

**Kootenai Environmental Alliance
Idaho Conservation League * The Lands Council
Spokane Riverkeeper * Idaho Rivers United**

Mr. Daniel Redline
DEQ Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814
VIA Email - daniel.redline@deq.idaho.gov

Oct. 27, 2009

***RE: Draft Certification for Army Corps of Engineers NWW No.
051200031 to dredge and place fill in Coeur d'Alene Lake
associated with the reconstruction of a marina on Blackwell
Island.***

Dear Mr. Redline,

We are submitting these comments in response to the Draft Certification for Army Corps of Engineers NWW No. 051200031 to dredge and place fill in Coeur d'Alene Lake. We submitted comments previously to the Idaho Department of Lands and the U.S. Army Corps of Engineers regarding the marina project expressing our concerns about the ongoing risk associated with the dredging of contaminated lake sediments and on-site storage of those sediments.

Our basic concerns are that the proposal includes permanent, on-site storage of dredged toxic sediments, in what amounts to a new private repository, within the flood plain of a heavily populated area. Any toxic sediment released from the proposed confined disposal facilities would contaminate Coeur d'Alene Lake, the

Spokane River or the Spokane Valley - Rathdrum Prairie Aquifer. In this case, either an off-site location for permanent disposal or a comprehensive, ongoing, independent inspection and monitoring program with appropriate institutional controls are both practicable alternatives that would reduce potential adverse impacts to the environment.

However, the draft certification requires no monitoring of water quality of the aquifer, and no monitoring of the long-term sufficiency of the engineering solutions proposed. Nor does the certification require independent third-party monitoring. Therefore, in our comments, we suggest the certification clarify requirements for both long-term monitoring and in-process monitoring for this project.

The dredged sediments are toxic and must be monitored carefully.

The applicant is proposing permanent storage of highly contaminated sediments in a private repository located within the 100-year floodplain on Blackwell Island. These sediments contain elevated levels of heavy metals with up to 2900 ppm lead and over 14,000 ppm zinc. Supplemental Material, Volume 2, Appendix D. At least one composite sample tested above the TCLP regulatory limit for lead (5 ppm). Additionally, zinc, which has no regulatory limits, tested above 5 ppm for 14 of the 20 samples tested.

The applicant proposes to handle the dredged materials in three differing ways, depending on the level of toxicity of the sediments. Several organizations and agencies have expressed concern about the ability to distinguish between toxic and non-toxic sediments during the excavation to be certain that materials are being

deposited in the appropriate locations. It is therefore critical that comprehensive independent in-process monitoring be conducted during the dredging to insure appropriate disposal. This type of metals monitoring is not addressed in the draft certification. Unfortunately in this respect, the DEQ's proposed monitoring currently is reactionary, instead of proactive.

Although excessive discharges to the lake and river are not allowed under the certification, making sure the materials are placed in the appropriate facility will help to ensure upfront that metals concentrations don't exceed water quality standards. We suggest therefore that the DEQ include a monitoring requirement to test for metals in dredged sediments during the excavation.

Additionally, considering that physical transport of metals is a real and substantial treat to the downstream environment, we request that all metals be monitored in both total and dissolved phases.

Because of the importance and proximity of the Rathdrum Prairie Aquifer, the sole-source of drinking water for the entire region, and because of its hydrological connection to the Spokane River, we strongly urge a monitoring program be established for the aquifer.

We would also suggest strengthening water quality monitoring requirements in the draft certification. First, turbidity should be measured regularly as well as when there is a visible plume. Second, in the event that turbidity plumes are evident, monitoring for metals should also be required. Third, turbidity should be monitored during significant storm events during dredging, regularly during

winters of the construction phases, and during flood events after the project's completion. Fourth, we would suggest that the required daily turbidity monitoring be done in afternoons, rather than leaving open the possibility that monitoring could occur first thing in the morning, before activity begins at the site. And finally, additional water quality monitoring in the settling basin should be performed immediately prior to discharge.

The project needs ongoing and independent monitoring

Overall, we support strengthening conditions in DEQ's draft certification. We have been concerned that the applicant does not provide for any *independent* monitoring and oversight during the construction period, or for any period after construction. Nor does DEQ require *independent* monitoring and oversight. In our view, toxic material should not be stored onsite in a flood plain unless the storage operation is subject to rigorous independent monitoring and long-term protection. Very simply, independent monitoring and inspections should take place during dredging and sediment storage operations, and should continue periodically throughout the life of the marina and beyond, to ensure dissolved and excavated toxic materials are not making their way back into the environment.

We are concerned that the self-monitoring and self-reporting outlined in the draft certification are not sufficiently rigorous, are not independent, and may not provide sufficient documentation. All monitoring should be done by licensed, certified and *independent* third parties. In addition to all necessarily immediate and

telephonic notifications, all notifications and monitoring data should be documented in writing and available for public inspection.

