

**COLORADO WETLANDS INITIATIVE
LOWER COLORADO RIVER FOCUS AREA
STRATEGIC PLAN**

INTRODUCTION

The purpose of this strategic plan is to document individual wetland projects and their priorities within the Lower Colorado River Focus Area (focus area) and to serve as an instrument to provide background material for project implementation. The strategic plan is designed to help achieve wetland protection and provide for associated human values. All migratory water birds, many other migratory birds, and nearly half of all threatened and endangered species depend on wetland and associated upland habitats for their survival. In the focus area, due to their location in developing river corridors, wetlands are key elements of environmental education programs, outdoor recreation opportunities, and open space preservation. The location of the focus area is shown on the following page.

In the focus area wetlands and associated riparian habitats are one of the most limited and important habitats in this arid region and a habitat that is threatened by many competing land and water uses. More than 80 percent of Colorado breeding birds are dependent on riparian areas.

The North American Waterfowl Management Plan (NAWMP) was signed into effect by the U.S. and Canada in 1986. Mexico was included later in a separate agreement. It is a federal initiative designed to protect wetland habitat and increase waterfowl populations that have experienced long-term downward trends. The NAWMP calls for cooperation and support between various governmental agencies, conservation organizations, private businesses, and concerned citizens interested in the conservation and management of waterfowl, wetland habitat, and associated human values.

The NAWMP establishes specific objectives to restore waterfowl populations to 1970-79 levels by the year 2000. A major objective is to establish a continental breeding population of 62 million ducks and an average fall flight of about 100 million birds.

Joint Ventures were created as the implementation arm of NAWMP. The ventures are a partnership of interested groups including federal and state agencies, non-governmental organizations, private corporations and private foundations. Joint ventures serve to maximize financial and organizational resource support for wetlands and specify objectives on a regional basis.

The Intermountain West Joint Venture (IWJV) was the thirteenth established in North America and it has developed waterfowl and wetland habitat objectives for parts of British Columbia, and all or parts of 12 western states including the western half of Colorado. IWJV is a partnership

network developed at three levels. The second level is State Action groups which develop state implementation plans and set common wetland objectives and project priorities for the states. Focus Area work groups are the third level which develop objectives and projects at the local level. The Lower Colorado River Focus Area is one of six focus areas identified in western Colorado.

DESCRIPTION OF THE LOWER COLORADO RIVER FOCUS AREA

The focus area boundaries are the irrigated and other lands associated with the Colorado River from New Castle to the Utah State line, Plateau Creek from Vega Reservoir to confluence with Colorado River (Figure 1), North Fork of the Gunnison River from Paonia Reservoir to confluence with main Gunnison River, Gunnison River from confluence with North Fork of the Gunnison to confluence with the Colorado River, and the Uncompahgre River from Ouray to the confluence with the Gunnison River (Figure 2).

Physiography

There are approximately 800,000 acres in the focus area. It is estimated 75 percent of the area is privately owned and around 300,000 acres are irrigated agriculture land. The remaining area is comprised of salt desert and sage range lands, pinyon-juniper woodlands and urban areas. Elevations range from 4400 ft. to 7000 ft. above sea level. Pasture and hay are the primary irrigated crops at the higher elevations. Crops grown at lower elevations include corn, alfalfa, pinto beans, wheat, barley, onions, various truck crops, grape vineyards and fruit orchards. The mean average annual temperatures for most of the area is around 50.0 degrees Fahrenheit. Average highs in the summer are 90 to 95 and lows are around 15 to 20 degrees in the winter. The growing season averages from 105 to 150 days. Most of the area is arid with an average annual precipitation from 8 to 10 inches. The area is characterized by low precipitation, low humidity, abundant sunshine, and a wide range in annual and daily temperatures.

Demography

Grand Junction and its neighboring communities with a population of over 100,000 is the largest city in the area. Montrose, Delta, Rifle, Hotchkiss and Paonia in order of size are the other notable communities in the area. All of the communities have major rivers running through them and are experiencing rapid growth. Much of the growth is dividing lands adjacent to the river courses into smaller parcels with more intense land use. Within the focus area, there is increasing interest in developing river front trails, parks and protecting wildlife habitat and open space.

