

June 27, 2012

Mr. David R. Hoover  
U.S. Army Corps of Engineers, Kansas City District  
Attn: Environmental Resources Section, Planning Branch  
601 East 12<sup>th</sup> Street  
Kansas City, Missouri 64106  
via email: [d.r.hoover@usace.army.mil](mailto:d.r.hoover@usace.army.mil)

Re: Jameson Island Unit Shallow Water Habitat Restoration Project

Dear Mr. Hoover:

Great Rivers Environmental Law Center is pleased to submit these comments on behalf of the Missouri Coalition for the Environment (“Coalition”) regarding the U.S. Army Corps of Engineers’ proposal to commence its Jameson Island Unit Shallow Water Habitat Restoration Project (“Project”) as part of the Missouri River Recovery Program (“MRRP”). The Coalition believes that, by completing the Jameson Island Project in the manner described by Alternative 4 in the Corps’ Project Implementation Report, the Corps will be fulfilling its statutory duty to construct shallow-water habitat.

Although the Clean Water Commission determined in 2008 that the Project violates the Clean Water Act (“CWA”), the Coalition believes that this project will have a beneficial impact not only on the Missouri River, but also on the larger Mississippi River System and the Gulf of Mexico. While “sediment” is technically considered a pollutant under state and federal law, it is not a pollutant when it is a natural characteristic of a river. The National Research Council’s (“NRC”) study, *Missouri River Planning: Recognizing and Incorporating Sediment Management*, demonstrates that a high sediment load was once a natural attribute of the Missouri River. Missouri River Planning: Recognizing and Incorporating Sediment Management, National Research Council, p. 21 (National Academies Press, 2010) (hereinafter referred to as “NRC Report” in these Comments). Subsequent to the release of this study, four federal agencies adopted the view that receiving-water characteristics should be taken into account when administering the Clean Water Act. Federal Position on Sediment Management Missouri River Recovery, Shallow Water Habitat Creation Downstream of Gavins Point Dam, (January 10, 2011). Even the legislative history of the Clean Water Act supports the idea that an agency must take into account a water body’s natural attributes when interpreting which water quality standards should be enforced. The Act’s Senate Report urged agencies to consider “the importance of historical records on species composition, ecological studies, and estimations of what a

  
GREAT  
RIVERS  
Environmental Law Center  
The legal resource for natural resources.

705 Olive Street  
Suite 614  
St. Louis, MO 63101-2208  
Telephone (314) 231-4181  
Facsimile (314) 231-4184  
[www.greatriverslaw.org](http://www.greatriverslaw.org)

Founding President  
Lewis C. Green, 1924-2003

PRESIDENT  
Kathleen G. Henry  
*Licensed in MO, IL, DC*  
GENERAL COUNSEL  
Bruce A. Morrison  
*Licensed in MO, IL*  
STAFF ATTORNEY  
Henry B. Robertson  
*Licensed in MO*  
Brook A. Spear  
*Licensed in MO*

BOARD OF DIRECTORS

HONORARY CHAIRMAN  
Hon. Thomas F. Eagleton  
(1929-2007)  
CHAIRMAN, Richard Lageson  
Joyce Armstrong  
David Bohm  
Beatrice Clemens  
Kay Drey  
Wayne Goode  
Louise Green  
Roger Hershey  
Nancy Kistler  
Ron Kucera  
Matthew P. McCauley  
Ken Midkiff  
Cathy Primm  
John A. Rava  
Thomas Sager  
Ben Senturia  
James Shrewsbury  
James Wilson

ADVISORY LAW COMMITTEE  
CHAIRMAN, Richard Lageson  
Charles Abele  
Timothy Barnhart  
David Bohm  
Richard Constance  
Maurice Graham  
Elkin Kistner  
Hugh Law  
Francis Oates  
Stephen Reynolds  
John Roach  
Sharon Turlington  
Deborah Wafer  
Patricia Wendling  
Douglas Williams

'balanced natural ecosystem' should look like" when reflecting on what embodies the natural integrity of our waters. S. Rep. No. 92-414, reprinted in 1972 U.S.C.C.A.N. at 3716.