The location of the proposed repository makes independent monitoring that much more important, as it is a busy recreation area near the urban core of Coeur d'Alene. The area downstream of the proposed marina repository is also highly populated and heavily used for recreation. Failure of the Blackwell Island storage facilities would have a devastating impact on private shorelines for miles downstream. For example, the Washington State Department of Ecology has made significant progress in cleaning up popular recreation sites along the Spokane River to make them safer and more attractive to recreationists. Toxic releases from the proposed repository would compromise these expensive, time-consuming cleanup efforts and put public health at risk once again.

Therefore, in addition to water and sediment sampling throughout the construction / dredging period, a post-construction monitoring plan should be adopted including quarterly sampling of down gradient monitoring wells and periodic cap inspections for cracks and subsidence, as recommended by the U.S. Army Corps of Engineers. (July 31 letter to applicant).

The Environmental Protection Agency has called for independent oversight of the construction of the repositories and the proposed clay liners, while staff at DEQ have questioned the wisdom of using clay, verses synthetic, liners for the repository (July 22, 2009, e-mail from June Bergquist to Jim Coleman, Coleman Engineering,

subject: MYC information request). In their comments to the U.S. Army Corps on July 14, 2009, the EPA wrote:

It is critical that the measures to properly excavate and dispose of sediments be implemented correctly. We believe this requires a quality assurance/quality control (QA/QC) plan that is verifiable and complete. ... The QA/QC plan should include independent confirmation of the proper construction techniques and materials employed for both removal of contaminated sediment and construction of the CDFs. Included in this independent confirmation should be hydraulic conductivity testing of the clay materials to be used as a clay liner in the CDFs as well as on the lakebed within the marina to verify that the clay source materials will meet project and regulatory performance requirements.

The EPA goes on to call for post-construction monitoring for the CDFs and the monitoring of groundwater upgradient and downgradient of the CDFs. We agree, but would add that monitoring that is concurrent with the construction and any monitoring following the construction of the repositories should all be independent.

The DEQ should require that the applicant establish a fund to be administered by the DEQ, which could be used to hire qualified, independent consultants to conduct monitoring during and after construction or for the agency itself to conduct independent monitoring through a comprehensive plan for spot checks on an ongoing basis. Independent monitoring is critical to give the public confidence that the storage of heavy metals in a flood plain is not remobilizing these metals and contaminating the Spokane River.

Water quality monitoring needs to continue in perpetuity

At the EPA repository being built at East Mission Flats, groundwater monitoring will continue, at least quarterly, for as long as it takes to fill the

repository to capacity. Then, responsibility for the site shifts to the State of Idaho, which will be required to maintain the repository in perpetuity to minimize the potential for release of contaminants into the environment. Requirements for the repositories on Blackwell Island should be no less stringent, and institutional controls should be required so that perpetual maintenance of the facilities is required of future title holders.

While the DEQ's general conditions in the Draft Certification call for the applicant to provide an Operating and Maintenance Plan for the Confined Disposal Facilities (CDFs), the direction from DEQ does not make it clear that this plan must be for perpetuity. For example, it's unclear how long the CDFs are expected to last, nor what the plan is to repair them if and when they fail. Indeed, permanent storage of toxic sediments in a floodplain is inviting failure. The Blackwell Island area floods frequently and completely. The watershed is known for flooding not only in springtime runoff, but in winter during warm-rain-on-heavy-snow situations. At some point, inevitably, flooding will inundate the CDFs and erode the engineered shoreline protections.

We still believe that a much better solution, should dredging be necessary at all, would be to remove the toxic spoils to an offsite location which is not subject to flooding. This applicant has both the resources and lands which may be made available for such off-site disposal. Because this dredged material poses a threat to human health and the environment, off-site storage of the highly contaminated material is preferred. In fact, off-site storage has been considered and the applicant

lists criteria (listed below) for the safe disposal of this material, Supplemental Material, Volume 2, Appendix A, BIM SAP, p.5:

- 1) The site is not on the Spokane Valley/Rathdrum Prairie Aquifer.
- 2) The site is not within the recharge zone of the Spokane Valley/Rathdrum Prairie Aquifer.
- 3) Groundwater is greater than 200 feet below the site and is protected by an aquitard or other natural or constructed low permeability layers.
- 4) Stormwater runoff can be routed around the site and not flow into or through the disposal site.
- 5) The site is at least 300 feet from a wetland, waterbody, stream or river and runoff cannot directly enter a wetland or water body from the disposal site.
- 6) The site can be capped with sufficient soil and/or incorporated into soil such that it will not pose a hazard from terrestrial contact or airborne dispersion.

The Blackwell Island repository site does not meet the majority of their own requirements for safe disposal of the contaminated material in question.

Nevertheless, if the regulatory agencies do not require the materials to be stored offsite, then it is critical that institutional controls to protect the integrity of the repositories, and ongoing maintenance with independent monitoring be required to ensure that erosion, slumping or leaching does not occur.