Wetlands

Rector et al (1979) conducted a wetland inventory and evaluation in the Lower Gunnison Salinity Unit which comprises nearly half of the focus area. They found that wetlands comprised about 12% of the study area. Over 60 percent of the wetlands were natural and usually associated with drainages and river riparian systems. The other 40 percent were mostly irrigation induced. The area inventoried by Rector et al (1979) is similar to most conditions found throughout the focus area. The Colorado River and Plateau Creek areas have less wetland, but it is fair to assume close to 5 percent of the focus area is wetland with a little over half natural and a little less than half man made. The most common wetland and deep water habitats classified according to Cowardin et al (1979) are Palustrine emergent, Palustrine scrub shrub, Palustrine forested, Lacustrine littoral, Lacustrine limnetic, Riverine upper perennial and Riverine lower perennial.

WETLAND BENEFITS

Recreation and Education

Wetlands provide important areas for hunting, fishing, boating, and general enjoyment of the outdoors. Wetlands associated with the river riparian areas are also becoming increasingly important as open space and locations for environmental education. Private groups, school systems, and State agencies are increasingly using these outdoor classrooms for education. These areas are often available for use year-round as opposed to high elevation areas in western Colorado. Wildlife observation and photography are enjoyed by wetland visitors and trail systems are being developed in riparian corridors. Many of the areas are near transportation corridors and provide areas of open space to thousands of passer byers every day.

Wetlands are vital and dynamic ecosystems. They filter pollutants from water, reduce flood damage, and recharge aquifers. Many people benefit from the fishing, hunting, environmental educational, and recreational opportunities wetlands provide.

Water Quality

Wetlands serve a vital role in preserving the environmental health of this state for all citizens. Wetlands improve water quality by slowing water flow causing sedimentation of undissolved soil particles and reducing downstream pollution.

Nutrients and contaminants adhering to soil particles are also removed from water during sedimentation. Aquatic vegetation further purifies water by absorbing and utilizing pollutants such as nitrogen, phosphorus, and some heavy metals.

Wildlife

The Lower Colorado River Focus area has historically been used by waterfowl and other migratory birds as winter and migration habitat. Pre-settlement the area was characterized by large rivers and associated riparian habitat surrounded by a dominating salt desert landscape. There is little known about pre-settlement populations of waterfowl in the area. The wetlands and riparian areas associated with the rivers have been reduced by water diversions, flood control, urban development and invasion of exotic species. Much of the adjacent salt desert landscape has transformed into irrigated cropland and urban development. Wildlife using the area has also changed. Fish and wildlife associated with the pre-settlement conditions have declined. Four endemic Colorado River fishes have been listed as endangered. It is likely that many species associated with back waters, mud flats, cottonwood galleries and large willow carrs supported by uncontrolled spring flood waters have also declined. Other species including mallard and Canada Goose have likely increased with the availability of waste grain, reservoirs, canals, ditches and associated habitat.

Wetlands provide critical habitat for a wide variety of wildlife. Wildlife rely on wetlands for breeding, nesting, resting and feeding habitat, as well as staging areas for annual migrations. Waterfowl are a high priority in most wetland management schemes. The focus area comprises most of the region referred to as the Colorado-Gunnison-Uncompahgre part of the Plateau Riverine Region in the Colorado Statewide Waterfowl Management Plan 1989-2003. The plan was published by the Colorado Division of Wildlife and indicates the winter population of ducks in the focus area has remained around 20,000 birds since the early 1950's. Mallards comprise 95% of the wintering duck population followed by green-winged teal and American Widgeon. Ring-necked duck, common goldeneye, scaup and common merganser are a few more of the many waterfowl species that depend on wetlands in the area.

Canada geese, have increased from a few hundred birds to over 10,000 wintering birds in the last two decades. The winter population is composed of both resident and migratory birds. The summer nesting population is estimated to be 1000 to 2000 birds.