Through the Jameson Island Restoration Project, the Corps will continue to remedy the disappearance of 90 percent of the Missouri River's shallow-water habitat, and the Coalition strongly supports the Corps' endeavors to restore the natural characteristics of the Missouri that are so essential to the functioning of its ecosystem and the ecosystems of the Mississippi and Louisiana Delta downstream.

### **I. The Reintroduction of Sediment Under Alternative 4 is Necessary to Restoring the Missouri River Basin's Water Quality**

#### **A. Alternative 4 Would Provide the Most Environmental Benefit to Missouri's Waters of all Alternatives with the Least Adverse Impact**

The Coalition supports the Corps' decision to execute Alternative 4, described in its Project Implementation Report as, "Extend Chute Using Heavy Construction Equipment for Initial Clearing/Grubbing and a Hydraulic Dredge to Excavate a 100' Wide Channel Mixing Dredged Materials with the Existing Missouri River Water and Sediment Load." Missouri River Recovery Program Project Implementation Report With Integrated Environmental Assessment And Section 404(b)(1) Evaluation, United States Army Corps of Engineers, p. 36 (U.S. Army Corps of Engineers, 2012) (hereinafter referred to as "PIR" in these Comments). As explained below, this alternative provides the most benefit to the Missouri River with the least amount of environmental harm.

Alternative 3 is the only alternative that remains viable while the Missouri Clean Water Commission's 2008 Order is in place. The Coalition shares the Corps' view that this alternative is unacceptable when compared to the benefits Alternative 4 would provide. Alternative 3 would extend a chute using a 200-foot-wide channel. *Id.* at 35. The sediment that would be excavated would be stockpiled outside the chute's meander process area. A negligible amount of sediment would be incorporated into the Missouri River's bedload under this alternative. This alternative is more costly and environmentally damaging than the recommended Alternative 4. Alternative 3 would impact approximately 14.9 acres of wetlands as compared to the 5 acres that would be impacted under Alternative 4. *Id.* at 60. After the Alternative 3 site becomes fully developed, no wetland acreage is expected to increase. In the recommended alternative, 8.9 acres of wetland would be created after full development.

Riparian timber would be significantly affected if Alternative 3 were undertaken. The projected impact would be the clearing of 109.5 acres of riparian timber. The recommended alternative would only require the clearing of 34.4 acres of timber. Alternative 3 will also drastically affect floodplain connectivity and could cause a rise in flood heights. This alternative would arrest natural flow from the chute to the floodplain because the stockpiles of excavated sediment would cut off connectivity. Nutrient exchange required to support the Missouri River's ecosystem would not be allowed to take place. Alternative 4, however, would have no impact on floodplain connectivity. Earthen materials would be introduced to the water allowing natural

flow, scouring, and deposition to take place. *Id.*

Water quality would be adversely affected if Alternative 3 were to be completed. After chute excavation, the erosion of stockpiled material would harm contiguous wetlands. Alternative 4 would not have this effect because sediment would be incorporated into the existing bedload. Fish and wildlife would be impacted more harshly with Alternative 3, as well. More timber and wetlands would have to be cleared, and stockpiles would block movement from the chute to the floodplain. Stockpiles would also make it more difficult to incorporate woody debris into the chute. Finally, Alternative 3 would not greatly benefit sediment reintroduction because all sediment would remain on the banks. Alternative 4 would incorporate sediment with the result of not only benefiting local habitat, but downstream habitat in the Mississippi River and Louisiana Delta, as well. *Id.*

Full evaluation of the alternatives makes it clear that identifying the Missouri River's natural sediment as a pollutant harms water quality and the wildlife that depend on that water quality. Allowing the sediment to remain on the banks defeats the purpose of creating shallow-water habitat. Instead of further depriving a river system of its natural characteristics, the Corps is supported by the Coalition in its aim to enhance Missouri River water quality and habitat, as well as that of the Mississippi River and Louisiana Delta. The completion of Alternative 4 will effectuate these goals.

