

1-23-19 CRITICAL REVIEW OF THE 2009 LAKE MANAGEMENT PLAN (LMP)

As stated in the Environmental Protection Agency's (EPA's) 2002 Interim Record of Decision, EPA deferred implementation of a remedy for Coeur d'Alene Lake to address the more than 75 million tons of metals-laden sediments in the lake bottom, concluding that: "...an effective LMP created outside of the Comprehensive Environmental Response Compensation Liability Act (CERCLA) defined process, using separate regulatory authorities, would reduce riverine inputs of nutrients and metals that continue to contribute to contamination of the lake and the Spokane River (2009 LMP, p. 8)." The deferral of an EPA CERCLA decision on the lake, resting on the substitution of the LMP, was difficult for the Coeur d'Alene Tribe (Tribe) to accept since, at best, tens of millions of tons of metals-contaminated sediments would remain on the lake bottom, subject to continuous management of nutrients into perpetuity. At worst, if ineffective, this solution could lead to accelerated metals mobilization into the water column and the food web. The Tribe also expressed their concerns over the failure of the 1996 LMP and questioned how the development of a new LMP would successfully protect lake water quality.

From 2002 to 2006, several versions of an LMP were developed by the Idaho Department of Environmental Quality (IDEQ) and the Tribe. At one point while jointly working on the LMP, the Tribe, concerned with the compromises being inserted into the draft LMP to appease the local county commissioners, ceased working collaboratively with the IDEQ, and wrote our own draft LMP, bringing the collaborative process to a stand-still. Over the next few years, the Tribe and IDEQ agreed to accept EPA's offer to hire a mediator to help resolve the impasses that impeded the finalization of a joint LMP. The impasses (lack of committed funding, lack of new regulations, no clear time schedules, and no details on the true cost of the LMP, among others) that kept the Tribe from agreeing to the joint draft LMP were never truly resolved. Instead, the Tribe was asked by the State and EPA to simply agree to an LMP that had no committed funding or any regulatory mechanisms to actually make the LMP substantive, in the hopes that once adopted, the impasses would resolve themselves. Begrudgingly, the Tribe agreed.

The outcome of mediation was the finalization of the 2009 LMP: essentially, a nutrient management plan with the goal of maintaining oxygenated waters directly above all metals-contaminated sediments at the bottom of the lake. Importantly, the 2009 LMP acknowledged that while Clean Water Act authority for water quality is held by the Tribe, the State of Idaho, and the Federal governments, most land use activity that impacts water quality is under the jurisdiction of other local, state and federal agencies, meaning that implementation of activities intended to reduce riverine inputs of nutrients lies outside the jurisdiction of the two coordinating governments/agencies (the Tribe and IDEQ). Two other points of significance acknowledged in the LMP include: 1) deferring a remedy resulted in the inability to use CERCLA funds to address mining-related water quality issues in the lake (2009 LMP, p. 8); and 2) a negative trend already existed for both phosphorous and plant productivity in the lake (2009 LMP, p. 16).

Although the Tribe and the IDEQ have tried to implement components of the LMP for nearly ten years (especially rigorous lake water quality monitoring and public education and outreach), analysis of monitoring results prove a decline in critical water quality parameters as outlined in the LMP as "trigger" values. **Therefore, the LMP as implemented is not sufficiently protective of the lake's water quality.** As a result, the Tribe has conducted the

following critical review of the LMP to substantiate why we no longer support EPA's non-CERCLA approach to manage metals mobilization from lake bed sediments into the water column. The following is a review of the 2009 LMP and a summary of the status of the objectives that were presented in that document.

