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7 Coeur d' Alene Subbasin Inventory of Existing Programs – Aquatic

7.1 Current Management Directions

State and Federal agencies and Tribal governments that have management authority over fish and wildlife resources in the Coeur d' Alene Subbasin include the U.S. Fish and Wildlife Service, U.S. Forest Service, Idaho Fish and Game, and the Coeur d' Alene Tribe. Other agencies, including, but not limited to, the Environmental Protection Agency, the Natural Resources Conservation Service, and the Idaho Department of Environmental Quality are involved in programs that affect the land or water that provide habitat for fish and wildlife. A complete list of state, federal, and Tribal entities that are involved in management of fish and wildlife or their habitats is included in Section 2.4.1, along with a description of the agency's management direction.

The following section describes the local government entities that are involved in natural resources management in the Coeur d' Alene Subbasin.

7.1.1 Local Government

7.1.1.1 Kootenai-Shoshone Soil and Water Conservation District

The current management strategies of Kootenai-Shoshone Soil and Water Conservation District (KSSWCD) can be summarized from excerpts of the District's current five-year plan. The goals and objectives include:

Water Quality

Goal: Improve water quality in streams and lakes that do not meet state water quality standards.

Objective: Administer programs and projects that accelerate Best Management Practice (BMP) implementation.

Objective: Represent private land interests on local committees and groups.

Information and Education

Goal: Increase public awareness of KSSWCD activities.

Objective: Provide conservation information to youth and adults.

Urban

Goal: Maintain agricultural base within District.

Objective: Protect farmland from urban encroachment.

Woodland

Goal: Insure healthy, productive woodlands within the district

Objective: Assist producers with woodland planning and implementation of forestland BMPs, including forest road remediation.

Objective: Strengthen partnerships with other agencies and groups working on forestland issues.

Objective: Stimulate reforestation with private landowners on large- and small-scales by providing low-cost tree stock through the District's tree sales program.

District Operations

Goal: Maintain an active and effective KSSWCD board.

Objective: Seek training for KSSWCD members and staff.

Objective: Insure adequate funding for KSSWCD operations.

Although not specifically addressed with goals and objectives within the five-year plan, other important resource concerns are mentioned in the introduction. These concerns include riparian, recreation, rangeland, and fish and wildlife.

Much, if not most of the focus in the fairly recent past has been water quality. The KSSWCD has been working toward achieving Total Maximum Daily Loads (TMDLs) compliance in local streams. Lake Creek has been a high priority in that regard; consequently, much of the work listed in the following report summaries is in the Lake Creek area. A significant sediment load has been prevented from entering Lake Creek, an important trout spawning stream. More sediment-reduction work is planned in this watershed. Very preliminary plans are presently in progress to combine efforts with the Coeur d' Alene Tribe to continue to reduce sediment loads in the Lake Creek watershed.

The KSSWCD has been involved in several significant streambank stabilization projects on the Coeur d' Alene River and Wolf Lodge Creek. These stabilization projects contain important habitat components, both instream and riparian. Stabilization, and consequent sediment reduction, requires a habitat component.

In conjunction with the TMDL focus, KSSWCD contracted with Idaho Department of Environmental Quality (IDEQ) to complete a streambank erosion inventory for the 303(d) listed streams in the region. KSSWCD has detailed reports on streambank erosion on streams throughout the region. These reports include observations of habitat, presence or absence of floodplains, wildlife, and more. KSSWCD has identified an important segment of TMDL and habitat concerns in the region, with underlying causes and some suggested remedies.

7.2 Existing and Imminent Protections

In 1992, the Environmental Protection Agency (EPA) issued a Record of Decision (ROD) for the Bunker Hill Mining and Metallurgical Complex located in Shoshone County, Idaho. As part of the 1992 ROD, the EPA determined federal water quality criteria under the Clean Water Act for human health and ecological health protection were applicable for on-site surface waters. Goals for maximum contaminant levels as identified in the Safe Drinking Water Act were applicable for site-wide groundwater. The general objectives identified in the ROD include: (1) minimize direct human contact with contaminants, (2) reduce erosion of the hillsides, (3) minimize windblown dust from contaminated areas, (4) reduce suspended sediment and contaminant loading in surface water run-off to the South Fork Coeur d' Alene River, (4) minimize migration of contaminants to groundwater, (5) consolidate contaminated

material removed during remedial actions in on-site repositories and close these areas with engineered covers to reduce infiltration (EPA 2000).

In 1994, the EPA Region 10 and State of Idaho entered a cost-sharing agreement specific to areas of the Non-Populated Areas of the 21-square mile Bunker Hill Superfund Site for remedial actions. The cost-share agreement is specific for the following areas: hillsides, gulches (Grouse, Government, Magnet, and Deadwood), Smeltonville Flats (north and south of I-90), Central Impoundment Area, Industrial Complex, Boulevard Area and Railroad Gulch, Mine Operations Area, Central Treatment Plant, Bunker and Milo creeks, and Reed Landing. The *First 5-year Review of the Non-Populated Area Operable Unit Bunker Hill Mining and Metallurgical Complex Shoshone County, Idaho* (EPA 2000) provides a more detailed summary of remedial actions implemented by the EPA Region 10 and State of Idaho during the initial five-year review (Available February, 2004 at: <http://www.epa.gov/superfund/sites/fiveyear/f00-10003.pdf>).

