



# Coeur d'Alene River Wildlife Management Area



Management Plan  
2014

Panhandle Region

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# **Coeur d'Alene River Wildlife Management Area**

**2014 – 2023 Management Plan  
December 2014**

Idaho Department of Fish and Game  
Panhandle Region  
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## Executive Summary

Idaho Department of Fish and Game (Department) manages 32 Wildlife Management Areas (WMAs). Researchers from the University of Idaho and The Nature Conservancy evaluated the value of Idaho's WMAs to wildlife. They found the WMA network, created to support game species, "also conserves the full range of Idaho's wildlife and other ecological features" (Karl et al. 2005). Surveys and monitoring work conducted by Department biologists on Panhandle Region WMAs confirms their value to big game, nongame, and many at-risk species identified in Idaho's State Wildlife Action Plan (SWAP). In many cases, WMAs provide the principal habitat for at-risk species in the Panhandle Region.

Wildlife Management Areas often abut other protected lands such as National Forests, Bureau of Land Management (BLM) lands, or private lands protected by conservation easement. Due to the wildlife-focused management, WMAs often serve as highly productive core areas of the landscapes in which they exist. Management of these areas involves a combination of restoring and maintaining important natural habitats to contribute to landscape-level habitat function (e.g., sage-steppe, slough wetlands) and creating hyper-productive habitats (e.g., food plots, impounded wetlands) to enhance the carrying capacity for certain wildlife species.

Wildlife Management Area management plans strive to direct management that upholds these values. They may also be bounded by legislative and/or funding mandates, Department species plans, the SWAP, conservation partner objectives, national wildlife conservation strategies and plans (federal and non-government organizations), and especially the Department's own strategic plan, "*The Compass*." Priorities, Management Directions, Performance Targets, and Strategies have been developed to be as consistent as possible with all of these documents and to capture the broader conservation values already provided by WMAs and ensure these values are protected and enhanced.

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The Department's Panhandle Region manages seven WMAs that collectively comprise 54,987 acres of land, which consists of 27,910 deeded acres and another 27,077 acres managed under cooperative agreement or lease. Wildlife Management Area management focus is to maintain highly functional wildlife habitat and provide wildlife-based recreation. Starting in the north and working south across the Panhandle Region these areas include:

- Boundary Smith Creek WMA: This 2,072-acre WMA consists of farmland that was converted back into a mosaic of wetlands and associated Kootenai River floodplain historic habitats.
- McArthur Lake WMA: One of the oldest WMAs in the state; the 1,891 acres of shallow lake, marshes, and adjacent upland forests/ meadows are primarily managed for waterfowl production and hunting.
- Pend Oreille WMA: Primarily acquired as mitigation for Albeni Falls Dam, it consists of 7,432 acres of scattered parcels of critical delta and riverine wetland habitats within the Pend Oreille River watershed.
- Farragut WMA: Another of our oldest WMAs, Farragut was originally a U.S. Navy base and gifted to the Department in 1950. The 1,418 acres is currently cooperatively managed with the Idaho Department of State Parks for public recreation and wildlife.
- Coeur d'Alene River WMA: This WMA consists of 7,538 acres of wetlands and low lying terrestrial habitats throughout the lower Coeur d'Alene and St. Joe River basins. It is primarily managed for waterfowl production and hunting.
- St. Maries WMA: A 2,344-acre mix of forest and meadow habitats, the St. Maries WMA is primarily managed for big game.
- Snow Peak WMA: A very remote, roadless back country WMA located in the upper St. Joe River drainage. The 32,292 acres are cooperatively managed with the U.S. Forest Service (USFS) for elk habitat and back country hunting opportunity.

There are several outlying land parcels within the Panhandle, previously tied to fishing and boating access sites, which have significant wildlife habitat resources. For management purposes, these parcels will now be included as part of the best-associated WMA and management priorities will be directed by the WMA plan.

The Panhandle WMAs are managed for a wide diversity of both game and sensitive species. Examples of at-risk species partially dependent on WMAs include black-backed woodpecker, red-naped sapsucker, olive-sided flycatcher, long-eared myotis, northern goshawk, northern pygmy-owl, spotted sandpiper, Vaux's swift, Cassin's finch, common garter snake, Columbia spotted frog, and western toad. Examples of sensitive plants include water howellia, maidenhair spleenwort, purple meadowrue, water pygmy weed, black snake-root, arrowleaf sweet coltsfoot, yellow sedge, and bristle-stalk sedge.

Regional WMAs are funded through a combination of hunting license dollars, appropriations from federal excise taxes derived from the sale of ammunition and firearms (Pittman-Robertson Act), and/or funding provided by the Bonneville Power Administration to mitigate habitat loss from construction of the Albeni Falls dam. All of the Panhandle WMAs, with the exception of Snow Peak WMA, have the common management themes of wetland management for waterfowl and waterbird production; terrestrial habitat management for big game, with some emphasis on upland game species; and riparian management for water quality and all species. The WMAs provide important wildlife-based recreation and are used heavily by waterfowl and big game hunters, as well as non-consumptive users such as birdwatchers, hikers and naturalists. The abundance of water resources also attracts water-based activities such as kayaking and fishing.

The Coeur d'Alene WMA (CDARWMA) was originally acquired to protect and enhance waterfowl habitat, increase waterfowl production, and provide a secure staging area for migrating waterfowl. An important aspect of the WMA is providing public access for waterfowl and big game hunting, fishing, and wildlife viewing.

The CDARWMA landscape consists of mixed ownerships including USFS, BLM, Idaho Department of Lands, private corporate timber lands, and private land.

Management priorities for CDARWMA are waterfowl production and staging, wetland habitat, restored wetland habitat related to Lower Basin EPA cleanup efforts, floodplain forest and scrub-shrub habitat, conifer forest habitat, wildlife-based recreation and education, and controlling noxious weeds.

Conservation Targets, a sub-set of species and communities, were selected to represent the biodiversity of CDARWMA for management and conservation; while still reflecting the management priorities of CDARWMA. The Conservation Targets selected to guide management on CDARWMA are waterfowl; wetland habitat; restored wetland habitat (related to Lower Basin EPA cleanup efforts); floodplain forest and scrub-shrub habitats; conifer forest habitat - Northern Rocky Mountain mesic montane mixed conifer forest, Northern Rocky Mountain dry-mesic montane mixed conifer forest, and Northern Rocky Mountain ponderosa pine woodland and savanna.

This document provides direction in the form of Priorities, Management Directions, Performance Targets, and Strategies for the management of CDARWMA. The Priorities and Issues for the CDARWMA were determined through a combination of public and staff input, mitigation requirements identified in the cooperative agreements that formed CDARWMA, and Department statewide priorities identified in "*The Compass*." A draft version of the CDARWMA Management Priorities, Management Directions, Performance Targets, and Strategies was offered for public inspection and comment in July 2013.

This plan will serve as a guide for current and future managers in planning where to direct efforts and resources for maximum wildlife benefit, public enjoyment, and efficient operation. As new information and technology becomes available, and as more property is acquired, strategies may be modified to most effectively reach the goals and objectives in this plan. All goals, objectives, and strategies are dependent on adequate funding, personnel, and public support.

## Introduction

This management plan is designed to provide broad guidance for the long-term management of Coeur d'Alene River Wildlife Management Area (CDARWMA). It replaces an earlier management plan written in 1999. This updated plan was completed during 2012 and 2013 with extensive public input. This plan is tiered off other Idaho Department of Fish and Game (Department) plans and policies summarized below:

- State Wildlife Action Plan (2005)
- Statewide waterfowl management plan (1991)
- Statewide upland game management plan (1991)
- Statewide management plans for:
  - mule deer (2010)
  - white-tailed deer (2005)
  - elk (2014)
  - moose (1991)
- Statewide big game depredation management plan (1988)
- Statewide furbearer management plan (1991)
- Conservation Plan for the Greater Sage-grouse in Idaho (2006)
- Policy for Avian and Mammalian Predation Management (2000)

## Department Mission

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing and trapping (Idaho Code Section 36-103).

## Department Strategic Goals

The Department's 2005 Strategic Plan, *The Compass*, is the primary guiding document for all other Department plans and outlines four goals for the Department:

- Fish, Wildlife and Habitat: Sustain Idaho's fish and wildlife and the habitats upon which they depend.
- Fish and Wildlife Recreation: Meet the demand for fish and wildlife recreation.
- Working With Others: Improve public understanding of and involvement in fish and wildlife management.
- Management Support: Enhance the capacity of the Department to manage fish and wildlife and serve the public.

The 2014 Wildlife Management Area (WMA) plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* objectives and strategies relevant to WMAs are included in Appendix I.

## Statewide WMA Vision

Our WMAs are managed to provide and showcase important habitat for all wildlife and to offer high-quality, wildlife-based public recreation.

## Coeur d'Alene River WMA Vision

Protect and manage the wildlife resources of the CDARWMA to ensure sufficient quantities of high quality and secure habitat for waterfowl, shorebirds, wetland obligate species, and for a wide variety of other game and nongame species. Provide high quality wildlife-based recreational and educational opportunities compatible with this primary mission for the benefit of the public.

## Modification of Plan

This plan provides broad, long-term management of CDARWMA and has a 10-year life span. It will be evaluated every five years to determine if adjustments are needed. The plan will be modified as needed to accommodate changing conditions and goals and to incorporate available advancements in management knowledge and techniques.

## Other Considerations

All strategies proposed in this plan are bound by the contractual agreements between cooperating agencies, the mission of CDARWMA, and all applicable Department species management plans and policies. Issues and strategies that are inconsistent with the mission were not considered. In addition, the implementation of all strategies will be subject to available funding, personnel, and safety considerations.

## Area Description and Current Status

### Geographic Features

The Coeur d'Alene River WMA is located primarily in Kootenai County within the lower Coeur d'Alene River Valley and extends from the mouth of the Coeur d'Alene River at Harrison upstream to Cataldo, a distance of 25 miles (Figure 1). A detached portion of the WMA, referred to as the Round Lake segment, is located at the southern end of Coeur d'Alene Lake near the mouth of the St. Joe River in Kootenai and Benewah counties (Figure 2). In addition, there are several outlying parcels managed under the CDARWMA (Figure 3).

The most prominent features of the CDARWMA segment are the lower Coeur d'Alene River and the numerous associated lateral lakes and marshlands in the extensive river floodplain. The Coeur d'Alene River flows from east to west through a broad floodplain ranging from 1/4 to 1 3/4 miles in width and drains into Coeur d'Alene Lake at the town of Harrison. The river has been disconnected from its floodplain in many areas with past constructed flood and erosion control levees and water control structures. The WMA encompasses all or portions of 13 small to moderate-sized shallow lakes (<25 feet deep) ranging from 25 acres (Porter Lake) to over 500 acres (Killarney Lake) and an extensive network of marshlands and channels. Connectivity between the lateral lakes and Coeur d'Alene River exists during periodic high water overflow events and from surface channels that have been deepened or widened by dredging in the past.

The most prominent features of the St. Joe River segment are the shallow end of southern Coeur d'Alene Lake, the marsh dominated Round Lake, and the mouth and historic delta islands of the St. Joe River. The "River that flows through the Lakes" is a unique feature of the lower St. Joe River. Here the river flows between two natural levees that are surrounded by Benewah, Chatcolet, Round, Hidden, and Coeur d'Alene Lakes.

The CDARWMA has a typical Pacific Northwest inland maritime-influenced climate with warm, dry summers and cool, wet winters. The annual precipitation ranges from 25-30 inches with over 60% of this occurring from October to March, primarily as snow. Rain-on-snow events in the Coeur d'Alene River and St. Joe River drainages occur annually. Prolonged rain-on-snow events can cause significant flooding in low-lying areas. Flooding can raise water levels 7-10 feet over the normal high water mark and may occur several times a year.

### Vegetation

Coeur d'Alene River WMA wetlands are incredibly diverse and productive. Aquatic beds and emergent marshes are dominated by pondweed (*Potamogeton* spp.), yellow pond-lily (*Nuphar lutea* ssp. *polysepala*), arrowhead (*Sagittaria* spp.), common spikerush (*Eleocharis palustris*), sedges (*Carex* spp.), giant bur-reed (*Sparganium eurycarpum*), water horsetail (*Equisetum fluviatile*), cattail (*Typha latifolia*), hardstem bulrush (*Schoenoplectus acutus*), and woolgrass (*Schoenoplectus cyperinus*). Wild rice (*Zizania* spp.) has been introduced into most wetlands on

or near the WMA during the past 50 years. It now occurs primarily in wetlands surrounding Killarney Lake and in lakes on both sides of the St. Joe River near its mouth.

The CDARWMA has three significant peatland sites located at Rose Lake, Hidden Lake, and Thompson Lake. Peatlands are generally defined as wetlands with waterlogged substrates and at least 30 cm of peat accumulation. All three WMA peatlands have extensive floating and fixed mats along the lake margins that provide substrates for a mosaic of mosses (e.g., peat mosses, *Sphagnum* spp.), sedges (especially wiregrass sedge, *Carex lasiocarpa*), rose spirea (*Spiraea douglasii*), cattails, rushes (*Juncus* spp.), mountain alder (*Alnus incana*), and willows (*Salix* spp.). Portions of the Hidden Lake site are dominated by cranberry (*Vaccinium oxycoccos*), a non-native shrub introduced by former land owners in the 1930s. Rare plant species associated with the WMA's peatlands include marsh willowherb (*Epilobium palustre*), water clubrush (*Schoenoplectus subterminalis*), many-fruit false loosestrife (*Ludwigia polycarpa*), and water celery (*Vallisneria americana*).

Riparian zones within the floodplain are forested or shrub-dominated primarily by black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), paper birch (*Betula papyrifera*), rose spirea, willows, red osier dogwood (*Cornus sericea*), and red alder (*Alnus rubra*). Common grasses include non-native forage species, primarily reed canarygrass (*Phalaris arundinacea*) and reedtop (*Agrostis stolonifera*).

There are three conifer forest ecological systems on the CDARWMA: Northern Rocky Mountain Mesic Montane Mixed Conifer Forest, Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest, and Northern Rocky Mountain Ponderosa Pine Woodland and Savanna.

The dominant tree species of the Mesic Montane Mixed Conifer Forest are Douglas-fir (*Pseudotsuga menziesii*), western larch (*Larix occidentalis*), and grand fir (*Abies grandis*). Western white pine (*Pinus monticola*), lodgepole pine (*Pinus contorta*), ponderosa pine (*Pinus ponderosa*), western red cedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*) occur in lesser quantities. North and east facing slopes are primarily forested with dense stands of Douglas-fir/mallow ninebark (*Physocarpus malvaceus*) and grand fir/ocean spray (*Holodiscus discolor*), while the south and west slopes often occurs as a matrix of large patches dominated or co-dominated by one species, or combinations of the above species. These forests are sometimes mixed with black cottonwoods, quaking aspen (*Populus tremuloides*), paper birch, and red alder.

The Dry-Mesic Montane Mixed Conifer Forest stands are dominated by a mix of Douglas-fir, ponderosa pine, lodgepole pine, western white pine, and western larch. The system often occurs as a matrix of large patches dominated or co-dominated by one species, or combinations of the above species. Understories are dominated by grasses and upland sedges, such as bluebunch wheatgrass (*Pseudoroegneria spicata*), pinegrass (*Calamagrostis rubescens*), and elk sedge (*Carex geyeri*). Understory deciduous shrubs may include Rocky Mountain maple (*Acer glabrum*), mallow ninebark, common snowberry (*Symphoricarpos albus*), white spirea (*Spiraea betulifolia*), or thinleaf huckleberry (*Vaccinium membranaceum*) on mesic sites.

The dominant conifer species in the Northern Rocky Mountain Ponderosa Pine Woodland and Savanna system is ponderosa pine. Douglas-fir may be co-dominant or dominant in the tree canopy in the northern extent of the range. The understory can be a mix of shrub species with mountain snowberry (*Symphoricarpos oreophilus*), common snowberry, Woods' rose (*Rosa woodsii*), kinnikinnick (*Arctostaphylos uva-ursi*), and serviceberry (*Amelanchier alnifolia*). More open stands support grasses such as bluebunch wheatgrass, Idaho fescue (*Festuca idahoensis*), and rough fescue (*Festuca campestris*).

## **Waterfowl**

The entire WMA is an important area for waterfowl. It serves as a production area for local birds and a major feeding and resting area for both spring and fall migrants.

The greatest waterfowl use of the CDARWMA occurs during the fall and spring migrations. Maximum counts during aerial flights have been as high as 20,000 ducks, 2,000 geese, and 500 tundra swans. Common migrants include mallards, American widgeons, northern pintails, Canada geese, and tundra swans.

The WMA also provides important breeding and nesting habitat for waterfowl, primarily mallards, green-winged teal, wood ducks, and Canada geese. Prior to 1980, no Canada goose production was recorded on the lower Coeur d'Alene River. Because of extreme water fluctuations during spring flooding, ground-nesting geese were apparently unable to nest successfully. In an attempt to start a local nesting population, the Department began placing artificial nest platforms throughout the WMA. The program was successful in producing a viable resident Canada goose population in the Lower Coeur d'Alene River Basin.

The CDARWMA provides habitat for one of the larger breeding populations of wood ducks in the Northwest. Wood ducks are cavity nesters and dependent on naturally occurring cavities or cavities excavated by woodpeckers in large trees for nest sites. Large cottonwood trees found on the WMA are especially important. Man-made nesting boxes have been maintained throughout the WMA to provide artificial cavities for nesting wood ducks to use.

A significant portion of the waterfowl hunting in northern Idaho occurs on the CDARWMA each fall. Hunting is excellent for ducks early in the season. If the weather is mild, good hunting for ducks and Canada geese continues through November. Migrating mallards stop at areas with wild rice, utilizing it as a principal food source.

## **Big Game**

Common big game species on the CDARWMA include white-tailed deer, elk, moose, mountain lion, and black bear. White-tailed deer are the most numerous, occupying the WMA year-round. Elk use of the WMA occurs primarily in the winter and spring. Elk are most visible during green-up in March on south-facing slopes above the river. Black bear are frequently observed in late spring - early summer feeding on new grasses. It is common to see moose foraging in the

many emergent wetlands across the lower Coeur d'Alene River Basin. Mule deer and mountain lion are occasionally observed on the WMA.

Big game hunting for white-tailed deer, elk, and black bear occurs throughout the WMA and is popular with local residents.

### **Upland Game Species**

Ruffed grouse, wild turkey, common snipe, and snowshoe hare are common game species on the CDARWMA. Wild turkey hunting is popular in the spring.

### **Furbearers**

Muskrat, mink, beaver, raccoon, and weasel are common. Bobcats are occasionally observed. Muskrat pushups and beaver lodges make excellent waterfowl nest sites. However, few ground nests survive the normal spring flood except in marshes protected by dikes. Trapping efforts are directly correlated with fur prices. During times of a strong fur market, trapping effort can be significant.

### **Other Notable Wildlife**

There is a robust osprey population throughout the lower St. Joe and Coeur d'Alene Basin due to the abundant productive fish bearing rivers, lakes, and open marshes. Ospreys readily nest on a variety of structures including live and dead trees, power poles, pilings, and nesting platforms erected for Canada geese.

Six pairs of bald eagles currently nest on the CDARWMA. Some of these nests have been active for over twenty years. The lower river basins and Lake Coeur d'Alene are also an important wintering area for bald eagles migrating south from Canada. Many of these birds use WMA lands for foraging and perching. Migrating eagles begin arriving in late October to take advantage of spawned out kokanee as a food source. Eagle numbers normally peak in late November - early December and decline through the end of March.

Other conspicuous nongame birds commonly found on the WMA include great blue herons, red-tailed hawks, northern harriers, American kestrels, Virginia rail, sora, belted kingfishers, common ravens, and northern flickers. A wide variety of other resident and migrant birds utilize the diverse array of habitats found on the WMA.

Common nongame mammals include chipmunks, pine squirrels, and Columbian ground squirrels. Seven reptiles and six amphibians are known to inhabit the WMA. The most visible species are the painted turtle, common garter snake, and Columbia spotted frog.

Coeur d'Alene River WMA is home to a wide variety of migratory and resident mammals, birds, reptiles, amphibians, and fish and with the "Trail of the Coeur d'Alene's" traversing the entire

WMA, this is a wildlife viewer's paradise. A list of the wildlife present on CDARWMA can be found in Appendix VII.

### **Fisheries**

The lakes and deeper marshes of the lower Coeur d'Alene and St. Joe Rivers support good populations of spiny-ray fish species: largemouth bass, black crappie, yellow perch, pumpkinseed sunfish, and northern pike. Bullhead catfish are also abundant in the lakes and in the main stem of the Coeur d'Alene River.

Native Westslope cutthroat trout are present in Coeur d'Alene Lake and abundant throughout the Coeur d'Alene and St. Joe river drainages. Quality cutthroat fishing can be found primarily in the two river systems and their tributaries. Bull trout, also a native fish, spawn and rear in the St. Joe River Basin and are occasionally caught by anglers seeking cutthroat.

The WMA has eleven boating and fishing access sites and ramps that are popular with local fisherman and waterfowl hunters alike.

### **Invasive Species**

The Department has an aggressive noxious weed control program. On the CDARWMA, noxious weeds are controlled by a variety of methods, including chemical, mechanical, and biological treatments. These efforts protect wildlife habitat from invasion by undesirable plant species. Significant effort is made to ensure weeds on the WMA do not spread to adjacent ownerships.

Terrestrial noxious weeds of management concern include spotted knapweed (*Centaurea stoebe* ssp. *micranthos*), meadow hawkweed (*Hieracium caespitosum*), and oxeye daisy (*Leucanthemum vulgare*). Formerly farmed, hayed, grazed, or disturbed uplands, and other sites along with the extensive road system and public access locations, are most in need of weed control and monitoring efforts.

Aquatic noxious weeds of management concern include Eurasian water milfoil (*Myriophyllum spicatum*) and purple loosestrife (*Lythrum salicaria*). Eurasian water milfoil is the most significant aquatic weed infestation, and is found in scattered populations around the lateral lakes and sloughs, the Lower Coeur d'Alene and St. Joe Rivers, Round Lake, Hidden Lake, Chatcolet and Benewah lakes, and Harrison Slough on Lake Coeur d'Alene. It is being aggressively treated by Kootenai County Weed Control, the Coeur d'Alene Tribe, the Department, and Idaho Department of Environmental Quality (IDEQ).

Prior to an aggressive multi-agency coordinated weed management control effort in 1996, purple loosestrife was considered the most significant aquatic noxious weed in the Lower Coeur d'Alene River Basin. During that summer, the Department initiated a biological control effort to reduce purple loosestrife by releasing a biological control agent on the host plant in several lateral lakes. These root borer weevil releases were continued in 1998 by the U.S. Forest Service (USFS), with additional releases on Department wetland areas in the lateral lakes. This program

was successful in dramatically reducing purple loosestrife populations. The Department monitored the established purple loosestrife stands and found the dispersal of the bio-control agents to be effective in containing the spread of this invasive weed. In 2010, a new root borer bio-control agent was released on a small population of purple loosestrife in Cave Lake.

### **Acquisition**

A summary of acquisitions can be found in Appendix VIII. Acquisition of the WMA began in 1964 with a gift of 364 acres from the American Game Association at Killarney Lake. The Department authorized an aggressive expansion program primarily using Pittman-Robertson funding and Department license dollars and acquired 45 additional parcels in Kootenai County and seven in Benewah County. The latest acquisition was completed in 2012 by the Bonneville Power Administration (BPA) for mitigation habitat losses associated with the Albeni Falls Dam on the Pend Oreille River and lake. Other funding sources used for acquisition included Dingell-Johnson Funds, the Land and Water Conservation Fund, BPA, and the Ducks Unlimited (DU) MARSH program.

Currently, the Department owns 6,106 acres, primarily marshlands – 5,500 acres in Kootenai County and 606 acres in Benewah County. The Department has water rights licenses for 5,719 acre-feet of reservoir storage on 1,650 surface acres in the lower Coeur d'Alene River Valley in Kootenai County, which allows the Department to maintain appropriate water depths in most of the WMA wetland systems.

In addition to property owned in fee title, the Department leases 592 acres from the Idaho Department of Lands (IDL), 250 acres from Avista Utilities at Round Lake, and 80 acres from Avista Utilities near Rose Lake. The Department also has cooperative management agreements with the USFS and the Bureau of Land Management (BLM) for 722 wetland acres near Rose Lake, Killarney Lake, and Thompson Lake.

### **Bonneville Power Administration Acquisitions**

Two of the most recent acquisitions on the CDARWMA were completed by the BPA to partially mitigate for habitat losses associated with the Albeni Falls Dam on the Pend Oreille River.

The Department acquired three parcels for a total of 65 acres, creating the Robinson Creek habitat segment. The property consists of floodplain located in Kootenai County adjacent to Lane Marsh in the Lower Coeur d'Alene River Valley. Presently, the property consists of two habitat cover types: 15.6 acres of deciduous forested wetland and 30.4 acres of herbaceous wetland. The herbaceous wetland area is composed of 13.2 acres of mesic meadow and 17.2 acres of emergent marsh. There are no areas of open water with the exception of Robinson Creek, which flows through the property.

Current efforts to restore wetland habitat are underway on the Robinson Creek habitat segment. A restoration plan is currently being developed under a Department contract for this property by DU and funded by mitigation funds provided by IDEQ. Restorations will be fully implemented

during the life of this plan. This property is unique in that it is uncontaminated by historic mining waste. Restoration efforts will provide for clean wetland foraging habitat for tundra swans and a host of waterfowl and wetland obligate species.

The Department acquired the 65.9-acre Lower St. Joe habitat segment in 2007. The property consists of floodplain located in Benewah County along the St. Joe River, eight miles east of St. Maries, Idaho. Presently, the property consists of three habitat cover types including 58.9 acres of herbaceous wetlands, 3.3 acres of forested wetlands, and 3.7 acres of scrub-shrub wetlands. The herbaceous wetlands include 37.9 acres of wet meadow, 20.6 acres of emergent vegetation and 0.5 acres of shallow open water. The property includes 3/4 mile of St. Joe River floodplain and 1/4 mile of Miesen Creek.

A cooperative restoration project began on the site in the fall of 2012 with staff and funding from Avista Utilities, BPA, DU, and the Department. The restoration activities completed to date have included vegetation control of invasive reed canarygrass, utilizing rotary mowing and chemical applications, the construction of four shallow wetland areas, and seeding of competitive native wetland species, herbaceous upland species, riparian scrub-shrub species, and planting riparian forest seedlings.

The restoration efforts will maximize floodplain and wetland values as a term of utilizing BPA wetland mitigation funds to complete the acquisition. The restoration of this site is planned to be completed in 2014.

### **Contamination Remediation and Restoration Efforts**

For over 100 years, precious metal mining within the mid- and upper Coeur d'Alene River Basin has resulted in heavy metal contamination throughout the river basin. Within the lower Coeur d'Alene River floodplain, most of the low lying areas are contaminated with lead, cadmium, zinc, and arsenic. In 2011, the Hecla Mining Company settlement agreement was approved and mitigation requirements set for Hecla's past mining operations in the Coeur d'Alene River Basin. Coupled with a 2008 settlement with ASARCO, a total of about \$140 million is available through both settlements for natural resource restoration in the Coeur d'Alene Basin. Restoration efforts and project funding will be guided by the Natural Resource Trustees (Trustees), which are the Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS) and the BLM; the U.S. Department of Agriculture, represented by the USFS; the Coeur d'Alene Tribe; and the State of Idaho, represented by the IDEQ and the Department.

