



desert conservation  
PROGRAM



2007-2009  
biennium progress report



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## desert conservation PROGRAM

### *Letter from the Program Manager...*

Dear Friends and Colleagues:

With another biennium closing, I can't help but reflect on past accomplishments and future goals. The 2007 – 2009 biennium has been a productive period for the Clark County Desert Conservation Program (DCP), but also a time of significant change.

The DCP managed over 100 conservation projects over the last two years, totaling nearly \$19 million, and collected and verified more than \$5.5 million in mitigation and federal fees. In addition, the DCP initiated efforts to amend the 2001 Multiple Species Habitat Conservation Plan and incidental take permit. The goals of this effort are to address the structure of the program, obtain coverage for developable acres not currently covered, re-evaluate the covered-species list and revise conservation strategies. We believe this effort will enhance the DCP's efficiency and effectiveness.

Nothing proves the need to be more effective and efficient than the nationwide economic downturn, which really came home to southern Nevada over the last two years. Fewer tourists were visiting, gaming revenues were down, and difficult credit-market conditions made it hard for development projects to continue. Las Vegas experienced a record 13% unemployment rate as the biennium came to a close, nearly double the rate of the year before. After 20 years of experiencing unprecedented growth, the DCP experienced a 67.6% decrease in mitigation funds due to decreased acres being developed.

The biennium has also brought renewed collaboration among the Permittees (Cities of Boulder City, Henderson, Las Vegas, Mesquite, and North Las Vegas; and Nevada Department of Transportation) as we gather to work through the amendment process and grapple with the new issues facing our communities. As part of this renewed collaboration we've adopted a new logo and image for the program. The logo demonstrates our connectivity as a community and our link to the natural environment.

As we consider the past, we remain proud of all that we've been able to accomplish to date as part of this program. As we move to the future, the need for effective and sustainable mitigation actions stays in the forefront of our minds.

With my regards,

Marci D. Henson  
Desert Conservation Program Manager

respect, protect and enjoy our desert!

333 North Rancho, Suite 625, Las Vegas, NV 89106 • Phone (702) 455-0374 • Fax (702) 382-4593



## INTRODUCTION

As required in Section 2.12.2.7 of the Clark County Multiple Species Habitat Conservation Plan (MSHCP), this document represents a composite final biennium progress report for the period July 1, 2007 through June 30, 2009. The biennial progress report is compiled every two years and provides a summary of progress by agencies and contractors implementing approved conservation projects, reports land disturbance activities and revenues generated as a result of those activities, and provides an accounting of expenses incurred and desert tortoise activities implemented during the two-year period.

### DESERT CONSERVATION PROGRAM HISTORY

The Clark County Desert Conservation Program (DCP) was initiated in 1989 following the listing of the desert tortoise (*Gopherus agassizii*) as threatened under the Endangered Species Act (ESA). The listing occurred as a result of illegal collection, vandalism, disease, urban growth, road construction and irresponsible off-road vehicle use throughout desert tortoise habitat. The ESA prohibits the "take" of any threatened or endangered species listed pursuant to the ESA. Take is broadly defined by the ESA as equivalent to "harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect."

The DCP is responsible for ensuring compliance with the Section 10(a)(1)(B) incidental take permit (Permit) and Multiple Species Habitat Conservation Plan (MSHCP) issued to Clark County and the Permittees (the cities of Boulder City, Henderson, Las Vegas, Mesquite and North Las Vegas; and the Nevada Department of Transportation) in 2001. The incidental take permit exempts the Permittees from the prohibited take provisions of the ESA (Section 9). More specifically, the Permit allows private property owners to develop land in Clark County without individual project consultations with the United States Fish and Wildlife Service (FWS).

The MSHCP and Permit allow for the disturbance (development) of up to 145,000 acres of non-federal (private) lands in Clark County and provide coverage for the incidental take of covered species listed in the Permit. As a condition of the Permit and as defined in the MSHCP, the Permittees have agreed to mitigate future potential impacts on and assist in the recovery of a broad range of other species residing in all of the habitats located within Clark County and reduce the likelihood that additional covered species will need to be listed as threatened or endangered in the foreseeable future.

There are 78 federal and state listed species covered by the MSHCP, including the federally listed desert tortoise and Southwestern willow flycatcher (*Empidonax traillii extimus*), and the Nevada state listed Las Vegas bearpoppy (*Arctomecon californica*). Clark County serves as Plan Administrator on behalf of the Permittees. The Permit is valid for 30-years from the date of approval by the FWS.

### 2007-2009 BIENNIUM PROGRESS REPORT

Clark County is required to collect and expend mitigation funds to implement conservation actions in accordance with terms outlined in the MSHCP and associated incidental take permit. The MSHCP provides funding for conservation projects to various federal, state, and local agencies, nonprofit organizations and private contractors from mitigation fees collected pursuant to Section 10 of the ESA, Section 7 of the ESA on behalf of the U.S. Fish and Wildlife Service (FWS), and proceeds from the disposal of federal land in Clark County authorized by the Southern Nevada Public Lands Management Act (SNPLMA).

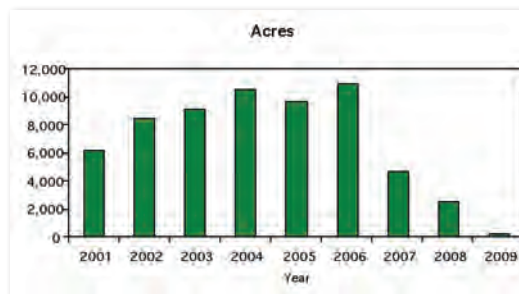
### PROJECTS AND EXPENDITURES

During the 2007-2009 biennium Clark County administered a total of 115 projects and/or contracts totaling \$19,143,603.28 to 49 agencies and contractors. See financial reports section of this document for a breakdown of expenditures by each funding source.

## LAND DISTURBANCE AND REVENUES GENERATED

In cooperation with the cities of Henderson, North Las Vegas, Las Vegas, Boulder City, Mesquite, and the Nevada Department of Transportation, Clark County tracks land disturbance through the permitting processes within each entity's jurisdiction. In summary, 4,780 acres were disturbed under Section 10, generating \$2,600,887, and 3,034 acres were disturbed under Section 7, generating \$2,955, 923, during the period from July 1, 2007 through June 30, 2009. During this time period \$3,783,198 was generated in interest for Section 10 and \$1,310,774 was generated in interest for Section 7.

During the next biennium, the Permittees anticipate that disturbance activities will be down significantly from previous bienniums. As the figure below demonstrates, the amount of disturbance has declined precipitously since 2007 as a result of the national economic recession. The weakening of the local development market is expected to continue through 2010. As a result, the Permittees are projecting revenues in the program during the 2009-2011 biennium to be substantially lower than previous years. Clark County is taking steps to adjust program expenditures to reflect the decline in revenues during upcoming bienniums. (2009-2011 Implementation Plan and Budget provides further explanation and a copy is available at: [http://www.accessclarkcounty.com/depts/daqem/epd/dcp/Documents/20081121\\_FinalReportWithAttachments.pdf](http://www.accessclarkcounty.com/depts/daqem/epd/dcp/Documents/20081121_FinalReportWithAttachments.pdf) ).



## PROJECT REPORTING PROCESS

Agencies and contractors receiving funding for the 2007-2009 biennium were required to submit quarterly reports and one final project report to DCP Program Administrator. These reports are collected and posted on the Clark County DCP website (<http://www.accessclarkcounty.com/depts/daqem/epd/Pages/dcpactiveprojects.aspx>). The Permittees are also required to maintain monthly Disturbance and Fee Reports per Section 2.12.2.2 of the MSHCP. The final draft of this biennium report will be formally submitted to the FWS.

The 2007-2009 biennium progress report includes a brief summary of each project, including the name of the agency or contractor, project description, project status, partners, contact, funding awarded and contract term, where applicable.

## USES FOR THIS REPORT

This report will be used to comply with the requirements of the MSHCP as outlined in Section 2.12.2 "Reporting" of the MSHCP, and to reaffirm Clark County's commitment as a steward of the plan and the DCP. In addition, the report will be used to clearly document accomplishments, recommendations and fiscal activities of the program. Finally, it will aid in planning future program activities as the DCP matures and provide a benchmark from which to measure future progress.

To obtain further information about the Clark County Desert Conservation Program, please write to Clark County Department of Air Quality and Environmental Management, 500 S. Grand Central Parkway, Las Vegas, NV 89155, call at (702) 455-5942, or visit the website at: [http://www.accessclarkcounty.com/depts/daqem/epd/pages/desert\\_index.aspx](http://www.accessclarkcounty.com/depts/daqem/epd/pages/desert_index.aspx).



# MASTER LIST OF PROJECTS





# CLARK COUNTY DESERT CONSERVATION PROGRAM 2007-2009 BIENNIUM PROGRESS REPORTS

Sorted by project number

FUNDING SOURCE	BN/ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/NOTES	REPORT INCLUDED
SNPLMA	R4	USFS	196A	2003-USFS-SMNRA-196A	Spring Mountain National Recreation Area Landscape Assessment	\$679,082	Completed	Phase II 11/06/07-08/31/08	Yes
SNPLMA	R4	PIC	319	2003-PIC-319	OHV Videos	\$99,700	Completed	10/16/07-08/30/08	Yes
S10	03-05	USFS	322	2003-USFS-322	Seed Collection of Rare and Native Species	\$565,970	Completed	Umbrella Project Number (no additional work initiated after 05-07)	No
SNPLMA	R4	USFS	344A	2003-USFS-344A	Ecological Site Inventory for the Spring Mountains Ecosystem	\$88,500	Completed	08/15/06-12/31/07	Yes
SNPLMA	R4	PIC	348	2003-PIC-348	Desert Conservation Week Pilot Program	\$20,500	Completed	09/28/06-06/30/08	Yes
SNPLMA	R4	ENTRIX	350A	2003-ENTRIX-350A	Virgin River Conservation Assessment	\$1,229,600	Completed	04/04/06-08/29/08	Yes
SNPLMA	R4	Outside Las Vegas Foundation	350B	2003-OLV-350B	Virgin River Partnership Facilitator	\$20,000	Completed	04/06/07-06/30/08	Yes
SNPLMA	R4	BLM	361	2003-BLM-361	Evaluating Impacts of Cattle Grazing on Vegetation	\$160,200	Completed	01/06/04-02/28/06	Yes
SNPLMA	R4	SNPLMA	380	2003-CC-380	Conservation Management Strategy Development	\$500,000	Completed	Umbrella Project Number (no additional work initiated after 05-07)	No
SNPLMA	R4	CC	439	2003-CC-439	MSHCP Adaptive Management Program Coordination, Science Advice and Effectiveness Monitoring Strategy (with UNR BRRC, SWCA, USGS, & Others)	\$1,593,015	Completed	08/16/01-08/30/08	Yes
SNPLMA	R6	NPS	475	2005-NPS-475	Peregrine Falcon Monitoring at Lake Mead NRA	\$30,120	In Progress	03/04/08-06/04/10	Yes
SNPLMA	R6	NPS	476	2005-NPS-476	Relict Leopard Frog Monitoring and Management	\$333,000	In Progress	09/04/07-12/04/10	Yes
SNPLMA	R6	USFS-SMNRA	486	2005-USFS-SMNRA-486	Annual Inspection and Maintenance of Riparian Protective Fencing within the Spring Mountains National Recreation Area	\$204,045	De-obligated	De-obligated	No
SNPLMA	R6	USFS-SMNRA	488	2005-USFS-SMNRA-488	Monitoring of Northern Goshawks and Owls within the Spring Mountains National Recreation Area	\$31,307	De-obligated	De-obligated	No
S10	05-07	USFS-SMNRA	490	2005-USFS-SMNRA-490	Bristle Cone Habitat Protection for MSHCP Covered Species on the Spring Mountains National Recreation Area	\$83,780	Completed	07/05/05-11/30/07	Yes
SNPLMA	R6	BLM	497	2005-BLM-497	Rare Plant Inventories	\$414,356	Re-allocated	See 497B	No
SNPLMA	R6	Jones and Stokes	497B	2005-JS-497B	Rare Plant Inventories	\$414,356	In Progress	03/29/09-03/31/11	Yes
SNPLMA	R6	BLM	498	2005-BLM-498	GIS Support	\$645,488	De-obligated	De-obligated	No
SNPLMA	R6	BLM	499	2005-BLM-499	Support of the Virgin River Conservation Management Strategy	\$256,623	Not Started	Not Started	No
SNPLMA	R6	BLM	502	2005-BLM-502	Sediment Transport of Source Materials to White-margined Penstemon	\$1,192,522	Partially Re-allocated and De-obligated	See 502A	No
SNPLMA	R6	Nevada System of Higher Education (NSHE)	502A	2005-NSHE-502A	Sediment Transport of Source Materials to White-margined Penstemon Habitat	\$800,553	In Progress	05/01/07-04/01/10	Yes
SNPLMA	R6	BLM	503	2005-BLM-503	Roads Monitoring on BLM Lands	\$432,589	Not Started	Not Started	No

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/ NOTES	REPORT INCLUDED
SNPLMA	R6	USFS-SMNRA	515	2005-USFS-SMNRA-515	Inventory for Covered Plant Species in the Spring Mountains National Recreation Area and adjacent lands.	\$282,426	De-obligated	De-obligated	No
SNPLMA	R6	NPS	525	2005-NPS-525	Lake Mead GIS and Data Management Support	\$312,788	In Progress	01/02/07-06/10/10	Yes
SNPLMA	R6	NPS	526	2005-NPS-526	Monitoring of Illegal Ground Disturbance in Response to Management Actions	\$105,287	In Progress	02/19/08-06/30/10	Yes
SNPLMA	R6	NPS	529	2005-NPS-529	Monitoring and Road Conditions and Signs	\$114,737	In Progress	02/19/08-06/30/10	Yes
SNPLMA	R6	USFS-SMNRA	531	2005-USFS-SMNRA-531	Forest Service GIS Support of MSHCP applications	\$24,300	De-obligated	De-obligated	No
SNPLMA	R6	NPS	532	2005-NPS-532	Threats, Research and Monitoring on the Invasive Species Sahara mustard	\$101,009	Not Started	Not Started	No
SNPLMA	R6	USFS-SMNRA	534	2005-USFS-SMNRA-534	Monitoring Rare Plant Species on the Spring Mountains NRA	\$179,396	De-obligated	De-obligated	No
SNPLMA	R6	NPS	535	2005-NPS-535	Inventory, Research, and Monitoring for Covered Plant Species	\$347,054	In Progress	10/02/07-06/10/10	Yes
SNPLMA	R6	NPS	536	2005-NPS-536	Inventory, Research, and Monitoring of Evaluation and Watch Plant Species on Lake Mead NRA and adjacent lands.	\$163,277	In Progress	02/05/08-06/30/10	Yes
SNPLMA	R6	NPS	537	2005-NPS-537	Interagency Week Sentry Project	\$905,688	In Progress	09/18/07-02/18/10	Yes
SNPLMA	R6	NPS	540	2005-NPS-540	Bald Eagle Monitoring	\$21,589	In Progress	01/02/08-04/10/10	Yes
SNPLMA	R6	NPS	542	2005-NPS-542	Historical and Current Assessment of Six Covered and Three Evaluation Bird Species	\$219,903	In Progress	10/16/07-10/15/10	Yes
SNPLMA	R6	CC	544P	2005-CC-544P	Desert Conservation Program Administration	\$3,646,949	In Progress	2/14/07-2/14/12	Yes
SNPLMA	R6	NPS	545	2005-NPS-545	Desert Tortoise Monitoring and Management at Lake Mead NRA	\$37,609	De-obligated	De-obligated	No
S10	05-07	CC	546	2005-CC-546	Boulder City Conservation Easement Plan	\$30,000	In Progress	Umbrella Project Number See 546A	No
S10	05-07	CC	546A	2005-WATASH-546A	Boulder City Conservation Easement Plan	\$30,000	In Progress	01/20/08-10/20/09	Yes
S10	05-07	CC	548	2005-CC-548	Conservation Management Strategy Development	\$650,000	Completed	Umbrella Project Number (no additional work initiated after 05-07)	No
SNPLMA	R6	NDOW	549	2005-NDOW-549	Peregrine Falcon Monitoring in Clark County	\$25,611	In Progress	04/07/09-03/31/11	Yes
SNPLMA	R6	USGS	551	2005-USGS-551	Effectiveness Monitoring of Fuel Management Treatments in the Spring Mountains National Recreation Area	\$321,501	In Progress	03/04/08-08/31/10	Yes
SNPLMA	R6	UCSB	552	2005-UCSB-552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959	In Progress	12/16/08-05/31/11	Yes
SNPLMA	R6	USGS	552	2005-USGS-552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959	Re-allocated	See 552	Yes
SNPLMA	R6	CC	553	2005-CC-553	Media and Outreach Development (Includes sub-projects 553-1 through 553-9)	\$240,000	In Progress	09/01/07-06/30/10	Yes
SNPLMA	R6	Natural Heritage Program	557	2005-NHP-557	Sensitive species Data Management	\$180,000	In Progress	06/16/09-10/01/11	Yes

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/ NOTES	REPORT INCLUDED
SNPLMA	R6	CC	559	2005-CC-559	Mojave Max Emergence Contest Partnership and Partnership Development	\$440,000	In Progress	Umbrella Project Number See 559A	No
SNPLMA	R6	RRCIA	559A	2005-RRCIA-559A	Mojave Max Emergence Contest Partnership and Partnership Development	\$400,000	In Progress	09/04/07-12/31/11	Yes
SNPLMA	R6	TNC	561	2005-TNC-561	Muddy River Property Management Acquisition and Partner Coordination	\$271,000	In Progress	04/15/08-12/31/10	Yes
S07	05-07	CC	562	2005-CC-562	Retro Fencing Projects	\$792,000	In Progress	Umbrella Project Number	Yes
S07	05-07	NDF	562A	2005-NDF-562A	Fencing Projects	\$200,000	In Progress	01/30/06-08/15/08 See 562	No
S07	05-07	American Fence	562B	2005-AMERICANFENCE-562B	Fencing Materials	\$123,970	Completed	03/20/07-03/19/08 See 562	No
S07	05-07	NDF	562E	2005-NDF-562E	Fencing Projects	\$200,000	In Progress	08/16/08-08/15/09 See 562	No
S07	05-07	CC	563	2005-CC-563	New Fencing Projects	\$1,500,000	In Progress (De-obligated \$1,420,000)	Umbrella Project Number See 562	No
S07	05-07	American Fence	563A	2005-AMERICANFENCE-562B	Fencing Materials	\$123,970	Completed	03/20/08-03/19/09 See 564	No
S07	05-07	CC	564	2005-CC-564	Fencing Monitoring and Maintenance Projects	\$80,000	In Progress	Umbrella Project Number See 562	No
S07	05-07	NDOT	564A	2005-NDOT-564A	Repair Existing Fencing at BCCE	\$10,000	Completed	07/03/08-06/30/09 See 562	No
SNPLMA	R6	UNR-BRRC	567	2005-UNR-567	Epidemiology of Desert Tortoise	\$779,726	In Progress	7/17/2007-11/01/09	Yes
SNPLMA	R6	UNR-BRRC	569	2005-UNR-569	Assessment of Listed and Other species of Concern at the Urban Edge	\$550,128	De-obligated	De-obligated	No
SNPLMA	R6	UNR	570	2005-UNR-570	Red Rocks to the Summit Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$115,700	Cancelled	03/22/07-11/30/09 (Terminated 03/14/08) See 570B	No
SNPLMA	R6	CC	570B	2005-CC-570B	Butterfly Monitoring in Spring Mountains	\$127,270	In Progress	Umbrella Project	Yes
SNPLMA	R6	SWCA	570A	2005-SWCA-570A	Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$11,570	In Progress	03/19/08-10/31/08 See 570B	No
SNPLMA	R6	TNC	572	2005-TNC-572	Effectiveness Monitoring for Saltcedar and Knapweed Control on the Upper Muddy River Floodplain	\$594,991	In Progress	04/09/08-05/31/10	Yes
SNPLMA	R6	CC	574	2005-CC-574	Adaptive Management Program	\$3,245,369	In Progress	Umbrella Project Number See 439	No
SNPLMA	R6	DRI	574A	2005-DRI-574A	Science Advisor	\$1,700,000	In Progress	06/05/07-06/30/09 See 439	No
SNPLMA	R6	USGS	574B	2005-USGS-574B	Expert Advice	\$430,000	In Progress	07/03/07-09/01/10 See 439	No

