UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

SEP 07 2010

OFFICE OF
THE REGIONAL ADMINISTRATOR

Colonel Anthony Hofmann
District Engineer
U.S. Army Corps of Engineers
601 East 12th Street
Kansas City, MO 64106

Dear Colonel Hofmann:

RE: Draft Environmental Impact Statement on Missouri River Commercial Dredging, Proposal to Extract Sand and Gravel from the Missouri River, U.S. Army Corps of Engineers Section 10 and Clean Water Act 404 Permits, Kansas City, Central Missouri and Greater St. Louis, Missouri, CEQ # 20100270

The U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Army Corps of Engineers' (Corps) referenced Draft Environmental Impact Statement (DEIS) pursuant to our authorities under the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act.

The DEIS describes the Proposed Action and four alternatives; the Proposed Action is the approval of all eleven permit applications for the extraction of 11,615,000 tons per year of main channel river bottom material and return of rejected material back to the river. The Proposed Action would increase the current levels of dredging by approximately 70 percent. In addition to the 'no action' alternative, the DEIS identifies three alternatives with differing extraction volumes. Because the Corps is neither an opponent nor a proponent of the applicants' proposals, a recommended or preferred alternative is not identified.

According to data presented in the DEIS, the lower Missouri River has experienced significant bed degradation (i.e., lowering of the river bed) over the past ten years, with bed loss accelerating in the reach near Kansas City (which has lost approximately four feet since 1995). In addition, the great majority of the sand and gravel extracted from the lower Missouri River comes from three reaches near St. Charles, Jefferson City and Kansas City, which also coincides with the greatest amount of river bed degradation. Replacement sand and gravel into the lower Missouri River has been curtailed by mainstem dams, tributary dams, and erosion control practices implemented in the headwaters. Further, the transport of sediments from unimpeded sources has been reduced due to diminished tributary flow caused by lowered water tables and recent droughts.

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EPA is concerned over the potential for dredging to contribute to bed degradation, which can have many adverse impacts, including significant damage to public infrastructure. For example, bed degradation is increasing the risk of catastrophic failure of bank stabilization features and levees along the Missouri River, and requiring increased public expenditures to address modifications to drinking and cooling water intakes due to reduced low-flow river stages. Impacts to water quality and fish and wildlife habitat can also be extensive, including the loss of shallow water habitat and floodplain wetlands due to de-watering associated with lowering of the water surface.

EPA is also concerned that the DEIS does not provide sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment. Most importantly, we believe additional information is necessary to develop a sediment budget which would account for sediment transport, erosion and deposition. With a sediment budget, development of sustainable approaches to sediment management in the river would be significantly improved.

Based on our review, we have rated the Proposed Action and Alternative C as EU ("Environmentally Unsatisfactory"), and recommend that a permit not be issued for these alternatives. Alternative B is rated as EO ("Environmental Objections"), and we also recommend that a permit not be issued for this alternative. Alternative A is rated as EC ("Environmental Concerns"), and the No-action Alternative is rated as LO ("Lack of Objections"). We have also rated the adequacy of the DEIS as 2 ("Insufficient Information"). Additional detailed comments are also enclosed, as well as a "Summary of Rating Definitions and Follow-Up Actions."

Thank you for the opportunity to comment on the DEIS. We look forward to continuing to work with you and the applicants to address the issues that we have identified. Please note that if we are unable to resolve our concerns regarding the proposed action and Alternative C, this matter may be a candidate for referral to the CEQ for resolution. In light of these concerns, EPA also believes that the proposed action and Alternatives B and C may result in substantial and unacceptable impacts to aquatic resources of national importance, as covered in Part IV, paragraph 3(a), of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement between the U.S. Environmental Protection Agency and the Department of the Army.

If you have any questions regarding these comments, please contact Joe Cothern, NEPA Team Leader, at (913) 551-7148, cothern.joe@epa.gov, or Larry Shepard at (913) 551-7441, shepard.larry@epa.gov.