Many other wildlife species utilize wetlands. Birds commonly found in wetland areas are, yellow-headed blackbird, great blue heron, yellow warbler, song sparrow and many others. Some mammals found in the wetlands include raccoons, cottontail, muskrat, beaver, river otter, mule deer and others. Many wetland habitats are suitable for listed threatened or endangered species such as the Southwest willow flycatcher and bald eagle. The Colorado Division of Wildlife estimates 80 to 100 bald eagles winter in the focus area. At least one nesting pair is found along

the Colorado River. In late winter and early spring water birds concentrate on the larger lakes, ponds and rivers. From late spring through fall a variety of wildlife use all types of wetlands throughout the focus area. Substantial waterfowl nesting does occur on many wetlands including ditches and canals.

PRIORITY WATERFOWL/WETLAND HABITAT IN THE FOCUS AREA

Priority wetlands areas were identified by the focus group as briefly described below:

1. The Uncompahgre River corridor from the confluence of the Gunnison River south to the town of Montrose, with particular emphasis on the area from the town of Delta south approximately 10 miles to Olathe and the area around Confluence Park near Delta. There are several ponds and sloughs associated with the river where a significant number of the west slope mallards winter. Several areas in the corridor have been developed for public outdoor use including Sweitzer Lake State Park and Confluence Park. The recreational and educational potential associated with these and other wetlands is very important. The entire corridor borders U.S. Highway 50 and provides open space values.
2. There are several irrigation reservoirs in Montrose, Delta and Mesa Counties that are important migration and wintering areas for waterfowl and other migratory and nesting birds. Some identified by the group include Cheney Reservoir, Fruitgrowers Reservoir, Highline Lake, Ruby Lee Reservoir, 6&50 Reservoir and Crawford Reservoir. Fruitgrowers Reservoir qualifies as a Globally Important Bird Area in the *American Bird Conservancy's United States Important Bird Areas*. Some of these reservoirs need various repairs and habitat improvement work. These areas have become important bird observation areas and provide other forms of recreation.
3. The riparian corridor along the Colorado River from Palisade downstream to Loma, including adjacent ponds and gravel pit lakes is of particular importance to wildlife. This corridor is used by over-half of the wintering Canada Geese on the Western Slope of Colorado and is the centerpiece of community riverfront projects.
4. Several riparian areas along streams are important as migration and winter habitat for waterfowl and provide habitat for other rare wildlife species such as blue heron and southwestern willow flycatcher. Riparian areas identified by the focus group as being particularly important are: Plateau Creek emphasizing the area around the

junction of State Highways 65 and 330 where willow flycatchers have been seen and Kannah Creek which provides a valuable habitat corridor between the Gunnison River and the Grand Mesa.

The area around the existing heron rookery on the Smith Fork, Salt wash near Mack, Colorado and Kannah Creek have potential to be developed into excellent wetland areas. Dry Creek and Coal Creek drainages in Montrose County could be enhanced to provide better waterfowl habitat for all seasons.

5. Riparian areas along the North Fork of the Gunnison River from Paonia, Colorado downstream to the Escalante State Wildlife Area winters a substantial number of waterfowl and provides habitat for many unique species to the area such as the yellow-billed cuckoo and willow flycatcher. Protection of the North Fork river channel between Paonia and Hotchkiss is considered very important.

FOCUS AREA GOALS AND OBJECTIVES

Waterfowl and other wildlife dependent on wetlands and riparian areas are susceptible to the increasing development in Western Colorado. Increasing population within the Lower Colorado River focus area is increasing demands on water and decreasing both riparian areas and agriculture lands. Education of the public and land planners, acquisition of important areas, and development-enhancement of habitat is necessary to prevent significant decreases of wintering waterfowl and other wildlife using the area.

Most of the several focus areas identified in western Colorado were selected on the potential to increase waterfowl production. The Lower Colorado River focus area has some potential for increasing waterfowl production but has more capability for migration and winter habitat. Habitat can be enhanced within the CGRFA by acquiring important winter habitats and securing them from development, enhancing acquired lands by constructing open water and shallow marshes, applying conservation practices to achieve properly functioning riparian systems and providing nesting habitat adjacent to existing waterways.

