

MUDDY RIVER PROPERTY MANAGEMENT



**FINAL REPORT TO THE CLARK COUNTY'S DESERT CONSERVATION PROGRAM
CONTRACT 2005-TNC-561-P**

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Executive Summary

The upper Muddy River has the highest concentration of riparian species in Clark County that are endangered and/or regarded as species of concern. The Nature Conservancy (TNC), using funds provided by Clark County, acquired fee title of three properties in the Upper Muddy River flood plain, the Alamo, Shirley Perkins, and Henrie properties. With these acquisitions came the need to provide for property management. Property management entails a range of activities including, but not limited to: weed removal and control, maintenance of existing structures, maintenance of existing roads, maintenance of a pond at Perkins, stabilization and maintenance as necessary of banks along the floodplain, and fence construction and maintenance.

TNC initiated property management as part of this contract on April 29, 2008, which is scheduled to come to a conclusion on December 31, 2010.

Through regular land steward and property management visits, TNC was able to address basic property management activities and assess other future property management needs. Quarterly reports were completed and submitted to Clark County keeping them informed of the status of the properties and ongoing activities. Major projects that were accomplished in addition to basic property management activities are highlighted below.

- Construction of a fence located along the roadside at Alamo to prevent unauthorized access to the swimming hole, which was completed on June 24, 2008.
- Salt cedar removal and treatment by Muddy River Regional Ecological Impact Alleviation Committee (MRREIAC) on the Alamo, Shirley Perkins and Henrie properties in areas that were not included in the Effectiveness Monitoring for Saltcedar and Knapweed on the Upper Muddy River Floodplain project. The work was completed on August 26, 2009.
- Construction to stabilize the bank at the swimming hole on Alamo property which was completed May 4, 2009.
- TNC entered into a cooperative agreement with BLM and NDOW which allowed Perkins Pond to become a Relict Leopard Frog refugium. After the pond was adequately prepared Relict Leopard frog tadpoles were released into the pond on May 11, 2010.
- Clark County determined that the Alamo house should be removed as a step towards future restoration efforts on the property. Demolition of the house, utility building and cement pads was completed on September 15, 2010.

TNC was diligent in ensuring that the properties were not only maintained, but improved when reasonable and appropriate resources were available. Future objectives for management of the properties include conducting an assessment which would guide future restoration efforts. In addition, collaboration on management of the properties with adjacent land owners such as Bureau of Land Management or Southern Nevada Water Authority would aid in our efforts to create and enhance habitat for native fauna with the added benefit of being contiguous.

Introduction

Background and Need for the Project

A priority for the Clark County Multiple Species Habitat Conservation Plan (MSHCP) is to take proactive steps to reduce the likelihood of future species or critical habitat listings 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. The upper fifteen miles of the Muddy River watershed are primarily in private, corporate, or tribal ownership. The Nature Conservancy (TNC), using funds provided by Clark County, acquired fee title of three properties in the Upper Muddy River flood plain. These properties, totaling roughly 110 acres, are the Alamo, Shirley Perkins, and Henrie properties. These acquisitions added a small but strategic number of acres into conservation ownership. With these recent acquisitions came the need to provide for property management. Property management entails a range of activities including, but not limited to: weed removal and control, maintenance of existing structures, maintenance of existing roads, maintenance of a pond at Perkins, stabilization and maintenance as necessary of banks along the floodplain, and fence construction and maintenance.

Goals and Objectives

Protection and restoration of both mesquite-catclaw ecosystems and desert riparian ecosystems are included as potential conservation and mitigation activities in the Clark County MSHCP.