Sincerely,

Karl Brooks
Regional Administrator

Enclosures

U.S. Environmental Protection Agency
Detailed Comments- Missouri River Commercial Dredging DEIS

Environmental Impact of the Actions

Bed degradation in heavily dredged reaches of the river present risks to the aquatic ecosystem and to critical infrastructure. EPA agrees with the potential impacts outlined in the DEIS, as well as the August 2009 "Missouri River Bed Degradation Reconnaissance Study" conducted by the Corps' Kansas City District. These potential impacts can be summarized as follows:

- Water supply intakes for water supply entities and public utilities have been lowered by degradation of the Missouri River channel. The potential exists for these structures to require total replacement with continued bed lowering;

- Erosion of foundation materials caused by bed degradation threatens bank stability, affecting the primary levee system along the Missouri River in Kansas City, water intakes, and drainage outfall structures. Toes of revetments supporting critical levee structures have eroded due to the degraded channel conditions. The condition of the eroded revetments poses a significant risk for failure of the levee system. During a major flood event, sloughing or a series of successive bank failures could result in partial or sudden and total failure of the affected levee segment;

- Head cuts are occurring on several of the tributaries. These head cuts are affecting bank stability, causing scour and exposure of bridge piers, and causing potential loss of habitat as banks of tributary streams erode. Habitat on tributary streams is potentially affected by the sloughing of banks that occurs as head cuts migrate. As this occurs, trees and vegetation along the slopes are lost and may not be reestablished. In both urban and rural areas, these vegetated areas are important habitat resources;

- Bridges and utility crossings located on the main stem and/or tributaries in close proximity to degrading reaches of the river may be affected. These include state and local bridges, railroad bridges, and numerous public and commercial pipeline crossings;

- Environmental impacts of riverbed degradation include potential loss of shallow water habitat due to the lowering of surface water levels;

- Analysis conducted using existing data shows a correlation between commercial dredging activities and the riverbed degradation;

- Bank erosion is resulting in loss of land;

- Degradation, by eroding the riverbank, sets in motion a chain of events that includes progressive bank instability and failure, failure of the levee foundation, soil weakening, and catastrophic scouring and erosion, culminating in levee failure; and

- At river mile 364.5, a 15-foot drop in the riverbed already has occurred. An additional drop of 10 feet in the riverbed's future condition is currently assumed, raising the already significant danger of levee undermining. Degradation would eventually undermine these three federal levee units of the Kansas City's Metropolitan Levee System. It is anticipated that a levee failure in this context would result in major destruction in the short term and continuing catastrophic economic impacts in the long term.

Loss of life. More than 8,000 people reside in these three areas and more than 57,000 people work in these levee units' protected areas. The serious public safety concerns inherent in any major flood event would be exacerbated in this case by the unseen character of erosion and scour beneath the surface of the river, which could result in little or no warning time in advance of levee failure. Significant loss of life could occur.

Single-event damages. In these three areas alone, levee failure from undermining during a major flood event could potentially cause $7.6 billion in damages and threaten $12.4 billion in investment, based on October 2008 prices.

Levee reconstruction costs. These three levee units would be severely damaged in a major flood event and would require major repairs.

Annual flood damage reduction benefits lost. In addition to the single-event damages, the long-term annual benefits provided by these three levee units would be lost until completion of reconstruction.

Environmental quality effects. Degradation could result in a number of environmentally destructive effects, of which the most important might be the threat to shallow water habitat in the Kansas City reach, including habitat restored under the Missouri River Recovery Program. This habitat is important to native river fish, including the endangered pallid sturgeon.

Infrastructure impacts. In addition to federal levees, other types of infrastructure threatened by riverbed degradation include bridges, water intakes, and utility crossings. Within the Kansas City District, there are 25 highway bridges and nine railroad bridges crossing either the Missouri River or tributaries near the confluence with the Missouri River. Bridges over rivers are held up by pylons that extend deep into the ground, using the stability of the earth to strengthen foundational support. Degradation erodes the riverbed, exposing pylons and diminishing support for the bridge, with obvious consequences for the risk of bridge failure. The total number of Missouri River bridges currently threatened by riverbed degradation is not known, but several currently show obvious effects of erosion from degradation. There are 11 water supply plant intakes on the Missouri River within the Kansas City District, serving an estimated 2.25 million people. There are also11 power plant intakes. These power plants have a gross generating capacity of 6,046 megawatts. In addition, there are at least 38 pipelines, cables, or power lines crossing the Missouri River between

Rulo, Nebraska, and St. Louis (28 petroleum pipelines, 4 water and sewer pipelines, 3 power lines, and 3 telephone cables).