Issues, goals and objectives were initially identified at the focus area meeting held January, 1995 and have been updated throughout the process. The first priority issue identified was the impact of human development on wetlands and waterfowl habitat. The second priority issue was the decline of waterfowl dependent on wetlands throughout the Intermountain West. During the process, one general project became more important in the teams' opinion. This was prevention of the spread of the exotic wetland weed, purple loosestrife. The following goals and objectives were developed to address the identified issues.

GOALS -

1. Protection, maintenance and enhancement of wetlands, migratory and winter water bird habitat; and prevention of purple loosestrife invasions to new wetlands.

2. Produce more waterfowl in the focus area.
3. Provide public environmental education and recreation in the focus area.

Objectives for Goal 1.

1. Acquisition/enhancement/protection of gravel pits/riparian areas where development could occur that would be detrimental to wetlands.
2. Encourage the protection of important wetland areas by land planning agencies, such as Counties, Cities, State etc. This could be done by zoning, development regulations, etc.
3. Protect existing wetlands from invasion of the exotic weed, purple loosestrife

Objectives for Goal 2.

1. Identify species that would benefit by enhancing nesting opportunities. Identify projects to enhance nesting and begin application. Example Wood Duck.
2. Work on existing State Wildlife Areas, State Parks, River Front Lands, and City/County Lands to protect and enhance wetlands.
3. Develop information and education program. Need to develop communication network with all entities - especially with developers so group can be pro-active in designing projects in concert with development.
4. Develop subgroup to contact and work with Gravel Operations and Mine Land Reclamation.
5. General land acquisition by easement or fee title of important wetland areas.
6. Inventory, evaluate, prioritize and select the most valuable gravel pits to work on.

Objectives for Goal 3.

1. Protect through easements or acquisition key wetland and riparian areas that are most important for public recreation, outdoor education, and open space.
2. Coordinate efforts with various river protection projects including the Mesa County riverfront program, Uncompahgre River corridor efforts, and Colorado Legacy programs.

FOCUS AREA PROPOSED PROJECTS

Criteria

The focus group identified 20 potential projects in the area. These projects have been prioritized based on several criteria. First, feasibility and long-term benefits/operational considerations were considered. Second, scientific and ecological values were considered; and finally, programmatic considerations such as water rights, environmental education opportunities, and recreation opportunities were considered.

Specific criteria elements were:

Rarity--do sites contain 1 or more unique natural features?	
Operation and Maintenance--both cost and long-term benefits	and operation costs.
Representativeness--representative of natural conditions as artificial or manmade.	compared to
Ecological Integrity--presence of functioning or restorable	ecological processes.
Threats--future threats, including land use changes, that desired functions and values.	could adversely affect
Stewardship--short and long term management needs to insure ecosystems for future generations.	functioning
Value to Science and Community--value for research, community use and pride.	monitoring, and
Contiguity--to other protected areas or high value sites.	
Agriculture--project is compatible with maintenance of	agriculture
Visibility--project is visible to the public from public	roads or overlooks.
Size--number of acres.	
Cost per Acre--estimated total costs.	
Public Recreation--available for recreation	
Education--available for education, outdoor classrooms.	
Winter and Migration Habitat--does project provide.	
Water depth--suitable for wildlife/wetlands and associated	uses.
Water rights--are rights owned or available to maintain functions.	desired values and
Land Use Plan--compatible with local plans/programs.	
Project Progress--could it be implemented, if funded.	
Partnerships--other partners involved.	

Project Priorities

The following projects, presented in order of priority, were identified for implementation. General locations are shown on the following page. Control of purple loosestrife was not compared to other projects, but the focus group considers this activity very important because a relatively small effort at this time can prevent significant and perhaps irreversible damage to wetlands throughout the focus area.

*Purple loosestrife control is an overall high priority.