7.3 Inventory of Recent Restoration and Conservation Projects¹

Refer to Appendix H for a comprehensive list of BPA and non-BPA funded projects within the IMP.

7.3.1 BPA Funded Projects

BPA funded mitigation within the Subbasin has occurred primarily through implementation efforts by the Coeur d' Alene Tribe as off-site protection, mitigation, enhancement and compensation activities called for under Section 4(h) of the Pacific Northwest Electric Power Planning and Conservation Act and the Northwest Power Planning Council Fish and Wildlife Program. These activities provide partial mitigation for the extirpation of anadromous fish resources from usual and accustomed harvest areas and Reservation lands. Additional mitigation is also occurring to address impacts to resident fish and wildlife populations and habitats attributable to development of the Federal Columbia River Power System. This includes the implementation of wildlife mitigation efforts, via the Albeni Falls Interagency Work Group, through off-site mitigation intended to address the wildlife construction and inundation ledger for Albeni Falls Dam.

7.3.1.1 Fish Enhancement on the Coeur d' Alene Reservation

This project began in 1987, when the Northwest Power and Conservation Council (Council) amended the Columbia River Basin Fish and Wildlife Program as to conduct baseline stream surveys of tributaries located on the Coeur d' Alene Indian Reservation. An ongoing resident fish substitution project, this project is funded through the Bonneville Power Administration Project #9004400 to mitigate for lost anadromous fishing opportunities resulting from the construction and operation of Grand Coulee Dam. Initial work used a modified Missouri method (Fajen and Wehnes 1981) to rank Reservation streams according to their potential for habitat development for westslope cutthroat trout and bull trout. Four streams (Alder, Benewah, Evans, and Lake creeks) were identified as having the best potential for restoration and targeted for further study.

¹ This section was taken directly from the Coeur d' Alene Subbasin Summary, 2001 pp. 68-90.

Between 1992 and 1994, the Tribe described watershed processes and resource conditions in the four target drainages. Channel types delineated a framework to predict channel response and to identify areas best suited for improvement projects (Rosgen 1991). Channel stability evaluations provided a quantitative determination of existing channel stability (Kappesser 1992; Pfancuch 1975). Riparian stand conditions identified potential LOD recruitment and channel shading problems. Biological assessments included physical aquatic habitat evaluation, trout population estimates, biomass estimates, individual stock assessments, and quantification of benthic macroinvertebrates.

In 1994, the Council adopted and in 1995 funded the recommendations for: 1) habitat restoration in Lake, Benewah, Evans, and Alder creeks; 2) purchase of critical watershed areas; 3) an educational/outreach program to facilitate a “holistic” watershed protection process; 4) an interim hatchery production fishery for Tribal and non-Tribal members of the Reservation through construction, operation and maintenance of five trout ponds; 5) design, construct, operate and maintain a trout production facility; and 5) a five-year monitoring program to evaluate the effectiveness of the production and habitat improvement projects.

A complete list of Coeur d’ Alene Tribal accomplishments is provided below. Accomplishments include continuing: 1) data collection efforts for an adaptive management strategy in this project; 2) limiting factor analysis to prioritize restoration activities; and 3) active and passive restoration treatments in the target tributaries since 1995 under the direction of community-based watershed councils and with the support of private landowners. These are sustainable projects, ensured by a combination of landowner agreements, conservation easements, cost-share initiatives, and continuing purchase of critical habitats. Ongoing monitoring efforts examining trout migration patterns, habitat use and incubation success, and overall population structure are providing data used to refine treatment priorities.

Implement Fisheries Enhancement Opportunities, Project #9004400

- 1987 Baseline stream surveys.
- 1990 Additional streams surveys on Reservation lands.
- 1990 Annual Report of enhancement potential for westslope cutthroat and bull trout.
- 1991 Physical and biological surveys of ten key tributaries.
- 1991 Selected target tributaries for restoration and enhancement using Missouri method.
- 1992 Watershed assessment techniques began on the Coeur d’ Alene Indian Reservation.
- 1993 Baseline population estimates for westslope cutthroat trout and macroinvertebrates in target tributaries.
- 1993 Limiting factor analyses for westslope cutthroat and bull trout in target tributaries.
- 1994 Habitat recommendations to protect and increase numbers of westslope cutthroat and bull trout adopted by the Council.
- 1995 Identified priority areas for restoration were in four target watersheds.
- 1995 Initiated the first demonstration projects. Erected 2.8 km of exclusion fencing, installed bank protection structures, constructed pool habitat, and reestablished connections with historic floodplain channels at two locations.
- 1995 Implemented the first compensatory harvest project by planting 1,000 rainbow trout into Worley Pond.