Alternatives and their specific impact potentials

EPA is concerned that the propose activity may not comply with Section 404 of the CWA. The Clean Water Act's (CWA) 404(b)(1) Guidelines (Guidelines), prohibit avoidable or significant adverse impacts to the aquatic environment and outlines the criteria for evaluating discharges of dredged or fill material. These Guidelines require applicants to follow a sequence of avoidance, minimization and compensation in planning for the development of aquatic sites and to ensure that proposed projects do not cause or contribute to the significant degradation of waters of the U.S. The Guidelines prohibit any discharge of dredged or fill material where: (1) there is a less environmentally damaging practicable alternative (LEDPA) to meet the project purpose; (2) the proposed project would violate other environmental standards, including applicable water quality standards; (3) the proposed project would cause or contribute to significant degradation of the Nation's waters; or (4) the proposed project fails to adequately minimize and compensate for wetland and other aquatic resource losses (see 40 CFR 230.10(a)-(d) and 230.11(g) and (h)). A 404(b)(1) analysis should be performed prior to the selection of the preferred alternative.

Proposed Action

Reach-specific quantities of dredged material proposed to be extracted by the applicants constitute a significant increase over amounts currently permitted. Under currently permitted practices, bed loss is expected to continue as the river seeks equilibrium through agradation and degradation of sediment. As proposed under this alternative, total dredging volumes for the lower Missouri River would increase substantially from approximately 6.9 million tons to 11.6 million tons with accompanying increases for each of the five reaches. For the upper reaches, dredging would extract 33% of the bed load at St. Joseph (a 252% increase from the volume currently dredged), 76% of the bed load in the Kansas City reach and 20% of the load in the Waverly reach.

The DEIS acknowledges that bed material in the three upstream reaches is finer than is required for construction, requiring that as much as two-thirds of the extracted load to be placed back into the river. Therefore, the estimated dredging amounts for the upstream reaches underestimate the actual volume of material extracted. The amounts proposed for the St. Joseph reach, as a percentage of bed load, match those currently dredged from the Jefferson City reach which has, according to the DEIS, experienced dredging-related degradation. Under this alternative, the Kansas City reach is projected to experience "substantial" river bed degradation at these proposed permit volumes and it would be expected that head cutting up the Kansas River would worsen. Proposed amounts for the Jefferson City and St. Charles reaches constitute 65% and 119% of the bed load, respectively. Bed degradation is expected to be "substantial" in the immediate segments near Jefferson City (RM 140-150) and St. Charles (RM 0-50). The St. Charles reach has experienced a steadily declining river bed elevation since 1959.

The DEIS also describes the potential for head cutting in the St. Charles reach which would move upriver under these dredging volumes. This alternative is approximately a 70% increase in the volume of sediment extracted from the lower river from currently permitted amounts and will cause an unacceptable amount of river bed loss with commensurate impacts to infrastructure and the ecosystem.

No Action

We understand from the DEIS that regional short-term demand for sand and gravel could be satisfied by existing operations other than those on the Missouri River, but long-term demand will likely require new sources. In our review of the Corps' 2008 Supplemental Permit Evaluation and Decision Document, we noted that at least one applicant had already initiated development of floodplain deposit mining options as an alternative to dredging. Although the DEIS did not evaluate the potential impacts to the floodplain environment or to small streams resulting from a shift from in-channel Missouri River dredging, we recognize that this represents a potentially significant threat to ecological health of those off-channel communities.

Alternative A

This alternative would permit an extraction volume of approximately 10% of the estimated bed load under existing river conditions. In the three river reaches experiencing the greatest incision, there would be a 70 to 80% reduction in sediment extraction from current practice and a 26% reduction in the Waverly reach for which data appears to suggest bed stability. Only the St. Joseph reach would be dredged to a greater degree than currently occurs, but constituting an increase of only 7%. Comparatively, this alternative represents a more reasoned approach to continuing to permit sand and gravel extraction in the lower river while the Corps proceeds with its other assessments and studies, particularly the planned feasibility study for the lower river. The total amount of bed material extracted from the lower river constitutes a smaller percentage of river bed transport, but it is not known whether the extraction of this quantity would provide for a sustainable condition both in each of the five reaches or the lower river as a whole. In addition, given the condition of the river bed in Kansas City and continuing bed loss in Jefferson City and St. Charles, EPA recommends further limiting dredging at locations within those reaches until more information can be collected which would ensure these management decisions do not exacerbate this condition or cause immediate threats to infrastructure and flood risk management.