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/ NOTES	REPORT INCLUDED
SNPLMA	R6	Remortel	574D	2005-Remortel-574D	GIS Soils Data	\$24,000	In Progress	11/12/07-11/12/09 See 439	No
SNPLMA	R6	Mulder	574E	2005-Mulder-574E	Independent Science Review	\$20,000	Completed	11/19/07-6/30/09 See 439	No
SNPLMA	R6	TNC	574F	2005-TNC-574F	Rare Plant Workshop	\$19,521	Completed	4/21/08-6/30/09 See 439	No
SNPLMA	R6	TSG	574L	2005-TSG-574L	Remote Sensing	\$25,000	In Progress	9/1/08-9/1/09 See 439	No
SNPLMA	R6	Sound Science	574M	2005-SoundScience-574M	Peer Review for MSHCP Documents	\$16,000	In Progress	3/1/09-6/20/2010 See 439	No
SNPLMA	R6	UNLV	575	2005-UNLV-575	Connectivity of Leopard Frog Populations	\$147,836	In Progress	08/07/07-03/19/10	Yes
SNPLMA	R6	UNR	576	2005-UNR-576	Movements and Barriers to Movement for Desert Tortoise	\$719,210	Completed	07/17/07-01/31/09	Yes
SNPLMA	R6	PIC	577	2005-PIC-577	PIC and Volunteer Support for BLM Roads Monitoring Project	\$354,200	Not Started	Not Started	No
SNPLMA	R6	UNR	578	2005-UNR-578	Ecosystem Indicators: Change Indicators	\$1,300,000	In Progress	11/05/08-06/01/11	Yes
SNPLMA	R6	USGS	580	2005-USGS-580	Long-term Conservation Strategy for Palmer's Chipmunk	\$276,447	In Progress	02/09/08-12/19/10	Yes
SNPLMA	R6	GBBO	581	2005-GBBO-581	Developing Habitat Models and Monitoring Techniques for Nine Rare Bird Species of the Clark County MSHCP	\$719,940	In Progress	10/16/07-12/31/13	Yes
SNPLMA	R6	USGS	582	2005-USGS-582	Population Status and Reproductive Ecology of the Western Burrowing Owl	\$415,051	In Progress	11/20/07-06/20/10	Yes
SNPLMA	R6	USDA-ARS	583	2005-UDA-ARS-583	Native Bee Pollinators: Status and Plant Relationships	\$261,696	Not Started	Not Started	No
SNPLMA	R6	UNR	585	2005-UNR-585	Desert Tortoise Monitoring	\$1,217,072	In Progress	04/30/07-11/02/09	Yes
SNPLMA	R6	USFWS	585A	2005-USFWS-585A	Desert Tortoise Monitoring	\$1,372,218	In Progress	09/18/07-10/01/09	Yes
SNPLMA	R6	UNR_BRRRC	588	2005-UNR-BRRRC-588	The Distribution and Abundance of Upland Amphibians and Reptiles	\$1,029,070	De-obligated	De-obligated	No
SNPLMA	R6	USFWS	593	2005-USFWS-593	U.S. Fish and Wildlife Service GIS Support, Data Management and Coordination	\$90,100	De-obligated	De-obligated	No
SNPLMA	R6	USFWS	595	2005-USFWS-595	Establishment of Rana onca Population in a Created Aquatic Habitat	\$200,195	De-obligated	De-obligated	No
SNPLMA	R6	USDA_ADC	596	2005-USDA-ADC-596	Distribution and Movements of common Ravens in Relation to Desert Tortoise Habitat	\$326,140	De-obligated	De-obligated	No
SNPLMA	R6	UNLV	597	2005-UNLV-597	Habitat Manipulations of Relict Leopard Frog Populations	\$87,267	Completed	01/16/07-05/01/09	Yes
S07	05-07	USDA-ADC	598-1	2005-USDA-ADC-598-1	Provide Assistance in the development and application of Wildlife Damage Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384	Completed	01/17/06-01/31/08, (Funded 1/2 57, 1/2 510 for a total of \$92,768)	Yes
S10	05-07	USDA-ADC	598-2	2005-USDA-ADC-598-2	Provide Assistance in the development and application of Wildlife Damage Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384	Completed	01/17/06-01/31/08, (Funded 1/2 57, 1/2 510 for a total of \$92,768) See 598-1	No

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/ NOTES	REPORT INCLUDED
SNPLMA	R6	Smithsonian	602	2005-SMITHSONIAN-602	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480	Re-allocated	See 602A	No
SNPLMA	R6	NTU	602A	2005-NTU-602A	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480	In Progress	03/17/09-04/15/11	Yes
SNPLMA	R6	CC	605	2005-CC-605	Volunteer Resource Stewardship Pilot Program	\$250,000	Not Started	Not Started	No
SNPLMA	R6	CC	606	2005-CC-606	Buckwheat and Bearpoppy Inventory	\$55,000	In Progress	Umbrella Project See 606A	No
SNPLMA	R6	CC	606A	2005-JS-606A	Buckwheat and Bearpoppy Inventory	\$55,000	In Progress	03/17/09-01/11/10	Yes
SNPLMA	R6	CC	607	2005-CC-607	Rick Analysis	\$100,000	De-obligated	De-obligated	No
SNPLMA	R6	CC	608	2005-CC-608	Effectiveness Monitoring for Conservation Actions	\$500,000	De-obligated	De-obligated	No
SNPLMA	R6	CC	609	2005-CC-609	Adaptive Management of Information Gathering and Analysis projects	\$500,000	In Progress	Umbrella Project Number See 475, 540, 542, 549	No
SNPLMA	R6	NPS	609A	2005-NPS-609A	Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species	\$133,500	In Progress	10/16/07-10/15/10 See 542	No
SNPLMA	R6	NPS	609B	2005-NPS-609B	Bald Eagle Monitoring	\$18,135	In Progress	01/02/08-03/02/10 See 540	No
SNPLMA	R6	NPS	609C	2005-NPS-609C	Habitat Modeling for Peregrine Falcon	\$14,853	In Progress	3/4/08-6/4/10 See 475	No
SNPLMA	R6	NDOW	609D	2005-NDOW-609D	Peregrine Falcon Modeling	\$14,000	In Progress	4/7/09-3/31/11 See 549"	No
SNPLMA	R6	NPS	609E	2005-NPS-609E	Inventory, Research, and Monitoring for Covered Plant Species Technical Conditions	\$23,500	In Progress	4/14/09-11/01/10 See 535	No
SNPLMA	R8	BLM	705	2007-BLM-705	Road Designation and Monitoring	\$223,061	Not Started	Not Started	No
S10	07-09	CC	711	2007-CC-711	Desert Conservation Program Administration	\$1,967,000	Completed	07/01/07-06/30/09 See 544P	No
S10	07-09	CC	714	2005-CC-714	Boulder City Conservation Easement (BCCE) Management Plan	\$300,000	In Progress	Umbrella Project Number	Yes
S10	07-09	Oliver, Robert	714A	2005-OLIVER-714A	BCCE Resource Protection	\$183,280	In Progress	06/19/07-06/18/09 See 714	No
S10	07-09	Boyd	714F	2005-Boyd-714F	BCCE Right of Way Consulting	\$12,650	In Progress	5/4/09-9/11/09 See 714	No
S10	07-09	CC	719	2007-CC-719	Desert Tortoise Transfer and Holding, Conservation Center, and Translocation	\$800,000	In Progress	Umbrella Project Number	Yes
S10	07-09	USFWS	719J	2007-USFWS-719J	Intake and Processing of Desert Tortoises	\$350,647	In Progress	12/18/07-08/31/09 See 719	No
S10	07-09	KNIGHT/ LEAVITT	719L	2007-KLA-719L	Desert Tortoise Pick Up Service	\$104,000	In Progress	09/23/08-09/23/10 See 719	No
S10	07-09	GBI	719K	2007-GBI-719K	Retro Fit Hatchling Pens	\$6,199	Completed	2/20/08-6/30/08 See 719	No

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	EXTENDED PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED	STATUS (7/1/07 through 06/30/09)	BN REPORT STATUS/ NOTES	REPORT INCLUDED
S10	07-09	CC	722	2007-CC-722	Acquired Lands and Water Rights	\$31,600	In Progress	Umbrella Project Number See 722A	No
S10	07-09	Buschelman, Michael	722A	2007-BUSCHELMAN-722A	Surface Water Rights Consulting	\$31,600	In Progress	12/17/07-01/31/12	Yes
S10	07-09	NDOT	737	2007-NDOT-737	Fencing Monitoring and Maintenance	\$300,000	Withdrawn	Withdrawn	No
S10	07-09	USFWS	785	2007-USFWS-785	Desert Tortoise Monitoring 2009	\$983,000	In Progress	10/29/08-03/30/10 See 585A	No
SNPLMA	R8	CC	1011	2007-CC-1011	Amendment of the Clark County MSHCP and Incidental Take Permit	\$1,407,120	In Progress	Umbrella Project Number See 1011A, 1011B	No
SNPLMA	R8	Nicholson, Ruth	1011A	2007-NICHOLSON-1011A	Meeting Facilitation Permit Amendment	\$385,000	In Progress	07/15/08-06/30/10	Yes
SNPLMA	R8	PBSJ	1011B	2007-PBSJ-1011B	Biological Environmental Consultant	\$623,320	In Progress	01/20/09-08/31/11	Yes
S10	07-09	Nicholson, Ruth	1014A	2007-NICHOLSON-1014A	Meeting Facilitation Desert Tortoise Task Force	\$280,470	In Progress	07/15/08-06/30/10 See 1011A	No
S10	07-09	EMS	1014B	2007-EMS-1014B	Permit Amendment Legal Counsel	\$913,000	In Progress	07/15/08-06/30/11	Yes



# PROJECT REPORTS





**LEAD AGENCY**

**U.S. Forest Service, Humboldt-Toiyabe National Forest, Spring Mountains National Recreation Area**

**PROJECT TITLE AND NUMBER**

**Landscape Assessment of the Spring Mountains National Recreation Area, Phase II**

2003-USFS-196A

SNPLMA R4

**PROJECT DESCRIPTION**

The goal of the landscape assessment was to provide recommendations for protection of special species by addressing species viability, biodiversity hot spots and habitats at risk, while balancing identified potential recreational needs for the area. This project evaluated conditions of the resources; trends; the interaction between the resources and recreation activities; and potential effects of recreation. The purpose of this study was to compare social and biological information on the Spring Mountains to identify trends, patterns and management issues, as well as provide management and use recommendations.

This project was a joint effort by the U.S. Fish and Wildlife Service and the U.S. Forest Service to identify means to ensure species viability and sustainable recreation in the Spring Mountains National Recreation Area (SMNRA).

**PROJECT STATUS - Completed**

- Produced and published final landscape assessment, agency public newsletter, final Citizen’s Guide to the landscape assessment
- Completed updates to the U.S. Forest Service SMNRA Web site: [http://www.fs.fed.us/r4/htnf/districts/smnra/landscape\\_assess/index.shtml](http://www.fs.fed.us/r4/htnf/districts/smnra/landscape_assess/index.shtml)
- Conducted public open house on August 26, 2008 and provided presentation at the Clark County Adaptive Management Program’s Annual Project Review Presentation on August 15, 2008

**AGENCY PROJECT CONTACT**

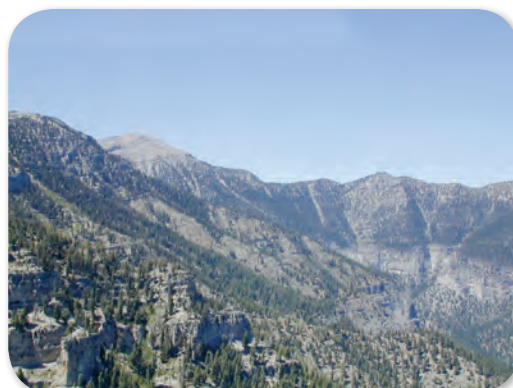
Randall M. Sharp  
Natural Resource Staff Officer  
U.S. Forest Service, Humboldt-Toiyabe  
National Forest  
(775) 355-5313  
rsharp@fs.fed.us

**FUNDING AMOUNT AWARDED**

\$679,082

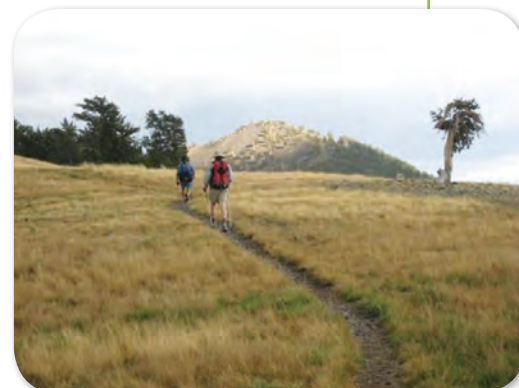
**CONTRACT TERM**

11/06/2007 through 08/31/2008



Landscape View of Mt. Charleston.

Hikers along South Loop Trail.



LEAD AGENCY

Partners In Conservation

PROJECT TITLE AND NUMBER

**Developing Teen/Pre-teen Off-Highway Vehicle Videos**

2003-PIC-319

SNPLMA R4

PROJECT DESCRIPTION

This project proposed to develop a responsible-use video targeting teenagers. This project anticipated using fast-paced, heavy graphics and an MTV-style format, which is popular with youth. The scope of work detailed three goals or objectives: 1.) Develop content for two video products that instructs desert off-highway vehicle (OHV) users on legal and responsible desert use, promoting the theme, "Respect, protect and enjoy our desert." 2.) Engage local teens and pre-teens in activities associated with the development of the video products, and 3.) Complete production and editing of two video products.

The two videos targeted two specific ages, pre-teens and teens, using regionally known peers who have name/face recognition because they have won many OHV races. The videos were shot on public lands near Moapa Valley and on private race tracks, primarily the Mesquite MX Park.

PROJECT STATUS - Completed

- Scouted locations and solicited individuals for filming
- Visited racing events, OHV group meetings and OHV events to inform as many people as possible about this project
- Developed script
- Filmed video
- Compiled and edited two video products so that conversations and wording matched the visual elements and the "respect, protect and enjoy" messages were appropriately presented to teen and pre-teen audiences
- Produced two videos using Joshua Tree Productions as the subcontractor
- Posted videos on the Internet
- Distributed videos to off-highway recreation users/groups, schools, Boy Scouts and other such groups, as well as OHV-related businesses
- "Respect the Ride" received a Pacific Southwest Regional Emmy Award in the Children's Video category in June 2009

AGENCY PROJECT CONTACT

Elise McAllister  
Administrator  
Partners In Conservation (PIC)  
P.O. Box 298  
Moapa, NV 89025  
(702) 864-2464  
picorg@mvdsl.com

FUNDING AMOUNT AWARDED

\$99,700

CONTRACT TERM

10/16/2007 through 08/30/2008



Interviewing Josh Fredrick for Teen OHV video.

Setting up "trail riding" shot with David Kelley and others for the Pre-teen OHV video.

## LEAD AGENCY

U.S. Department of Agriculture, Forest Service

## PROJECT TITLE AND NUMBER

**Ecological Site Inventory for the Spring Mountains Ecosystem, Phase II**

2003-USFS-344A

SNPLMA R4

## PROJECT DESCRIPTION

The purpose of the project was to complete a baseline ecological inventory of soils, vegetation and springs in the Spring Mountains and Red Rock Canyon areas, using integrated methodology developed jointly by the U.S. Forest Service and the Bureau of Land Management. The synthesized results were expected to provide baseline information to interpret ecological conditions, impacts of grazing and recreation, and the basis to improve habitat for Multiple Species Habitat Conservation Program species across administrative boundaries.

## PROJECT STATUS - Completed

- Migrated soil and vegetation data into the National Resource Conservation Service (NRCS) corporate database. Geographic Information System (GIS) map is available on the NRCS public Web site
- Combined existing spring data and data from 65 newly surveyed springs into a database
- Prepared a GIS map of the springs
- Created a GIS map of fire occurrences in the Spring Mountain and Red Rock Canyon areas
- Provided information to improve a corporate database that includes soil, spring and vegetation data
- Produced final report

## AGENCY PROJECT CONTACT

James C. Hurja  
Spring Mountain National Recreation Area  
(702) 646-3628

## FUNDING AMOUNT AWARDED

\$88,500

## CONTRACT TERM

08/15/2006 through 12/31/2007



Water testing at unnamed Spring #58.

Pinyon/Juniper/Gamble Oak – Charklin  
soils ecological type.



**LEAD AGENCY**  
**Partners In Conservation**

**PROJECT TITLE AND NUMBER**

**Development of Conservation Week as Educational Pilot Program**  
2003-PIC-348  
SNPLMA R4

**PROJECT DESCRIPTION**

This was an educational project for rural communities using the “respect, protect, and enjoy our desert” message. Project targeted elementary school students and their families using facts and terms that residents of rural communities would accept and thus, be receptive to. The goal of this project was to bring the “respect, protect, and enjoy our desert” message to the rural schools with a personalized approach so that students in northeast Clark County would internalize that message and subsequently want to respect, protect, and enjoy THEIR desert. Partners in Conservation proposed to deliver this message by a series of components that would work together and reinforce that message.

**PROJECT STATUS** - Completed

- Delivered educational program to more than 105 teachers and 2,200 students in the four rural elementary schools of northeast Clark County, Virgin Valley, Bunkerville, Logandale and Moapa
- Produced six supply boxes to provide to the schools and supplement the activities in the guide
  - Implemented the Calendar Coloring Contest, selected winners and produced four unique calendars featuring the winners
  - Provided unique calendars with environmental messages to each school that were placed in classrooms, libraries, offices and joint-use rooms

**AGENCY PROJECT CONTACT**

Elise McAllister  
Administrator  
Partners In Conservation (PIC)  
P.O. Box 298  
Moapa, NV 89025  
(702) 864-2464  
picorg@mvdsl.com

**FUNDING AMOUNT AWARDED**

\$20,500

**CONTRACT TERM**

09/28/2006 through 06/30/2008



Deciding what pictures to pair with what month for a calendar-coloring contest.

Virgin Valley Elementary School student dresses up as a tortoise during a Mojave Max presentation to the entire first grade.

LEAD AGENCY

Entrix

PROJECT TITLE AND NUMBER

**Virgin River Conservation Management Assessment**

2003-ENTRIX-350A

SNPLMA R4

PROJECT DESCRIPTION

This project developed a Conservation Management Assessment for the Virgin River and Virgin River Conservation Management Plan. The work included coordination among the diverse groups and stakeholders that had already been meeting on Virgin River issues to synthesize management objectives, conservation strategies and planning efforts.

PROJECT STATUS - Completed

- Collected and analyzed available data to determine existing habitat conditions
- Conducted background scoping for species and species threats
- Developed a Web-based database for organizing and housing species data
- Identified and evaluated information gaps, conservation objectives and conservation actions
- Provided final report on conservation objectives
- Recommended conservation actions, implementation strategy, prioritization scheme, funding assessment, staffing analysis, implementation responsibilities and implementation schedule

AGENCY PROJECT CONTACT

Leo Lentsch  
Vice President, Technical Director  
ENTRIX, INC  
829 Front Street, Suite J  
Georgetown, SC 29440  
(843) 545-1015 office  
(843) 333-3706 cell  
LLentsch@entrix.com  
www.entrix.com

FUNDING AMOUNT AWARDED

\$1,229,600

CONTRACT TERM

04/04/2006 through 08/29/2008

Virgin River.



LEAD AGENCY

Outside Las Vegas Foundation

PROJECT TITLE AND NUMBER

**Virgin River Conservation Partnership Facilitation**

2003-OLVF-350B

SNPLMA R4

PROJECT DESCRIPTION

This project coordinated and facilitated meetings hosted by partner agencies throughout Clark County for the Virgin River Conservation Partnership (VRCP). The VRCP was a collaborative group of federal, state and local municipalities, as well as private interests and community stakeholders formed to coordinate conservation and restoration activities throughout the Virgin River watershed. At least two meetings per year were held in the Mesquite area along the Virgin River corridor that included Virgin River field trips.

PROJECT STATUS - Completed

- Established a sustainable partnership to coordinate planning, development and implementation of strategies for Virgin River conservation through public awareness and community involvement
- Subcontracted a position with Deborah Campbell and Associates to coordinate and facilitate the meetings and activities of the VRCP from April 2007 through March 2008
- Facilitated seven Virgin River Conservation Partnership Meetings on behalf of Clark County, National Park Service, U.S. Fish and Wildlife Service, City of Mesquite and the Southern Nevada Water Authority
- Co-facilitated one Virgin River watershed analysis meeting with the U.S. Army Corps of Engineers
- Served as a clearinghouse for information, knowledge, expertise and/or other resources, as well as a forum for discussion and recommendation of strategies, actions and issues related to Virgin River Conservation programs and mandates
- Supported and coordinated funding efforts by members of the partnership
- Sought compatibility between conservation and development efforts through the contribution of agriculture lands to wildlife and riparian ecosystems

AGENCY PROJECT CONTACT

Alan O'Neill  
Executive Director  
Outside Las Vegas Foundation  
(702) 461-6162

FUNDING AMOUNT AWARDED

\$20,000

CONTRACT TERM

04/06/2007 through 06/30/2008



Virgin River downstream of the Riverside bridge.

Virgin River public education brochure.



## LEAD AGENCY

Bureau of Land Management

## PROJECT TITLE AND NUMBER

**Evaluating the Impact of Cattle Grazing on Vegetation and Vegetative Recovery Following Removal of Cattle Grazing**

2003-BLM-361

SNPLMA R4

## PROJECT DESCRIPTION

The purpose of this project was to resample vegetation trend plots in all areas within critical desert tortoise habitat where grazing had been removed. This project collected data during trend analysis which included frequency and cover. This data was used to determine species diversity and to investigate the effects of cattle grazing on desert tortoise habitat.

## PROJECT STATUS - Completed

- Collected trend data
- Entered trend data into a database and included all frequency and cover data, trend photos and grazing history for the entire range of trend studies within critical desert tortoise habitat dating back to 1982
- Compiled a list of plants by species
- Analyzed data with the assistance of the U.S. Geological Survey - Biological Research Division
- Created a Geological Information System-based interactive map to facilitate visual comparison between photo points over time
- Prepared and submitted scientific report

## AGENCY PROJECT CONTACT

Carolyn Ronning  
Wildlife Biologist  
BLM, Las Vegas Field Office  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130  
(702) 515-5143

## FUNDING AMOUNT AWARDED

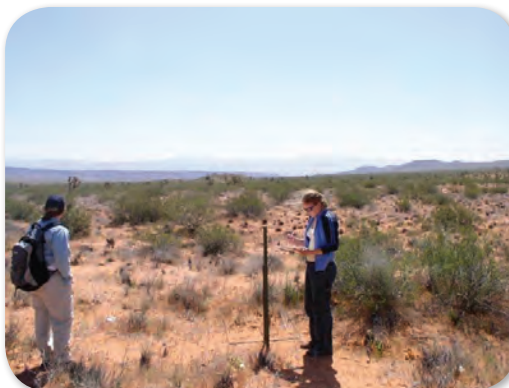
\$160,200

## CONTRACT TERM

01/06/2004 through 2/28/2006

Field crew surveys the Gold Butte #1 plot.

Field crew surveys the Joshua Park Reservoir plot.



**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Adaptive Management Program**

2003-CC-439  
2005-CC-574  
SNPLMA R4/R6

**PROJECT DESCRIPTION**

The 2007-2009 Adaptive Management Program (AMP) project continued to provide technical review and advice to the Desert Conservation Program (DCP), as well as refine the Adaptive Management analyses defined in the Multiple Species Habitat Conservation Plan (MSHCP) and Biological Opinion. These analyses are: Land Use Trends, Habitat Loss by Ecosystem, Species Status and Ecosystem Health, and MSHCP Implementation and Effectiveness. This project also continued implementing improvements recommended by the DCP's Program Management Analysis (December 2005). These improvements included: competitive selection process for the Science Advisor Team (awarded to Desert Research Institute), hosting two annual progress report symposia for DCP projects with an AMP panel of experts providing feedback, elimination of perceived and real conflicts of interest within the Adaptive Management Science Team and Science Advisor Team, and wider distribution of the products of the DCP, including those of the AMP.