- 1996 Implemented additional demonstration projects. Erected 1.9 km of exclusion fencing, placed large woody debris (LWD) in a 300 meter test reach, installed two current deflectors, and planted more than 9,000 trees and shrubs.
- 1996 Maintained and stocked Worley Trout Pond with over 3,000 rainbow trout.
- 1997 Completed 5-year Tribal Fisheries Management Plan.
- 1997 Constructed and enhanced 4 acres of wetland habitat, constructed a side-channel rearing pond, built a bio-revetment to protect 100 meters of streambank, and planted more than 9,000 trees and shrubs.
- 1997 Stocked Worley Pond with 2,200 rainbow trout.
- 1998 Constructed and enhanced 2 acres of wetland habitat and planted more than 9,000 trees and shrubs.
- 1998 Stocked Worley Pond with 1,400 rainbow trout.
- 1998 Compiled comprehensive lists of landowner contacts in the four target watersheds.
- 1998 Studied the quality and quantity of gravel in known spawning tributaries.
- 1998 Genetic analysis of 400 fish in 13 locations to determine stock purity and relatedness of westslope cutthroat trout stocks.
- 1998 Completed supplementation feasibility report for westslope cutthroat trout.
- 1998 Rehabilitated more than 20 acres of riparian habitat and planted more than 11,000 trees and shrubs. Substantially reduced non-point source sediment pollution from over 300 acres of farmland.
- 1998 Initiated a bathymetric survey of Coeur d' Alene Lake to quantify near shore habitat.
- 1998 Completed a biological assessment for bull trout in waters of the Coeur d' Alene Reservation. Obtained an incidental take permit from the USFWS to authorize restoration and monitoring/evaluation activities and ensure compliance with Endangered Species Act (ESA).
- 1998 Completed a National Environmental Policy Act (NEPA) compliance checklist and supplemental analysis for watershed projects under the watershed management program Environmental Impact Statement (EIS). Completed a stock assessment for westslope cutthroat trout in waters of the Coeur d' Alene Reservation.
- 1999 Completed a stock assessment for westslope cutthroat trout in waters of the Coeur d' Alene Reservation.
- 1999 Completed a four-year water quality study on Lake Coeur d'Alene.
- 1999 Monitored fish populations at 101 index sites in 4 watersheds.
- 1999 Developed Management Plan to guide fisheries enhancement efforts.
- 1999 Completed water storage structures in the Lake Creek drainage.
- 1999 Prepared, stocked, and maintained put and take fish pond.
- 1999 Prepared annual reports and supplemental analyses.
- 2000 Planted more than 12,000 trees and shrubs.
- 2000 Established a native plant nursery.
- 2000 Engaged in advanced scoping of restoration projects with landowners in the target watersheds, targeting high priority areas outlined in the Fisheries Project Management Plan.
- 2000 Developed sites in target watersheds to restore elements of floodplain function, provide high quality rearing areas for juvenile trout, or improve available spawning habitat for adult trout.
- 2000 Completed water storage structures in the Lake Creek drainage.

- 2000 Prepared, stocked, and maintained put and take fish pond.
- 2000 Completed population estimates of remaining fish in put and take pond.
- 2000 Monitored fish populations at 101 index sites in 4 watersheds.
- 2001 Completed NEPA requirements for all planned enhancement projects.
- 2001 Engaged in advanced scoping of restoration projects with landowners in the target watersheds, targeting high priority areas outlined in the Fisheries Project Management Plan.
- 2001 Developed the provisions of a long-term easement process for application on private lands within the target watersheds.
- 2001 Updated Tribal standards for riparian buffer management and incorporated new standards into the Tribal Forest Management Plan.
- 2001 Coordinated restoration and management activities with other Tribal programs involved in Natural Resource Management.
- 2001 Planted more than 14,000 trees and shrubs.
- 2001 Developed sites in target watersheds to restore elements of floodplain function, provide high quality rearing areas for juvenile trout, or improve available spawning habitat for adult trout.
- 2001 Completed construction of new stream channel and associated floodplain habitat in Benewah Creek to restore 2000 feet of entrenched channel.
- 2001 Completed water storage structures in the Lake Creek drainage.
- 2001 Implemented the fish stocking strategy at additional put and take fishing sites on the Reservation.
- 2001 Prepared, stocked, and maintained put and take fish ponds.
- 2001 Completed population estimates of remaining fish in put and take pond.
- 2001 Monitored fish populations at 101 index sites in 4 watersheds.
- 2002 Reviewed the existing management plan and made adaptive changes, as necessary, to ensure that fishing pressure on wild stocks remains at acceptable levels.
- 2002 Planted more than 12,000 trees and shrubs.
- 2002 Completed population estimates of remaining fish in put and take pond.
- 2002 Monitored fish populations at 101 index sites in 4 watersheds.
- 2002 Finalized a Habitat Protection Plan to prioritize properties for restoration/enhancement measures in 4 target watersheds.
- 2002 Completed a Research, Monitoring and Evaluation Plan and Technician Training Manual.
- 2002 Prepared a comprehensive annual report to evaluate all project activities from 1995 through 2001.