The Trustees first step will be to develop a comprehensive restoration plan and Environmental Impact Statement (EIS) to guide restoration of injured natural resources in the Basin. The Trustees will conduct public scoping and then draft restoration alternatives that will propose priority locations and types of actions needed and may also include some specific actions.

Following analysis and public comment, a final restoration plan and EIS will be completed and adopted through a record of decision for implementation starting by 2015. Settlement funds recovered by the Trustees will be used to restore, replace, or acquire the equivalent natural

resources injured by mining. The resources and services that have been affected include fish, birds and wildlife, clean water, riparian vegetation, soil and sediment, and recreation opportunities. To leverage restoration funds and maximize the amount of restoration that can be completed with available funding, restoration will be closely coordinated with the Environmental Protection Agency (EPA) remediation (cleanup) projects where possible and practical.

The Department will work with all Trustee partners relevant to the restoration of the Coeur d'Alene River Basin, including our direct involvement and representation on the Trustee Council and the Natural Resource Restoration Team (NRRT). Future conservation work within the Coeur d'Alene River Basin will be guided by the "Restoration Partnership" through the Basin Natural Resource Restoration Plan, currently being developed by the NRRT. Remediation and restoration of CDARWMA wetlands and properties, additional WMA acquisitions, and conservation easements on adjacent properties will be the types of projects actively sought out and completed over the next 20 years through this process.

### Coeur d'Alene River Wildlife Management Area - Along CDA River

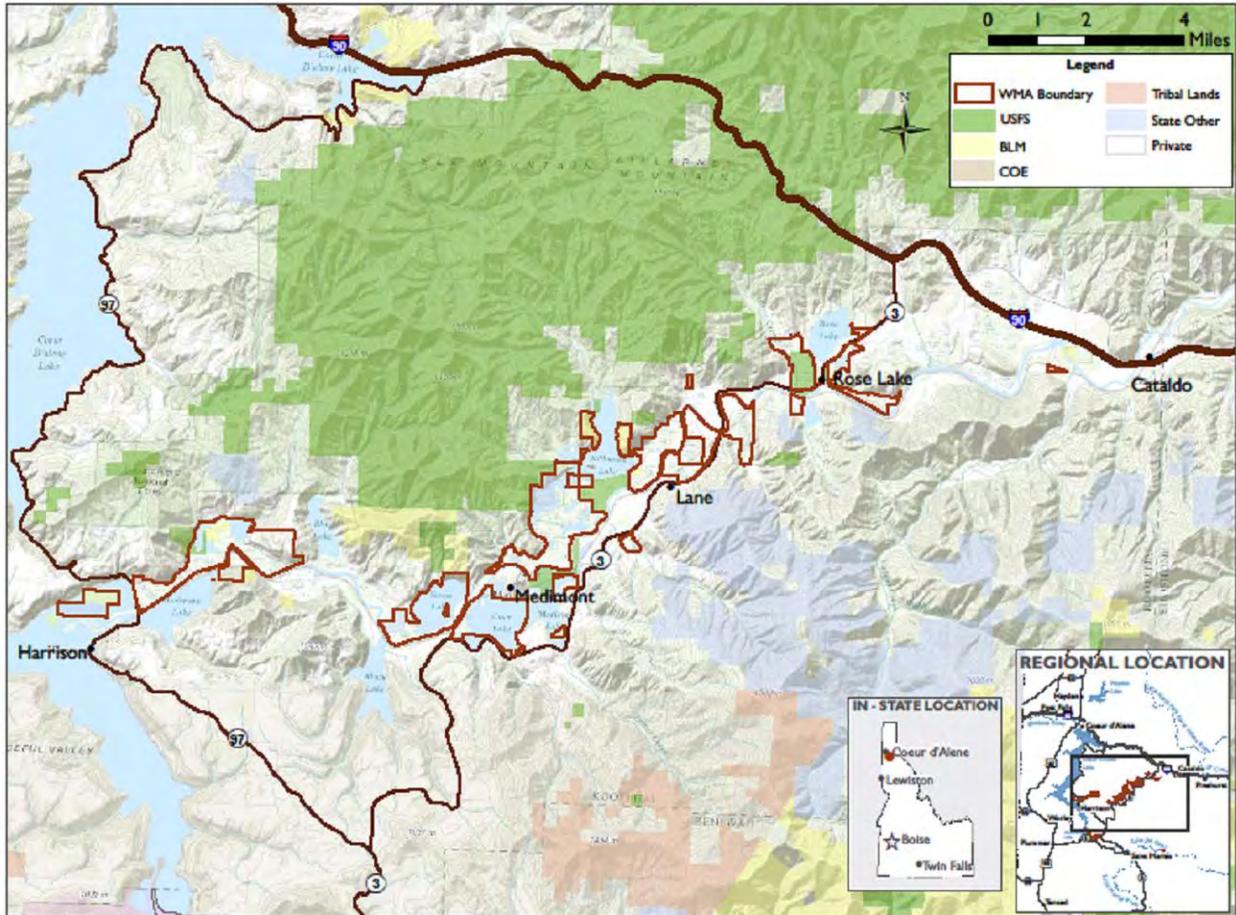


Figure 1: Map of Coeur d'Alene River WMA – Coeur d'Alene River parcels.

### Coeur d'Alene River Wildlife Management Area - Along St. Joe River

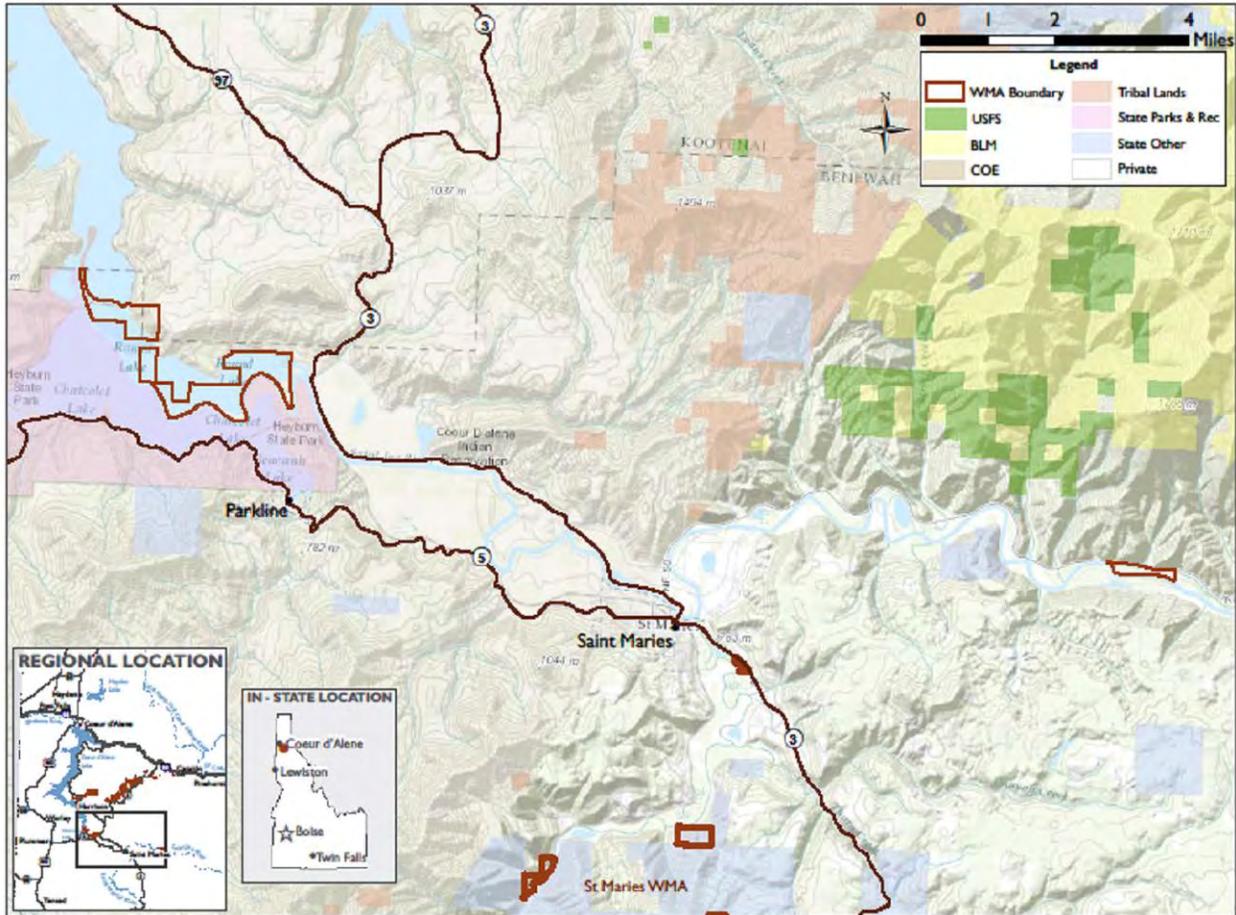


Figure 2: Map of Coeur d'Alene River WMA – St. Joe River parcels.

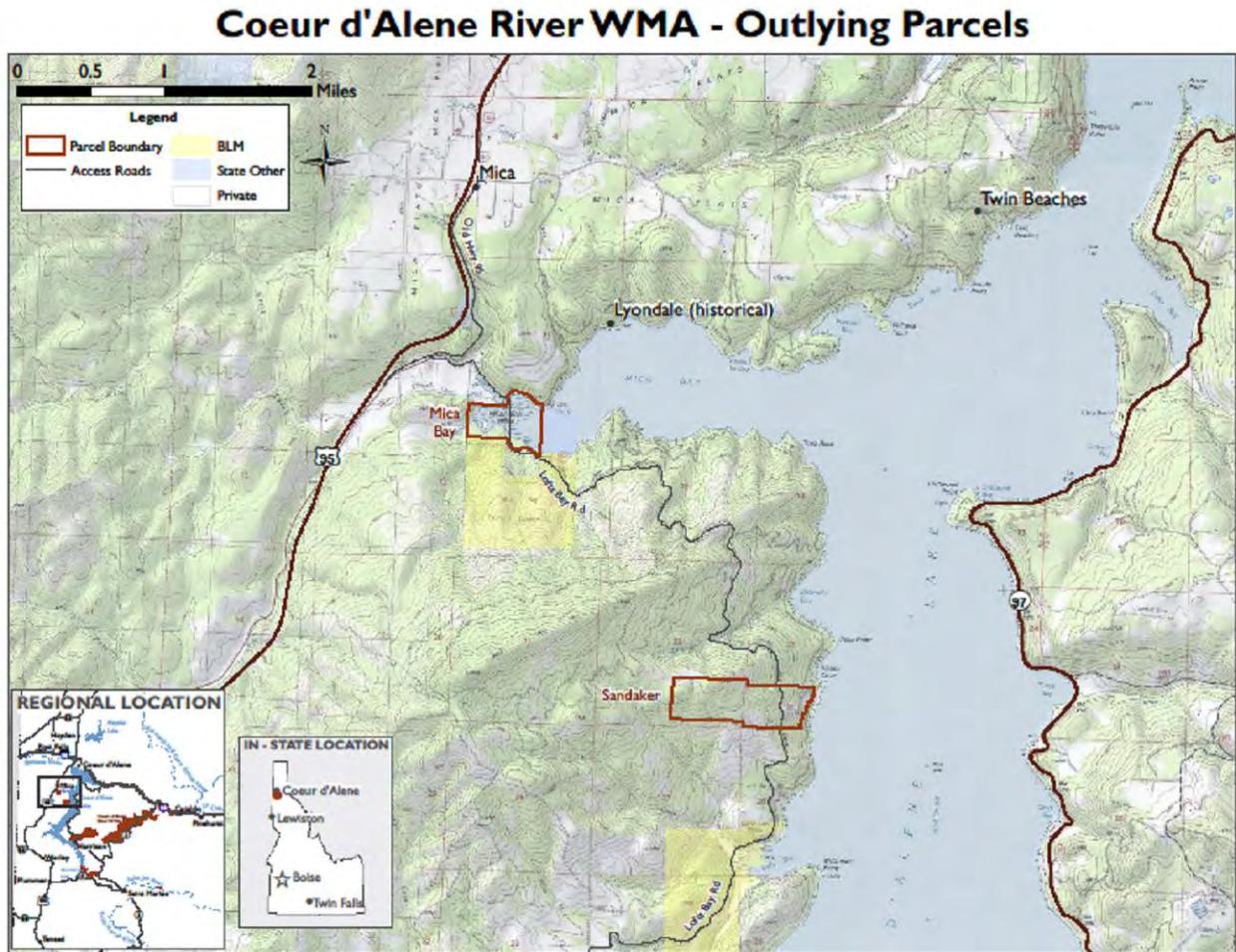


Figure 3: Map of Coeur d'Alene River WMA – outlying parcels.

## Management Issues

This list of Management Issues was developed after internal and external agency and public input was completed. Three general groups provided input: WMA users; state and federal agencies which include IDL, USFS, and BLM; and neighboring landowners which includes several corporate timber companies and private landowners. Department policy direction and CDARWMA staff management experience also helped shape the list of current issues. The issues identified were grouped, based on similarity, into three general categories, Habitat Management, Wildlife Management, and Public Use Management. Each issue is summarized and some potential management options discussed.

### Habitat Management

**1. A majority of the emergent wetlands have decadent unproductive vegetation and soils and are in the need of rejuvenation. (Issue identified by the Department)**

Discussion: The Department has provided custodial management on a majority of the CDARWMA emergent wetlands primarily due the inability of controlling water levels and limitations in funding sources needed to upgrade failing water control structures. It will be important to take advantage of all opportunities to install new or replace damaged water control structures on wetland complexes as funding sources become available. Water control structures provide managers the ability to control water levels for aquatic vegetation and moist soil management. The goal is to enhance wetland communities and vegetation condition and vigor, and provide improved waterfowl foraging and nesting habitat.

**2. Wetlands in the Coeur d'Alene basins are contaminated with heavy metals and negatively impacting waterfowl species. (Issue identified by both the public and the Department)**

Discussion: The CDARWMA lies within the lower Coeur d'Alene River Basin, and is the site of several settlement agreements from past mining operations for natural resource restoration work in the future. Historic mining within the basin resulted in heavy metal-related damage to natural resources within the basin including wetland and riparian habitats and their dependent species. Recent settlements with the mining industry have resulted in over \$700 million in funding to EPA for clean-up efforts and over \$140 million in funding for natural resources damage restoration to the Natural Resources Trustees (a coalition of federal, state, and tribal governments charged with using settlement funds to address natural resources damage within the basin). The CDARWMA management direction compliments ongoing efforts by the EPA and Natural Resources Trustee's to improve the quantity and quality of wetland and riparian habitats within the Coeur d'Alene Basin. Opportunities for collaborative projects will be available in the future.

**3. Fish and wildlife carrying capacities are reduced in those lakes and wetlands that do not have dikes and water control structures to retain water at or near full pool elevation. (Issue identified by the Department)**

Discussion: Managing water levels within our wetlands for fish and wildlife populations is critical in the Department's efforts to provide and sustain fish and wildlife populations in the lower Coeur d'Alene River Basin. Water control structures provide managers the ability to control water levels for aquatic vegetation and moist soil management. These enhanced wetland communities will increase the fish and wildlife carrying capacities of the WMA wetlands.

The majority of water control structures in the basin were severely damaged in the 1996-1997 flood event with additional damage occurring in more recent years. Much of the water control infrastructure is damaged and is not properly functioning. Minimal maintenance of existing structures is currently occurring on the WMA. Opportunities to install new structures or replace failed water control structures are being pursued.

**4. The inundation of Lake Coeur d'Alene by Post Falls Dam has created an unnatural water regime on the Coeur d'Alene and St. Joe River systems. This results in significant bank erosion and negative impact on riverine vegetation communities. (Issue identified by the Department)**

Discussion: The current operation of Post Falls Dam resulted in loss of wetland and seasonally flooded areas by creating unnatural water levels on the Coeur d'Alene and St. Joe Rivers historical floodplain. Prior to the dam construction, the rivers had a natural levee system and a low gradient, wide floodplain with limited erosion rates. Now, summer water levels held in Lake Coeur d'Alene prevent riparian forest (especially black cottonwood) and scrub/shrub habitat from establishing naturally. The fall drawdowns result in non-vegetated banks with saturated soil conditions. These banks are unstable and tend to fail. Late winter and spring high river levels result in significant erosion and loss of riverine vegetation which directly impacts wildlife and fish habitat.

Additionally, the majority of the riverine system in the Coeur d'Alene River floodplain is highly contaminated with metals due to over a century of mining in the upper river basins. The stabilization of these riverbanks becomes a much greater concern when these contaminated soils are vulnerable to erosion. Bank protection measures are needed to prevent further loss of riverine habitats. This large scale restoration effort will require cooperation with various conservation agencies, other public land management agencies, and private landowners to effectively address the problem.

**5. There is a lack of conifer stand and forest health information to properly manage the forested acres on the CDARMA. (Issue identified by the Department)**

Discussion: There are three conifer forest ecological systems on the CDARWMA: Mesic Montane Mixed Conifer Forest, Dry-Mesic Montane Mixed Conifer Forest, and Ponderosa

Pine Woodland and Savanna. All have specific management requirements and opportunities for improvements to benefit the associated wildlife species. Fire suppression has reduced old growth ponderosa pine habitat in much of the west. Lack of active forest management and natural fire regime over the years has resulted in a wide variety of stand conditions and health in the mesic and dry-mesic mixed conifer stands. Treatments in all forest habitat types are needed.

A forest inventory is needed to determine the forest habitat type, percent composition, condition, and trend of the conifer forest habitat types. The development of a forest management plan will follow the primary goal of managing these forested acres to be healthy and productive forests. The plan will address maintaining a diversity of productive forest habitats for benefitting a wide variety of wildlife species. It will address forest health issues such as disease, changes in forest structure and species composition, and effects of wildfire or lack thereof. A forest management plan is needed to provide long-term management direction for the Department to address wildlife resource objectives relative to the management of these forest habitat types.

**6. There are CDARWMA parcels that are impacted by trespass livestock. (Issue identified by both the public and the Department)**

Discussion: Damage to wetland, riparian scrub-shrub, grassland, and forest habitats can result from unauthorized cattle grazing on WMA parcels. Efforts need to be made with neighboring landowners and livestock operators to cooperate on annual fence maintenance to prevent trespass grazing on WMA lands.

**7. Noxious weeds are a problem on CDARWMA. (Issue identified by both the public and the Department)**

Discussion: The WMA staff conducts an annual noxious weed control program incorporating Integrated Weed Management, combining multiple management tools to reduce noxious weeds levels. Practices include chemical, mechanical, and biological control of noxious weeds. The staff maintains a Professional Applicator License through Idaho State Department of Agriculture and participates with the local Coordinated Weed Management Area group to secure funding through grants, and share information and resources. The cooperative effort is important to successfully treat and monitor known stands of noxious weeds and monitor for and eradicate new invasive plant species. The Department will comply with Idaho State law pertaining to the control of noxious weeds and will avoid those management practices that create conditions favorable for the spread of noxious weeds.

## Wildlife Management

- 1. There is a significant mortality on migrating tundra swans using CDARWMA wetlands within the Coeur d'Alene River Basin. (Issue identified by both the public and the Department)**

Discussion: Tundra swan are highly susceptible to heavy metal contaminant ingestion due to their foraging habits. Swan mortality can result from lethal levels of lead ingested during their migratory stopover (primarily in late winter and early spring) in the Coeur d'Alene River Basin. Significant efforts to reduce swan and other waterfowl mortality are needed and will be directly correlated with the long-term cleanup efforts planned for the Coeur d'Alene River Basin. Wetland remediation throughout the basin will focus on those wetland complexes with the greatest opportunity for cleanup and sites favored by tundra swan for foraging habitat. Large areas of clean, secure wetlands for tundra swan foraging will be needed to address this issue. Acquisitions of existing clean wetlands, restoration of existing clean wetlands, or the creation of new wetland habitat for tundra swan foraging will be pursued.

- 2. There is significant flooding during a majority of the spring runoff times, which often occurs twice a spring, resulting in low ground nesting success for some waterfowl species. (Issue identified by the Department)**

Discussion: Nesting habitat can be negatively impacted during years with spring flooding resulting in low nesting success. Mallards and other upland nesting waterfowl require the cover of low growing shrub communities that are adjacent to wetland habitat. Efforts are needed to provide additional secure nesting habitat in areas closely associated with good wetland habitat and enhance existing nesting habitat to reduce nest loss. Future wetland restoration projects should include plans to increase the amount of nesting habitat available to waterfowl whenever possible.

- 3. There is a current downward trend in the amount of large diameter trees along the marshes and rivers, which will result in low natural nesting cavities available for cavity-nesting waterfowl species in the future. (Issue identified by the Department)**

Discussion: Large diameter trees and snags occurring in the floodplain forest, forested wetlands and lakes are being lost due to high bank erosion and mass wasting of saturated river bank soils. This loss is occurring on the lower Coeur d'Alene and lower St. Joe rivers due to the Post Falls Dam influence on summer water levels on Lake Coeur d'Alene. Floodplain forest habitat is also threatened with urban development and livestock grazing on the private land parcels. Recreational vehicles, camping, and other outdoor activities are also becoming more prevalent. The loss of large diameter trees and snags is negatively impacting important habitat for cavity-nesting waterfowl, mammals, and other bird species, in addition to nesting and perching habitat for bald eagle, osprey, and other raptors.

- 4. There is a lack of mesic grassland meadow habitat adjacent to existing wetland habitat on much of the WMA. This habitat's residual vegetation is important as nesting cover for mallards and other dabbling duck species. (Issue identified by the Department)**

Discussion: Mesic grassland meadow habitat for nesting mallards and other dabbling duck species is limited due to the water level influences the Post Falls Dam has on the entire lower Coeur d'Alene and St. Joe River floodplains. Opportunities to enhance mesic grassland meadow habitat adjacent to wetland habitat must be pursued. Examples of this would be to include this habitat type into the design plans of all future wetland restoration projects. Mesic grassland meadow habitat is a limiting factor in our efforts to produce healthy viable populations of mallard and other dabbling duck species on the CDARWMA.

Mesic grassland meadow habitat will be protected and managed for upland nesting waterfowl. Nesting period disturbances will be minimized to provide additional nesting security for waterfowl. Opportunities to increase acreage of mesic grassland habitat will be pursued to create a better balance between wetland and upland habitat on the WMA landscape.

- 5. There is a lack of information on species diversity, occurrence, and habitat use of Species of Greatest Conservation Need (SGCN) designated within the Idaho State Wildlife Action Plan (SWAP). (Issue identified by the Department)**

Discussion: To ensure all species are considered and not negatively affected during future management activities, there is a need to get more information on occurrence and abundance of SGCN species. Species assessment projects will need to be cooperatively completed by the Department's Diversity and CDARWMA staff. The development of a SGCN management plan and monitoring protocols will be important to help guide long-term planning on the WMA lands.

## Public Use Management

- 1. Access roads, campsites, and areas frequented by the public within the Coeur d'Alene River Basin are contaminated with heavy metals and create a public health risk. (Issue identified by both the public and the Department)**

Discussion: Existing Department-owned access sites will need to be upgraded and improved to reduce the exposure of WMA visitors to metal contaminants. Making our public access sites safe to the recreating public will be an important part of our future access management planning within the basin. Reducing the public health risk will require coordinated efforts among natural resource agencies and state and federal land management agencies sharing roads, trails and waterways within the lower basin.

- 2. Coeur d'Alene River WMA parcels and adjacent public lands are scattered throughout the Coeur d'Alene River Basin and it is difficult for the public to identify these properties for recreational access. (Issue identified by both the public and the Department)**

Discussion: The various user groups may not be aware of the recreational opportunities that are available to them on the WMA. The lack of knowledge may lead to underutilization by the public or misuse by not having acceptable user guidelines and management objectives for the WMA identified.

Improvements in informational signage and road maintenance will enhance sportsman and other wildlife-based recreation user access on the WMA. General road/ trail system and landownership signage will inform the public of Department management objectives for the CDARWMA.

- 3. Unauthorized Off-Road Vehicle (ORV) use has caused damage on some CDARWMA segments resulting in damage to habitat and disturbance to wildlife. (Issue identified by both the public and the Department)**

Discussion: Damage to fragile environments has occurred on some WMA segments. These include wetlands associated with the lakes, marshes, and river banks along the Coeur d'Alene River. Trampled vegetation and rutting of moist soil areas has resulted in damage to wildlife habitat and contributed to soil erosion. This is particularly concerning due to the metal contaminants issues facing the lower basin. The retention of vegetative cover is crucial to soil stabilization. Pioneering of new trails on steep erodible slopes has resulted in soil erosion, dispersal of noxious weed seed, and disturbance to wildlife.

Public use of the WMA properties for hunting, fishing, trapping, and wildlife viewing will be allowed and encouraged, provided these uses are compatible with Department regulations and WMA management objectives. Public use of motorized vehicles on WMA segments is prohibited. Monitoring of these sites will continue, with needed infrastructure such as gates, fences, and area restriction signage installed to prevent unauthorized ORV use on WMA lands.

- 4. There is limited parking and access sites to many of the CDARWMA parcels for the public. (Issue identified by the Department)**

Discussion: Development of additional parking areas and points of access to improve public use of the WMA properties will be necessary to reduce crowding or potential conflicts among various user groups. Identifying the areas of greatest need will be determined through public input related to overcrowding issues. It will be important to work in coordination with Kootenai County Eastside Road District, Kootenai County Waterways, and the Department's Access Program for project needs and funding opportunities.

**5. Public access needs to be available but consistent with CDARWMA goals. (Issue identified by the Department)**

Discussion: Access problems exist on the WMA due to a checkerboard of ownerships, lack of marked landownership boundaries, and minimal road maintenance. County road systems, which are available to all motorized vehicles year-round, provide public access to key access points to most WMA parcels. It is important for the Department to coordinate with the Kootenai County Eastside Road District to determine road maintenance needs for the recreating public. Interior upland portions of the WMA have secondary roads and trails that are available to public by non-motorized means. Much of the wetlands, lateral lakes, and Coeur d'Alene River are accessible by motorized and non-motorized watercraft.

**6. There is a need to encourage and provide additional youth and mobility-impaired hunting and other recreational opportunities. (Issue identified by the Department)**

Discussion: Opportunities for both hunting and non-consumptive use on the WMA will be advertised and made available to youth and mobility-impaired sportsmen and women. These opportunities exist through the Department's Hunter Education Program and Annual Mentored Youth Hunts to expand our outreach to youth and the mobility impaired. Sites for mobility-impaired hunters and other recreational users will need to be determined.

**7. There is a lack of access infrastructure and opportunities for non-consumptive users, like kayakers and birders, across the CDARWMA. (Issue identified by the Department)**

Discussion: As new funding sources are obtained, the Department will provide necessary infrastructure to increase opportunities for non-consumptive users that are compatible with the wildlife management goals for the WMA. Public input on the needs for additional access development will be determined through information gathered through public use survey input. Involvement with groups associated with these uses could help determine the level of need.

**8. There are continual problems with littering, vandalism, and non-compliance with the 10-day camping limit and other Department regulations at public access sites. (Issue identified by both the public and the Department)**

Discussion: Unlawful activities such as littering, vandalism, and extended use requires additional repair and maintenance costs for the Department, and limits our ability to provide these services to the law abiding recreating public. Health and public safety is compromised, and issues with adjacent landowners result when these activities occur on public lands. Damage to wildlife habitat has also occurred on several sites.

