

*Appendix L.  
Land Protection Plan and  
Conceptual Management Plan  
for Moapa Valley NWR*

# **APPENDIX L-1**

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## **LAND PROTECTION PLAN**

**Proposed Moapa Valley  
National Wildlife Refuge Expansion  
Clark County, Nevada**

**United States Department of the Interior**  
**Fish and Wildlife Service**

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**Land Protection Plan  
Proposed Moapa Valley  
National Wildlife Refuge Expansion**

**Clark County, Nevada**

*Prepared by*  
**U.S. Fish and Wildlife Service  
Region 8**

January 2008

Recommended By:

Approved By:

\_\_\_\_\_  
Director, Region 8  
Sacramento, California

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Date

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Date

APPENDIX L-1

LAND PROTECTION PLAN

**Introduction..... 1**  
**Project Description ..... 1**  
**Purpose and Goals of Moapa Valley NWR ..... 2**  
**Objectives of the Proposed Action..... 2**  
**Threats to and Status of the Resource to be Protected..... 5**  
**Protection Methods..... 6**  
**Management Considerations ..... 8**  
**Summary of Planning and Land Acquisition Processes..... 9**  
**Willing Seller Policy..... 11**  
**Land Protection Priorities within the Planning Area Boundary..... 12**  
**Social and Cultural Impacts ..... 12**  
**Coordination and Consultation ..... 13**  
**Summary of Proposed Action ..... 13**  
**References..... 15**

Map and Table

Tract Map..... 3  
Tract Table..... 14

# **LAND PROTECTION PLAN**

## **Proposed Moapa Valley National Wildlife Refuge Expansion Clark County, Nevada**

### **Introduction**

This draft land protection plan outlines resource protection needs, priorities, and habitat protection methods the U.S. Fish and Wildlife Service (Service) would use for the proposed Moapa Valley National Wildlife Refuge (Refuge) expansion in Clark County, Nevada. This plan proposes fee-title acquisition as the primary level of protection needed to meet habitat and wildlife management goals for the project area. The Environmental Assessment (EA) evaluated the environmental effects of expanding the approved refuge acquisition boundary to conserve and where appropriate, restore approximately 1,472 additional acres, which includes warm springs and their outflows, riparian corridors and adjacent lands where land use directly affects water quality and associated vegetation.

Nothing in this plan constitutes an offer to purchase private property, or a usurpation of the authority of the State of Nevada, Clark County, or any other jurisdiction to regulate land use within the proposed refuge boundary. This plan is intended to guide the Service's proposed land protection activities subject to the availability of funds and other constraints. To complement this plan, the Service has prepared a conceptual management plan (Appendix L-2) that describes the general management approaches for the Refuge.

### **Project Description**

The Service proposes to establish an approved refuge land acquisition boundary and provide protection and management within the proposed expanded boundary of the Refuge. The Service's proposed action encompasses approximately 1,472 acres, which includes of warm springs and their outflows, riparian corridors and adjacent lands where land use directly affects water quality and associated vegetation. The refuge study area adjoins the existing Refuge in northeast Clark County (see Tract Map).

## Purpose and Goals of Moapa Valley NWR

The Refuge was established on September 10, 1979, to secure and protect habitat for the endangered Moapa dace (*Moapa coriacea*). The purpose of the Refuge comes from the Endangered Species Act of 1973, as amended (Act):

*“...to conserve (A) fish or wildlife which are listed as endangered species or threatened species...or (B) plants...”* (16 USC §1534).

The Service developed two goals for management of Moapa Valley NWR. These goals were used to identify appropriate objectives and strategies and develop alternatives.

**Endemic and Special Status Species (Goal 1).** Protect and restore, when possible, healthy populations of endemic and special status species, such as the endangered Moapa dace, within the Muddy River headwaters.

**Visitor Services (Goal 2).** Local communities and others enjoy and learn about the resources of Moapa Valley NWR and participate in its restoration.

The authorities for the acquisition are the Endangered Species Act of 1973, as amended (16 U.S.C. 1532-1544, 87 Stat. 884), Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742(a)-754), Migratory Bird Conservation Act of 1929 (16 U.S.C. 715-715d) and Refuge Recreation Act of 1962, as amended (16 U.S.C. 460k-460k-4). The Endangered Species Act of 1973, Fish and Wildlife Act of 1956, and Refuge Recreation Act of 1962 authorize the Service to use funds made available under the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-4601-11) to acquire lands, waters, or interests therein for fish and wildlife conservation purposes. Federal monies used to acquire private lands through the Land and Water Conservation Fund are derived primarily from oil and gas leases on the outer continental shelf, excess motorboat fuel tax revenues, and the sale of surplus Federal property.

## Objectives of the Proposed Action

The primary objectives of this proposal are to ensure the conservation and perpetuation of aquatic, wetland, and mesquite bosque habitats needed for the recovery of Moapa dace and other endemic wildlife species in the upper Moapa Valley. Our areas of emphasis are twofold: (1) the warm springs and their outflows, which provide the only habitat of the Moapa dace, and (2) riparian corridors and adjacent lands where land use directly affects water quality. Also important is the opportunity to improve riparian habitat conditions for the yellow-billed cuckoo, the southwestern willow flycatcher, and other species. The expansion of the Refuge is a crucial step toward recovery of the Moapa dace and would advance and expand habitat restoration actions other important recovery actions.