As mentioned, a critical component of the LMP was the establishment of triggers that would provide an "early warning system" regarding deterioration of lake water quality, with the understanding that these triggers would be used to drive the LMP's adaptive management plan approach. The LMP states:

In the event that monitoring data reveals trends that approach a trigger level for one or more constituents, this will prompt a comprehensive review to identify the causes of the trend and guide development of a corrective management response. Modeling will also be used as a tool to estimate additional nutrient reductions needed to restore water quality to below trigger levels. The Management Action Tables (MATs) will be reviewed to verify implementation status and identify "next steps" for reducing nutrient inputs. Additional management actions will be prioritized, and may include: increasing the implementation of projects, targeting critical sources for reduction, reviewing Best Management Practices (BMP) effectiveness, and reviewing regulatory effectiveness (adequacy of enforcement and of rules). This adaptive management approach using water quality trends and triggers to signal the need for additional actions followed with ongoing monitoring and modeling to determine the lakes response to these actions; will provide for a proactive and measured strategy for protecting water quality (2009 LMP, p. 18).

In keeping with this directive, in 2015 and 2016 the Tribe and IDEQ produced successive reports on trends for each of the triggers established in the LMP, using core monitoring data gathered since 2008 (Coeur d'Alene Tribe and Idaho Department of Environmental Quality, 2015; 2016). The 2015 and 2016 Coeur d'Alene Lake Status Reports demonstrated undesirable trends in dissolved oxygen, total phosphorous, chlorophyll α , and dissolved lead. The reports were shared with EPA, the Basin Environmental Improvement Project Commission (BEIPC), the Technical Leadership Group (TLG), the Kootenai County Commissioners, the Kootenai County Natural Resources Advisory Committee, and the general public at the 2016 and 2017 Our Gem Symposia. Results were also shared via the media with the Spokesman Review reporting on both declines in dissolved oxygen and the need for nutrient reduction (Kramer, 2016).

Despite this, none of the additional management actions outlined in the LMP have occurred (i.e., there has been no increase in project implementation around the lake to actively reduce nutrient inputs, no additional funding has been allocated towards LMP efforts, no state or local agencies have reviewed the effectiveness of their BMPs, and absolutely no regulations have been developed or reviewed to address the increase in nutrients entering Coeur d'Alene Lake). There has not been little to no public response to the LMP reports regarding the decline in lake water quality, nor has any public agency responded with action or dedicated funding.

The LMP outlined five core objectives to support both reduction of nutrients, and to improve understanding of the dynamics of metals and nutrients within the lake:

Improve scientific understanding of lake conditions through monitoring, modeling, and special studies

- The Tribe believes that the cornerstone of the LMP was based on the development of water quality “triggers” (those numeric criteria that were established to be compared to the monitoring data collected). The Tribe’s intent in agreeing to the LMP was predicated on the proof of the effectiveness of the LMP that would be captured in the trend data. To date, Tribal and IDEQ trend data empirically shows declining water quality and the exceedances of two critical water quality triggers. On page 18 of the LMP, it clearly states that data would be viewed as “an early warning system.” Ideally, corrective steps would be taken before conditions deteriorate (i.e., exceeding a trigger). Furthermore, any trends that approach a trigger level would “...prompt a comprehensive review to identify the causes of the trend and guide the development of a corrective management response.” Since 2016, the Tribe has asked EPA and the State of Idaho what response actions will be taken, yet for more than two years there has been no response other than both agencies/governments wanting to engage in lengthy bureaucratic processes. Additionally, it concerns the Tribe that Kootenai County technical representatives expressed reactionary behavior once they received the technical reports that have identified trends showing conclusively that there are degrading water quality trends. After providing this information to the counties, rather than participating in dialog about solutions to improve water quality and future steps, they have attempted to discredit the reports by questioning the integrity of Tribal and IDEQ staff and their monitoring results.

In the summer of 2018, Tribal Council formally requested a meeting with the Director of IDEQ and the EPA Region 10 Administrator to ask these decision makers what their intended corrective actions were going to be in addressing the exceedances of trigger values. IDEQ Director, Mr. John Tippetts, stated to the Tribal Council that he agreed that more needs to happen but could not further articulate what “more” meant. EPA Region 10 Administrator, Mr. Chis Hladick, and the Director of EPA Office of Environmental Cleanup, Ms. Sheryl Bilbrey, could offer little more than to say that they *may* be able to provide funding to the Tribe for future water quality sampling; efforts the Tribe believes should have been EPA’s responsibility under Superfund from the date of signing the 2002 ROD. Page 18, paragraph 2 of the LMP clearly outlines the data driven, adaptive management feedback loop; none of the actions detailed in this loop have occurred.

