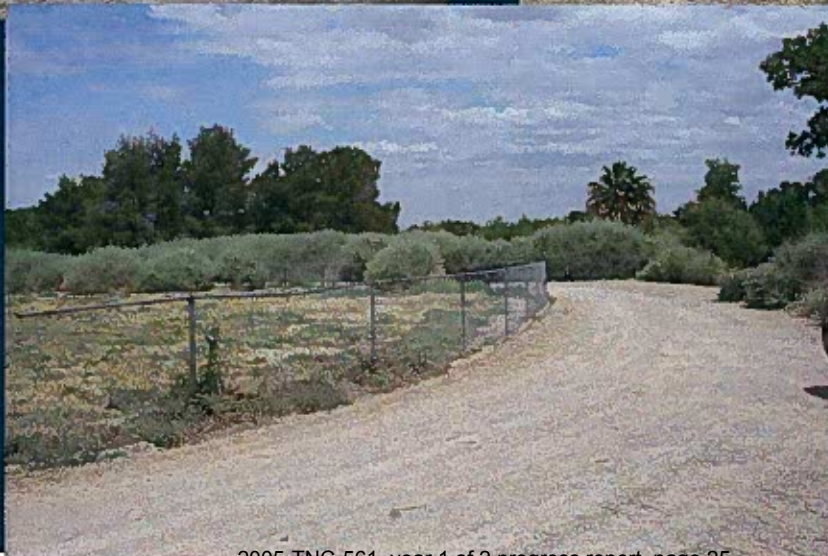
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Contract with MRREIAC for removal of Salt Cedar and Russian Knapweed on
Properties not included in TNC-572-P; Henrie



Implementation of Methods: Road Maintenance

Maintaining passable roads at the Alamo & Perkins properties



Implementation of Methods: Inspect the Henrie property and the disjointed Shirley Perkins Property

Regular visits to both properties: central goals at both properties are to preserve, restore and protect the Mesquite-Bosque habitat.

Views at the Henrie in different seasons



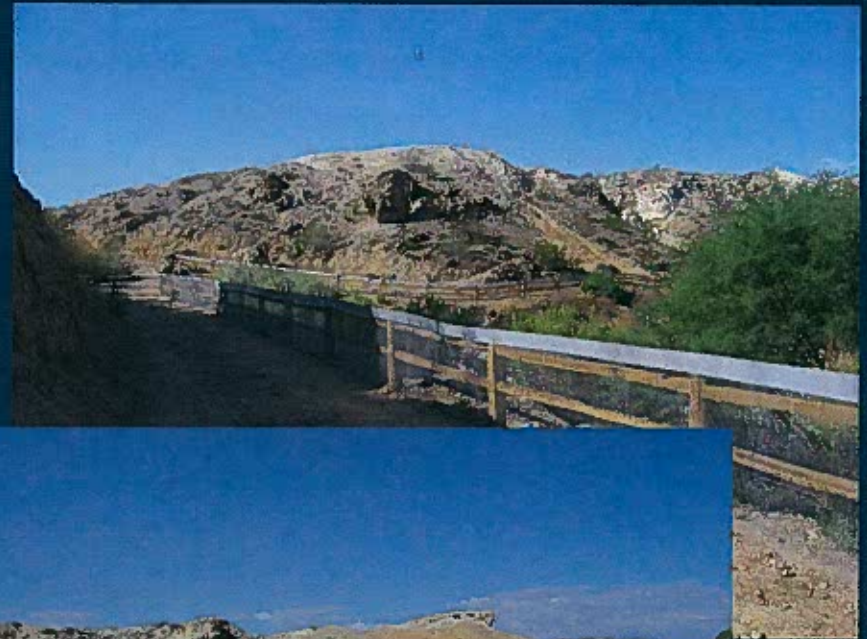
Implementation of Methods: Inspect the Henric property and the disjointed Shirley Perkins Property



Implementation of Methods: Pond Maintenance

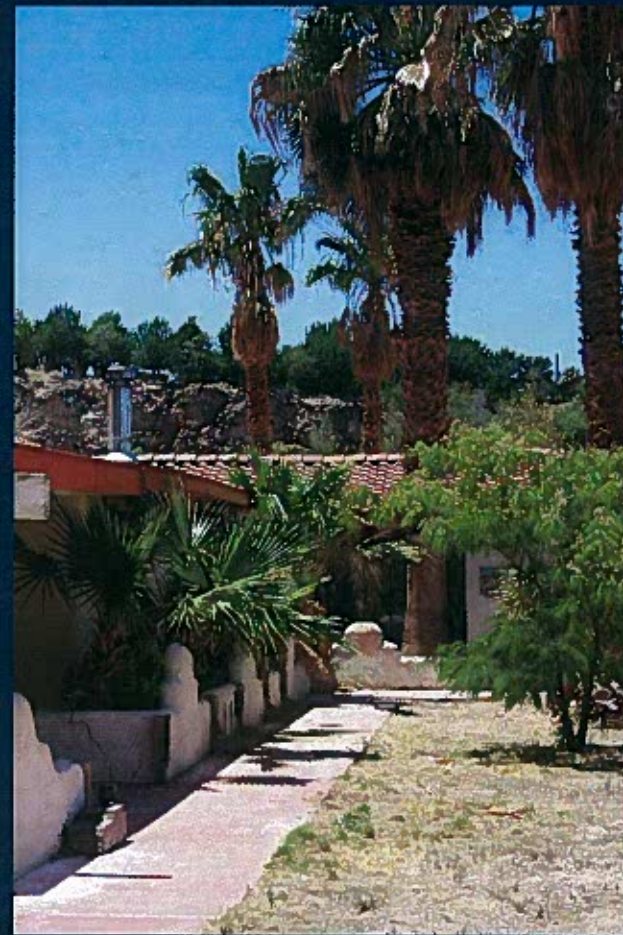
Maintain water levels, maintain pump

Most recently, worked with NDOW and BLM to establish relic leopard frog refugium



Implementation of Methods: Alamo House

Maintaining house in good condition: inspect on regular basis, trimming skirts of palm trees to limit fire threat.