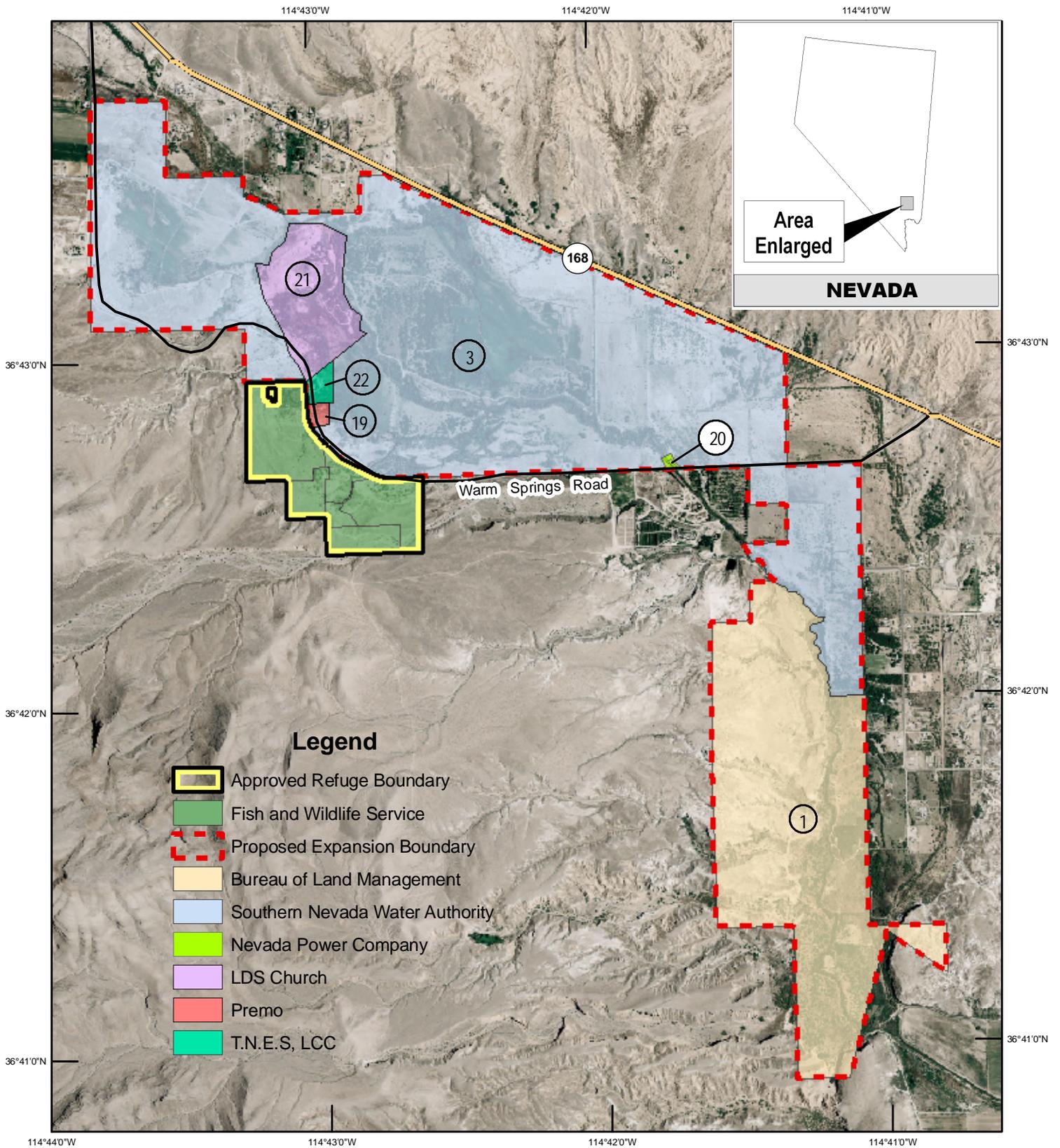


U.S. Fish & Wildlife Service

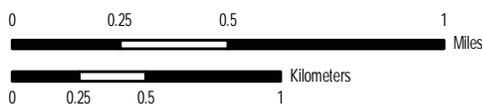
# Moapa Valley National Wildlife Refuge Proposed Expansion

Clark County, NV

Tract Map



Produced by the Region 8 Realty Office  
 Sacramento, CA  
 1/16/2008  
 Boundaries follow 2008 Clark County  
 parcel data except where survey data was used.



Additionally, protection of this habitat could preclude the need to list other rare aquatic species in the future. The proposed project provides opportunities for Federal, Tribal, State, and local government partnerships with private property owners. These partnerships are the basis for achieving mutual conservation goals while maintaining the rural lifestyle and economic vitality of the Moapa Valley.

Protection of the lands considered would fulfill the habitat criterion of the Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem (Recovery Plan) (USFWS 1995). The proposed expansion area includes about 1,472 acres of land adjacent to the Refuge that are occupied by species listed as threatened or endangered under the Endangered Species Act of 1973, as amended (Act). The proposed expansion area also contains other listed and species of concern, has restorable habitat, and potential to contribute significantly to species recovery.

### **Threats to and Status of the Resource to be Protected**

Threats to the upper Moapa Valley and its species include incompatible land use, decline in quantity and quality of the regional aquifer, introduction of exotic aquatic species, and spread of invasive plant species.

Clark County is one of the fastest growing counties in the United States, with a population forecasted to grow to approximately 2.5 million people by 2030 (Clark County 2000a). Residential development may include risks such as increased contaminants, human disturbance, risk of wildfire, exotic species establishment, increased draw on the aquifer, and increased agriculture or ranching. Historically, ranching activities such as water diversion, ditching and draining of wetlands, grazing, haying, burning, and clearing have adversely affected habitats in the upper Moapa Valley. Many of these activities continue to contribute to the decline of native wildlife populations.

Groundwater pumping may draw down the aquifer and reduce spring flow. Pumping of groundwater in the immediate vicinity of the springs is probably causing declines in the flow in the upper Muddy River. The reduction in stream flow is caused by the interception of water discharging from the carbonate aquifer to the stream through the alluvium.

Water discharging at Pedersen and other nearby springs on the Refuge, is probably isolated from the alluvium, but has a more direct connection with the carbonate aquifer. Small declines in the spring pool elevation have occurred at Pedersen spring, and it is presently unclear if the discharge rate is declining because of other factors that affect the relationship between pool level and discharge-rate measurements (Waddell, pers. comm.).

Continued pumping from the carbonate aquifer will likely further decrease the water levels in the carbonate aquifer beneath the Refuge, and cause a measurable, and possibly significant reduction in discharge rate at Pedersen and nearby springs. Computer modeling of the groundwater system predicts that groundwater production from the carbonate aquifer beneath California Wash and

Coyote Springs Valley will reduce groundwater discharge rates in the upper Muddy River area. This reduction will be in addition to the reduction caused by more local pumping. Because Pederson and nearby springs are located at higher elevation than the springs located in the center of the valley, they will probably be more affected by pumping than the other springs (Waddell, pers. comm.).

The introduction, both intentional and accidental, of nonnative species has adversely affected endemic species through predation, competition, and infestation by parasites. Predation by tilapia and bullfrogs is of particular concern, and these species, as well as shortfin mollies and mosquitofish, also compete with native species for resources. Crayfish (*Procambarus clarkii*), already present in the lower Muddy River, could spread upriver and create additional pressures on endemic species in the Warm Springs area.

