

Appendix C - Management Action Tables

(page intentionally left blank)

Appendix C – Management Action Tables

Background

The Management Action Tables (MATs) were first published in the 1996 Coeur d’Alene LMP (CLCC et al. 1996). These were developed by numerous individuals in the government, business, and private sectors; working within Technical Advisory Groups for broad land use categories such as: forest practices, wastewater, and agriculture. Management action items within the tables are a compilation of current rules, regulations, recommendations, BMPs, and other actions that play a role in water quality management of Coeur d’Alene Lake and its tributaries. A column titled “Lead Group” identified government agencies and other entities who would take the lead for implementing individual action items.

In 2002, there was an effort to update and revise the 1996 MATs by advisory workgroups. Revised tables were published in a draft *Coeur d’Alene Lake Management Plan Addendum*. The 2002 draft LMP was never published as a final document.

In 2006, staff from the Tribe and DEQ began a collaborative project to assess the level of implementation of action items in the tables. The revised 2002 tables were used to develop questionnaires and to conduct personal interviews with representatives of Lead Group entities, listed in the tables.

The final 2009 tables reflect recommended changes from the 1996 and 2002 versions, based largely on information collected through the interview process. Some action items were deleted because the actions had been fully implemented; others were deleted based on solid reasoning gained from the interviews or in some cases, redundancy across multiple tables. Some action items were reworded based on unclear language or other recommended rewording by those interviewed. Some action items were combined into a single item, again based on redundancy. At the end of each general land use table there are comments or a rationale for each recommended item, primarily based on information gained during the interviews.

Priority of Action Items and Lead Groups

The order of Action Items within the MATs do not indicate priority of implementation. Priority of Action Items will be established with partners during coordination sessions to develop workplans (see LMP section 3.2). These implementation priorities will be outlined in annual LMP workplans (see LMP section 5.2). In addition, the order of listed agencies or entities in the Lead Group and Other Participant columns does not signify order or priority of leadership among those identified.

By agreement with the three County governments (Kootenai, Shoshone, and Benewah) the Tribe and DEQ have committed that initial implementation of the LMP will include working with the jurisdictional agencies listed in Table C7 of the MATs. LMP staff will coordinate the development of a well thought out and ecologically responsible plan, including funding possibilities, for implementing the riverbank stabilization action items.

Estimated Costs and Funding Sources

The Estimated Costs and Funding Source columns within the final MATs have been left blank because DEQ and the Tribe feel that Action Item costs are best determined during coordination sessions with partners to develop workplans. The Lead Group agencies or entities are the best source for these costing figures and will be asked to provide this information. Estimated costs will be reported in annual LMP workplans.

Management of Contaminated Dredged/Excavated Sediments in the Lake and Spokane River

Numerous comments were received on the Draft 2008 LMP regarding management of contaminated dredged/excavated sediments. The Tribe and DEQ, therefore, recommend a new MAT be developed to outline the necessary actions to address this issue further. In an effort to expedite this work, the Tribe and DEQ will use the findings of the Contaminant Management Project Focus Team (formed by the BEIPC), outlined in a report entitled, *Issue Analysis: Contaminant Management for the Coeur d'Alene Lake and Spokane River upstream of the Post Falls Dam, July 2007*. MAT development will require close coordination with all agencies having authorities and basin stakeholders with an interest in this issue. The concepts in this report should be considered only a starting point for discussion and subsequent development of a MAT for management of contaminated dredged/excavated sediments (refer to the *Issue Analysis* paper at the end of Appendix C).

Acronyms and Abbreviations used in Management Action Tables

ACOE	U.S. Army Corps of Engineers
AVISTA	rename of Washington Water & Power
BEIPC	Coeur d'Alene Basin Environmental Improvement Project Commission (formed in 2002)
BSWCD	Benewah Soil & Water Conservation District
BC	Benewah County
BIA	U.S. Bureau of Indian Affairs
BLM	U.S. Bureau of Land Management
BMP	Best Management Practices
CAC	Citizen's Advisory Committee for CBIG
CCC	Citizen's Coordinating Council for BEIPC
CBIG	Coeur d'Alene Basin Interagency Group (1990 - 1996)
CBRP	Coeur d'Alene Basin Restoration Project (1991 - 1996)
CIA	Central Impoundment Area
Cities	Collectively, cities within the Coeur d'Alene Lake Basin: Coeur d'Alene, Pinehurst, Kellogg, Osburn, Wallace, Mullan, Harrison, Plummer, St. Maries
CLCC	Clean Lakes Coordinating Council
Cons-Part	Agriculture Conservation Partnership comprised of the KSSWCD, BSWCD, NRCS, PLRCD and the ISCC
Counties	Collectively, counties that are within the Coeur d'Alene Lake Basin: Benewah, Kootenai, and Shoshone
CRBC	Coeur d'Alene River Basin Commission
CWA	Federal Clean Water Act
CWMA	Cooperative Weed Management Area
CWE	IDL's Cumulative Watershed Effects protocol
EPA	U.S. Environmental Protection Agency
Fire Dist.	Local Fire Districts
Forest Associations	Associated Logging Contractors, Intermountain Forest Association, etc.
Forest Industry	Contractors, and forest product industries
Forest Landowners-Private	Non-industrial private forest landowners and Industrial Timber companies (e.g., Potlatch, Stimson, Forest Capital, Inland Empire Paper)
FPA	Idaho Forest Practices Act
FSA	USDA Farm Service Agency
Hwy-Dists	Collectively, Highway Districts with jurisdictions within the Coeur d'Alene Lake Basin: Worley, East Side, Plummer-Gateway
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish & Game
IDL	Idaho Department of Lands
IDPR	Idaho Department of Parks & Recreation
IDWR	Idaho Department of Water Resources
ILB	Idaho Land Board

INFISH	Inland Native Fish Strategy
INLT	Inland Northwest Land Trust
IPNF	Idaho Panhandle National Forest
ISCC	Idaho Soil Conservation Commission
ITD	Idaho Transportation Department
KC	Kootenai County
KCPW	Kootenai County Parks & Waterways
KMPO	Kootenai Metropolitan Planning Organization
KSSWCD	Kootenai-Shoshone Soil & Water Conservation District
Legislature	Idaho State Legislature
LHTAC	Local Highway Technical Assistance Council
LSAS	Large Soil Absorption System
NAS	National Academy of Sciences
NIBCA	North Idaho Building Contractors Association
NPDES	National Pollutant Discharge Elimination System
NRCS	USDA Natural Resource Conservation Service
PAC	Panhandle Area Council
PHD	Panhandle Health District
PLRCD	Panhandle Lakes Resource Conservation and Development
SC	Shoshone County
SAWQP	State Agriculture Water Quality Program (now WQPA)
SPZ	Stream Protection Zone (in FPA)
State	State of Idaho
SWCD	Soil & Water Conservation Districts
TNC	The Nature Conservancy
TMDL	Total Maximum Daily Load
Tribe	Coeur d'Alene Tribe
T2 Center	Idaho Technology and Transfer Center
UI - CES	University of Idaho, Cooperative Extension Service
U of I	University of Idaho
USDA	United States Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey
WPCA	Water Pollution Control Account
WQPA	Water Quality Program for Agriculture
WDOE	Washington Department of Ecology

Table C1. Public Outreach Information and Education (I & E)

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 1: Create a centralized public education and outreach program, including a Lake Stewardship Center. Functions of the education and outreach program include the following:</p> <ul style="list-style-type: none"> a) Provide Federal, State, local, and Tribal regulatory information. b) Serve as a liaison and coordinate among government, tribal, businesses, and community entities for promoting water quality protection awareness and education. c) Provide a centralized location for information and education materials that are related to water quality protection. Existing and new materials will be housed in this location. d) Develop and implement a Coeur d’Alene Lake specific Lake*A*Syst (LAS) program and materials. e) Create and maintain a Coeur d’Alene Lake Management Plan (LMP) website. f) Conduct workshops, tours, & presentations for the community and area schools on water quality issues. g) Assist the conservation partnerships with their outreach efforts. h) Promote consumer awareness and use of “lake friendly” products. i) Promote training programs on erosion & sediment control Best Management Practices (BMPs). j) Provide landowners with information on proper maintenance of subsurface sewage systems. 	<p>IDEQ Tribe UI-CES</p>	<p>All other government, business, conservation partners, and community entities in the Cd’A Lake Basin</p>		

Table C1. Public Outreach Information and Education (I & E)

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
k) Develop an educational pamphlet for distribution to boat registrants on reducing impacts caused by boat wakes to riverbanks and lakeshores.				
l) Fund and implement a Clean Marina program for marinas, boat operators, and the general public.				
m) Work with the public on the understanding of potential nutrient contributions from public lands.				