The following subprojects/subcontracts were managed under this project:

2003-KLA-439D	\$9,500	Complete
2005-DRI-574A	\$1,700,000	Complete
2005-USGS-574B	\$430,000	In Progress
2005-REMORTEL-574D	\$24,000	In Progress
2005-MULDER-574E	\$20,000	Complete
2005-TNC-574F	\$19,521	Complete
2005-TSG-574L	\$25,000	In Progress
2005-SOUND SCIENCE-574M	\$16,000	In Progress

**PROJECT STATUS - In Progress**

- Moved old database for MSHCP Implementation from science advisor consultant to County and migrated to a new outcomes-based MSHCP Implementation database
- Created a users' manual for the MSHCP Implementation database

*continued on next page*

**AGENCY PROJECT CONTACT**

Sue Wainscott  
Adaptive Management Coordinator  
Desert Conservation Program  
Las Vegas, NV  
(702) 455-3859  
swainsco@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

2003-CC-439 (R4) - \$1,593,015  
2005-CC-574 (R6) - \$3,245,369

**CONTRACT TERM**

2003-CC-439  
08/16/2001 through 08/31/2008  
2005-CC-574  
02/14/2007 through 02/13/2012



Rare plant workshop group presenting monitoring design 2.

- Completed competitive Request for Proposal process for 2007-2009 science advisor contract, initiated second competitive Request for Proposal process for 2009-2011 contract
- Tracked land use trends and habitat loss by ecosystem. Produced four reports (2007 and 2008 for each analysis)
- Developed a species status database to use available data to track trends in species status. Entered data for 12 species. Created a users' manual for the species database
- Held workshop with agency staff and experts to develop conceptual models for the 11 ecosystems described in the MSHCP. Report included in 2008 Adaptive Management Report
- Held workshop with agency and permittee staff and experts to develop recommendations for project-level and overall programmatic-level MSHCP Effectiveness Monitoring and produced a report
- Provided technical recommendations for development of 2009-2011 Implementation Plan and Budget using 2008 habitat loss by ecosystem report, and science-based rating of submitted proposals
- Held workshop with experts in October 2008 to evaluate and improve bird monitoring projects
- Evaluated proposal to amend Boulder City Conservation Easement to increase north-south habitat connectivity. Conducted desert tortoise survey to compare areas proposed for addition or removal from easement, recommended no change in current easement boundaries based upon these data
- Held two workshops with experts in September 2007 and October 2008 to evaluate and improve rare plant monitoring. Workshop materials and final report produced
- Refined soils and geological datasets for gypsum and sand habitats
- Held the 2008 Project Progress Symposium on August 14-15, 2008. 22 projects presented, diverse audience attended, panel of six biological science experts provided verbal and written comments on presentations
- Produced 2008 Adaptive Management Report which included progress updates and detailed descriptions of all products to date



Symposium photos.

Rare plant workshop Sutter presenting 2007.

Rare plant workshop groups examining niterwort population.

**LEAD AGENCY**

**National Park Service, Lake Mead National Recreation Area**

**PROJECT TITLE AND NUMBER**

**Peregrine Falcon Monitoring at LMNRA**

2005-NPS-475

**Habitat Modeling for Peregrine Falcon**

2005-NPS-609C

SNPLMA R6

**PROJECT DESCRIPTION**

The overall goal of the project is to determine the current status of the species within a specific region of Clark County. This project proposed to collect demographic data on nesting pairs of peregrine falcons in Lake Mead National Recreation Area (LMNRA). The majority of known nesting sites for peregrines in Nevada have been located along the shorelines of Lakes Mead and Mohave since breeding by the species was detected in 1985.

Technical aspects of this effort associated with the development of a conceptual model, habitat suitability model, and habitat map for the peregrine falcon in Lake Mead National Recreation Area were addressed in project 2005-NPS-609C.

**AGENCY PROJECT CONTACT**

Ross Haley  
Resource Management  
National Park Service,  
Lake Mead National Recreation Area  
601 Nevada Highway  
Boulder City, NV 89005-4004

**FUNDING AMOUNT AWARDED**

2005-NPS-475 - \$30,120  
2005-NPS-609C - \$14,853

**CONTRACT TERM**

2005-NPS-475  
04/04/2008 through 06/30/2010  
2005-NPS-609C  
03/04/2008 through 06/04/2010

**PROJECT STATUS - In progress**

- Conducted multiple nest visits at each known peregrine territory in 2008 and 2009 following a protocol issued by the USFWS
- Developed an experimental survey method and tested it for effectiveness to more quickly determine the presence of territorial peregrines
- Collected data on habitat requirements, reproductive success, and breeding chronology (i.e., stages of courtship, incubation, nestling, fledging)
- Monitored five territories throughout the non-breeding periods in 2008-2009 in order to gain insight into year-round peregrine habitat use
- Documented that, within LMNRA, the breeding population of peregrines has increased to at least 24 territories in 2008 and 26 in 2009
- Detected peregrine presence at 2 additional sites in 2008 and 5 sites in 2009 but without confirmed breeding. Non-breeding season observations corroborate earlier anecdotal observations that many of these birds are non-migratory residents
- In addition to monitoring previously known nesting sites, expanded surveys in 2009 to areas with potential peregrine nesting habitat
- Identified six new breeding territories and 2 previously suspected territories were confirmed



Photo showing suitable peregrine nesting habitat in the Black Canyon area of Lake Mead National Recreation Area.  
*Photo credit Joe Barnes*

Juvenile peregrine falcon siblings prior to leaving the nest at a site in Lake Mead National Recreation Area.  
*Photo credit Joe Barnes*

**LEAD AGENCY****National Park Service, Lake Mead National Recreation Area****PROJECT TITLE AND NUMBER****Relict Leopard Frog Monitoring and Management (*Rana onca*)**

2005-NPS-476

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to implement a federally sanctioned conservation agreement and strategy for the relict leopard frog. The project involves managing relict leopard frogs through a cooperative interagency program designed to increase both overall numbers as well as number of populations in defined areas of Southern Nevada and Northern Arizona. Efforts under this project include population monitoring, habitat improvement and a headstarting and translocation program to establish new populations. Headstarting involves rearing eggs and larvae (tadpoles) collected from healthy populations in a captive setting through development to advanced stage tadpoles or young frogs. These animals are then be translocated to suitable sites. To monitor the status of both natural and experimental populations, visual encounter surveys are conducted systematically several times per year. Assistance is provided to agency partners to identify potential translocation sites and to conduct associated conservation actions and research on this species.

**PROJECT STATUS - In progress**

- Conducted visual encounter surveys at extant sites each spring and fall
- Conducted additional egg mass and tadpole surveys at four sites each month for one year to assess breeding phenology
- Conducted additional surveys at some natural sites to locate egg masses under urgent efforts to augment populations
- Provided assistance to researchers conducting mark-recapture surveys at one site to estimate population size in late spring of 2009
- Released frogs and tadpoles to augment five existing experimental sites in 2008 and 2009
- Coordinated reporting for the semiannual meetings of the Relict Leopard Frog Conservation Team

**AGENCY PROJECT CONTACT**

Ross Haley  
Resource Management  
National Park Service,  
Lake Mead National Recreation Area  
601 Nevada Highway  
Boulder City, NV 89005-4004

**FUNDING AMOUNT AWARDED**

\$333,000

**CONTRACT TERM**

09/04/2007 through 12/04/2010

Volunteers from the National Park Service and University of Nevada, Las Vegas assist with efforts to improve relict leopard frog habitat.



Researcher collecting partial egg mass for headstarting.



LEAD AGENCY

U.S. Forest Service, Spring Mountains National Recreation Area

PROJECT TITLE AND NUMBER

**Bristlecone Habitat Protection Project**

2005-USFS-SMNRA-490

S10 05-07

PROJECT DESCRIPTION

The primary goal for this project was to protect the sensitive habitat near the Bristlecone Trail and Las Vegas Ski & Snowboard Resort, especially in areas where recreation use was high. The following species were expected to benefit from this project:

Clokey eggvetch (*Astragalus oophorus* var. *clokeyanus*)

Charleston grounddaisy (*Townsendia jonesii* var. *tumulosa*)

Rosy King sandwort (*Arenaria kingii* ssp. *Rosea*)

Charleston pinewood lousewort (*Pedicularis semibarbata* var. *charlestonensis*)

Mt. Charleston blue butterfly (*Icaricia shasta charlestonensis*)

PROJECT STATUS - Completed

- Constructed a total of 1,100 meters of fence along both sides of the Bristlecone Trail and west of the Bristlecone Trailhead near the ski area entrance to help manage recreation use and keep visitors on the trail
- Restored interpretive signage along the trail to help visitors learn more about the project and its purpose
- Completed National Environmental Policy Act (NEPA) process
- Completed botanical surveys

AGENCY PROJECT CONTACT

Amy Nichols  
4701 North Torrey Pines  
Las Vegas, NV 89130  
(702) 515-5421  
anichols@fs.fed.us

FUNDING AMOUNT AWARDED

\$83,780

CONTRACT TERM

07/05/2005 through 11/30/2007



Fence installation.

Sensitive species locations flagged along trail for avoidance during installation.

**LEAD AGENCY**  
**ICF Jones & Stokes**

**PROJECT TITLE AND NUMBER**

**Desert Conservation Program Rare Plant Inventories**

2005-JS-497B

SNPLMA R6

**PROJECT DESCRIPTION**

The project consisted of a landscape approach to conducting rare plant inventories for ten rare plant species found in Clark County. The inventories were designed to obtain comprehensive knowledge of the species to further define their predictive ecological models, including soil-landform relationship studies. The species studied were: sticky ringstem (*Anulocaulis leiosolenus*), Las Vegas bearpoppy (*Arctomecon californica*), white bearpoppy (*Arctomecon merriamii*), threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*), Pahrump Valley buckwheat (*Eriogonum bifurcatum*), Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*), sticky buckwheat (*Eriogonum viscidulum*), Beaver Dam breadroot (*Pediomelum castoreum*), whitemargin beardtongue (*Penstemon albomarginatus*) and yellow two-tone beardtongue (*Penstemon bicolor* ssp. *bicolor*). A total of 511 four-hectare (10-acre) plots were selected for surveys within 13 separate geographic units within the county.

Funding for this project was originally allocated to BLM (2005-BLM-497) but was reallocated to ICF Jones & Stokes.

**PROJECT STATUS - In progress**

- Developed a work plan and data management plan
- Began field surveys in March 2009
- Completed approximately 90 percent of the survey plots (460 survey plots)
- Located all of the target rare plants at least once and located many numerous times
- Completed data collection and submitted approximately 16 percent of the field data
- Remaining field surveys are scheduled to occur in April and May 2010

**AGENCY PROJECT CONTACT**

Brad Schafer  
Project Manager  
ICF Jones & Stokes  
(916) 737-3000  
bschafer@jsanet.com

**FUNDING AMOUNT AWARDED**

\$414,356

**CONTRACT TERM**

3/26/2009 through 3/31/2011



Whitemargin beardtongue taken in the Ivanpah Geographic Unit.



Las Vegas bearpoppy taken in the Muddy River Geographic Unit.

LEAD AGENCY

Nevada System of Higher Education

PROJECT TITLE AND NUMBER

**Sediment Transport to Whitemargin Beardtongue Habitat (*Penstemon albomarginatus*)**

2005-NSHE-502A

SNPLMA R6

PROJECT DESCRIPTION

This study obtained and analyzed field measurements to determine characteristics of whitemargin beardtongue habitats, the ranges in soils, geomorphology and climatic properties supporting whitemargin beardtongue populations, the extent aeolian transport of sand occurs, the extent aeolian transport of dust occurs in support of characterization of the biological and physical features of whitemargin beardtongue (*Penstemon albomarginatus*) habitat.

PROJECT STATUS - In progress

- Established and maintained seven full meteorological and sediment transport monitoring stations
- Collected community- and *Penstemon*-specific growth data; herbivory and reproductive data; and soil texture and chemistry data
- Collected new population data on the *Penstemon* within both Clark and Nye counties
- Updating the previous dataset collection from 1997
- Completed meteorological data from each site
- Analyzing meteorological data for sediment transport rates and their corresponding triggers

AGENCY PROJECT CONTACT

Vic Etyemezian  
Associate Research Professor  
Nevada System of Higher Education  
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Las Vegas, NV 89119

FUNDING AMOUNT AWARDED

\$800,553

CONTRACT TERM

05/01/2007 through 04/01/2010



NSHE (*Penstemon albomarginatus*).

NSHE Monitoring Site.



**LEAD AGENCY****National Park Service, Lake Mead National Recreation Area****PROJECT TITLE AND NUMBER****Lake Mead Geographic Information System and Data Management Support**

2005-NPS-525

SNPLMA R6

**PROJECT DESCRIPTION**

This project provided geographic information system (GIS) and data management support for other Multiple Species Habitat Conservation Program (MSHCP)-funded projects which took place on National Park Service (NPS) lands. Support included assistance with project design; development of spatial and tabular databases; development of field data collection methodologies using global positioning system (GPS) receivers, mapping software, and data dictionaries; assistance with data analysis; development of database queries and reports; development of GIS habitat models and maps; and other GIS and GPS technical assistance as needed. In addition, this project developed spatial and tabular databases from mined historic agency resource data and maps to provide information important to MSHCP implementation on NPS lands.

**PROJECT STATUS - In progress**

- Created databases and geodatabases for project data on peregrine falcon, relict leopard frog, illegal ground disturbances, road conditions and signs, covered plants, watch list plants, weeds, bald eagle and nine bird species
- Performed quality assurance/quality control checks on database records, developed database reports, and created metadata and other documentation
- Provided GPS device and electronic data collection support for field mapping on most projects
- Produced maps for presentations and reports for many of the projects
- Developed GIS information from mined historic data for vegetation transects, razorback sucker, bonytail chub, bighorn sheep, bats, gila monster, abandoned mine lands, water quality and climatic data

**AGENCY PROJECT CONTACT**

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**FUNDING AMOUNT AWARDED**

\$312,788

**CONTRACT TERM**

01/02/2007 through 06/10/2010

2008 eagle survey.



2009 GPS training.



**LEAD AGENCY**

**National Park Service, Lake Mead National Recreation Area**

**PROJECT TITLE AND NUMBER**

**Monitoring of Illegal Ground Disturbance in Response to Management Actions**

2005-NPS-526

SNPLMA R6

**PROJECT DESCRIPTION**

This project was designed to discover incidents of off-road vehicle (OHV) disturbance on a timely basis before they can become established illegal routes. The study intends to provide, in a timely manner, accurate information to the park law enforcement and restoration programs that would assist in more effective management in the selected area. Finally, the project provides timely and accurate visitor information to help determine long-term management strategies for the park.

**PROJECT STATUS** - In progress

- Developed a database in Microsoft Access for traffic counter data, disturbances assessment and restoration treatments
- Monitored 18 approved roads every month, looking for illegal ground disturbances and other illegal activities
- Switched all traffic counters from nu-metric NC-30X to TRAFx precision Micro-Magnetic™ OHV sensors
  - Obtained use of a utility terrain vehicle to access roads that are inaccessible by four-wheel-drive trucks and SUVs
  - Provided law enforcement with updates of illegal ground disturbances and traffic counter information after each road was monitored
  - Completed six quarterly reports and one project data deliverable

**AGENCY PROJECT CONTACT**

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**FUNDING AMOUNT AWARDED**

\$105,287

**CONTRACT TERM**

02/19/2008 through 06/30/2010



The new TRAFx precision Micro-Magnetic™ sensor.

Restoration Crew member collecting traffic counter data from our TRAFx Micro-Magnetic™ sensor using a TRAFx G3 dock station.

**LEAD AGENCY****National Park Service, Lake Mead National Recreation Area****PROJECT TITLE AND NUMBER****Monitoring of Road Conditions and Signs**

2005-NPS-529

SNPLMA R6

**PROJECT DESCRIPTION**

This project is designed to perform road, sign, fence and barrier maintenance to help reduce illegal off-road travel in Lake Mead National Recreation Area due to public ignorance and deliberate illegal off road travel. The project provides information relating to road conditions, disturbance and sign conditions to the appropriate National Park Service programs and management. Finally, the project will standardize documentation and monitoring with the Bureau of Land Management, U.S. Forest Service and U.S. Fish and Wildlife Service, so data can be compared across the landscape of Southern Nevada.

**PROJECT STATUS - In progress**

- Developed a database for organizing Sign/Post ID, Sign Location, Sign/Post Condition and Sign/Post Material, which will then be connected to the National Park Service Facilities Management Software System
- Obtained use of a utility terrain vehicle, to access roads that are inaccessible by four-wheel drive-trucks and SUVs
- Monitored all the roads, signs, fences, barriers on the Nevada side of the park every quarter
- Installed 98 signs on approved backcountry roads and inventoried and monitored 400 backcountry signs

**AGENCY PROJECT CONTACT**

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**FUNDING AMOUNT AWARDED**

\$114,737

**CONTRACT TERM**

02/19/2008 through 06/30/2010

Two members of LAME NRA restoration team install an extension on a post and cable barrier in the Cottonwood east area.



A member of LAME NRA restoration team inventorying a new sign.



LEAD AGENCY

National Park Service, Lake Mead National Recreation Area

PROJECT TITLE AND NUMBER

**Inventory, Research and Monitoring for Covered Plant Species**

2005-NPS-535

**Inventory, Research and Monitoring for Covered Plant Species Technical Conditions**

2005-NPS-609E

SNPLMA R6

PROJECT DESCRIPTION

The purpose of this project is to establish long term monitoring activities for four Multiple Species Habitat Conservation Program-covered plant species, Las Vegas bearpoppy (*Arctomecon californica*), threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*), sticky buckwheat (*Eriogonum viscidulum*) and ringstem (*Anulocaulis leiosolenus* var. *leiosolenus*). The project was designed to help determine whether population numbers remain within their historic range of variation by evaluating annual densities of target plants in addition to collecting abiotic data at each monitored population including weather data, soil chemistry, soil compaction, biological crust presence and depth, slope and aspect.

AGENCY PROJECT CONTACT

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FUNDING AMOUNT AWARDED

2005-NPS-535 - \$347,054

2005-NPS-609E - \$23,500

CONTRACT TERM

2005-NPS-535

10/02/2007 through 6/10/2010

2005-NPS-609E

04/14/2009 through 11/01/2010

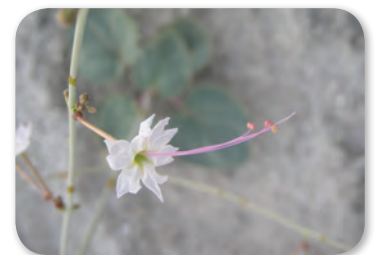
PROJECT STATUS - In progress

- Conducted surveys on Bureau of Land Management and National Park Service lands for the four covered species (Las Vegas bearpoppy, threecorner milkvetch, sticky buckwheat and sticky ringstem) to re-evaluate historic and known populations
- Installed weather stations at each rare plant monitoring site and collected temperature, relative humidity and rainfall data
- Produced rare plant monitoring protocols for each covered species
- Completed two field seasons of rare plant monitoring data collection. Analyses will begin next quarter
- Will collect data for sticky ringstem phenology research project in its third season. Preliminary data shows that sticky ringstem flowers open in the evening, are night pollinated by the sphinx moth, and fruit develops within seven days of flowering



Threecorner milkvetch monitoring grid on Sandy Cove.

Sticky buckwheat monitoring site at Lime Cove.



**LEAD AGENCY****National Park Service, Lake Mead National Recreation Area****PROJECT TITLE AND NUMBER****Inventory and Research for Evaluation and Watch Plant Species**

2005-NPS-536

SNPLMA R6

**PROJECT DESCRIPTION**

This project funded inventory surveys to gather information about the locations and population sizes of the following ten species: Virgin River thistle, Hoffman's cryptantha, unusual catseye, Mokiak milkvetch, Chalk liveforever, Las Vegas buckwheat, Beaverdam breadroot, Sunray, Barrel cactus and rosy two-toned beardtongue. The purpose of these surveys is to gain knowledge of the health and status of these species in order to help land managers and partners make more informed decisions on future actions concerning these species.

**PROJECT STATUS - In progress**

- Conducted field surveys of the above 10 watch species in habitats that are known, potential and new, where species are not known to occur
- Conducted literature and herbaria searches on each of the 10 watch species
- Collected spine measurements and fruit samples from barrel cactus individuals to determine subspecies presence, continuing into next quarter as fruit develops

**AGENCY PROJECT CONTACT**

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**FUNDING AMOUNT AWARDED**

\$163,277

**CONTRACT TERM**

02/05/2008 through 06/30/2010

Sunray population at LMNRA.



Chalk liveforever in Newberry Mountains.



LEAD AGENCY

National Park Service, Lake Mead National Recreation Area

PROJECT TITLE AND NUMBER

Interagency Weed Sentry Project

2005-NPS-537

SNPLMA R6

PROJECT DESCRIPTION

The Weed Sentry Project proactively detects incipient invasive plant populations for control or eradicated before they negatively impact ecosystems and species of concern. The major objectives of the Weed Sentry Project are to: 1.) identify and document the presence of new exotic invasive plant species, 2.) document targeted incipient populations of weeds in Clark County, or vectors outside of Clark County, and determine their distribution, and 3.) control incipient weed populations when feasible and prioritize areas for more extensive control efforts. The measurable objectives of the Weed Sentry Project are to survey for and document the locations of invasive plant populations, treat incipient populations and record negative weed data.

The data collected through this project provides land managers with a valuable tool to guide their management decisions. Knowing where new infestations are, how extensive they are, and getting recommendations on how to treat them will allow land managers to make informed decisions and control invasive plants before they become major problems.