The spread of California fan palms continues to have deleterious effects on the hydrology of the Warm Springs area. Young palms are growing and increasing in numbers along the stream channels. As a result, the streams have narrowed and channelized creating higher velocities unsuitable for the Moapa dace. The presence of these palms also increases the risk of wild fire. A fire in 1994 virtually eliminated Moapa dace on the Refuge (USFWS 1995). To lessen the probability of fire occurring again over Moapa dace habitat, Refuge staff developed a management plan for both wild and prescribed fires.

The invasion of weeds poses a threat to the integrity of habitats supporting listed species and other species of concern in the Moapa Valley. Nonnative shrubs, such as tamarisk (*Tamarix*) and Russian olive (*Eleagnus angustifolius*), are increasing in numbers in the study area, competing with native riparian species, and potentially lowering the water table. Eel grass (*Valisneria*) is flourishing in many portions of the streams and threatens to alter stream hydrology further. Upland weeds, such as Russian thistle (*Salsola tragus*) and knapweed (*Centaurea* spp.), have affected habitat quality of the upland areas and will continue to proliferate in disturbed areas.

## **Protection Methods**

A variety of habitat protection methods can be used to conserve the natural resources of the area within the boundary of the proposed Refuge expansion. Service policy is to adopt habitat protection measures and strategies that involve acquiring the minimum possible interest or rights in lands and waters. The goal is to leave as large a proportion of these rights as possible in private ownership and still meet the defined resource objectives.

The Service first considered the likelihood of the land/habitat in question being protected under local government action (e.g., zoning, ordinances) designating specific geographic areas where particular uses are either permitted or prohibited; such as residential, business, or open space for the parks. The Service also considered the likelihood of the land/habitat in question being protected under a Federal/State/local permit, license or other program. Since the above

protection methods are not available or not being used at the local and State level to protect these lands, the Service examined the degree of land acquisition which may be needed to protect habitat resources.

These acquisition options range from the acquisition of land by the Service in fee-title, conservation and agricultural easements, cooperative agreements, or memorandum of understanding. Since habitat protection by means of local or State regulatory controls appears unlikely, the Service believes fee title acquisition represent the minimum possible interest or rights in lands and waters which would need to be acquired to meet the habitat protection objectives for the Warm Springs Ranch. Expansion of the Refuge would provide a coordinated effort to protect native habitats and assist recovery of declining fish and wildlife populations of the Muddy River Ecosystem.

The term “conservation” is defined to include a wide variety of habitat protection methods. On lands owned and managed by public agencies, cooperative agreements and coordinated planning/management efforts, including shared resources, could be used to conserve natural resources within the proposed refuge boundary. “Conservation” also includes acquisition of land or interest therein by the Service for inclusion in the National Wildlife Refuge System. The Service could acquire fee-title, conservation or agricultural easements, long-term leases, and/or cooperative agreements with willing public agencies and willing landowners through purchase, donation, transfer, exchange, or written agreement.

While the Service Proposed Action is fee-title acquisition of the lands considered, habitat protection methods that could be used by the Service to protect habitats within the proposed expansion area are described below:

**Conservation Easements.** Conservation easements provide the Service the opportunity to manage lands for their fish and wildlife habitat values. The easement would preclude uses inconsistent with the Service’s management objectives as outlined in the CMP. In effect, the landowner transfers certain development and property rights to the Service for restrictive uses, as specified in the easement. Property taxes would remain the responsibility of the landowner.

Easements would likely be useful when (1) most, but not all, of a private landowner’s uses are compatible with the Service’s management objectives, and (2) the current owner desires to retain ownership of the land and continue compatible uses under the terms mutually agreed to in the easement. Land uses that are normally restricted under the terms of a conservation easement include, but are not limited to:

- Development rights (residential, industrial, etc.)
- Alteration of the area’s natural topography
- Uses which adversely effect the area’s flora and fauna
- Crop type (cereal grains, corn, etc.)
- Alteration of natural water regimes.

**Fee-Title Acquisition.** The Service acquires land by outright purchase (fee-title) when (1) the land's fish and wildlife resources require permanent protection that is not otherwise available, (2) the land is needed for development associated with public use, (3) a pending land use could otherwise harm fish and wildlife resources, or (4) purchase is the most practical and economical way to assemble small tracts into a manageable unit. Fee-title acquisition often transfers all property rights owned by the landowner, including mineral and water rights, to the federal government. A fee title interest may be acquired by purchase, donation, exchange, or transfer. The Service proposes fee-title acquisition for the project study area, for the reasons listed above, as the best way to permanently protect and restore all the lands considered in this expansion proposal

## **Management Considerations**

The Southern Nevada Water Authority (SNWA) has title to the Warm Springs Ranch and acquired it through funding from the Southern Nevada Public Lands Management Act (SNPLMA). The Bureau of Land Management has title to the 400 acre riparian area south of the Refuge, and Mary Premo owns three acres situated between the Refuge and the Warm Springs Ranch. The Warm Springs Ranch has no water rights associated with it and there is an inholding within the Ranch that the Church of Latter Day Saints owns, consisting of approximately 72 acres, and another inholding consisting of six acres owned by TNES, LLC.

The Service, Moapa Band of Paiutes, Southern Nevada Water Agency (SNWA), MVWD, and Coyote Springs Investments, LLC (CSI) are signatories in a Memorandum of Agreement (MOA). In this MOA, the parties have identified certain conservation measures for the conservation and recovery of the Moapa dace, and have agreed to coordinate the monitoring, management and mitigation measures in their monitoring plans.

The MOA establishes a Recovery Implementation Program (RIP) to outline and implement necessary protection and recovery activities for the Moapa dace. The MOA also provides for funding to develop the RIP, dedication of certain water rights to preserve in-stream flows, pumping restrictions whereby the parties agree to curtail pumping in the event spring flows in the Warm Springs area decline to specified "trigger levels." Any future production of groundwater by the parties would be subject to the terms of the MOA, including pumping that may occur after the two-year pump test or as a result of other groundwater development projects. Other conservation measures in the MOA include:

- Dedication of the Jones water right (Apcar spring) to provide in-stream flows.
- Dedication of a portion of CSI's water rights from the Coyote Spring Valley.