The EPA Office of Inspector General recently issued a report on the design of a sediment repository in East Mission Flats¹ and stated concerns about the potential erosion of the repository in flood conditions, and about the potential for mobilizing contaminants from the stored sediments into the environment. The EPA OIG concerns about the engineering solutions at the East Mission Flats repository

¹EPA Office of Inspector General Report, "Contaminated Soil Waste Repository at East Mission Flats, Idaho Report No. 09-P-0162," dated June 8, 2009.

are equally as relevant at this site, where flooding is regularly occurring and where stored sediments are similarly toxic in nature. For example, at Blackwell Island, like East Mission Flats, an engineering solution to flooding CDF-1 is a cap, but like East Mission Flats, there is not sufficient data to understand the potential for infiltration of water into CDF-1 and the potential for migration of contaminants away from the repository under anoxic flooding conditions.

We are also not convinced that the proposed engineering solutions are sufficient to prevent floodwater from breaching the CDF facilities. For one thing, we are not convinced that the flood elevation assumptions have a sufficient basis. As pointed out in testimony received at the hearing, engineering assumptions by the applicant's engineer appear to rely on misapplied water surface elevations.² We are concerned not only for the over-topping of the CDFs in flood events but infiltration from the sides and bottom of the facilities from flood saturation. Although caps and liners are *designed* to seal against such waters, the design needs to be *implemented* with 100% reliability in perpetuity. Instead, we tend to believe that there is a 100% chance of failure, eventually, and it is only a matter of when.

Frequent and overwhelming floods as seen on Blackwell Island are almost certain to compromise the CDFs eventually. For example, debris from heavy flood events is certainly foreseeable, especially at this particular location of the Marina at the outflow of the Lake into the Spokane River, and can be enormously destructive

² Letter "Blackwell Island – Flood Issues," from James P. Meckel, dated May 30, 2009, submitted at the June 4, 2009 hearing by Wes Hanson.

forces on engineered caps and seawalls. But more probably, without a plan for inspection and maintenance, and without institutional controls to establish responsibility, the engineering implementation will age and deteriorate and eventually fail.

In short, we believe DEQ's conditions should make it crystal clear that if materials are stored on site, the responsibility for maintaining the facilities and the financing the independent monitoring of the facilities are a perpetual obligation of the applicant.

A private repository in a floodplain sets a very poor precedent

One of our greatest concerns with the proposed Blackwell Island marina dredging and onsite containment proposal is the precedent that it sets. There are numerous proposals that call for disturbing lake sediments and several projects pending that involve sediment removal. We believe that the permitting of small, unmanaged repositories all around Coeur d'Alene Lake is unreasonable and ominous. If the lake bottom material is allowed to be dredged, then the State should have a comprehensive plan for managing the material. To prevent the proliferation of these mini-repositories, we would suggest that perhaps it is time for the State to consider options to designate and maintain a repository site that will be able to take the material generated from this project as well as other pending projects.

In its comments to the Corps of Engineers on July 14, 2009, the EPA expressed similar reservations:

In general, EPA does not prefer the project's proposed approach of constructing several relatively small CDFs in the floodplain of Coeur d'Alene Lake. Constructing several small disposal sites multiplies the inherent risks associated with building and maintaining CDFs in the flood plain ...

As DEQ considers this proposal, we urge the agency to consider the bigger picture.

If this project is allowed to proceed without rigorous, independent monitoring during and following the construction, it will set a dangerous precedent for the Coeur d'Alene Basin as a whole.

Additional Comments

-- We feel that the character of the former city dump on Blackwell Island is ill-defined. The draft certification (Condition 34) refers to garbage from the old city dump which may be encountered within the footprint of the Confined Disposal Facilities; we request that if this material is encountered that it be assessed for hazardous materials before removal.

-- DEQ's review and approval of the monitoring plan, O&M plan, and declaration of restrictive covenants (Conditions 37-39) should be subject to public notice and comment.

-- DEQ's proposed 24-hour reporting for 25-gallon spills of petroleum is far too lax. (Condition 9.) We would suggest that any spill whatsoever should require 24-hour reporting.

-- DEQ should clarify that all silt fences, coffer dams, or other water quality control devices and best management practices be installed correctly and in

accordance with all manufacturer instructions and within any specifications and/or limitations. (Conditions 12, 17-21) DEQ should also clarify that the applicant is ultimately responsible for all water quality impacts, regardless of the technologies employed.

Respectfully submitted,

Terry J. Harris
Executive Director
Kootenai Environmental Alliance
408 Sherman Ave. #301
Coeur d'Alene, ID 83814

Rick Eichstaedt
Spokane Riverkeeper
and Idaho Rivers United
35 West Main, Suite 330
Spokane, Washington 99201

Susan Drumheller
North Idaho Associate
Idaho Conservation League
P.O. Box 2308
Sandpoint, ID 83864

Mike Peterson
Executive Director
The Lands Council
25 West Main Ave., Suite 222
Spokane, WA 99201

cc: Barbara Benge, Army Corps of Engineers
Ed Moreen, U.S. EPA
Carl Washburn, Idaho Department of Lands
Mary Terra-Berns, Idaho Fish and Game