The Department will need to work with local law enforcement to assure public use is compatible with Department regulations and WMA management objectives. Monitoring of these access sites will continue, with needed infrastructure such as gates, fences, and additional signage installed to prevent further damage. Additional maintenance checks and enforcement patrols will be needed during peak use times to address these issues.

## Coeur d'Alene River WMA Management Programs

The Department is responsible for the preservation, protection, perpetuation, and management of all wildlife, fish, and plants in Idaho. Wildlife Management Areas allow the Department to directly affect habitat to maximize suitability for species in key areas. Management to restore and maintain important natural habitats, and create hyper-productive habitats to enhance carrying capacity for selected wildlife species remains a key strategy on CDARWMA. However, the most pervasive threats to WMA ecological integrity, such as noxious weeds, rural residential/commercial development, increased water diversion, and conflicting land uses on public lands, likely come from outside their boundaries. Therefore, WMA managers must recognize and create opportunities to participate in collaborative conservation and management programs with adjacent landowners, enabling broader influence to maintain the ecological functions that sustain WMA-dependent wildlife.

We propose that an effective way to enable a broader influence over the future of CDARWMA is through the use of Conservation Targets to guide management. Conservation Targets could be either a focal species or a habitat-type that benefits numerous species. According to Noss et al. (1999), focal species are those used by resource managers to determine the appropriate size and configuration of conservation areas. Conservation of species within landscapes used for other enterprises such as forestry, recreation, agriculture, grazing, and commercial development requires managers to determine the composition, quantity, and configuration of landscape elements required to meet the needs of the species present (Lambeck 1997). Since it is impractical to identify key landscape elements for all species dependent on CDARWMA, a carefully selected suite of Conservation Targets can help provide for the conservation needs of many species. Additionally, identifying landscape-scale Conservation Targets across ownership boundaries helps address wildlife-related issues on CDARWMA and creates a platform for conservation partnerships on the surrounding landscape.

The following six-step process was used to create the CDARWMA management program described in this plan. Each of these steps is described in detail on the ensuing pages.

- 1) Summary of Management Priorities
- 2) Focal Species Assessment
- 3) Selection of Conservation Targets
- 4) Viability Assessment of Selected Conservation Targets
- 5) Spatial Delineation of Conservation Target Landscapes
- 6) Creation of Management Program Table

### Summary of Management Priorities

Coeur d'Alene River WMA, like many other WMAs, was created for a specific purpose and therefore has inherent management priorities incorporated in the cooperating agency agreements

and land ownerships that formed the WMA. The CDARWMA was created by the procurement of many land parcels over time put together to protect and manage the wildlife resources to ensure sufficient quantities of high quality and secure habitat for waterfowl, shorebirds, and other wetland obligate species and for a wide variety of other game and nongame species. The CDARWMA is also managed to provide high quality wildlife-based recreational and educational opportunities that are compatible with the primary mission for the benefit of the public.

Additionally, legal mandates associated with the 2001 appropriation of federal funding for the State Wildlife Grants program also guide the Department's management priorities. The U.S. Congress appropriated federal funds through the State Wildlife Grants program to help meet the need for conservation of all fish and wildlife. Along with this new funding came the responsibility of each state to develop a SWAP. The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (IDFG 2005a). The SWAP does not distinguish between game and nongame species in its assessment of conservation need and is Idaho's seminal document identifying species at-risk. Therefore, at-risk species identified in the SWAP, both game and nongame, are a management priority for the Department.

In addition to the biological goals of preserving, protecting, and perpetuating all fish and wildlife in the state of Idaho, the Department also has a statewide goal of protecting and improving wildlife-based recreation and education. The Department's strategic plan, *The Compass*, outlines multiple strategies designed to maintain or improve both consumptive (e.g., hunting, trapping, fishing) and non-consumptive (e.g., wildlife watching) wildlife-based recreation opportunities across the state.

Taking the biological and funding resources of CDARWMA into consideration, in concert with these foundational priorities of CDARWMA and statewide Department priorities, the Department developed the following list of broad-scale WMA Management Priorities.

**Coeur d'Alene River WMA Management Priorities** (listed in order of priority):

1. Waterfowl (waterfowl production and staging)
2. Wetland Habitat
3. Restored Wetland Habitat (related to Lower Basin EPA cleanup efforts)
4. Floodplain Forest and Scrub-shrub Habitat
5. Conifer Forest Habitat
6. Wildlife-based Recreation and Education
7. Monitor and Evaluate Habitat Conditions and Wildlife Use
8. Control Noxious Weeds
9. Maintain Administrative Facilities
10. Information Gaps

## Focal Species Assessment

This section of the CDARWMA Plan is an assessment of various conservation priority fish and wildlife species on the WMA in order to identify focal species to guide management. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or at-risk species identified by the Idaho Department of Fish and Game in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005a) and key federal agencies.

Flagship species are popular, charismatic species that serve as symbols and catalysts to motivate conservation awareness, support, and action (Heywood 1995). Flagship species often represent a landscape or ecosystem (e.g. Coeur d'Alene River watershed), a threat (e.g. habitat loss or climate change), organization (e.g. state government or non-government organization), or geographic region (e.g. protected area, Department Region or state; Verissimo et al. 2009). Waterfowl are an example of a group that fit the criteria as both focal and flagship species. In addition, they are a culturally and economically important species in Idaho and represent a founding priority for establishment of the CDARWMA. Therefore, waterfowl is an important flagship species group considered in the WMA assessment.

A principal limitation of the flagship species concept is that by focusing limited management resources on culturally and economically important species, more vulnerable species may receive less or no attention (Simberloff 1998). To overcome this limitation, we are explicitly considering a wide variety of at-risk species (Groves 2003); yielding a more comprehensive assessment that includes culturally and economically important species (e.g. mule deer and elk) along with formally-designated conservation priorities (e.g. bald eagle and sage-grouse). Categories of at-risk vertebrate species considered in this assessment are: 1) species designated as Idaho SGCN; 2) species designated as Sensitive by Region 1 (Northern Rockies Region) of the USFS; and 3) species designated as Sensitive by the Idaho State Office of the BLM.

The Idaho SGCN list was developed as part of the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005a). The Comprehensive Wildlife Conservation Strategy document is now referred to as the SWAP. Idaho's plan serves to coordinate the efforts of all partners working toward conservation of wildlife and wildlife habitats across the state. Although the Idaho SWAP SGCN includes most of the special status species identified by land management agencies in Idaho, some species not listed as SGCN are considered priorities by other agencies.

The Coeur d'Alene River watershed, including CDARWMA is a mosaic of land ownerships including private lands; private corporate timber lands; USFS, BLM, and IDL lands; and lands managed by the Department. The USFS, BLM, and IDL are key partners in this landscape as their management actions directly influence ecological function on CDARWMA. To maximize coordination, communication, and partnership opportunity, we include both USFS and BLM sensitive species in our biodiversity assessment.

United States Forest Service Sensitive Species are animal species identified by the Intermountain Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or significant current or predicted

downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service Manual (FSM 2670.22) directs the development of sensitive species lists. This designation applies only on USFS-administered lands.

Bureau of Land Management Sensitive Species are designated by State Directors in cooperation with the State fish and wildlife agency (BLM manual 6840). The Idaho State BLM Office updated these designations in 2003. The sensitive species designation is normally used for species that occur on BLM public lands and for which BLM has the capability to significantly affect the conservation status of the species through management.

The Intermountain West Joint Venture (IWJV) also maintains a list of priority species. The IWJV has identified 40 priority species from which to base conservation planning.

Information on species status, occurrence, beneficial management/conservation actions, and threats were derived through consultation with Department staff, occurrence records in the Department's Idaho Fish and Wildlife Information System database, consultation with various BLM and USFS species lists, and species summaries provided in the Idaho SWAP.

Suitability of assessed species as a focal species were estimated by Panhandle Regional Habitat and Diversity staff based on descriptions in Groves (2003) and USFWS (2005). Potentially suitable focal species may include species with one or more of the following five characteristics:

- *Species with high conservation need*
- *Species or habitats that are representative of a broader group of species sharing the same or similar conservation needs*
- *Species with a high level of current program effort*
- *Species with potential to stimulate partnerships*
- *Species with a high likelihood that factors affecting status can realistically be addressed (USFWS 2005)*

Table 1. Status of flagship and special status species on Coeur d'Alene River WMA, including their potential suitability as a focal species for management.

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
<b>Waterfowl Game Species All</b>	Flagship	Breeding and migrating populations of a wide variety of species occur on the WMA and in the Coeur d'Alene and St. Joe River watersheds.	Primary threat is the wetland habitat degradation resulting from the heavy metal contamination from historic mining in the Silver Valley area of the South Fork of the Coeur d'Alene River. High lead levels have been recorded, and significant waterfowl losses have occurred due to lead related poisoning. Wetland habitat degradation, such as wetland draining and agricultural alterations, on both breeding and wintering grounds.	Primary actions should be to continue to actively participate in EPA contaminant remediation and restoration projects and activities on wetland habitat in the CDA Basin. Focus should also include restoring wetlands through cooperative joint ventures and water level management to create productive wetlands for breeding and migrating habitat.	<b>Potentially suitable as a focal species.</b> Waterfowl are a foundational priority for the creation of Coeur d'Alene River WMA and the Department has extensive data on their use of Coeur d'Alene and St. Joe River watersheds and the surrounding landscape. Waterfowl are a culturally and economically important wildlife species in northern Idaho and are a species with a good potential for developing conservation partnerships.
<b>Waterfowl - Dabbling Duck species -</b> Mallard, Northern Pintail <sup>1</sup> , Canada goose	Flagship, SGCN <sup>1</sup>	Migrating and breeding populations are present on the WMA and in the Coeur d'Alene and St. Joe River watersheds.	Degradation of habitat for wintering and breeding populations in Idaho; regional threats and decreasing long-term trend. Drainage of wetlands and agricultural alterations. Wintering populations are of primary concern, especially as ducks on winter wetlands compete against agricultural and urban users for limited water and space as human populations escalate (Austin and Miller 1995).	Primary actions should focus on restoring wetlands and integrating waterfowl management with farming practices. Management activities could follow recommendations made by Idaho Partners in Flight (IDPIF 2000) or the Idaho Steering Committee of the Intermountain West Joint Venture (IWJV 2005) for wetland restoration. Monitoring of wintering pintail population numbers as part of Idaho's coordinated, statewide all-bird monitoring program is recommended. Primary actions should continue to focus on restoring wetlands through cooperative joint ventures of federal, state, and provincial resource agencies, private organizations such as DU and state waterfowl associations, and private landowners.	<b>Potentially suitable as a focal species.</b> Dabbling duck species are a foundational priority for long-term wetland restoration in the Lower Coeur d'Alene River Basin. Dabbling duck species are a culturally and economically important wildlife species in northern Idaho and are a species with a good potential for developing conservation partnerships. Dabbling duck species are a good indicator of wetland system health. Continued use of the WMA would help guide priorities for wetland management.
<b>Waterfowl - Diving Duck species,</b> Hooded Merganser <sup>1</sup> , Lesser Scaup, Redhead Duck, Harlequin duck <sup>1,2,4</sup>	Flagship, SGCN <sup>1</sup> , USFS Sensitive <sup>2</sup> , BLM Sensitive <sup>4</sup>	Migrating and breeding populations are present on the CDARWMA and in the Coeur d'Alene and St. Joe River watersheds.	Range wide declining population trend. Loss or degradation of wetlands due to drainage and conversion to agriculture, dredging and filling, modification of water levels, levee construction, changes in salinity, siltation, and introduction of exotic plants are all potential issues of concern that may impact both breeding and wintering habitats for these species.	Primary actions should focus on setting forest management goals that include the establishment and conservation of cavity-producing trees (>100 years old, >30 cm [12 in] diameter at breast height) as well as the maintenance of riparian forested corridors and forests located within 1.6 km (1 mi) of suitable brood habitat for cavity-nesting waterfowl.	<b>Potentially suitable as a focal species.</b> Diving duck species are a foundational priority for long-term wetland restoration in the Lower Coeur d'Alene River Basin. Diving duck species are a culturally and economically important wildlife species in northern Idaho and are a species with a good potential for developing conservation partnerships. Diving duck species are a good indicator of wetland system health in northern Idaho. Continued use of the WMA would help guide priorities for wetland management.
Wood Duck	Flagship	Migrating and breeding populations are present on the CDARWMA and in the Coeur d'Alene and St. Joe River watersheds.	Loss of wetland habitats and adjacent large diameter woodlands for cavity nesting.	Primary actions should focus on setting forest management goals that include the establishment and conservation of cavity-producing trees (>100 years old, >30 cm [12 in] diameter at breast height) as well as the maintenance of riparian forested corridors	<b>Potentially suitable as a focal species.</b> Wood duck is a good indicator of productive, diverse and healthy riparian forest habitat.

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
				and forests located within 1.6 km (1 mi) of suitable brood habitat for cavity-nesting waterfowl.	
<b>Wetland Species</b> Muskrat	Flagship	Breeding and year round habitat occur on the WMA and within the Coeur d'Alene and St. Joe River watersheds.	Drainage and conversions of wetland habitats.	Target species to represent aquatic furbearers and herbaceous wetlands.	<b>Potentially suitable as a focal species.</b> Muskrat is a good indicator of productive, diverse and healthy marsh habitats.
<b>Wetland Species</b> Black Tern	BLM Sensitive, SGCN	Nesting and breeding populations are present on the CDARWMA and in the Coeur d'Alene watershed.	Disturbance is a potential threat in some locations, although black terns appear to be tolerant of nearby human activity as long as the colony is not entered (Gerson 1987).	Limiting access to colonies during the nesting season should be implemented. In addition, because black terns respond well to artificial wetlands, including restored wetlands, efforts should be made to restore or create suitable marsh habitat in historic nesting areas.	<b>Potentially suitable as a focal species.</b> Species is an indicator of wetland systems. Continued use of the WMA would help guide priorities for wetland management.
<b>Wetland Species</b> Western Grebe	SGCN	Western grebes are abundant on WMA sites, particularly in Cave Lake where one of only a few north Idaho nesting colonies occurs. Courtship displays are common in spring and early summer when up to 150 western grebes have been noted. Between 35 and 50 nests constructed from aquatic vegetation have been counted in Cave Lake in July. This established nesting colony has been observed and monitored over 20 years.	Two of the main issues for grebes nesting in Idaho are water quality and water level fluctuations. Nesting colonies also are sensitive to disturbance by humans approaching the colony on foot or by boat. Adults leave nests approached by humans, exposing eggs to increased risk of depredation by gulls, crows, or ravens. Increased boat traffic through foraging and brood-rearing habitat can elevate chick mortality.	Reducing drastic water level fluctuation during the breeding season at key sites is important, even though some water level fluctuation is necessary to provide suitable nesting habitat (40+ cm [16+ in] water depth) in emergent vegetation. Closing off important breeding areas to recreational activities during the nesting period would help alleviate disturbance pressures, including seasonal closures to protect nesting waterbirds. Minimize increased resort development along the shoreline and its associated increase in recreational boating. Consistent monitoring of existing breeding colonies should be implemented through the Idaho Bird Inventory and Survey program. Water quality monitoring is important.	<b>Potentially suitable as a focal species.</b> Species is an important indicator of wetland system health in northern Idaho. Continued use of the WMA would help guide priorities for wetland management.
<b>Wetland Species</b> Common Loon	BLM Sensitive, USFS Sensitive, SGCN	Common loons are often observed at WMA sites during spring and fall migrations. Smaller numbers of common loons occur on Lake Coeur d'Alene in the winter. No nesting has been observed on the WMA.	Degradation of habitat through shoreline development, campsites, human recreational use of nesting and nursery sites may force loons into marginal, less protected nesting sites. Chicks are more susceptible to predation when forced to separate from their parents by boats, jet skis, or any human intrusion; chicks are also killed by direct impact from outboard propellers and jet skis.	Install artificial nesting platforms in Lake Coeur d'Alene, Benewah, Round Lake, or in the chain lakes of the lower Coeur d'Alene River system. Monitor the loons during the breeding and non-breeding season. Increased study into the toxic sensitivity of loons is needed. Public education and cooperation could contribute to reversal of population decline and should be expanded in Idaho.	<b>Unsuitable as a focal species.</b> Trend data for Idaho is not available, likely because of low detection rates along BBS routes.
Tundra Swan	Flagship	Tundra swan occur in significant numbers throughout the Lower Coeur d'Alene River Basin landscape. In general, tundra swan utilize much of the WMA wetland habitats during their spring and fall migration period.	Mortality due to heavy metal contaminants due to past mining activity. Loss and degradation of wetland habitat. Possible recontamination issues on restored wetlands.	Support management that increases high quality wetland habitat on the landscape through existing wetland restoration as part of wetlands mitigation or acquisition of functioning wetlands; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat; provide technical assistance to private landowners to increase awareness of	<b>Potentially Suitable as a focal species.</b> Tundra swan are a foundational priority for long-term wetland restoration in the Lower Coeur d'Alene River Basin. Tundra swan are a culturally and economically important wildlife species in northern Idaho and are a species with a good potential for developing conservation partnerships.

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
				wetland values to wildlife and water quality, and increase available habitat on private lands; contribute to Department regional wetland monitoring efforts in the Lower Coeur d'Alene River Basin landscape.	
Bald Eagle	USFS Sensitive, BLM Sensitive, SGCN, ESA - Delisted	Bald eagle wintering and breeding habitat has been well documented on CDARWMA and vicinity. Annual survey determines nesting activity on and around the WMA. Eight known nest sites resulted in six successful nests in 2012. Breeding, nest activity and nest success are documented throughout the breeding season.	Greatest threat to birds in Idaho is disturbance during the nesting period from activities such as forestry, human recreation, and construction projects.	Disturbance around nest sites should be minimized or avoided altogether, especially during late-winter/early-spring when eagles are initiating territory establishment and breeding activities. This species has national significance and represents water bodies with sufficient prey availability and nest/perch structures.	<b>Potentially suitable as a focal species.</b> Species is an important indicator of riparian and wetland system health in northern Idaho. The recovery of riparian forest communities will continue to enhance this species need for breeding, nesting and foraging areas in the Coeur d'Alene and St. Joe River watersheds.
<b>Waterbird Guild</b> American white pelican, Red-necked grebe, California gull, Forster's tern, Caspian tern, Spotted sandpiper, Wilson's phalarope	SGCN , BLM Sensitive	Nomadic sub-adult groups of up to 400 pelicans forage on the WMA during July through September. Species listed have been documented to occur on or near the CDARWMA but overall use, abundance and distribution occurrence and use is poorly documented.	Two of the main issues for these water birds nesting in Idaho are water quality and water level fluctuations. Nesting colonies also are sensitive to disturbance by humans approaching the colony on foot or by boat. Adults leave nests approached by humans, exposing eggs to increased risk of depredation by gulls, crows, or ravens. Increased boat traffic through foraging and brood-rearing habitat can elevate chick mortality.	Limiting access to colonies during the nesting season should be implemented. In addition, wetland restoration efforts should be made to restore or create suitable marsh habitat in historic nesting areas.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. Species are an indicator of healthy wetland systems. Continued use of the WMA would help guide priorities for wetland management.
<b>Ungulates</b> White-tailed Deer, Moose	Flagship	CDARWMA provides important yearlong habitat for both white-tailed deer and moose. Though common, these ungulate species have regional significance as big game species.	Urban development; loss of habitat diversity from brush control operations, logging operations, noxious weed problems, loss of native plant species.	These ungulate species are regionally significant due to their ties to scrub-shrub and forest wetland habitat which is a major habitat type across the CDARWMA landscape.	<b>Potentially suitable as a focal species.</b> Both white-tailed deer and moose are representative target species to assess the quantity and quality of scrub-shrub and forest wetland habitat available on CDARWMA and the Lower Coeur d'Alene River riparian and wetland landscape.
Fisher	BLM Sensitive, USFS Sensitive, SGCN	Various small-scale survey efforts have been conducted in northern Idaho and western Montana in order to determine their presence and distribution. Fishers are present in the study area and may represent a stronghold for the northern Rockies population.	Habitat loss and degradation continue to threaten populations. Loss of forested habitat, particularly old growth forests, to fire and timber harvest results in the reduction and fragmentation of suitable habitat.	Protection and restoration of important habitat may be necessary. Forest management that maintains a balance of old growth and early seral-stage forests and protects riparian habitat may be required to sustain viable fisher populations.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. More study efforts, particularly random surveys, would be needed to address the lack of detections in certain areas, as well as to learn more about the population attributes and habitat selection of fishers in the region.
<b>Riparian Habitat Species</b> Black-capped chickadee	Flagship	Breeding and year round populations occur on the WMA and surrounding forest.	Removal of riparian vegetation and communities.	Target species represents species dependent on forested wetlands, including the presence of snags.	<b>Potentially suitable as a focal species.</b> The black-capped chickadee is a good target species for evaluating habitat enhancements within riparian and riverine habitats.
<b>Riparian Habitat Species - Native fish:</b> Westslope Cutthroat Trout <sup>4,1,3</sup> Bull Trout <sup>4,2</sup>	SGCN <sup>4</sup> , BLM Sensitive <sup>1,2</sup> , USFS Sensitive <sup>3</sup> , Bull Trout ESA - LT	Lake Coeur d'Alene and its tributaries provide important habitat for bull trout, a federally threatened species. The Coeur d'Alene River and St. Joe River systems and their tributary streams provide important spawning and staging area for bull trout. This system also provides important westslope cutthroat trout	Disturbed stream habitats have reduced the size and the quality of spawning areas for bull trout and westslope cutthroat trout in the drainage. Threats to bull trout include the combined effects of habitat degradation, fragmentation and alterations associated with dewatering, road construction and maintenance, mining, grazing; the blockage	Protection of riparian and wetland habitat. Disturbed stream habitats have reduced the size and the quality of spawning areas for bull trout and westslope cutthroat trout in the Coeur d'Alene and St. Joe River systems. State and federal agencies, Indian Tribes, water managers, and hydroelectric operators should continue working collaboratively to	<b>Unsuitable as a focal species.</b> Management actions on the CDARWMA will not directly impact fish species, though species will be taken into account.

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
		spawning, rearing and staging areas.	of migratory corridors by dams or other diversion structures; poor water quality, entrainment into diversion channels, and introduced non-native fish species in the watershed.	assess ways to improve and enhance habitat conditions for bull trout across its range. In addition, conservation efforts in Idaho should work with neighboring states on shared drainages.	
<b>Forest Habitat- N. Rocky Mountain Ponderosa Pine Woodland and Savanna dependent species:</b> Cassin's Finch <sup>2, 5</sup> Northern Pygmy Owl <sup>2, 5</sup> Black-backed Woodpecker <sup>2</sup> Long-eared Myotis <sup>2, 5</sup> Long-legged myotis <sup>2, 1, 5</sup>	USFS Sensitive <sup>1</sup> BLM Sensitive <sup>3, 5</sup> SGCN <sup>2</sup>	Species listed have been documented to occur on or near the CDARWMA but overall use, abundance and distribution occurrence and use is poorly documented.	The ponderosa pine old growth habitat type has seen a significant decline all across the western U.S.	Prescribed burns through forest understory to promote grass and tree savanna habitat and ponderosa pine regeneration. Forest management to include thinning of shade tolerant tree species to allow for an open forest understory.	<b>Potentially Suitable as a focal habitat.</b> This extensive list of N. Rocky Mountain Ponderosa Pine Woodland and Savanna habitat dependent species includes birds, mammals and a reptile. This habitat type represents a broad group of species sharing the same or similar conservation needs.
<b>Forested Habitat</b> Flammulated Owl	USFS Sensitive, BLM Sensitive, SGCN	Potential habitat occurs in the upland forest on the WMA and surrounding landscape. No known occurrence in the surrounding area.	Direct habitat loss from timber harvest practices; fire exclusion resulting in altered forest structure, stocking rates, and species composition; pesticides; and cutting of dead trees for firewood.	Monitoring programs for nocturnal birds are needed to refine population estimates and trend data for this species. Research on factors influencing clustered spatial distribution of breeding sites is warranted to investigate why large areas of presumably suitable habitat remain unoccupied.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area.
<b>Forest Habitat -N. Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest dependent species:</b> Cordilleran Flycatcher <sup>2, 5</sup> Hammond's Flycatcher <sup>2, 3</sup> Olive Sided Flycatcher <sup>2, 3</sup> Red-naped Sapsucker <sup>2, 5</sup>	USFS Sensitive <sup>1</sup> BLM Sensitive <sup>3, 5</sup> SGCN <sup>2</sup>	Species listed have been documented to occur on or near the CDARWMA but overall use, abundance and distribution occurrence and use is poorly documented.	Salvage logging, by reducing snag densities, diminishes preferred habitat. Clear-cutting practices also pose a great risk to these species.	In areas where fire suppression has reduced the heterogeneity of the forest, fire management techniques that promote a more historic pattern of disturbance would benefit these species. Several other management techniques to benefit the species include retaining forested habitat around riparian and wetland habitats and retaining snags and large trees post-fire. Select logging practices that retain medium to large trees with a relatively open canopy closure may also provide appropriate habitat.	<b>Potentially Suitable as a focal habitat.</b> This extensive list of N. Rocky Mountain Dry-Mesic Montane Mixed Forest habitat dependent species includes birds, mammals and a reptile. This habitat type represents a broad group of species sharing the same or similar conservation needs.
<b>Scrub-shrub Riparian Habitat</b> Yellow Warbler	Flagship	Nesting and breeding populations are present on the CDARWMA and throughout Lower Coeur d'Alene and St. Joe River watershed scrub-shrub habitats.	The yellow warbler is used as an evaluation species to assess the impacts and mitigation of the Albeni Falls hydroelectric power dam operation.	Monitoring populations of this species to use as an indicator of the health of the scrub-shrub cover type.	<b>Potentially suitable as a focal species.</b> The BPA selected the yellow warbler as a representative evaluation species to assess the quantity and quality of habitat available on BPA mitigation properties for this species.
<b>Scrub-shrub Riparian Habitat</b> Willow Flycatcher	BLM Sensitive USFS Sensitive	Documented occurrences during the breeding season in riparian habitats on CDARWMA.	Loss, degradation, and fragmentation of lowland riparian habitat due to water diversions, impoundments, and heavy livestock grazing.	Riparian habitat conservation strategies benefit this species. Maintain or restore shrub willow patches, preferably in multiple patches along a given riparian reach.	<b>Potentially suitable as a focal species.</b> Willow flycatcher is a riparian obligate and representative of riparian-dependent species sharing similar conservation needs. Limited

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
				Manage grazing such that it does not significantly fragment or reduce the density of willow patches. Maintain the presence of wet soils and nearby surface water. (Great Basin Bird Observatory 2010).	information on occurrence and distribution on CDARWMA would require survey work to determine the extent of breeding.
Northern Goshawk	USFS Sensitive, BLM Sensitive SGCN	No nesting pairs identified. CDARWMA likely provides foraging habitat for goshawks nesting on adjacent properties.	Goshawks are considered sensitive to large-scale changes to forested habitats associated with timber harvesting, livestock grazing, fire suppression and drought (Reynolds et al. 1992).	Maintain forested habitat on the margins of CDARWMA in a variety of vegetation structure stages to provide quality habitat for goshawk prey species and that enhance foraging opportunities for goshawk.	<b>Unsuitable as a focal species.</b> Do to the high public recreation use of the WMA it is unlikely that goshawks would breed or use the WMA consistently due to disturbance.
Great Gray Owl	USFS Sensitive, BLM Sensitive SGCN	CDARWMA likely provides foraging habitat for great grey owls during winter.	Habitat loss and fragmentation through timber harvest and development are the primary threats facing great gray owl populations. Other threats include fire suppression (leading to forested-stand density increases and conifer encroachment into meadows) (Williams 2012).	Retain beneficial habitat features at the landscape-level; particularly open areas for foraging adjacent to stands of mature or old-growth trees for nesting and roosting. When implementing forest management, limit timber harvest unit sizes; utilize variable harvest patch sizes.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Vaux's Swift	BLM Sensitive SGCN	Occurs on or near the CDARWMA but context of occurrence is poorly documented.	Loss of potential nest and roost sites are probably the primary threats. Hazard tree removal and fire-control programs destroy potential nest and roost trees and preclude their development.	Require the retention of residual old-growth trees and snags in managed forests. Evaluate habitat-use patterns and threats on their range.	<b>Unsuitable as a focal species.</b> Limited information on utilization of CDARWMA habitats limits the potential value of management feedback.
Common Garter Snake	USFS Sensitive, BLM Sensitive SGCN	Occurs on CDARWMA but context of occurrence is poorly documented.	Threats to common garter snakes are most likely related to loss and degradation of riparian and wetland habitats and hibernacula.	Management that protects, restores wet habitats (seeps, springs) and enhances prey species availability (i.e., earthworms, insects, amphibians, and small mammals) will benefit common garter snake. Identifying and protecting hibernacula will also benefit common garter snake.	<b>Unsuitable as a focal species.</b> Limited information on utilization of CDARWMA habitats limits the potential value of management feedback.
Yuma Myotis	SGCN	Occurs on CDARWMA but context of occurrence is poorly documented.	Individuals are long-lived and exhibit low reproductive potential. Roost sites tend to be colonial, and may be limited in some areas. High prey densities are often associated with wetlands and other highly production habitat. Accessible surface water also likely affects local distribution and abundance.	Minimize broad spectrum insect control activities that reduce prey base. Where possible, document natural roosting habitat such as cliffs. Create day and night roosting habitat through installation of bat boxes.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Western Toad	USFS Sensitive, BLM Sensitive SGSN	Occurs on CDARWMA but context of occurrence is poorly documented.	Chytrid fungus, <i>Batrachochytrium dendrobatidis</i> , is the primary threat to western toad populations throughout the Northern Rocky Mountains. This is compounded by habitat alteration around wetlands and human-facilitated expansion of natural and introduced predators. Habitat fragmentation isolates breeding populations, which increases the effects of these widespread threats and the risk associated with other threats, such as local changes in water quality, timber harvest, livestock	Managing disease, cataloging and monitoring population status, delineating important habitat, protecting delineated habitat, and identifying and protecting current breeding sites from habitat degradation (Keinath and McGee 2005).	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.