- Habitat restoration and recovery measures, including funding for; restoration of Moapa dace habitat, development of an ecological model for the Moapa dace, construction of fish barriers, eradication of non-native fish species, and cultivation of native vegetation.
- Protection of in-stream flows through the establishment of minimum in-stream flow levels that would trigger a range of conservation actions including restriction of groundwater pumping.
- Establishment of a Hydrologic Review Team to coordinate data collection, analyses of impacts, and assessments of pumping restrictions.
- Acquisition of additional land and water rights to assist in the recovery of the Moapa dace.
- Operational coordination among the Service, SNWA, CSI, and MVWD.
- Adaptive management measures, including additional conservation measures for the conservation and recovery of the Moapa dace.

On January 30, 2006, the USFWS issued a final programmatic biological opinion (BO) on the MOA (Service File 1-5-05-FW-536). The Service determined that the cumulative groundwater withdrawal of 16,100 afy from two hydrographic basins, Coyote Spring Valley and California Wash is likely to adversely affect the Moapa dace. The Service concluded that the proposed action, combined with the conservation measures outlined in the MOA would not jeopardize the Moapa dace. Future Section 7 consultations for federal actions under the MOA, including the Coyote Spring Project, would be tiered from this programmatic BO.

## **Summary of Planning and Land Acquisition Processes**

The Director of the Service, in consultation with the Region 8 Director, would approve the designation of the project boundary upon completion of the planning and environmental coordination process. This process includes compliance with the National Environmental Policy Act (NEPA), the Endangered Species Act, and other federal regulations and executive orders. Based on NEPA and other compliance documents, the Regional Director, in consultation with the Regional Chief of the National Wildlife Refuge System will decide whether to select an expanded project boundary or not. If the decision is to expand the Refuge project boundary, the Regional Director will determine if an expanded Refuge project boundary would have a significant impact upon the quality of the human environment, and make a formal recommendation to the Director for approval. If the selected alternative is determined not to have a significant impact, a Finding of No Significant Impact (FONSI) will be issued. If the selected alternative is determined to have a significant impact, a Notice of Intent to prepare an Environmental Impact Statement (EIS) will be issued.

With the selection of an approved boundary and successful completion of the NEPA process, the selected project alternative can be implemented as described in this Land Protection Plan and Conceptual Management Plan.

The Service's planning process includes the following steps:

- Preliminary agency planning
- Concept plan issued
- Public involvement
- Environmental assessment and other planning documents released
- Public review period of planning documents
- Notice of Decision (whether to expand the Refuge or complete an EIS)

**Public Scoping and Involvement.** This expansion is being conducted concurrently with the development of the Desert Complex Comprehensive Conservation Plan (CCP). Public meetings have been held and some members of the public have advocated the expansion of the Moapa Valley NWR. Future public meetings for the CCP are scheduled for 2008.

Throughout the scoping process, the Service has consulted with a number of federal, state, and local elected officials and agencies and private organizations to solicit their views of the proposal. Parties contacted have included: the Southern Nevada Water Authority, Moapa Valley Water District, Nevada Division of Wildlife, Bureau of Land Management, Clark Co. Comprehensive Planning, U.S. Geological Survey-Biological Resources Division, As the result of the above public involvement, the Service selected the preferred alternative represented in this Land Protection Plan.

The selection and approval of a project boundary only allows the Service to acquire lands or interest in lands from willing sellers at fair-market value or to enter into management agreements with interested landowners. An approved project boundary does not grant the Service jurisdiction or control over lands within the boundary, and it does not automatically make lands within the project boundary part of the National Wildlife Refuge System. Lands do not become part of the National Wildlife Refuge System unless they are acquired by the Service or are placed under an agreement that provides for management as part of the refuge system.

No new or additional zoning laws would be imposed by the Service within the approved project boundary. Any landowner within an approved project boundary retains all existing rights, privileges, and responsibilities of private-land ownership as determined by local, city, or county jurisdictions. Again, lands remain under the control of the owner until management rights or title to the property has been transferred to or has been acquired by the Service.

The Service land protection policy is to acquire land only when other protective means are not appropriate, available, or effective. The Service strives to obtain the minimum interest necessary to reach management objectives, once land is acquired or retained.

The acquisition and habitat protection program is expected to take several years. Initial acquisition efforts would focus primarily on protecting blocks of land having the highest biological values. The Service recognizes that some lands identified within the approved project boundary may never become part of the National Wildlife Refuge System.

## **Willing Seller Policy**

Service policy is to acquire lands or interest in lands only from willing participants under general authorities such as the Endangered Species Act, Fish and Wildlife Act of 1956, the Migratory Bird Conservation Act, and the Refuge Recreation Act. Landowners within the project boundary who do not wish to sell their property or any other interest in their property are under no obligation to enter into negotiations or to sell to the Service.

The Service, like other federal agencies, has been given the power of eminent domain, which allows the use of condemnation to acquire lands and other interest in land for the public good. This power, however, is seldom used and is not expected to be used in this project. The Service usually acquires land from willing participants and is not often compelled to buy specific habitats within a specific time frame.

In all cases the Service is required by law to offer 100 percent of fair-market value for lands to be purchased as determined by an approved appraisal that meets professional standards and federal requirements.

Under the Uniform Relocation Assistance and Real Property Acquisition Policies Act, landowners who sell their property to the Service are eligible for certain benefits and payments which include:

1. Reimbursement of reasonable moving and related expenses or certain substitute payments.
2. Replacement housing payments under certain conditions.
3. Relocation assistance services to help locate replacement housing/farm/or business.
4. Reimbursement of certain necessary and reasonable expenses incurred in selling real property to the federal government.

## **Land Protection Priorities within the Planning Area Boundary**

The Service would seek fee title acquisition of all or part of the lands within the proposed Refuge boundary. The Service has prepared a table (Table 1) that lists assessor parcel numbers, acreages and priority for acquisition should the property owner be willing to sell and funding become available. Prioritizing the lands within the proposed boundary can be difficult to calculate, as land uses and conditions can change rapidly. The Service has placed a priority on Moapa dace habitat, springheads and streams, including the Muddy River, and associated riparian habitat. Second in priority would be desert uplands retaining their characteristic vegetation.

