

Management Action Description		Priority	Cost	Effectiveness Measures	Timeframe	Frequency	Status	Quarterly Accomplishments January 1 – March 31
1.0	Restore, create, and enhance habitat for covered species							
1.1	Identify and prioritize locations for habitat restoration and enhancement							
	Determine sites that have the greatest potential for restoration and result in the most contiguous habitat	H	L	Completed assessment of sites for restoration	2014 and ongoing	Upon completion of assessment	Process completed for current properties. Continue as new properties become available.	An assessment of restoration potential for the Virgin River properties was completed in 2013 and 2017.
1.2	Develop restoration plans for priority restoration sites							
	Establish restoration goals and objectives, assess site condition and restoration potential, restoration design includes plant materials, planting methods, and weed control; incorporate natural riparian processes wherever possible	H	M	Plans are complete with goals and objectives for restoration and with all components needed for implementation	2015-2017 IPB and ongoing	Upon completion of each restoration plan	Restoration Plan has been developed for VR-Mormon Mesa parcel, and is in the process of being completed for the Muddy River	Restoration plans for the Muddy River remote parcels and the Mormon Mesa Virgin River Reserve Unit are complete. Restoration planning and design continues for the large-scale restoration project on the Muddy River A-E parcels
1.3	Implement restoration plans							
	Implement restoration plans; prepare scope of work/contract; clear vegetation, plant vegetative materials as designed, and fence restoration sites to eliminate cattle trespass, if needed.	H	H	Implementation meets restoration goals and objectives, contract requirements	Begin within 1 year after development of restoration plan	Upon completion of each restoration project	Restoration has begun in VR Mormon Mesa, MR Parcel A, B and E	The restoration plans for the Muddy River remote parcels will continue to be implemented through 2022. The Phase II restoration plan for the Mormon Mesa Virgin River Reserve Unit was completed in April 2021. Monitoring is ongoing.
1.4	Monitor and adaptively manage restored riparian habitat							
	Establish success criteria and monitoring schedule; assess success of restoration/enhancement against criteria; continue/augment restoration actions to maintain investment; further discussion is available in the Adaptive Management and Monitoring Plan (DCP in prep).	H	M	Restoration/enhancement plantings and topographic modifications meet success criteria	Quarterly assessments for first 2 years post-restoration, then annually	Quarterly after restoration enhancement activities phase	Ongoing	Continued to photo-document and monitor restoration that was conducted on the Virgin River Reserve Unit, Mormon Mesa property in 2014. Sites are trending towards success and natives continue to naturally recruit.
1.5	Collaborate collectively with others to manage riparian habitat restoration along the Muddy and Virgin Rivers							
	Collaborate with other agencies for sharing of information on successes, failures, and techniques	H	L	Knowledge is shared supportive of habitat restoration	As needed	As needed	Ongoing	Continue to participate in Virgin River Coalition meetings and the Muddy River Biological Advisory Committee. Attended the Native Seed Restoration workshop and the Native Plant Materials Conference this quarter. Participating as a cooperating agency to the Bureau of Land Management's Restoration Opportunities Mapping project.
1.6	Assess opportunities to obtain water from irrigation districts to support restoration							
	Water from irrigation districts could be used in restoration projects to increase survival of planted materials	H	L	Assess quality and quantity of planted materials because of water obtained from irrigation districts for conservation purposes.	2015-2017 IPB and ongoing	End of project	Water from irrigation districts could be used in restoration projects to increase survival of planted materials	No activities this quarter. Irrigation districts will be contacted as necessary.
1.7	When feasible, assess opportunities to establish in-lieu fee agreement with U.S. Army Corps of Engineers for Clean Water Act permit mitigation options							
	Discuss requirements for in-lieu fee agreement with Corps; assess options and locations for establishing agreement	M	L	Decision to pursue in-lieu fee agreement	Ongoing	After assessment of options is completed	Coordinating with Regional Flood Control on this issue	DCP continues to coordinate with the District to support the District's need to establish a new in-lieu fee program for the Las Vegas Valley. The Prospectus was accepted by the U.S. Army Corps of Engineers in 2021 and the draft Instrument is currently in development.
1.8	Analyze relevant landscape matrix elements and composition							

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Analyzing the matrix of landscape elements, including developed areas, roads, dominant vegetation cover types, etc., both within the riparian reserve units and the surrounding landscape will serve to achieve biological objectives R 4.1 and R 4.2. R 4.1 involves identifying critical ecological and management uncertainties (when feasible) and R 4.2 involves identifying critical connectivity corridors and prioritize acquisition and/or conservation, where feasible.		H	L	Maps of areas with ecological or management uncertainty; maps of landscape matrix to identify habitat connectivity	Ongoing	Every 4 years	Not started	There were no activities this quarter.