Lake Creek Land Acquisition and Enhancement, Project #9004401

- 1990 Completion of appraisal and other pre-acquisition requirements.
- 2003 Purchase one fee-title property: 155 acres located on Lake Coeur d'Alene.
- 2004 Will be rolled into the Coeur d' Alene Wetlands project in fiscal year 2004; funding will be additive.

Coeur d' Alene Tribe Trout Production Facility, Project #9004402

- 1998 Completed supplementation feasibility report for westslope cutthroat trout on the Coeur d' Alene Indian Reservation.

- 1998 Compiled comprehensive lists of landowner contacts in each of the target watersheds.
- 1999 Completed hatchery Master Plan.
- 1999 Completed hatchery NEPA process.
- 1999 Completed genetic analysis of cutthroat trout in reservation waters.
- 1999 Completed 4 additional trout ponds for stocking.

Coeur d’ Alene Tribe Trout Production Facility

A trout production facility is planned for the Coeur d’ Alene Reservation to supplement native fish stocks in tributaries located on the Reservation, as well as, provide fish for an interim fishery in trout ponds. The Coeur d’ Alene Tribe Trout Production Facility is intended to rear and release westslope cutthroat trout into rivers and streams with the express purpose of increasing the numbers of fish spawning, incubating and rearing in the natural environment. It will use the modern technology that hatcheries offer to overcome the mortality occurring in lakes, rivers, and streams after eggs are laid in the gravel. Supplementation of native fish stocks in conjunction with effective habitat restoration will be the primary means of achieving these biological goals.

7.3.2 Non-BPA Funded Projects

7.3.2.1 Santa Creek Streambank Project

Santa Creek Streambank Protection and Stability Project

The project is to stabilize 1 mile of severely eroding banks of Santa Creek, a tributary to St. Maries River. Monitoring is conducted by regular maintenance by landowner and Bonner Soil and Water Conservation District (BSWCD) with annual inspection by IDEQ. Accomplishments consist of 2 miles of exclusion fencing, riparian buffer, and bank stabilization (1 mile on both sides). Thousands of willows, trees and shrubs were planted. Raptor roosts were installed to control rodents. Four hard crossings were installed for cattle management.

Special Notes

A freeze in July 2002 caused significant willow and dogwood mortality. It was replanted in May 2003 and the vegetation has shown improvement. A new 319 grant has been approved for adjacent 1.5 miles of stream to begin work in 2004.

7.3.2.2 Kootenai-Shoshone Soil and Water Conservation District Projects

WQPA 98-10 (Dryland Crops on Erodible Soils)

Growing dryland crops on erodible soils to reduce the amount of sediment input into Lake Creek. Monitoring includes annual inspections by KSSWCD and/or Natural Resources Conservation Service (NRCS). Accomplishments consist of 211 acres no-till oats, 36 acres permanent cover crops, 3 grade stabilizations, 5 gully plugs, 1 sediment basin, 3621 feet diversions (waterbars on firebreaks), 340 feet grassed waterway, 1 sediment retention pond, and 1 sediment retention/wildlife-habitat pond. This project is funded by the Idaho Soils Conservation Council (ISCC) and the Coeur d’ Alene Indian Tribe. The project will continue through 2007.

WQPA 94-4 (Dryland Crops on Erodible Soils)

Growing dryland crops on erodible soils to reduce the amount of sediment input to Lake Creek.

To date 248 acres no-till oats and winter wheat, 8 gully plugs, and 3 sediment basins have been implemented. This project is funded by the ISCC and ends in 2003.

WQPA 97-7 (Dryland Crops on Erodible Soils)

Reduce sediment inputs to Lake Creek with dryland crops. To date 64 acres no-till, 2 gully plugs, 251 acres permanent cover crops, 2950 feet diversions (waterbars on firebreaks), have been implemented. The project, funded by the ISCC, began in 1993 and ended in 2002.

WQPA 00-15 (Sediment/storage Ponds on Upper Lake Creek)

Sediment storage ponds with fish passage were constructed to reduce the input of sediment to Lake Creek. In addition, 2.5 acres of foliage was planted in critical areas. Funding was provided by ISCC. The project began in 2000 and ends in December of 2003.

WQPA 01-16 (Sediment Retention Pond)

A sediment retention pond at the lowest point of very erodible dryland farm was built to reduce sediment input into Lake Creek. Area surrounding pond was planted to wildlife cover. Site will be monitored over years to assess sediment collection and wildlife use. The project is funded by ISCC and will continue through 2009.