In selecting the priorities for Table 1, it was determined that the first priority would be the Warm Springs Ranch, because it contains 90 percent of Moapa dace habitat. Equal in priority is the BLM property, as it contains a large portion of the Muddy River. Second in priority are the Premo, Nevada Power Company, LDS Church, and TNES, LLC properties. Final determination of priority lands would occur when final negotiations are made for the purchase of lands.

## **Social and Cultural Impacts**

The current quality of life communities and individuals around the proposed refuge is expected to remain the same or improve slightly as a result of the expansion of the Refuge. The expansion of the Refuge is not expected to change most land use activities or public use patterns in the vicinity of the project area.

Under provisions of the Refuge Revenue Sharing Act (Public Law 95-469), the Service would make an annual payment to the county to help offset revenue lost as a result of Federal acquisition. This law states that the Secretary of the Interior (Secretary) shall pay to each county in which any area acquired in fee title is situated, the greater of the following amounts:

§ An amount equal to 75 cents per acre for the total acreage of that portion of the fee area which is located within each county.

§ An amount equal to three-fourths of 1 percent of the fair market value, as determined by the Secretary, for that portion of the fee area which is located within each county.

§ An amount equal to 25 percent of the net receipts collected by the Secretary in connection with the operation and management of such fee area during each fiscal year.

There have been occasions when payments to the counties have been less than the legislated amounts because of funding deficits. Congress may appropriate, through the budget process, supplemental funds to compensate local governments for any shortfall in revenue sharing payments. The Refuge Revenue Sharing Act also requires that Service lands be reappraised every five years to ensure that payments to local governments remain equitable. Payments under

this Act would be made only on lands the Service acquires in fee title. On lands where the Service acquires only partial interest through easement, all taxes would remain the responsibility of the individual landowner. From 1993 through 2002 (the last ten years for which there is complete data) payments averaged 63 percent of the legislated amounts.

## **Coordination and Consultation**

The Service has worked with a variety of interested parties to identify issues and concerns associated with the proposed Refuge expansion. These interested parties include members of the public, interested private groups, elected officials, and federal, state and local government agencies. The Service's public involvement activities included hosting meetings, developing a mailing list, requesting information, undertaking consultations, and responding to inquiries. The Service has provided information about the proposal to the media and other interested or affected parties throughout the public scoping period.

The Service has invited and continues to encourage public participation through the public involvement program consisting of public notices, meetings with potential affected landowners, government agencies, and private organizations. The proposed acquisition is being presented in conjunction with the Desert Complex Comprehensive Conservation Plan (CCP). Planning updates have been prepared and sent to landowners and other interested parties. Additionally, public scoping meetings have been held.

## **Summary of Proposed Action**

In light of the valuable resources in the Warm Springs area and continuing threats to these resources, the Service proposes to expand the Refuge boundary from 116 acres up to 1,588 acres. This proposed expansion would allow the Service to conserve, protect, and restore thermal springs, riparian corridors and desert uplands through fee-title acquisition. Protection of the lands considered would fulfill the habitat criterion of the Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem (Recovery Plan) (USFWS 1995).

Our areas of emphasis are twofold: (1) the warm springs and their outflows, which provide the only habitat of the Moapa dace, and (2) riparian corridors and adjacent lands where land use directly affects water quality. Also important is the opportunity to improve riparian and mesquite bosque habitat conditions for the yellow-billed cuckoo, the southwestern willow flycatcher, and other bird and bat species. The expansion of the Refuge is a crucial step toward recovery of the Moapa dace and would allow the Service to initiate habitat restoration and other important recovery actions on this land.

The Refuge is located about 60 miles northeast of Las Vegas in Clark County. The Refuge is part of a unique system of thermal springs that are part of the headwaters of the Muddy River, which eventually flows into Lake Mead east of Las Vegas. The Refuge is located on the southern side of State Highway 168 and the Muddy River, between I-15 and Hwy 93. The entire

Refuge lies within the Moapa Valley. It is bounded on the north by Warm Springs Road, on the south and west by BLM, and on the east by private property.

The Service has encouraged input from landowners, agencies, and conservation organizations, other Federal agencies, State and local governments, and individuals in the community to identify concerns and issues and to explore the alternatives. Additional public input was sought through the use of mailings, personal contacts, and news releases.

The EA analyzes the potential effects to the human environment resulting from expanding the Refuge and managing the area under the Conceptual Management Plan (CMP). The EA describes various alternatives that the Service could take to protect and manage an expanded refuge. Copies of the EA, LPP, and CMP were distributed to Federal and State delegations, agencies, landowners, private groups, and interested individuals. The documents are also available on the Service’s Division of Refuge Planning website at the following URL: <http://www.fws.gov/cno/refuges/planning.html>.

**TABLE 1**  
**Land Tracts and Acquisition Priorities for the Proposed Action:**

Proposed Moapa Valley NWR Expansion – Tract Table

Tract #	Owner	APN	Acres	Priority
1	BLM	03023201002	11.34	1
1	BLM	03023401001	136.0	1
1	BLM	03026101001	160.0	1
1	BLM	03026701003	8.32	1
1	BLM	03026301003	75.75	1
3	SNWA	03016101001	239.22	1
3	SNWA	03014401001	67.73	1
3	SNWA	03015301001	318.58	1
3	SNWA	03009401001	39.09	1
3	SNWA	03016701008	65.89	1

3	SNWA	03023101003	92.91	1
3	SNWA	03015201001	140.61	1
3	SNWA	03023301001	23.09	1
4	MVWD	03016701002	0.65	1
19	Premo	03016801009	3.3	2
20	NPC	03015801002	0.3	2
20	NPC	03015801001	0.9	2
21	LDS	03016601002	72	2
22	TNES	03016701005	6	2

## References

Clark County. 2000a. *Comprehensive Planning News*. Clark County Department of Comprehensive Planning, summer 2000.

U. S. Fish and Wildlife Service. 1995. Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem. Portland, Oregon. 60pp.

Waddell, R. 2002. Personal communication from Richard Waddell, hydrologist with GeoTrans, Inc., Westminster, Colorado.