Species	Status Designation(s)	Occurrence Context in Coeur d'Alene River WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Coeur d'Alene River WMA
			grazing, fire, and toxic chemicals (Keinath and McGee 2005).		
Northern Leopard Frog	BLM Sensitive, SGCN	In northern Idaho, the species was found in the Kootenai, Pend Oreille, and Clark Fork rivers prior to 1955, but populations may no longer persist in this region.	Loss and degradation of wetland and riparian habitat is thought to be the most prevalent threat. Urban and agricultural development, pollution from agricultural runoff, mining and mineral processing, water diversion, and livestock wastes and trampling of habitat are the most pervasive stressors to wetland systems. Introduced competitors and predators, such as bullfrogs and sport fishes, can cause amphibian population declines and losses. Disease is also a concern, particularly the chytrid fungus, <i>Batrachochytrium dendrobatidis</i> .	A comprehensive understanding of population status throughout the state is needed. Investigation of the cause of declines may be warranted and would be a priority if regional or state-wide declines are demonstrated. Wetland protection and restoration of degraded sites may be needed.	<b>Unsuitable as a focal species.</b> Due to their extirpation from northern Idaho, this species would not provide feedback to managers.
Wood Frog	BLM Sensitive, SGCN	In Idaho, the species was found historically at three sites in Boundary and Bonner counties. No record has been reported since 1970, and these Idaho populations may have been extirpated.	Threats to any populations that may persist in the State are unknown.	Surveys are needed to determine if the species persists in Idaho. If a population is extant, a habitat protection and monitoring plan should be developed.	<b>Unsuitable as a focal species.</b> Due to their extirpation from northern Idaho, this species would not provide feedback to managers.
Columbia Spotted Frog	BLM Sensitive, SGCN	Occurs on CDARWMA but context of occurrence is poorly documented.	The loss of wetland and riparian habitats is a pervasive threat. Agricultural activities, such as water withdrawal, diversion, and livestock use, can contribute to habitat loss and degradation.	Actions to include stabilization and rehabilitation of habitat for extant breeding populations. In many areas, habitat improvements may be accomplished through grazing management. Emphasis is needed in stream and riparian restoration to increase available wetland habitat and restore connective corridors among occupied habitats.	<b>Unsuitable as a focal species.</b> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
<b>Gastropod species:</b> Humped coin, Pale jumping slug, Pygmy slug, sheathed slug, thinlip tightcoil, Kingston Oregonian, Smokey taidropper, striate mountainsnail, western pearlshell	SGCN	Current distribution and status on WMA or in watershed is not documented. The gastropod species listed here will be surveyed on and around CDARWMA during summer of 2013.	Timber harvest, wildfires, road construction.	Surveys will determine distribution of these species.	<b>Unsuitable as a focal species.</b> Limited information on distribution and abundance near CDARWMA.

## Selection of Conservation Targets

The biodiversity of CDARWMA is represented by numerous vertebrates, invertebrates, plants, and ecological communities. It is impractical to evaluate and plan for the conservation of all these elements. Therefore, Conservation Targets, a sub-set of species and communities, were selected to represent the biodiversity of CDARWMA for management and conservation; while still reflecting the management priorities of CDARWMA.

Conservation Targets for the CDARWMA Management Plan were selected from species ranked as potentially suitable focal species in Table 1. Plants are not included in this assessment due to practical considerations including lack of data and funding. Conservation Targets could also include habitats that effectively represent suites of the flagship and special status species evaluated in Table 1, regardless of their potential suitability as a focal species. A final consideration in the selection of Conservation Targets was the best professional judgment of the Panhandle Regional Habitat Manager and CDARWMA staff. Effective Conservation Targets cannot be selected based solely on species assessments. They must reflect regional threats, priorities, existing conservation partnerships, and the limitations of WMA personnel and funding.

**The Conservation Targets selected to guide management on CDARWMA** (listed in order of priority) are:

1. Waterfowl (waterfowl production and staging)
2. Wetland Habitat
3. Restored Wetland Habitat (related to Lower Basin EPA cleanup efforts)
4. Floodplain Forest and Scrub-shrub Habitats
5. Conifer Forest Habitat - Northern Rocky Mountain Mesic Montane Mixed Conifer Forest, Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest, and Northern Rocky Mountain Ponderosa Pine Woodland and Savanna

### **Waterfowl (waterfowl production and staging)**

The CDARWMA is an important area for waterfowl. It was created to protect and enhance waterfowl habitat, increase waterfowl production, and provide a secure staging area for migrating waterfowl. An important aspect of the WMA is providing public access for waterfowl hunting and wildlife viewing opportunities. Also, CDARWMA and surrounding wetland habitats represent a key landscape for waterfowl conservation in the Panhandle Region of Idaho. The CDARWMA provides crucial wetland habitat for waterfowl that seasonally utilize the various wetland habitat types in northern Idaho. In addition, their broad habitat requirements and distribution make them good surrogates for a wide variety of SGCN and other wildlife.

Our vision for waterfowl is providing secure, clean wetland habitats to ensure healthy populations of waterfowl, where CDARWMA serves as the nucleus for waterfowl on a much larger landscape. Understanding the role of CDARWMA in providing for this vision is essential. However, since analysis indicates that these waterfowl populations depend upon far more habitat

than just CDARWMA, identifying the landscape that serves the Coeur d'Alene river populations is also essential. Monitoring this landscape and providing technical assistance to landowners—in this case, USFS, BLM, IDL, and private landowners—is of direct interest to maintaining the value of the WMA for these species.

### **Wetland Habitat**

Wetland habitat was chosen as a focal habitat for management on the CDARWMA due to the number of focal species that rely on functioning wetland habitat. Wetland habitat management has been the historic and current management priority on CDARWMA. The Department manages 7,538 acres of wetlands and associated upland habitat, and is a major landowner of much of the shallow marshes, wetlands, and lakes in the Lower Basin. Over 80% of the WMA consists of wetland habitat and is the predominant habitat occurring on the Lower Coeur d'Alene and St. Joe River landscapes. Wetland habitat is likely the most effective and practical focal habitat for gaining a better understanding of the effective planning landscape surrounding the WMA. The CDARWMA provides crucial wetland habitat for waterfowl and a wide variety of SGCN and other wildlife that seasonally utilize the various wetland habitat types in the Panhandle Region of Idaho.

Our vision for wetland areas is characterized by clean, properly functioning wetland habitats that provide linkage and habitat continuity throughout the Lower Coeur d'Alene and St. Joe River watersheds. Remediation and restoration of contaminated wetlands is the most important goal in improving functional wetland habitat, as it has the potential to directly benefit many species including waterfowl, shorebirds, wetland obligate mammals, neo-tropic songbirds, tundra swan, and other species not identified in the focal species assessment table.

Monitoring this landscape and providing technical assistance to landowners—in this case, USFS, BLM, IDL, and private landowners—is of direct interest to maintaining the value of the WMA wetland habitat.

### **Restored Wetland Habitat (related to Lower Basin EPA cleanup efforts)**

Contaminated wetlands are a long-standing issue needing attention in the Lower Basin. The largest issue facing the WMA is wetland habitat degradation and wildlife losses associated with metal contaminants. Cleanup efforts will be an expensive task, requiring a landscape-scale approach working with a diverse group of partners for many years. Restored wetland habitat was chosen as a focal habitat for management on the CDARWMA due to the number of species that rely on functioning wetland habitat. Restoring wetland habitat contaminated by heavy metals has been the historic and current management priority on CDARWMA.

Most of the wetland habitat on the WMA, the Lower Coeur d'Alene River, and Lake Coeur d'Alene landscape is contaminated with heavy metals. There is a large amount of information available on levels of contamination of all wetland complexes, along with extensive monitoring of wildlife use in the WMA wetlands and surrounding landscape.

Wetlands are productive habitats that are used extensively by a wide variety of wildlife species for much of their life stages. The restoration of wetland habitat is likely the most effective and practical focal habitat for gaining a better understanding of the future planning needs to address issues related to the Lower Basin EPA cleanup efforts. Coeur d'Alene River WMA and the surrounding landscape provides crucial wetland habitat for waterfowl, a wide variety of SGCN, and other wildlife that seasonally utilize the various wetland habitat types in the Panhandle Region of Idaho.

Our vision for restored wetland habitat is providing clean, healthy, and properly functioning wetlands that provide linkage and habitat continuity throughout the Lower Coeur d'Alene River watershed. We believe the Department, being the agency responsible for the management of all wildlife resources of the state, should be a major cooperators to see this large restoration effort accomplished over the Lower Coeur d'Alene River landscape.

Remediated and restored wetlands will result in a return to highly functional wetland habitat and must be viewed as a landscape level endeavor with many partnerships involved. These restored wetlands will directly benefit many species including waterfowl, shorebirds, wetland obligate mammals, neo-tropic songbirds, tundra swan and other species not identified in the focal species assessment table. Thus, selecting restored wetland areas as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

Monitoring this landscape and providing technical assistance to landowners—in this case, USFS, BLM, IDL, and private landowners in contaminant remediation and restoration projects—is of direct interest to maintaining the value of the WMA's restored wetland habitat.

### **Floodplain Forest and Scrub-shrub Habitat**

Floodplain Forest and Scrub-shrub habitats were chosen as a focal habitat for management on the CDARWMA due to the number of focal species that rely on functioning riparian habitats.

Our vision for Floodplain Forest and Scrub-shrub habitats is healthy and functioning habitats that provide linkage and habitat continuity throughout the Lower Coeur d'Alene River watershed. Improving or maintaining highly functional floodplain and riparian habitat has the potential to directly benefit many species including bald eagle, osprey, cavity-nesting waterfowl, neo-tropic songbirds, moose and white-tailed deer, furbearing animals, riparian obligate species, and other species not identified in the focal species assessment table. Thus, selecting Floodplain Forest and Scrub-shrub areas as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

### **Conifer Forest Habitat – Northern Rocky Mountain Mesic Montane Mixed Conifer Forest, Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest, and Northern Rocky Mountain Ponderosa Pine Woodland and Savanna**

Conifer Forests was chosen as a focal habitat for management on the Coeur d'Alene River WMA due to the number of focal species that rely on them.

Our vision for the Northern Rocky Mountain Mesic Montane Mixed Conifer Forest and Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest ecological systems is to support healthy and functioning habitats that provide linkage and habitat continuity throughout the Lower Coeur d'Alene River watershed. By improving or maintaining these ecological systems in a highly functional condition, we have the potential to directly benefit many species, including flammulated and great grey owl, goshawk, neo-tropic songbirds, moose and white-tailed deer, furbearing animals, and other species not identified in the focal species assessment table. Thus, selecting these ecological systems as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

Our vision for the Northern Rocky Mountain Ponderosa Pine Woodland and Savanna ecological system is to support healthy and functioning habitats that provide linkage and habitat continuity throughout the Lower Coeur d'Alene River watershed. By improving or maintaining highly functional Northern Rocky Mountain Ponderosa Pine Woodland and Savanna, we have the potential to directly benefit many species, including Cassin's finch, northern pygmy owl, black-backed woodpecker, Lewis's woodpecker, long-eared myotis, long-legged myotis, elk, mule deer, and other species not identified in the focal species assessment table. Thus, selecting Northern Rocky Mountain Ponderosa Pine Woodland and Savanna as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

## Coverage Assessment of Selected Conservation Targets

We define an effective Conservation Target as one providing meaningful conservation benefits for multiple species that share similar habitat requirements or life history traits. They are useful for directing limited management resources and maximizing conservation effort. One measure of effectiveness is to assess the number of species that a Conservation Target benefits (or covers) within the management landscape.

Regional Habitat and Diversity staff worked together to complete the coverage assessment table (Table 2). We evaluated each of the Conservation Targets to determine which species from Table 1 would benefit from management activities focused on that target. Evaluations are based on knowledge of species habitat requirements, occurrence within the management landscape, and the scope of current and planned management actions. The assessment considered only those habitat features or needs relevant to the species as it occurs on the management landscape. Our results indicate that the selected Conservation Targets on CDARWMA provide substantial, but variable habitat benefits for an array of assessed species. We found that management efforts directed towards restoring wetland habitat will provide conservation benefits for 23 of the 56 assessed species.

We also evaluated which species or guilds would receive little or no tangible benefit from management actions for specific Conservation Targets; these are designated "conservation needs." We identified conservation needs for several species or guilds and determined that further data will be useful to inform the next WMA planning process. A prudent management strategy is to consider a landscape where these species may be prioritized for management in the

future. Broad strategies for addressing these management needs are identified in the following Management Program Table (pages 48-55), but typically include collection of additional baseline data.

Table 2. Analysis of Conservation Target coverage and identification of conservation needs.

Species Assessed in Table 1	Conservation Targets <sup>a</sup>					Conservation Need
	Waterfowl	Wetland Habitat	Restored Wetland Habitat	Floodplain Forest and Scrub-shrub Habitat	Conifer Forest Habitats	
Mallard	X	X	X	P		
Northern pintail	X	X	X			
Canada goose	X	X	X	P		
Hooded merganser	X	X	X	X		
Lesser scaup	X	X	X			
Redhead duck	X	X	X			
Harlequin duck				X		
Wood duck	X	X	X	X	P	
Muskrat		X	X			
Black tern		X	X			
Common loon		X	X			
Tundra swan		X	X			
Bald eagle		X	X	X	P	
American white pelican		X	X			
Red-necked grebe		X	X			
California gull		X	X			
Forster's tern		X	X			
Caspian tern		X	X			
Spotted sandpiper		X	X	P		
Wilson's phalarope		X	X			
White-tailed deer				X	X	
Moose		X	X	X	X	
Fisher					X	
Black-capped chickadee					X	
Westslope cutthroat trout						Yes
Bull trout						Yes
Cassin's finch					X	
Northern pygmy owl					X	
Black-backed woodpecker					X	
Long-eared myotis					X	
Long-legged myotis					X	

Species Assessed in Table 1	Conservation Targets <sup>a</sup>					Conservation Need
	Waterfowl	Wetland Habitat	Restored Wetland Habitat	Floodplain Forest and Scrub-shrub Habitat	Conifer Forest Habitats	
Flammulated owl					X	
Cordilleran flycatcher				P	X	
Hammond's flycatcher				P	X	
Olive-sided flycatcher				P	X	
Red-naped sapsucker					X	
Yellow warbler				X	P	
Willow flycatcher				X		
Northern goshawk					X	
Great grey owl				X	X	
Vaux's swift						Yes
Common garter snake			P			Yes
Yuma myotis						Yes
Western toad			P			Yes
Northern leopard frog						Yes
Wood frog						Yes
Columbia spotted frog			P			Yes
Humped coin						Yes
Pale jumping slug						Yes
Pygmy slug						Yes
Sheathed slug						Yes
Thinlip tightcoil						Yes
Smokey taildropper						Yes
Kingston Oregonian						Yes
Striate mountainsnail						Yes
Western pearlshell						Yes

<sup>a</sup> Entries marked with "X" indicate that the majority or all habitat needs for an assessed species within the management landscape are being met by management actions benefitting the Conservation Target. Entries marked with "P" indicate only a portion of the species habitat needs are being met by management actions for the Conservation Target. Conservation needs exist where target-specific management actions provide little or no tangible habitat benefit for an assessed species. Blank cells under conservation targets may indicate a conservation need or where dissimilar habitat needs preclude conservation benefits.

## Spatial Delineation of Selected Focal Species/Habitat Landscapes

This section describes the methods used to define spatial landscapes for each Conservation Target. We used the best data available (i.e., wildlife surveys, the scientific literature, species ecology data from the scientific literature, and local knowledge) to construct Conservation Target-specific landscapes. These landscapes are utilized in the Management Program Table (pages 48-55) to identify Conservation Target-specific Management Directions, Performance Targets, and Strategies for both CDARWMA and the landscape.

Each of the focal species or habitats selected as Conservation Targets for CDARWMA also utilizes habitats beyond the WMA to meet their annual needs. For example, species that will benefit from having wetland habitat as a conservation target also use wetland habitats outside the WMA. Therefore, it is crucial that we actively participate in habitat conservation efforts within the landscape, beyond the borders of the WMA, if we are to maintain the integrity of the WMA itself.

The following describes the steps we took to delineate the landscape of interest for each of our focal species/habitats which include Waterfowl Habitat, Wetland Habitat, Restored Wetland Habitat, Floodplain Forest and Scrub-shrub Habitat, and Conifer Forest Habitats. All spatial analyses were conducted with ArcGIS 10 unless otherwise specified. Resulting hydrography within the Lower Coeur d'Alene and St. Joe River Hydrologic Unit Code (HUC: an acronym used to identify all the drainage basins in the United States) is our habitat landscape that informs management and conservation recommendations in the Management Table.

To delineate the Lower Coeur d'Alene and Lower St. Joe River watersheds, ArcGIS 10 was used to select the area below the 2,625 feet (800 meter) elevation along the Coeur d'Alene and St. Joe rivers, within five miles of the WMA boundary in Kootenai and Benewah counties of Idaho. The 2,625' elevation was used because it included all focal habitats that are managed for on the CDARWMA and mostly covered the WMA's area of influence within the two lower river basin landscapes.

All focal habitats selected for the CDARWMA are also associated with the Lower Coeur d'Alene and Lower St. Joe River watersheds. When combined, they provide a diversity of habitat features including emergent and submergent wetland vegetation, open water, scrub-shrub and riparian forest, two types of conifer forest cover, contaminated wetlands, and several recently remediated and restored wetlands. Many of the species that occur on the WMA also utilize these habitat types throughout the Lower Coeur d'Alene and Lower St. Joe River watersheds. Different wildlife species use each habitat type for a specific purpose and looking at the larger landscape as a whole can help support species dependent on these types of habitats. Therefore, the larger landscape considered in management of the WMA and the focal habitats, is the Lower Coeur d'Alene and St. Joe River floodplain in Kootenai and Benewah counties of Idaho (Figure 4).

### **Waterfowl Landscape**

The waterfowl landscape was selected due to the importance of the WMA in leading local and regional waterfowl management activities and direction. Our impact on local waterfowl production is evident. Providing secure nesting habitat for Canada geese and wood duck for the past 35 years has built viable populations of these species.

The WMA is an important area for waterfowl. It was created to protect and enhance waterfowl habitat, increase waterfowl production, and provide a secure staging area for migrating waterfowl. Also, CDARWMA and surrounding wetland habitats represent a key landscape for waterfowl conservation in the Panhandle Region of Idaho.

### **Wetland Habitat Landscape**

Wetland habitat on the WMA is a major contributor to wetlands occurring throughout the Lower Coeur d'Alene and St. Joe River floodplain. By increasing total wetland acreage through acquisition, improving wetland health and function through mitigation and restoration, and improving wetland management through cooperative efforts, we will improve critical wetland habitat for the wetland-dependent wildlife and plant species throughout the Lower Coeur d'Alene and St. Joe River floodplain.

### **Restored Wetland Habitat Landscape**

The restored wetland habitat landscape was selected due to the significant landownership held by the Department throughout the lower Coeur d'Alene River Basin. It is estimated that 95% of the wetland habitats are contaminated. The Department owns almost half of the contaminated floodplain area, and has a long-term goal of seeking wetland remediation and restoration of contaminated wetlands on the WMA. The Department will play an integral role in the restoration of wetland habitats in the lower Coeur d'Alene River landscape within the future Coeur d'Alene River Basin remediation restoration efforts.

### **Floodplain Forest and Scrub-shrub Landscape**

The floodplain forest and scrub-shrub landscape of the Lower Coeur d'Alene River Basin was selected in part due to the ubiquity of land ownership and land management by the Department over the last 50 years. Throughout the course of acquisitions, properties were identified based on their importance to wetland protection and management throughout the lower basin. The CDARWMA conservation and management efforts will continue to influence all wetland properties and habitats throughout the lower river basins.

### **Conifer Forest Landscape**

The conifer forest landscape is an important upland habitat associated with the lower Coeur d'Alene and lower St. Joe River watersheds. Most WMA wetland parcels have upland habitats adjacent to them that are an important feature for many wetland and upland habitat-dependent

species. Several larger segments of the WMA consist of conifer forest habitat with opportunities for active management to enhance those wildlife species reliant upon them.

Conifer forest habitat types are found on the CDARWMA and on surrounding parcels, and were well represented using the ArcGIS 10 below 2,625 feet (800 meter) elevation description.

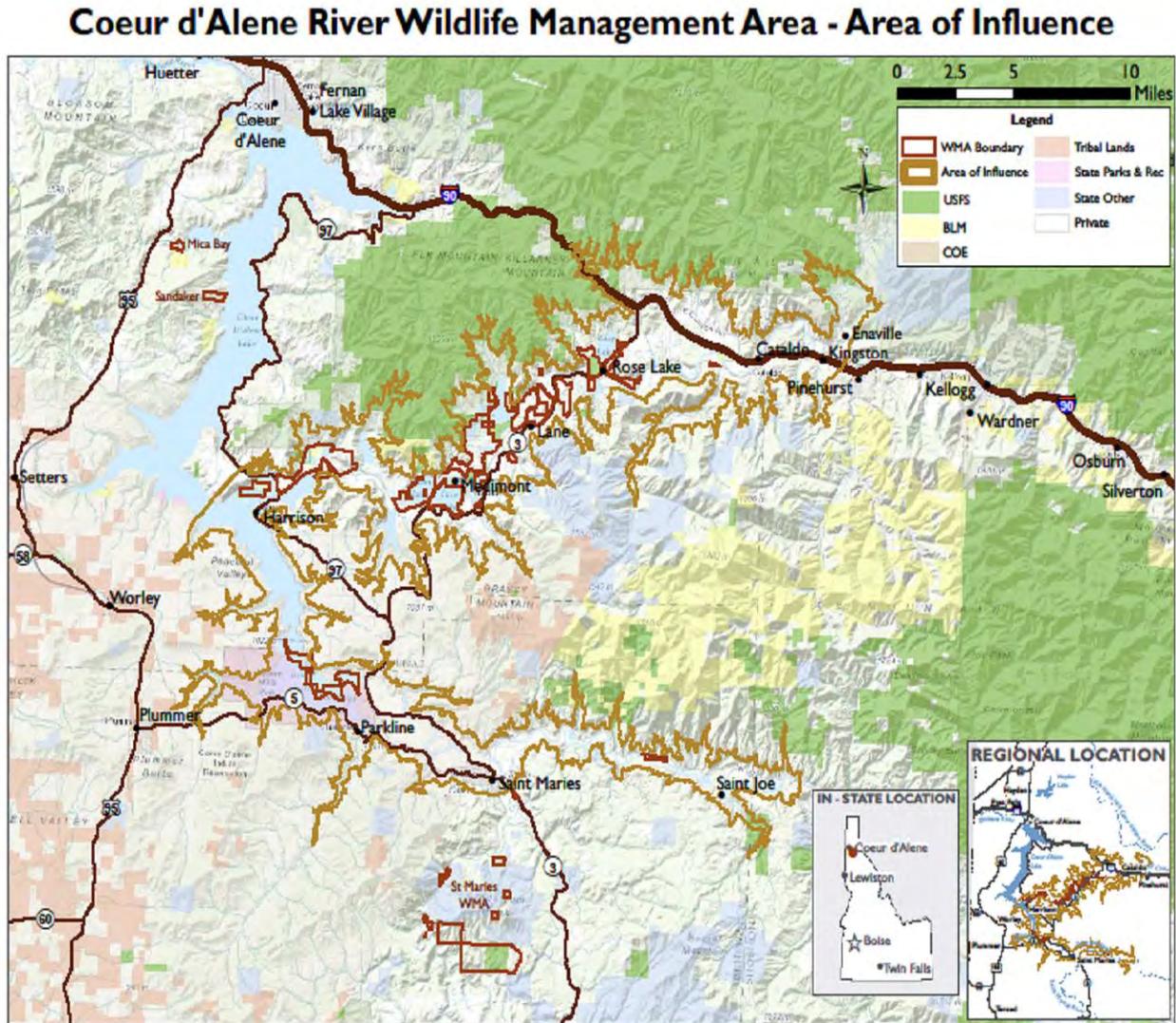


Figure 4. The Coeur d'Alene and St. Joe floodplain and adjacent upland forests below 2,625 feet (800 meter) elevation as the landscape for focal habitat consideration for Coeur d'Alene River WMA.

## Coeur d’Alene River WMA Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics CDARWMA staff will use to manage for the Conservation Targets selected (page 39) to represent each CDARWMA Priority (page 30) at both the CDARWMA and Conservation Target-specific landscape scale. The Compass Objective column links the Management Directions in this table to the objectives of the Department’s strategic plan, “*The Compass*” (Appendix I).