AGENCY PROJECT CONTACT

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FUNDING AMOUNT AWARDED

\$905,688

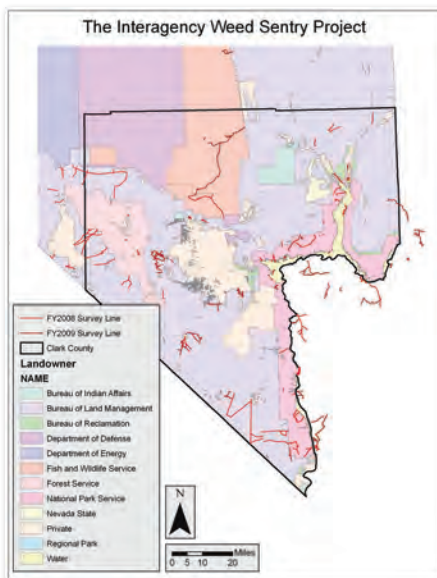
CONTRACT TERM

09/18/2007 through 02/18/2010

PROJECT STATUS - In progress

- Surveyed the following land for weed infestation: U.S. Bureau of Land Management (BLM) (356 miles/2,786 acres); National Park Service (NPS) (290 miles/2,255 acres); U.S. Forest Service (USFS) (11 miles/63 acres); and U.S. Fish and Wildlife Service (USFWS)(94 miles/730 acres)
- Compiled a database of 3,553 exotic plant infestations composed of 116 different species. Species most commonly encountered were: *Brassica tournefortii*, *Bromus tectorum*, *Malcolmia africana*, *Sisymbrium irio* and *Tamarix ramosissima*
- Treated invasive plant species on BLM (5,095 individuals of 15 species), NPS (44,789 individuals of 15 species), USFS (14,173 individuals of 3 species) and USFWS (121 individuals of 5 species) lands

- Produced trip reports and offered recommendations for weed control to BLM, NPS, USFS and USFWS land managers
- Published *Abella, S.R., J.E. Spencer, J. Hoines, and C. Nazarchyk. 2009. "Assessing an exotic plant surveying program in the Mojave Desert," Clark County, Nevada, USA. Environmental Monitoring and Assessment 151:221-230*



Weed survey area for weed surveys conducted by the Interagency Weed Sentry Project during fiscal years 2008 and 2009.



**LEAD AGENCY****National Park Service, Lake Mead National Recreation Area****PROJECT TITLE AND NUMBER****Bald Eagle Monitoring**

2005-NPS-540

**Bald Eagle Habitat Modeling**

2005-NPS-609B

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to perform winter counts of the bald eagle in Lake Mead National Recreation Area (LMNRA) and to better standardize the counting protocol. The vast majority of bald eagles within Clark County were found in the LMNRA, and this project provided data to monitor population trends for this previously federally threatened species. The overall goal of this project is to provide products to inform an assessment of species status for the bald eagle in Clark County.

This project includes the technical aspects to assess habitat suitability and creation of a map of habitat use based on current and previous count conducted under project 2005-NPS-609B, Bald Eagle Habitat Modeling.

**PROJECT STATUS - In progress**

- Developed written standard operating procedures
- Completed field counts
- Observed 116 bald eagles (not including unidentified eagles and golden eagles) on Lake Mead and Lake Mohave during the 2008 count
- Observed 108 bald eagles during the 2009 count
- Surveyed a portion of Lake Mead in addition to the standard counts to evaluate variation in counts through pre- and post-surveys of the Overton survey route (typically this area has the highest eagle count)
- Completing final report summarizing field components of the project
- Conducted initial modeling of habitat use

**AGENCY PROJECT CONTACT**

Ross Haley  
Resource Management  
National Park Service,  
Lake Mead National Recreation Area  
601 Nevada Highway  
Boulder City, NV 89005-4004

**FUNDING AMOUNT AWARDED**

2005-NPS-540 - \$21,589  
2005-NPS-609B - \$18,135

**CONTRACT TERM**

2005-NPS-540  
01/02/2008 through 04/10/2010  
2005-NPS-609B  
01/02/2008 through 03/02/2010

Eagle count observers recording eagles on the Overton survey route.

Adult bald eagle perched next to a common raven, photo taken during eagle count 2008.  
Photo credit Joseph Hutcheson



**LEAD AGENCY**

National Park Service, Lake Mead National Recreation Area

**PROJECT TITLE AND NUMBER**

**Historical and Current Assessment of Six Covered and Three Evaluation Bird Species**

2005-NPS-542

**Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species**

2005-NPS-609A

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of these projects is to provide information on nine Multiple Species Habitat Conservation Program-covered/evaluation bird species within Clark County. These species are the Southwestern Willow Flycatcher, Blue Grosbeak, Phainopepla, Summer Tanager, Vermillion Flycatcher, Arizona Bell's Vireo, Bendire's Thrasher, Le Conte's Thrasher and Gray Vireo.

Intensive area surveys are performed at several locations during two years as part of a collaborative effort to provide information for point counts associated with the Nevada Bird Count program. Historical locations for the nine species were mined from literature, regional records and museum records, and were used to guide targeted surveys as

part of the historical assessment. Modeling efforts were focused on developing predictive habitat models and maps using available spatial variables and Geographic Information System technology. Conceptual models depicting the relationship between each species, its habitat, stressors and management were developed to assist this effort. The main field components are to conduct intensive area surveys and targeted inventories and assessments of historical locations for these species within Clark County.

This project includes the technical aspects and habitat models conducted under project 2005-NPS-609A, Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species.

**PROJECT STATUS** - In progress

- Conducted intensive area searches at four sites each of the last two years, with sites surveyed nine to 10 times during the breeding season
- Completed habitat assessments for sites surveyed in 2008
- Geo-referenced 214 historic records for the targeted bird species within Clark County
- Reviewed approximately 75 different museums, databases, agencies records and publications to obtain these historic records
- Created three separate databases to store, evaluate and record the data from these efforts
- Initiated field surveys to assess historical locations
- Created final habitat suitability models and maps for the Le Conte's Thrashers

**AGENCY PROJECT CONTACT**

Ross Haley  
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National Park Service,  
Lake Mead National Recreation Area  
601 Nevada Highway  
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**FUNDING AMOUNT AWARDED**

2005-NPS-542 - \$219,903  
2005-NPS-609A - \$133,500

**CONTRACT TERM**

2005-NPS-542  
0/06/2007 through 10/15/2010  
2005-NPS-609A  
10/16/2007 through 10/15/2010



Photo of Le Conte's Thrasher within Clark County.  
Photo credit Joseph Hutcheson

Reference photo taken at historic location at Potosi Mountain where a Gray Vireo was documented in 1940 and again during a targeted survey in 2009.



**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Desert Conservation Program Administration**  
2005-CC-544P  
SNPLMA R6  
**Desert Conservation Program Administration**  
2007-CC-711  
S10 07-09

**PROJECT DESCRIPTION**

This project provides the day-to-day administration and operations of the Clark County Desert Conservation Program (DCP) and implementation of the Multiple Species Habitat Conservation Plan (MSHCP) by Clark County, on behalf of the cities of Las Vegas, North Las Vegas, Henderson, Mesquite, Boulder City and the Nevada Department of Transportation.

**PROJECT STATUS - In progress**

- Initiated the MSHCP permit amendment
- Convened and facilitated a stakeholder advisory group
- Developing and implemented the 2007-2009 IPB
- Administered approximately 115 mitigation and conservation projects
- Continued development and implementation of project and contract tracking system using Case 360
- Administered conservation projects including public information and education, cooperative weed management, development of conservation management strategies for key species and ecosystems, management of the Boulder City Conservation Easement, desert tortoise fencing, operation of the Desert Tortoise Conservation Center, and desert tortoise translocation, and Adaptive Management
- Provide ongoing administration of all MSHCP activities

**AGENCY PROJECT CONTACT**

Marci Henson  
Clark County Desert Conservation Program  
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**FUNDING AMOUNT AWARDED**

2005-CC-544P - \$3,646,949  
2007-CC-711 - \$1,967,000

**CONTRACT TERM**

Internal project, no contract term  
Project effective dates:  
2005-CC-544P  
02/14/2007 through 02/14/2012  
2007-CC-711  
07/01/2007 through 06/30/2009

Marci Henson, Desert Conservation Program Administrator and Catherine Jorgenson, Deputy District Attorney, Clark County discuss Desert Conservation Program administration.

Community Advisory Committee meeting set-up.



**LEAD AGENCY**  
**Watash, LLC**

**PROJECT TITLE AND NUMBER**

**Management Action Plan for the Boulder City Conservation Easement**

2005-Watash-546A  
SNPLMA R6

**PROJECT DESCRIPTION**

This project researches the history and intent of the Boulder City Conservation Easement (BCCE) and provides management recommendations. The final product is a management action plan report, which summarizes the history of the property, management challenges and important characteristics of the land.

The final project report provides initial framework for later development of a complete management plan for the 86,700-acre BCCE.

This project was awarded under Clark County's 2005-CC-546.

**PROJECT STATUS** - In progress

- Synthesized the relevant information on the history of the BCCE and its importance to compliance with the Endangered Species Act
- Provided annotated summaries of past management issues documented by Clark County
  - Recommended management actions including: clarification of roles and responsibilities; fencing the property to regulate uses; design and implementation of a natural resource inventory; and establishment of a long-term monitoring program to evaluate whether the primary purpose of the BCCE is being achieved
  - Recommended secondary management including: development of a habitat reclamation program; formalization of a process to evaluate access requests; establishing mitigation measures required of users; a review of the rights associated with existing rights-of-way and easements; and development of an on-site team to implement management of the BCCE
  - Proposed management actions to eliminate or moderate the issues
  - Provided an initial framework for later development of an on-site management plan
  - Recommended steps to be taken to implement four fundamental management actions
  - Subcontractor: TerraSpectra Geomatics Inc. produced the maps

**AGENCY PROJECT CONTACT**

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Watash, LLC  
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**FUNDING AMOUNT AWARDED**

\$30,000

**CONTRACT TERM**

01/20/2008 through 10/20/2009



Staff analyzing roads and use in the BCCE.

**LEAD AGENCY****Nevada Department of Wildlife****PROJECT TITLE AND NUMBER****Peregrine Falcon Monitoring in Clark County**

2005-NDOW-549

**Peregrine Falcon Modeling**

2005-NDOW-609D

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to determine the current status of peregrine falcons in Clark County through continued monitoring of historic sites, and discovery of new territories as aided by the development of a predictive habitat suitability model and map. This project collects information on the status of peregrines and their habitat. Known peregrine territories are surveyed for occupancy, nest success and productivity.

The peregrine falcon was once a federal endangered species. It has made a remarkable comeback across the country and was officially removed from the Endangered Species Act list in 1999, however, the U.S. Fish and Wildlife Service (USFWS) post de-listing monitoring plan called for continued monitoring through 2015.

This project includes technical aspects from project 2005-NDOW-609D, Peregrine Falcon Modeling.

**PROJECT STATUS - In progress**

- Initiated project in April 2009
- Monitoring seven historic territories and five newly discovered territories in Clark County
- Monitoring additional sites to locate new territories and to improve the predictive habitat model and map
- Coordinating and collaborating with the National Park Service, Lake Mead National Recreation Area and the USFWS
- Working with the University of Nevada, Las Vegas to develop a predictive habitat suitability model and map for peregrine falcons under associated project 2005-NDOW-609D

**AGENCY PROJECT CONTACTS**

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Principle Investigator  
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**FUNDING AMOUNT AWARDED**

2005-NDOW-549 - \$25,611  
2005-NDOW-609D - \$14,000

**CONTRACT TERM**

2005-NDOW-549 & 2005-NDOW-609D  
04/07/2009 through 03/31/2011

Adult peregrine falcon in Clark County.  
*Photo credit Christy Klinger*



Clark County peregrine falcon eyrie  
with two fledglings.  
*Photo credit Christy Klinger*



**LEAD AGENCY**  
**U.S. Geological Survey**

**PROJECT TITLE AND NUMBER**

**Effects of Fuels Management Treatments in the Spring Mountains National Recreation Area**  
2005-USGS-551  
SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this monitoring project is to produce a monitoring plan, establish monitoring plots and collect baseline vegetation data to be compared with follow-up vegetation data (post-treatment sampling) to evaluate the effects of the Spring Mountains Hazardous Fuel Reduction Project.

The monitoring plots will be used to evaluate: 1.) responses of the overall plant community (i.e. biodiversity plots), and 2.) responses of selected MSHCP-covered plant species and the nectar and larval host plants of covered butterfly species (i.e. covered plants species) to treatment effects associated with fuels reduction activities.

**PROJECT STATUS** - In progress

- Designed and developed a long-term monitoring plan
- Installed plots
- Mapped and geo-referenced all plots
- Entered, error checked and delivered year one data to Clark County
- Collected baseline pretreatment data for 64 community and 152 plant population plots
- Visiting, mapping and restaking plots

**AGENCY PROJECT CONTACT**

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Yosemite Field Station  
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**FUNDING AMOUNT AWARDED**

\$321,501

**CONTRACT TERM**

03/04/2008 through 08/31/2010



Photo showing plot layout of biodiversity plot in sagebrush-juniper plot in Lee canyon.



Photo showing plot layout of biodiversity plot in upper region of Kyle canyon in montane habitat.

**LEAD AGENCY**

University of California Santa Barbara, California

**PROJECT TITLE AND NUMBER****Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments**

2005-UCSB-552

SNPLMA R6

**PROJECT DESCRIPTION**

This project was implemented by UCSB in collaboration with U.S. Geological Survey. It provides effectiveness monitoring assessment of sites where measures to control invasive riparian weeds had been previously applied. The research characterizes and compares control methods to determine management approaches that yield desired results.

Experimental management treatments are applied at demonstration sites where prior approaches had not achieved weed control goals. Experimental restoration treatments being applied and evaluated include prescribed fire and re-vegetation with native species.

**PROJECT STATUS - In progress**

- Completed vegetation assessments for treatment and control plots: 80 percent completed
- Monitored biocontrol agents for Tamarix at Virgin River and tributaries
- Performed Avian nesting and habitat associations, 75 percent completed; herptile associations, 25 percent completed; avian Fall migration plots are identified
- Installed experimental restoration plants (cottonwood/willow, mesquites) at Virgin River sites and now monitoring; pre-rain fall treatments to be installed
- Conducted simulated defoliation treatments at Valley of Fire and Virgin River
- Conducted two experimental burns conducted at Valley of Fire and Humboldt; completed 50 percent of response data for defoliation and burn experiments
- Initiated fuel laboratory analyses for fire modeling at the U.S. Forest Service's Fire Lab in Riverside, Calif. To be completed July 2009
- Collected post-fire mortality data, 40 percent completed
- Executed Russian knapweed experiments and collected year 1 data, 90 percent completed
- Located and installed brush-belt plots (5 x 30 m) at targeted study sites
- Completed approximately 75 percent of the vegetation sampling of the upland seep and spring site in and around Lake Mead National Recreation Area
- Sampled 274 plots and completed 50 percent of the vegetation sampling along the Virgin River (95 of 189 plots)
- Documented dispersal of beetles from St. George, Utah, through the Virgin Gorge and into the very upper extent of the Virgin Valley
- Established a monitoring program to document beetle dispersal and establishment patterns
- Established seven primary, permanent Virgin River beetle monitoring locations
- Sampled other invertebrates to document their responses to the beetles and to determine whether they can slow down the rate establishment
- Developed survey protocols to evaluate the effectiveness of tamarisk treatment on bird communities
- Evaluating cost-effective restoration methods that can be applied in riparian habitat where the biocontrol beetle has established
- Collected post-fire data from an experimental prescription burn

**AGENCY PROJECT CONTACT**

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**FUNDING AMOUNT AWARDED**

\$899,959

**CONTRACT TERM**

12/16/2008 through 05/31/2011

**LEAD AGENCY**

**Desert Conservation Program**

**PROJECT TITLE AND NUMBER**

**Media and Outreach Development**

2005-CC-553

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to develop and implement media and outreach projects to support public information and education for the Desert Conservation Program.

Section 2.8.4.3 of the MSHCP required public information and education projects to: "1.) Inform the public of the terms of the Section 10(a) Permits, 2.) Encourage respect, protection, and enjoyment of natural ecosystems in Clark County. 3.) Through education, increase the public understanding and awareness of the value of Clark County's natural ecosystems."

This project provides information to the public, desert users, agency partners, and Clark County staff relating to: respect, protect, and enjoy messages, responsible desert use, wildlife protection, and public safety. This project also supports educational resources for school aged children relating to the Mojave Desert and its species and ecosystems.

**AGENCY PROJECT CONTACT**

Christina Gibson  
Clark County Desert Conservation Program  
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(702) 455-2860  
cng@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

\$240,000

**CONTRACT TERM**

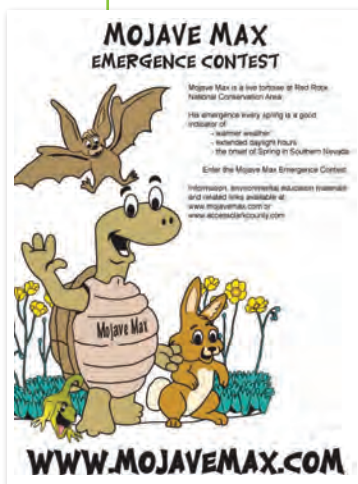
09/01/07 through 06/31/11

The following subprojects/subcontracts were managed under this project:

2005-WEIR-553-3-A	\$22,500	Completed
2005-KRAMERROGERS-553-6-A	\$15,000	In Progress
2005-JOSHUATREE-553-6-B	\$10,000	Completed
2005-IMAGEMARK-553-7-A	\$19,165	Completed
2005-STEVENKIDS-553-8-A	\$10,000	In Progress

**PROJECT STATUS - In progress**

- Developed and ran "Stay on the Trail" billboard campaign and print advertisements
- Developed and ran billboard campaign and print advertisements in support of the Mojave Max Emergence Contest
- Produced "Mojave Max Assembly" video and distributed to teachers and students that did not receive personal presentations
- Purchased and distributed outreach materials including can coolers, zipper pulls and rulers
- Provided Mojave Max mascot appearances at public events
- Continued to host [www.mojavemax.com](http://www.mojavemax.com) in support of the Mojave Max Emergence Contest
- Produced Mojave Max Yearbook in supported of 10th anniversary of the Mojave Max Emergence Contest



LEAD AGENCY

Nevada Natural Heritage Program

PROJECT TITLE AND NUMBER

**Sensitive Species Data Management**  
2005-NHP-557  
SNPLMA R6

PROJECT DESCRIPTION

The purpose of this project is to continue the development and updating of the Nevada Natural Heritage Program (NNHP) biological datasets for sensitive species within Clark County. Funding was provided to NNHP to coordinate data management of sensitive species addressed under the MSHCP; to coordinate data transactions in and out of NNHP's central repository directly with federal, state, Clark County and other MSHCP participants; to provide periodic data deliveries to County in Geographic Information System (GIS) format; and to create custom database or GIS data sets and deliver to county, if requested.

PROJECT STATUS - In progress

- Creating and submitting an annual work plan
- Creating and submitting a data management plan
- Participating in a data coordination meeting where diverse datasets will be compared to start the process of reconciling datasets and incorporating new information

AGENCY PROJECT CONTACT

Jennifer Newmark  
Administrator  
Nevada Natural Heritage Program  
(775) 684-2904  
jnewmark@heritage.nv.gov

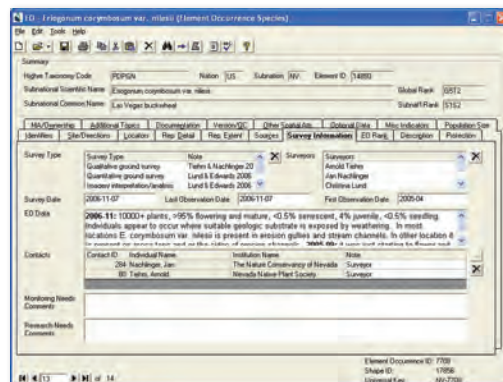
FUNDING AMOUNT AWARDED

\$180,000

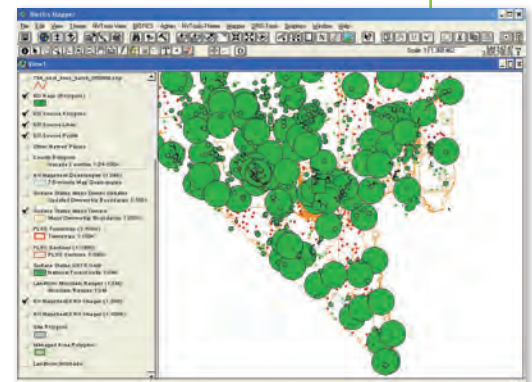
CONTRACT TERM

06/16/2009 through 10/01/2011

Screen shot of Tracker, NNHP database where tabular data are recorded on such attributes as date last observed, size and condition of population, habitat conditions, land ownership and other important documented information.



Screen shot of Mapper, Nevada Natural Heritage Program Geographic Information System database where geographical information is captured and stored.



LEAD AGENCY

Red Rock Canyon Interpretive Association

PROJECT TITLE AND NUMBER

**Mojave Max Education Program Development**  
2005-RRCIA-559A  
SNPLMA R6

PROJECT DESCRIPTION

The Mojave Max education program provides information to the public about the desert tortoise (*Gopherus agassizii*). Through school presentations, teacher training classes, an online contest and community appearances, Mojave Max encourages thousands of students a year to "respect, protect and enjoy our desert." The program is well received by students, teachers and the community.

PROJECT STATUS - In progress

- Provided classroom presentations in 946 classrooms at 162 schools
- Held 28 large assemblies for a total of 7,025 students
- Trained 34 teachers to teach Mojave Max lessons in their own classrooms
- Trained 20 volunteer instructors to present the Mojave Max lessons
- Contacted 20,197 people at various community events
- Generated \$18,827 in additional funding and donations
- Reached approximately 37,000 people through school presentations and community events
- Continuing educational activities
- Making progress toward the contract goals of making the program sustainable and increasing coordination with program partners
- Continuing educational activities in Clark County and supporting the implementation of the program in Southern California and Lincoln County

AGENCY PROJECT CONTACT

Stacy Irvin  
Mojave Max Program Manager  
6755 W. Charleston Blvd., Ste. D  
Las Vegas, NV 89146  
(702) 258-7097

FUNDING AMOUNT AWARDED

\$400,000

CONTRACT TERM

09/04/2007 through 12/31/2011



The 2008 Mojave Max Emergence Contest winners from Conners Elementary School are introduced to the real Mojave Max at Red Rock Canyon National Conservation Area.