1. Delta Heron Rookery easement purchase along the Gunnison River.
2. Palisade High School easement purchase along the Colorado River.
3. Clanton wetland development along the Uncompahgre River.
4. Alexander easement purchase on Uncompahgre River south of Montrose.
5. Double Shoe Ranch easement purchase on Uncompahgre River south of Montrose.
6. Tisdale easement purchase on Uncompahgre River south of Montrose.
7. Fruitgrowers Reservoir easement purchase northeast of Delta.
8. North Fork of the Gunnison Restoration Project near Hotchkiss.
9. Welfelt/Lewis wetland development and easement along the Uncompahgre River.
10. South Montrose easement purchase on Uncompahgre River.
11. 6&50 Reservoir rehabilitation west of Fruita.
12. Roots Reservoir near Fruita.
13. Ripp easement and wetland development on Uncompahgre River near Delta.
14. Christianson wetland development near Palisade along the Colorado River.
15. Palisade High School Nature Pond along the Colorado River.
16. Cheney Reservoir restoration between Grand Junction and Delta.
17. Anderson Pond rehabilitation near Delta.
18. Max Morris wetland development along Kannah Creek near Whitewater.
19. Sullivan wetland development near Delta.
20. Nelson pond construction near Delta.

Description of Priority Projects

***Purple loosestrife control** is not ranked as a project but is considered very important by the team. An initial proposal calls for eradication of a 50-acre infestation along the San Miguel River at a cost of \$60,000 over 3 years. This work would prevent spread to the San Miguel and Dolores Rivers as well as the mainstem of the Colorado River.

1. The **Delta heron rookery** project is designed to protect approximately 100 acres of wetland/riparian lands near the confluence of the Gunnison and Uncompahgre Rivers. The area is easily observed from the City of Delta Confluence Park and has excellent long-term environmental education potential. The area is currently being used as a rookery by great blue herons and is used by many other species during nesting and migration periods. Cost for protection of this area is estimated at \$200,000 and would involve acquisition of 3 easements. Long-term management would include signing, fencing, occasional weed control, and monitoring. Potential managers include the City of Delta and the Valley Land Conservancy. Cooperating agencies include the NRCS, Fish and Wildlife Service, and Colorado Division of Wildlife.

2. Purchase through a conservation easement or in fee title of 27 acres along the Colorado River near **Palisade High School** would cost an estimated \$54,000. The acquisition would protect riverbottom lands along an area of the Colorado River critical to the survival of the endangered Colorado squawfish and razorback sucker. Riparian vegetation would be restored and the lands would expand outdoor classroom opportunities available on an adjacent property. The major

Palisade to Grand Junction Riverfront trail could go through the property by designing it for minimal disturbance to wildlife so that general public use in addition to student-use would occur. Mesa County Land Conservancy would manage the easement and Palisade High School would help manage the lands.

3. The **Clanton wetland** is a privately-owned wetland along the Uncompahgre River between Olathe and Delta and is part of the corridor identified previously as being a key wetland and waterfowl element of the focus area. A conservation easement could be acquired on this 35-acre parcel at an approximate cost of \$40,000. In addition a 4 acre wetland restoration project has been designed for the property; costs for this work, which would protect additional wetlands from sedimentation, is estimated at \$56,000. The easement would be designed to be a part of a larger riparian area protected by easements and would assure long-term protection of valuable wetlands. The area is readily visible from U.S. Highway 50 and would be an important open space acquisition.

4. Purchase of the **Alexander easement** would protect 20 acres of valuable wetlands and riparian areas along the Uncompahgre River south of Montrose. Costs are approximately \$40,000. This easement would be adjacent to a 120 acre conservation easement presently being negotiated.

5. The **Double Shoe easement** would also protect and enhance 20 acres along the Uncompahgre River at a cost of \$40,000. This and other easements/acquisitions along the river would help preserve a large corridor of value to wildlife and open space values. The Double Shoe easement would be adjacent to a recently acquired 400 acre conservation easement and is also a short distance downstream from the Billy Creek State Wildlife Area, thus creating the potential for protecting a relatively large segment of river.

6. The **Tisdale easement** would involve 35 acres and estimated costs are \$70,000. The easement would protect an excellent cottonwood bottomland along the Uncompahgre River between the town of Ridgway and Ridgway Reservoir. This protection would also enhance the aesthetics and enjoyment of a trail segment along the river.