WMA Priority: Waterfowl (Waterfowl Production and Staging)					
Conservation Target: Waterfowl					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Manage wetland and upland habitats for waterfowl production	Maintain ≥ 60 nesting pair of Canada geese annually	Maintain 120 Canada goose nest structures	# of occupied Canada goose nest structures; number of Canada goose nesting pairs	A, B, C, E, F, H
		Maintain ≥ 90 nesting pair of wood duck annually	Protect snags and large diameter trees within the floodplain forest habitat for cavity nest sites	# of occupied wood duck nesting boxes; # of wood duck nesting pairs	
			Maintain 180 nesting boxes for cavity-nesting ducks, primarily wood ducks		
		Annually, maintain or restore secure nesting habitat in good to excellent ecological condition (as measured by floristic quality objectives, such as increase native species richness by 10%, decrease noxious/invasive weed cover by 25%, decrease % of flora comprised of non-native species by 10%) on > 200 acres for mallard and other nesting waterfowl species	Protect the riparian scrub/shrub stands preferred by upland nesting waterfowl, primarily rose spirea; enhance habitat with shrub plantings where necessary	# of acres of nesting habitat maintained and/or restored; floristic quality metrics	
			Provide mallard nesting habitat by creating, developing, and protecting grassland/mesic meadow habitat adjacent to wetland habitats		
			Use plantings, burning, mechanical disturbance, and herbicide control of noxious weeds to increase diversity, floristic quality, and structure of upland grassland and mesic meadows		
	Protect nesting habitat by reducing nesting disturbance factors such as unauthorized livestock grazing and human activity during peak nesting periods				
	Reduce swan mortality associated with spring migration use of transitional habitat	During next 10 years, reduce swan mortality during spring migration use of transitional habitat by 25%	Evaluate wetland sites to restore and clean for tundra swan foraging use as part of the long-term wetland restoration efforts in the Lower Basin	# of dead swans observed	
Encourage swan use away from heavily contaminated wetland sites using a variety of new deterrent methods, including water level management, and wetland shrub plantings					

WMA Priority: Wetland Habitat					
Conservation Target: Wetland Habitat					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Provide clean, secure, high quality wetland habitat for migrating and seasonal waterfowl, waterbirds, shorebirds, amphibians, and other wildlife, while maximizing potential water quality and ecosystem support functions	By 2023, assess condition, potential function, and map habitat, water management potential, and contamination of all wetland management units; utilize results to develop and implement a restoration plan	Utilize Wildlife Bureau staff and volunteers (e.g., Idaho Master Naturalists if possible) to assess condition and potential function of wetland management units using Wetland Ecosystem Services Protocol for the United States	Creation of spatial database of assessment results, vegetation, marsh successional stage, habitat map, water management potential, and contamination	A, B, C, H, J, L
			Create GIS map of the current vegetation and condition of all wetland habitat on CDARWMA, including marsh successional stage		
			Utilize waterfowl observations, water level and flood event information, wetland contaminant survey results and waterfowl mortality data to determine locations of wetlands in greatest need of restoration		
			Prioritize wetland restoration efforts according to their historic waterfowl usage, their overall contaminant levels, and areas least likely to be re-contaminated		
			Identify wetland sites within CDARWMA with greatest opportunity to remediate or restore to clean foraging areas for migratory waterfowl		
		By 2023, initiate and/or complete wetland enhancement and/or restoration on at least three high priority wetland complexes comprising at least 500 acres at CDARWMA; utilize results of assessment to guide restoration planning	Secure other funding (e.g., NAWCA Grants, HIP Projects, Candidate Species Grants, Idaho Fish and Wildlife Foundation Grants, etc.) to implement collaborative wetland enhancement and restoration projects	Acres of enhancement or restoration	
			Initiate the Bare Marsh Wetland Restoration project on the CDARWMA. Primary purpose of the project is the replacement of the water level control structure for improving aquatic vegetation condition and allowing for moist soils management on Bare Marsh		
		Annually, remove all trespass cattle from CDARWMA (within the procedures and timeframe outlined in the Idaho State Trespass of Animals [Title 25, Chapter 22] or Estrays [Title 25, Chapter 23] Laws, whichever is applicable); prevent cattle access to WMA	Work with neighboring landowners to quickly address fencing, gates and cattle guard problems and to quickly remove trespass cattle	Lawful Removal of Trespass Cattle; number of cattle observed	
			When direct communication with the livestock owner isn't possible or does not result in a timely removal of the livestock, work with the Kootenai County Brand Inspector and/or Sheriff to ensure trespass cattle are removed as quickly as Idaho Law allows		
			Construct a property line fence along common boundary in the Swan Lake Marsh area to control livestock from trespassing onto CDARWMA. Drift fence options at several key locations upriver of this site may alleviate other livestock trespass source locations, while also addressing unauthorized ORV use		
Monitor newly constructed Thompson Lake parcel fence. Work with adjacent landowner on fencing options to keep cattle from entering adjacent property and possibly entering CDARWMA from another location					
When necessary, follow the legal process outlined in the Estrays Law for detaining trespass livestock and recouping expenditures for feed and care of livestock					
Wetland Landscape	Expand CDARWMA to provide a sufficient quantity of clean, secure high quality wetland habitat to meet the needs of migratory waterfowl and shorebirds	During next 10 years, acquire (or use conservation easements when acquisition is not possible) at least 1,000 acres around, and within the boundaries of, CDARWMA beginning with custodial lands (held by the CDA Basin trust) as wetland mitigation for wetland losses in the Lower Coeur d'Alene River Basin. Meet the needs of migratory waterfowl and shorebirds by creating a buffer zone around core wetland areas and improve overall management of CDARWMA by creating larger blocks of wetland habitat that can be more effectively remediated or restored with future cleanup efforts	Create a GIS layer that identifies the boundary of a "Greater CDARWMA Area" that would meet the wetland habitat needs of migratory waterfowl and shorebirds utilizing all available biological data and professional knowledge related to the restoration efforts underway in the Lower Coeur d'Alene River Basin	Acres Conserved; GIS spatial databases created and utilized for conservation plan	A, B, C, D, H, N
			Create a database of all non-Department lands within this "Greater CDARWMA Area" (including information on current ownership, current vegetation, and perceived/potential habitat value), create a ranking criteria to prioritize properties, and rank all properties within the "Area"		
			The Department will work with all partnerships relevant to the restoration of the CDA Basin, including our direct involvement with the Hecla Settlement Restoration Partnership. Our future conservation work within the CDA Basin will be guided by the "Partnership" and through the CDA Basin Natural Resource Restoration Plan and EA currently being developed by the NRRT		

<b>WMA Priority: Wetland Habitat</b>					
<i>Conservation Target: Wetland Habitat</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
Wetland Landscape	Provide clean, secure, high quality wetland habitat for migrating and seasonal waterfowl, waterbirds, shorebirds, amphibians, and other wildlife, while maximizing potential water quality and ecosystem support functions	Restore or enhance at least 100 acres of wetland habitat in at least one high priority wetland complex (identified from landscape assessments) in 10 years on other public lands in the Lower Coeur d’Alene River Basin	Provide data to the USFS and BLM that identifies important waterfowl habitat	Acres restored or enhanced	A, B, C, D, F, N
			Assist the USFS and BLM in developing, funding, and implementing projects to improve wetland habitat		
			Assist the USFS and BLM in developing, funding, and implementing projects to improve wetland habitat on public lands		
		Annually, provide technical assistance on USFS and BLM wetland management planning in the Lower Coeur d’Alene River Basin	Assist USFS and BLM in identifying wetland habitat in need of restoration on these important public land wetlands; utilize the Department’s existing Landscape Wetland Assessment GIS tool	Technical assistance provided	
			If available, provide succinct and quantifiable wildlife use data to the USFS and BLM for their use in wetland habitat planning projects		
		Annually, increase communication and cooperation between agency and private land managers; respond to 100% of the technical assistance requests	Assist public land managers in developing wetland management plans consistent with CDARWMA plans, as the wetland parcels held by USFS and BLM have historically been cooperatively managed under CDARWMA objectives and goals for waterfowl management	# of Contacts and technical assistance provided	
			Work with neighboring private landowners and private timber land managers. Provide technical assistance and where applicable, cost-share on projects that focuses on improving wetland habitat quality within the landscape		
		Restore and/or enhance 50 acres of wetland habitat on private lands in 10 years; respond to 100% of the technical assistance requests	Work with the Department’s Wildlife Bureau staff to ground truth and refine existing spatial data products related to wetland condition and function in the landscape (e.g., Landscape Wetland Assessment GIS tool)	# of acres restored or enhanced	
Utilize landowner assistance programs (e.g., HIP, Partners For Wildlife) to help private landowners provide or improve wetland habitat					
Conduct planting projects to re-establish wetland vegetation in degraded wetland habitats					
			Work with private land owners and the local Cooperative Weed Management Area program to treat noxious weeds in wetland habitats		
<b>WMA Priority: Remediation of Contaminated Wetland Habitat</b>					
<i>Conservation Target: Lower Coeur d’Alene River Basin Habitat Remediation and Restoration</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	In cooperation with EPA and Natural Resources Trustees, remediate and restore CDARWMA metals contaminated wetlands	Remediate and restore 1,000 acres of contaminated wetlands in 10 years	Utilize waterfowl observations, water level and flood event information, wetland contaminant survey results and waterfowl mortality data to identify the locations of wetlands with the greatest need and opportunity for remediation and restoration	Projects completed; # of acres restored or improved	A, B, C, E, F, G, H, J, K, N
			Submit remediation and restoration project proposals to EPA and the Natural Resources Trustees for funding		
		Identify levels of contaminants on all WMA wetlands	Create GIS layer of the current vegetation and condition of all wetland habitat on CDARWMA		

<b>WMA Priority: Remediation of Contaminated Wetland Habitat</b>					
<i>Conservation Target: Lower Coeur d’Alene River Basin Habitat Remediation and Restoration</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
Restored Wetland Habitat Landscape	In cooperation with EPA and Natural Resources Trustees, remediate and restore metals contaminated wetlands in the Lower Coeur d’Alene River Basin	Provide technical assistance and cooperation in pursuing remediation and restoration of contaminated wetlands on other wetlands; respond to 100% of the technical assistance requests	Partner with Basin-wide remediation and restoration efforts	Technical assistance provided	
<b>WMA Priority: Floodplain Forest and Scrub-shrub Habitat</b>					
<i>Conservation Target: Floodplain Forest and Scrub-shrub Habitat</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Provide functioning riparian forest and scrub-shrub habitat in good to excellent ecological condition to benefit a variety of fish and wildlife species	Within 10 years, restore 10,000 linear feet of floodplain forest and scrub-shrub habitat lacking bank stability and/or sufficient riparian vegetation along the lower Coeur d’Alene River (e.g., increase canopy cover to > 25% with at least 30% survival of black cottonwood trees and native shrubs; evidence of natural tree and shrub reproduction; and 90% bank stability); prioritize sites based on floodplain / riparian assessment	Protect snags and large diameter trees within floodplain forest habitat	Acres protected	A, B, C, E, F, G, H, J, K, N
		Within 5 years, complete a floodplain and riparian forest and scrub-shrub habitat inventory, condition and function assessment, and bank stability inventory along all high river reaches on WMA	Implement river bank stabilization projects to include riparian forest/shrub planting projects with bank armoring, focusing on degraded riparian areas along the lower Coeur d’Alene and St. Joe River systems	Linear feet of riverbank restored and/or protected	
			Utilize Wildlife Bureau staff to assess floodplain and riparian forest and scrub-shrub habitat condition and function, and inventory bank stability	Completion of floodplain / riparian assessment	
Floodplain Forest and Scrub-shrub Landscape	Provide functioning riparian forest and scrub-shrub habitat in good to excellent ecological condition to benefit a variety of fish and wildlife species	Maintain, restore, and establish a diverse mix of riparian species in black cottonwood dominant riparian forest stands along river banks and throughout floodplains (e.g., increase canopy cover to >25% with at least 30% survival of black cottonwood trees and native shrubs; evidence of natural tree and shrub reproduction; and 90% bank stability); prioritize sites based on floodplain / riparian assessment	Treat riparian areas for invasive and noxious weed species	Linear feet of riverbank restored and/or protected	A, B, C, E, F, G, H, J, K, N
			Implement river bank stabilization projects to include riparian forest/shrub planting projects with bank armoring, focusing on degraded riparian areas along the lower Coeur d’Alene and St. Joe River systems		
		Cooperate with neighboring private landowners in the Lower Coeur d’Alene River Basin to create/maintain/protect floodplain forest and scrub-shrub habitat	Work with private land owners through HIP and other conservation programs to create and restore healthy floodplain forest and scrub-shrub habitat on their land	# of acres improved	
		Complete a floodplain and riparian forest and scrub-shrub habitat inventory, condition and function assessment, and bank stability inventory along high priority river reaches in landscape in five years; utilize existing Department Landscape Wetland Assessment GIS tool to prioritize areas for inventory	Within constraint of preventing entrainment of contaminated alluvium into river, identify opportunities to restore natural floodplain processes for the purpose of enhancing black cottonwood reproduction		

<b>WMA Priority: Conifer Forest Habitat</b>					
<i>Conservation Target: Mesic Montane Mixed Conifer Forest, Dry-Mesic Montane Mixed Conifer Forest, and Ponderosa Pine Woodland and Savanna Ecological Systems</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Provide conifer forest habitat in good to excellent ecological condition to benefit a variety of wildlife species	Complete a Forest Inventory and Assessment in five years on all WMA upland forests; Complete a Forest Management/Stewardship Plan in 10 years	Conduct a forest composition and structure inventory and health assessment using established protocols; develop a forest Management/Stewardship Plan based on assessment	Completion of forest inventory and assessment; Forest Management/Stewardship Plan	A, B, C, E, F, G, H, J, K
		Restore ≥ 100 acres of ponderosa pine ecological system in 10 years by reducing the amount of shade tolerant tree species in understory to an amount to be determined by inventory; maintain as many large diameter (> 20 inch dbh) trees and snags as possible for wildlife	Use pre-commercial and commercial thinning to restore stands to open stand conditions and reduce wildfire threat. Use small direct sales to begin restoration activities Explore possible use of prescribed fire as a treatment tool Control invasive and noxious weed species in disturbed forest openings	Acres restored	
		Maintain or restore > 200 acres of mixed species conifer stands in 10 years to create a mix of early to mid-seral Douglas-fir - Grand fir stands and Douglas-fir - Ponderosa Pine stands; maintain as many large diameter (> 20 inch dbh) trees and snags as possible for wildlife	Use pre-commercial and commercial thinning to restore stands to historical conditions and reduce wildfire threat. Use small direct sales to begin restoration activities	Acres restored	
Conifer Forest Habitat Landscape	Provide conifer forest habitat in good to excellent ecological condition to benefit a variety of wildlife species	Complete a Forest Inventory and assessment in five years. Complete a Forest Management Plan in 10 years	Complete a forest inventory and assessment and develop a forest Management/Stewardship Plan	Forest Management Plan completed	A, B, C, E, F, G, H, J, K
		Cooperate with neighboring private landowners along with state and federal agencies in Coeur d'Alene and St. Joe basins to create/maintain/protect mid to late-seral, open ponderosa pine-dominated stands; treat or protect > 100 ac in 10 years	Work with private land owners through HIP and other conservation programs to create healthy ponderosa pine forest habitat on their lands	# of acres improved	
		Cooperate with other state and federal agencies in the Lower Coeur d'Alene River Basin to create/maintain/protect healthy, early to mid-seral mixed conifer forest habitat; treat or protect > 200 ac in 10 years	Work cooperatively with agency personnel on projects that will promote healthy mixed conifer forest habitat on their lands	Acres improved	
<b>WMA Priority: Wildlife-based Recreation and Education</b>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Provide opportunity for consumptive and non-consumptive wildlife-based recreation and education	Improve and maintain 30 public access sites on the WMA in 10 years	Unless future data indicates a needed change to meet the CDARWMA mission, maintain the current level of motorized access to provide opportunity for motorized use and opportunity for non-motorized use away from open roads	# of access sites improved	E, F, G, H, J, K, M
			Improve heavily used sites with fire rings, fixed barbeque grills and picnic tables to reduce user impacts on natural vegetation and to lessen contact with contaminated soils while using the site for recreational hunting and fishing		
			Increase CDARWMA staff and Department Enforcement staff presence to curtail illegal activities (e.g., illegal harvest, illegal motor vehicle use, littering) that diminish the recreation of law abiding users		

WMA Priority: Wildlife-based Recreation and Education					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Provide opportunity for consumptive and non-consumptive wildlife-based recreation and education	Provide non-consumptive wildlife-based recreation and education opportunities consistent with the CDARWMA mission	Develop wetland restoration and non-consumptive wildlife based educational signage and parking areas along St. Joe River property.	Number of new educational signs, brochures and viewing platform	E, F, G, H, J, K, M
			Develop a new viewing platform and educational signage system for Robinson Creek parcel		
			Work with GIS Staff to create a new CDARWMA Access Brochure to improve recreational user’s visits and provide educational awareness to a more diverse group of CDARWMA users		
		Maintain facilities, signage, and CDARWMA-managed roads/trails to facilitate recreation and education	Provide improved maps, informational signage, and property boundary markers	Number of Facilities, Signage, or Roads/Trails Maintained or Improved	
			Improve CDARWMA-managed roads from their current condition to provide safe access to recreational sites, then maintain or upgrade as future site usage warrants		
			Maintain signage on and maintenance of designated trails		
			Maintain campsites in a safe, useable, low maintenance state		
			Reduce camping limit days from 10 days to three days in areas where high use, or abuse of the established regulation continues to result in resource damages or conflict among user groups		
		Improve facilities, signage, and CDARWMA managed roads/trails to lessen the heavy metals contamination risk of the recreating public using roads and public access sites along the lower Coeur d’Alene River	Reduce off-road activities with a combination of signage and barriers at points of illegal entry		
			Coordinate with EPA and submit a pilot project for the cleanup of contaminated sediments on CDARWMA access roads and access sites identified within the proposal		
			Coordinate with EPA to achieve cleanup goals by identifying selected recreational sites and access roads on CDARWMA where removal or capping of contaminants would reduce public exposure risks		
			Coordinate with EPA and Eastside Road District to determine road systems and parking areas to be paved to reduce blowing dust and mud		
CDARWMA Landscape	Promote access to other public lands	Within 10 years, increase the number of public acres available to the general hunting and fishing public	Work with neighboring federal and state agencies to identify areas where improved access will provide additional hunting and fishing opportunities	# of access sites maintained or improved	E, F, G, H, J, K, M
	Promote public access for recreational use on private lands	Within 10 years, increase the number of private acres available to the general hunting public	Coordinate with USFS, BLM and IDL on cooperatively managed areas to continue to improve facilities, signage roads and trails		
			Coordinate with Eastside Highway District on County roads designated throughout the CDARWMA landscape. Work with their Road Maintenance Supervisor to identify roads where improved access will provide additional hunting and fishing opportunities		
CDARWMA Landscape	Promote public access for recreational use on private lands	Within 10 years, increase the number of private acres available to the general hunting public	Work with neighboring landowners to resolve issues they have with hunters. Work to educate hunters on the needs and desires of landowners. Work to bring the two together	Acres of access to private lands associated with CDARWMA; # of new signs and brochures	E, F, G, H, J, K, M
			Improve public access through agreements with cooperating landowners through the Access Yes Program where access is limited to larger blocks of WMA or other public lands within the CDARWMA landscape		
			Work with Landowner/Sportsman Coordinator on areas having wildlife depredation issues where hunting public could assist in reducing complaints		
			Improve access by pursuing conservation easements or acquisitions with willing landowners		

WMA Priority: Monitor and Evaluate Habitat Conditions and Wildlife Use					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Monitor and evaluate habitat conditions and wildlife use to consider the effectiveness of management measures	Annually monitor and evaluate habitat conditions to determine when management actions should be employed and assess desired results of activities	Conduct HEP analysis every five years to monitor changes in vegetation and habitat quality, and provide updated crediting to BPA	Annual Report completed	A, B, C, E, F, G, J, K
			Monitor permanent photo points in July/August at least every five years to monitor changes in plant communities over time		
			Conduct aerial photo monitoring during July/August annually or when a flight over the WMA can be scheduled by the WMA Manager or other Regional Department staff		
			Monitor and map weed infestations and location and level of weed control efforts across the WMA		
			Conduct baseline wetland vegetation inventory, condition assessment, and map using Department protocols every five - 10 years		
			Conduct baseline floodplain and riparian function and condition, and bank stability inventory every five - 10 years		
		Conduct baseline forest habitat inventory and assessment using Department protocols every five - 10 years			
		Annually monitor wildlife use and reproductive success to determine general trends	Monitor waterfowl migration numbers in spring and fall for general trends in area use		
		Monitor waterfowl breeding activities annually, including artificial nest box use, duck breeding pairs, and duck brood counts			
		Conduct pheasant crow counts each spring to provide an indices for density and distribution of the breeding population			
CDARWMA Landscape	Promote opportunities to inventory and assess wildlife habitat and use throughout the Coeur d'Alene and St. Joe River basins	Work cooperatively with agencies and local interest groups in efforts to collect and share information on current and historic habitat conditions and wildlife use within the Coeur d'Alene and St. Joe River basins	Where possible, provide expertise and assistance to cooperating agencies and local interest groups in collecting data on habitat and wildlife use across Coeur d'Alene and St. Joe River basins	Provide collected data	B, C, J, K
			Conduct waterfowl banding each year in August, on the WMA and other locations in the valley, in coordination with the USFWS Office of Migratory Bird Management	Provide collected data	A, B, C, E, F, G, J, K
			Monitor bald eagle nests on the WMA and within the Coeur d'Alene and St. Joe River basins, as part of Department statewide monitoring. Monitor nests annually to determine presence, nest initiation, number of young, and fledging rate		
WMA Priority: Control Noxious Weeds					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Control noxious and invasive weed infestations on the WMA to avoid displacing desirable vegetation	Annually employ an integrated weed management program (chemical, biological, mechanical) on the WMA to control noxious weeds; annually survey 30% of the WMA for weeds	Treat established weed infestations annually to restrict the spread of noxious weeds on the WMA	Acres treated	C
			Eradicate newly invading weed species to keep them from becoming established	Number of new invader species treated	
CDARWMA Landscape	Prevent weed dispersal between neighboring properties and the WMA	Limit the level of weed infestations and dispersal throughout the surrounding landscape	Participate in the local Cooperative Weed Management Area program	Number of projects completed	B, C
			Work with adjoining landowners with cooperative weed control projects		
			Communicate and work with surrounding landowners on weed management issues	Number of contacts	

WMA Priority: Information Gaps					
Scope	Management Direction	Gaps Identified	Strategy	Metric	Compass Objective (Appendix I)
CDARWMA	Develop strategies to address gaps identified in the viability assessment	Waterbird Guild	With Wildlife Diversity Program staff, develop a monitoring protocol to address waterbird use on CDARWMA wetland habitat	Projects completed	E, F, G, H, J, K, M
			Recruit volunteers to conduct monitoring of waterbird use according to protocols developed		
		Amphibian and Reptile Guild	With Diversity staff lead, develop an amphibian and reptile management plan		
			With Diversity staff lead, develop an amphibian and reptile monitoring protocol		
		Gastropod Guild	With Diversity staff lead, organize volunteers to conduct amphibian and reptile monitoring		
			With Diversity staff lead, develop a plan to ensure that management considers gastropod guild habitat requirements		
			With Diversity staff lead, recruit volunteers to monitor gastropod populations and to develop a species list		
			With Diversity staff lead, identify areas of high concentrations of gastropods and identify habitat use		
		Forest-dependent Species	Manage forested areas for diversity of overstory and understory vegetation types by addressing the effects of forest succession		
			Manage forested areas to more historic species composition consisting of dry forest site habitat of ponderosa pine, western larch and western white pine		
			Manage forested areas to favor mountain shrub and grass/forb regeneration		
		USFS and BLM lands within CDARWMA landscape	Develop strategies to address gaps identified in the viability assessment		
Work with USFS and BLM to maintain a complex understory in forested areas					
Work with USFS and BLM to maintain a canopy mosaic of age and species structure in forest management at a landscape level					

## Monitoring

Monitoring and reporting are critical for tracking accomplishment of performance targets identified in the CDARWMA Management Program Table. Monitoring can be separated into three categories: compliance monitoring, biological monitoring, and public use monitoring.

### Compliance Monitoring

Compliance monitoring documents the completion of regular management tasks that are essential to WMA operations. These include but are not limited to:

- Maintaining WMA facilities and access sites
- Maintaining infrastructure at ponds and wetlands
- Providing technical assistance to local agency staff and private landowners
- Maintaining public access sites

Compliance monitoring will be reported annually at work plan meetings between regional and headquarters staff.

### Biological Monitoring

Wildlife Management Areas across the state have a range of established biological monitoring programs and needs. Additional monitoring needs may have been identified during development of the CDARWMA Management Program Table. Biological monitoring includes wildlife, vegetation, and habitat monitoring. It may also include assessing the effectiveness of management and restoration activities. Monitoring may occur at multiple spatial and temporal scales, depending on objectives.

Currently, annual monitoring on CDARWMA consists of ocular vegetation surveys of noxious weed infestations. This effort determines the effectiveness of our weed management activities and guides future noxious weed control work on the WMA. Systematic surveys of other wildlife species on the WMA have been extensive.

Big game population monitoring on CDARWMA has included limited aerial surveys for elk and mule deer (see wildlife reports at

<https://collaboration.idfg.idaho.gov/WildlifeTechnicalReports/Forms/Allitems.aspx>)

### Wildlife Monitoring

Waterfowl monitoring on CDARWMA has included annual Canada goose nest counts, duck breeding pair counts, duck brood counts, wood duck nest box surveys, and waterfowl banding. Additional wildlife monitoring includes annual tundra swan, bald eagle, osprey, marshbird, and waterbird surveys.

### **Canada Goose Nest Counts**

Canada goose nest counts have been conducted on CDARWMA since 1980. All the artificial nest boxes throughout the wetland complexes of the Lower Coeur d'Alene River Basin, the Lower St. Joe River Basin and the Round Lake segment are searched, and active nests (i.e., goose in incubation posture on nest) are recorded. This includes all observed nests (e.g., nests on nesting structures, natural islands, muskrat houses, osprey nest sites, etc.). Care is taken not to flush geese from their nests. Canada goose nest counts are conducted as close to April 15 as possible to include both early and late nests. Approximately 120 nest structures are checked and all observed ground nests are recorded in the general search area.

### **Wood Duck Nest Box Surveys**

Cavity-nesting nest box inspections have been conducted on CDARWMA since approximately 1967. Artificial duck nest boxes are inspected and serviced in late summer to determine duck species use and nest success. Approximately 180 nest boxes are checked throughout the CDARWMA.

### **Duck Breeding-pair and Brood Counts**

Duck breeding-pair and brood counts are used to index and assess breeding effort, total production, and productivity (i.e., broods/pair). They have been conducted on CDARWMA since 1992. Two duck breeding pair counts are conducted per season: the first in early May to detect early-nesting duck species, and the second in late May to detect late-nesters. Both the species and number of pairs are recorded. A duck breeding pair is indicated by lone drakes, paired ducks, or broods.