2.0	Manage habitat to avoid harm to aquatic species							
2.1	Coordinate with USFWS on management actions to avoid negative effects to the Moapa dace population							
Obtain input from USFWS on management actions that may impact the river system. Determine which management actions require input from USFWS.		H	L	Negative effects from restoration and land management are avoided	Prior to restoration activities that impact the river	Prior to restoration activities that impact the river	Not started	There were no activities this quarter.
3.0	Manage reserves to control invasive plant species and noxious weeds							
3.1	Conduct control activities for invasive species and noxious weeds							
Prepare contracts, schedule, and implement control activities		H	L	Treatment/eradication is completed and meets goals and objectives or plan and contract requirements	Ongoing	Semi-annually	Ongoing	National Park Service (NPS) Invasive Plants Management Team (IPMT) conducts a biannual survey that includes monitoring locations for recurrence of invasive and noxious weeds and focus on recently restored areas that risk infestations of invasive plant species. NPS continues to monitor and treat weeds at the Muddy River and Virgin River Reserves and provide updates to DCP staff.
3.2	Adaptively manage the control of invasive species and noxious weeds							
Establish monitoring schedule; assess success of treatment/eradication against criteria; schedule additional treatments as needed.		H	L	Monitor to area and/or numbers to assess eradication or reduction	As prescribed in weed control contracts	Semi-annually	Ongoing	NPS IPMT monitors their treatment of weeds at the Muddy and Virgin Rivers and adapts treatment techniques and schedules additional treatments as necessary.
4.0	Manage reserves to reduce threat of fire and maintain safe conditions							
4.1	Maintain existing fire breaks and establish new fire breaks when necessary							
Fire breaks control the spatial spread of fire and protects the conservation values of the parcels and the property of adjacent landowners. Prepare contracts, schedule, and implement the maintenance or establishment of fire breaks.		H	M	Fire breaks control the spatial spread of fire and protects the conservation values of the parcels and the property of adjacent landowners	Annually or as needed	Ongoing	Ongoing	There were no activities this quarter.
5.0	Manage property rights and property infrastructure							
5.1	Update title to and use of groundwater rights							
The certificated groundwater rights must be changed for title and for use for wildlife purposes		VH	M	Groundwater rights are certificated to Clark County for wildlife uses	2015-2017 IPB	After certificate is received	Completed	All water rights have been certificated for wildlife purposes and DCP continues to coordinate with the Nevada Department of Wildlife to transfer a portion of water rights to them.
5.2	Maintain functional municipal water connection and maintain pump equipment							
Inspect Moapa Valley Water District water connection backflow device, pay monthly connection fees		VH	M	Functional municipal water connection that meets restoration needs	Annually and monthly respectively	Annually and Monthly respectively	Paused	No activities this quarter. The backflow device was tested annually to ensure it functions properly; however, the Moapa Valley Water District locked the water meter due to lack of use and removed the annual requirement to test the backflow device.

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5.3	Identify presence and location of operational and abandoned underground utilities (water, sewer, electric)							
Determine likely locations for utilities; prepare contract, schedule, and implement action to search and assess the underground utilities.		M	L-M	Presence and location of underground utilities are identified	2015-2017 IPB	End of project/inspection	Ongoing	Incorporated the search for and potential realignment of utilities into Muddy River grading plan scope of work.
5.4	Maintain existing fencing and add additional fencing if needed							
Inspect existing fencing on a continual basis, repair fences when needed; assess reserves for additional fencing needs and installation as needed		H	L	Location, length, and percent of fencing inspected. Length and percent of fencing needing repair. Completion of repairs, time period between notification and repair.	Weekly, quarterly	Weekly	Ongoing	Fencing is inspected by staff and repaired by a maintenance contractor, as needed.
5.5	Obtain permission to cross private lands to access reserve units							
Determine the timing, frequency, and extent of access needed; contact owners of property where access is needed; obtain written permission for access		VH	L	Permission is obtained to cross private lands to access properties	Ongoing	When permission is received	Ongoing	Coordinated with RPM to get authorization from adjacent property owners to get easier access for work on Muddy River, parcels G and H.