WQPA 01-1 (Mica Creek Ranch Improvements)

A cattle and horse ranch on Mica Creek is 303(d) listed for sediment and bacteria. Ranch was implicated for bacteria since it was the only ranch on the creek. The project constructed 11,018 feet of exclusion and cross fence, 3 spring developments with pumps and troughs, and 3.3 acres of riparian use exclusion. Cross-fencing was included to help manage stock after access to stream watering was lost. IDEQ supplemented cost-share when costs exceeded allowable amounts. The project is funded by the Water Quality Program for Agriculture (WQPA) and IDEQ and will continue through 2005.

WQPA 98-9 (Dryland Crops on Erodible Soils)

An area 133-acres designated for no-till wheat and oats, 3 gully plugs, 1 sediment basin, 69 acres permanent cover crop, and 2515 feet diversions (waterbars on firebreak) were created to reduce sediment into Lake Creek. Funding is provided by ISCC and will continue through 2007.

WQPA 97-8 (Dryland Crops on Erodible Soils)

To reduce sediment into Lake Creek 547 feet of diversions (waterbars on firebreak), 9 gully plugs, 1 sediment basin, and 1 pond were constructed. Funding was provided by ISCC and the project will continue through 2006.

WQPA 00-14 (Dryland Crops on Erodible Soils)

To reduce sediment inputs to Lake Creek one sediment trap pond was constructed. An island was created in middle of the pond for waterfowl nesting, surrounding area was planted to wildlife habitat. The project was funded by ISCC and ended in 2001.

WQPA 00-11 (Dryland Crops on Erodible Soils)

A one acre riparian forest buffer, 764 feet of diversions (waterbars on firebreak), 3.5 acres critical area plantings, 2 ponds, and 14 gully plugs were constructed to reduce sediment inputs

into Lake Creek. The project is funded by the ISCC and will continue through 2003.

SAWQP 95-6 (Dryland Crops on Erodible Soils)

To reduce sediment inputs into Lake Creek, 568 acres no-till oats and wheat, 1440 feet grassed waterway, 5 sediment basins, and 126 acres permanent cover crop were created. The project was funded by ISCC and ended in 2002.

SAWQP 93-2 (Dryland Crops on Erodible Soils)

To reduce sediment inputs to Lake Creek, 114 acres permanent cover crop, 5300 feet grassed waterway, 1 gully plug, and 1 sediment basin were constructed. The project was funded by the ISCC and ended in 2002.

KC 319 MN (Sediment Retention Pond)

One sediment retention pond was constructed to reduce sediment inputs to Kidd Creek. Pond was designed to trap sediment from erosion coming from pasture/hay/crop lands. Surrounding area planted to riparian buffer/wildlife habitat. The project is funded by the IDEQ and ends in 2003.

CDALMP-DW (Streambank Restoration)

A portion of Wolf Lodge Creek's streambank was eroding more than 7 feet annually. Bank was armored and revegetated. Project consisted of 579 feet streambank stabilization, and 75 feet headcut from ephemeral stream stabilized. Adjoining riparian buffer planted. The project is jointly funded by IDEQ and Idaho Department of Fish and Game (IDFG), and ends in 2003.

WHIP-GM (Dryland Crops on Erodible Soils)

To reduce sediment inputs to streams and increase wildlife habitat, 160-acres were converted into dryland farming and 108 acres enrolled into the Conservation Reserve Program (CRP). The project was funded by the NRCS and ended in 1999.

CRP-HM (Dryland Crops on Erodible Soils)

To reduce sediment inputs into Lake Creek and improve wildlife habitat, 90.5 acres of CRP permanent conservation cover were established. The project is funded by the NRCS and ends in 2003.

WQPA-CR (Dryland Crops on Erodible Soils)

To evaluate the use of gully plugs, one badly erodible gully was plugged and one was not. Monitoring will evaluate the difference in sedimentation rates between the two gullies. This project is near Lake Creek. Funding is provided by the ISCC and KSSWCD and ends in 2003.

CDAR DEMO-MS (Streambank Stabilization)

Streambanks on both side of a 3000 ft reach of the Lower Coeur d' Alene River in Kootenai County were stabilized using rock armour and extensive riparian planting. Monitoring included seven cross sectional transects to model the sedimentation rate. The project was funded by IDEQ and ended in 2001.

2000-UNI-DM (Sediment Retention Pond)

A sediment retention pond to trap sediment from gully through pasture was created in the Lake

Creek Watershed. This project was funded by the private landowner and ended in 2000.

CRP-RB (Dryland Crops on Erodible Soils)

To reduce sediment inputs to Lake Creek and improve wildlife-habitat, 320 acres of highly erodible soils were enrolled into CRP. The project is funded by NRCS and ends in 2003.

EQIP-CR (Streambank Stabilization)

An 800 ft section of the North Fork Coeur d' Alene River banks were stabilized. The project was funded by the NRCS and ends in 2003.

Lake Creek Monitoring

Water quality and quantity monitoring on Lake Creek consists of two gauging stations collecting data on temperature and velocity. Data was analyzed at the University of Idaho. Seven years of data were collected; the project ended in 2001.