Comments and Rationale:

Action 1: The LMP audit found a lack of understanding of Coeur d’Alene Lake issues and the need to protect water quality. Though several entities throughout the basin each have some form of information and education efforts, there is a need for centralization and coordination.

Table C2. Forest Practices

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 1: Continue implementation of BMPs within the Forest Practices Act (FPA) and Cd'A Tribal Forest Management Plan (on Tribal Trust lands) as related to the stream protection zone (SPZ), and make recommendations as needed to FPA as related to SPZ.	IDL Tribe	USFS, BLM Forest Landowners-Priv., Forest Assoc.		
Action 2: Fully implement FPA rule 030.07.a (lakeside management rule) following the rule guidance. Implement Cd'A Tribal Forest Management Plan on Tribal Trust lands.	IDL Tribe	USFS, BLM Forest Landowners-Priv., Forest Assoc.		
Action 3: Continue to implement pre-operation inspections for proposed timber harvests and related road construction. Continue to conduct quadrennial audits of forest-practices operational areas, and conduct annual field audits where feasible.	IDL, IDEQ, Tribe USFS, BLM	Forest Landowners-Priv.		
Action 4: Continue to encourage alternatives to culverts where feasible within the Stream Channel Alteration permit process.	IDWR, IDL, ACOE USFS, BLM	Tribe, Forest Landowners-Priv.		
Action 5: Continue stream channel protection activities. Develop prescriptive stream-crossing and stream alteration BMPs that provide a high level of water quality protection from road sediments. Promote enforcement of the Stream Channel Protection Act within the basin for crossing and alteration proposals.	IDWR IDL ACOE	Tribe, USFS BLM, Forest Landowners-Priv., Forest Assoc.		
Action 6: Continue logger accreditation and other forestry I & E programs.	IDL, Tribe USFS, BLM Forest Assoc. UI-CES	Forest Landowners-Priv.		
Action 7: Identify, prioritize, and implement restoration projects using currently available technologies.	IDL, Tribe, USFS BLM, Forest Landowners-Priv.			

Table C2. Forest Practices

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 8: Minimize road construction impacts in basin by cooperating on joint access development to forest stands. Streamline process to allow access on previously developed roads.	IDL, Tribe, USFS BLM Forest Landowners-Private			
Action 9: Pursue all necessary funding to address road maintenance needs and management objectives which reduce sediment releases on forest roads.	IDL, Tribe, USFS BLM	Forest Landowners-Priv. Forest Assoc.		
Action 10: Monitor watershed restoration projects to determine effectiveness in minimizing sediment and nutrient loading into water bodies.	IDL, Tribe USFS, BLM, IDEQ	Forest Landowners-Priv. Forest Assoc.		

Comments and Rationale:

Action 1: Coeur d’Alene Reservation Forest Management Plan 2003-2017 adopted 12/12/02. There have been many significant changes to the 1996 FPA.

Action 2: Tribe and DEQ staff met with IDL regarding the rule guidance under FPA Rule 030.07.a. At this meeting IDL stated that the St. Joe Supervisory Area Guidelines for this rule were not applicable. IDL suggested that the LMP can recommend potential changes in either the rule or the guidance through the formal process of addressing the Idaho Forest Practices Act Advisory Committee (FPAAC).

Action 3: During the LMP MAT audit, IDL FPA Advisors stated that pre-operation inspections might be conducted on timber harvests in sensitive areas and for timber harvests conducted by contractors that have demonstrated non-compliance of the FPA in the past. Industrial Timber companies stated that pre-operation inspections, along with frequent FPA and company audits are conducted as a requirement of forest product certifications under either the Forest Stewardship Council or the Sustainable Forestry Initiative. A minimum of annual field audits is important and a requirement of forest product certifications. All entities stated that timber sale inspections are considered audits.

Action 4: IDL suggested the following – “Continue to encourage alternatives to culverts greater than 60 inches in diameter, on Class I streams, where feasible within the Stream Channel Alteration permit process.” This practice of encouraging operators (or landowners) to seek a culvert alternative when pipes are greater than 60 inches is actually printed in IDL administrative rules (Culvert Sizing Table 1 listed under IDAPA 20.02.01.040.02.e in the Forest Practices Rules). Many times, it is more cost-efficient for landowners to install a bridge than to install a large culvert. A 2002 MOU between IDWR and IDL has streamlined the Stream Channel Alteration permit process. All entities agree that there is a need to consider alternatives to culverts.

Table C2. Forest Practices

Comments and Rationale cont.

Action 5: Road stabilization at stream crossings and stream channel protection activities are important FPA BMPs.

Action 6: The LEAP program has gained a successful reputation and most if not all lumber mills in North Idaho will only accept timber from certified LEAP participants.

Action 7: Restoration projects are still necessary however, inadequate funding restrains progress.

Action 8: Using the St. Joe watershed as an example, shared access and joint maintenance lessens the need for new roads.

Action 9: Insufficient funding and manpower cannot keep up with current forest road maintenance needs. Forest managers have reported to DEQ and the Tribe that they have insufficient funding for all road maintenance needs that could reduce sediment releases from forest roads.

Action 10: The LMP audit found overall agreement that monitoring of restoration project success and BMP effectiveness is an important component in forestry activities, however, funding is generally not available for monitoring.

Table C3. Roads

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 1: All entities with road responsibilities need to identify and prioritize road related water quality improvement needs, and develop long range plans for correcting existing problems (e.g., a five-year workplan).</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe, KMPO Forest Landowners-Priv.</p>	<p>IDWR</p>		
<p>Action 2: Road jurisdiction entities need to improve on the control of erosion and sediment during construction and maintenance activities.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe Forest Landowners-Priv.</p>	<p>IDWR T2 Center</p>		
<p>Action 3: Develop and enforce regulations as needed to incorporate water quality protection strategies into existing road standards, policies, procedures, and decisions.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS BLM, Tribe</p>	<p>IDWR, Forest Landowners-Priv. Forest Assoc.</p>		
<p>Action 4: IDL, Counties, and Hwy Districts need to coordinate enforcement of road standards and specifications, and educate landowners when converting forest access roads to subdivision roads and driveways.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe, KMPO</p>	<p>Fire Districts IDWR, Forest Landowners-Priv. Forest Assoc.</p>		
<p>Action 5: Prevent sediment from entering road ditches from adjacent properties by adopting and enforcing erosion control and grading ordinances or regulations for all land disturbing activities.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe</p>	<p>EPA IDWR, Forest Landowners-Priv.</p>		

Table C3. Roads

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 6: Promote training programs on maintenance and construction BMPs, and regulations which can be used to reduce road impacts to water quality. Provide private landowners with education and assistance materials to install road BMPs.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe LHTAC, DEQ</p>	<p>UI, IDWR, Forest Landowners-Priv. Forest Assoc.</p>		
<p>Action 7: Encourage ITD and other road jurisdictions to hold public meetings and/or make construction plans available prior to and during project construction.</p>	<p>ITD, Hwy-Dist. Counties, Cities IDL, USFS, BLM Tribe</p>			

Comments and Rationale:

Action 1: Problem roads that impair water quality remain, and need to have a long term plan of prioritization and funding in order to be maintained, repaired, or decommissioned.

Action 2: Lead group entities are only responsible for road related issues within their jurisdiction, and in the case of IDL, include enforcement of road BMPs on private lands during forest practices. DEQ and the Tribe believe that there is always room for improvement in BMP technologies and effectiveness. Observations show that there needs to be continued improvement in erosion and sediment control education and implementation. The Idaho Technology and Transfer Center (T2) through the U of I provides a framework for this improvement.

Action 3: Existing regulations are considered to be somewhat insufficient in the protection of water quality and improved enforcement is necessary.

Action 4: The LMP audit found this was a commonly stated problem. Forest access roads are constructed for low volume capacities, and when logging operations are complete these roads are “buttoned up” as per FPA standards with IDL. Some of these forest access roads, however, get converted to private access roads and driveways which do not meet Hwy District standards or specifications. This practice has been identified by FPA advisors as “logging with the intent to build”. Currently there are efforts between IDL and the Counties to address this issue.

Action 5: Road Supervisors stated that there is a problem with adjacent land disturbances contributing sediment into County road ditches. Many road ditches can discharge directly into surface waters. The T2 Center and Stormwater and Erosion Education Program (SEEP) through PAC, provide education and certification. These education programs provide information regarding County and City ordinances as well as State and Federal regulations and identify the appropriate implementing entities.

Table C3. Roads

Comments and Rationale cont.

Action 6: Promote and further support existing training and education programs such as T2, SEEP, and the Logger Education to Advance Professionalism (LEAP).