Each year, the Mojave Max mascot travels to twelve Clark County elementary schools to teach students about desert tortoises and desert conservation.



## LEAD AGENCY

The Nature Conservancy

## PROJECT TITLE AND NUMBER

**Muddy River Property Management**

2005-TNC-561

SNPLMA R6

## PROJECT DESCRIPTION

This project provides protection and restoration of habitat for species at risk in the upper Muddy River which has the highest concentration of riparian species in Clark County that are endangered and/or regarded as species of concern.

The Nature Conservancy acquired approximately 110 acres (the Alamo, Shirley Perkins and Henrie properties) on behalf of Clark County, and provides property management of these areas. Property management activities include: 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.

## PROJECT STATUS - In progress

- Treated and removed invasive vegetation including Salt Cedar on Alamo and Perkins, Malta Starthistle on Perkins and Russian Knapweed on Perkins property
- Planted willow waddles on Alamo and Perkins property
- Surveyed and maintained roads
- Stabilized the bank alongside the swimming hole on Alamo property
- Constructed a new fence and gate at the entrance to the Alamo property
- Constructed fences marking the boundaries between TNC property and in-holding at Perkins property
- Entered into an agreement with the U.S. Bureau of Land Management (BLM) and the Nevada Department of Wildlife (NDOW) to allow BLM and NDOW to create a relict leopard frog refugium at the Perkins pond
  - Dried out the pond in preparation for frog introduction
  - Preparing to install a fence to keep out invasive species

## AGENCY PROJECT CONTACT

Mauricia Baca  
Southern Nevada Project Director  
The Nature Conservancy  
1771 E. Flamingo Road, Ste. 104A  
Las Vegas, NV 89119  
(702) 737-8744 ext. 12  
mbaca@tnc.org

## FUNDING AMOUNT AWARDED

\$271,000

## CONTRACT TERM

04/15/2008 through 12/31/2010

Bank Stabilization at Alamo  
swimming hole.



Perkins pond.



**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Retro-Fencing**

2005-CC-562

**New Fencing**

2005-CC-563

**Fencing Monitoring and Maintenance Program**

2005-CC-564

S7 05-07

**AGENCY PROJECT CONTACT**

Christina Gibson  
Clark County Desert Conservation Program  
500 S. Grand Central Parkway, 1st Floor  
Las Vegas, NV 89155-5210  
(702) 455-2860  
cng@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

2005-CC-562 - \$792,000  
2005-CC-563 - \$200,000  
2005-CC-564 - \$1,500,000

**CONTRACT TERM**

2005-CC-562 - Internal project, no contract term: Clark County project effective dates (07/01/2005 through 06/30/2009)  
2005-CC-563 - Internal project, no contract term: Clark County project effective dates (07/01/2005 through 06/30/2009)  
2005-CC-564 - Internal project, no contract term: Clark County project effective dates (07/01/2005 through 06/30/2009)

**PROJECT DESCRIPTION**

This project complies with section 2.8.3.7 of the MSHCP and condition N of the Clark County incidental take permit. This project provides installation of barriers to protect the desert tortoise and other wildlife as well as monitoring and maintenance of existing barriers to protect the desert tortoise and other wildlife.

The following subprojects/subcontracts were managed under this project:

2005-NDF-562A	\$200,000	Complete
2005-AMERICANFENCE-562B	\$123,970	Complete
2005-NDF-562E	\$200,000	In Progress
2005-AMERICANFENCE-563A	\$123,970	In Progress
2005-NDOT-564A	\$10,000	Complete

**PROJECT STATUS - In Progress**

- Contracted with NDF and NDOT to install, monitor and maintain tortoise-proof fencing
- Purchased fencing materials consisting of mesh fencing, t-posts, hog rings and smooth wire from American Fence
- Completed retrofitting of I-15 northbound from mile marker 75 to 90
- Monitored and maintained previously installed fencing along the north and south boundaries of the LSTS and the north and south sides of Nipton Road. Approximately 30 additional miles of fencing was completed during this biennium



Fencing Materials.

Retrofencing.

**LEAD AGENCY**

University of Nevada, Reno

**PROJECT TITLE AND NUMBER**

**Epidemiology of the Desert Tortoise**

2005-UNR-567

SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to research mechanisms by which stress causes disease and decline of tortoise populations. The primary goal is to evaluate the immune status of natural populations of desert tortoises and to develop indicators of environmental stress that allow better management of this listed species. This survey of health status can be used in Geographic Information System analyses important for recovery of the species.

**PROJECT STATUS – In progress**

- Showed that the SDS-PAGE and Western Blot analysis reagents bind well with the heavy and light chains of desert tortoise IgM, IgY, and IgG (DFc)
- Prepared an IgG reagent by chromatography and used this in a fluoroimmunoassay in an experiment to track the immune response to ovalbumen injected into tortoises
- Showed seasonal competence to the immune system. IgY and IgM fractions of the total Ig were prepared using Sephacryl=A-300 gel filtration chromatography. Hybridomas secreting monoclonal antibodies were prepared. Three IgM heavy-chain-specific antibodies have been characterized by ELISA and Western Blot
- Developed methods of isolating peripheral blood lymphocytes from tortoise blood, and methods of culturing these cells
- Showed geographic variation in natural antibody patterns
- Tested all range-wide blood serum samples from wild tortoises
- Mapped tortoise point locations with the associated health data

**AGENCY PROJECT CONTACT**

Dr. C. Richard Tracy  
Professor of Biology  
University of Nevada, Reno  
1049 Evans Ave.  
Reno, NV 89557  
(775) 784-4565  
dtracy@biodiversity.unr.edu

**FUNDING AMOUNT AWARDED**

\$779,726

**CONTRACT TERM**

07/17/2007 through 11/01/2009

Desert tortoise.

Tortoise disease status map.

Field work.



**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Butterfly Monitoring in Spring Mountains**

2005-CC-570B

SNPLMA R6

**PROJECT DESCRIPTION**

The original project was proposed by the University of Nevada, Reno with the purpose of monitoring 11 species of rare butterflies and mapping their habitats in the Spring Mountains National Recreation Area. The agreement between Clark County and the University of Nevada, Reno was terminated for convenience before completion. The current focus is on the Mount Charleston blue butterfly (*Plebejus [Icaricia] shasta charlestonensis*) and the Spring Mountains checkerspot (*Chlosyne acastus robusta*). The County awarded a contract to SWCA to collect data and better define characteristics and distribution of possible habitat variables for the Mount Charleston blue butterfly (*Icaricia shasta charlestonensis*). The primary goal of this project was to map potential butterfly habitat. If butterflies were observed, they were recorded. The County is currently preparing additional strategies to observe butterfly population numbers and habitat suitability.

The following subprojects/subcontracts were managed under this project:

2005-UNR-570	\$115,700	Terminated
2005-SWCA-570A	\$11,570	Completed

**PROJECT STATUS** - In progress

- Mapped and described habitat patch areas
- Delineated habitat polygons for Mount Charleston blue butterfly
- Conducted 15 pedestrian transects parallel to the South Loop Trail
- Placed 315 1m<sup>2</sup> quadrants along the transects
- Conducted Mount Charleston Blue Butterfly surveys
- Completed data analysis

**AGENCY PROJECT CONTACT**

Sonja Kokos  
Project Manager  
Clark County Desert Conservation Program  
Las Vegas, NV  
(702) 455-2946  
kokos@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

\$127,270

**CONTRACT TERM**

02/15/2007 to 02/15/2010



Acastus butterfly host plant.

Bruce Boyd and Dr. Murphy.

**LEAD AGENCY**  
**The Nature Conservancy**

**PROJECT TITLE AND NUMBER**

**Effectiveness Monitoring for Saltcedar and Knapweed Control on the Upper Muddy River Floodplain**

2005-TNC-572  
SNPLMA R6

**PROJECT DESCRIPTION**

The Purpose of this project is to sample and treat riparian habitat along the Muddy River from the Alamo property through the Perkins property, as well as from the Nevada Power property through the Riverview property near Interstate 10. The project will conduct retrospective effectiveness monitoring for past and current weed control and restoration efforts; conduct experimental effectiveness monitoring for weed and restoration efforts; and map the distribution of saltcedar, Russian knapweed and tall whitetop using remote sensing on the Muddy River.

**PROJECT STATUS - In progress**

- Completed sampling on all retrospective plots previously treated by Muddy River Regional Environmental Impact Alleviation Committee (MRREIAC)
- Completed pretreatment sampling of all experimental blocks
- Subcontractor, MRREIAC, completed saltcedar and Russian knapweed removal on all experimental blocks with the exception of BLM-Perkins
- Completed the first season of breeding bird surveys and fish surveys along the parcels of the Muddy River
- Initiated remote sensing analysis

**AGENCY PROJECT CONTACT**

Mauricia Baca  
Southern Nevada Project Director  
The Nature Conservancy  
1771 E. Flamingo Road, Ste. 104A  
Las Vegas, NV 89119  
(702) 737-8744 ext. 12  
mbaca@tnc.org

**FUNDING AMOUNT AWARDED**

\$594,991

**CONTRACT TERM**

04/09/2008 through 05/31/2010

A plot on Alamo property prior to the experimental treatment of removal and seeding. Note dense saltcedar stand.



The same plot on Alamo property of after treatment of removal and seeding. Note several wolfberry shrubs.



LEAD AGENCY

University of Nevada, Las Vegas, School of Life Sciences

PROJECT TITLE AND NUMBER

**Connectivity of Leopard Frog Populations**

2005-UNLV-575

SNPLMA R6

PROJECT DESCRIPTION

The purpose of this study is to determine the distribution and identity of related frog populations in the western Grand Canyon within the proposed management zone, and to identify sites potentially suitable for establishment of new relict leopard frog populations. This project will genetically identify any new leopard frog populations encountered. The population structure among existing frog sites will be investigated to inform translocation efforts.

PROJECT STATUS - In progress

- Completed majority of the field surveys
- Surveyed all first and second order priority sites within the western Grand Canyon region for leopard frogs
- Visited many of the targeted sites multiple times to accommodate for intermittent water within large side canyons

- Encountered no new leopard frog populations during these surveys
- Completed and published isolation and characterization of microsatellite markers for use in genetic assessments in a scientific journal
- Generating data using microsatellite markers for population assessments
- Assessing populations using mitochondrial DNA

AGENCY PROJECT CONTACT

Dr. Jef Jaeger  
Primary Investigator  
Research Assistant Professor  
School of Life Sciences  
University of Nevada, Las Vegas  
4505 S. Maryland Parkway  
Las Vegas, NV 89154-4004  
(702) 895-2463  
jef.jaeger@unlv.edu

FUNDING AMOUNT AWARDED

\$147,836

CONTRACT TERM

08/17/2007 through 03/19/2010



An example of leopard frog habitat within the western Grand Canyon region.

Photo showing spatial relationship of vegetation control area (background) and paired treatment areas (mechanically cut and burned) within a site of dense Sawgrass (*Cladium californicum*) during a prescribed fire in December 2007.

## LEAD AGENCY

University of Nevada, Reno

## PROJECT TITLE AND NUMBER

**Movements and Barriers to Movement in the Desert Tortoise (*Gopherus agassizii*)**

2005-UNR-576

SNPLMA R6

## PROJECT DESCRIPTION

This project used highly variable nuclear DNA markers to: 1.) resolve the population boundaries for *G. agassizii*; 2.) quantify gene flow among *G. agassizii* populations in the Mojave Desert; 3.) evaluate barriers to gene flow among populations; 4.) infer dispersal and migration patterns among populations; 5.) use genetics to inform U.S. Fish and Wildlife Service designations of recovery units for the Mojave assemblage of *G. agassizii*; and 6.) determine how translocation has changed the genetics of a *G. agassizii* population in Clark County.

The results of this research were used to protect the diversity of *G. agassizii* through the identification of conservation units; to clarify the genetic structure among populations and what aspects of the landscape shape this structure; to identify patterns of desert tortoise movement and initiate hypothesis testing; and to provide managers with information necessary to restore and maintain these patterns.

## PROJECT STATUS - Completed

- Completed data analysis and presented results to Clark County at the Research Symposium in August 2008
- Produced three manuscripts submitted to peer-reviewed journals
- Collected DNA samples from over 750 desert tortoises throughout the Mojave and Colorado deserts (listed range)
- Completed population genetic analyses to determine the population boundaries of the Mojave Desert tortoise and descriptions of those subpopulations

## AGENCY PROJECT CONTACT

Dr. C. Richard Tracy  
Professor of Biology  
University of Nevada, Reno  
1049 Evans Ave.  
Reno, NV 89557  
(775) 784-4565  
dtracy@biodiversity.unr.edu

## FUNDING AMOUNT AWARDED

\$719,210

## CONTRACT TERM

07/17/2007 through 01/31/2009

Desert tortoise found during the field season in March 2005 in the large-scale translocation site near Jean, NV.

Bridgette Hagerty and Fran Sandmeier (two graduate students at UNR) are preparing to take a blood sample from a tortoise in Coyote Springs, NV.



**LEAD AGENCY**  
**University of Nevada, Reno**

**PROJECT TITLE AND NUMBER**  
**Ecosystem Indicators: Change Indicators**  
2005-UNR-578  
SNPLMA R6

**PROJECT DESCRIPTION**

The first goal of this project is to develop a countywide geomorphology Geographical Information System (GIS) dataset. This new geomorphic map could assist the county and agency partners to predict, model and map locations where habitats of concern may exist. The second goal of this project is to update and refine the current vegetation and ecosystem dataset currently being used for all of the Multiple Species Habitat Conservation Program analyses. The final goal is to develop a set of remote sensing enhanced vegetation classification methods by combining the new geomorphology GIS dataset with the new vegetation and ecosystem GIS dataset. This set of prototype methods may prove to be useful to further refine and enhance the vegetation classes within the vegetation and ecosystem dataset.

**PROJECT STATUS** - In progress

- Processed Quickbird Imagery
- Processing geomorphology GIS data
  - Produced online catalog of photographs of geologic and vegetation observations
  - Gathered and assessed existing GIS information
  - Began field mapping of areas with no existing data
  - Developed methodologies for assessing fan age and composition
- Processing vegetation GIS Data and vegetation pilot GIS data
  - Collected vegetation data for 535 waypoints and 11 plots
  - Developed field methodologies for mapping mesquite/acacia and yucca ecosystems
  - Conducted atmospheric calibration and mosaicing of ETM imagery for use in enhanced vegetation classification

**AGENCY PROJECT CONTACT**

Jill S. Heaton  
University of Nevada, Reno  
Department of Geography  
1664 N. Virginia St. Mailstop 154  
Reno, NV 89557  
Office (775) 784-8056  
Lab (775) 784-6287  
Fax (775) 784-1058  
jheaton@unr.edu

**FUNDING AMOUNT AWARDED**

\$1,300,000

**CONTRACT TERM**

11/05/2008 through 06/01/2011



Drs. Pat Cashman, Karin Hoff and Jill Heaton conducting a geology clast count in Kyle Canyon. June 2009.  
*Photo credit UNR G-Lab*

Drs. Dave Charlet and Craig Westenberg conducting a detailed vegetation plot in the McCullough Range. June 2009.  
*Photo credit UNR G-Lab*



**LEAD AGENCY**  
U.S. Geological Survey

**PROJECT TITLE AND NUMBER**

**Long-term Conservation Strategy for Palmer's Chipmunk in the Spring Mountains National Recreation Area**

2005-USGS-580  
SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this study is to provide important data to support and refine monitoring efforts for the Palmer's Chipmunk (*Tamias palmeri*) as part of a long-term conservation strategy for the species. The main objectives include conducting a systematic inventory across the Spring Mountains and determining whether track plate methodology is an acceptable alternative to trapping of Palmer's Chipmunk.

Relative abundance estimates will be determined using eight independent trapping grids run simultaneously during each month per season for a total of .24 independent population estimates per year. Before trapping occurs within each grid, track plates will be placed and run for two days. Densities will be calculated from track plate data by counting the number of track plates with tracks per day. Density estimates from track plate will be regressed on estimates from trapping to help determine the effectiveness of the track plate methodology.

**PROJECT STATUS** - In progress

- Completed the first of two seasons of data collection
- Completed over 9,750 trapping/tracking days
- Tagged and released more than 500 target animals throughout the study area
- Completed 40 1-kilometer transects along the entire lower and upper (elevation) distribution of the species range
- Collected genetic samples from target animals along transects for positive identification
- Conducted tracking plate methodology
- Measured and entered vegetation data for areas surrounding each of the 960 trapping sites

**AGENCY PROJECT CONTACT**

Chris Lowrey  
Ecologist  
U.S. Geological Survey  
160 N. Stephanie St.  
Henderson, NV 89074  
(702) 564-4537  
clowrey@usgs.gov

**FUNDING AMOUNT AWARDED**

\$276,447

**CONTRACT TERM**

02/19/2008 through 12/19/2010



Palmer's Chipmunk.

Research Camp.



**LEAD AGENCY**  
Great Basin Bird Observatory

**PROJECT TITLE AND NUMBER**

**Developing Habitat Models and Monitoring Techniques for  
Nine Rare Bird Species of Clark County**  
2005-GBBO-581  
SNPLMA R6

**PROJECT DESCRIPTION**

This study collects monitoring data and develops habitat models for nine bird species, including six species covered by the Multiple Species Habitat Conservation Plan (MSHCP) and three evaluation species. The six covered species are the Southwestern Willow Flycatcher, Blue Grosbeak, Phainopepla, Summer Tanager, Vermilion Flycatcher and Arizona's Bell's Vireo; the three evaluation species are Bendire's Thrasher, Le Conte's Thrasher and Gray Vireo. This study estimates population sizes for each of these species within Clark County; develops habitat models; maps occupied and suitable habitat in Clark County; and improves methods of population monitoring, where needed.

**PROJECT STATUS** - In progress

- Collected one field season of data in 2008, with 12 area searches and 116 point count surveys completed across 97 transects
- Conducting a second season of data collection
- Assessing habitat suitability criteria for the nine targeted species. These surveys involve fairly intensive vegetation measurements and ground-truthing of landscape variables on the randomly-selected point count transect locations in order to relate presence of a bird species with habitat conditions and landscape variables
- Coordinating with other researchers and wildlife biologists in an effort to vet the procedure of population size estimation and improve monitoring methods

**AGENCY PROJECT CONTACT**

Elisabeth Ammon  
Executive Director  
Great Basin Bird Observatory  
1755 E. Plumb Lane #256A  
Reno, NV 89502  
(775) 323-4226  
ammon@gbbo.org

**FUNDING AMOUNT AWARDED**

\$719,940

**CONTRACT TERM**

10/16/2007 through 12/31/2013



Bird survey point in Mojave scrub habitat.

Vermilion flycatcher in screwbean mesquite woodland.

## LEAD AGENCY

U.S. Geological Survey

## PROJECT TITLE AND NUMBER

**Population Status and Reproductive Ecology of the Western Burrowing Owl in Clark County**

2005-USGS-582

SMPLMA R6

## PROJECT DESCRIPTION

This project estimates the relative abundance and density of Western Burrowing Owls (*Athene cunicularia hypugaea*). The goals for this project are to 1.) conduct surveys to assess the current distribution and population status of the Burrowing Owl in Clark County; 2.) relate occurrence and population density to habitat and environmental variables to determine areas of high to low density of Burrowing Owls; and 3.) evaluate reproductive success of *A. cunicularia hypugaea* in relation to habitat and environmental variables for populations located within selected areas in Clark County. Surveys are conducted in four habitat types: low-elevation desert shrub dominated by creosote bush-white bursage (*Larrea tridentata-Ambrosia dumosa*); mid-elevation desert scrub dominated by creosote bush-Mojave yucca-Joshua tree (*Larrea tridentata-Yucca schidigera-Yucca brevifolia*); blackbrush (*Coleogyne ramosissima*); and pinyon-juniper (*Pinus-Juniperus*).

## PROJECT STATUS - In progress

- Completed 95 unique 3.2-km transect surveys for the Western Burrowing Owl in selected areas of Clark County
- Conducted 61 transect surveys during the 2008 breeding season in four habitat types
- Conducted 68 transect surveys during 2009 in three habitat types
- Repeated 34 of the 2008 transects during 2009 resulting in the 95 unique surveys conducted during the entire project
- Completed investigation of reproductive success and nest site characterization for the 2008 season
- Entered reproductive success and nest site characterization data for 2008 season into database spreadsheets
- Completed nest monitoring and determined reproductive success for the 2009 nest burrows
- Collecting habitat measurements for nest site characterization of the 2009 nest burrows
- Entering the 2009 transect survey, reproductive success and nest site characterization data
- Following quality assurance and quality control for this data set

## AGENCY PROJECT CONTACT

Kathleen Longshore  
U.S. Geological Survey Western Ecological  
Research Center  
Las Vegas Field Station  
160 N. Stephanie St.  
Henderson, NV 89074  
Phone: (702) 564-4505

## FUNDING AMOUNT AWARDED

\$415,051

## CONTRACT TERM

11/20/2007 through 6/20/2010

A Western Burrowing Owl standing at a nest burrow in the eastern Mojave Desert of Clark County, NV.

A field crew member measuring nest site characteristics at a Western Burrowing Owl nest burrow in the eastern Mojave Desert.



**LEAD AGENCY**  
**University of Nevada, Reno**

**PROJECT TITLE AND NUMBER**  
**Desert Tortoise Monitoring**  
2005-UNR-585  
SNPLMA R6

**PROJECT DESCRIPTION**

The purpose of this project is to assist the U.S. Fish and Wildlife Service (USFWS) with their desert tortoise monitoring training program. This project will develop more efficient training and monitoring techniques to more effectively track trends in the status of tortoise populations in Clark County. The project encompasses data review and analysis; development of a preliminary assessment of distribution of threat indicators; and development of a preliminary predictive desert tortoise activity model. The project goals are to: 1.) conduct baseline density monitoring to determine population trends and evaluate management actions and threats; 2.) research effectiveness monitoring and determine needed improvements or modifications; and 3.) conduct intensive, uniform training of tortoise monitors that will increase accuracy of the data. Achievement of the goals will result in better (less biased, more precise) desert tortoise density estimates, better description of distribution of desert tortoises in Clark County and a preliminary description of correlations between threat indicators and desert tortoise distribution and abundance. This project is conducted jointly with the U.S. Geological Survey.