## **APPENDIX L-2**

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# **CONCEPTUAL MANAGEMENT PLAN**

## **Moapa Valley National Wildlife Refuge Proposed Expansion**

**Clark County, Nevada**

United States Department of the Interior

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**U.S. Fish and Wildlife Service**

# **CONCEPTUAL MANAGEMENT PLAN**

## **Moapa Valley National Wildlife Refuge Proposed Expansion**

**Clark County, Nevada**

Prepared By:

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January 2008

## TABLE OF CONTENTS

<b>INTRODUCTION.....</b>	<b>1</b>
<b>NATIONAL WILDLIFE REFUGE SYSTEM.....</b>	<b>2</b>
<b>Goals of the National Wildlife Refuge System .....</b>	<b>2</b>
<b>Purpose of the Moapa Valley National Wildlife Refuge .....</b>	<b>3</b>
<b>Goals of the Moapa Valley National Wildlife Refuge.....</b>	<b>3</b>
<b>REFUGE ADMINISTRATION .....</b>	<b>3</b>
<b>KEY AREAS OF MANAGEMENT FOCUS .....</b>	<b>4</b>
<b>Habitat and Wildlife Management.....</b>	<b>4</b>
<b>Population Monitoring .....</b>	<b>4</b>
<b>PUBLIC USE AND WILDLIFE-DEPENDENT RECREATIONAL ACTIVITIES.....</b>	<b>5</b>
<b>Refuges as Primary Use Areas.....</b>	<b>5</b>
<b>The Compatibility Standard .....</b>	<b>5</b>
<b>Refuge Purpose(s) .....</b>	<b>6</b>
<b>Pre-acquisition Compatibility Determinations .....</b>	<b>6</b>
<b>RIGHTS-OF-WAY AND EASEMENTS.....</b>	<b>7</b>
<b>LAW ENFORCEMENT .....</b>	<b>7</b>
<b>FACILITIES DEVELOPMENT AND MANAGEMENT .....</b>	<b>7</b>
<b>FIRE MANAGEMENT .....</b>	<b>7</b>
<b>INTERAGENCY AND PUBLIC COORDINATION .....</b>	<b>8</b>
<b>Recovery Implementation Team .....</b>	<b>8</b>
<b>Muddy River Regional Environmental Impact Alleviation Committee.....</b>	<b>8</b>
<b>REFERENCES CITED .....</b>	<b>9</b>

**CONCEPTUAL MANAGEMENT PLAN  
MOAPA VALLEY NATIONAL WILDLIFE REFUGE  
PROPOSED EXPANSION  
Clark County, Nevada**

**INTRODUCTION**

This draft conceptual management plan outlines resource protection needs, priorities, and habitat protection methods the U.S. Fish and Wildlife Service (Service) would use for the proposed Moapa Valley National Wildlife Refuge (Refuge) expansion in Clark County, Nevada. This plan proposes fee-title acquisition as the primary level of protection needed to meet habitat and wildlife management goals for the project area. The Environmental Assessment (EA) evaluated the effects of expanding the approved refuge acquisition boundary to protect, conserve, and where appropriate, restore, thermal springs, riparian corridors, mesquite bosques and associated uplands totaling approximately 1,503 additional acres. Habitat management practices will be directed towards improving stream habitat and water quality for the endangered Moapa dace; these efforts will also have a direct and positive effect on use of the area by terrestrial and migratory wildlife.

This Conceptual Management Plan (CMP) is for the Service's proposed acquisition and management of the expanded Refuge and presents a general outline on how these new lands would be managed. As a conceptual plan, this CMP does not provide extensive detail or pinpoint exactly where long-term habitat improvements could be made or exactly where, if any, public use facilities would be ultimately constructed. Those details would normally be included in the Refuge's Comprehensive Conservation Plan (CCP), a long-term formal planning effort which is running concurrently with this land acquisition effort. During the CCP planning effort, goals, objectives, and strategies for public use as well as resource management are being developed for the existing 116-acre Refuge with input from the public, and in accordance with the National Environmental Policy Act. This CMP however, is for the proposed expansion acreage and presents a broad overview of the Service's proposed management approaches to wildlife, habitats, public uses, wildlife-dependent recreational activities, wildfire suppression, rights-of-way, easements, law enforcement, and facilities.

As part of the acquisition process, an environmental assessment (EA) evaluated the effects of expanding the approved refuge acquisition boundary to protect, conserve, and where appropriate, restore thermal springs, riparian corridors, mesquite bosques and associated uplands, totaling approximately 1,503 additional acres. Habitat management practices will be directed towards improving stream habitat and water quality for the endangered Moapa dace; these efforts will also have a direct and positive effect on use of the area by terrestrial and migratory wildlife.

Our areas of emphasis are twofold: (1) the warm springs and their outflows, which provide the essential habitat for the Moapa dace, and (2) riparian corridors and adjacent lands where land use directly affects water quality. Also important is the opportunity to improve riparian habitat conditions for the Yuma clapper rail, yellow-billed cuckoo, the southwestern willow flycatcher,

phainopepla and other migratory bird species. The Refuge expansion is a critical step toward recovery of the Moapa dace and would allow the Service to expand habitat restoration efforts and other important recovery actions. Additionally, habitat improvements and protection of this area could preclude the need to list other species in the future.

## **NATIONAL WILDLIFE REFUGE SYSTEM**

The proposed expansion area would become part of the National Wildlife Refuge System (Refuge System) and would be managed to fulfill the Refuge System's mission and the specific purpose for which the Refuge was established. The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Improvement Act of 1997). The Refuge System is a network of protected lands and waters dedicated to fish and wildlife. Since the Refuge System's inception in 1903, with the establishment of the Pelican Island National Wildlife Refuge in Florida, the System has grown to 545 refuges, with at least one refuge in every state. The Desert National Wildlife Refuge complex consists of four refuges with a combined total of 1,634,306 acres.

### **Goals of the National Wildlife Refuge System**

- To fulfill our statutory duty to achieve refuge purpose(s) and further the System mission.
- Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered.
- Perpetuate migratory bird, interjurisdictional fish, and marine mammal populations.
- Conserve a diversity of fish, wildlife, and plants.
- Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems.
- To foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

## **Purpose of the Moapa Valley National Wildlife Refuge**

The Refuge was established on September 10, 1979, to secure and protect habitat for the endangered Moapa dace (*Moapa coriacea*). The purpose of the Refuge comes from the Endangered Species Act of 1973, as amended (Act):

*“...to conserve (A) fish or wildlife which are listed as endangered species or threatened species...or (B) plants...”* (16 USC §1534).

## **Goals of the Moapa Valley National Wildlife Refuge**

The Service developed two goals for management of Moapa Valley NWR. These goals were used to identify appropriate objectives and strategies and develop alternatives.