Action 7: During our audit it was stated that public meetings prior to and on occasion during road construction projects are important in order to gain public input. IDL posts FPA road construction schedules on their state-wide website.

Table C4. Development, Erosion, and Stormwater

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 1: In order to address stormwater run-off, provide information and technical assistance to contractors, utility companies, engineers, design professionals, businesses, recreationists, cities, agencies, property owners and the general public. Stormwater run-off information and education would be a function of the Cd’A Lake Stewardship Center (see Table C1).</p>	<p>IDEQ Tribe UI-CES EPA</p>	<p>All other stakeholders throughout the basin.</p>		
<p>Action 2: Utility companies need to incorporate and implement erosion and sediment control into the siting, installation, and maintenance of utilities.</p>	<p>Utilities</p>			
<p>Action 3: Improve enforcement of existing stormwater treatment and erosion control requirements; including maintenance, in the Cd’A Lake Basin to better prevent phosphorous and sediment loading from grading and development activities. Hire sufficient staff to inspect and enforce site disturbance and stormwater ordinances.</p>	<p>Counties Cities EPA</p>			
<p>Action 4: Protect, and ensure maintainance of existing riparian vegetative buffer around the entire perimeter of Coeur d’Alene Lake.</p>	<p>Counties, Cities IDPR, Tribe</p>	<p>Private property owners</p>		
<p>Action 5: Establish performance standards which will minimize the quantity of sediment leaving property boundaries. For example, prohibit increases in sediment export, or if sediment export is allowed, limit it to identified numeric standards. Require stabilization of soil disturbance</p>	<p>Counties Cities</p>	<p>EPA IDEQ Tribe</p>		
<p>Action 6: Establish requirements within site disturbance and stormwater ordinances that development projects will result in “no net increase” in phosphorus loading to surface waters. This will include treatment of stormwater, and pollution (e.g., phosphorus) trading where feasible.</p>	<p>Counties Cities</p>	<p>EPA IDEQ Tribe</p>		

Table C4. Development, Erosion, and Stormwater

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 7: Investigate alternatives to Grassed Infiltration Areas (GIAs) for stormwater treatment within the City of Coeur d’Alene.	City of Coeur d’Alene	PHD, IDEQ, EPA		
Action 8: Site disturbance and stormwater ordinances shall not allow exemptions to erosion control requirements during the installation of subsurface sewage disposal systems on slopes greater than 10% and/or less than 500’ from surface waters.	Counties Cities	PHD		
Action 9: Pursue funding for stormwater and erosion control programs, including stormwater utilities. Implement programs and ordinances throughout the Cd’A Basin.	Counties Cities	IDEQ, Tribe EPA		
Action 10: Conduct periodic audits and monitoring of BMP implementation and effectiveness.	Counties Cities	IDEQ, Tribe EPA		
Action 11: Prohibit burning of construction debris on lakeshores and adjacent to streams and drainageways. Provide information on the effects of burning any debris on the lakeshores and adjacent to streams.	IDEQ, Counties Cities, Fire Dist.	Tribe		
Action 12: Evaluate the level of treatment and stormwater retention needed for roads and highways in the basin; expand regulations and policies as needed to prevent contaminants from reaching the water.	All road jurisdictions in the basin			

Comments and Rationale:

Action 1: Public information and education on erosion control and stormwater run-off is needed and would be a major function of a Cd’A Lake Stewardship Center. Staff of the Center will promote SEEP or other related education programs.

Action 2: Erosion control techniques need to be in place during the installation of utilities. These might include: reseeding of disturbed areas, locating utilities away from streams and drainages, and timing utility projects.

Action 3: Throughout the Cd’A Lake Basin, there is insufficient funding and manpower for inspection and enforcement of current site disturbance and stormwater ordinances.

Table C4. Development, Erosion, and Stormwater

Comments and Rationale cont.

Action 4: In 2006, IDEQ and the Tribe conducted a shoreline survey for compliance with the Kootenai County Site Disturbance Ordinance 374. It was commonly observed that the 25' buffer zone was disturbed or eliminated in violation of the ordinance. There remains roughly 25% of undisturbed shoreline vegetation and this needs to be protected. The Tribe and DEQ LMP staff will work with the Counties and Cities on riparian buffer preservation under current ordinances, and the voluntary re-establishment of riparian buffers that have been damaged or removed.

Action 5: Numeric performance standards should be included and enforced in site disturbance and stormwater ordinances. For soil disturbance stabilization requirements, an EPA SWPPP, for example, requires stabilization within 7-14 days.

Action 6: Some ordinances already state that BMPs must be sufficient to prevent sediment from leaving a site. This is "no net increase" but is not often achieved. A pollution trading system is designed to offset new phosphorus loads by reducing existing loads. Mitigation actions might include: providing funds for upgrading the Page Wastewater Treatment Plant (to increase its phosphorus removal capabilities); replacing substandard septic systems; removing unpaved roads not in use; or surfacing poorly constructed dirt roads which are eroding into Cd'A Lake or its tributaries.

Action 7: As per City of Coeur d'Alene stormwater engineers and staff, GIAs are the only approved BMP over the Rathdrum Prairie-Spokane Valley Aquifer and have been difficult to design and maintain due to an increase in development and run-off. City staff recommend that alternatives need to be explored.

Action 8: As per PHD staff, site disturbance for septic tanks and drainage fields are deferred to County ordinances. PHD staff observe that installation of subsurface systems is often exempt from Kootenai County Site Disturbance Ordinance 374, per Section 5.A.7. They observe that when septic tanks are installed as close as 50 feet from the lake, and effluent is pumped to an up-gradient drainfield, erosion controls BMPs are exempt. PHD states that subsurface sewage disposal systems should be explicitly cited as needing a permit under the ordinance.

Action 9: Additional funding and staff are needed. As per Kootenai County staff, a stormwater utility is not a county concept, refer to city stormwater utilities.

Action 10: Audits and monitoring of BMP implementation and effectiveness are lacking basin wide. This could be a significant cost for agencies.

Action 11: The burning of trade and construction waste is prohibited as per IDAPA 58.01.01.600-617. Burning of woody debris along streambanks, riverbanks, and lakeshores needs to be discouraged because burned residue can contribute to the phosphorus load. Burning of debris requires a local fire district permit.

Action 12: As an example, Lakes Hwy District has performed an evaluation of stormwater treatment and retention on some roads around Hayden Lake. As a result, the Hwy District obtained a 319 IDEQ grant for a pilot project to treat stormwater run-off before entering Hayden Lake.

Table C5. Agriculture

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 1: Continue to identify those tributaries which produce high levels of nutrients, sediment, pesticides, and bacteria from agricultural sources.	Cons-Part. IDEQ Tribe			
Action 2: Continue to provide direct technical assistance and provide new and existing cost-share programs to agricultural landowners, including livestock operators, for planning and implementation of BMPs. Encourage planning and implementation on a watershed scale.	Cons-Part.	Tribe		
Action 3: Improve outreach programs directed at agricultural landowners, including livestock operators. The program will utilize personal contact and mass communication tools with the intent of advertising available programs that encourage voluntary planning and implementation of BMPs.	Cons-Part.	IDEQ Tribe UI-CES		
Action 4: Education materials on the environmental benefits and available programs for agricultural BMPs will be a function of the Cd' A Lake Stewardship Center (see Table C1).	IDEQ Tribe UI-CES	Cons-Part.		
Action 5: Ensure the continued implementation of existing cropland management practices, including production of grass seed, through implementation of federal Farm Bill requirements.	NRCS	FSA USDA		
Action 6: Provide planning, implementation, and funding assistance to small acreage farms (e.g., ranchettes or hobby farms) for BMPs.	Cons-Part.	UI-CES Tribe		
Action 7: Continue to provide engineering surveys and designs for structural BMP implementation.	NRCS	Cons-Part.		
Action 8: Identify funding to conduct on-farm testing of potential new BMP technologies.	UI-CES Cons-Part.	UI EPA		
Action 9: Encourage funding for NRCS to conduct Rapid Watershed Assessments within the Cd' A Lake Basin.	NRCS	Cons-Part. Tribe		

Table C5. Agriculture

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 10: Continue to provide technical and financial assistance for stream and riverbank stabilization projects in agricultural areas.	NRCS, Cons-Part. Tribe	IDWR		
Action 11: Continue to provide and update databases and GIS coverage of land use activities, including BMP implementation through funded agricultural projects.	Cons-Part. Tribe	FSA		
Action 12: Fund and implement water quality monitoring to determine collective effectiveness of agricultural BMP installation and maintenance.	Cons-Part. IDEQ Tribe			
Action 13: Consider a tax incentive program to encourage agricultural landowners to restore natural vegetation buffers along creeks and drainage ways to minimize runoff from adjacent lands.	Counties	Cons-Part.		
Action 14: Consider zoning ordinances that limit the conversion of agricultural land to urban uses.	Counties Cities	Cons-Part.		