5.6	Identify options for road access to Virgin River Reserve, Mormon Mesa							
Determine the timing, frequency, and extent of access needed; contact owners of property where access is needed; obtain written permission for access		H	L	Road access is obtained to Virgin River Mormon Mesa Parcel	2015	End of project	Completed	No activities this quarter, owners will be contacted, as needed.
5.7	Maintain road access to the Muddy River Reserve							
Monitor condition of access roads; determine type of maintenance needed for safe conditions; conduct maintenance. Weekly to parcels A-E, monthly F-I		H	L	Road access is maintained to all Muddy River Reserve parcels	Weekly and monthly	Weekly and monthly	Ongoing	No activities this quarter, maintenance will occur, as needed.
5.8	Maintain relationships and coordinate with adjacent landowners to protect conservation values of the reserve							
Communicate (formal and/or informal, as appropriate) with landowners regarding property management actions, issues, and ongoing and pending projects		H	L	Relationships with adjacent landowners is reviewed annually	As needed	Annually, at year end	Ongoing	Communication with neighboring landowners at the Muddy and Virgin River Reserves occurs as needed.
6.0	Build and maintain positive relationships in the community							
6.1	Maintain positive interactions with neighbors							
Engage with neighbors when safely provided the opportunity		H	L	Good relationship is maintained	Ongoing	When possible	Ongoing	Communication with neighboring landowners at the Muddy and Virgin River properties occurs as needed.
6.2	Perform general maintenance on reserves as needed							
Identify and implement maintenance activities, direct maintenance contractor as needed		M	L-H	Maintenance activities are performed	Ongoing	As needed	Ongoing	Staff conducts inspections. Maintenance is conducted, as needed.
6.3	Be responsive to community concerns related to the reserves							
Listen to and respond to concerns from members of the community if appropriate		M	H-VH	Community concerns are addressed	Ongoing	As needed	Ongoing	No activities this quarter.
6.4	Prepare public information material that provides property information to the public							
Public information can include webpage, signs, interpretive materials that discuss allowable uses, property boundary, resource values and purpose		M	L-M	Current webpage and other materials	Review biannually	Biannually	Ongoing	No activities this quarter.

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7.0	Acquire title to private lands from willing sellers							
7.1	Identify priority parcels for purchase using Acquisition Selection Tool							
	Use the Acquisition Section Tool to assess the priority of parcels when offered by willing sellers; prioritize patches that enhance landscape-level habitat connectivity	H	L	Properties offered by willing sellers are assessed with the Acquisition Selection Tool within 3 months of being offered and a decision on acquisition provided within 6 months of being offered	As parcels are offered by willing sellers	As parcels are offered by willing sellers	Ongoing	No activities this quarter.
7.2	Ensure clear title to property before proceeding with acquisition							
	Coordinate with County Surveyor to review property boundaries and deeds to ensure clear title; review cadastral survey when complete	VH	L	Decision on clear title from County Surveyor	After lands have been prioritized	As parcels are offered by willing sellers	Ongoing	Continued coordination with County Surveyor on properties identified for acquisition.
7.3	Pursue acquisition of priority parcels							
	Conduct appraisal, determine fair market value, make offer, negotiate as needed	H	L-VH	Decision on acquisition	After clear title has been determined	As parcels are offered by willing sellers	Ongoing	No activities this quarter.
7.4	Pursue acquisition of parcels held by local and state entities when available							
	Identify parcels held by County Treasurer or other Departments, other municipalities, or state; discuss planned or future needs for parcels to determine best use or benefit to County; transfer management responsibility to DCP.	H	L	Decision on acquisition	Ongoing	As parcels are available	Ongoing	No activities this quarter.
8.0	Acquire conservation easements to public and private lands from willing landowners as appropriate							
8.1	Identify priority parcels for conservation easements using Acquisition Selection Tool							
	Evaluate feasibility of conservation easement; use the Acquisition Selection Tool to assess the priority of parcels when offered by willing sellers; prioritize parcels that enhance landscape-level habitat connectivity	H	L	Easements offered by willing landowners are assessed with the Acquisition Selection Tool	As parcels are offered by willing landowners	As parcels are offered by willing landowners	Not started	No activities this quarter.
8.2	Develop a conservation easement template							
	Develop an easement template that outlines approved and prohibited actions, access for monitoring, and communication schedule	H	L	Completed conservation easement template	After priority parcels are identified		Not started	No activities this quarter.
8.3	Pursue easements of priority parcels							
	Negotiate terms of easement.	H	L-H	Decision on easements provided within 12 months of being contacted	When appropriate	After easement granted	Not started	No activities this quarter.