- **Endemic and Special Status Species.** Protect and restore, when possible, healthy populations of endemic and special status species, such as the endangered Moapa dace, within the Muddy River headwaters.
- **Visitor Services.** Local communities and others enjoy and learn about the resources of Moapa Valley NWR and participate in its restoration.

## **REFUGE ADMINISTRATION**

The Refuge would continue to be administered and supervised by the Desert National Wildlife Refuge Complex (Complex) in Las Vegas, Nevada. Currently, the Desert NWR Manager also serves as the Moapa Valley NWR Manager. However, acquisition of the expansion area would likely allow stand-alone staffing for the Moapa Valley NWR. The 2007 approved staffing chart shows a vacant GS 11 Refuge Manager and GS 7/9 Ecologist position. At present, the Desert NWR Equipment Operator assists, as needed, at the Moapa Valley NWR. This arrangement would be acceptable with supplemental funding provided, or alternatively, maintenance activities could be contracted. Eventually, a full-time maintenance position would be required. Administrative assistance would be provided through the Complex. Temporary or seasonal employees could include biological aides, tractor operators or Youth Conservation Corps (YCC) crews.

Presently existing on the Refuge are two government quarters. It is conceivable that one employee could live in one of the homes, and the second be converted to office space. This satellite office would increase the efficiency of staff time by eliminating the commute from the Desert NWR, a nearly 3-hour round trip.

A small storage building is located on the existing Refuge; however, the Refuge does not have any heavy equipment. A larger building would be necessary in the future, to house and protect these items.

The annual budget for the Refuge is estimated to be \$165,000 to include salaries for 2 permanent FTE's, maintenance contracting or supplementing a current equipment operator's salary, utilities, supplies, materials and equipment. PCS moves for employees are likely to be near \$100,000.

Start-up expenditures would require \$50,000 to purchase two vehicles; \$25,000 for office and computer equipment; \$15,000 for building upgrades and repairs; and \$15,000 for tools and maintenance supplies, totaling \$105,000.

## **KEY AREAS OF MANAGEMENT FOCUS**

The key areas of initial focus for the expanded area would be habitat and wildlife management, research, and wildlife-dependent recreational activities. The proposed new unit would operate under interim management until a formal habitat management plan or Comprehensive Conservation Plan is in place. Interim management would include non-native vegetation control using chemical and mechanical means, habitat restoration with native plant species, endangered species surveys, law enforcement patrols, and limited environmental education and interpretation.

### **Habitat and Wildlife Management**

Native habitats and plant communities would generally be managed for the recovery of endangered, threatened, and rare species. Active modification and manipulation of intact native plant communities would be avoided. In disturbed areas, such as the pastures, along the roads and around buildings, there are non-native plant infestations. Mechanical and chemical means would be used to treat these species, as well as remove non-native trees. Areas that have undergone invasive/non-native species vegetation control would be re-planted with native species. Seeds from native plants would be collected locally and propagated in a greenhouse managed by the Moapa Band of Paiute Indians for future outplanting.

Research that may benefit the Refuge's endangered and threatened species or other natural resources may be permitted. The Service may allow limited access for scientific research and for study groups on a case-by-case basis through a special-use permit process. Research that is nondisruptive to wildlife or archaeological resources, and compatible with refuge purposes and goals, are types that may be allowed.

### **Population Monitoring**

Surveys of listed and sensitive species would occur semi-annually, as well as the continuation of scientific studies carried out within the Refuge through the special use permit program.

## **PUBLIC USE AND WILDLIFE-DEPENDENT RECREATIONAL ACTIVITIES**

### **Refuges as Primary Use Areas**

National wildlife refuges are managed first and foremost for the benefit of fish, wildlife, plants, and their habitats. In addition, refuges are closed to public uses unless specifically and formally opened. Other Federal land management systems are managed under a multiple-use mandate (e.g., national forests administered by the U.S. Forest Service and public lands administered by the U.S. Bureau of Land Management). Hunting, fishing, wildlife observation and photography, and environmental education and interpretation are priority public uses of the Refuge System. These uses must receive enhanced consideration over other general public uses in refuge planning and management.

As part of the National Wildlife Refuge System, the proposed Refuge expansion would provide opportunities for wildlife-dependent recreational uses that are compatible with the Refuge purpose. The Refuge can provide the people of the Las Vegas area and the nation with opportunities to gain better appreciation and understanding of the region's unique wildlife heritage.

### **The Compatibility Standard**

Before any uses are allowed on a national wildlife refuge, Federal law requires a written compatibility determination be completed which states that the use is compatible. A compatible use is defined as a proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge. Sound professional judgment is defined as a decision that is consistent with the principles of fish and wildlife management and administration, available science and resources (funding, personnel, facilities, and other infrastructure), and adherence to the requirements of the National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd-668ee), and other applicable laws. If resources are not available to design, operate, and maintain priority public uses that are otherwise compatible, the refuge manager will take reasonable steps to obtain outside assistance from the state and other conservation interests. If adequate funding or staffing assistance cannot be identified, then the use is not compatible and cannot be allowed. High quality wildlife-dependent recreational opportunities are predicated on healthy habitats and healthy populations of endangered species, migratory birds, and other native species. Therefore, some constraints on public use and recreation are necessary. Unlimited public access and use of refuge lands could easily degrade the resources that make a visit to a national wildlife refuge so special.

## **Refuge Purpose(s)**

The purpose(s) for which a refuge is established has special significance relating to compatible public uses. A refuge purpose may be specified in or derived from a Federal law or proclamation, an executive order, an agreement, a public land order, a donation document, or an administrative memorandum (Fish and Wildlife Service Manual, 602 FW 1.4M.). In addition to providing a basis for making compatibility determinations, a refuge's purpose also serves as a vision or mission statement for refuge managers and the public. It provides a broad, long-term statement of management direction and priorities.

## **Pre-acquisition Compatibility Determinations**

The Service is required to identify, prior to acquisition of new refuges or refuge additions, existing owner-authorized, wildlife-dependent public uses that would be allowed to continue on an interim basis during the time period following Service acquisition to the completion of a Comprehensive Conservation Plan (CCP). This is required by the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee). The referenced wildlife-dependent public uses are hunting, fishing, wildlife observation and photography, and environmental education and interpretation. These are the priority public uses of the National Wildlife Refuge System.