Comments and Rationale:

Action 1: The Conservation partnership uses the IDEQ 303(d) list of impaired waterbodies as well as the NRCS Stream Visual Assessment Program (SVAP) to identify problem areas and develop TMDLs. Some grant programs such as IDEQ 319 Non-Point Source Pollution program prioritizes requests according to approved TMDLs.

Action 2: Current available Farm Bill programs implemented by the NRCS include: Conservation Reserve Program (CRP), Continuous CRP, Wetland Reserve Program (WRP), and Environmental Quality Incentives Program (EQIP). The State agricultural cost-share program implemented by the ISCC is the Water Quality Program for Agriculture (WQPA). As of 2006, the NRCS and ISCC have combined the EQIP and WQPA programs to potentially offer up to 90% cost-share for eligible landowners.

Action 3: The LMP audit found that awareness of the above cost-share programs by eligible landowners has been lacking due to funding and Conservation District staff turn-over.

Action 4: The Cd'A Lake Stewardship Center could assist the Conservation Districts in their outreach programs.

Table C5. Agriculture

Comments and Rationale cont.

Action 5: Request that NRCS Area offices provide Farm Bill program project updates as they pertain to nutrient management and Coeur d'Alene Lake (keeping in mind landowner privacy rights).

Action 6: The LMP audit found there is an increasing trend of 5-20 acre "hobby farms" and there can be water quality issues on these small acreage farms. If tracts are < 20 acres they do not qualify for Farm Bill or WQPA programs. Districts need additional funding to assist with these small acreage farms.

Action 7: Many agricultural BMPs are installed with the help from NRCS engineering and surveying (Federal and Non-Federal).

Action 8: Funding and new ideas are limiting factors for on-farm testing of new BMP technologies. One example of testing new BMP technologies is a riverbank stabilization design on the Cd'A River which utilizes EQIP dollars and is adjacent to agricultural land.

Action 9: Rapid Watershed Assessments (RWA) for the Coeur d'Alene Lake Basin was scheduled for the beginning of 2007. Examination of other RWAs show that this assessment provides valuable watershed information.

Action 10: Inventories of streambanks and riverbanks have identified areas of significant bank erosion adjacent to agricultural lands. Funding is limited for stabilization projects.

Action 11: Agricultural databases and GIS coverages can be very helpful in watershed assessments. The NRCS Performance Results System (PRS) is available on the web for public use and it hosts program specific reports and conservation practices information.

Action 12: Water quality monitoring is generally lacking in agricultural projects. For example, there were 3 water quality monitoring stations on Lake Creek for several years that monitored turbidity, TSS, and phosphorus to ensure that the agricultural BMPs were working. The stations have not been in use for the last 5 years due to the lack of funding.

Action 13: There are no tax incentives for riparian area restoration projects. Counties have not considered a tax break for this purpose. Kootenai County believes they have no taxing authority in this area.

Action 14: Shoshone County staff stated that very limited agricultural acreage remains for conversion. Kootenai County staff states that it is a low priority to conserve agricultural land and they question why this is an LMP issue. Benewah County does not have zoning ordinances related to the conversion of agricultural land to urban uses, however, staff stated that the County favors agricultural resources.

Table C6. Wastewater

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 1: Evaluate impacts (including inflow and infiltration problems), conduct a financial evaluation of alternatives, and recommend strategies for reducing phosphorus loads from wastewater treatment plants that discharge to surface waters in the Coeur d'Alene Lake Basin. Identify basin wide funding alternatives.</p>	<p>Sewer-Dists. IDEQ EPA Tribe</p>	<p>BEIPC</p>		
<p>Action 2: Inventory existing individual/subsurface sewage systems, community sewage systems, and wastewater reuse systems (lagoon/land application), located along tributaries and lakeshore in the Cd'A basin.</p> <p>a) Maintain a data base which can be used to locate and prioritize systems needing attention.</p> <p>b) Identify substandard and failed individual/subsurface sewage systems.</p> <p>c) Prioritize systems for upgrade and/or replacement based on their probable nutrient contribution to the lake.</p>	<p>PHD IDEQ Tribe</p>	<p>Counties developers private landowners</p>		
<p>Action 3: Fund studies that evaluate the effect of nutrients in wastewater on water quality, particularly in near shore areas. Studies would include potential impact of wastewater generated by future growth and development. Incorporate the use of IDEQ's Nutrient/Pathogen Evaluation Program. Where nutrients have been identified as a problem, develop and install alternative sewage systems which are more effective at removing nutrients from effluent.</p>	<p>IDEQ Tribe PHD</p>			

Table C6. Wastewater

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 4: Encourage replacement of substandard individual/subsurface sewage disposal systems by:</p> <p>a) Allowing nutrient loads for new development to be offset with upgrades to existing offsite substandard individual/subsurface sewage systems (i.e. pollution trading).</p> <p>b) Developing cost share and other incentives.</p> <p>c) Investigate new and alternative technologies for improvement of substandard systems.</p>	<p>PHD IDEQ Tribe</p>	<p>Sewer Districts private landowners</p>		
<p>Action 5: Improve compliance with PHD rules regarding the reporting and identification of failed individual/subsurface sewage systems.</p>	<p>PHD private landowners</p>			
<p>Action 6: Improve compliance of reporting and maintenance requirements by homeowner associations connected to Large Soil Absorption Systems (LSAS). IDEQ should periodically inspect LSAS.</p>	<p>IDEQ</p>	<p>Private landowners</p>		
<p>Action 7: Improve maintenance of individual/subsurface sewage systems. This would primarily be through an information and education effort by PHD inspectors with private landowners, and also would be a function of the Cd'A Lake Stewarship Center (see Table C1).</p>	<p>PHD IDEQ Tribe</p>			
<p>Action 8: Ensure that PHD has sufficient funding and staff to adequately inspect the installation of new individual/subsurface sewage systems. Pursue additional funding for PHD staff to periodically inspect existing individual/subsurface sewage disposal systems.</p>	<p>PHD IDEQ</p>			

Table C6. Wastewater

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 9: During plan reviews of both new and replacement individual/subsurface sewage systems, consider clustering of the systems if it will have less impact on water quality than small, individual systems.</p>	<p>PHD IDEQ Counties Cities</p>	<p>Private Landowners</p>		
<p>Action 10: Evaluate and promote the use of non or low phosphate laundry detergents, other cleaning products, and fertilizers in the Cd’A Lake Basin. Audit the compliance of the City of Coeur d’Alene’s Phosphorus Laundry Detergent Ban (Ord. 2267). This could be a function of the Cd’A Lake Stewardship Center (see Table C1).</p>	<p>Counites Cities Tribe IDEQ</p>			

Comments and Rationale:

Action 1: Wastewater Treatment Plant’s (WWTP) contribute a portion of the nutrient loading to Coeur d’Alene Lake. Some evaluations have been started at the South Fork Cd’A River Sewer District, and the Plummer Waste Water Treatment and Disposal Facility. Inflow and Infiltration (I & I) of groundwater into deteriorating sewer lines is a problem for WWTP’s throughout the entire basin. Funding needs to be secured for improvements.

Action 2: An updated inventory/mapping (in GIS format) of sewage disposal systems is underway to evaluate the impact of subsurface wastewater. These systems include: individual/subsurface sewage systems, community subsurface systems (2-10 homes serviced), Large Soil Absorption Systems (greater than 2,500 gpd), and wastewater reuse systems (lagoon/land application). This inventory will help identify “hot spots” of wastewater impacts to the lake. Substandard systems (action 2.b) are considered those installed prior to 1971 that are non-compliant by current PHD regulations. A system with surfacing sewage or if sewage is backing up, is identified as failed system. The wastewater inventory will in part be used to prioritize systems for upgrade and/or replacement (action 2.c).

Action 3: Scientific studies, including inventory information gathered in Action 2, are needed to identify any impacts of wastewater on the lake. There are no current rules governing the recommendations of Action 3 for existing subsurface wastewater systems (last sentence in Action item).

Action 4: Pollution trading concepts will be explored by the LMP team. Replacing substandard individual/subsurface sewage disposal systems is voluntary. Public outreach and cost-share program incentives could assist in getting substandard systems upgraded.

Action 5: PHD Repair Permit is required for a failed individual/subsurface sewage disposal system. PHD acknowledges that homeowners may not report a failed system due to the cost of an upgrade to current or “best fit” standards.

Action 6: IDEQ needs to improve the current audit procedure for required annual LSAS reports, and needs to conduct periodic field inspections.