- As detailed on p. 19 of the 2009 LMP, the AEM3D Modeling of Coeur d’Alene Lake (formerly known as ELCOM CAEDYM) was intended to be a collaborative effort between the Tribe and IDEQ. The model’s intended purpose is to predict lake productivity changes from changes in nutrients, metals and temperature. To date, IDEQ has not developed its capacity to use the model, leaving the Tribe to be the sole entity running the model. The Tribe has independently become proficient with the model without any investment from IDEQ. This lack of effort from our partner has delayed the calibration of the model for at least an additional two years, though it remains a high priority for the Tribe. Although IDEQ continues to show interest in model calibration, IDEQ’s lack of involvement in the model leads the Tribe to believe that the State can dismiss model output because they simply will not trust it, since they did not jointly develop the output. This may also merely be an approach to delay having to take any immediate lake protection measures while the Tribe

spends two more years calibrating the model. Additionally, given the counties technical team's reaction to our empirical data reports, we can only conclude that model predictions will also be dispelled by local county officials.

- The 2009 LMP details a number of special studies that were to be conducted based on recommendations from the National Research Council/National Academy of Sciences 2005 report on the Bunker Hill Superfund Site (2009 LMP, p. 20). These special studies included the need to study internal nutrient cycling, metals releases from sediments, food web toxicity, and subsurface sewage systems impacts. Due to lack of staff and funding, none of these studies have been completed, except those undertaken by the Tribe.
- The 2009 LMP called for an update to the 1989-90 sediment core sampling, but no funding has been made available to support this effort (estimated cost ~\$200,000).
- The LMP budget called for \$75,000 annually in Years 4 and 5 for nearshore studies for suspected septic drain field impacts (2009 LMP, p. 59). This was not funded.
- At the time of the 2009 LMP development, the Basin Environmental Monitoring Program (BEMP) sampling was occurring in the Lower Coeur d'Alene River seven to eight times a year. The 2009 LMP called for additional riverine monitoring sites to better evaluate nutrient source loading and to support the nutrient source inventory. Instead, the BEMP monitoring was reduced to six times a year, and in 2014, after the BEMP optimization process, sampling was further reduced to four times a year. The Tribe shared our concerns over the impact of these reductions in sampling which could hinder the ability to understand and capture metals and nutrient dynamics. These concerns were shared with EPA in person and writing, but were summarily dismissed.
- Following a review and reanalysis of data from USGS and EPA technical reports, the Tribe identified important data gaps regarding lower Coeur d'Alene river productivity and metals transport within the river and into the lake. As EPA was cutting the funding for BEMP sampling in the lower Coeur d'Alene River, the Tribe was negotiating with EPA as part of the EPA/Tribe Cooperative Agreement, for more rigorous sampling in the lower river. From these negotiations the Tribe developed and completed two studies in the lower Coeur d'Alene River (Coeur d'Alene Tribe 2014, Coeur d'Alene Tribe 2018). Results from the two reports showed alarming trends of stratification, anoxia (devoid of oxygen) and increased rates of metals/nutrient benthic flux in the deep meander bends of the river. The reports revealed that internal cycling of nutrients and metals within the lower river were happening during the summer and fall when the river was most biologically productive. The reports also revealed that the particulate, dissolved and colloidal-lead increase in the Lower Coeur d'Alene River throughout the summer are being transported into the lake well into the early winter (December). Additional sampling by the Tribe in the lateral lakes of the river's floodplain revealed the same anoxia and internal cycling of nutrients and metals. EPA has begrudgingly acknowledged the significance of these lower Coeur d'Alene River reports. The Tribe believes the studies (Coeur d'Alene Tribe 2014, Coeur d'Alene Tribe 2018) are especially relevant now as EPA is in the middle of upgrading the Central Treatment Plant (CTP), that will remove metals in water from mine adits and groundwater affected by the