7. **Fruitgrowers Reservoir** is an irrigation impoundment varying in size seasonally between approximately 100 and 500 surface acres. The reservoir is relatively shallow and in the spring is used heavily by migrating waterfowl, grebes, shorebirds and sandhill cranes. Nearly 20,000 sandhill cranes stage on the reservoir during migration. Fruitgrowers qualifies as a Globally Important Bird Area in the American Bird Conservancy's United States Important Bird Areas. Areas near the reservoir are being subdivided and built on. The group decided that pursuing conservation easements or other avenues to protect the area surrounding the reservoir from development was a high priority project. Appraisals have been completed on 535 acres that could be suitable for conservation easements around the reservoir. Costs would be approximately \$80,000. Other options include fee title acquisition of a buffer zone around the reservoir.

8. The **North Fork of the Gunnison River restoration** project would involve assisting a partnership of landowners and agencies that are implementing solutions to bank erosion and

riparian habitat degradation along a 16-mile reach of the North Fork. Initial investigations have been funded by Reclamation, USGS, and others.

A pilot project is proposed that would treat 1-2 miles of the river near the confluence of Jay Creek. Costs are estimated at approximately \$300,000. The pilot project is designed to protect approximately 200 acres of existing wetlands; provide a model for other reaches of the project area; and provide an opportunity for public information and education (an overlook site is available along the highway to use in interpretation)

9. Acquisition of an easement on the **Welfelt/Lewis property** would preserve 120 acres of prime wetland and waterfowl habitat along the Uncompahgre River between Olathe and Delta. Costs are estimated at \$240,000. The property contains backwaters, springs, and high quality riparian vegetation. It is a major waterfowl wintering area and nesting populations are gradually increasing. The area is adjacent to other properties being considered under this program to establish long-term protection of a large corridor. The property is visible from U.S. Highway 50 and is an important open space acquisition. Opportunities for additional wetland enhancement also exist on this property.

10. The **South Montrose easement** purchase along the Uncompahgre River in Montrose County would protect 27 acres at an estimated cost of \$68,000. This easement could be combined with an adjacent easement being considered for donation.

11. Rehabilitation of the **6&50 Reservoir Site** includes 2 projects that would be located on public lands in Mesa County. The 6&50 Reservoir could be rehabilitated to create over 10 acres of wetlands of various depths. Major work items would include provision of a reliable water source. Costs are estimated at \$100,000 and work and management would be accomplished in cooperation with the NRCS, BLM, Reclamation, and the livestock allotment. A similar wetland would be created at the West Badger wetland. Both areas have high potential for waterfowl, shorebird, and migratory bird use as well as for an important watering area for antelope and other wildlife. The areas have excellent potential for public wildlife observation and other recreation uses.

12. **Roots Reservoir** would be constructed near Mack Colorado in cooperation with private land owners. It would be designed to have a diversity of water depths and would create 32 acres of wetlands and open water at a cost of \$70,000 to the program. Approximately 28 acres of adjacent uplands would be managed with the wetlands and a conservation easement would be included to protect long term values. Total costs are estimated at \$180,000 and would be shared with the landowners and the Fish and Wildlife Service.

13. The **Ripp easement** would protect 8 acres of valuable wildlife habitat at an estimated cost of \$4,000 along the Uncompahgre River. This easement would add to the wetland/waterfowl complex between Delta and Olathe.

14. The **Christianson wetland** development includes construction of 22 acres of shallow water wetlands and 12 acres of adjacent wildlife habitat plantings adjacent to the Colorado River near Palisade. Estimated costs are \$15,000.

15. The **Palisade High School Nature Pond** would involve the restoration of a 1-acre existing wetland near the high school at a cost of approximately \$14,000. Restoration would consist of creation of a small wetland/pond complex to trap sediment to extend the life of the existing wetland area. The area would provide an outdoor classroom, enhance wildlife habitat, and serve as open space in rapidly developing Mesa County. The pond/wetland complex would be maintained by Palisade High School.

16. Repair of **Cheney Reservoir** would preserve another important shallow water impoundment used by many species of waterfowl, shorebirds, and a large number of sandhill cranes during migration. The project would include repairing the dam, acquiring adjacent private land and confirming existing water rights. Approximately 60 acres of wetlands would be created in a desert setting. A cost estimate is not available at this time. The area is heavily used by migratory waterfowl and shorebirds as well as serving as a watering area for antelope and other terrestrial species. Much of the wetland would be located on public land.