7.4 Strategies Currently Being Implemented Through Existing Projects

7.4.1 Limiting Factors and Strategies Currently Being Implemented

As described in Section 2.4.2, a database was developed listing the recent projects that have been implemented in the subbasin. Each project was coded for the limiting factors that were addressed, and the strategies that were employed.

In the Coeur d' Alene Subbasin, 63 recent restoration and conservation projects were identified. Of the projects identified, 10 were focused on resident fish, 19 primarily benefited wildlife, and 34 benefited both fish and wildlife.

Most of the recent projects in the Coeur d' Alene Subbasin (87 percent) have focused on addressing habitat-related limiting factors, particularly habitat quality and water quality or quantity, with less emphasis on habitat quantity or barriers (Figure 7.1). The lack of information was addressed by nine percent of the recent projects. Other limiting factors such as disease, competition, predation, and hybridization have been addressed by four percent of the recent projects. No recent projects have addressed indirect mitigation.

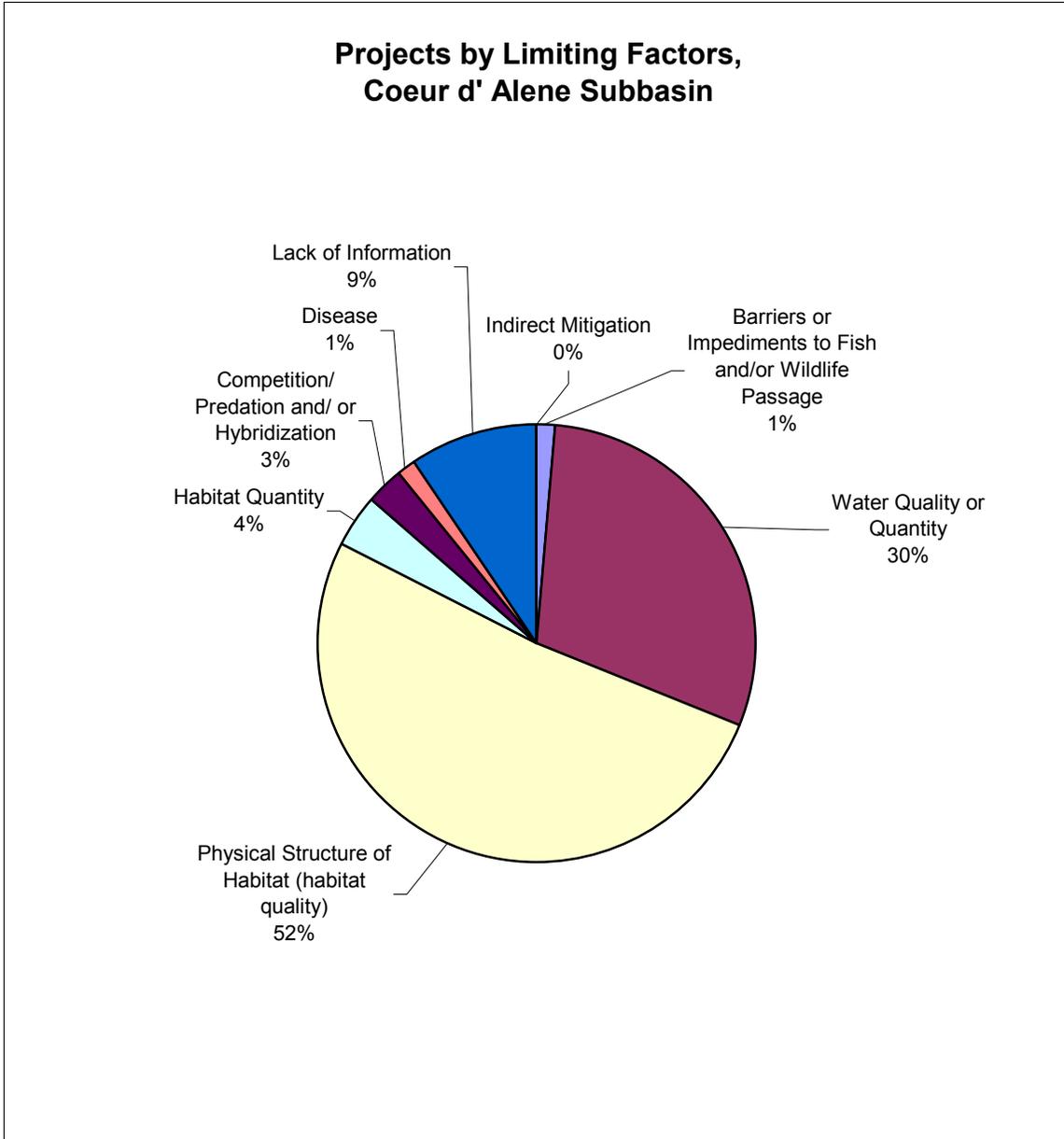


Figure 7.1. The percentage of the 63 recent restoration and conservation projects that addressed various limiting factors within the Coeur d' Alene Subbasin

Given the focus on habitat limitations in the Coeur d' Alene, it is not surprising that 71 percent of the projects implemented employed the strategies of improving, restoring, protecting, or acquiring habitat (Figure 7.2).