**PROJECT STATUS** - In progress

**AGENCY PROJECT CONTACT**

Ron Marlow  
Primary Investigator and Project Manager  
University of Nevada, Reno  
Biology Department  
3245 El Camino Road  
Las Vegas, NV 89146  
(702) 364-1036

**FUNDING AMOUNT AWARDED**

\$1,217,072

**CONTRACT TERM**

04/30/2007 through 11/02/2009

- Coordinated closely with the USFWS for the related Desert Tortoise Monitoring project, 2005-USFWS-585A
- Prepared instructional and training materials for training
- Assisted the USFWS with training field crews
- Conducted regular field data quality assurance/quality control review during field data collection
- Conducted the annual final data quality assurance/quality control review
- Conducted the annual data analysis
- Conducted a preliminary assessment of distribution of threat indicators and tortoises
- Developed a preliminary predictive desert tortoise activity model



Dr. Heaton evaluating potential habitat.



Field crew training.

**LEAD AGENCY****U.S. Fish and Wildlife Service****PROJECT TITLE AND NUMBER****Desert Tortoise Monitoring**

2005-USFWS-585A

**Desert Tortoise Monitoring 2009**

2007-USFWS-785

SNPLMA R6

**PROJECT DESCRIPTION**

This project implements 2005 monitoring protocol and improvements. Some improvements addressed the proposed objectives of increasing precision and developing a mechanism for characterizing the distribution of tortoises in Clark County. Other improvements, however, are general quality assurance steps that increase confidence in the quality and applicability of the data for answering questions about distribution and abundance of desert tortoises. Training and planning received concentrated attention in 2008, and corresponding improvements were seen in data quality control and in ability to complete transects in hard-to-reach areas (more representative sampling).

**PROJECT STATUS - In progress**

- Oversaw development of an expanded, comprehensive monitoring handbook (USFWS 2008), partnering with University of Nevada, Reno (UNR) and U.S. Geological Survey
- Coordinated all components of data management: integrating collection database development; training to reduce data entry errors; quality control training and procedures for field crews; second- and third-level quality control; and database product development partnering with UNR, Great Basin Institute, Kiva Biological, Mojave Desert Ecosystem Program and Topoworks
- Utilized data from previous years of monitoring to re-do study design to improve precision of tortoise density estimates
- Implemented two new approaches in desert tortoise study design for 2007 and 2008 field seasons that resulted in improved precision of desert tortoise density estimates
- Subcontracted to Great Basin Institute for data collection in Nevada, Arizona and Utah portions of the Mojave Desert as part of a larger coordinated effort that included monitoring in California
- Completed 286 transects partly or entirely in Clark County by GBI in 2007
- Completed 443 transects partly or entirely in Clark County by GBI 2008

**AGENCY PROJECT CONTACT**

Linda Allison  
Desert Tortoise Monitoring Coordinator  
U.S. Fish and Wildlife Service  
(775) 861-6324  
Linda\_Allison@fws.gov

**FUNDING AMOUNT AWARDED**

2005-USFWS-585A - \$1,372,218  
2007-USFWS-785 - \$983,000

**CONTRACT TERM**

2005-USFWS-585A  
9/18/2007 through 10/01/2009  
2007-USFWS-785  
10/29/2008 through 03/31/2010

Tortoise models used for training and practice before the field season are molded and painted to look realistic.  
*Photo credit Linda Allison, USFWS*

Field crews learn on training lines how to walk transects, scan for tortoises and measure distances of the models from the transect line.  
*Photo credit Kelly Slade, Clark County DCP*



LEAD AGENCY

University of Nevada, Las Vegas, School of Life Sciences

PROJECT TITLE AND NUMBER

**Habitat Manipulations for Relict Leopard Frogs**

2005-UNLV-597

SNPLMA R6

PROJECT DESCRIPTION

The purpose of this study was to test the hypotheses that the reduction of vegetation cover and density along springs would increase the use of modified areas by relict leopard frogs (*Rana onca*), thus potentially allowing for higher adult frog numbers. This study was also intended to test methods of creating fish-free ponds adjacent to streams and to evaluate whether these fish-free habitats would increase numbers of frog egg masses and tadpoles. The ultimate goal was to provide information for management planning for relict leopard frogs within the Northshore springs complex of Lake Mead National Recreation Area, where populations have declined in recent years.

PROJECT STATUS - Complete

- Reduced vegetation density over approximately 415 linear meters of habitat along stream courses as experimental habitat improvements for relict leopard frogs
- Used prescribed burn on approximately 157 linear meters of habitat to identify practical methods to improve habitat for relict leopard frogs
- Collected and assessed data describing vegetation responses to habitat modifications
- Concluded that treatments had minimal impact on plant community composition. There was no expansion of exotic plants in treated areas and vegetation recovered to pre-treatment levels within a year
- Created four fish-free pond systems with moderate success, representing 103 linear meters of pond and channel (adult frogs used the ponds, however only one egg mass was observed in the fish-free ponds)
- Conducted surveys to evaluate the estimated adult frog numbers at one site and monitor population responses to experimental actions
- Observed that evidence provides tentative support for the conclusion that frogs preferred the modified sites

AGENCY PROJECT CONTACT

Dr. Jef Jaeger  
Primary Investigator  
Research Assistant Professor  
School of Life Sciences  
University of Nevada, Las Vegas  
4505 S. Maryland Parkway  
Las Vegas, NV 89154-4004  
(702) 895-2463  
jef.jaeger@unlv.edu

FUNDING AMOUNT AWARDED

\$87,267

CONTRACT TERM

01/16/2007 through 05/01/2009

**LEAD AGENCY**

**U.S. Department of Agriculture, APHIS, Wildlife Services**

**PROJECT TITLE AND NUMBER**

**Wildlife Damage Management**

2005-USDA-ADC-598-1 & 2  
S7 & S10 05-07

**PROJECT DESCRIPTION**

This project provided feral cat damage management for the protection of the Palmer's Chipmunk. Feral cats were detected, humanely captured in cage traps, and, if feral, were euthanized. This project also provided monitoring and management of ravens for the protection of desert tortoises. Raven reduction was implemented in areas where ravens were found to be above acceptable levels due to human impacts from landfills and dairies. This project was conducted in conjunction with Nevada Department of Agriculture, Division of Resource Protection

**PROJECT STATUS - Completed**

- Removed ten feral cats from Spring Mountains
- Obtained samples from each cat for disease monitoring, as the pneumonic plague was discovered in previously trapped feral cats
- Trapped additional nontarget species and obtained stomach samples for potential genetic analysis of Palmer's Chipmunk ingestion
- Conducted raven control projects
- Removed more than 400 ravens from Clark County

**AGENCY PROJECT CONTACT**

Mark Jensen  
State Director  
USDA-Wildlife Services-NDRP  
8775 Technology Way  
Reno, NV 89521  
(775) 851-4848  
Mark.A.Jensen@aphis.usda.gov

**FUNDING AMOUNT AWARDED**

\$92,768  
(\$46,384 for S7 and \$46,384 for S10)

**CONTRACT TERM**

01/01/2006 through 01/31/2008



Feral cat pictured in Palmer chipmunk habitat



Egg baits set for raven control project

LEAD AGENCY

University of North Texas, Health Science Center

PROJECT TITLE AND NUMBER

**Impact of Nutritional Stress on Upper Respiratory Tract Disease and Immune Function in the Desert Tortoise**

2005-NTU-602A

SNPLMA R6

PROJECT DESCRIPTION

The purpose of this study is to further research in the understanding of interactions between nutrition, immune function, and Respiratory Tract Disease (URTD) via controlled dietary studies, independent challenge to the immune system and experimental infection of tortoises with a causative agent of URTD.

University of North Texas assumed the lead role for this project when the Smithsonian Institute was unable to initiate the project. (Formerly project 2005-Smithsonian-602)

PROJECT STATUS - In progress

This project was suspended in June of 2009 due to a critical absence of Desert Tortoises to conduct this project. The County is in the process of terminating this contract.

AGENCY PROJECT CONTACT

Jerry W. Simecka, Ph.D.  
Professor and Chairman  
Dept. Molecular Biology and Immunology  
UNT Health Science Center  
3500 Camp Bowie Blvd.  
Fort Worth, TX 76107  
Tel: (817) 735-2116  
Fax: (817) 735-2651  
jsimecka@hsc.unt.edu

FUNDING AMOUNT AWARDED

\$698,480

CONTRACT TERM

03/17/2009 through 04/15/2011



**LEAD AGENCY**  
**ICF Jones & Stokes****PROJECT TITLE AND NUMBER****Las Vegas Bearpoppy and Las Vegas Buckwheat Inventory**

2005-JS-606A

SNPLMA R6

**PROJECT DESCRIPTION**

This project involves conducting rare plant inventories for two rare plant species found in Clark County. The inventories are designed to obtain comprehensive knowledge of the species to further define their predictive ecological models, including soil-landform relationship studies. The species are Las Vegas bearpoppy (*Arctomecon californica*) and Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*). A total of 36 four-hectare (10 acre) plots will be surveyed within the Gold Butte geographic unit.

This project was awarded under Clark County's 2005-CC-606.

**PROJECT STATUS - In progress**

- Developed a work plan and data management plan
- Began field surveys in April 2009
- Completed 100 percent of the field surveys within 36 survey plots
- Located Las Vegas Bearpoppy on or near several survey plots
- Completed data processing and submitted to Clark County

**AGENCY PROJECT CONTACT**

Brad Schafer  
Project Manager  
ICF Jones & Stokes  
(916) 737-3000  
bschafer@jsanet.com

**FUNDING AMOUNT AWARDED**

\$55,000

**CONTRACT TERM**

3/17/2009 through 1/11/2010



Two photos of Las Vegas bearpoppy, taken in the Gold Butte geographic unit.



**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Boulder City Conservation Easement Management Plan**  
2007-CC-714  
S10 07-09

**PROJECT DESCRIPTION**

This project provides for overall management of the Boulder City Conservation Easement (BCCE), a desert tortoise conservation area set aside by the County as part of its mitigation efforts to comply with its federal take permit requirements. The property contains significant natural resource, ecological and native habitat values as well as various indigenous flora and fauna. The BCCE is approximately 85,000 acres of land that lies due south of Boulder City and on both sides of US 95 Highway.

The area attracts many users for assorted recreational endeavors because of its close proximity to Boulder City and Las Vegas. This project provided law enforcement for the BCCE, as the BCCE has a number of ordinances in place to protect the natural habitat and prevent against inappropriate use. These include rules against off-road travel, dumping, vandalism, speeding, shooting, camping, etc.

The following subprojects/subcontracts were managed under this project:

2007-Oliver-714A	\$183,280	Completed
2007-Boyd-714F	\$12,650	Completed

**PROJECT STATUS - Completed**

- Provided one permanent, full-time Law Enforcement Officer in the BCCE
- Patrolled the BCCE approximately 40 hours per week
- Completed patrol plans
- Contacted users of the BCCE, provided information, and issued citations
- Attended meetings, provided presentations, and attended court upon request

**AGENCY PROJECT CONTACT**

John Brekke  
Clark County Desert Conservation Program  
(702) 455-2722  
brekke@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

\$300,000

**CONTRACT TERM**

Internal project, no contract term



Boulder City Conservation Easement trail signage

Robert Oliver, Law Enforcement

**LEAD AGENCY**  
**Clark County**

**PROJECT TITLE AND NUMBER**

**Desert Tortoise Pickup Service and Transfer and Holding**

2007-CC-719

S10 07-09

**PROJECT DESCRIPTION**

This project manages a variety of activities related to desert tortoise, as outlined in the Multiple Species Habitat Conservation Plan. It provides for ongoing management of a desert tortoise hotline and pickup service to collect wild tortoises displaced from development and/or found wandering in urban areas in harm's way, as well as provide for a transfer and holding facility for these tortoises. In addition, outreach materials and efforts were produced to educate the public on what to do if they come across a wild tortoise, how to contact the desert tortoise hotline, etc.

The following subprojects/subcontracts were managed under this project:

2007-GBI-719K	\$6,199	Completed
2007-USFWS-719J	\$350,647	In Progress
2007-KLA-719L	\$104,000	In Progress

**PROJECT STATUS** - In progress

- Contributed funding to hatchling pen retrofit project
- Provided supplies for the Desert Tortoise Conservation Center
- Managed a hotline and pickup service (see Tortoise Disposition Report for numbers of tortoises collected)
- Provided for care and management of collected tortoises through funding to the Desert Tortoise Conservation Center, managed by the U.S. Fish and Wildlife Service and San Diego Zoo

**AGENCY PROJECT CONTACTS**

Jodi Bechtel  
Sr. Management Analyst  
500 Grand Central Parkway  
Las Vegas, NV 89155  
702-455-5529  
jbechtel@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

\$800,000

**CONTRACT TERM**

Internal project, no contract term



KLA pickup service truck.



Collected desert tortoise in pickup crate.

**LEAD AGENCY**

**Buschelman Consulting, Inc.**

**PROJECT TITLE AND NUMBER**

**Surface Water Rights Consulting**

2007-BUSCHELMAN-722A

S10 07-09

**PROJECT DESCRIPTION**

The Clark County DCP acquired several stock water rights as a result of purchasing grazing allotments with the intent of providing undivided 1/3 interest to the Bureau of Land Management (BLM), Nevada Division of Wildlife and Clark County. In order for Clark County to hold permitted water rights, a series of applications, reports of conveyance, extensions of time, abstracts of water right titles, and proofs of completion and beneficial use needed to be completed and filed by Clark County and accepted by the Office of the State Engineer. The DCP hired Buschelman Consulting, Inc. to prepare and file the necessary paperwork to establish Clark County as the owner of record and to obtain permitted water rights on the remaining 33 of the original 59 surface water rights. The manner of use for the base rights was also to be changed from stock water to wildlife and habitat preservation.

**PROJECT STATUS - In Progress**

- Three surface water rights were permitted under Clark County's name and the manner of use was changed to wildlife and habitat preservation
- Withdrew 5 water rights application to change due to lack of water
- Application to change the manner of use at Summit Spring is being processed by the Office of the State Engineer
- Five stock water rights are in the process of being converted to Clark County's name
- Confirmed the closure of the Gold Butte Grazing Allotment per BLM letter and acceptance by the Office of the State Engineer
- Conducted initial negotiations with The Nature Conservancy (TNC) concerning 19 stock water rights associated with Gold Butte grazing allotment
- Gold Butte grazing allotment water rights were conveyed to TNC from the Frei Family
- Awaiting TNC to convert the manner of use for the Gold Butte water rights to wildlife and habitat preservation, or convey a Water Right Deed to Clark County, allowing Clark County to proceed with conversion of the manner of use to wildlife and habitat preservation

**AGENCY PROJECT CONTACT**

Michael D. Buschelman  
Michael D. Buschelman Consulting, Inc.  
(775) 355-9628  
mike@mbuschelman.com

**FUNDING AMOUNT AWARDED**

\$31,600

**CONTRACT TERM**

12/17/2007 through 01/31/2012

**LEAD AGENCY**  
**PBS&J**

**PROJECT TITLE AND NUMBER**

**Desert Conservation Program Biological/Environmental Consultant**  
2007-PBSJ-1011B  
SNPLMA R8

**PROJECT DESCRIPTION**

The purpose of this project is to provide biological and environmental support for the development of an amendment to the Multiple Species Habitat Conservation Plan (MSHCP). Specific tasks include review and revision of covered species, updating species and habitat accounts, review and revision of measurable biological goals and objectives, and review and revision of the mitigation and conservation strategy. The goal of this project is to obtain an amended Endangered Species Act (ESA) Section 10 Incidental Take Permit from the U.S. Fish and Wildlife Service (USFWS). Under this contract PBS&J will also prepare an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act and other documentation as necessary to support the issuance of the amended permit.

**PROJECT STATUS** - In progress

- Reviewed available information and conducted literature review for the 231 species listed as covered under the current MSHCP; developed criteria to evaluate the appropriateness of providing continued status of these species under an amended plan
- Developed a proposed list of species to be presented to USFWS for preliminary discussions
- Updated accounts for each species proposed for coverage under the amended MSHCP with the following information:
  - current legal status and any known efforts to list a species under the ESA
  - range of the species and known or potential distribution within Clark County, general threats to the species preferred ecosystem(s), specific threats to the species, population trends, and existing management actions for the species within Clark County
- Produced a revised list of species, updated species accounts and updated ecosystem descriptions for species proposed for coverage under an amended MSHCP
- Produced an outline for the supplemental EIS, reserved meeting dates and locations for SEIS public scoping meetings and produced draft scoping meeting advertisements

**AGENCY PROJECT CONTACT**

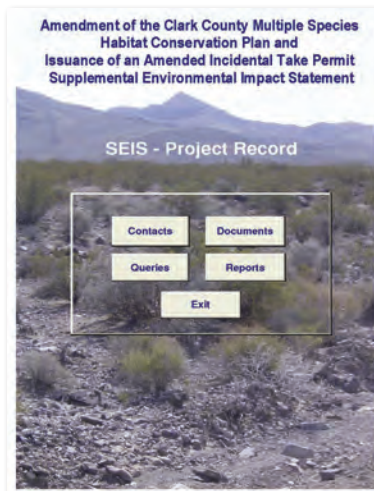
Matt Baird  
Associate Vice President  
Division Manager  
PBS&J  
2270 Corporate Circle, Ste 100  
Henderson, NV 89074  
(702) 263-7257  
mbaird@pbsj.com

**FUNDING AMOUNT AWARDED**

\$623,320

**CONTRACT TERM**

01/20/2009 through 08/31/2011



Administrative record database created for the SEIS.

Desert tortoise crossing dirt road in Ivanpah Valley.



**LEAD AGENCY**

**Nicholson Facilitation & Associates LLC**

**PROJECT TITLE AND NUMBER**

**Meeting Facilitation for Permit Amendment**

2007-NICHOLSON-1011A

SNPLMA R8

**Meeting Facilitation for Desert Tortoise Task Force**

2007-NICHOLSON-1014A

S10 07-09

**PROJECT DESCRIPTION**

This project provides meeting facilitation, process consultation, and public outreach support for a variety of committees, meetings, and processes in support of the amendment of the current Multiple Species Habitat Conservation Plan (MSHCP), such as ongoing facilitation services and support of two standing committees associated with the MSHCP amendment process: the Process Management Group (PMG) and the Community Advisory Community (CAC).

The CAC will develop recommendations on the four key areas associated with the MSHCP permit amendment: 1) acreage cap (take); 2) covered species; 3) mitigation activities; and 4) implementation structure.

This project also provides support for scoping meetings for the Environmental Impact Statement for the MSHCP amendment, meetings related to addressing unwanted and stray pet desert tortoises, and other meetings to support DCP work as requested.

**PROJECT STATUS** - In progress

- Ongoing provision of meeting facilitation, documentation, design, agenda development, staff coaching, presentation and materials review, pre-meeting coordination and preparation, and meeting room set up and take down
- Developed Web pages on the [www.h2outreach.com](http://www.h2outreach.com) Web site, in partnership with Eric Hawkins, H2Outreach, LLC
- Provided public outreach support including the development of a distinctive logo and branding for the DCP, in partnership with Douglas Huston, AccuEdit Writing Services, LLC and Ron Crain, Crain Associates
- Received Graphic Design USA, 2009 American Graphic Design Award for new DCP logo

**AGENCY PROJECT CONTACT**

Ruth E. Nicholson  
IAF Certified Professional Facilitator  
and Assessor  
Nicholson Facilitation & Associates, LLC  
914 – 164th Street, SE, #1702  
Mill Creek, WA 98012-6385  
(425) 385-2700  
Ruth@NicholsonFacilitation.com  
[www.nicholsonfacilitation.com](http://www.nicholsonfacilitation.com)

**FUNDING AMOUNT AWARDED**

2007-NICHOLSON-1011A - \$385,000  
2007-NICHOLSON-1014A - \$280,470

**CONTRACT TERM**

2007-NICHOLSON-1011A  
07/15/08 through 06/30/10  
2007-NICHOLSON-1014A  
07/15/08 through 06/30/10



Ruth Nicholson, CPF and John Tennert, Clark County DCP staff, discuss the agenda prior to a CAC.

CAC members examine a tortoise burrow on a field trip.

**LEAD AGENCY**

**Ebbin Moser + Scaggs, LLP**

**PROJECT TITLE AND NUMBER**

**Permit Amendment Legal Counsel**

2007-EMS-1014B

S10 07-09

**PROJECT DESCRIPTION**

This project provides advocacy and legal advice and services to Clark County to facilitate the amendment of the Multiple Species Habitat Conservation Plan (MSHCP) Incidental Take Permit Number TE034927-0 in compliance with the NEPA and the ESA statutes, regulations and policies.