### **Waterfowl Banding**

Waterfowl banding is conducted under the authority of the federal government. Federal permits, banding protocols, bands, and banding records are administered through the USFWS Office of Migratory Bird Management. Waterfowl banding has been conducted as an annual monitoring effort on CDARWMA since 2001. All banding data are forwarded to the U.S. Geological Survey bird-banding laboratory.

### **Tundra Swan**

Tundra swan surveys have been conducted by the USFWS since 1995, as part of their annual Coeur d'Alene River Basin migratory waterfowl counts. Surveys are conducted weekly from first week of April to the first week of May. A selected suite of waterfowl species are counted, including tundra swan. Correlated with this survey is an annual basin count of observed tundra swan deaths resulting from metal contaminants poisoning.

## **Bald Eagle**

Bald eagle nest monitoring has been conducted under the guidance of the Department's Diversity Program as part of a statewide monitoring program. Bald eagle nests on CDARWMA have been monitored annually since 1992. Known nest sites are visited by ground during the pre/egg-laying (3/1-3/15), incubation (3/15-5/1), nesting (5/1-6/20), and fledgling (6/20-7/20) periods, and information on eagle activity and nest success is reported to the Panhandle Diversity Program Biologist.

## **Osprey**

Osprey nest monitoring has been conducted by CDARWMA personnel annually since 1984. Known sites are visited by ground and boat during fledgling (6/20-7/20) periods, with information provided to the Department's Diversity Program Biologist.

## **Marshbird and Waterbird Surveys**

Marshbird and waterbird surveys were conducted on CDARWMA in 2011 by the Idaho Bird Inventory and Survey technicians. A training session for Regional staff resulted in surveys continuing on an annual basis. Marshbird surveys are intended to collect data primarily on five focal species: Virginia rail, sora, American bittern, pied-billed grebe, and Wilson's snipe. Each of these five species is counted when seen or heard. Data are also collected on least bitterns and yellow rails. In addition to these focal species, the presence or absence of grebes (other than pied-billed grebe), herons, ibis, egrets, coots, cranes, common yellowthroats, yellow-breasted chats, yellow warblers, song sparrows, marsh wrens, willow flycatchers, brown-headed cowbirds, yellow-headed blackbirds, and red-winged blackbirds are recorded.

## **Pheasant/ crow survey**

Pheasant crow surveys have been conducted annually since 1992 on one 20-mile route in the southern portion of Benewah County near Tensed, Idaho. Surveys are conducted once in mid-April and again in mid-May to determine pheasant trends in this agricultural area of South Panhandle Habitat District.

## **Habitat Monitoring**

In 2010, the Department initiated a statewide, long-term habitat monitoring program for all WMAs. The goal of the program is to collect quantitative and comparable baseline data to monitor habitat change on all WMAs due to management actions or other causes. The baseline data collected will be specific to each WMA, based on the habitat types present and its unique management issues. Baseline data typically includes:

- Distribution and extent of cover types, including mapping of vegetation cover types
- Vegetation structure, composition, and condition, including forested ecological systems
- Presence or abundance of noxious weeds and other invasive plants

- Riparian and wetland condition and function assessment
- Photo points

To date, this program has collected baseline data on five WMAs, with surveys of all 32 WMAs expected to be completed by 2019. This is a long-term program and will be repeated starting in 2020. Completion of this habitat monitoring at CDARWMA is critical for planning appropriate restoration and management actions described in the management program.

### **Habitat Evaluation Procedures**

The objective of the Habitat Evaluation Procedures (HEP) is to assess the quantity and quality of habitat available for the targeted wildlife species listed in the Albeni Falls Wildlife Protection, Mitigation, and Enhancement Plan (Martin et al. 1988) and to provide recommendations for the ongoing enhancement efforts.

The USFWS developed HEP as a habitat-based evaluation methodology for use in impact assessment and project planning (USFWS 1980). HEP is based on the assumption the habitat quality for selected wildlife species can be described by a habitat suitability index (HSI). The HSI is a value between 0.0 and 1.0 with 0.0 being habitat with no value for the selected species and 1.0 being optimum habitat for the selected species. The HSI can be multiplied by the number of acres of habitat available to obtain habitat units (HU) for the selected wildlife species.

The Northwest Power Planning Council (now the Northwest Power and Conservation Council) endorsed the use of HEP for evaluating impacts and mitigation of hydroelectric projects on the Columbia River System. An interagency working group of biologists used HEP to estimate the wildlife habitat losses attributed to the Albeni Falls hydroelectric project in terms of habitat units (Martin et al. 1988). The working group selected eight target species to represent wildlife and habitats affected by the Albeni Falls hydroelectric facility. The Albeni Falls dam project area includes portions of the shoreline along the Pend Oreille River and all shorelines and low lying marshes along Lake Pend Oreille. The eight species chosen to represent these habitat types include the black-capped chickadee, Canada goose, mallard duck, muskrat, redhead duck, white-tailed deer, yellow warbler, and both wintering and breeding populations of bald eagle. The interagency working group estimated that a net loss of 28,587 HU occurred for the eight target species in the project area. HEP surveys are conducted at five-year intervals on each CDARWMA segment as part of the Department's monitoring obligation to BPA.

Currently, HEP monitoring occurs on two parcels on CDARWMA which were acquired through the Albeni Falls Wildlife Protection, Mitigation, and Enhancement Plan. They include Robinson Creek property on the Coeur d'Alene River in Kootenai County and the Shadowy St. Joe property on the lower St. Joe River in Benewah County.

### **Photo Points**

Photo points were established on the Shadowy St. Joe habitat segment in 2011 to track wetland restoration activities, allowing managers to note any changes in habitat over time. Pictures will

be taken twice a year during the first week of May and the first week of August. Each segment has a protocol for the number of photo points required from each segment where photos are taken in each cardinal direction: north, east, south, and west. Photo points are very useful to monitor any habitat changes over time and can be used to monitor baseline conditions for each WMA segment.

### **Hayfield Restoration**

Annual grain food plots and perennial reseedings have been established on the Thompson parcel since 2010 and have been monitored for establishment and annual wildlife use. Mowing of portions of the hayfield has resulted in stimulating of new growth of established grasses. Treatment sites are then monitored for big game use using the pellet count method.

### **Tree plantation/Mast crop**

A 4-acre fenced tree plantation was established in 2008 to provide mast crop for turkey and big game. Project was maintained with chemical applications for competitive vegetation control, and fertilized for improved seedling growth and survival rates. Monitoring for establishment success indicated an overall 40% survival rate of planted trees. In 2011, the project was replanted to more appropriate species for the site.

### **Noxious Weed Control**

Noxious weeds are typically introduced non-native plants that lack the insect predators and plant pathogens that would normally keep them in check in their native habitats. For this reason and because of their aggressive growth, these alien plants can be highly destructive, competitive, and difficult to control. Weeds lead to environmental degradation through destruction of native plant and animal habitat.

Noxious weed monitoring include: assessing and mapping weed infestations on the WMA, mapping treatment areas, recording method and timing of treatment, recording amount and type of herbicides used, and tracking the results of control efforts. Monitoring information is summarized in an annual weed report and is used in future weed control planning.

## **Public Use Monitoring**

Wildlife Management Areas use public surveys and monitoring tools (e.g., traffic counters) to evaluate public satisfaction and use patterns as well as identify issues of concern. In some areas, hunter check stations monitor hunter success and satisfaction. These survey data help managers determine whether they are meeting the goals for the WMA.

Public use surveys occurred on CDARWMA during 2004-2005 and again in 2012-2013. On-going public use monitoring consists of annual waterfowl check stations to determine hunter harvest and satisfaction.

Public use assessments were conducted in 2004/2005 with the results of the survey reported in the Coeur d'Alene River Wildlife Management Area 2005 Public Use Survey. To remain current with public needs and increase public recreational opportunities and use of the CDARWMA into the future, public use monitoring surveys will need to be completed every five years.

Acquisition and management of land for wildlife habitat and public access is a primary mission of the Department. Consequently, it is important to periodically assess what public benefits are achieved through Department land acquisition and management, gauge public satisfaction with the program, and identify opportunities for program enhancement. In addition to managing for wildlife habitat, Department lands are managed for wildlife viewing, hunting and fishing access, hiking, picnicking, and other forms of outdoor recreation.

Developed access sites are heavily used by the public seeking access to the Lower Coeur d'Alene River; Lower St. Joe River; Round Lake; and all associated lakes, marshes, and wetlands for fishing, hunting, sight-seeing, or other recreational opportunities. Access is also provided to Lake Coeur d'Alene.

### **Waterfowl Check Stations**

Waterfowl check stations have been conducted annually during opening weekend of the duck season at CDARWMA since 1988. The number of hunters, the number of hours hunted, and the number of waterfowl harvested by species are collected at these check stations. Check stations are operated from 0800 to 1300 on both days of the opening weekend of the duck hunting season. The check stations are located at Medimont River boat launch and Killarney Lake boat launch.

In Table 3, future monitoring needs associated with performance targets and strategies identified in the WMA Management Program Table are summarized. The goal is to measure success or effectiveness of strategies that are implemented to reach performance targets. A detailed monitoring plan including specific techniques will be completed for the WMA by December 31, 2014.

## **Future Monitoring Needs**

### **Forest Management Activities**

Prior to timber harvest activity to restore ponderosa pine woodland and savanna, establishment of photo points within the timber sale boundaries will be necessary. Songbird point counts, owl surveys, and small mammal snap trap surveys could also be conducted to monitor species response to the forest management activities.

## Wetland Remediation and Restoration

Future wetland remediation and restoration project sites will need a monitoring protocol established to determine the success of the restoration efforts. Monitoring will include vegetation response and wildlife monitoring.

## Reporting

Each WMA will produce a five-year report on implementation of this WMA plan in 2019, including a summary of accomplishments and progress towards meeting performance targets. During the five-year review, CDARWMA staff will determine whether modifications to the plan are needed to meet performance targets, to accommodate changing conditions and priorities, or to incorporate advancements in management knowledge and techniques.

Table 3. Biological monitoring for Coeur d’Alene River WMA, 2014-2023.

Performance Target	Survey Type	Survey Frequency
By 2023, improve 500 acres of wetland habitat on the WMA through replacement of water level control structures and chemical control of vegetation.	Department vegetation monitoring protocol; Wetland Ecosystem Services Protocol for the United States	Pre-construction and vegetation treatment, then annually for three years post-treatment and again at five and 10 years
By 2023, remediate and/or restore 1,000 acres of contaminated wetlands in the Lower Coeur d’Alene River Basin.	Department vegetation monitoring protocol; Wetland Ecosystem Services Protocol for the United States	Pre-construction and vegetation treatment, then annually for three years post-treatment and again at five and 10 years.
By 2023, restore 10,000 linear feet of Floodplain forest and scrub-shrub habitat along the lower Coeur d’Alene River.	Department Riverine Riparian and Bank Stability rapid assessment method	Pre-river bank stabilization treatment, then annually for three years post-treatment and again at five and 10 years.
By 2023, restore 100 acres of ponderosa pine habitat for old growth conditions.	Transect Photograph points	Before vegetative treatment, then annually for three years post-treatment.

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## Appendices

## I. THE COMPASS – THE DEPARTMENT’S STRATEGIC PLAN

In 2006, the Department completed a strategic plan—*The Compass*—based on public input and legislative mandates. It continues to guide the Department in 2014 and is the primary guiding document for all other Department plans developed since 2006. The following table presents the goals, objectives, and strategies from *The Compass* that are most relevant to WMA management. *Compass* objectives are lettered on the left side for reference in the Management Program Table.

<i>The Compass</i>	
<b>GOAL—Fish, Wildlife, and Habitat</b>	
A.	Objective – Maintain or improve game populations to meet the demand for hunting, fishing, and trapping.
B.	Objective – Ensure the long-term survival of native fish, wildlife, and plants.
C.	Objective – Increase the capacity of habitat to support fish and wildlife.
D.	Objective – Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans.
<b>GOAL—Fish and Wildlife Recreation</b>	
E.	Objective – Maintain a diversity of fishing, hunting, and trapping opportunities.
F.	Objective – Sustain fish and wildlife recreation on public lands.
G.	Objective – Maintain broad public support for fish and wildlife recreation and management.
H.	Objective – Increase opportunities for wildlife viewing and appreciation.
I.	Objective – Increase the variety and distribution of access to private land for fish and wildlife recreation.
<b>GOAL—Working With Others</b>	
J.	Objective – Improve citizen involvement in the decision-making process.
K.	Objective – Increase public knowledge and understanding of Idaho’s fish and wildlife.
<b>GOAL—Management Support</b>	
L.	Objective – Attract and retain a diverse and professional workforce.
M.	Objective – Provide equipment and facilities for excellent customer service and management effectiveness.
N.	Objective – Improve funding to meet legal mandates and public expectations.

## II. HISTORY

The lower Coeur d'Alene River Valley was originally developed by farmers and loggers. Mining towns were established on the North Fork and South Forks of the Coeur d'Alene River after the discoveries of gold, silver, and lead. After settlement by European Americans, the river became a major transportation corridor. Steamboats carried freight and passengers to the upper limit of navigation at Cataldo and ore was carried on the return trip. The era of steamboats ended when the Union Pacific Railroad and a road system were constructed into the Silver Valley.

The lower river floodplain has a history of significant mining related pollution dating back to the 1880s. The entire floodplain, including all wetlands and lakes, has a deep sediment layer that contains a large amount of water-borne mine wastes contaminated by heavy metals, primarily lead, cadmium, and zinc. Pollution control efforts by the mining industry have improved considerably over the past 100 years but the river system continues to move contaminated sediments downstream during annual flood events. The average lead content of sediments throughout the river floodplain is estimated at 2,500 parts per million.

During the 1920s and 1930s, the Coeur d'Alene River was reported to be toxic enough that most aquatic life could not survive. Dead tundra swans were reported as early as 1924. Waterfowl deaths, primarily swans and Canada geese, have frequently occurred during the spring migration since the 1920s and continue to the present. Most of the mortalities have been due to lead poisoning from ingesting contaminated sediments.

The construction of Post Falls Dam in 1906 and subsequent improvements in the 1940s impounded Coeur d'Alene Lake, backing water up the Coeur d'Alene River to Cataldo and up the St. Joe River to St. Joe City. Operation of the dam has disrupted the natural rise and fall of the lake and stabilizes water at a higher level from the spring run-off through September. Much of the low-lying land adjacent to the lower Coeur d'Alene and St. Joe rivers was rendered unusable for farming due to the higher water level throughout the growing season.

Fish and wildlife carrying capacities are reduced in those lakes and wetlands that do not have dikes and water control structures to retain water at or near full pool elevation. The Department has been granted water right licenses to impound water and control water levels in many of the wetlands on the WMA to provide maximum benefits for fish and wildlife resources.

Acquisition of the WMA began in 1964 with a gift of 364 acres from the American Game Association at Killarney Lake. The Department authorized an aggressive expansion program primarily using Pittman-Robertson funding and Department license dollars and acquired additional parcels in Kootenai and Benewah counties. Other funding sources also used for acquisition included Dingell-Johnson funding, the Land and Water Conservation Fund, BPA, and the Ducks Unlimited MARSH program.

### III. MANAGEMENT REQUIREMENTS AND AUTHORITIES

Federal funds, including those derived from the Land and Water Conservation Fund and USFWS Federal Aid Program, have been used in part to acquire and manage CDARWMA lands. Certain activities are prohibited from funding with Federal Aid funds, and all provisions of Federal Aid funding will be followed.

Other federal and state laws also affect management of the CDARWMA. The Department has responsibility under provisions of the Endangered Species Act to ensure that management actions protect threatened and endangered species, and responsibility under the Clean Water Act to ensure that water quality standards and guidelines are in place on CDARWMA lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on the CDARWMA.

The Idaho Noxious Weed Law under Idaho Code 22-2405 requires all landowners to eradicate noxious weeds on their lands, except in special management zones. The counties are required to enforce the law and the State of Idaho is required to ensure the counties do so.

Consistent with Idaho Codes 38-101 and 38-111, and through a cooperative agreement with the Idaho Department of Lands, the Department is required to pay a fee for fire protection on all forest and some rangeland acreage it owns, and for residences in forest areas. Fees are submitted annually based on the number of qualified acres and residences owned by the Department.

The Department is required by Idaho Code 63-602A to pay a fee-in-lieu of taxes (FILT) for lands that are owned by the Department and meet certain code requirements. These fees are submitted annually to affected counties based on the number of qualifying acres and agricultural tax rates.

## IV. PUBLIC INPUT SUMMARY/OTHER PROGRAMS

An online survey form was made available to the public on the Department website from February-December 2012. The survey allowed participants to answer questions and provide feedback on WMA management statewide and the management of specific WMAs. We received 67 online surveys specific to CDARWMA during the survey period. These suggestions were taken into consideration when the plan was written.

From the 67 comments received, 40% of people utilized the wildlife management area for hunting and scouting as their primary activity, while fishing (13.3%), kayaking (11.7%) and ATV riding (6.7%) were the other primary activities. Some other uses included biking, camping, hiking, and wildlife viewing, however these activities were all less than 5% of the primary activities occurring on the wildlife management area. Comments indicated that 69% of users were satisfied with their visit, while 20% were not and 11% did not have an opinion. Comments related to support of the Department's management goals found that 75% agreed with the goals, while 18% did not and 7% had no opinion.

During spring 2014, we received four survey responses and/or comments on the draft CDARWMA plan. Two comments showed support for the draft plan, while one remained neutral/no opinion. One survey participant disagreed with the proposed management priorities presented but did not provide any comments.

## **Travel Management Program**

Coeur d'Alene River WMA is open to public travel use with the following restrictions:

- Vehicles must remain on established, open roads
- Visitors may not harass wildlife during non-hunting seasons

Some recent unauthorized vehicle access and ORV trail pioneering has occurred on several parcels of the WMA. These sites have been reported and are being addressed by our Department enforcement staff. With a better travel management signing program, additional gates or barricades, and increased Department enforcement and WMA personnel presence in the area, it should reduce these activities and the resource damage.

The 8 undeveloped campsites are available to sportsmen and other outdoor recreationists. A 10-day camping limit rule within any 30-day period provides the public with equitable opportunities to recreate. Two sites that have received greater use and have had issues with violation of the 10-day camping limit now have a 3-day camping limit rule in place. This has discouraged extended use which has, in the recent past, resulted in littering and resource damage.

## **Boating and Fishing Access**

Boating and fishing access sites are maintained under the umbrella of the Panhandle Regional Access Program. These access sites are maintained for public use and include parking lot development, fishing/boat dock maintenance, and noxious weed control. Access areas that are out of compliance or have public issues are reported to the Regional Fishing/Boating Access Program Manager.

## **Timber Harvest**

Between 1989 and 1997, seven direct sales were conducted to address a bark beetle outbreak in ponderosa pine stands. With these sales, 131 acres were treated and 482,200 board feet of timber were removed.

## V. 2000-2013 ACCOMPLISHMENTS

Since the CDARWMA plan was revised in 2000, these accomplishments have occurred. The following goals have been developed to guide management on the WMA. The goals are responsive to the identified issues, the purpose for which the WMA was originally acquired, the Department's current Waterfowl Management Plan, and the Idaho Department of Fish and Game Strategic Plan: *The Compass 2005*.

### **Goal: Manage wetland habitats for waterfowl production.**

Objective: Construct, maintain and monitor nesting platforms to meet Canada goose production goals.

Accomplishment:

- Approximately 120 nesting platforms are maintained and monitored annually.

Objective: Install and maintain nest boxes for cavity-nesting ducks.

Accomplishment:

- Approximately 180 wood duck nest boxes are annually inspected for nesting success. The management goals for this program are for at least 50% use and at least 65% success for used boxes along the lower Coeur d'Alene, the lower St. Joe River, and associated wetlands.

Objective: Protect and improve riparian and wetland habitats on the Shadowy St. Joe parcel and enhance important bird, fish, and wildlife habitat.

Accomplishment:

- Wetland restoration efforts since October 2012 has included reed canarygrass control using rotary mowing and chemical applications. During the winter of 2013, five shallow wetland excavations were constructed to create 4.5 acres of deep emergent wetland and open water habitat. During the fall of 2013, the five wetland excavations were planted with emergent wetland plants with high food and cover values for waterfowl. Additionally, clump plantings of scrub-shrub species were included on three of the wetland excavations. Lastly, a fall dormant seeding of 20 acres to a competitive wetland and upland seed mix was completed.

**Goal: Manage riparian habitats for a variety of wildlife species benefits including cavity-nesting waterfowl.**

Objective: Create or expand riparian areas within the WMA when funding and opportunities are available. Emphasize the restoration of Riparian Forest and shrub/scrub habitat along the Coeur d'Alene River to benefit a variety of wildlife species requiring riparian habitat.

Accomplishment:

- The first segment of CDARWMA-owned Coeur d'Alene River bank was stabilized with stream bank protection measures on 4,000 linear feet. In coordination with Kootenai County Soil and Water Conservation Commission, a 319 grant was secured to complete the Medimont Riverbank Protection Project in 2012. The Department provided in-kind match by collection and preparing the vegetative materials needed for the project. A rock armor provided protection for the sand/gravel filter and willow bundles. This NRCS technique has been used to successfully stabilize stream banks and reduce soil erosion on much of the Coeur d'Alene River system.

**Goal: Control noxious weeds on CDARWMA.**

Objective: Use available resources to control noxious weeds through chemical, biological, and mechanical means. All parcels of the WMA will be annually inspected and treated for noxious weeds. Annual weed control efforts will be conducted. Coordinate with local cooperative weed management area group on control of noxious weeds.

Accomplishments:

- Herbicides are annually applied to approximately 65 acres on WMA parcels to control noxious weed infestations. Annual weed control efforts have been successful in reducing overall noxious weed populations, with some areas requiring only spot spraying of small patches. Mechanical mowing is used on several WMA parcels for additional weed control.
- Coordinated with Kootenai County Noxious Weed Control and participated in Inland Empire Cooperative Weed Management Area meetings and training opportunities. A new root boring weevil used for purple loosestrife biological control was released at two locations near Cave Lake on the lower Coeur d'Alene River.
- Two recent wildlife mitigation parcels purchased under the Albeni Falls Wildlife Mitigation Project were initially inspected for weed infestations, then mapped and treated for noxious weeds. The recently donated Sandaker property was also inspected for weed infestations, then mapped and treated for noxious weeds. New properties usually have well established noxious weed populations and therefore require additional efforts to control them.

**Goal: Manage upland habitats for a variety of wildlife species.**

Objective: Plant and maintain mast producing tree plantation project in cooperation with National Wild Turkey Federation.

Accomplishment:

- Four acres of trees and shrubs were planted and protected with a big game exclusion fence to allow plant establishment. Annual maintenance of the project has included chemical applications to control competitive vegetation around the seedlings and broadleaf weeds, and the application of fertilizer to improve growth and establishment. Seedling losses were replanted with more adaptable species for the site.

Objective: Plant and maintain annual grain food plots, perennial forb food plots, and dense nesting cover for a variety of wildlife species.

Accomplishment:

- Three acres of annual grain food plots were planted and maintained. All food plots were established and are maintained by Department personnel.

Objective: Plant and maintain perennial forb food plots.

Accomplishment:

- Seven acres of perennial forb food plots were planted and maintained. All food plots were established and are maintained by Department personnel.

Objective: Plant and maintain dense nesting cover that benefits ground nesting birds.

Accomplishment:

- Thirty acres of dense nesting cover were maintained and enhanced by Department personnel using a combination of rotary mowing and broadleaf weed control.

**Goal: Conduct general land and facility management protocols.**

Objective: Maintain fences in good repair to direct public access and prevent unmanaged livestock grazing within the WMA.

Accomplishment:

- Constructed two miles of boundary fence on the Thompson parcel to address trespass grazing. This property is located in an open range herd district in Kootenai County.

Objective: Maintain access sites facilities - parking areas, outdoor restrooms, fishing docks, and boat ramps.

Accomplishment:

- Wildlife Management Area access sites were improved with the placement of standardized signs showing the WMA ownership map. Several boat ramps were cleaned of flood-placed contaminated sediments at the request of EPA to address public health concerns.

Objective: Improve administrative access for WMA segments.

Accomplishment:

- Access roads to Thompson parcel and Round Lake Boat launch were brushed out to improve vehicle access to these sites.

Objective: Remove old buildings and structures on the CDARWMA.

Accomplishment:

- A manufactured home residing on the most recent parcel acquisition on Robinson Creek segment was sold and removed. All outbuildings were removed and the site was cleared of materials left by the previous owner. Over 1/2 mile of interior fence was removed. Two barrier gates were installed at access points.
- Removal of one mile of old livestock fence on several parcels in the Coeur d'Alene River Basin was accomplished, along with the removal of 3/4 mile of old fence on the Lower St. Joe parcel.

Objective: Inspect and maintain the WMA segment culverts for proper water delivery and reduced road damage.

Accomplishment:

- All culverts were inspected and maintained as needed to ensure safe and functional condition. Plugged culverts have been a problem and are the result of beaver activity. The culvert at Bull Run had to be replaced to avoid a complete road failure. The Bare Marsh culvert is cleaned out throughout the year. Trappers have been directed to these sites to help address the problem.

Objective: Provide and maintain access points throughout the CDARWMA.

Accomplishment:

- Fourteen public access areas are maintained throughout the WMA.

**Goal: Employ monitoring and evaluation procedures to measure changes in habitat and both target and non-target wildlife species use.**

Objective: Employ habitat monitoring and evaluation to determine when management activities should be employed and whether or not they achieve desired results.

Accomplishment:

- Vegetation and habitat monitoring and evaluation has included monitoring weed occurrence and effect of control efforts; assessing grassland health for the need of prescribed burning and/or mowing; monitoring of wetland vegetation for the need of wetland drawdowns, or additional management options; tree and shrub survival; and success of annual grain and perennial forb plot establishment.

Objective: Monitor and evaluate wildlife species use to determine general trends.

Accomplishment:

- Annual wildlife monitoring and evaluation includes waterfowl migration surveys, waterfowl breeding pair and brood surveys, artificial nest use surveys, and duck banding.

Objective: Complete HEP monitoring every five years following BPA protocols to monitor changes in vegetation and habitat quality, and provide updated crediting to BPA.