Central Impoundment Area (CIA). The Tribe is concerned that phosphorus, a critical nutrient identified in the LMP, will not be removed as efficiently as metals by the CTP; creating a scenario where zinc is reduced faster than phosphorus and lower Coeur d'Alene River productivity and Coeur d'Alene Lake productivity could increase. Increased phosphorus loading in the productive summer and fall seasons will drive increased productivity, which will exacerbate the internal cycling and flux of metals out of the river sediments. These lower river nutrient/metals and productivity dynamics raise the concern of whether or not, without any further nutrient inputs to the system, the current bed-load of metals and nutrient loads are, in themselves, are enough to create a cascading benthic flux. This concern raises the question of whether the entire goal of the LMP is flawed.

Establish and strengthen partnerships to maximize benefits of actions under existing regulatory frameworks

- The LMP outlined a series of MATs, (pp. 109 – 137) and suggested that the LMP staff would coordinate with other agencies to assist them in implementing these actions within their annual work plans. While the LMP coordinators collaborate with multiple agencies and organizations, only the Kootenai Environmental Alliance, a non-profit entity, has explicitly integrated the LMP into its strategic plan and the Coeur d'Alene Chamber of Commerce Natural Resources committee has identified lake protection as an annual goal.
- The LMP calls for regular coordination with Kootenai, Benewah and Shoshone counties **to support counties in their enforcement of regulations related to land activities that generate sediment and nutrients.** Instead, the LMP staff has found themselves reporting on *their* activities to the counties. Meetings have often consisted of confrontations where stakeholders with specific political agendas attempt to discount scientific reports, even questioning the legitimacy of the core goal of the LMP: prevention of benthic flux. The counties have not engaged in any direct activities related to the LMP. County commissioners and their staff have not attended the Our Gem Symposia. In 2015, Kootenai County attempted to *remove* its already inadequate site disturbance ordinance that calls for undisturbed natural vegetation buffers to be a minimum of 25' in slope distance from the ordinary high water mark of water bodies in Kootenai County. The County's Code Enforcement staff is lacking and codes are rarely enforced and the County has repeatedly moved (and continues) to lessen existing land use regulations.
- Specific issues in regards to implementation of the MATs include our concerns about the following:
 - While the Idaho Department of Lands (IDL) reports annually on adherence to the Forest Practices Act (FPA), and its quadrennial audits with IDEQ show very high levels of compliance, there is no reported evaluation on the effectiveness of erosion and sediment control BMPs, nor an evaluation of cumulative watershed effects. At the same time, the Tribe has observed intensive pressure on private timberlands in the St. Joe River Basin resulting in extensive land clearing. When Google map time-lapse imagery displaying the vast reductions in forest canopy cover was provided to EPA and IDEQ, EPA had no response. IDEQ Regional Administrator, Mr. Dan Redline is paraphrased as stating, the video proves nothing; you can't expect me to ask my

Director to question the protectiveness of FPA without rigorous data to prove it. If the Tribe expects this to happen, it would be up to the Tribe to collect such data.

Additionally, the Tribe maintains concerns about the efficacy of FPA BMPs; specifically, that the Stream Protection Zone of 75 feet is less than the minimum of 30 meters recommended in the literature (Sweeney and Newbold, 2014). Assessments of its efficacy by IDEQ and IDL are visual only, and based on a one-time observance of a sample of cuts. No ongoing monitoring of sites is conducted, nor do audits assess the efficacy of sediment and erosion control BMPs after storm events.