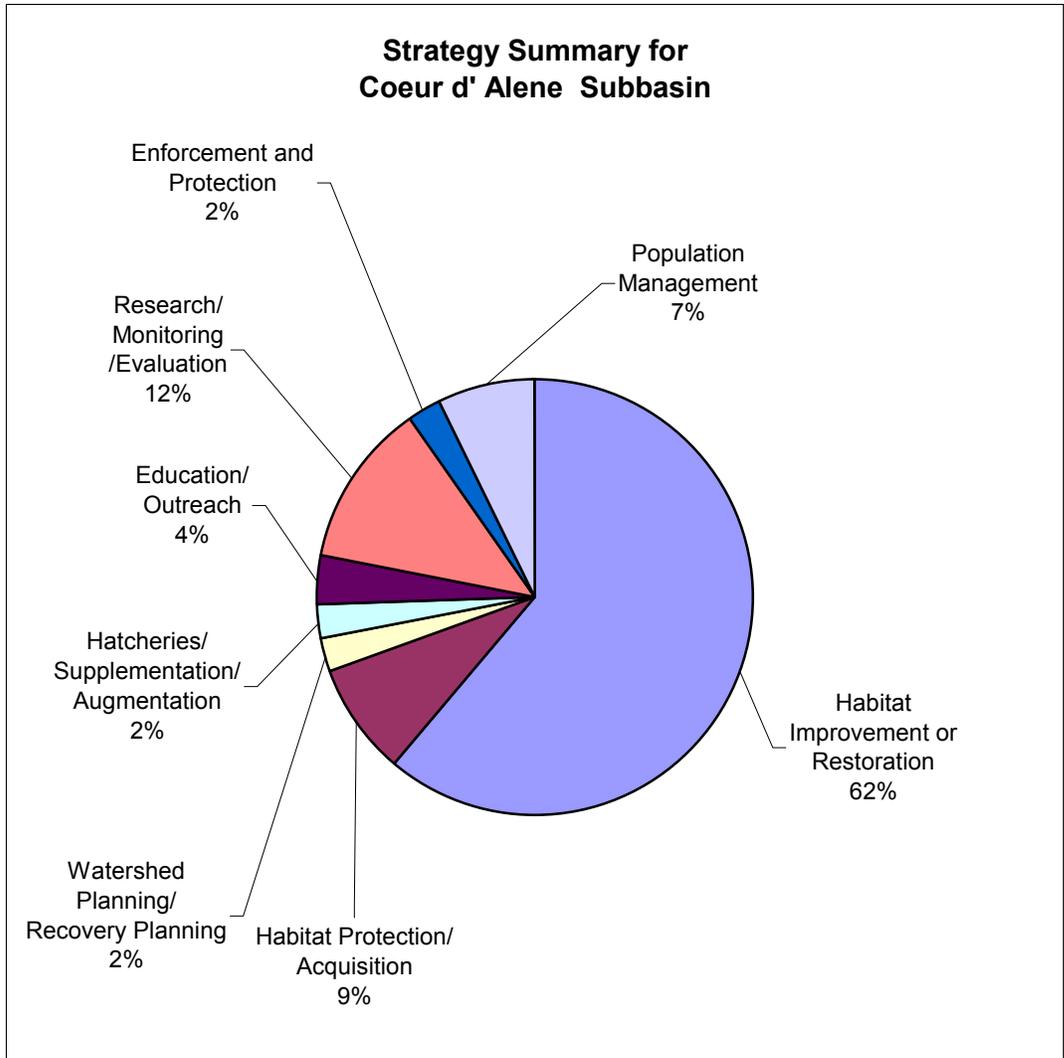


Figure 7.2. The percentage of the 63 recent restoration and conservation projects that addressed various strategies within the Coeur d' Alene Subbasin

7.4.2 Gaps Between Actions Taken and Actions Needed

The Technical Guide for Subbasin Planners requires that gaps between actions taken and actions needed be identified. This perspective will help determine whether ongoing activities are appropriate or should be modified and lead to new management activity considerations.

The information for this section was gathered at a meeting of the IMP Technical Coordination Group. The group was asked for their input on the degree to which past projects have addressed fish and wildlife issues in the Coeur d' Alene Subbasin. In addition, they were asked what needs the subbasin has for future projects. Table 7.1 provides a summary of the needs that were identified through the inventory, with corresponding objectives and strategies from the management plan that address these needs.

The main focus in the Coeur d' Alene Subbasin at this time should be on habitat improvement work. Many projects have already been implemented, many by the conservation districts. While these projects have been beneficial for fish and wildlife, they have been mostly small projects. A large unmet need for habitat restoration continues. Funding is needed for habitat restoration efforts to conserve and enhance vulnerable populations. There are numerous objectives and strategies in the management plan that address the need for habitat evaluation, protection, and restoration.