Alternative B

This alternative would permit total amounts of material dredged from the lower Missouri River to be moderately reduced and would constitute approximately 23 to 25% of the estimated bed load in the five reaches under existing river conditions. In the three river reaches experiencing the greatest incision, there would be a 38 to 54% reduction in sediment extraction from current practice. In the Waverly and St. Joseph reaches there would be a 68% and 163% increase, respectively, in dredging amounts from current practice.

While constituting a reduction in the total amount of sediment dredged within the lower Missouri River, the individual extraction volume reductions within the three reaches experiencing the most bed loss are significantly smaller than Alternative A and the increase in the St. Joseph reach is 18 times greater than current dredging practice. As mentioned previously, the gross amounts extracted from the 3 upstream reaches exceed those extracted from the 2 lower reaches as more sediment material is rejected in those upper reaches. As a result, the elevated amount of sediment extracted from the St. Joseph reach under this alternative would be even greater than described by the DEIS. The DEIS states that past dredging has occurred primarily within a ten mile segment of the St. Joseph reach (RM 445-455) and that a more even distribution of dredging throughout the reach would likely dampen the bed degradation impacts.

We recommend considering opportunities to modify this alternative with regard to the St. Joseph reach so as to require a more broad distribution of dredging in order to moderate potential impacts within the area of concentrated dredging. In general, however, without additional information supporting these extraction quantities as sustainable and not likely to cause further bed loss, we believe it is more prudent to further limit extractions from all five reaches than has been proposed in this alternative. In addition, we would carryover our recommendation from Alternative A regarding further limiting dredging at locations within the three reaches experiencing acute bed loss.

Alternative C

This alternative would permit total amounts of material dredged to remain at levels equivalent to 2004 to 2008. This alternative, based on information presented in the DEIS, would have limited impact on the river bed in the St. Joseph and Waverly reaches. Continuing extraction at current levels would be expected to continue serious bed loss in the Kansas City reach which is both uniformly and heavily dredged throughout the entire reach. Head cutting issues on the Kansas River associated with continuing incision in the Kansas City reach of the Missouri River would also be expected to continue.

Status quo dredging under this alternative, according to the DEIS, would not be expected to significantly increase bed loss in the Jefferson City and St. Charles reaches but only if dredging is spread more evenly throughout these reaches and not concentrated, as is the current practice, in segments with significant bed loss (i.e., RM140-150 in Jefferson City reach and RM 0-50 in St. Charles reach). Our previous recommendations regarding increased dredging limitations in the Kansas City, Jefferson City and St. Charles reaches and more uniform dredging in the other two reaches are also pertinent to this alternative.

Mitigation/Recommendations

The Corps has identified permit conditions from the current permits which are to be carried over into all action alternatives. EPA strongly supports the Corps' intent to carry those permit conditions over into any future permits as a baseline for a more expansive mitigation strategy.

Pursuant to 33 CFR §332.4 and 40 CFR §230.94, *Compensatory Mitigation for Losses of Aquatic Resources (Mitigation Rule)*, a compensatory mitigation plan must be submitted and approved by USACE before issuance of an individual CWA Section 404 permit. EPA recommends that the USACE/EPA regulations that address compensatory mitigation for losses of aquatic resources be reviewed, and that compensatory mitigation consistent with these regulations (73 Fed. Reg. 19594, April 10, 2008, http://www.usace.army.mil/CECW/Pages/final_cmr.aspx) be developed that will adequately compensate for impacts due to dredging activities along the entire project. Additionally, we recommend that the Final EIS include a conceptual monitoring plan that will, throughout a period of time (normally five years), direct field evaluations to assure aquatic functions and values are recovering. The monitoring plan should also include the compensation sites. EPA prefers mitigation take place in areas as close to the project site as practicable (i.e., in close proximity and, to the extent possible, the same watershed).