- A recommendation to develop a MAT for managing contaminated sediments around the lake has never been developed and efforts for EPA to consider expanding the Institutional Controls Program around the perimeter of the lake have not been sought.
- Although marina owners/operators expressed an interest in participating in a “Clean Marina Program,” there has been no funding to support such a program.
- Funding for the multiple restoration projects called for in the MATs is limited; anticipated support from the Restoration Partnership (RP) is only just becoming available, and processes for securing future LMP funds from the RP is questionable.
- We are especially concerned about the Development, Erosion and Stormwater MATs (pp. 121 – 123), that are the least implemented of the eight existing categories and most reliant on counties and cities for implementation. As mentioned above, there has been little to no enforcement of site disturbance ordinances/regulations with flagrant violations occurring in plain sight of the community. There is no county encouragement of restoring or protecting riparian vegetative buffers around the lake and a vocal minority of influential individuals repeatedly makes public statements alleging that the lake has never had riparian buffers due to the natural basalt features. There is no attention to the rampant upland development occurring, and elected officials are currently pushing to loosen requirements for minor land divisions. Kootenai County is experiencing some of the fastest population growth in the nation (6.7% in 2017), and its population has more than doubled since 1990. Given the perfect storm of ideological opposition to land use regulations, population pressures and economic growth, efforts to use regulatory authority to reduce increasing nutrient inputs is unlikely.

Develop and implement a nutrient reduction action plan

- A nutrient reduction action plan was intended to determine the relative contributions of sub watersheds, prioritize site-specific projects, incorporate the Total Maximum Daily Load (TMDL) process, and incorporate FERC-related projects (2009 LMP, p. 22). The specific milestones for the Nutrient Reduction Action Plan are:
 - A basin-wide nutrient source inventory funded, designed and conducted by 2012 to determine relative contributions. Use the basin-wide nutrient source inventory and ongoing monitoring to prioritize site specific projects for implementation in coordination with the management agencies identified in the MATs
 - Incorporate the Total Maximum Daily Load (TMDL) process under the CWA into the nutrient reduction plan
 - Incorporate appropriate mitigation measures required by FERC for relicensing of the Avista hydroelectric project into the nutrient reduction plan

- The “essential first step” in this process was to be the development of a nutrient source inventory, with an intended product available for decision-makers in a GIS layer. The LMP staff initially spent three years sampling the St. Maries/lower St. Joe Rivers, but no additional sampling has been conducted (IDEQ is planning to begin sampling at Wolf Lodge Creek). The nutrient inventory has yet to be completed, and completion has been hamstrung primarily by multiple staffing changes at IDEQ and the inability for IDEQ and the Tribe’s technical staff to agree to data integrity (the paucity of data for the northern lake tributaries) and model results. Additionally, given the coarseness of the data and the scale of the watershed, the nutrient inventory is unlikely to point to the land use specific, parcel-level scale as needed by IDEQ to question current land use practices and as anticipated by stakeholders that would truly drive site-specific projects. Furthermore, even if the nutrient inventory was able to be parcel specific, there are no funding sources set aside to implement any, much less, basin -wide, non-point source nutrient reduction projects.
- The nutrient reduction goal also calls for the integration of the TMDL process. As one can clearly see when looking at the TMDL map provided on page 24 of the LMP, there are many water bodies that have already been placed on the 303(d) list as being impaired. Of those waterbodies listed for nutrients (Black Lake and Fernan Lake) none have been improved through the IDEQ TMDL process. IDEQ has listed that small tributaries to the lake may need a nutrient TMDL and that the Spokane River, from the outlet to the state border, needs a phosphorus TMDL (Idaho Integrated Report 2016). Numerous segments of the St. Joe, St. Maries, and Coeur d’Alene rivers and all of their tributaries have completed TMDLs for temperature and sediments, yet none of these TMDLs were developed with downstream goals in mind - so even if they are fully implemented and their respective goals met, they may not achieve LMP goals downstream (especially since most are not nutrient TMDLs). In the Coeur d’Alene Lake Basin, Black Lake and Fernan Lake are the only waterbodies that are listed for nutrients (e.g., phosphorous) and have EPA approved TMDLs through the IDEQ TMDL process. Neither of these have finalized TMDL Implementation Plans, nor implementation funding. This is a concrete indication that the TMDL process is flawed. It is not sufficient for the State to be required to write a TMDL Implementation Plan without requiring the State to implement those TMDL Implementation Plans. IDEQ continues to suggest that until a nutrient inventory is completed, there is no indication of what areas need to be addressed. The Tribe believes that the TMDL list already provides the State with clear direction as to what water bodies are impaired, and therefore, they should have been rigorously implementing actions, particularly since the LMP, in part, relies on this process for nutrient reduction.
- While the LMP coordinators have engaged with the existing Watershed Advisory Groups (WAGs), specifically the Coeur d’Alene Lake Tributaries WAG and the St. Joe WAG, in the last five years virtually no projects have been implemented as a result of this involvement. The Coeur d’Alene Lake Tributaries WAG coordinated an assessment of the Wolf Lodge Creek watershed, but landowner participation has ebbed and IDEQ has struggled to find willing landowners even for the placement of monitoring equipment. No projects have emerged from the St. Joe WAG, and participation from stakeholders is minimal. Both WAGs rarely meet.