17. The **Anderson pond rehabilitation** would improve and protect an existing 2 acre wetland and adjacent riparian areas at an estimated cost of \$40,000. Work would include sediment and runoff control, with long-term goal of maintaining the functions and values of this wetland. This area is located adjacent to the high priority wetland complex along the Uncompahgre River between Delta and Olathe. It winters around 10,000 ducks and serves as a valuable waterfowl site for managers to trap and band birds for migration and other studies.

18. The **Morris wetland** development near Kannah Creek between Grand Junction and Delta would help preserve and enhance wetlands along Kannah Creek, a major tributary of the Gunnison River. This area is visible from U.S. Highway 50 and is important as open space. Its greatest value would be in helping to protect an important wildlife corridor between the Grand Mesa and the Gunnison River.

19. The **Sullivan wetland** development between Hotchkiss and Crawford would involve 20 acres and 10 different wetlands and would cost approximately \$50,000. This area is important for migratory shorebirds and waterfowl.

20. The **Nelson Pond** work would involve construction of a new wetland with 3 to 5 surface acres on private lands located along the Uncompahgre River between Delta and Olathe. Approximately 30 to 40 percent of the wetland would be shallow (less than 3 feet deep). The wetland would be fed by canal water rather than groundwater, thus reducing the potential for development of water quality problems.

FUNDING FOR PRIORITY PROJECTS

Project costs will be further detailed in individual grant proposals. At this time the best funding possibilities include NAWCA grants, U.S Fish and Wildlife Partners funds, GOCO Colorado grants, NRCS Wetland Reserve Program, USDA Wildlife Incentive Programs, and Marsh grants (state duck stamp and Ducks Unlimited funds). Landowner cost sharing is included in many of the proposals.

Management of projects would vary. Many of the projects consist of easements which could be managed by local land conservancies such as the Valley Land Conservancy or the Mesa County Land Conservancy. Private land owners would also be responsible for maintaining some of the projects; involvement of agencies such as the Bureau of Land Management, Colorado Division of Wildlife, and Bureau of Reclamation would also occur on some of the projects.

Each project will adhere to the funding programs operation and maintenance requirements. It is anticipated most conservation easements will be overseen by local land trusts which have rigid monitoring programs. Enhancement and development projects on private lands will be given higher priority if they are in conjunction with a conservation easement and if they include private funding of operations and cost sharing of construction.

Monitoring requirements will be spelled out in a legal binding contract with the land owner and will be done by the subject(s) indicated in the contract.

Appendix A.

LOWER COLORADO RIVER FOCUS AREA VERTEBRATE LIST

Species Name	Notes
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BIRDS

Common Loon	
Pied-billed Grebe	
Horned Grebe	
Eared Grebe	
Western Grebe	
Clark's Grebe	
American White Pelican	
Double-crested Cormorant	
American Bittern	
Great Blue Heron	
Snowy Egret	
Cattle Egret	
Green-backed Heron	
Black-crowned Night-Heron	
White-faced Ibis	
Tundra Swan	
Snow Goose	
Rosy's Goose	
Canada Goose	
Wood Duck	
Green-winged Teal	
Mallard	
Northern Pintail	
Blue-winged Teal	
Cinnamon Teal	
Northern Shoveler	
Gadwall	
American Widgeon	
Canvasback	
Redhead	
Ring-necked Duck	
Lesser Scaup	
Common Goldeneye	

Barrow's Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck
Turkey Vulture
Osprey
Bald Eagle
Northern Harrier
Cooper's Hawk
Red-tailed Hawk
Rough-legged Hawk
Golden Eagle
American Kestrel
Merlin
Peregrine Falcon
Prairie Falcon
Ring-necked Pheasant
Wild Turkey
Gambel's Quail
Virginia Rail
Sora
American Coot
Sandhill Crane
Whooping Crane
Black-bellied Plover
Lesser Golden Plover
Snowy Plover
Semipalmated Plover
Killdeer
Black-necked Stilt
American Avocet
Greater Yellowlegs
Lesser Yellowlegs
Solitary Sandpiper
Willet
Spotted Sandpiper
Whimbrel
Long-billed Curlew
Marbled Godwit
Western Sandpiper
Least Sandpiper
Baird's Sandpiper
Pectoral Sandpiper
Dunlin

