

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

Comments to the U.S. Army Corps of Engineers
Re: Blackwell Island Marina Proposal
Applications: NWW No. 051200031
June 15, 2009

With these comments, we express our serious concerns with the above-described application to permit the renovation and expansion of the Blackwell Island Marina on Coeur d'Alene Lake in Kootenai County, Idaho. On balance, we are concerned that the risks to public health and the environment posed by the application outweigh the public benefits as described in the application and as stated by the applicant.

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 almost certainly end up in Coeur d'Alene Lake, the Spokane River or the Spokane Valley - Rathdrum Prairie Aquifer. Meanwhile, the applicant offers no monitoring whatsoever -- of water quality of the aquifer, of water quality of the surface waters, or of the sufficiency of the engineering solutions proposed. Both long-term monitoring and in-process monitoring should be required of a proposal this significant. In this case, either an

off-site location for permanent disposal or a comprehensive inspection and monitoring program with appropriate institutional controls are both practicable alternatives which would reduce potential adverse impacts to the environment.

Preliminary comments on the application were provided to both the Corps of Engineers and Idaho Department of Lands as part of the record at the joint hearing conducted in Coeur d'Alene on June 4, 2009. These comments are intended to supplement and expand on those already provided.

Standard for Review

Under § 404 of the Clean Water Act, in order to issue a permit, the Corps of Engineers is required to evaluate impacts on the public interest, and weigh the benefits of the project against reasonably foreseeable detriments. If the benefits do not outweigh the detrimental impacts, then the permit cannot issue. Among the impacts to be evaluated are conservation, wetlands, fish and wildlife values, flood hazards and floodplain values, shoreline erosion and accretion, recreation, water supply and conservation, and water quality. 33 C.F.R. § 320.4(a)(1), requires that the Corps conduct a “careful” public interest review prior to granting a Section 404 permit. In doing so, the Corps must also apply the EPA guidelines of 40 C.F.R. §230 in its evaluation. In particular, the guidelines prohibit a discharge of dredged material if a practicable alternative with less environmental impact is available, 40 C.F.R. § 230.10(a), and unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem, 40 C.F.R. § 230.10(d).

DISCUSSION

1. The Lake Coeur d'Alene sediments to be dredged are quite toxic

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 listed in Table 2-1. We feel that regulatory guidance pertaining to disturbance of these sediments should be instituted. The Coeur d'Alene Basin, including Coeur d'Alene Lake, is listed on the National Priorities List.

In addition, it's unclear from reading the applicant's permit application supplemental information how the applicant intends to handle high levels of Cadmium, Copper, Silver and Zinc. The text (pp. 60-61) indicates that anything exceeding prescribed screening levels will be placed in CDF-1. But Table 2.2, of the DMMU analysis, indicates that the levels of Cadmium, Silver and Zinc, are high enough to be placed in CDF-1. Similarly, it's unclear whether or not any materials containing Arsenic or Lead will be placed in CDF-2. While the Table 2.2 indicates that they will be placed in CDF-2, the text on pages 60 and 61 seem to indicate otherwise.

2. The dredged material removal protocols are problematic

Section 40 C.F.R. § 230.11(d) requires a determination of the degree to which the dredged material will introduce, relocate, or increase contaminants. The determination shall consider the material to be discharged, the aquatic environment at the proposed disposal site, and the availability of contaminants. The applicant, however, relies too simply on general removal protocols to address this guideline in this specific and unique situation.