B. Missouri River Sediment will Improve Water Quality and not Significantly  
Contribute to Excessive Phosphorous in the Dead Zone

The hypoxic region, or “dead zone,” located in the Northern Gulf of Mexico is caused by high amounts of nutrients emanating from tributaries that enter the Gulf. Nutrients cause large algal blooms, which deplete oxygen levels in the water column. This, in turn, kills other organisms that depend upon oxygen to survive. NRC Report, p. 105. There are many point and non-point sources to blame for this phenomenon, including cropland, livestock operations, grazing, waste water treatment plants, and modification of stream banks. In one study, scientists from the National Academy of Sciences discovered that “the large majority of nutrient yields across the [Missouri River Basin] are nonpoint in nature and are associated with agricultural activities.” Improving Water Quality in the Mississippi River Basin and Northern Gulf of Mexico: Strategies and Priorities, National Research Council, p. 1 (National Academies Press, 2011). The study concluded that 80 percent of the phosphorous flowing to the Gulf was associated with agricultural runoff and that 10 to 11 percent of the phosphorus was associated with “urban and population-related activities.” Unfortunately, agricultural non-point sources are exempt from regulation under the Clean Water Act, making reduction of the dead zone an ominous task. *Id.* at 9.

The NRC proved that habitat restoration projects that incorporate historic Missouri River sedimentation processes have had very little effect on the Gulf dead zone. NRC Report, p. 11. This is because, unlike agricultural runoff, the sediment the Corps is reintroducing to the Missouri River is the type of material that is naturally found in the river. Most phosphorous that is naturally occurring in this sediment is considered “particulate phosphorous.” If this type of

phosphorous ever makes it to the Gulf, it is only 30 percent bio-available to the algae that causes the dead zone. Lake Erie Nutrient Loading and Harmful Algal Blooms: Research Findings and Management Implications, Jeffery M. Reutter, et al., p. 3 (Ohio State University, 2011). Particulate phosphorous tends to remain attached to particulate matter and not dissolve in water. This is in contrast to “soluble reactive phosphorous” or “orthophosphate” which is 100 percent bio-available. This is the most stable type of phosphate that is taken up directly by crops as well as algae. Fertilizers used on crops typically contain this type of phosphorus.

The confusion that surrounds the issue of sediment centers on the distinction between different methods of describing water quality standards. Narrative criteria describe water quality parameters in a qualitative way. Numeric criteria, on the other hand, describe water quality in a quantitative way. Missouri uses both narrative and numeric criteria when determining its water quality standards. Numeric criteria are quantitative values for pollutants in water bodies that cannot be exceeded by polluters. Narrative criteria are requirements that cannot be quantified such as the requirement that “[w]aters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor, or prevent full maintenance of beneficial uses....” 10 CSR 20-7.031(3)(C). There is no numeric criterion for sediment in Missouri water quality law and therefore it is difficult to determine whether sediment is harmful to a particular water body. According to the narrative criterion quoted above, it would seem that the turbidity caused by sediment, which is a natural characteristic of the Missouri River, would violate the state's water quality standards. If the state of Missouri were to adopt protective numeric criteria that are designed to embrace the natural characteristics of a water body, it would resolve the contradiction of labeling a natural characteristic of a water body as a pollutant, without any further examination.