EPA supports the Corps' consideration of several other specific measures, including the restriction of concentrated dredging in portions of each segment, prohibition of cutter-head dredging and limiting dredging during times of the year when larval pallid sturgeon entrainment is more likely. We believe that the Kansas City reach is most critical based on existing and projected future impacts to infrastructure along the lower Missouri River and the significant head cutting on the Kansas River. The Kansas City District's River Engineering Section commented in a November 5, 2009 memorandum that any dredging quantities during 2010 in the Kansas City reach should be limited to the "computed bed load" of 1.3 million tons. Only Alternatives A and B include quantities below that value and only Alternative A includes an amount significantly below that value. Other reaches experiencing significant bed loss over portions of their length include St. Joseph, RM 445-455; Jefferson City, RM 140-150; St. Charles, RM 0-50.

Head cutting would be expected to proceed both up- and downstream from a dredge location resulting in an expansion of the zone of bed loss. These processes work counter to approaches which would not limit the overall extraction amount in the lower river and suspend dredging in only small segments of a larger river reach (e.g., Jefferson City RM 140-150, St. Charles RM 0-50) while allowing dredgers to simply shift concentrated dredging to just outside a degrading segment. We also suggest that any dredging in the lower Missouri River exclude any use of cutter heads which provide access to more consolidated sediment and exacerbate bed loss.

The DEIS states that uncertainties associated with estimating changes in water surface elevation under low and high flows resulting from dredging activities are greater than for other parameters. High-flow surface water elevations have been shown to be historically increasing in all reaches and, to a greater or lesser degree among the alternatives, this trend is expected to continue. This would be expected to place more stress on river infrastructure, including federal and non-federal levees throughout the lower river. Low-flow surface water elevations are expected to fall with increasing bed loss and would be more significant in those reaches, and heavily dredged segments within those reaches, experiencing greater bed loss. Falling low-flow surface water elevations further isolate the river's floodplain and eliminate channel-margin habitat, affecting survival of riverine and semi-aquatic organisms. Falling low-flow surface water also lowers alluvial groundwater, potentially causing additional loss of floodplain wetlands

and reduced access to water by alluvial public water supply wells. In addition, with falling low-flow surface water elevations, vegetation growth along newly dried banks will slow river flow under high-flow conditions causing episodic threats to flood risk management structures.

The absence of a sediment budget limits the ability to effectively manage the river's resources. The Missouri River's need for sediment is no less critical than its need for flow, and the association between sediment and flow define the ecological character of this river. Given the lack of data, we recommend that any permits are cognizant of the need to ensure that the data needed to determine whether this activity can be conducted in a sustainable manner is acquired and evaluated. We recommend that the Corps consider an approach to permitting that allows for incorporation of the results of the ongoing Missouri River Authorized Purposes Study, the planned feasibility study of possible solutions to the bed degradation problem in the Kansas City metropolitan area and the comprehensive Missouri River Ecosystem Restoration Plan.

We also recommend that the Corps consider including reach-specific limitations for the dredging alternatives. Specifically, we recommend that dredging exclusion areas include the mouth of the Blue River at RM 358 to the confluence of the Little Blue River at RM 340 in order to minimize the extraction and mobilization of potentially contaminated sediment from the Blue River urban watershed. More generally, we recommend that dredging within the three reaches identified as experiencing acute bed loss be suspended until survey data confirms that these areas have recovered. The Kansas City (RM 357 to 391), Jefferson City (RM 140 to 150) and St. Charles (RM 0 to 50) reaches have experienced large scale bed loss and the potential for an increase in flood risk and costly infrastructure failure is significant enough to warrant a conservative approach to permitting.

Without sufficient replacement material, mining of bed material from the lower river could preclude the Corps from complying with the requirements of the 2003 Biological Opinion regarding the operation of the Missouri River and the recovery of listed species. Further, incising segments isolate the floodplain and make ecologically-desirable reconnections between channel and floodplain nearly impossible. Habitat restoration projects on the channel margin (e.g., shallow water habitat) also become more isolated from flow during low-flow or average-flow conditions. The bulk of the restoration project sites (Figure 5.3-1) appear to be located within the St. Joseph and Jefferson City reaches and largely outside of the specific segments within these reaches which are experiencing significant bed loss. According to the DEIS, these two reaches contain wider river valleys and softer substrate. This geomorphology better supports channel margin and floodplain restoration projects. As the Corps evaluates the permitting of dredging within these two reaches, it would be prudent to avoid segments with restoration areas. We recommend that the Corps provide an analysis, with data supporting a high degree of confidence, that permitted dredging locations and quantities, will not negatively affect the design and performance of these projects.