The applicant, in the materials and in testimony at the hearing, relies heavily on two protocols for removal and storage of the toxic sediments: EPA Method 6200 for evaluating the toxicity of the sediments, and the Northwest Regional Sediment Evaluation Framework (NRSEF) for determining disposal options. Neither protocol can be considered mandatory for this project. Indeed, neither protocol may be entirely applicable in this case.

a. the NRSEF does not control the disposal options

In its preface, the NRSEF makes it very clear that the framework is not a substitute for regulatory requirements, but rather a toolbox of potential options and a framework for evaluation of sediments. First, the NRSEF is not a substitute for the evaluation itself. But more importantly, the NRSEF is not a framework for determining the disposal solution.¹ There is nothing in the NRSEF, for example, that either requires or allows a particular disposal option for

¹ See NRSEF, Interim Final 2006, page 10-1. (“This chapter is not intended to evaluate disposal options or make engineering recommendations, but rather to introduce the user to the potential options and concepts that govern their use.”) See also RSET Issue Papers 25 and 27 in NRSEF Appendix 3.

particularly contaminated sediment. Also, the NRSEF does not necessarily apply to CERCLA-constrained cleanups.²

We suggest that upland, off-site disposal of these particularly contaminated sediments may actually be more consistent with the overall NRSEF and its environmental and navigation goals, than the on-site disposal option chosen by the applicant. The Lake's historic contamination, and the connection to the CERCLA activities throughout the Coeur d'Alene Basin, makes off-site disposal a safer and more permanent solution which would be certainly justified under the NRSEF.

b. Method 6200 does not control accuracy of the sediment disposal

Method 6200 is simply a method to perform x-ray fluorescence (XRF) testing of individual sediment samples. However, the method does not set standards or guidelines for the number of samples to be tested, nor therefore, how to gain an accurate depiction of the sediment toxicity profile within a DMMU. Such testing is the only way to determine where the sediments are disposed – CDF-1, CDF-2, or as clean fill. Therefore, the applicant should provide more detailed description of how the sediment materials will be identified for testing and how the resulting materials will be sorted into disposal sited. Such a description should include an estimate of the number of samples that will be analyzed by XRF (method 6200) for each DMMU.

Also, although EPA method 6200 is approved for in-situ and ex-situ analysis of lead, zinc and other contaminants of concern, the methods states:

² NRSEF at page 1-6. See also page 3-8.

“Moisture content may affect the accuracy of analysis of soil and sediment sample analyses. When moisture content is between 5 and 20 percent, the overall error from moisture may be minimal. However, moisture content may be a major source of error when analyzing samples of surface soil or sediment that are saturated with water. This error can be minimized by drying the samples in a toaster oven. Microwave drying is not recommended because field studies have shown that microwave drying can increase variability between FPXRF data and confirmatory analysis and because metal fragments in the sample can cause arcing to occur in a microwave.”

Therefore, we request that no dredged material be permanently stored until confirmatory analyses can verify the accuracy of this method at Blackwell Island site conditions.

c. The applicant’s process for sorting material between CDF-1 and CDF-2 is unclear and problematic.

We are concerned that plans to remove contaminated sediments from the channel and place them in the containment facilities may result in contaminating unrestricted fill material with heavy metals. These materials will be left unprotected from flood waters or stormwater runoff that could carry them to the nearby river. Currently, the plans for how to prevent this from happening are unclear.

When we first asked the applicant how they intended to keep separate the contaminated from uncontaminated materials, we were told that “If a polygon has *any* material that needs to go to CDF-1, then *all* the sediment in that polygon goes to CDF-1.” (Emphasis added.) If a “polygon” is the entire Dredged Management

Unit, Unit 601 or 606 for instance, that would mean all the materials within the Unit – contaminated and uncontaminated – would be placed in CDF-1.

But if that's the case, and if the same applies for CDF-2 level materials, this is inconsistent with the tables provided in the application supplemental information, which show that most (112,787 cubic yards) of the material is to be used as unrestricted fill across the island.

Instead, it appears that the actual intention is to remove and carefully place each discrete DMMU unit – as identified vertically and horizontally – into the appropriate repository. That, however, requires incredible precision in the excavation.³ Furthermore, the profiles of the contaminated sediments may not be entirely accurate, as the information is derived from just 20 sample cores. Figure 7.13, for instance, shows a cross-section of the channel with sediments of differing characterization sitting side-by-side, when such an abrupt change in contamination levels is highly unlikely.