Table C6. Wastewater

Comments and Rationale cont.

Action 7: It is possible that many homeowners around the lake and tributaries are unaware that periodic pumping of septic tanks is necessary for individual subsurface systems to function properly. PHD recommends that a rule change be made to make maintenance required.

Action 8: State rules require that septic system installers have to be licensed, bonded, and insured, and PHD offers a one day training course for installers. PHD considers inspections for new individual/subsurface sewage disposal systems as adequate. Inspections of existing, substandard, and failed sewage systems are complaint based. Currently there is no rule requiring inspection of these existing systems. Additional funding and staff would be needed for these inspections.

Action 9: The LMP audit found that clustered or community systems are at times not feasible due to easement issues and the size requirements of community drainfields. LSAS and Community systems have monitoring, reporting, and O&M requirements which would come from established homeowner associations that jointly maintain the systems. PHD encourages clustering of lake cabins with a centralized LSAS where feasible. Advantages of clustered systems are the above listed requirements, and the requirement of 2 separate drainfields for the purpose of alternating and resting of drainfields. Kootenai County states that they do not play a role in the clustering of systems.

Action 10: There is very little promotion of using low or non phosphate detergents and fertilizers throughout the basin. The Operators of the WWTP's that were interviewed showed interest in learning more about the benefits, and were unaware that the City of Coeur d'Alene has a Phosphorus Ban Ordinance dated 1990.

Table C7. Rivers, Bays, and Southern Shallows

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 1: Control bank erosion & bottom scour on the St. Joe and Coeur d'Alene Rivers, and lakeshores by expanding and enforcing no-wake zones and speed of boats and improve signage for these zones.	Counties Tribe IDPR	Boaters		
Action 2: Develop an informational pamphlet for distribution to boat registrants educating them on the impacts caused by boat wakes to riverbanks and lakeshores. This could be a function of the Cd'A Lake Stewardship Center (see Table C1).	Tribe IDPR Counties	BEIPC		
Action 3: Continue to inventory rapidly and moderately eroding banks along reaches of the Cd'A and St Joe rivers.	Cons-Part Tribe IDEQ IDFG	USGS IDL, ACOE USFWS, BEIPC EPA, IDWR		
Action 4: Develop, fund, and use a suite of bank stabilization technologies for eroding riverbanks and lakeshores. Support legislation enabling counties to assess user fees dedicated to lake and river protection activities.	Cons-Part EPA IDEQ, ACOE Tribe, IDWR, IDFG Local legislators, BEIPC, Counties	PLRCD		
Action 5: Support funding for public land managers to implement bank stabilization on public lands. Stabilize banks at all existing recreation sites and newly developed sites.	IDL IDFG USFS BLM Tribe, EPA	USFWS BEIPC IDWR PLRCD		

Table C7. Rivers, Bays, and Southern Shallows

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
<p>Action 6: Identify sources of trace (heavy) metal loads in the Cd' A River between Enaville and Harrison with special attention to:</p> <ul style="list-style-type: none"> a) Need for tailings removal from banks or channel b) Assess if bank stabilization will be effective in curtailing metals loading c) Monitor bank erosion rates where heavy metal laden sediments have come to lie d) Utilize USGS sediment transport models that have been developed using CWA funds 	<p>EPA USGS IDEQ</p>	<p>BEIPC Tribe IDWR IDFG</p>		
<p>Action 7: Mitigate and manage the effects of lake level fluctuations and management upon shoreline erosion and bank sloughing.</p>	<p>Avista, IDEQ, Tribe WDOE, IDFG IDWR, USFWS</p>			
<p>Action 8: Develop a pamphlet explaining the bank stabilization permit processes (ACOE, State, Tribal). The pamphlet could include:</p> <ul style="list-style-type: none"> a) Stabilization design features including the utilization of softer vegetative components b) Recommendations on methods to develop beach and wildlife areas utilizing existing vegetation 	<p>ACOE IDWR IDL Tribe IDEQ IDFG Cons-Part</p>			
<p>Action 9: Contract with nationally recognized river hydrology experts to develop a total river system management plan for the North Fork and South Fork Cd'A River above Cataldo.</p>	<p>IDEQ, Tribe, EPA BEIPC</p>	<p>IDWR</p>		

Table C7. Rivers, Bays, and Southern Shallows

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 10: Work with landowners (public or private) to improve riparian zone management by developing buffer strips and bank stabilization along rivers and streams.	Cons-Part, TNC, INLT, landowners Counties, Cities Tribe, IDEQ	IDWR		
Action 11: Develop & implement TMDLs for 303(d) listed waterbodies in the Cd'A Basin as required under the Clean Water Act.	Tribe, IDEQ, EPA	other Tribes		
Action 12: Continue to fund and implement comprehensive water quality monitoring efforts basin wide.	Tribe, IDEQ EPA, USGS	BEIPC		
Action 13: Continue to pursue funding for the study, inventory, and management of rooted aquatic plants with special attention to the invasive Eurasian watermilfoil species.	Counties, Tribe IDPR, IDEQ PLRCD, CWMA	UofI		

Comments and Rationale:

Action 1: The LMP audit found that “No-Wake Zone” signage throughout the lakes and rivers is insufficient and difficult to read and/or locate. County or Tribal (within Reservation boundaries) funding is necessary for repairing these signs. Enforcement and citations within “no-wake zones” could be improved and citation revenues could provide supplemental funding.

Action 2: County manuals have been printed and distributed in the past, however, existing pamphlets do not highlight “no-wake zones” and the impact that wakes can have on bank erosion. County and IDPR showed interest for improving education materials.

Action 3: Some inventories along the two rivers have been conducted, however, streambanks and riverbanks continue to erode annually. Ongoing inventories need to be established and funded.

Action 4: A Coordinated program among agencies needs to be established to produce a viable and accepted suite of stabilization technologies for future projects.

Action 5: Encourage interest groups to aid agency projects with labor and/or dollars for matching funding. Permits are required by ACOE, IDL, IDWR and Tribe within respective jurisdictions.

Action 6: Need to coordinate LMP process with EPA RI/FS (ROD) cleanup efforts.

Table C7. Rivers, Bays, and Southern Shallows

Comments and Rationale cont.

Action 7: The parties involved in the FERC relicensing process for the AVISTA, Spokane River Hydroelectric Project at the Post Falls dam, are currently involved in evaluating the impacts and implications of current lake level fluctuations and management.

Action 8: The LMP audit found that those agencies involved with bank stabilization projects agree, that the application process is confusing and not very “user friendly.” All entities that were interviewed support a joint pamphlet explaining who, what, when, where, and why. There might be some reluctance to a “do it yourself” bank stabilization process, therefore, the detailed engineering should be left to professionals. There is an ACOE national brochure that could be adapted to make it more local to reflect local jurisdictions, needs, etc.

Action 9: Coordination is necessary for long-range planning of Coeur d’Alene River hydrology dynamics. This is a recommendation that came out of the National Academy of Sciences report concerning basin-wide planning and flood concerns.

Action 10: Utilize voluntary methods such as conservation easements, long-term leases, donation, purchase, etc. These methods can improve or maintain riparian areas of rivers and streams in order to minimize excessive nutrients and sediments from entering waterbodies.

Action 11: TMDLs for sediment, nutrients, temperature, metals, and bacteria have and are being developed. Funding for TMDL implementation is lacking and funds need to be identified and secured.

Action 12: Continue and expand monitoring programs such as: EPA- Basin Environmental Monitoring Program, IDEQ- Beneficial Use Reconnaissance Program, NRCS- Stream Visual Assessment Program, IDEQ and Tribe- Cd’A Lake monitoring program, and stream sampling by the Tribe’s Water Resources Program.

Action 13: Various control methods of Eurasian milfoil include: herbicide treatment, diver hand pulling, bottom barriers, and surface raking. As per conversation with the Kootenai County Noxious Weed Dept., mechanical harvesting is not considered viable, at this time.