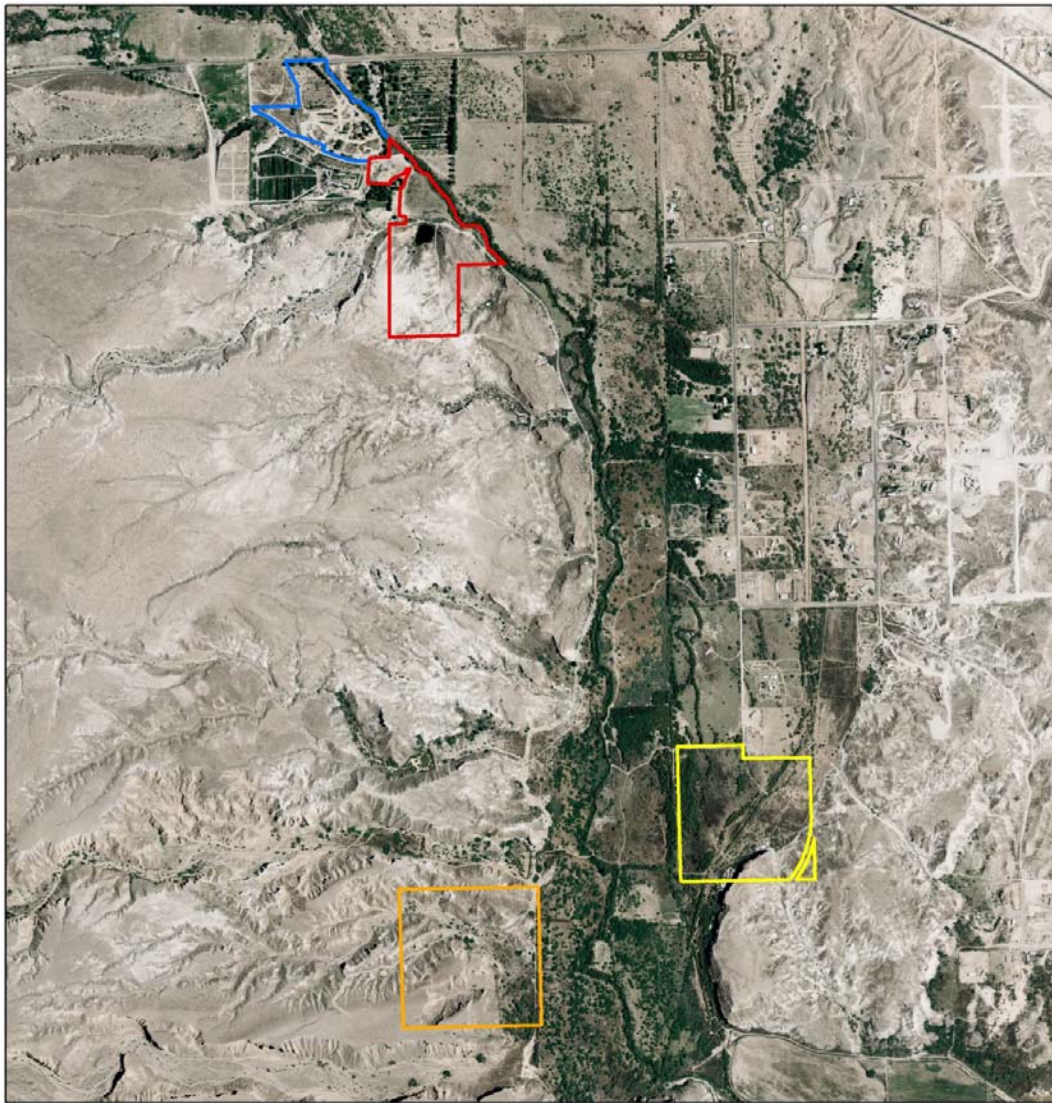
Methods and Materials

The Nature Conservancy (TNC) was contracted to provide property management on the three properties that were owned by TNC, which were the Alamo, Shirley Perkins and Henrie properties (Figure 1). Property management activities commenced on April 29, 2008, and are scheduled to end on December 31, 2010. Our land steward ensured that basic property management activities were addressed through regular site visits to the properties. Additional visits were made by property management to review the properties as well as assess future needs of the properties. For activities that needed additional expertise TNC entered into contracts initiated with Work Authorization Forms. Beyond fundamental property management activities TNC performed the following activities:

- Remove all invasive vegetation from the properties with the exception of the areas that were included in the 2005-TNC-572 Effectiveness Monitoring for Saltcedar and Knapweed on the Upper Muddy River Floodplain project.
- Ensured that the dirt roads on the Shirley Perkins and Alamo properties were passable.
- Inspect the Henrie and disjointed Shirley Perkins properties at least quarterly.
- Ensured that the water levels in the pond located on the Shirley Perkins property were adequate for use by wildlife. In addition, the water pump was inspected regularly for proper function and repaired when needed.
- Ensured that the house on the Alamo property was maintained, until the date that it was deemed necessary to be removed.