**PROJECT STATUS - In progress**

- Conducted a comprehensive and critical review of the short-term habitat conservation plan, long-term habitat conservation plan, MSHCP, associated environmental impact statements, implementing agreements, biological opinions and other related documents
- Ongoing communication and advice in preparation of key documents and reports

**AGENCY PROJECT CONTACT**

John Tennert  
Sr. Management Analyst  
Clark County Desert Conservation Program  
500 S. Grand Central Parkway, 1st Floor  
Las Vegas, NV 89155-5210  
(702) 455-0374  
tennert@co.clark.nv.us

**FUNDING AMOUNT AWARDED**

\$913,000

**CONTRACT TERM**

07/15/08 through 06/30/11





# PROJECT INDEX TABLES





## SORTED BY FUNDING SOURCE

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
S07	05-07	CC	562	Retro Fencing Projects	\$792,000
S07	05-07	NDF	562A	Fencing Projects	\$200,000
S07	05-07	American Fence	562B	Fencing Materials	\$123,970
S07	05-07	NDF	562E	Fencing Projects	\$200,000
S07	05-07	CC	563	New Fencing Projects	\$1,500,000
S07	05-07	American Fence	563A	Fencing Materials	\$123,970
S07	05-07	CC	564	Fencing Monitoring and Maintenance Projects	\$80,000
S07	05-07	NDOT	564A	Repair Existing Fencing at BCCE	\$10,000
S07	05-07	USDA-ADC	598-1	Provide Assistance in the development and application of Wildlife Damage Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384
S10	07-09	Nicholson, Ruth	1014A	Meeting Facilitation Desert Tortoise Task Force	\$280,470
S10	07-09	EMS	1014B	Permit Amendment Legal Counsel	\$913,000
S10	03-05	USFS	322	Seed Collection of Rare and Native Species	\$565,970
S10	05-07	USFS-SMNRA	490	Bristle Cone Habitat Protection for MSHCP Covered Species on the Spring Mountains National Recreation Area	\$83,780
S10	05-07	CC	546	Boulder City Conservation Easement Plan	\$30,000
S10	05-07	CC	546A	Boulder City Conservation Easement Plan	\$30,000
S10	05-07	CC	548	Conservation Management Strategy Development	\$650,000
S10	05-07	USDA-ADC	598-2	Provide Assistance in the development and application of Wildlife Damage Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384
S10	07-09	CC	711	Desert Conservation Program Administration	\$1,967,000
S10	07-09	CC	714	Boulder City Conservation Easement (BCCE) Management Plan	\$300,000
S10	07-09	Oliver, Robert	714A	BCCE Resource Protection	\$183,280
S10	07-09	Boyd	714F	BCCE Right of Way Consulting	\$12,650
S10	07-09	CC	719	Desert Tortoise Transfer and Holding, Conservation Center, and Translocation	\$800,000
S10	07-09	USFWS	719J	Intake and Processing of Desert Tortoises	\$350,647
S10	07-09	GBI	719K	Retro Fit Hatchling Pens	\$6,199
S10	07-09	KNIGHT/ LEAVITT	719L	Desert Tortoise Pick Up Service	\$104,000
S10	07-09	CC	722	Acquired Lands and Water Rights	\$31,600
S10	07-09	Buschelman, Michael	722A	Surface Water Rights Consulting	\$31,600
S10	07-09	NDOT	737	Fencing Monitoring and Maintenance	\$300,000
S10	07-09	USFWS	785	Desert Tortoise Monitoring 2009	\$983,000
SNPLMA	R8	CC	1011	Amendment of the Clark County MSHCP and Incidental Take Permit	\$1,407,120
SNPLMA	R8	Nicholson, Ruth	1011A	Meeting Facilitation Permit Amendment	\$385,000
SNPLMA	R8	PBSJ	1011B	Biological Environmental Consultant	\$623,320
SNPLMA	R4	USFS	196A	Spring Mountain National Recreation Area Landscape Assessment	\$679,082

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
SNPLMA	R4	PIC	319	OHV Videos	\$99,700
SNPLMA	R4	USFS	344A	Ecological Site Inventory for the Spring Mountains Ecosystem	\$88,500
SNPLMA	R4	PIC	348	Desert Conservation Week Pilot Program	\$20,500
SNPLMA	R4	ENTRIX	350A	Virgin River Conservation Assessment	\$1,229,600
SNPLMA	R4	Outside Las Vegas Foundation	350B	Virgin River Partnership Facilitator	\$20,000
SNPLMA	R4	BLM	361	Evaluating Impacts of Cattle Grazing on Vegetation	\$160,200
SNPLMA	R4	SNPLMA	380	Conservation Management Strategy Development	\$500,000
SNPLMA	R4	CC	439	MSHCP Adaptive Management Program Coordination, Science Advice and Effectiveness Monitoring Strategy (with UNR BRRC, SWCA, USGS, & Others)	\$1,593,015
SNPLMA	R6	NPS	475	Peregrine Falcon Monitoring at Lake Mead NRA	\$30,120
SNPLMA	R6	NPS	476	Relict Leopard Frog Monitoring and Management	\$333,000
SNPLMA	R6	USFS-SMNRA	486	Annual Inspection and Maintenance of Riparian Protective Fencing within the Spring Mountains National Recreation Area	\$204,045
SNPLMA	R6	USFS-SMNRA	488	Monitoring of Northern Goshawks and Owls within the Spring Mountains National Recreation Area	\$31,307
SNPLMA	R6	BLM	497	Rare Plant Inventories	\$414,356
SNPLMA	R6	Jones and Stokes	497B	Rare Plant Inventories	\$414,356
SNPLMA	R6	BLM	498	GIS Support	\$645,488
SNPLMA	R6	BLM	499	Support of the Virgin River Conservation Management Strategy	\$256,623
SNPLMA	R6	BLM	502	Sediment Transport of Source Materials to White-margined Penstemon	\$1,192,522
SNPLMA	R6	Nevada System of Higher Education (NSHE)	502A	Sediment Transport of Source Materials to White-margined Penstemon Habitat	\$800,553
SNPLMA	R6	BLM	503	Roads Monitoring on BLM Lands	\$432,589
SNPLMA	R6	USFS-SMNRA	515	Inventory for Covered Plant Species in the Spring Mountains National Recreation Area and adjacent lands.	\$282,426
SNPLMA	R6	NPS	525	Lake Mead GIS and Data Management Support	\$312,788
SNPLMA	R6	NPS	526	Monitoring of Illegal Ground Disturbance in Response to Management Actions	\$105,287
SNPLMA	R6	NPS	529	Monitoring and Road Conditions and Signs	\$114,737
SNPLMA	R6	USFS-SMNRA	531	Forest Service GIS Support of MSHCP applications	\$24,300
SNPLMA	R6	NPS	532	Threats, Research and Monitoring on the Invasive Species Sahara mustard	\$101,009
SNPLMA	R6	USFS-SMNRA	534	Monitoring Rare Plant Species on the Spring Mountains NRA	\$179,396
SNPLMA	R6	NPS	535	Inventory, Research, and Monitoring for Covered Plant Species	\$347,054
SNPLMA	R6	NPS	536	Inventory, Research, and Monitoring of Evaluation and Watch Plant Species on Lake Mead NRA and adjacent lands.	\$163,277
SNPLMA	R6	NPS	537	Interagency Week Sentry Project	\$905,688
SNPLMA	R6	NPS	540	Bald Eagle Monitoring	\$21,589
SNPLMA	R6	NPS	542	Historical and Current Assessment of Six Covered and Three Evaluation Bird Species	\$219,903

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
SNPLMA	R6	CC	544P	Desert Conservation Program Administration	\$1,743,540
SNPLMA	R6	NPS	545	Desert Tortoise Monitoring and Management at Lake Mead NRA	\$37,609
SNPLMA	R6	NDOW	549	Peregrine Falcon Monitoring in Clark County	\$25,611
SNPLMA	R6	USGS	551	Effectiveness Monitoring of Fuel Management Treatments in the Spring Mountains National Recreation Area	\$321,501
SNPLMA	R6	UCSB	552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959
SNPLMA	R6	USGS	552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959
SNPLMA	R6	CC	553	Media and Outreach Development (Includes sub-projects 553-1 through 553-9)	\$240,000
SNPLMA	R6	Natural Heritage Program	557	Sensitive species Data Management	\$180,000
SNPLMA	R6	CC	559	Mojave Max Emergence Contest Partnership and Partnership Development	\$440,000
SNPLMA	R6	RRCIA	559A	Mojave Max Emergence Contest Partnership and Partnership Development	\$400,000
SNPLMA	R6	TNC	561	Muddy River Property Management Acquisition and Partner Coordination	\$271,000
SNPLMA	R6	UNR-BRRC	567	Epidemiology of Desert Tortoise	\$779,726
SNPLMA	R6	UNR-BRRC	569	Assessment of Listed and Other species of Concern at the Urban Edge	\$550,128
SNPLMA	R6	UNR	570	Red Rocks to the Summit Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$115,700
SNPLMA	R6	SWCA	570A	Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$11,570
SNPLMA	R6	CC	570B	Butterfly Monitoring in Spring Mountains	\$127,270
SNPLMA	R6	TNC	572	Effectiveness Monitoring for Saltcedar and Knapweek Control on the Upper Muddy River Floodplain	\$594,991
SNPLMA	R6	CC	574	Adaptive Management Program	\$2,950,335
SNPLMA	R6	DRI	574A	Science Advisor	\$1,700,000
SNPLMA	R6	USGS	574B	Expert Advice	\$430,000
SNPLMA	R6	Remortel	574D	GIS Soils Data	\$24,000
SNPLMA	R6	Mulder	574E	Independent Science Review	\$20,000
SNPLMA	R6	TNC	574F	Rare Plant Workshop	\$19,521
SNPLMA	R6	TSG	574L	Remote Sensing	\$25,000
SNPLMA	R6	Sound Science	574M	Peer Review for MSHCP Documents	\$16,000
SNPLMA	R6	UNLV	575	Connectivity of Leopard Frog Populations	\$147,836
SNPLMA	R6	UNR	576	Movements and Barriers to Movement for Desert Tortoise	\$719,210
SNPLMA	R6	PIC	577	PIC and Volunteer Support for BLM Roads Monitoring Project	\$354,200
SNPLMA	R6	UNR	578	Ecosystem Indicators: Change Indicators	\$1,300,000
SNPLMA	R6	USGS	580	Long-term Conservation Strategy for Palmer's Chipmunk	\$276,447
SNPLMA	R6	GBBO	581	Developing Habitat Models and Monitoring Techniques for Nine Rare Bird Species of the Clark County MSHCP	\$719,940

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
SNPLMA	R6	USGS	582	Population Status and Reproductive Ecology of the Western Burrowing Owl	\$415,051
SNPLMA	R6	USDA-ARS	583	Native Bee Pollinators: Status and Plant Relationships	\$261,696
SNPLMA	R6	UNR	585	Desert Tortoise Monitoring	\$1,217,072
SNPLMA	R6	USFWS	585A	Desert Tortoise Monitoring	\$1,372,218
SNPLMA	R6	UNR_BRRC	588	The Distribution and Abundance of Upland Amphibians and Reptiles	\$1,029,070
SNPLMA	R6	USFWS	593	U.S. Fish and Wildlife Service GIS Support, Data Management and Coordination	\$90,100
SNPLMA	R6	USFWS	595	Establishment of Rana onca Population in a Created Aquatic Habitat	\$200,195
SNPLMA	R6	USDA_ADC	596	Distribution and Movements of common Ravens in Relation to Desert Tortoise Habitat	\$326,140
SNPLMA	R6	UNLV	597	Habitat Manipulations of Relict Leopard Frog Populations	\$87,267
SNPLMA	R6	Smithsonian	602	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480
SNPLMA	R6	NTU	602A	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480
SNPLMA	R6	CC	605	Volunteer Resource Stewardship Pilot Program	\$250,000
SNPLMA	R6	CC	606	Buckwheat and Bearpoppy Inventory	\$55,000
SNPLMA	R6	CC	606A	Buckwheat and Bearpoppy Inventory	\$55,000
SNPLMA	R6	CC	607	Risk Analysis	\$100,000
SNPLMA	R6	CC	608	Effectiveness Monitoring for Conservation Actions	\$500,000
SNPLMA	R6	CC	609	Adaptive Management of Information Gathering and Analysis projects	\$500,000
SNPLMA	R6	NPS	609A	Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species	\$133,500
SNPLMA	R6	NPS	609B	Bald Eagle Monitoring	\$18,135
SNPLMA	R6	NPS	609C	Habitat Modeling for Peregrine Falcon	\$14,853
SNPLMA	R6	NDOW	609D	Peregrine Falcon Modeling	\$14,000
SNPLMA	R6	NPS	609E	Inventory, Research, and Monitoring for Covered Plant Species Technical Conditions	\$23,500
SNPLMA	R8	BLM	705	Road Designation and Monitoring	\$223,061

## SORTED BY AGENCY

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
S07	05-07	American Fence	562B	Fencing Materials	\$123,970
S07	05-07	American Fence	563A	Fencing Materials	\$123,970
SNPLMA	R4	BLM	361	Evaluating Impacts of Cattle Grazing on Vegetation	\$160,200
SNPLMA	R6	BLM	497	Rare Plant Inventories	\$414,356
SNPLMA	R6	BLM	498	GIS Support	\$645,488
SNPLMA	R6	BLM	499	Support of the Virgin River Conservation Management Strategy	\$256,623
SNPLMA	R6	BLM	502	Sediment Transport of Source Materials to White-margined Penstemon	\$1,192,522
SNPLMA	R6	BLM	503	Roads Monitoring on BLM Lands	\$432,589
SNPLMA	R8	BLM	705	Road Designation and Monitoring	\$223,061
S10	07-09	Boyd	714F	BCCE Right of Way Consulting	\$12,650
S10	07-09	Buschelman, Michael	722A	Surface Water Rights Consulting	\$31,600
SNPLMA	R8	CC	1011	Amendment of the Clark County MSHCP and Incidental Take Permit	\$1,407,120
SNPLMA	R4	CC	439	MSHCP Adaptive Management Program Coordination, Science Advice and Effectiveness Monitoring Strategy (with UNR BRRC, SWCA, USGS, & Others)	\$1,593,015
SNPLMA	R6	CC	544P	Desert Conservation Program Administration	\$1,743,540
S10	05-07	CC	546	Boulder City Conservation Easement Plan	\$30,000
S10	05-07	CC	546A	Boulder City Conservation Easement Plan	\$30,000
S10	05-07	CC	548	Conservation Management Strategy Development	\$650,000
SNPLMA	R6	CC	553	Media and Outreach Development (Includes sub-projects 553-1 through 553-9)	\$240,000
SNPLMA	R6	CC	559	Mojave Max Emergence Contest Partnership and Partnership Development	\$440,000
S07	05-07	CC	562	Retro Fencing Projects	\$792,000
S07	05-07	CC	563	New Fencing Projects	\$1,500,000
S07	05-07	CC	564	Fencing Monitoring and Maintenance Projects	\$80,000
SNPLMA	R6	CC	570B	Butterfly Monitoring in Spring Mountains	\$127,270
SNPLMA	R6	CC	574	Adaptive Management Program	\$2,950,335
SNPLMA	R6	CC	605	Volunteer Resource Stewardship Pilot Program	\$250,000
SNPLMA	R6	CC	606	Buckwheat and Bearpoppy Inventory	\$55,000
SNPLMA	R6	CC	606A	Buckwheat and Bearpoppy Inventory	\$55,000
SNPLMA	R6	CC	607	Rick Analysis	\$100,000
SNPLMA	R6	CC	608	Effectiveness Monitoring for Conservation Actions	\$500,000
SNPLMA	R6	CC	609	Adaptive Management of Information Gathering Gathering and Analysis projects	\$500,000
S10	07-09	CC	711	Desert Conservation Program Administration	\$1,967,000
S10	07-09	CC	714	Boulder City Conservation Easement (BCCE) Management Plan	\$300,000
S10	07-09	CC	719	Desert Tortoise Transfer and Holding, Conservation Center, and Translocation	\$800,000

FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
S10	07-09	CC	722	Acquired Lands and Water Rights	\$31,600
SNPLMA	R6	DRI	574A	Science Advisor	\$1,700,000
S10	07-09	EMS	1014B	Permit Amendment Legal Counsel	\$913,000
SNPLMA	R4	ENTRIX	350A	Virgin River Conservation Assessment	\$1,229,600
SNPLMA	R6	GBBO	581	Developing Habitat Models and Monitoring Techniques for Nine Rare Bird Species of the Clark County MSHCP	\$719,940
S10	07-09	GBI	719K	Retro Fit Hatchling Pens	\$6,199
SNPLMA	R6	Jones and Stokes	497B	Rare Plant Inventories	\$414,356
S10	07-09	KNIGHT/ LEAVITT	719L	Desert Tortoise Pick Up Service	\$104,000
SNPLMA	R6	Mulder	574E	Independent Science Review	\$20,000
SNPLMA	R6	Natural Heritage Program	557	Sensitive species Data Management	\$180,000
S07	05-07	NDF	562A	Fencing Projects	\$200,000
S07	05-07	NDF	562E	Fencing Projects	\$200,000
S07	05-07	NDOT	564A	Repair Existing Fencing at BCCE	\$10,000
S10	07-09	NDOT	737	Fencing Monitoring and Maintenance	\$300,000
SNPLMA	R6	NDOW	549	Peregrine Falcon Monitoring in Clark County	\$25,611
SNPLMA	R6	NDOW	609D	Peregrine Falcon Modeling	\$14,000
SNPLMA	R6	Nevada System of Higher Education (NSHE)	502A	Sediment Transport of Source Materials to White-margined Penstemon Habitat	\$800,553
SNPLMA	R8	Nicholson, Ruth	1011A	Meeting Facilitation Permit Amendment	\$385,000
S10	07-09	Nicholson, Ruth	1014A	Meeting Facilitation Desert Tortoise Task Force	\$280,470
SNPLMA	R6	NPS	475	Peregrine Falcon Monitoring at Lake Mead NRA	\$30,120
SNPLMA	R6	NPS	476	Relict Leopard Frog Monitoring and Management	\$333,000
SNPLMA	R6	NPS	525	Lake Mead GIS and Data Management Support	\$312,788
SNPLMA	R6	NPS	526	Monitoring of Illegal Ground Disturbance in Response to Management Actions	\$105,287
SNPLMA	R6	NPS	529	Monitoring and Road Conditions and Signs	\$114,737
SNPLMA	R6	NPS	532	Threats, Research and Monitoring on the Invasive Species Sahara mustard	\$101,009
SNPLMA	R6	NPS	535	Inventory, Research, and Monitoring for Covered Plant Species	\$347,054
SNPLMA	R6	NPS	536	Inventory, Research, and Monitoring of Evaluation and Watch Plant Species on Lake Mead NRA and adjacent lands.	\$163,277
SNPLMA	R6	NPS	537	Interagency Week Sentry Project	\$905,688
SNPLMA	R6	NPS	540	Bald Eagle Monitoring	\$21,589
SNPLMA	R6	NPS	542	Historical and Current Assessment of Six Covered and Three Evaluation Bird Species	\$219,903
SNPLMA	R6	NPS	545	Desert Tortoise Monitoring and Management at Lake Mead NRA	\$37,609
SNPLMA	R6	NPS	609A	Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species	\$133,500
SNPLMA	R6	NPS	609B	Bald Eagle Monitoring	\$18,135
SNPLMA	R6	NPS	609C	Habitat Modeling for Peregrine Falcon	\$14,853



FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
SNPLMA	R6	NPS	609E	Inventory, Research, and Monitoring for Covered Plant Species Technical Conditions	\$23,500
SNPLMA	R6	NTU	602A	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480
S10	07-09	Oliver, Robert	714A	BCCE Resource Protection	\$183,280
SNPLMA	R4	Outside Las Vegas Foundation	350B	Virgin River Partnership Facilitator	\$20,000
SNPLMA	R8	PBSJ	1011B	Biological Environmental Consultant	\$623,320
SNPLMA	R4	PIC	319	OHV Videos	\$99,700
SNPLMA	R4	PIC	348	Desert Conservation Week Pilot Program	\$20,500
SNPLMA	R6	PIC	577	PIC and Volunteer Support for BLM Roads Monitoring Project	\$354,200
SNPLMA	R6	Remortel	574D	GIS Soils Data	\$24,000
SNPLMA	R6	RRCIA	559A	Mojave Max Emergence Contest Partnership and Partnership Development	\$400,000
SNPLMA	R6	Smithsonian	602	Impact of Nutritional Stress on URTD and Immune Function in the Desert Tortoise	\$698,480
SNPLMA	R4	SNPLMA	380	Conservation Management Strategy Development	\$500,000
SNPLMA	R6	Sound Science	574M	Peer Review for MSHCP Documents	\$16,000
SNPLMA	R6	SWCA	570A	Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$11,570
SNPLMA	R6	TNC	561	Muddy River Property Management Acquisition and Partner Coordination	\$271,000
SNPLMA	R6	TNC	572	Effectiveness Monitoring for Saltcedar and Knapweed Control on the Upper Muddy River Floodplain	\$594,991
SNPLMA	R6	TNC	574F	Rare Plant Workshop	\$19,521
SNPLMA	R6	TSG	574L	Remote Sensing	\$25,000
SNPLMA	R6	UCSB	552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959
SNPLMA	R6	UNLV	575	Connectivity of Leopard Frog Populations	\$147,836
SNPLMA	R6	UNLV	597	Habitat Manipulations of Relict Leopard Frog Populations	\$87,267
SNPLMA	R6	UNR	570	Red Rocks to the Summit Monitoring for Covered and At-Risk Butterfly Species in the Spring Mountains	\$115,700
SNPLMA	R6	UNR	576	Movements and Barriers to Movement for Desert Tortoise	\$719,210
SNPLMA	R6	UNR	578	Ecosystem Indicators: Change Indicators	\$1,300,000
SNPLMA	R6	UNR	585	Desert Tortoise Monitoring	\$1,217,072
SNPLMA	R6	UNR_BRRRC	588	The Distribution and Abundance of Upland Amphibians and Reptiles	\$1,029,070
SNPLMA	R6	UNR-BRRRC	567	Epidemiology of Desert Tortoise	\$779,726
SNPLMA	R6	UNR-BRRRC	569	Assessment of Listed and Other species of Concern at the Urban Edge	\$550,128
SNPLMA	R6	USDA_ADC	596	Distriburion and Movements of common Ravens in Relation to Desert Tortoise Habitat	\$326,140