Table C8. Motorized Watercraft and Hazardous Materials

Management Actions	Lead Group	Other Participants	Estimated Costs	Funding Sources
Action 1: Pursuant to applicable codes (refer to Notes), on-board inspections conducted by County and Tribal marine deputies in the Cd’A Lake Basin shall include an examination of wastewater facilities on the craft to ensure their compliance with the referenced codes. Any violations shall be enforced according to said codes. On the Idaho Boat Inspection Report, add a line item for inspecting wastewater facilities.	IDPR Counties PHD Tribe			
Action 2: Review and strengthen present codes and regulations that manage wastewater facilities discharge from motorized watercraft.	PHD, Legislature, Counties, Tribe			
Action 3: Require that public and private marinas comply with applicable codes regarding pump-out and shore-based facilities.	Counties, PHD, Tribe, Marinas	IDL		
Action 4: Complete, implement, and enforce with existing codes, the Cd’A Lake Clean Marina Program. This program is currently being developed and is in draft form and includes a public outreach component. (See notes for details).	IDEQ, Tribe, PHD, Counties, IDL	USCG, IDPR, Marinas, Marine shops, EPA		
Action 5: Develop and strengthen an aquatic spill response partnership basin-wide.	IDEQ, Tribe, PHD, Counties, Cities	Marinas, EPA		
Action 6: Coordinate a program to address the removal of abandoned docks and other large debris which can become a hazard to navigation.	IDL, Tribe, Counties, Marinas, Private Businesses			

Comments and Rationale:

Action 1: Idaho Code §67-7501 *et. seq.* (Marine Sewage Disposal Act) disallows the discharge or disposal of sewage or other wastes from any vessel into waters of the state. Rules of Panhandle Health District 1, IDAPA 41.01.01.200.01, requires any boat with wastewater facilities to have those facilities sealed to prevent discharge into any waters within District 1. There are also federal laws within the Clean Water Act that would apply to “no sewage discharge” lakes which DEQ has determined is the status of Coeur d’Alene Lake. With Idaho Legislative action, the State could take on enforcement of Clean Water Act laws regarding marine sewage disposal. Note: The Idaho Boat Inspection Report was last revised 7/95. Adding a line item for wastewater facilities was recommended by the Kootenai County Sheriff’s department.

Table C8. Motorized Watercraft and Hazardous Materials

Comments and Rationale cont.

Action 2: Recommend that IDAPA 41.01.01.200.01.(d) be amended as follows:

If any watercraft located upon the waters of Panhandle Health District 1 is found to have a ~~marine toilet~~ wastewater facilities which is are not in compliance with the requirements of this section, the Health Officer or enforcement person shall have the following alternative or cumulative powers to:

- i. cause the ~~marine toilet~~ wastewater facilities to be locked and sealed to prevent usage;
- ii. require such watercraft to be removed from the waters of Panhandle Health District 1 until the ~~marine toilets~~ wastewater facilities are made to conform with the requirements of this Code.

The rationale behind changing the wording of marine toilets to wastewater facilities in the Health Code is that many large boats on Coeur d'Alene Lake would have facilities that generate both black water (sewage) from toilets and gray water from sinks and showers. Some boat manufactures do not make a holding tank for the gray water generated; this water becomes pumped overboard. By changing the code to wastewater facilities instead of marine toilets, both sewage and gray water discharges become prohibited. Idaho Code §67-7501 (Legislative Intent) cites "that is necessary to provide a uniform system for control and treatment of such marine sewage, gray water and other wastes; and that violators should be penalized."

Action 3: Rules of Panhandle Health District 1, IDAPA 41.01.01.200.02, require that marinas providing moorage for vessels with on-board wastewater facilities, also provide pumpout stations to adequately clean waste retention tanks on the largest boat that could reasonably use the moorage. All marinas must provide shore-based toilet facilities for their users.

Action 4: The committee that is developing the Cd' A Lake Clean Marina Program considers the program as an educational tool for use by marina operators, however, there are many existing State, Federal, Local, and Tribal laws addressing hazardous and deleterious materials storage and spills. Compliance and enforcement of these laws should be incorporated into this program. For example: a common winterization procedure for marine inboard engines is to store the engine block with two gallons of anti-freeze. In spring when such boats are first launched and started, the anti-freeze is ejected into the lake and replaced by fresh water. This could translate to substantial gallons of anti-freeze ejected into Coeur d'Alene Lake each year. In some boat launch areas, water is taken from the lake for household potable uses. The regional DEQ office in Coeur d'Alene is of the opinion that such disposal of anti-freeze violates Idaho Water Quality Standards, IDAPA 58.01.02.800 (Hazardous and Deleterious Material Storage).

The current Cd' A Lake Clean Marina Program is in draft form and does not sufficiently present a comprehensive public outreach approach. A public I & E program is needed that includes the following: effective methods of winterization of boats; pumping of holding tanks; fuel and oil transfers and spillage cleanup; proper boat cleansing procedures; safe boat operation; and ways to assure that these and other lake-oriented activities are conducted in an environmentally sound fashion. The program targets boat owners, marina and resort owners, and the general public.

Table C8. Motorized Watercraft and Hazardous Materials

Comments and Rationale cont.

Action 4: *cont.*

The Clean Marina Program also needs to address the problem of debris and litter around and in the lake. Available dumpsters around the basin are commonly filled beyond capacity. If dumpsters are to be used, there is a need for additional funding to maintain the refuse load and provide recycling receptacles. The LMP audit found Kootenai County prefers, and suggests to the public, a “Pack it in, Pack it out” policy. There are inherent problems with this policy such as transporting empty alcohol containers in vehicles.

Action 5: Currently there is not an established communication system among the jurisdictions on spill response protocol.

Action 6: This action item was added based on a comment to the 2008 draft LMP as well as findings from the LMP audit. During the audit, DEQ and the Tribe were informed that abandoned docks and large floating debris can be extremely hazardous to lake users. Currently, there is not a coordinated program in place that addresses this issue. One suggestion was that IDL incorporate into their dock permit, a requirement that there be proper disposal of old docks when replaced with new docks.

Issue Analysis:

Contaminant Management for Coeur d'Alene Lake and the Spokane River upstream of Post Falls Dam, July 2007

Since August 2006 in response to Basin Environmental Improvement Project Commission (BEIPC) direction, the Executive Director and Contaminant Management Project Focus Team (PFT) have been working on contaminant management issues for Coeur d'Alene Lake (Lake) and the Spokane River upstream of Post Falls Dam (River). This was based on direction from the BEIPC to evaluate and make recommendations for some sort of institutional control "like" program outside the basin Institutional Controls Program (ICP) Administrative Area that would address under what circumstances, and in what areas, the institutional controls may be needed and address the who, what, where, when, and why. There may be areas that are outside of the geographical boundaries of the proposed Basin ICP where it would be appropriate to have some sort of control program where there may be the potential to discover a hot spot, etc. There needs to be a mechanism to properly reveal those areas and it would be very site specific. The purpose is for the PFT to look at approaches to determine when, where, or how it may be appropriate and make a recommendation to the BEIPC.

The contaminants of concern under consideration are mining related contaminants identified in the Bunker Hill Mining and Metallurgical Complex Superfund Facility/Site Records of Decision (RODs), which are primarily lead, arsenic, cadmium and zinc. As is the situation in other areas within the Facility/Site, additional contaminants of concern may be encountered if the Lake and River bed or bank sediments are disturbed. Such contaminants have not been considered by the PFT and may be subject to the Resource Conservation and Recovery Act (RCRA) or other applicable regulations. The toxicity of other such contaminants may result in prescriptive handling and disposal requirements but are not readily known until such time as testing procedures would identify hazardous material characteristics or known listed wastes.

The PFT and Executive Director have gathered data and applicable agency regulations, interviewed regulatory agency officials, held meetings to discuss the issues and agency and stakeholder positions, and reported to the BEIPC on a number of occasions concerning the findings and issues.

Following are narratives of findings and issues gathered and developed from the activities of the PFT and Executive Director. Because of concerns including the scope and potential environmental and community effects of the findings and issues, the PFT was unable to develop consensus on all of the conclusions and specific recommendations that could be made to the BEIPC. The PFT did agree to request direction from the BEIPC as is stated in the final paragraph of the paper. Therefore, the conclusions and recommendations at the end of the paper are those of the Executive Director.

General Issues and Findings – In the past there has been strong opposition by some stakeholders to Superfund involvement on the Lake and River. There has been a misunderstanding by some stakeholders that the Lake and River were not included in the Superfund Facility/Site. As defined in the Record of Decision (ROD) for Operable Unit #3 (OU-3) the Bunker Hill Mining and Metallurgical Complex Superfund Facility, located in the Coeur d'Alene Basin includes mining-contaminated areas in the CDA River Corridor, adjacent

floodplains, downstream waterbodies, tributaries, and fill areas, as well as the 21-square mile Bunker Hill Box. The 9th Circuit Court of Appeals decision confirmed the Superfund Facility includes all areas of the CDA Basin where mining contamination has come to be located. Therefore, the Lake and River are included in the Facility/Site.

Some local officials and stakeholders believe that there already exists adequate regulation of activities around the Lake and River flood plains and within the bodies of water to address contaminant management, and any new requirements, if necessary, should be in the form of implementation of voluntary best management practices. Others support the implementation of enforceable rules to ensure compliance.