Implementation of Methods: Tree and Nursery Maintenance

Trimming of trees to protect human safety; Tracking amount of nursery stock remaining on property



Implementation of Methods: Swimming Hole at Alamo

Construction of fence to prevent easy access to the area; Bank stabilization project

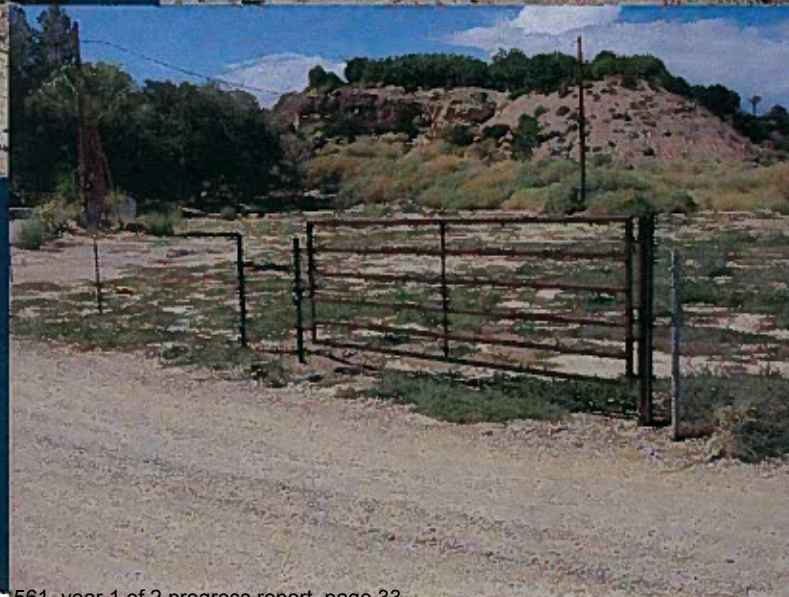
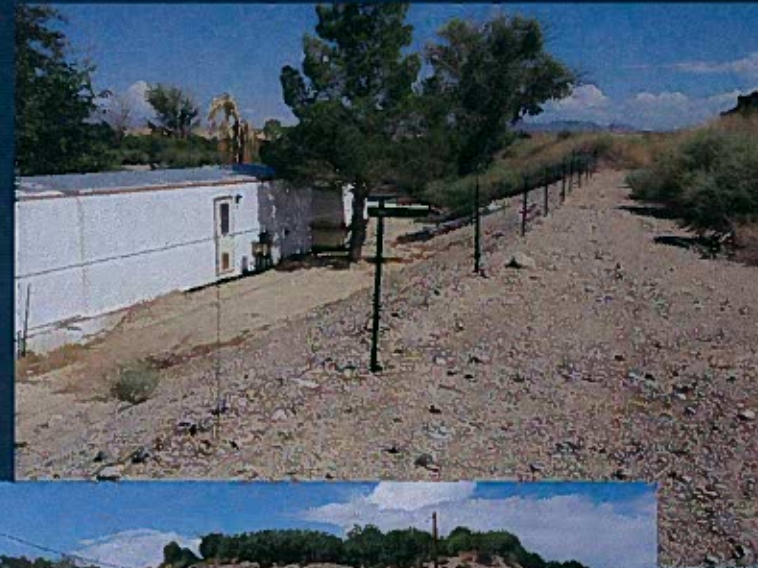


Bank stabilization project



Construction of fence at Perkins property

In order to better delineate TNC property from in holding property at Perkins, a fence was constructed.



Overview of Implementation from April 2008 - Present

- ✿ Substantial amounts of salt cedar and knapweed have been removed.
- ✿ Roads have been maintained allowing access by staff and neighbors
- ✿ Henrie and the disjoint Shirley Perkins have been inspected. The disjoint Perkins Property condition has remained good, while the Henrie has been substantially improved by removal of salt cedar
- ✿ Perkins Pond has been maintained with appropriate water levels, and most recently TNC has cooperated with NDOW and BLM to prepare the pond for use as a relic leopard frog refugium
- ✿ The Alamo House has been maintained; the skirts of the palm trees have been trimmed
- ✿ Trees and nursery stock have been maintained and trimmed
- ✿ There is a new fence at the swimming hole, and the bank has been stabilized
- ✿ Fencing has been erected at the Perkins property to delineate boundary along in-holding

Conclusion

- ❖ Because these properties are along the upper Muddy River and located in the floodplain along the upper Muddy River, acquisition and subsequent maintenance contributes to the vitality of the system by encouraging native vegetation. This contract has resulted in management that is maximizing the conservation value of these properties to the extent possible at this time.
- ❖ TNC is grateful to Clark County for having the vision to not only acquire these properties, but to provide funding to properly manage these properties for the benefit of the upper Muddy River.