Table 7.1. Summary of objectives and strategies from the management plan that address unmet needs that were highlighted in the inventory

Identified Needs	Examples of management plan objectives and strategies that address needs
Barrier reduction	<p>Objective 1B1 Strategy h: Inventory and ground truth all potential fish passage barriers in the Coeur d' Alene Subbasin by 2010; prioritize by determining the amount of usable fish habitat above barriers and determine if barrier is important in isolating a pure strain of native species before identifying it for removal.</p> <p>Objective 1B1 Strategy i: Have each land management agency and large private landowner, identify known culverts in their ownership and identify potential barriers by gradient and/or size of culvert installed.</p> <p>Objective 1B1 Strategy j: Where appropriate, remove passage barriers and improve passage impediments, with a goal of correcting 10 percent of barriers per year with full implementation by 2020.</p>
Coeur d' Alene Lake co-management plan	Objective 2Ad: Increase cooperation and coordination among stakeholders throughout the province.
Increased enforcement	Subbasin Objective 2B1: Protect, restore, and enhance existing aquatic and terrestrial resources in order to meet the increased demands (i.e., cultural, subsistence, and recreation) on these resources associated with the extirpation of anadromous fisheries.
Research	<p>Subbasin Objective 1A1: Fully quantify lost fish resources and opportunities historically used by the Coeur d' Alene Tribe associated with the construction, inundation and operation of the FCRPS outside the Coeur d' Alene Subbasin by 2015.</p> <p>Objective 2A2 Strategy h: Evaluate native resident fish distribution and abundance and assess need for conservation aquaculture facilities to assist with enhancing or reestablishing healthy, self-sustaining native fish populations for reproduction, recreation, and subsistence by year 2010.</p>
Implementation of identified projects	Subbasin Objective 2B1: Protect, restore, and enhance existing aquatic and terrestrial resources in order to meet the increased demands (i.e., cultural, subsistence, and recreation) on these resources associated with the extirpation of anadromous fisheries.

As shown in Figure 7.1, only one percent of the recent projects in the Coeur d' Alene Subbasin addressed barriers. The Forest Service has done some barrier analysis work on their lands within the subbasin. The Coeur d' Alene Tribe has also done some barrier analysis as well as some limited culvert replacement in at least one watershed on the Coeur d' Alene Reservation. However, there is a need for a comprehensive evaluation of fish passage barriers in this Subbasin. The Coeur d' Alene Subbasin management plan addresses this need in Objective 1B, Strategies h, i, and j.

Watershed planning and recovery planning are strategies that have been implemented by only one percent of the recent projects (Figure 7.2). The subbasin needs an Idaho Fish and Game and Coeur d' Alene Tribe Fisheries co-management plan for the Coeur d' Alene Lake and

River system. This plan would allow for a coordinated effort to manage this valuable resource. A co-management plan could lead to more collaboration between managers and ultimately some direct fish population management. The provincial management plan addresses this need through a proposed strategy that says, “develop technical and policy working groups that meet regularly to identify problems and implement solutions.”

Illegal harvest may be a problem that is causing depressed adfluvial bull and westslope cutthroat trout populations in the Coeur d’ Alene Subbasin. Only three percent of current projects involve education and outreach and three percent involve enforcement and protection. The managers believe that the current fishing regulations are adequate as long as compliance is high. Education and outreach are needed to increase compliance with fishing regulations and eliminate illegal harvest.

One of the most serious fish and wildlife management issues in the Coeur d’ Alene Subbasin is the lack of information. Only 10 percent of recent projects have been research oriented, such as Avista’s research for their re-licensing. A comprehensive evaluation of adfluvial westslope cutthroat trout in the subbasin is needed. The study should include an evaluation of population abundance and habitat conditions in off-reservation streams, identification of limiting factors, and a prioritized list of habitat restoration projects. Another research need is a bull trout life history and population status evaluation in Coeur d’ Alene Lake. Presently, biologists have some knowledge of bull trout spawning habitats, but they have little other information about the species in this subbasin. The research, monitoring, and evaluation (R, M, & E) plan for the Coeur d’ Alene Subbasin presents the R, M, & E needs for the subbasin in more detail in Section 11.

Once information is gathered, projects can be developed and then implemented. At present, there is a gap between project development and implementation. That is, worthwhile project proposals have been developed that have not been funded. In general, the fish and wildlife managers in the Coeur d’ Alene Subbasin feel that there is a need for funding existing projects, not new projects.

The management plan reflects the concern about lack of information in the objectives and strategies. The management plan adopts a step-wise process where losses to native fish and wildlife would be quantified, then the losses restored by addressing the identified limiting factors.

As described in the Coeur d’ Alene Management Plan, the Coeur d’ Alene Subbasin offers opportunities for species recovery and mitigation of hydropower impacts that have and are occurring in other subbasins throughout the IMP. It is hoped that on-the-ground mitigation work for Avista’s re-licensing will begin in a year or two. However, there are also opportunities in the Coeur d’ Alene Subbasin for mitigating losses caused by the federal hydropower system through enhancement of resident species.