The Service is not required to complete pre-acquisition compatibility determinations for uses that did not previously exist and were not owner-authorized. Determination of what qualifies as an existing priority public use is a judgment call by the refuge manager. In general, occasional, personal use of property, such as allowing family or friends to hunt or photograph wildlife, would not be considered an existing public use. In contrast, properties that are generally open, such as a private hunt club or a military reservation that allows military personnel and their families to fish, would be considered to have an existing public use. The Warm Springs Ranch does not presently have any public uses. The Warm Springs Ranch is expected to have some public uses since the Southern Nevada Water Authority recently acquired the property, through the Southern Nevada Public Land Management Act (SNPLMA). The SNPLMA funding source is the Parks, Trails, and Natural Areas (PTNA). As a PTNA, the SNWA is expected to provide public use and interpretation on the Warm Springs Ranch, once a management plan is written.

The Service, once they have acquired the Warm Springs Ranch, is likely to continue wildlife dependent public uses that are compatible with the Refuge purpose. A pre-acquisition compatibility determination would have to be made by the Refuge manager. It is likely that some compatible public use opportunities would be available within the capabilities of allocated staff and budget.

Hunting and fishing do not currently occur on the Refuge. There are no game fish in the stream. The site does not provide good hunting opportunities due to the proximity of residences. There is no known demand for hunting on this site.

The Refuge expansion may eventually open to limited staff or volunteer-led public use, providing interpretative and educational opportunities. There would also be the opportunity for the public to enjoy wildlife observation and photography during these on-site visits. In order to protect endangered species and sensitive resources, the area would initially be open to the public only through Refuge staff-led tours and volunteer programs. Group size could be limited and may be supervised by Refuge staff or volunteers to ensure that resources are protected.

The Service may also allow limited access for scientific research and for study groups on a case-by-case basis through a special-use permit process. Research that is nondisruptive to wildlife or archaeological resources and compatible with refuge purposes and goals may be allowed. Any public use allowed would be in strict conformance with applicable Federal and State statutes.

## **RIGHTS-OF-WAY AND EASEMENTS**

Lands for the Refuge would be acquired subject to existing rights-of-way and easements. The Service has an application process for granting new rights-of-way and easements across refuge lands. This process would also be used if holders of existing rights-of-way and easements on refuge lands want to expand or modify the terms and conditions of their rights. New rights-of-way and easements or modifications to existing rights-of-way and easements must be compatible with the purpose for which the Refuge was established.

## **LAW ENFORCEMENT**

Enforcement of Federal, State, and County laws are critical to safeguard Refuge resources, visitors, and facilities. The Refuge Complex staff includes five law enforcement personnel. Refuge officers would work with Las Vegas Metropolitan Police Department, Clark County Sheriff's Office, and Bureau of Land Management Rangers to prevent trespass, vandalism, and violation of wildlife laws.

## **FACILITIES DEVELOPMENT AND MANAGEMENT**

The Service is in the process of constructing visitor facilities on the existing Refuge property. These include a stream viewing chamber, an interpretive trail and kiosk, and an educational/group use shelter. Any additional facilities and management of those facilities cannot be projected at this time.

Boundaries of lands acquired by the Service are posted with refuge signs at regular intervals. Fencing or other types of barriers are often constructed to control trespassing that could damage habitat or endangered species.

## **FIRE MANAGEMENT**

Wildfires are a threat to Refuge structures due to the number and flammability of dead palm tree fronds within the valley. If and when the Refuge is expanded, the Service would update the

Moapa Valley National Wildlife Refuge Wildland Fire Management Plan (FMP) to include the new unit. The FMP addresses initial response, fire crew dispatch, wildfire suppression, cooperative agreements for firefighting support, and prescribed burning. Fire management planning would also include agreements with the Bureau of Land Management, and local fire departments for fire suppression support. The Refuge would maintain certain existing roads and trails as fire breaks and fire roads, and would evaluate needs for additional fire management facilities.

## **INTERAGENCY AND PUBLIC COORDINATION**

The Service, Moapa Band of Paiutes, Southern Nevada Water Agency (SNWA), Moapa Valley Water District (MVWD), and Coyote Springs Investments, LLC (CSI) are signatories in a Memorandum of Agreement (MOA). In this MOA, the parties have identified certain conservation measures for the conservation and recovery of the Moapa dace, and have agreed to coordinate the monitoring, management and mitigation measures in their monitoring plans. The MOA establishes a Recovery Implementation Program (RIP) to outline and implement necessary protection and recovery activities for the Moapa dace. The MOA also provides for funding to develop the RIP, dedication of certain water rights to preserve in-stream flows, pumping restrictions whereby the parties agree to curtail pumping in the event spring flows in the Warm Springs area decline to specified “trigger levels.” Any future production of groundwater by the parties would be subject to the terms of the MOA, including pumping that may occur after the two-year pump test or as a result of other groundwater development projects.

### **Recovery Implementation Team**

The Service has established a Recovery Implementation Team for the Muddy River. The goal of the team is to develop an action plan, identify on-the-ground activities, and implement actions necessary for recovery and management of native and endangered species of the Muddy River watershed. Partners involved with this initiative include the Nevada Division of Wildlife, U. S. Geological Survey, The Nature Conservancy, University of Nevada, Reno, Clark County and the Southern Nevada Water Authority, and the Muddy River Regional Environmental Impact Alleviation Committee (MRREIAC).

### **Muddy River Regional Environmental Impact Alleviation Committee**

The MRREIAC has begun an active program to enhance the Muddy River ecosystem. One aspect of the program is removing tamarisk and other weeds and restoring riparian habitat with native species. The communities of Moapa, Logandale, Glendale, and Overton support these activities. The program has received funding from the U.S. Environmental Protection Agency, the Service, and the Clark County MSHCP. If its conservation measures are determined to be effective, Clark County intends to continue to provide funding to assist MRREIAC.

The Service acknowledges the strong support of the Nevada Department of Wildlife and Clark County. The Service will continue to work with these agencies to maximize resource protection,

enhancement, and public education for the expanded Refuge. The Service would seek partnerships with other agencies and neighboring landowners to meet mutual goals and objectives whenever possible. The Service would also pursue other partnerships to benefit resource management and public use, including interpretation and environmental education.

## **REFERENCES CITED**

U. S. Fish and Wildlife Service. 1995. Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem. Portland, Oregon. 60pp.