There are a number of governmental jurisdictions involved with the Lake and River including various Federal, State, Tribal, and local government agencies. Each of these agency's authorities must be recognized and accommodated in any contaminant management program for the Lake and River.

There is a general understanding that a lake management plan (LMP) outside the Superfund process was anticipated by the Interim ROD for OU-3 as the means to deal with contaminated sediments in the Lake and River. However, dredging of Lake and River bed sediments has not been specifically identified in LMP development efforts.

The language in the BEIPC Memorandum of Agreement (MOA) does not completely indicate the level of involvement envisioned for the BEIPC in the lake management process, but past BEIPC and Technical Leadership Group (TLG) meeting notes as well as the State's draft of its update of the LMP in 2004 indicate a much stronger BEIPC involvement than is currently being envisioned. These documents indicate that the BEIPC would coordinate the implementation of the LMP through a steering committee made up of representatives from the TLG.

The original intent of the BEIPC direction concerning contaminant management was to develop a mechanism to locate and deal with sites along the flood plain of the Lake and River that were "hot spots" of contamination and that any contaminant management program would be very site specific. After working on this for a year, it is apparent that the need for contaminant management involving the Lake and River is much more complicated and far reaching than determining how to deal with a few "hot spots".

Most stakeholders involved with the Lake and River seem to recognize the great natural resource value the community has in these bodies of water, but many are polarized as to the current condition and potential for deterioration of these valuable resources. Some indicate strong support for protecting the resource, but become very upset if proposed regulatory requirements will result in additional costs or more control over their activities. Others indicate that they would rather use extreme caution and increased regulatory authority to insure that the resource is not allowed to deteriorate.

Within the PFT there seems to be agreement that there is a need for some type of contaminant management involving the Lake and River. Continued growth and development around and within the Lake and River and the effects or lack of effects from upstream environmental cleanup require adaptive management to adequately deal with the contaminant management issues.

There has been some misunderstanding as to the purpose of the ICP in the Box and Basin and what the purpose of institutional controls for the Lake and River might involve. Some believe that the ICPs serve only to protect constructed or installed Superfund remedies. The ICPs in the Box and Basin were established for the purpose of protecting human health from exposure to and migration of contaminants. If contaminant management in the Lake and River came in the form of some type of institutional controls, a decision would need to be made concerning whether they should include only human health issues or ecological issues as well.

Kootenai County representatives have indicated that if an institutional controls type program is instituted for the Lake and River areas, that the Federal and State agencies should fund testing and remediation of properties in the same manner as is done in the Upper and Lower CDA River Basin and any ICP type program would be funded similar to the basin ICP. Their position is that owners of developed residential and commercial properties would not be responsible for soil or sediment testing and remediation of contaminated properties, and the agencies would provide repositories for excavated or dredged soils and sediments containing mining related contamination. There would also be no fees for ICP type permits. If the Federal or State agencies would not fund the program, they do not want to pursue the issue any further.

Interim Record of Decision (ROD) Issues - The Interim ROD for OU-3 states that OU-3 is mining related contamination in the broader CDA Basin. This definition is somewhat confusing because the ROD also states that the Superfund Facility/Site is located in the CDA Basin.

EPA's position is that OU-3 includes those areas within the defined Bunker Hill Facility/Site but outside OU-1 and OU-2 (the Box) where EPA has selected remedial actions. Thus, while the Lake and River may be within the Facility/Site, they are not part of the OU-3 ROD until and unless EPA selects additional remedial actions for these areas as part of an OU-3 remedy decision.

This position is confusing to some because the Lake and River are addressed in the Interim ROD for OU-3. The question is then, are the Lake and River in OU-3? The Executive Director and others interpret the Interim ROD definition to mean that OU-3 does not include the Box or every square mile of the broader CDA Basin, just areas within the CDA Basin outside the Box where mining related contamination has come to be located. From this interpretation, it would appear then that OU-3 includes any areas of the Lake and the River where mining related contamination has come to be located.

Although the Interim ROD focuses largely on the CDA River corridor and floodplain portion of OU-3, under one interpretation, it would include the Lake, portions of the Spokane River corridor and areas adjacent to the Trail of the Coeur d'Alenes right-of-way (ROW) if contaminated with mining related material. Under the EPA position, it may not. The OU-3 Interim ROD states "The Selected Remedy does not include remedial actions for Coeur d'Alene Lake. State, tribal, federal, and local governments are currently in the process of implementing a lake management plan outside of the Superfund process using separate regulatory authorities." Essentially the Interim ROD deferred a decision on a remedy under CERCLA for the Lake and River pending an attempt to revise, adopt, implement, and demonstrate that a LMP is effective in managing mining related contaminants in the waters and bed sediments of the Lake and River.

The Selected Remedy for OU-3 specified by the Interim ROD includes proposed actions for environmental clean-up in the Upper and Lower Basin, as defined in Section 5 of the ROD, and protection of human health in the communities and residential areas, including identified recreational areas, of the basin upstream of the Lake in the CDA River corridor and protection of human health in areas of the Spokane River. The Interim ROD does not select remedies for the Lake and Spokane River in Idaho. The Interim ROD also addresses institutional controls for human health protection in the Upper and Lower CDA Basin. It states that institutional controls will be required to limit future exposures to contaminated soil that is left in place and groundwater not addressed by the Selected Remedy.

The basin ICP addresses the portion of the basin upstream of the Lake in the CDA River corridor and does not address the Lake and Spokane River. Also, there are no remedies noted in the Interim ROD for areas adjoining the Trail of the Coeur d'Alenes (Trail) ROW south of the mouth of the CDA River. The area along the railroad/Trail ROW was included in a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal action; not part of the overall Superfund remedial action in the basin. Contaminant management issues on the Trail of the Coeur d'Alenes and adjacent ROW are to be jointly managed and implemented by the State of Idaho (State) and the Coeur d'Alene Tribe (Tribe) under a formal and legally-binding agreement and in conformance with the Remedial Action Maintenance Plan (RAMP) which was drafted by the State and Tribe.

The Interim ROD states that repositories constructed pursuant to the ROD can only receive material generated by cleanup actions associated with the Selected Remedy including ICP and related CERCLA Removals and that the repositories must be designed and constructed appropriately to contain the waste materials placed there. Repository sites for the remedial actions and ICP generated wastes are currently limited to areas that are contaminated with mining related wastes. This policy has been implemented to ensure that repositories are located within the defined boundaries of the Superfund Facility/Site (areas where the mining related contaminated has come to be located).

Institutional controls are tied to human health protection in the Upper and Lower Basin by the Interim ROD for OU-3. To include ecological protection in an institutional controls type program for the Lake and River would probably require additional remedial investigation type work and an amendment to the Interim ROD or a new ROD.

Environmental Situation - Two major contaminant management concerns in the basin that have not yet been adequately addressed include: 1) managing sediments containing mining related contaminants that may be disturbed during construction and development activities involving excavation and/or dredging in and along the shore of the Lake and River; and 2) management of the contaminated sediments in place on the bottom of the Lake and River by controlling nutrient loadings and biological productivity (eutrophication) that could result in depletion of dissolved oxygen in lake bottom waters and produce geochemical conditions leading to release of metals contaminants in the sediments into the water column. It has been anticipated that the second concern would be addressed by implementation of a LMP as noted in the Interim ROD. The LMP process is currently being developed under a formal mediation process by the State of Idaho (and its political subdivisions), the Tribe, and EPA.

Other concerns include the potential for upland contamination from disposal of contaminated materials from the Lake and River, and the potential contamination of property adjoining the ROW of the Trail outside the areas noted for remediation in the ROD where contamination may migrate from the ROW.

The Lake and River are areas of natural deposition of sediments containing mining related contaminants and other materials moving downstream from the CDA River corridor and other tributary streams. This natural deposition process has resulted in these sediments being a major repository of mining related contaminants within the Superfund Facility/Site and in the absence of remedial/restoration activities they need to be maintained and managed as such.

An estimated 44 to 75 million metric tons of metals-enriched sediments cover approximately 85% of the bottom of the Lake and range in thickness from 17 to more than 119 cm. The metals-enriched sediments generally are extremely fine-grained and are thus susceptible to physical remobilization by river- and wind-induced lake currents. In addition, the metals contaminants are primarily associated with an operationally-defined iron oxide phase which makes them substantially more available in the environment than if they were associated with sulfide minerals as in the original ore bodies, especially under the reducing conditions associated with low or depleted dissolved oxygen concentrations potentially encountered in lake bottom waters under conditions of thermal stratification.