- Conducted tree and nursery maintenance which included palm tree skirt trimming and removing dead nursery trees when needed.
- Maintain the swimming hole located on the Alamo property which included fencing to prevent public access and hiring a contractor to perform bank stabilization activities.

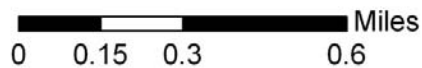
TNC submitted quarterly reports to provide updates on the progress of these activities which included photo verification.



Parcels

-  Alamo
-  Disjoint Perkins
-  Henrie
-  Perkins

Images: 2006 USDA NAIP



Results

TNC's property management major activities were initiated with the construction of a fence located along the roadside at Alamo to prevent unauthorized access to the swimming hole, which was completed on June 24, 2008. Another WAF was entered in order to acquire the supplies to build a fence between the Perkins property and the neighbor to clarify property boundaries which was completed on August 5, 2008.

A contract was initiated with Muddy River Regional Ecological Impact Alleviation Committee (MRREIAC) to remove salt cedar on the Alamo, Shirley Perkins and Henrie properties in areas that were not included in the Effectiveness Monitoring for Saltcedar and Knapweed on the Upper Muddy River Floodplain project. The work was completed on August 26, 2009.

In early 2009 it was determined that the riverbank adjacent to the swimming hole had eroded several feet and would likely continue to erode without intervention. A WAF was initiated and a contractor was selected to stabilize the bank with rip rap and to open the small dam that was allowing the river to flow around the dam causing increased erosion during high flows. The bank stabilization was followed up with native plantings of willow and Yerba mansa. The bank stabilization was complete by May 4, 2009.

TNC entered into a cooperative agreement with Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW) in April 2009 that allowed for BLM and NDOW to prepare the Perkins Pond to become a Relict Leopard Frog refugium. This entailed draining the pond and letting it remain dry to ensure that there were no bullfrogs or other predatory animals in or around the pond that might impact the long-term success of the Relict Leopard Frog. Simultaneously BLM was preparing to install a fence to prevent bullfrogs or other predatory animals from entering the pond which was completed in August 2010. Relict leopard frog tadpoles were released into the pond on May 11, 2010.

In early 2010 Clark County determined that the Alamo house should be removed as a step towards future restoration efforts on the property. A WAF was initiated and a contractor was selected that would demolish the house, utility room, and cement pad and recycle as much of the materials as was reasonable. Demolition was initiated on September 8, 2010, and completed on September 15, 2010.

Evaluation

TNC successfully managed the three properties from April 29, 2008, to the current date in order to maintain and improve the properties as habitat for native flora and fauna. During our property management activities we worked to minimize invasive species growing on the properties which included salt cedar, Russian knapweed, and Russian thistle. TNC worked with NDOW and BLM to successfully create protected habitat for a species of concern listed under the MSHCP. We stabilized the river bank near the swimming hole so that it would cease to further erode. Finally we removed the house on the Alamo property, which will contribute to future restoration activities on the property.

Conclusion/Recommendations

Future objectives for property management of the properties includes conducting an assessment which will guide restoration activities on the properties similar to the assessment conducted by Provencher et al. (2005), but specific to the Alamo, Shirley Perkins and Henrie parcels. In addition, collaboration on management of the properties with adjacent land owners such as BLM or Southern Nevada Water Authority would aid in our efforts to create and enhance habitat for native fauna with the added benefit of being contiguous.

Although TNC was able to maintain and accomplish some improvements during the tenure of the property management contract, it would take significant amounts of funding to accomplish broad scale restoration of the properties.

Literature Cited

Provencher, L., S. Wainscott, and R. Andress. 2005. Integrated Science Assessment for the Upper Muddy River, Clark County, Nevada. Final report to the Clark County Multiple Species Habitat Conservation Plan. The Nature Conservancy, Reno, Nevada.