If the contaminated sediments are to be separated from uncontaminated sediments and stored on the island, then it is imperative that independent oversight is provided during the dredging activities to make sure the materials are sampled regularly and placed in the appropriate repository.

³ And a great number of XRF tests using Method 6200.

3. The application provides no plan for monitoring the CDFs, and no plan for monitoring water quality.

As we described in our previous comments, the application does not provide for any independent monitoring and oversight during the construction period, or for any period after construction. 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. In this instance, neither the most critical environmental and public health indicators nor the engineering solutions are proposed to be monitored. 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. At minimum a post-construction monitoring plan should be adopted including quarterly sampling of down gradient monitoring wells and periodic cap inspections for cracks and subsidence.

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 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.

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 this repository should be no less stringent, and institutional controls should be required so that perpetual maintenance of the facility is required of future title holders.

4. Permanent storage on a floodplain is not a proper disposal solution

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. (Under separate cover, we are submitting for the record a DVD recording of flood waters, essentially submerging Blackwell Island in 1996) At some point, inevitably, flooding will inundate the CDFs and erode the engineered shoreline protections. The current proposal fails to acknowledge this eventuality. 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.

a. the proposed on-site repository is not sufficiently studied or engineered.

EPA guidelines section 40 C.F.R. § 230.72 provides that the effects of the dredged or fill material after discharge may be controlled by:

(a) Selecting discharge methods and disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or methods include, but are not limited to:

(1) Using containment levees, sediment basins, and cover crops to reduce erosion;

(2) Using lined containment areas to reduce leaching where leaching of chemical constituents from the discharged material is expected to be a problem;

(b) Capping in-place contaminated material with clean material or selectively discharging the most contaminated material first to be capped with the remaining material;

(c) Maintaining and containing discharged material properly to prevent point and nonpoint sources of pollution;

(d) Timing the discharge to minimize impact, for instance during periods of unusual high water flows, wind, wave, and tidal actions.

The permit application does satisfy this section. In particular, the application does not account for “the proper maintaining and containing of discharged material to prevent point and nonpoint sources of pollution” after completion of the project in a floodplain. Indeed, the permit application does not describe *any* maintenance or monitoring of CDF1 and CDF2 to prevent point and nonpoint sources of pollution. More to the point, the application fails to select a disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. By placing the materials in the flood plain, this standard cannot be met.

The EPA Office of Inspector General recently issued a report on the design of a sediment depository in East Mission Flats⁴ and found that:

- geochemical and physical conditions that might lead to contaminants dissolving near the repository base had yet to be investigated, and
- the adequacy of the repository design to prevent dissolved contaminant release had yet to be evaluated.

In particular, the report 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 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. In fact, because of its location near a population center and over the drinking water aquifer, the design, monitoring and institutional controls at the Blackwell Island site should be even more protective than Mission Flats.

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.

⁴EPA Office of Inspector General Report, “Contaminated Soil Waste Repository at East Mission Flats, Idaho Report No. 09-P-0162,” dated June 8, 2009. See pages 6-7.

As pointed out in testimony received at the hearing, engineering assumptions by the applicant's engineer appear to rely on misapplied water surface elevations.⁵ 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 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.

b. Off-site storage is a preferred and practicable alternative

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

⁵ Letter "Blackwell Island – Flood Issues," from James P. Meckel, dated May 30, 2009, submitted at the June 4, 2009 hearing by Wes Hanson.

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.