Accomplishment:

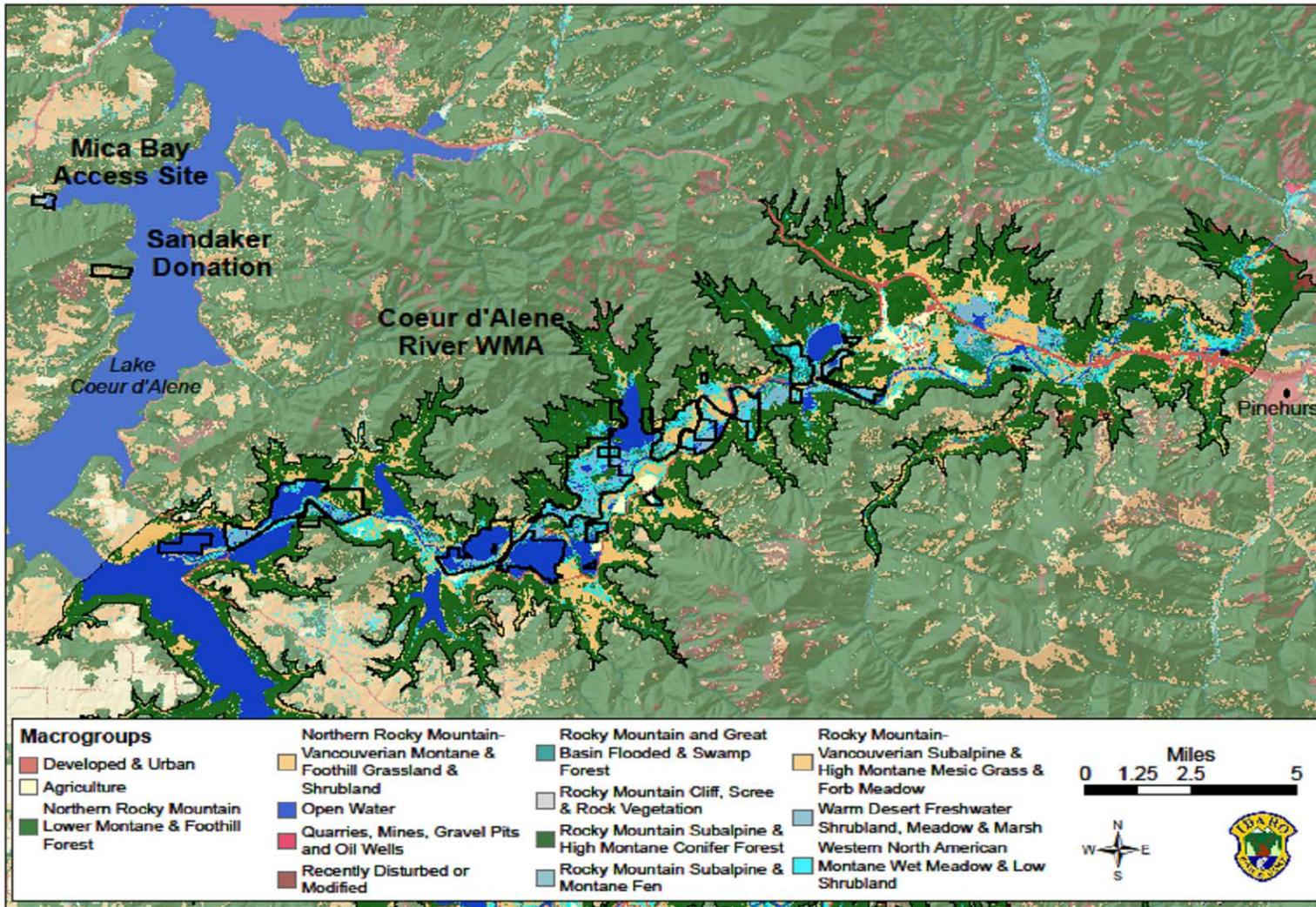
- The baseline HEP survey was completed on the Lower St. Joe Habitat Segment on May 10, 2007. The baseline HEP survey was completed on the Robinson Creek Habitat Segment on August 3, 2010.

## VI. VEGETATION

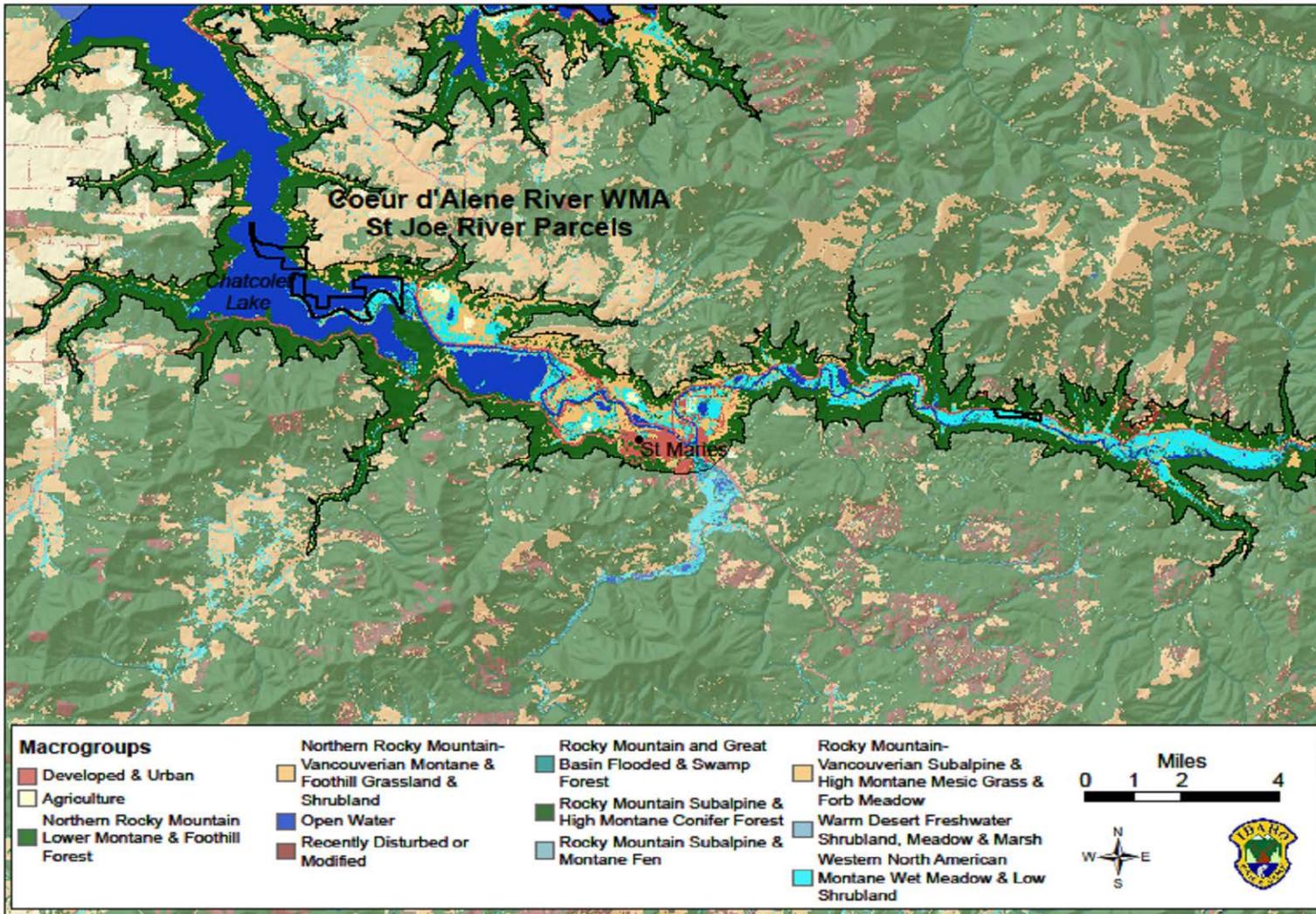
Area of various vegetation types for Coeur d'Alene River WMA, Access Sites, and surrounding Area of Influence, NWReGAP.

Formation	Macrogroup	Ecological System	Mica Bay Access Site	Sandaker Donation	St. Joe River Parcels	Coeur d'Alene River WMA	CDARWMA Area of Influence
Agriculture	Agriculture	Cultivated Cropland					195.93
		Pasture/Hay				34.25	916.27
Cool Temperate Forest	Northern Rocky Mountain Lower Montane & Foothill Forest	Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest	14.68	66.72	38.92	637.38	25,144.81
		Northern Rocky Mountain Mesic Montane Mixed Conifer Forest	4.23	18.90	14.01	228.62	19,758.86
		Northern Rocky Mountain Ponderosa Pine Woodland and Savanna	4.67	8.45	30.25	225.29	7,078.15
	Rocky Mountain Subalpine & High Montane Conifer Forest	Rocky Mountain Aspen Forest and Woodland					0.89
		Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland		0.22			0.22
		Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland					0.89
Developed & Urban	Developed & Urban	Developed, Low Intensity				3.34	1,333.26
		Developed, Medium Intensity				0.89	526.19
		Developed, Open Space	2.45		7.56	32.02	2,018.67
		Developed, High Intensity					45.37
	Quarries, Mines, Gravel Pits and Oil Wells	Quarries, Mines, Gravel Pits and Oil Wells					2.00
Recently Disturbed or Modified	Recently Disturbed or Modified	Harvested Forest - Grass/Forb Regeneration					68.50
		Harvested Forest - Northwestern Conifer Regeneration				2.00	513.29
		Harvested Forest-Shrub Regeneration					30.91

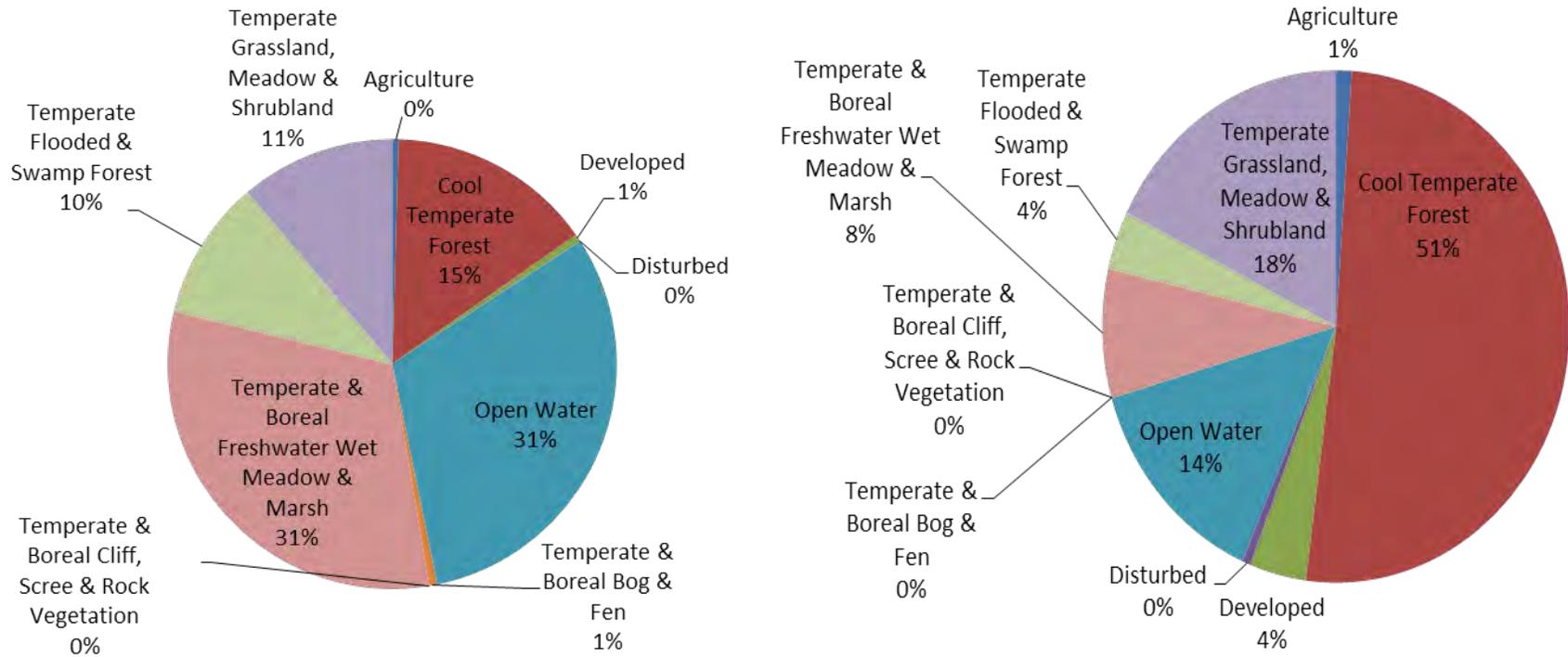
Formation	Macrogroup	Ecological System	Mica Bay Access Site	Sandaker Donation	St. Joe River Parcels	Coeur d'Alene River WMA	CDARWMA Area of Influence
Open Water	Open Water	Open Water (Fresh)	26.69		626.49	2,284.21	16,161.19
Temperate & Boreal Bog & Fen	Rocky Mountain Subalpine & Montane Fen	Rocky Mountain Subalpine-Montane Fen			0.22	43.81	73.83
Temperate & Boreal Cliff, Scree & Rock Vegetation	Rocky Mountain Cliff, Scree & Rock Vegetation	Rocky Mountain Cliff, Canyon and Massive Bedrock					2.00
Temperate & Boreal Freshwater Wet Meadow & Marsh	Warm Desert Freshwater Shrubland, Meadow & Marsh	North American Arid West Emergent Marsh	8.67		20.24	1,165.79	3,124.87
	Western North American Montane Wet Meadow & Low Shrubland	Rocky Mountain Alpine-Montane Wet Meadow	4.23		119.43	1,148.22	7,300.77
Temperate Flooded & Swamp Forest	Rocky Mountain and Great Basin Flooded & Swamp Forest	Northern Rocky Mountain Conifer Swamp					0.67
		Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland	17.12	0.44	47.59	740.57	4,406.08
Temperate Grassland, Meadow & Shrubland	Northern Rocky Mountain-Vancouverian Montane & Foothill Grassland & Shrubland	Northern Rocky Mountain Lower Montane, Foothill and Valley Grassland	0.67	28.91	48.48	596.91	10,435.19
		Northern Rocky Mountain Montane-Foothill Deciduous Shrubland	0.89	38.47	25.13	174.80	7,065.70
	Rocky Mountain-Vancouverian Subalpine & High Montane Mesic Grass & Forb Meadow	Rocky Mountain Subalpine-Montane Mesic Meadow	8.45	3.56	4.89	51.15	958.52
Total Acres			92.74	165.68	983.21	7,369.26	107,163.01



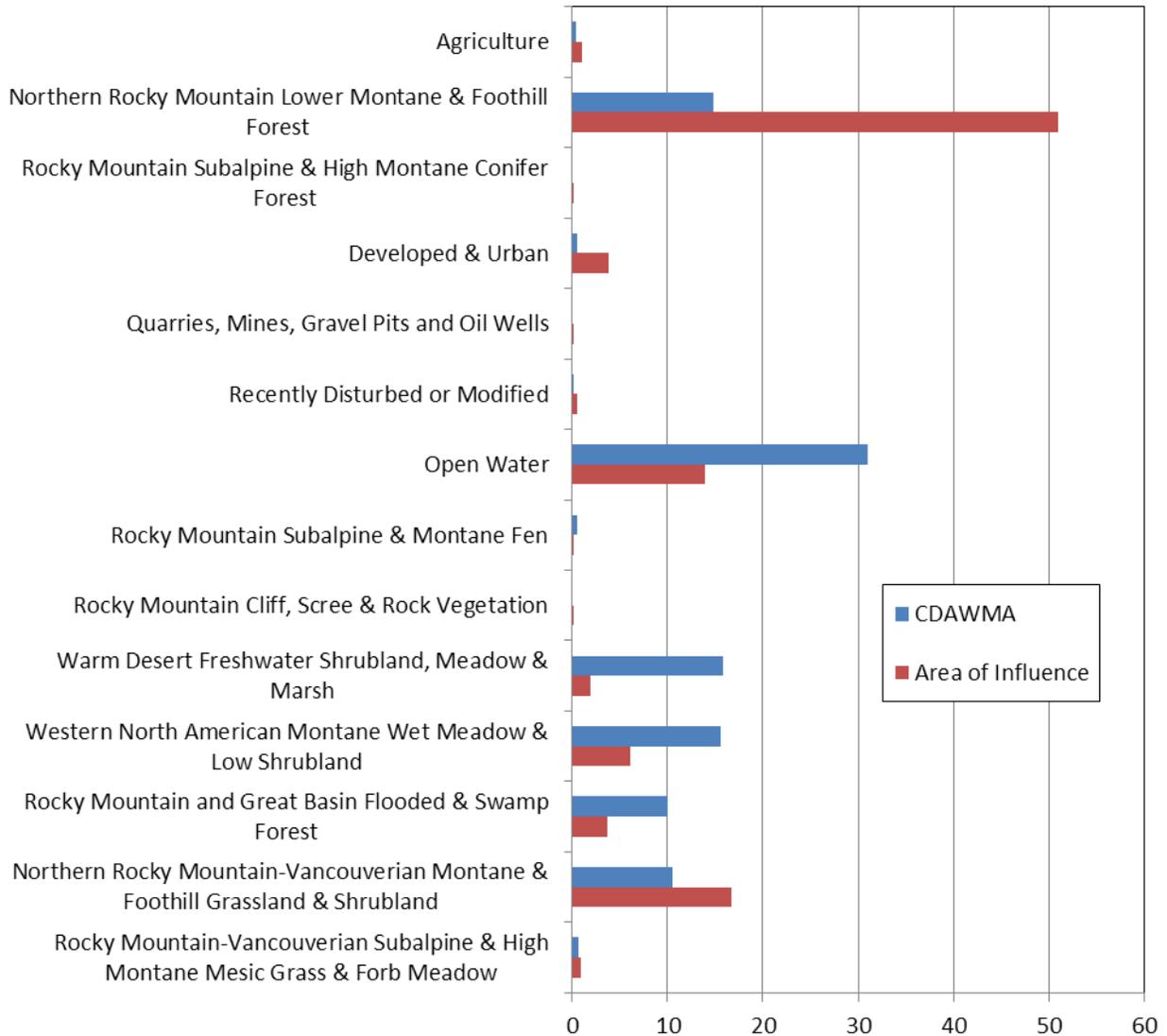
Re-gap vegetation analysis macro group map for Coeur d'Alene River parcels of CDARWMA.



Re-gap vegetation analysis macro group map for St. Joe River parcels of CDARWMA.



Distribution of Formation level vegetation types in Coeur d'Alene River WMA (left) as compared to the surrounding Area of Influence (right).



Percent of Macrogroup level vegetation types in Coeur d'Alene River WMA as compared to the surrounding Area of Influence.

## Plant Species List

(Selected Common Species; additional information available at [www.idfg.idaho.gov](http://www.idfg.idaho.gov))

Common Name	Scientific Name	Common Name	Scientific Name
<b>Forbs</b>		<b>Wetlands</b>	
Spreading Dogbane	<i>Apocynum androsaemifolium</i>	Northern Water Plantain	<i>Alisma triviale</i>
Spotted Knapweed	<i>Centaurea stoebe</i>	Sedge	<i>Carex</i> spp.
Canada Thistle	<i>Cirsium arvense</i>	Coon's Tail	<i>Ceratophyllum demersum</i>
Bull Thistle	<i>Cirsium vulgare</i>	Common Spikerush	<i>Eleocharis palustris</i>
Morning Glory	<i>Convolvulus</i> spp.	Dwarf Spikerush	<i>Eleocharis parvula</i>
Gypsyflower	<i>Cynoglossum officinale</i>	Canadian Waterweed	<i>Elodea canadensis</i>
Willowherb	<i>Epilobium</i> spp.	Clubmoss	<i>Lycopodium</i> spp.
Field Horsetail	<i>Equisetum arvense</i>	Pondweed	<i>Potamogeton</i> spp.
Fragrant Bedstraw	<i>Galium triflorum</i>	Arrowhead	<i>Sagittaria</i> spp.
Hawkweed	<i>Hieracium</i> spp.	Hardstem Bulrush	<i>Schoenoplectus acutus</i>
Common St. John's Wort	<i>Hypericum perforatum</i>	Soft-stem Bulrush	<i>Schoenoplectus tabernaemontani</i>
Prickly Lettuce	<i>Lactuca serriola</i>	Narrowleaf Cattail	<i>Typha angustifolia</i>
Oxeye Daisy	<i>Leucanthemum vulgare</i>	<b>Shrubs</b>	
Starry False Lily of the Valley	<i>Maianthemum stellatum</i>	Rocky Mountain Maple	<i>Acer glabrum</i>
Cinquefoil	<i>Potentilla anserina</i>	Serviceberry	<i>Amelanchier alnifolia</i>
Western Dock	<i>Rumex aquaticus</i>	Redosier Dogwood	<i>Cornus sericea</i>
Curly Dock	<i>Rumex crispus</i>	Black Hawthorn	<i>Crataegus douglasii</i>
Climbing Nightshade	<i>Solanum dulcamara</i>	Oceanspray	<i>Holodiscus discolor</i>
Canada Goldenrod	<i>Solidago canadensis</i>	Chokecherry	<i>Prunus virginiana</i>
Common Tansy	<i>Tanacetum vulgare</i>	Current	<i>Ribes</i> spp.
Field Pennycress	<i>Thlaspe arvens</i>	Woods' Rose	<i>Rosa woodsii</i>
Yellow Salsify	<i>Tragopogon dubius</i>	Black Elderberry	<i>Sambucus nigra</i>
White clover	<i>Trifolium repens</i>	Western Mountain Ash	<i>Sorbus sitchensis</i>
American vetch	<i>Vicia americana</i>	Common Snowberry	<i>Symphoricarpos albus</i>

Common Name	Scientific Name	Common Name	Scientific Name
<b>Grasses</b>		<b>Trees</b>	
Redtop	<i>Agrostis gigantean</i>	White Fir	<i>Abies concolor</i>
Bluejoint	<i>Calamagrostis canadensis</i>	Grand Fir	<i>Abies grandis</i>
Orchardgrass	<i>Dactylis glomerata</i>	Alder	<i>Alnus spp.</i>
Tufted Hairgrass	<i>Deschampsia cespitosa</i>	Paper Birch	<i>Betula papyrifera</i>
Basin Wildrye	<i>Elymus cinereus</i>	Western Larch	<i>Larix occidentalis</i>
Blue Wildrye	<i>Elymus glaucus</i>	Engelmann Spruce	<i>Picea engelmannii</i>
Quackgrass	<i>Elymus repens</i>	Lodgepole Pine	<i>Pinus contorta</i>
Field Horsetail	<i>Equisetum arvense</i>	Western White Pine	<i>Pinus monticola</i>
Idaho Fescue	<i>Festuca idahoensis</i>	Ponderosa Pine	<i>Pinus ponderosa</i>
Reed Canarygrass	<i>Phalaris arundinacea</i>	Black Cottonwood	<i>Populus balsamifera</i>
Timothy	<i>Phleum pretense</i>	Quaking Aspen	<i>Populus tremuloides</i>
Kentucky Bluegrass	<i>Poa pratensis</i>	Douglas-fir	<i>Pseudotsuga menziesii</i>
Bluebunch Wheatgrass	<i>Pseudoroegneria spicatum</i>	Bebb Willow	<i>Salix bebbiana</i>
Woolgrass	<i>Scirpus cyperinus</i>	Scouler's Willow	<i>Salix scouleriana</i>
Intermediate Wheatgrass	<i>Thinopyrum intermedium</i>	Western Redcedar	<i>Thuja plicata</i>
Tall Wheatgrass	<i>Thinopyrum ponticum</i>	Western Hemlock	<i>Tsuga heterophylla</i>
Broadleaf Cattail	<i>Typha latifolia</i>		

## Rare Plants of Coeur d'Alene River WMA

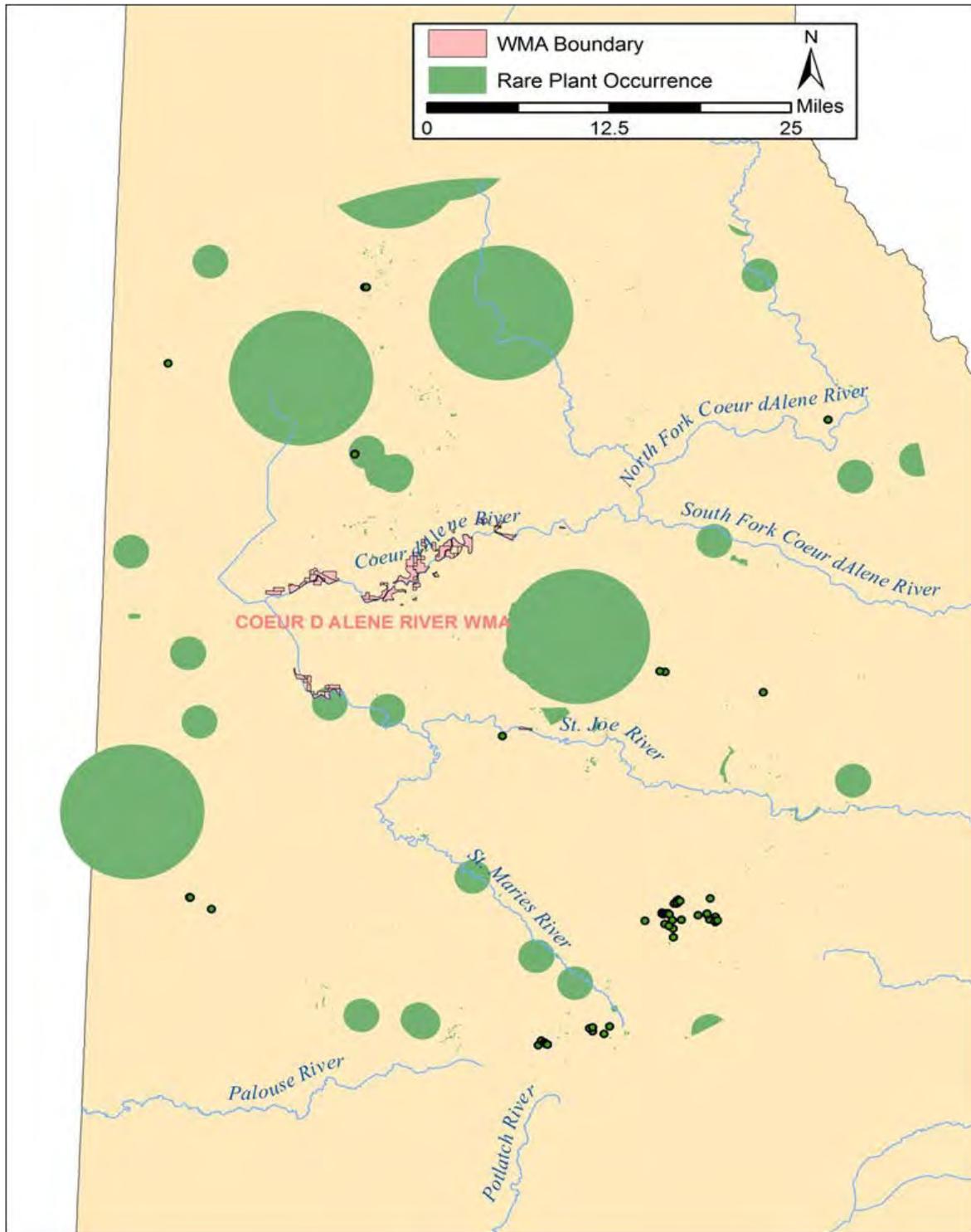
Five rare plant species have been found within the boundary of this WMA, and 52 have been found within 25 miles of the boundary. This is an odd-shaped WMA since the property lines are on the river banks and follow the river. There are also quite a few small parcels that are not connected. Most of the rare plants within the 25-mile buffer are in mountainous terrain. There are several riparian species that probably should be the most targeted of concern, especially those species that are up river from the WMA and are riparian. For example, there is an EO of *Cardamine constancei* a few miles upriver of the WMA. Below is a list of the rare plant species.

This WMA has not been thoroughly surveyed for rare plants. Species found within the 25-mile buffer, or other species, have the potential to exist on this WMA.