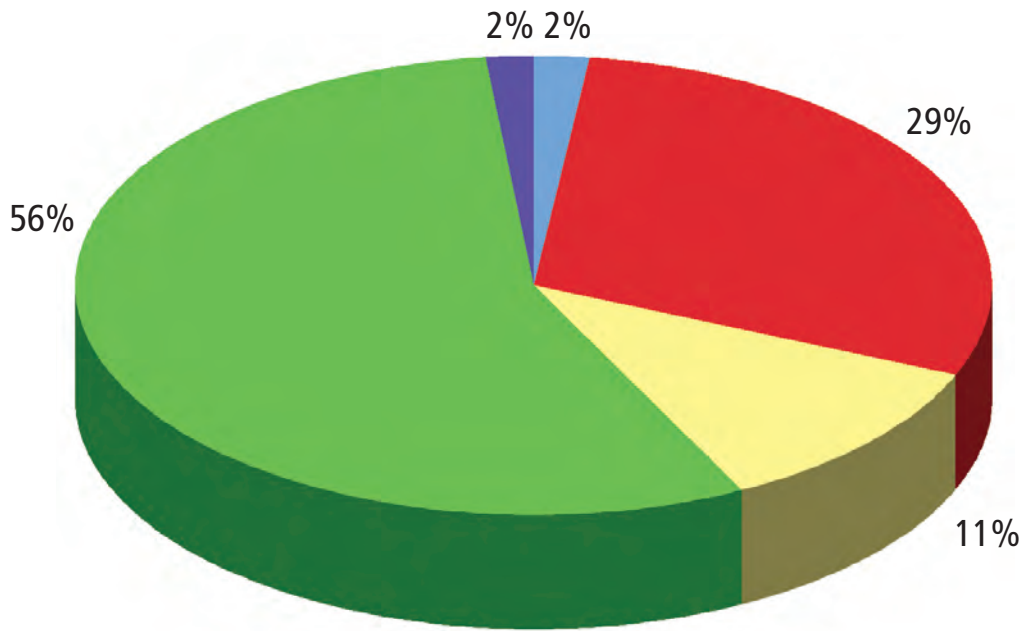
FUNDING SOURCE	BN/ ROUND	AGENCY	PROJECT NUMBER	PROJECT TITLE	AMOUNT AWARDED
S07	05-07	USDA-ADC	598-1	Provide Assistance in the development and application of Wildlife Damange Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384
S10	05-07	USDA-ADC	598-2	Provide Assistance in the development and application of Wildlife Damange Management for the protection of identified threatened and/or endangered species from predation or parasitism within Clark County	\$46,384
SNPLMA	R6	USDA-ARS	583	Native Bee Pollinators: Status and Plant Relationships	\$261,696
SNPLMA	R4	USFS	196A	Spring Mountain National Recreation Area Landscape Assessment	\$679,082
S10	03-05	USFS	322	Seed Collection of Rare and Native Species	\$565,970
SNPLMA	R4	USFS	344A	Ecological Site Inventory for the Spring Mountains Ecosystem	\$88,500
SNPLMA	R6	USFS-SMNRA	486	Annual Inspection and Maintenance of Riparian Protective Fencing within the Spring Mountains National Recreation Area	\$204,045
SNPLMA	R6	USFS-SMNRA	488	Monitoring of Northern Goshawks and Owls within the Spring Mountains National Recreation Area	\$31,307
S10	05-07	USFS-SMNRA	490	Bristle Cone Habitat Protection for MSHCP Covered Species on the Spring Mountains National Recreation Area	\$83,780
SNPLMA	R6	USFS-SMNRA	515	Inventory for Covered Plant Species in the Spring Mountains National Recreation Area and adjacent lands.	\$282,426
SNPLMA	R6	USFS-SMNRA	531	Forest Service GIS Support of MSHCP applications	\$24,300
SNPLMA	R6	USFS-SMNRA	534	Monitoring Rare Plant Species on the Spring Mountains NRA	\$179,396
SNPLMA	R6	USFWS	585A	Desert Tortoise Monitoring	\$1,372,218
SNPLMA	R6	USFWS	593	U.S. Fish and Wildlife Service GIS Support, Data Management and Coordination	\$90,100
SNPLMA	R6	USFWS	595	Establishment of Rana onca Popluation in a Created Aquatic Habitat	\$200,195
S10	07-09	USFWS	719J	Intake and Processing of Desert Tortoises	\$350,647
S10	07-09	USFWS	785	Desert Tortoise Monitoring 2009	\$983,000
SNPLMA	R6	USGS	551	Effectiveness Monitoring of Fuel Management Treatments in the Spring Mountains National Recreation Area	\$321,501
SNPLMA	R6	USGS	552	Effectiveness Monitoring of Spring-fed Wetlands and Riparian Restoration Treatments	\$899,959
SNPLMA	R6	USGS	574B	Expert Advice	\$430,000
SNPLMA	R6	USGS	580	Long-term Conservation Strategy for Palmer's Chipmunk	\$276,447
SNPLMA	R6	USGS	582	Population Status and Reproductive Ecology of the Western Burrowing Owl	\$415,051

# FINANCIAL REPORT





EXPENSES BY FUNDING SOURCE  
 July 1, 2007 through June 30, 2009



Section 7	\$347,061.94
Section 10	\$5,642,563.54
SNPLMA R4	\$2,172,776.06
SNPLMA R6	\$10,663,070.82
SNPLMA R8	\$318,130.92
<b>Total</b>	<b>\$19,143,603.28</b>



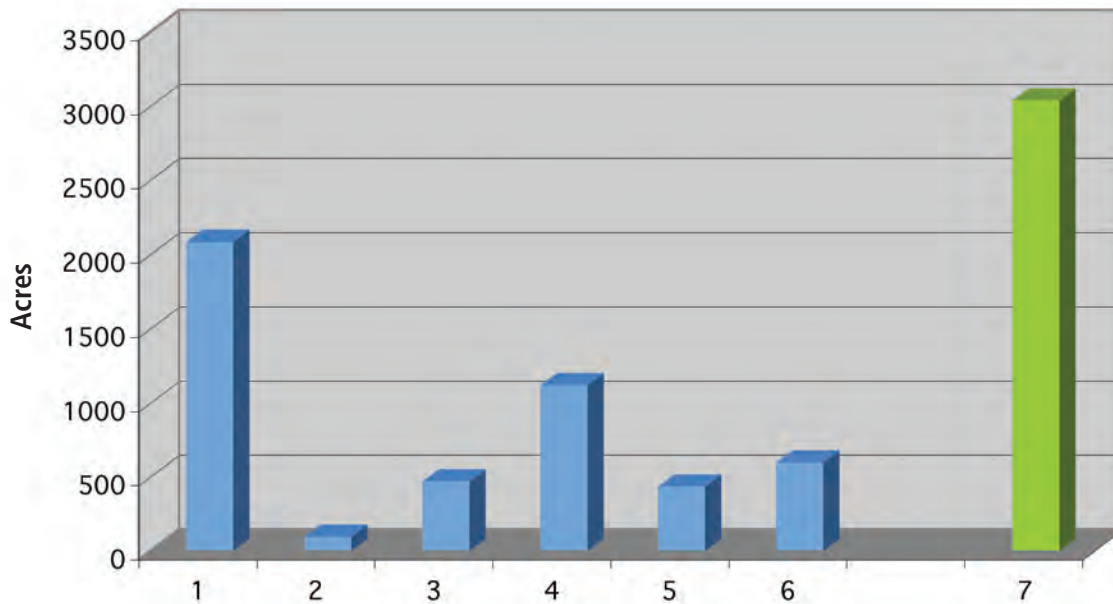
# LAND DISTURBANCE REPORTS





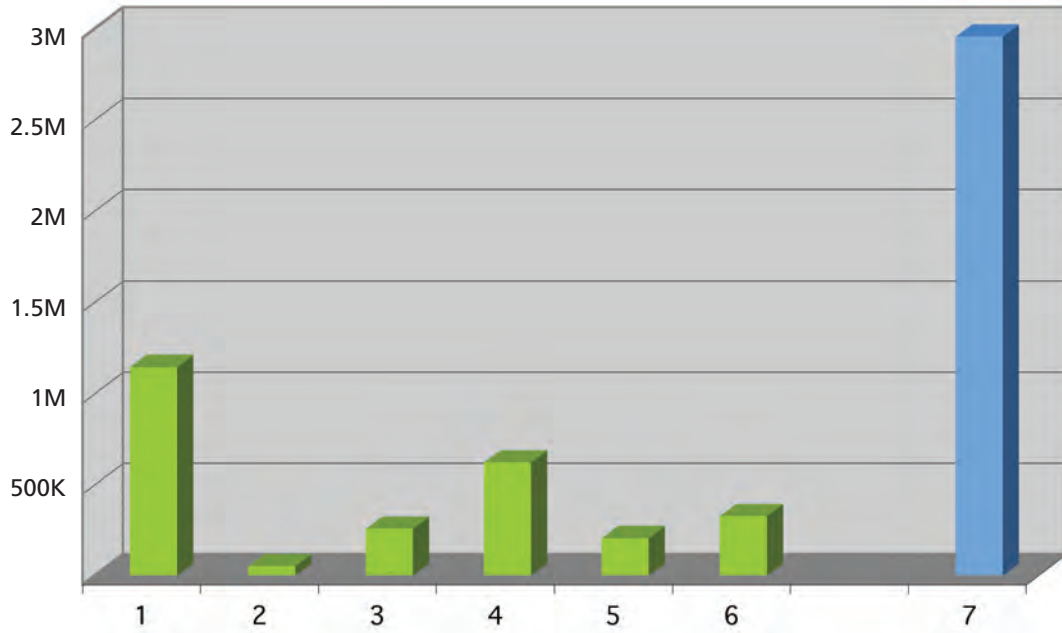


ACRES DISTURBED  
July 2007 through June 2009



1	Clark County	2,080.63
2	Boulder City	92.78
3	City of Las Vegas	465.47
4	Henderson	1,114.57
5	Mesquite	432.05
6	North Las Vegas	594.59
7	Section 7	3,034.38

REVENUE GENERATED  
July 2007 through June 2009



1	Clark County	\$1,142,646.13
2	Boulder City	\$51,030.50
3	City of Las Vegas	\$255,387.50
4	Henderson	\$620,566.65
5	Mesquite	\$204,231.50
6	North Las Vegas	\$327,024.50
		<b>\$2,600,886.78</b>
7	Section 7	\$2,955,923.03

# TORTOISE DISPOSITION SUMMARY

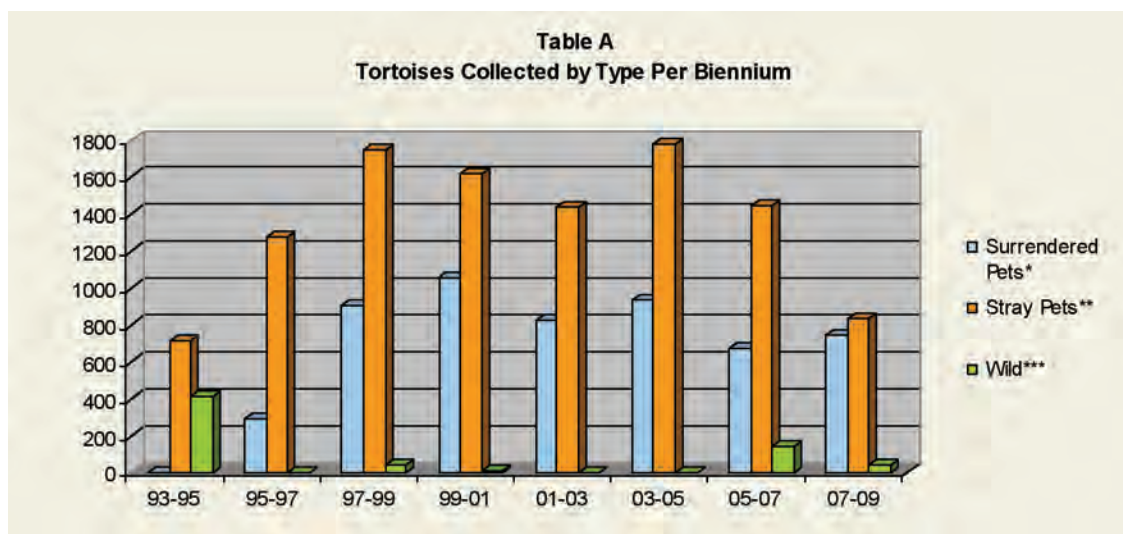




DESERT TORTOISE DISPOSITION

Clark County's responsibilities regarding desert tortoise collection were established in the 1995 DCP and 2001 MSHCP and Section 10 Permit #TE034927-0. The DCP outlines the requirement to provide a pickup service to handle desert tortoises which are displaced by development or appear to be in harms way within urban areas under section C.3.a. The service is currently free of charge and is provided to developers who do voluntary surveys of their property prior to disturbance and to individuals who find a tortoise wandering near urban development. The service began collecting pet tortoises as a voluntary service to the community in 1996. Table A, Type of Tortoise Collected Per Biennium, displays the number of surrendered pets, stray pets, and wild tortoises collected by the pickup service since 1993.

The pickup service has handled over 17,500 tortoises since 1995 and averaged approximately 2,200 pick-ups a biennium over the last eight biennia. All tortoises collected by the service are taken to the Desert Tortoise Conservation Center (DTCC) for care and ultimate disposition. Disposition options are at the discretion of the U.S. Fish and Wildlife Service (FWS). Table B, Tortoise Disposition Per Biennium, displays the number of tortoises per disposition option for each biennium (if data was available), for Clark County tortoises brought in to the DTCC through the pickup service.

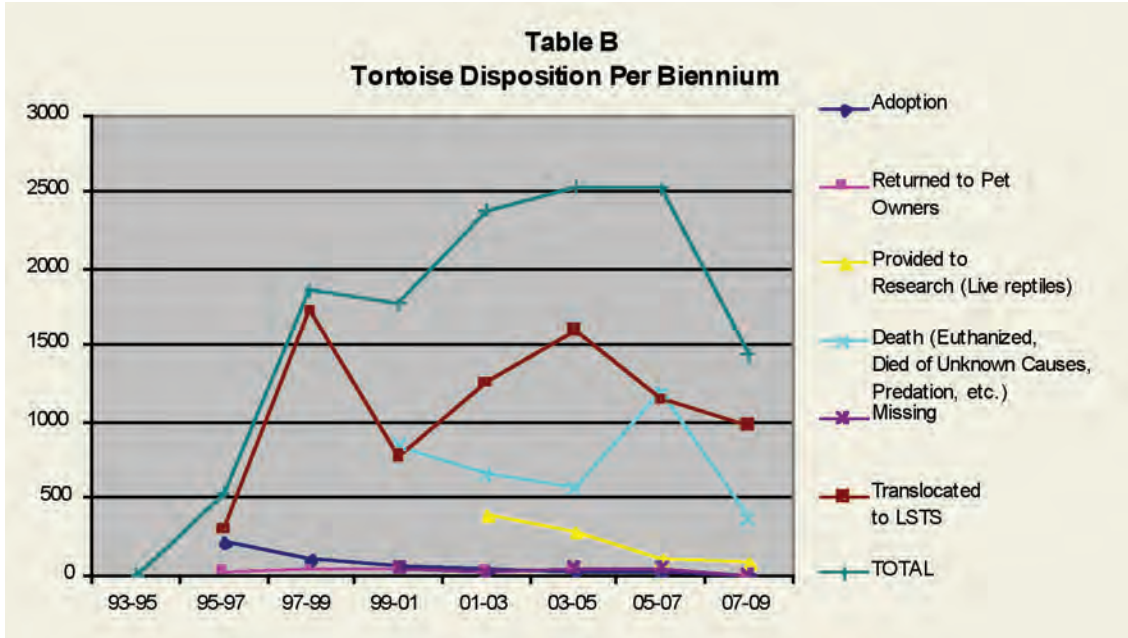


\* The pickup of pet desert tortoises began as a pilot project in October 1996

\*\*These tortoises are found in urban areas without desert tortoise habitat

\*\*\*Includes tortoises found through mandatory clearances in 93-95, then optional clearances after August 1995, and Coyote Springs clearances in 05-07.

# TORTOISE DISPOSITION SUMMARY



NOTE: Data used to compile these charts was provided through the final biennial reports of Southern Nevada Environmental Inc., contractor to Clark County for the pickup service and management of the DTCC 1993-2007; Clark County hotline and pickup service database 2007; quarterly reports from Knight and Leavitt Associates, contractor to Clark County for the pickup service 2008 to present; and quarterly reports and informal communications with FWS, manager of the DTCC 2007-present.

# GLOSSARY & ACRONYMS







ACEC	Area of Critical Environmental Concern
AML	Appropriate Management Level
AMP	Adaptive Management Plan
AMSC	Adaptive Management Subcommittee
AMST	Adaptive Management Science Team
ARS	Agricultural Research Service
BAC	Biological Advisory Committee
BAMR	Biennial Adaptive Management Report
BCCE	Boulder City Conservation Easement
BLM	United States Bureau of Land Management
BMP	Burro Management Plan
BPR	Biennial Progress Report
BRD	United States Geological Survey Biological Resources Division
BRRC	Biological Resources Research Center at University of Nevada, Reno
CA	Conservation Agreement
CC	Clark County
CCDCP	Clark County Desert Conservation Program
CCMA	(Desert Tortoise) Center Management Area
CDSN	Conservation District of Southern Nevada
CFR	Code of Federal Regulations
CM	Contract Manager
CMS	Conservation Management Strategy
CO	Carbon Monoxide
COLA	Cost of Living Adjustment
Contract	The formal legal agreement signed by all parties that guides the work and determines requirements of the contractor.
Contractor	The contractor who has the primary responsibility for developing, delivering and/or integrating the system. The contractor may hire and oversee various subcontracts to complete the required work. All subcontractors must be approved by the MSHCP.
Contract Amendment	A change to the contract terms, including changes in scope, period of performance, key personnel, cost or billing rates.
DAQEM	Department of Air Quality and Environmental Management
DCP	Desert Conservation Program
DM	Deliverable Monitor
DED	Deliverable Expectation Document
Deliverable	A tangible and measurable result, outcome, or item that must be produced to complete a project or a part of a project. Something that is to be delivered according to agreement.

## GLOSSARY & ACRONYMS

Deliverable Expectation Document	A document that presents an overview of what a certain deliverable will include. The DED is reviewed and approved by the contract manager to ensure agreed-upon expectations are clearly defined before the deliverable is actually developed. The DED is not attached to any payment.
DNWR	Desert National Wildlife Range
DOD	United States Department of Defense
DTCC	Desert Tortoise Conservation Center
DTTF	Deliverable Transmittal Tracking Form
DTL	Deliverable Tracking Log
DTRP	Desert Tortoise Recovery Plan
DTS	Deliverable Transmittal Sheet
DTTHF	Desert Tortoise Transfer and Holding Facility
DWMA	Desert Wildlife Management Area
EA	Environmental Assessment
EIS	Environmental Impact Statement
ELISA	Enzyme-Linked Immunosorbent Assay
EPA	United States Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Federal Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of no Significant Impact
FP	Forest Plan (USFS)
GIS	Geographic Information System
GMP	General Management Plan (NPS)
GPS	Global Positioning System
GSA	Government Services Administration
H <sub>2</sub> S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HMA	Herd Management Area
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
IMC	Clark County Implementation and Monitoring Committee
IMA	Intensively Managed Area
IMP	Interim Management Plan
INRMP	Integrated Natural Resources Management Plan
IPB	Implementation Plan and Budget
IPTL	Issues/Problems Tracking Log
IRF	Invoice Review Form
ISA	Instant Study Area

ISAFAF	Indian Spring Air Force Auxiliary Field
LE	Law Enforcement
LEO	Law Enforcement Officer
LIMA	Less Intensively Managed Area
LMNRA	Lake Mead National Recreation Area
LSTS	Large Scale Translocation Sites
LVSP	Las Vegas Springs Preserve
LVVWD	Las Vegas Valley Water District
Milestone	A reference point marking a major event in the project and used to monitor the project's progress. A significant point in development
MFP	Management Framework Plan
MLWA	Military Lands Withdrawal Act
MOA	Memorandum of Agreement
MOG	Management Oversight Group
MOG TAC	Management Oversight Group Technical Advisory Committee
MOU	Memorandum of Understanding
MRREIAC	Muddy River Regional Environmental Impact Alleviation Committee
MSHCP	Multiple Species Habitat Conservation Program
MUMA	Multiple Use Management Area
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NADCP	Nevada Animal Damage Control Program
NAFB	Nellis Air Force Base
NAFR	Nellis Air Force Range
NBC	National Broadcasting Corporation
NCA	National Conservation Area
NDCNR	Nevada Department of Conservation and Natural Resources
NDF	Nevada Division of Forestry
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NNHP	Nevada Natural Heritage Program
NO2	Nitrogen Dioxide
NOX	Oxides of Nitrogen
NPS	United States National Park Service
NRA	National Recreational Area
NRCS	National Resource Conservation Service
NRIS	National Resources Information Center

## GLOSSARY & ACRONYMS

NRS	Nevada Revised Statute
NSAR	Nellis Small Arms Range
NSHE	Nevada System of Higher Education
NTE	Not to Exceed
NWR	National Wildlife Refuge
O3	Ozone
OHV	Off-Highway Vehicle
ORV	Off Road Vehicle
OWMA	Overton Wildlife Management Area
PA	Purchasing Agent
PARC	Predatory Animal and Rodent Committee
Pb	Lead
PDA's	Personal Digital Assitants
PIE	Public Information and Education
PM	Project Manager
PM10	Particulate Matter
PR (POR)	Purchase Requisition
PVC	Polyvinyl Chloride
REMI	Regional Economic Models, Inc.
RMP	Resource Management Plan (BLM)
RNA	Research Natural Area
RPO	Resource Protection Officer
RRCNCA	Red Rock Canyon NCA
SADG	Spatial Analysis /Database/Geographic Information System
SIP	State Implementation Plan
SMNRA	Spring Mountain National Recreation Area
SNPLMA	Southern Nevada Public Lands Management Act
SNWA	Southern Nevada Water Authority
SOW	Scope of Work
SO2	Sulfur Dioxide
Subcontractor	A contractor who is hired by the Prime Contractor to perform work on the project. The ultimate contractual responsibility for the project lies with the Prime Contractor.
SRMA	Special Recreation Management Area
TAC	Technical Advisory Committee
TAG	Technical Advisory Group
TEA-21	Transportation Efficiency Act-21st Century
TNC	The Nature Conservancy
TSP	Total Suspended Particulates

UMA	Unmanaged Area
UNLV	University of Nevada Las Vegas
UNR	University of Nevada Reno
URTD	Upper Respiratory Tract Disease
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USU	Utah State University
Vendor	A company or consultant offering to provide services or products or bidding on a solicitation
VOC	Volatile Organic Compound
WHR	Wildlife Habitat Relationships
WMA	Wildlife Management Area (Overton)
WS	Wildlife Service
WSA	Wilderness Study Area