Indeed, the Blackwell Island repository site does not meet the majority of their own requirements for safe disposal of the contaminated material in question. The USACOE Public Notice of Application states on page 3 that the project area is perched above the Aquifer, which is a protected sole-source Aquifer, and the hydrologic Analysis for this project clearly states that leakage from the marina and the lake-river system recharges the Aquifer, Volume 2, Appendix C, Hydrologic Analysis, p. 18. Furthermore, the Hydrologic Analysis states that water levels (groundwater) are a mere 2 feet below ground surface during high lake levels and 10-15 feet during low-lake levels. The Aquifer proper is stated to be 80 feet below the surface. Volume 2, Appendix C, Hydrologic Analysis, p. 11. The potential Blackwell Island repository site is less than 300 feet from Coeur d'Alene Lake and the Spokane River and runoff can easily enter both waterbodies. Additionally, this

site is in close proximity to downtown CdA, the highest population center in Idaho's portion of the Basin.

Finally, serious subsidence issues exist at the site, as witnessed by the multiple asphalt patches and extreme bumpiness on the road accessing the marina, which, we believe, should call to question the long-term stability of the contained disposal facilities.

c. On-site storage sets a potentially dangerous precedent on the Lake.

This decision sets a precedent for sediment disturbance and storage of contaminated lakebed sediments on the entire Lake. There are at least 3 other projects pending that involve sediment removal. Permitting of small, unmanaged repositories all around Coeur d'Alene Lake is unreasonable and ominous. If this lake bottom material is allowed to be dredged, perhaps the State should designate a repository site that will be able to take the material generated from this project as well as other pending projects. The precedent setting nature of this proposal must be taken into account while evaluating cumulative impacts on the public interest. It is our view that it is unacceptable to allow this project to define the requirements for disturbance of lakebed sediments; the BEIPC as well as the Lake Management Plan should address these matters before permits are issued.

5. Permanent repository of toxic materials requires institutional controls

Institutional controls, such as deed restrictions, should be required in order to ensure that future development or other activity cannot compromise the

engineering solutions proposed by the applicant, particularly relating to the long term integrity of the CDFs.

As an example, long-term responsibility for the Mission Flats repository site belongs to the State of Idaho, which will be required to maintain the environmental integrity of the site in perpetuity. Similarly, institutional controls should be required for the Blackwell Island private repository so that it is crystal clear that responsibility for perpetual monitoring and maintenance of the facility is required of future owners and operators of the site.

Moreover, the institutional controls should be sufficiently specific as to the responsibilities of future owners and operators. There is no question that the engineering solutions need to be maintained such that potential pathways for environmental degradation and human exposure are eliminated in perpetuity. For example, it should be clear that future owners are responsible for the integrity and maintenance of the CDF linings and cap, the integrity and maintenance of erosion controls and stormwater designs, and subject to limitations on re-excavation and re-disposal of the toxic dredged materials

6. Liability for future releases must remain with the Applicant.

We argue strongly that in any permit, the Corps of Engineers needs to ensure that liability associated with any release of toxic sediment remains with the Applicant. We are deeply concerned that without a specific requirement from the Corps, the Applicant may be exempt from liability associated with the release of toxic materials from the repositories. Section 107 of CERCLA releases from liability

a discharge that occurs pursuant to a federal permit, such as a 404 permit. Given this, and consistent with the direction provided in Regulatory Guidance Letter 89-03, the Corps should include a special condition in the permit that is worded in such a way as to ensure that the Applicant accepts potential liability, to the same extent as would be inherent under CERCLA, when he accepts his Corps permit.

7. Other adverse environmental impacts of the proposal

EPA Guidelines, Section 40 C.F.R. § 230.31(b) requires a permit to take into account the possible loss of values associated with fish and other organisms. The introduction of rip rap and the general hardening of the shoreline has the potential to negatively impact native fish by providing habitat to warm water invasive species.

EPA Guidelines Section 40 C.F.R. § 230.32 requires a permit to take into account the possible loss of values associated with other wildlife. Similarly, Section 40 C.F.R. § 230.40 requires a permit to take into account the possible loss of values associated with sanctuaries and refuges. Finally, EPA Guidelines Section 40 C.F.R. § 230.53 requires a permit to take into account the possible loss of values associated with aesthetics. In particular, any permit to this facility must weigh whether the project creates unplanned, easy and incompatible human access to remote aquatic areas.