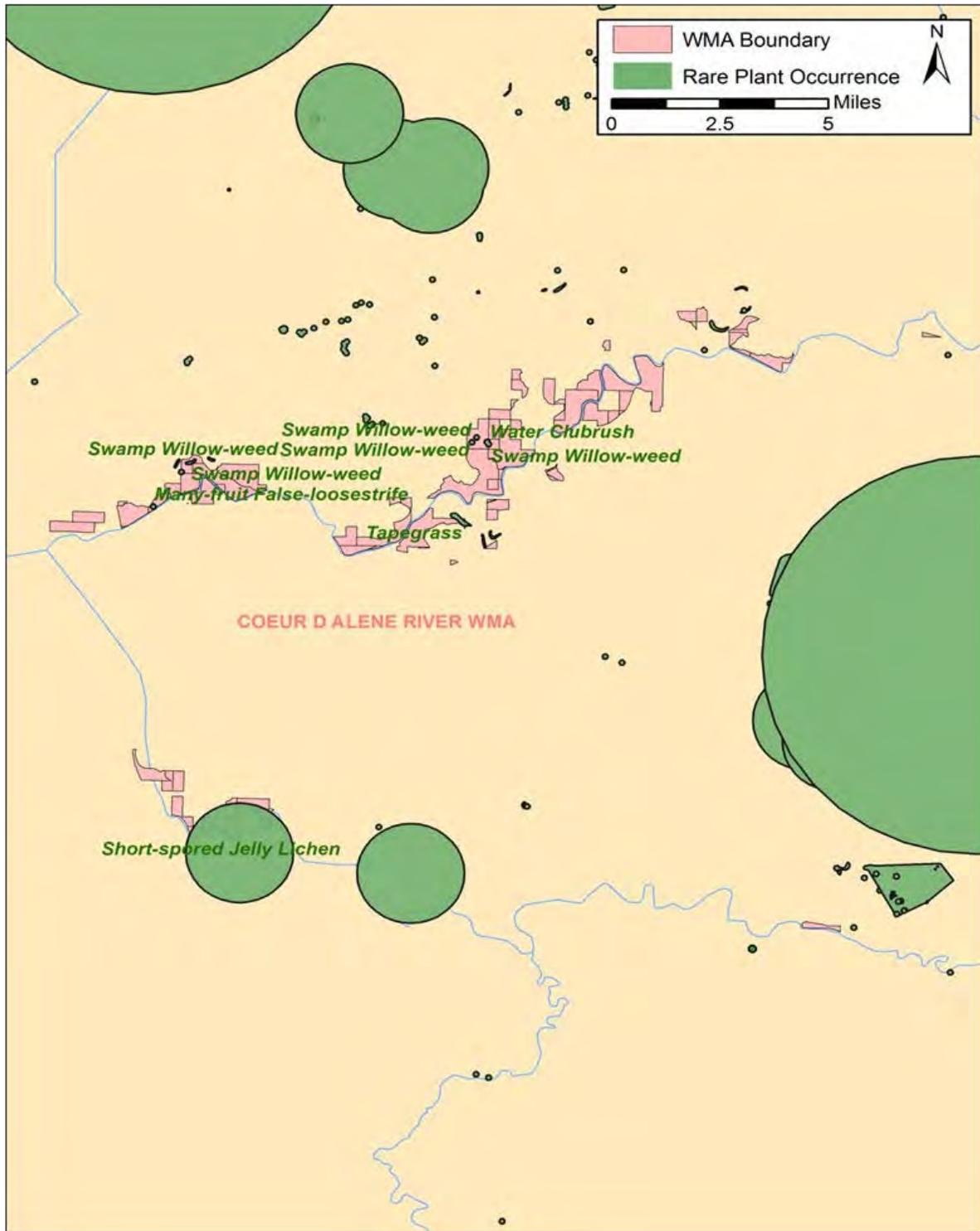
Rare plant species within 25 miles of the Coeur d'Alene River WMA. Bold species occur within the WMA boundaries.

Common Name	Scientific Name	Common Name	Scientific Name
Deer-fern	<i>Blechnum spicant</i>	Pored Lungwort	<i>Lobaria scrobiculata</i>
Crenulate Moonwort	<i>Botrychium crenulatum</i>	<b>Many-fruit False-loosestrife</b>	<b><i>Ludwigia polycarpa</i></b>
Lance-leaved Moonwort	<i>Botrychium lanceolatum</i> var. <i>lanceolatum</i>	Northern Bog Clubmoss	<i>Lycopodiella inundata</i>
Mingan Moonwort	<i>Botrychium minganense</i>	Chickweed Monkeyflower	<i>Mimulus alsinoides</i>
Mountain Moonwort	<i>Botrychium montanum</i>	Bank Monkeyflower	<i>Mimulus clivicola</i>
Northern Moonwort	<i>Botrychium pinnatum</i>	Pine Broomrape	<i>Orobanche pinorum</i>
Least Moonwort	<i>Botrychium simplex</i>	Nail Lichen	<i>Pilophorus acicularis</i>
Green Bug-on-a-stick	<i>Buxbaumia viridis</i>	Herre's Ragged Lichen	<i>Platismatia herrei</i>
Constance's Bittercress	<i>Cardamine constancei</i>	Pseudocyphellaria Lichen	<i>Pseudocyphellaria anomala</i>
California Sedge	<i>Carex californica</i>	Slender Woolly-heads	<i>Psilocarphus tenellus</i>
Beaked Sedge	<i>Carex rostrata</i>	Palouse Goldenweed	<i>Pyrrocoma liatrifomis</i>
Phantom Orchid	<i>Cephalanthera austiniiae</i>	Naked Rhizomnium Moss	<i>Rhizomnium nudum</i>
Palouse Thistle	<i>Cirsium brevifolium</i>	Red-flowered Currant	<i>Ribes sanguineum</i>
<b>Short-spored Jelly Lichen</b>	<b><i>Collema curtisporum</i></b>	Black Snake-root	<i>Sanicula marilandica</i>
Case's Corydalis	<i>Corydalis caseana</i> ssp. <i>hastata</i>	<b>Water Clubrush</b>	<b><i>Schoenoplectus subterminalis</i></b>

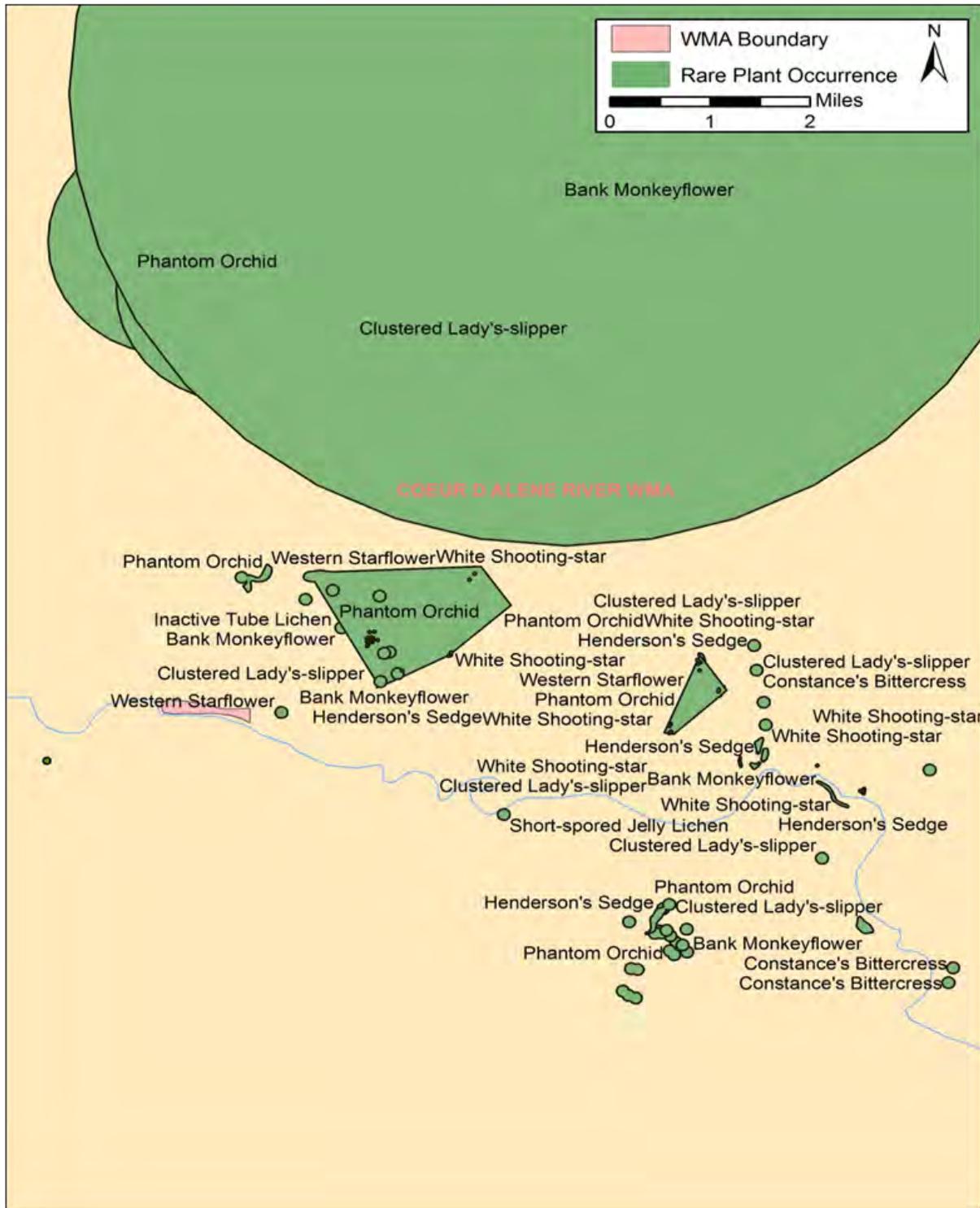
<b>Common Name</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Scientific Name</b>
Clustered Lady's-slipper	<i>Cypripedium fasciculatum</i>	Liverwort	<i>Sphaerocarpos hians</i>
White Shooting-star	<i>Dodecatheon dentatum</i>	Tuckermann's Ball-bearing Lichen	<i>Sphaerophorus globosus</i>
<b>Swamp Willow-weed</b>	<b><i>Epilobium palustre</i></b>	Robust Starwort	<i>Stellaria oxyphylla</i>
Howell's Gumweed	<i>Grindelia howellii</i>	Rush Aster	<i>Symphyotrichum boreale</i>
Yellow Bloodstain Lichen	<i>Haematomma ochroleucum</i>	Leiberg's Tauschia	<i>Tauschia tenuissima</i>
Vanilla Grass	<i>Hierochloe odorata</i>	Western Starflower	<i>Trientalis latifolia</i>
Light Hookeria	<i>Hookeria lucens</i>	Douglas' Clover	<i>Trifolium douglasii</i>
Water Howellia	<i>Howellia aquatilis</i>	Lichen	<i>Tuckermannopsis sepincola</i>
Large Canadian St. John's Wort	<i>Hypericum majus</i>	<b>Tapegrass</b>	<b><i>Vallisneria americana</i></b>
Inactive Tube Lichen	<i>Hypogymnia inactiva</i>	Idaho Strawberry	<i>Waldsteinia idahoensis</i>
Bolander's Rush	<i>Juncus bolanderi</i>		



Rare plant location and distribution maps.



Rare plant location and distribution maps.



Rare plant location and distribution maps.



Rare plant location and distribution maps.

## VII. WILDLIFE SPECIES LIST

(Selected Common Species; additional information available at [www.idfg.idaho.gov](http://www.idfg.idaho.gov))

Common Name	Scientific Name	Common Name	Scientific Name
<b>Birds</b>		<b>Birds (cont.)</b>	
Cooper's Hawk	<i>Accipiter cooperii</i>	American Bittern	<i>Botaurus lentiginosus</i>
Spotted Sandpiper	<i>Actitis macularius</i>	Canada Goose	<i>Branta canadensis</i>
Western Grebe	<i>Aechmophorus occidentalis</i>	Great Horned Owl	<i>Bubo virginianus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Bufflehead	<i>Bucephala albeola</i>
Wood Duck	<i>Aix sponsa</i>	Common Goldeneye	<i>Bucephala clangula</i>
Northern Pintail	<i>Anas acuta</i>	Barrow's Goldeneye	<i>Bucephala islandica</i>
American Widgeon	<i>Anas americana</i>	Red-tailed Hawk	<i>Buteo jamaicensis</i>
Green-winged Teal	<i>Anas carolinensis</i>	Rough-legged Hawk	<i>Buteo lagopus</i>
Northern Shoveler	<i>Anas clypeata</i>	California Quail	<i>Callipepla californica</i>
Cinnamon Teal	<i>Anas cyanoptera</i>	Turkey Vulture	<i>Cathartes aura</i>
Blue-winged Teal	<i>Anas discors</i>	Brown Creeper	<i>Certhia americana</i>
Mallard	<i>Anas platyrhynchos</i>	Killdeer	<i>Charadrius vociferus</i>
Gadwall	<i>Anas strepera</i>	Black Tern	<i>Chlidonias niger</i>
Golden Eagle	<i>Aquila chrysaetos</i>	American Dipper	<i>Cinclus mexicanus</i>
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Northern Harrier	<i>Circus cyaneus</i>
Great Blue Heron	<i>Ardea herodias</i>	Northern Flicker	<i>Colaptes auratus</i>
Short-eared Owl	<i>Asio flammeus</i>	Rock Dove	<i>Columba livia</i>
Lesser Scaup	<i>Aythya affinis</i>	American Crow	<i>Corvus brachyrhynchos</i>
Redhead	<i>Aythya americana</i>	Common Raven	<i>Corvus corax</i>
Ring-necked Duck	<i>Aythya collaris</i>	Steller's Jay	<i>Cyanocitta stelleri</i>
Canvasback	<i>Aythya valisineria</i>	Trumpeter Swan	<i>Cygnus buccinator</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Tundra Swan	<i>Cygnus columbianus</i>
Bohemian Waxwing	<i>Bombycilla garrulus</i>	Blue Grouse	<i>Dendragapus obscurus</i>
Ruffed Grouse	<i>Bonasa umbellus</i>	Hammond's Flycatcher	<i>Empidonax hammondii</i>

Common Name	Scientific Name	Common Name	Scientific Name
<b><i>Birds (cont.)</i></b>		<b><i>Birds (cont.)</i></b>	
Dusky Flycatcher	<i>Empidonax oberholseri</i>	Gray Jay	<i>Perisoreus canadensis</i>
Horned Lark	<i>Eremophila alpestris</i>	Double Crested Cormorant	<i>Phalacrocorax auritus</i>
Brewers Blackbird	<i>Euphagus cyanocephalus</i>	Wilson's Phalarope	<i>Phalaropus tricolor</i>
Merlin	<i>Falco columbarius</i>	Ringed-necked Pheasant	<i>Phasianus colchicus</i>
Prairie Falcon	<i>Falco mexicanus</i>	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Peregrine Falcon	<i>Falco peregrinus</i>	Black-billed Magpie	<i>Pica hudsonia</i>
American Kestrel	<i>Falco sparverius</i>	Downy Woodpecker	<i>Picoides pubescens</i>
American Coot	<i>Fulica americana</i>	Hairy Woodpecker	<i>Picoides villosus</i>
Wilson's Snipe	<i>Gallinago delicata</i>	Pine Grosbeak	<i>Pinicola enucleator</i>
MacGillivray's Warbler	<i>Geothlypis tolmiei</i>	Western Tanager	<i>Piranga ludoviciana</i>
Sandhill Crane	<i>Grus canadensis</i>	Eared Grebe	<i>Podiceps nigricollis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Pied-billed Grebe	<i>Podilymbus podiceps</i>
Evening Grosbeak	<i>Hesperiphona vespertina</i>	Black-capped Chickadee	<i>Poecile atricapillus</i>
Barn Swallow	<i>Hirundo rustica</i>	Mountain Chickadee	<i>Poecile gambeli</i>
Dark-eyed Junco	<i>Junco hyemalis</i>	Chestnut-backed Chickadee	<i>Poecile rufescens</i>
Gull	<i>Larus spp.</i>	Vesper Sparrow	<i>Pooecetes gramineus</i>
Gray-crowned Rosy Finch	<i>Leucosticte tephrocotis</i>	Sora	<i>Porzana carolina</i>
Hooded Merganser	<i>Lophodytes cucullatus</i>	Flammulated Owl	<i>Psilosops flammeolus</i>
Belted Kingfisher	<i>Megaceryle alcyon</i>	Virginia Rail	<i>Rallus limicola</i>
Wild Turkey	<i>Meleagris gallopavo</i>	Ruby-crowned Kinglet	<i>Regulus calendula</i>
Song sparrow	<i>Melospiza melodia</i>	Golden-crowned Kinglet	<i>Regulus satrapa</i>
Common Merganser	<i>Mergus merganser</i>	Rock Wren	<i>Salpinctes obsoletus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>	Calliope Hummingbird	<i>Selasphorus calliope</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>	Yellow-rumped Warbler	<i>Setophaga coronata</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>	Mountain Bluebird	<i>Sialia currucoides</i>
Osprey	<i>Pandion haliaetus</i>	Red-breasted Nuthatch	<i>Sitta canadensis</i>
House Sparrow	<i>Passer domesticus</i>	Pine Siskin	<i>Spinus pinus</i>
American White Pelican	<i>Pelecanus erythrorhynchos</i>	American Goldfinch	<i>Spinus tristis</i>

Common Name	Scientific Name	Common Name	Scientific Name
<b>Birds (cont.)</b>		<b>Mammals (cont.)</b>	
American Tree Sparrow	<i>Spizella arborea</i>	Bobcat	<i>Lynx rufus</i>
Brewer's Sparrow	<i>Spizella breweri</i>	American Marten	<i>Martes americana</i>
Chipping Sparrow	<i>Spizella passerina</i>	Striped Skunk	<i>Mephitis mephitis</i>
Barred Owl	<i>Strix varia</i>	Long-tailed Vole	<i>Microtus longicaudis</i>
Western Meadowlark	<i>Sturnella neglecta</i>	Meadow Vole	<i>Microtus pennsylvanicus</i>
European Starling	<i>Sturnus vulgaris</i>	Short-tailed Weasel	<i>Mustela ermine</i>
Tree Swallow	<i>Tachycineta bicolor</i>	Long-tailed Weasel	<i>Mustela frenata</i>
House Wren	<i>Troglodytes aedon</i>	American Mink	<i>Mustela vison</i>
American Robin	<i>Turdus migratorius</i>	Long-eared Myotis	<i>Myotis evotis</i>
Cassin's Vireo	<i>Vireo cassinii</i>	Little Brown Myotis	<i>Myotis lucifugus</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	Bushy-tailed Wood Rat	<i>Neotoma cinerea</i>
<b>Mammals</b>		Mule Deer	<i>Odocoileus hemionus</i>
Moose	<i>Alces alces</i>	White-tailed Deer	<i>Odocoileus virginianus</i>
Coyote	<i>Canis latrans</i>	Common Muskrat	<i>Ondatra zibethicus</i>
Gray Wolf	<i>Canis lupus</i>	Great Basin Pocket Mouse	<i>Perognathus parvus</i>
American Beaver	<i>Castor canadensis</i>	Deer Mouse	<i>Peromyscus maniculatus</i>
Elk	<i>Cervus elaphus</i>	Heather Vole	<i>Phenacomys intermedius</i>
Columbian Ground Squirrel	<i>Citellus columbianus</i>	Vole	<i>Phenacomys spp.</i>
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Northern Raccoon	<i>Procyon lotor</i>
Big Brown Bat	<i>Eptesicus fuscus</i>	Mountain Lion	<i>Puma concolor</i>
Common Porcupine	<i>Erethizon dorsatum</i>	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
Yellow-pine Chipmunk	<i>Eutamias amoenus</i>	Masked Shrew	<i>Sorex cinereus</i>
Red-tailed Chipmunk	<i>Eutamias ruficaudus</i>	Shrew	<i>Sorex spp.</i>
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Mountain Cottontail	<i>Sylvilagus nuttallii</i>
Hoary Bat	<i>Lasiurus cinereus</i>	Yellow-pine Chipmunk	<i>Tamias amoenus</i>
Snowshoe Hare	<i>Lepus americanus</i>	Least Chipmunk	<i>Tamias minimus</i>
River Otter	<i>Lontra canadensis</i>	Red-tailed Chipmunk	<i>Tamias ruficaudus</i>

Common Name	Scientific Name	Common Name	Scientific Name
<b><i>Mammals (cont.)</i></b>		<b><i>Amphibians and Reptiles (cont.)</i></b>	
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Western Rattlesnake	<i>Crotalus viridis</i>
Northern Pocket Gopher	<i>Thomomys monticola</i>	Northern Alligator Lizard	<i>Elgaria coerulea</i>
American Black Bear	<i>Ursus americanus</i>	Western Skink	<i>Eumeces skiltonianus</i>
Red Fox	<i>Vulpes vulpes</i>	Pine-gopher Snake	<i>Pituophis melanoleucus</i>
Western Jumping Mouse	<i>Zapus princeps</i>	Pacific Tree Frog	<i>Pseudacris regilla</i>
<b><i>Amphibians and Reptiles</i></b>		Bull Frog	<i>Rana catesbeiana</i>
Tiger Salamander	<i>Ambystoma tigrinum</i>	Columbia Spotted Frog	<i>Rana luteiventris</i>
Western Toad	<i>Anaxyrus boreas</i>	Northern Leopard Frog	<i>Rana pipiens</i>
Rubber Boa	<i>Charina bottae</i>	Terrestrial Garter Snake	<i>Thamnophis elegans</i>
Painted Turtle	<i>Chrysemys picta</i>	Common Garter Snake	<i>Thamnophis sirtalis</i>
Racer	<i>Coluber constrictor</i>		

## VIII. LAND ACQUISITIONS AND AGREEMENTS

<b>Land Acquisitions</b>			
<b>Year</b>	<b>ACNO</b>	<b>Acres</b>	<b>Acquired From</b>
7/1/1954	05-0072	154.96	Lucinda Hemenway
11/2/1955	05-0074	40.02	Josephine Forrester
11/2/1955	28-0542	79.82	Josephine Forrester
8/22/1961	28-0569	31.67	D W Lewis
12/1/1964	28-0529	393.07	American Game Association
12/9/1964	28-0530	3.62	Kilarney Hunting Club Inc.
12/14/1965	28-0532	40.06	Raymond Griner
7/5/1966	28-0543	39.51	Papesh Comp
10/30/1969	28-0524	458.95	Diamond International
3/18/1970	28-0526	72.72	Addie Belle Bolich
1/4/1971	28-0535	394.13	Seattle First National Bank & Frisco Mining Comp Ltd
4/27/1971	28-0545	243.07	Joe Farber
6/14/1971	28-0521	440.66	Robert H Kennedy & Nancy D Kennedy
12/31/1971	28-0531	121.1	Evan Jones
6/21/1972	28-0551	163.13	Robert H Kennedy
7/7/1972	28-0519	542.24	Mattawa Land & Cattle Co
8/1/1972	28-0540	2.72	Ben Reese
8/30/1972	28-0552	149.08	Leroy C McDaniel
9/1/1972	28-0515	131.53	Elvier Oehrling
9/6/1972	28-0544	35.57	Raymond C Chatfield
9/6/1972	28-0553	20.1	Potlatch Forest Inc.
10/5/1972	28-0550	62.79	Lonnie Victor Soucy
12/20/1972	28-0541	73.78	Chris Weddle
1/3/1973	28-0548	1.88	Idaho Forest Industries Inc.
3/20/1975	28-0520	119.49	Floyd L Klein
12/23/1975	28-0549	10.42	Idaho Forest Industries Inc.
12/30/1975	28-0554	20.5	Pat Flammia
1/20/1976	28-0533	356.9	McHugh & Johnston
2/11/1976	28-0522	335.16	Emelia Shaffer
12/29/1978	28-0561	96.18	Philip P Reed
4/5/1979	28-0534	139.52	Helen Strobel
5/1/1979	28-0536	61.78	Pat Flammia
1/30/1981	05-0070	58.11	Potlatch Corp
12/31/1981	05-0071	160.242	Potlatch Corp
1/4/1982	28-0539	8.35	Lloyd Harding
8/5/1982	28-0527	36.5	Robert B McFarland
8/24/1982	28-0518	28.82	Robert B McFarland
8/20/1984	28-0547	158.98	Eugene Neff
7/22/1985	28-0517	60.14	Shirley Foley
7/22/1985	28-0525	57.93	Virgil Earling
1/23/1990	28-0546	78.49	Bert Russell
1/10/1992	28-0512	59.78	C Lanes, W Goodrich, J Goodrich

<b>Land Acquisitions</b>			
<b>Year</b>	<b>ACNO</b>	<b>Acres</b>	<b>Acquired From</b>
1/8/1993	05-0076	147.27	Rustin & Tina Young
12/3/1993	05-0075	34.37	Larry M & Laureen Belmont
12/23/2002	28-0920	40.21	Marie Russell
3/2/2004	28-0943	15.64	Florence P Farber
3/8/2007	05-0969	79.055	Kenneth & Laurie Martin
11/5/2009	28-1006	50.1	Robert Dionne
4/13/2011	28-1043	5.72	ITD
5/23/2012	28-1066	14.94	Stimson Lumber Co
6/18/2012	28-1064	9.15	Hayman
2/1/2013	W28-0797	165.67	Mary E Sandaker
<i>Sub-total Acquired</i>		6,105.597	
<b>Lease Agreements and MOUs</b>			
<b>Year</b>	<b>ACNO</b>	<b>Acres</b>	<b>Acquired From</b>
1956	05-0073	234.30	Washington Water Power Co, Round Lake Segment
1959	X28-0537	1.37	BLM, Amended 11/16/61. This was a 1.37 ac BLM Agreement. If it was the typical 25 years, would have expired by 1986. Changed to expired AcNo 8/16/2011.
1969	28-0514	444.56	BLM
1973	X28-0523	25.50	USFS, Medimont Access Site. Medimont Segment
1986	28-0570	230.07	USFS - Rose lake Outlet
2007	28-0528	478.51	Purpose is wildlife habitat management. Three Parcels
2012	40-1083	17.70	This ACNO includes the Conservation Easement (469219), an Access Easement and Covenant, and a Baseline Report. Appraisal valued the Conservation Easement at \$161,000, paid by Avista, who conveyed to the Department at no cost.
<i>Sub-total Acquired</i>		1,432.01	
<b>WMA Total Acres</b>		<b>7,537.607</b>	

## **IX. INFRASTRUCTURE**

### Building/structures

24' x 64' steel and concrete office/shop/equipment shed

24' x 40' WMA residence/with attached garage

12' x 36' wooden storage shed

10' x 10' steel storage shed

8 campsites

3 restrooms

6 parking areas

14 fishing and boating access areas

### Water improvements

8 small constructed wetlands

### Roads and trails

7 miles unpaved access site roads

### Fences

4 miles livestock boundary fence

# COEUR D'ALENE RIVER WILDLIFE MANAGEMENT AREA PLAN

## Approval

**Submitted by:**

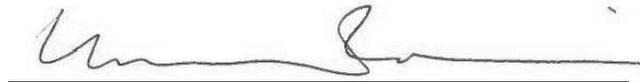


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Miles Benker, Habitat Biologist

**Reviewed by:**



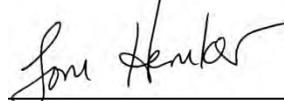
\_\_\_\_\_  
James Teare, Regional Habitat Manager



\_\_\_\_\_  
Chip Corsi, Regional Supervisor



\_\_\_\_\_  
Chris Murphy, Bureau of Wildlife



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Tom Hemker, State Habitat Manager

**Approved by:**



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Virgil Moore, Director