- While the lake is listed as metals-impaired north of Hidden Lake, there is no metals TMDL adopted for the lake. In 2000 a metals TMDL was developed, but later overturned by the Idaho Supreme Court after local mining companies successfully argued that rulemaking procedures had not been appropriately followed. This decision is supposed to be reviewed on a 5-year review schedule by IDEQ, and the 2009 LMP stated that IDEQ would reassess the voided metals TMDL for both the lake and the South Fork of the Coeur d'Alene River beginning in 2009 (2009 LMP, p. 23). To the best of our knowledge, this review has not occurred. Furthermore, EPA has recently been in negotiations for the reopening of both the Bunker Hill and Sunshine mines, both of which would require Non-Point Discharge Elimination System (NPDES) (soon to be taken over by Idaho as IPDES) permits. This raises concerns about the continued absence of any metals TMDL for both the lake and South Fork Coeur d'Alene River.
- Avista/FERC Mitigation Program: Although it was envisioned that many aspects of the Tribal and State Avista mitigation programs were geared to indirectly reduce nutrients in the lake, several key changes have been made to these programs that may make them far less effective in managing nutrients. These changes have occurred because of on the ground scientific work and adaptive management. For example, the Tribe's invasive aquatic weeds management program was designed to reduce Eurasian water milfoil (milfoil) in the system, because in addition to invasive milfoil being a nuisance it can alter nutrient cycling in lakes. However, what the Tribe found from over 10 years of intensive weed management (and several million dollars in funding) is that although we may have treated over 1000 acres, our effectiveness in controlling the weeds in these areas varies greatly and areas that never before had milfoil now have infestations of milfoil. Therefore, our ability to reduce the amount of milfoil in the system has failed. The end result is a program that can only reduce nuisance milfoil on a temporary basis and cannot reduce milfoil across the entire lake basin. State bank stabilization work also offers minimal reduction in sediment recruitment into the lake.

Increase public awareness of lake conditions and influences on water quality

- While LMP staff have been able to achieve almost every milestone in the 2009 LMP, they have had to do so with limited funding and very few staff. Furthermore, despite their activities, a rapid increase in new residents, as well as the challenge of reaching a tourism community, means that many lake users and local residents are still largely unaware of the challenges facing Coeur d'Alene Lake, or even its mining history. Additionally, LMP staff and partners are regularly challenged by stakeholder groups such as the Coeur d'Alene Lakeshore Property Owners Association, who question the scientific premise of the LMP. There is little interest in the local press in reporting on LMP activities or scientific reports and LMP staff have been unable to engage with Hagadone Industries, owner of the Coeur d'Alene Resort and the Coeur d'Alene Press, with their major community voice that has historically opposed the LMP.