The marina location is near to Cougar Bay which is known for its solitude and abundance of wildlife. An increase in boating and personal watercraft traffic in Cougar Bay will have an almost certain adverse impact. The large boats create

large wakes that lessen the aesthetic qualities of the lake and Cougar Bay. The increase in jet skis will increase noise and air pollution which reduces the aesthetic qualities of the lake. Meanwhile, the proposed development certainly makes access to Cougar Bay by kayak more dangerous than it currently is. Any permit should require the applicant to provide easier access to Cougar Bay for non-motorized craft.

8. The Project is Inconsistent with the Public Interest.

In addition to complying with EPA and other guidelines, the Corps regulations require a “public interest review” for each permit. 33 C.F.R. § 320.4(a). This wide-ranging review includes cumulative impacts and should “reflect the national concern for both protection and utilization of important resources.” The Corps is directed to consider:

All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps should consider the following additional factors during its public interest review:

- The site contains a former landfill. Disturbing this site risks contamination of the land and water.
- The dredging may puncture into the Rathdrum Aquifer putting the drinking water of 400,000 people at risk.

- If the Blackwell Island proposal is approved, the development could eventually connect to the City's water and waste treatment system. However, the City's wastewater system currently contributes to impairment of water quality standards for the Spokane River.
- The proposed project will adversely affect a recreation area that is popular with families and kayak and canoe paddlers. The Bureau of Land Management (BLM) has expressed concern that the proposal would endanger this group of recreation users by introducing more large boats into the area. The Blackwell Canal is administered by BLM and is closed to motorized boats. Because of this the area provides safe access to Cougar Bay and Nature Conservancy property trails. The Lake has very few safe areas for non-motorized users, and if this project goes forward this segment of the public will be further limited.

9. Analysis of Alternatives

The Corps must examine if there are less environmentally damaging alternatives that will satisfy the purpose of the project. In particular, the project must identify a least environmentally damaging practicable alternative (referred to as an LEDPA analysis). 40 C.F.R. § 230.10(a). Here, the proposal lacks an alternatives analysis or identifies an LEDPA. In order to assess whether a project application is indeed complete and meets the standards of the CWA and its associated regulations and guidelines, it is important for the public and the Corps to have before it the range of alternatives that need to be analyzed, especially the LEDPA. It is premature for the Corps to begin analyzing impacts on wetlands at the Blackwell Island site without having the LEDPA analysis. Thus, the project applications should be stayed until draft analyses, including the identification of an LEDPA, are completed and submitted to the Corps.

10. Water Quality Stormwater Permit

Under the Clean Water Act's 404 Guidelines, activities are prohibited where: (1) a practicable alternative to the proposed action would have less adverse impacts on the aquatic ecosystem, 40 C.F.R. § 230.10(a); (2) a discharge causes or contributes to a significant degradation of the aquatic environment, *id.* at § 230.10(c); or (3) appropriate and practicable steps have not been taken to minimize adverse effects of the discharge. *Id.* at § 230.10(d). In short, the emphasis in the review process is on "avoiding, minimizing, rectifying, reducing or compensating for resource losses." 33 C.F.R. § 320.4(r).

Construction of the size and scale proposed here is subject to regulation by EPA's Construction Stormwater NPDES Program. This program is designed to minimize impacts to water quality associated with construction activities. Approval of this project must be conditional upon receiving an EPA-issued construction stormwater permit and compliance with all conditions therein.

CONCLUSION

On balance, we are not convinced that the application meets the criteria for approval under the Clean Water Act without substantial additional conditions to protect the environment and to provide for long-term independent monitoring and responsibility. As the application exists currently, we do not believe the public benefits outweigh the risks to the environment and public health. We urge a careful review of the application.

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

Kat Hall
Environmental Health Program Director
The Lands Council
25 W. Main Ave., Suite 222
Spokane, WA 99201