Adequacy of the Impact Statement

Information Regarding Sediment Transport in the Lower Missouri River

Sediment transport in rivers is composed of two major components: a suspended sediment fraction which includes a wash load of finer material (e.g., silt, clay) and bed-material load of coarser material carried under higher energy flows (e.g., sand); and a bed load fraction which is coarser material which moves along the river bottom by rolling and saltating (e.g., sand, gravel, rock). Bed load typically constitutes less than 10% of the total sediment load in large, lowland rivers like the Missouri River. Contemporary data on sediment transport in rivers relies upon measures of sediment transported in the water column as a general indicator of overall sediment movement, but does not represent a measure of bed sediment transport. Very little data exists on the character of bed load transportation in large rivers, sediment fluxes from tributaries and interactions between river sediment and floodplains. Sediment budgets which account for sediment transport, erosion and deposition are dependent upon this data. Absence of a budget for the Missouri River precludes a determination of what could constitute a sustainable approach to sediment management in the river.

Threats to Infrastructure and Flood Risk Management

The Kansas City District's River Engineering Section, in its November 5, 2009 memorandum, specifically stated that the condition of most infrastructure is unknown, including Corps constructed levees. The Corps also acknowledges that "the problem [of structure failure] is very complex" and significant uncertainty remains. Given the number of flood control levees along the lower river, we recommend that the Corps provide a characterization of the lower river levee system and the risk potential (toe integrity, certification standard, protection levels of 25 to 500 years) of those levees placed along the three reaches with the highest amount of bed loss.

Tributary Head Cutting

The analysis of cumulative impacts does not address those multiple impacts to tributary rivers resulting from bed loss and head cutting. The DEIS describes the potential for heading within downstream portions of tributary streams within each Missouri River reach, but provides no characterization of that potential or its impacts for individual tributaries. This is particularly troublesome with regard to the Kansas River which has documented severe head cutting problems associated with both bed loss in the Missouri River and its own sand dredging activities. The DEIS acknowledges that severe bed loss within the Kansas City reach creates the potential for expanded head cutting in the Kansas River. At a minimum, we recommend that the Corps evaluate the potential for increasing head cutting in tributary streams within Missouri River reaches which have suffered increasing bed loss, particularly with regard to the Kansas River for which exists a significant amount of data.

Impacts Associated with Two New Sand Plants

The DEIS does not address impacts associated with the construction and operation of two proposed sand plants by two of the applicants. Master's Dredging Company is proposing to build a sand plant at approximately River Mile 388 which would cover 20 to 60 acres of floodplain. In addition, this applicant proposes to utilize a slurry pipeline from dredging operations to the plant which would extend across a portion of the channel and shoreline. Edward N. Rau Contractor Company proposes to build a sand plant at about River Mile 67 on a 25.6 acres site. As these are new facilities whose construction is dependent upon the Corps' decision to issue permits to new dredging operations, we recommend that the Corps evaluate the impacts of their construction and operation as a "connected action" as defined in CEQ's regulations (40 CFR 1508.25(a)(1)).

Water Quality

The DEIS's conclusions regarding the potential impact of suspended sediments from both shallow water habitat restoration projects and dredging on the river's nutrient loads would not exceed water quality criteria (DEIS, Section 5.3.3.1). As neither Kansas nor Missouri have adopted numeric water quality criteria for nitrogen or phosphorous, we recommend that the Corps instead clarify that testing results or ambient measurements were found to be not significantly different from or less than background nutrient concentrations. References to "water quality standards" could be interpreted as meaning state-adopted numeric water quality criteria which could serve as the basis for state water quality certification under section 401 of the Clean Water Act.

Draft Environmental Impact Statement Rating Definitions

Environmental Impact of the Action

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative. EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.