Establish funding mechanisms to support the LMP goal, objectives, and strategies

- Funding has been inadequate for the core LMP budget since its inception. While the LMP budget outlined the need for a full-time coordinator, a full-time outreach staff, a limnologist, a modeler, a technician, a TMDL coordinator and full-time administrative support for each agency, existing Tribal and State funds could not and cannot support this. Thus, the coordinators are responsible for outreach and a partnership duty, the Tribe’s limnologist also is tasked with modeling, and there are no staff assigned to TMDL integration.
- The 2009 LMP budget called for \$2,000,000 in annual funding for TMDL implementation and projects on non-303(d) waterbodies. This was not funded.
- EPA has funded the analysis of core monitoring metals samples through their Manchester Lab, but has for the past five years verbally expressed an upcoming end this support. Both the Tribe and IDEQ were forced to cut back on the collection of metals samples to the bare minimum, and loss of this support would result in about \$35-\$40,000 in additional annual costs. As stated above, while EPA Region X Office of Environmental Cleanup Director Sheryl Bilbrey stated to the Coeur d’Alene Tribal Council in August 2018 that EPA would look at taking on the costs of monitoring, no written assurances as to the future of this funding have been given to the Tribe or IDEQ. More recently EPA claimed “they were running on fumes” when asked about funding LMP-related work.
- There is very little funding available from the Hecla settlement to support nutrient reduction projects. LMP staff have sought additional funding from State §319 funding in coordination with partners at the Kootenai Shoshone Soil and Water Conservation District, a process that takes approximately 18 months and has left private landowners frustrated and disinterested.
- The four primary mechanisms for funding for the LMP as outlined in the 2009 plan are:
 - *Annual budget requests.* The Tribe has no taxing mechanisms to support federal or state appropriations, and has nearly depleted the Hecla settlement dollars that the Tribe has used to support the LMP thus far. These funds are not anticipated to last beyond FY 2019. In fact, since funding was running out the Tribe’s LMP Coordinator has taken on a new position. The Tribe does not plan on back filling this position.
 - *Annual Congressional budget requests and appropriations.* None have been made. There appears to be little interest from the congressional delegation. While Tribal staff met with Senator Risch’s staff in early 2018, and expressed our concerns about the lake, there has been no formal response. Congressional staff has been formally invited to attend the Our Gem Symposia, but have not attended. Of late, their involvement in the Basin Environmental Improvement Project Commission (BEIPC) also appears to be dwindling.
 - *Local business community matching funds for cooperative projects.* There have been no contributions or matching funds from area businesses, even those whose livelihood is dependent on the lake.
 - *Other fundraising initiatives.* The Tribe has applied for several grants to support outreach and education, including two unsuccessful proposals for EPA Environmental Justice grants. Tribal staff was told by EPA grant specialists that the EPA’s Environmental Education Request for Proposal process has precluded the Tribe from applying. The Tribe did however support a successful 2013 application by the

University of Idaho (UI) to support the Confluence Project (our high school field science project) and the Tribe has partnered on three National Science Foundation proposals with the UI, though they have thus far been unsuccessful. One successful application has been a collaborative effort with the Spokane Soil and Water Conservation District, Washington Department of Ecology and USDA - NRCS Regional Conservation Partnership Program, which provides targeted conservation program dollars for the Spokane River watershed. However, despite success in obtaining funding, to date, only a handful of farmers have applied for the program (one crop application in Benewah County as of 12-3-18).

The 2009 LMP states: “Cultivating this funding pool will depend, in part, on the political acknowledgement of the importance and need for implementing the 2009 LMP. Advocacy of all basin partners will be necessary to garner political support. Commitment of partners to continue to prioritize and pursue funding for their respective LMP implementation activities, in coordination with the overall 2009 LMP implementation effort, is essential (2009 LMP, p. 29).” There is little to no evidence of this advocacy by EPA, our Congressional representatives, our business community, or any other stakeholders.