The recently released Scientific Investigations Report on the Hydrogeologic Framework and Water Budget of the Spokane Valley-Rathdrum Prairie Aquifer indicates that the River from the Lake to Flora Road in the Spokane Valley is the largest single contributor of inflow to the Aquifer. The Lake also is a contributor. Although there is concern that water quality in the Lake and the River could affect the quality of water in the Aquifer without proper contaminant management, a 2003 U.S. Geological Survey (USGS) report on surface water/groundwater interaction of the River and the Aquifer indicated that losses from the River to the Aquifer do not appear to have human health implications at this time. While concentrations of some trace elements in River water and bed sediments were elevated, concentrations in the River and in near-River ground water never exceeded EPA drinking water standards in samples taken for the study. The Executive Director contacted drinking water officials at the regional office of IDEQ and verified that there currently were no known drinking water quality violations for metals in near-River wells under their jurisdiction. No information was found concerning the potential for groundwater contamination due to an increase in available metals contamination in the Lake and River water due to contaminated soil excavation or sediment dredging or a situation where metals were released from Lake or River bottom sediments due to eutrophication.

Regulatory Situation - Current federal, state and local agency regulatory processes do not adequately address handling and disposal of contaminated sediments and excavated materials from dredging and other excavation operations involving the Lake and River. There does not seem to be sufficient regulatory control over these activities at this time. Some stakeholders are anticipating that the amended LMP will adequately address this situation.

The Idaho Department of Water Resources (IDWR) has a Stream Alteration Permit process but it is not applicable to these bodies of water because they are considered slack water and through agreement with the Idaho Department of Lands (IDL), the latter exercises authorities over the bed and banks of the Lake and River in Idaho. Currently, IDL and U.S. Army Corps of

Engineers (COE) regulate activities up to the 2,128 ft. high water elevation on the northern portion of the Lake and River. IDL is currently undergoing a negotiated rulemaking process that may have some impacts on dredging activities. The COE, under Section 404 of the Clean Water Act, regulates activities in navigable waters to protect navigation and discharges of dredged or fill material into the Lake and River. Normally the Lake and River would be subject to Section 10 of the Rivers and Harbors Act, but this body of water has been exempted as a result of a congressional act some time ago. The Tribe regulates activities on the southern portion of the Lake and portions of the St. Joe River within the Coeur d'Alene Tribal Reservation Boundary. The Tribe issues permits for all encroachments on the portion of the Lake it manages and does not allow dredging activities. These agencies do not regulate the disposal of dredged or excavated materials above the high water mark or in upland areas.

Excluding the southern portion of the Lake and lower reach of the St. Joe River within Reservation boundaries, currently there are no state or local dredging regulations that exist and the development of State dredging guidelines seems to be stalled. The IDEQ currently does not appear to have adequate funding or authority to regulate disposal of contaminated materials generated from excavation and dredging activities involving the Lake and River. There is also no designated or approved repository for these materials and neither the EPA nor IDEQ have indicated that they have the funding authority to address the need for a repository. It remains a local government and waste generator problem.

Kootenai County (coordinating with the IDL, COE and Tribe where appropriate) regulates site disturbance activities above the high water mark in Kootenai County through its site disturbance ordinance. This ordinance is intended to protect property, surface water, and ground water against significant adverse effects from excavation, filling, clearing, unstable earthworks, soil erosion, sedimentation, and stormwater runoff. This ordinance is currently under amendment and revision, and current information indicates that enforcement of it may be somewhat lacking due to a large workload and lack of adequate funding for enforcement of the program.

CDA Tribe officials indicated that they do not have a means to regulate upland site disturbances on lands surrounding the portion of the Lake they manage except on Tribal fee and trust land areas. EPA may regulate site disturbances in excess of one acre for the purpose of preventing non-point source pollution, but the majority of site disturbance on the uplands around the Lake and River do not meet that criteria. Benewah County is in the process of developing site disturbance regulations for areas affected by development near the Lake and St. Joe River.

The Panhandle Health District (PHD) regulates septic systems that can affect nutrient loadings to the Lake and River, but recent attempts to tighten regulation have been rebuffed by the lake shore owners and the State Legislature for a number of reasons. The Idaho Department of Health and Welfare will be reviewing local recommendations to amend the current sizing limits on subsurface sewage disposal systems in the 2008 Legislature.

Because the Interim ROD for OU-3 addresses institutional controls for the purpose of human health protection in the Upper and Lower Basin, (Harrison to the head waters of the South Fork CDA River) EPA has indicated that they do not have funding authority to aid in the implementation of an institutional controls type program for the Lake and River without amending the ROD. IDEQ is reluctant to become involved in funding a contaminant management program for the Lake and River because of tight funding appropriations and a

concern that funding this activity would reduce funding for the human health protection remediation program in the community and residential areas of the Upper and Lower Basin.

Conclusions and Recommendations by the Executive Director:

Lake and River sediments are acting as repositories for mining related contaminants. There is also an increased level of excavation and dredging activities around and in the Lake and River that may not have been anticipated when the OU-3 Interim ROD was prepared. Proper handling and disposal of potentially contaminated material (from dredging or other excavation processes) should be provided for. This should at least include a process for testing material to determine if it is contaminated with metals at specific action levels and requiring or providing for proper disposal. There are a number of potential approaches to regulating these activities.

Mining waste contaminated sediments in the bed and banks of the Lake and River may need to be managed under enforceable rules and regulations of CERCLA, or State, Tribal and/or local governments under regulatory frameworks such as land use and site disturbance ordinances and permitting authorities, and/or a LMP.

It appears that the intent of the Interim ROD for OU-3 was to deal with contaminant management issues through the LMP process, but that this may not now adequately address contaminant management needs. While the potential need for managing mining related contaminants in the Lake and River within the LMP development and implementation process is a valid concept for further consideration, it is premature to do so at this time because of the current status of the LMP process. Although there may be a difference of opinion concerning whether the Lake and River are in OU-3, it is apparent that the Interim ROD for OU-3 would need to be amended or a new OU and corresponding ROD be prepared before CERCLA (Superfund) funding for a contaminant management program for the Lake and River could be made available.

EPA views local enactment and implementation of Institutional Control Programs or similar “like” programs as critical to program success. An entity (or entities) who has legal authorities that would allow them to implement and enforce institutional controls (or institutional control-like measures) needs to be identified before any program and rule can be developed in a meaningful way.

The Spokane Valley-Rathdrum Prairie Aquifer Study indicates that the Lake and River are major contributors to the aquifer that is a sole source of potable water for thousands of people, but current data is not adequate to determine what impact increased releases of metals from sediments in the Lake and River would have on aquifer groundwater quality. Proper management of these sediments to prevent increased releases of metals may reduce the potential for metals contamination of the aquifer and would ensure protection of the Selected Remedies downstream in the River by preventing the release of hazardous substances into surface waters from dredging or excavation activities or the release of metals from the contaminated sediments. This is an important issue for the downstream stakeholders.

Following are some specific approaches or issues that could be explored further and vetted by the PFT and TLG if further staff effort is to continue:

- The Lake and River should be managed to control the disturbance and migration of mine waste contamination as well as natural resources.
- As managers of uplands, Kootenai and Benewah Counties could work with the State and Tribe to develop the contaminant management controls for upland activities.
- Kootenai County's site disturbance ordinance could be used as a model for contaminant management controls for ground disturbance activities in upland areas (another model is the joint State/Tribe management plan for the Trail of the Coeur d'Alenes).
- Contaminant management controls for managing flood plain excavation and dredging activities should be developed and coordinated with the COE and IDL. Some of the provisions of the basin ICP rules should be considered as models for dealing with excavation and dredging activities.
- Contaminant management controls should include provisions for testing of material to be excavated within the flood plain of the Lake and River and any material to be dredged from the Lake and River.
- Contaminant management should provide for control of ground disturbance activities and septic systems on the uplands adjacent to the Lake and River to ensure that activities and septic system effluents do not increase the nutrient loadings to the Lake and River.
- A regional repository should be developed for disposal of contaminated material associated with mining activities removed from the Lake and River by excavation or dredging. This repository should be developed in a manner consistent with others developed within the Bunker Hill Superfund Facility/Site.
- An agreement may need to be negotiated concerning the enforcement of contaminant management controls in the various jurisdictional areas of the Lake and River and their flood plains and uplands.
- The BEIPC through the TLG and PFT can be the agent to assist all responsible governments in developing a contaminant management program for the Lake and River.

Although the PFT could not come to consensus on all of the conclusions and recommendations above, the PFT and Executive Director are requesting that the BEIPC review the discussion presented and provide direction. If the BEIPC desires that development of a contaminant management/institutional controls process for the Lake and River continue to be pursued at this time, then by working through the PFT, TLG and CCC processes, a plan could be drafted for further review and endorsement. This plan would also include recommendations of how the responsible agencies might administer the plan and how it would be funded and implemented.

(page intentionally left blank)