Stilt Sandpiper
Long-billed Dowitcher
Common Snipe
American Woodcock
Wilson's Phalarope
Red-necked Phalarope
Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
California Gull
Sabine's Gull
Forster's Tern
Black Tern
Rock Dove
Mourning Dove
Yellow-billed Cuckoo
Barn Owl
Western Screech-Owl
Great Horned Owl
Northern Pygmy-Owl
Long-eared Owl
Common Nighthawk
Black Swift
Black-chinned Hummingbird
Belted Kingfisher
Lewis's Woodpecker
Downy Woodpecker
Northern Flicker
Western Wood-Pewee
Willow Flycatcher
Say's Phoebe
Western Kingbird
Eastern Kingbird
Purple Martin
Tree Swallow
Violet-green Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow
Black-billed Magpie
American Crow
Common Raven
Black-capped Chickadee
Mountain Chickadee
Plain Titmouse

Bushtit
White-breasted Nuthatch
Brown Creeper
Bewick's Wren
House Wren
Winter Wren
Marsh Wren
American Dipper
Ruby-crowned Kinglet
Blue-gray Gnatcatcher
Mountain Bluebird
Townsend's Solitaire
American Robin
Gray Catbird
American Pipit
Bohemian Waxwing
Cedar Waxwing
Northern Shrike
Loggerhead Shrike
European Starling
Solitary Vireo
Warbling Vireo
Orange-crowned Warbler
Virginia's Warbler
Yellow Warbler
Yellow-rumped Warbler
Northern Waterthrush
MacGillivray's Warbler
Common Yellowthroat
Wilson's Warbler
Yellow-breasted Chat
Western Tanager
Black-headed Grosbeak
Blue Grosbeak
Lazuli Bunting
Rufous-sided Towhee
American Tree Sparrow
Savannah Sparrow
Song Sparrow
Golden-crowned Sparrow
White-crowned Sparrow
Harris's Sparrow
Dark-eyed Junco
Red-winged Blackbird
Western Meadowlark
Yellow-headed Blackbird

Brewer's Blackbird
Great-tailed Grackle
Common Grackle
Brown-headed Cowbird
Northern Oriole
House Finch
Lesser Goldfinch
American Goldfinch
Evening Grosbeak
House Sparrow

MAMMALS

Masked Shrew
Montane Shrew
Little Brown Bat
Long-eared Myotis
Long-legged Myotis
Yuma Myotis
Fringed Myotis
California Myotis
W. Small-footed Myotis
Silver-haired Bat
W. Pipistrelle
Big Brown Bat
Hoary Bat
Spotted Bat
Townsend's Big-eared Bat
Pallid Bat
Brazilian Free-tailed Bat
Big Free-tailed Bat
Desert Cottontail
Rock Squirrel
Golden-mantled Ground Squirrel
Ord's Kangaroo Rat
Beaver
Western Harvest Mouse
Deer Mouse
Brush Mouse
Desert Woodrat
Bushy-tailed Woodrat
Montane Vole
Meadow Vole
Muskrat
House Mouse
Western Jumping Mouse

Porcupine
Coyote
Red Fox
Grey Fox
Black Bear
Ring-tailed Cat
Raccoon
Long-tailed Weasel
Mink
Badger
Spotted Skunk
Striped Skunk
River Otter
Mountain Lion
Bobcat
Elk
Mule Deer

AMPHIBIANS

Tiger Salamander
Red-spotted Toad
Woodhouse's Toad
Western Chorus Frog
Bullfrog
Northern Leopard Frog
New Mexico Spadefoot
Great Basin Spadefoot

REPTILES

Short-horned lizard	Utah Blackhead Snake
Northern Plateau Lizard	Great Basin Gopher Snake
Northern Tree Lizard	Western Blackneck Garter Snake
Northern whiptail	Wandering Garter Snake
Plateau striped whiptail	Western Rattlesnake
Western Yellowbelly Racer	
Great Plains Rat Snake	
Milk Snake	

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