In summary, the following points must be considered:

- 1) The mission of the LMP: The LMP was developed to be the “non CERCLA” approach to manage over 75 million tons (enough to fill the Berkley Pit in Butte, Montana 1½ times) of hazardous substances at the bottom of the lake. To do so would require basin wide nutrient reduction to keep oxygen in the hypolimnetic waters in order to prevent metals mobilization (benthic flux) from lake bed-sediments into the greater lake water column. The LMP has relied heavily on land use management under separate regulatory authorities outside the jurisdiction of the Tribe and State. It relies on committed funding to administer the program, conduct monitoring and special studies, conduct a nutrient inventory, audit land management activities in the basin, develop and run predictive modelling scenarios, and most importantly, develop water quality criteria “trigger” thresholds in which to compare trend monitoring data and use adaptive management to respond to water quality trends. Finally, it relies on the integration of other state, local and tribal programs, non-regulatory programs, and enforcement of regulations, to manage nutrients.
- 2) To date, a paucity of funding has been dedicated to the full implementation of the LMP, which at a bare minimum was estimated in the LMP at over \$2,500,000 per year into perpetuity. The Tribe has spent all of its available mining company settlement funds (over \$250,000/year for 10 years) to implement our portion of “core” aspects of the LMP and have no additional dedicated funding to continue this work. As stated above, the Tribe has now eliminated the LMP Coordinator position. We have also not been successful in securing competitive grant funding. The State continues to fund a portion of their “core elements” of the program, but has no dedicated funding to implement basin-wide non-point source sediment reduction projects (under the TMDL program estimated to cost some \$2,000,000/year). Additionally, The TMDL program itself has proven to be nothing more than a process that has led to very few success stories that have resulted in restoring a water body’s beneficial uses.

- 3) Education and outreach activities have been successful but have yielded very little “substantive” nutrient reduction actions.
- 4) Many of the management actions found in Appendix C that have been audited have been reviewed by State and Tribal LMP Co- Coordinators and seem to all be meeting their regulatory intent or BMPs, with the exception of shoreline development (see below), but few have been evaluated for their efficacy.
- 5) Shoreline regulations (i.e., site disturbance ordinance) that have been put in place by Kootenai County have been consistently ignored and undermined by elected officials and community leaders during the life of this LMP.
- 6) Monitoring data has shown that the water quality triggers defined in the LMP have been approached and in two parameters, exceeded. This is the “report card” that indicates the ineffectiveness of the LMP efforts.
- 7) Special studies are beginning to show the potential adverse effects that EPA’s upstream remedy will have on primary production, anoxia, and riverine and lake bed releases of not only metals, but nutrients. EPA has never analyzed the potential adverse effect that their remedies would have on the lake, ignoring ecological principles of upstream and lake connectivity. The results of these studies are startling and further indicate the need to figure out future protective measures outside the LMP umbrella. Our AEM 3D modeling, although not fully calibrated, predicts continued declining water quality trends.
- 8) Given trigger exceedances, and the impacts of EPA’s upstream remedy, actions need to be taken to change the trajectory of declining water quality trends. Since 2016 the Tribe has been imploring the State of Idaho and EPA to explain what “actions” will be taken to adaptively manage this problem. As we enter 2019, there are still no serious actions being considered, no less taken, by the State or EPA to convince the Tribe that the LMP can be the “non CERCLA” remedy to protect the lake from the release of 75 million tons of hazardous substances from lake bed sediments.

At best, the LMP was slated to be the mechanism to manage one of the largest hazardous substance repositories in the country, if not the world. To put this in perspective the amount of contaminated sediments is enough to fill the Berkley pit in Butte, Montana one and a half times. As it currently stands, the use of Coeur d’Alene Lake as a repository with no dedicated funding to implement the 2009 LMP would remain a burden to the Coeur d’Alene Tribe, already burdened with the damage to cultural and spiritual heart, leaving it bearing the brunt of the lake’s management into perpetuity. This outlook is extremely unnerving to the Tribe. We are concerned that based on the current trajectory, we are facing our worst case scenario. The ineffectiveness of the LMP is obvious and will result in metals mobilization from lake bed sediments into the water column, guaranteeing catastrophic ecological, social, and economic regional ramifications. This must be prevented at any cost.

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