It is well understood that wildlife that evolved in the Missouri River's waters depends upon turbidity for survival. NRC Report, p. 4. It only took a little more than 50 years for the dams and levees built on the river to reduce the sediment that causes turbidity to between 20 and 25% of its original volume. Missouri River Recovery Program Fact Sheet, U.S. Army Corps of Engineers-Kansas City District, (September, 2007). Other states have used the Unified Soil Classification System to describe different kinds of sediment and how much of that sediment may be appropriate in a particular stretch of water. The NRC recognized that “the designation of sediment as a 'pollutant' is fraught with ambiguity.” *Id.* at 26. If numeric water quality criteria were established for sediment in the Missouri River, the acceptable amount of sediment for a water body would be represented quantitatively and, thus, more accurately. In the case of the Missouri River, which is actually starved for sediment, the reintroduction of this material would not be a water quality issue but, in fact, would be beneficial. *Id.* at 117. To address concerns regarding other pollutants that may relate to sediment, like phosphorous, a numeric water quality standard could be set that is considerate of relevant factors such as bio-availability or the difference between orthophosphates and particulate phosphorous.

Under any measure of water quality, it is essential to evaluate a water body's natural and historical characteristics and downstream conditions to determine the criteria necessary to protect the water body and other affected ecosystems and communities. Without this sort of appraisal, water bodies with varying natural, historical characteristics would be treated as if they are the

same, resulting in dire effects to water quality, aesthetics and ecology. As an example, after considering historical water body characteristics, it would be incorrect to conclude that the water quality of an historically “clear-water” lake or stream would benefit by introducing high amounts of sediment to its waters. In the same vein, it would be incorrect to conclude that, in the case of the Missouri River, introducing high amounts of sediment would *impair* water quality. On the contrary, the Missouri is so starved for sediment that the reintroduction of it would be necessary to restore the river's water quality to an acceptable standard.

Usually, when companies are fined for putting sediment in the state's waters, the companies have engaged in construction activities near river banks or large-scale land disturbances and have extricated all natural flora and fauna from a site, allowing unnatural sediment transport which is detrimental to water bodies that are not naturally sediment-rich. The storm-water that rushes over the exposed soils on a construction site can carry sediment that may contain such toxins as oil and solvents into a water body, rendering harm to humans and wildlife. Similarly, erosion from farming practices can result in the loading of 100% bio-available orthophosphate from unnatural farm fertilizers, which enter into the water column, and move quickly to the Gulf where they will contribute to the dead zone. The Corps' habitat creation can hardly be compared to these scenarios. While sediment can rightly be called a pollutant in some instances, reintroducing natural sediment for the purpose of helping wildlife is not the type of activity meant to be frustrated by the Clean Water Act.

While a high sediment load is necessary to maintain the Missouri River's water quality, some have expressed concern that the sediments being introduced to the river contain high amounts of phosphorus that significantly contribute to the dead zone in the Gulf of Mexico. Subsequent studies have shown this is not the case. When the Corps was directed to stop habitat restoration in 2007, the Corps and the Missouri Department of Natural Resources (“MDNR”) tested water and sediment located on the Jameson site only to find that there was no evidence of nutrients or contaminants present that “would cause an exceedance of State water quality standards or other adverse impacts to water quality in the Missouri River.” PIR, p. 15. Between 2009 and 2011, monthly samples were collected upstream and downstream of the Jameson Island site. The amount of phosphorous at the project site was significantly lower than the amounts that were detected at the upstream and downstream collection locations. *Id.* at 77. The testing methods used to determine these nutrient concentrations were based on “Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual: Inland Testing Manual.” This manual was published by the U.S. Environmental Protection Agency (EPA) and the Corps. The testing in this manual is the “best available technical guidance regarding how dredged material should be tested.” Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual (Inland Testing Manual), p. i, U.S. Army Corps of Engineers, (February, 1998). This testing is evidence that the continuation of the Jameson Island Project would not negatively affect the Missouri River's water quality. The NRC's study also proves educational with respect to this point:

An upper bound estimate of the increased phosphorus loadings to the Gulf of Mexico from Corps' projects is 6 to 12 percent. In reality, actual phosphorus loadings caused by these projects would be less than this estimate, as not all the

sediment and associated phosphorus would make it all the way through the river system to the Gulf of Mexico. Current studies suggest that at least a 20 percent increase in nutrients would be necessary to see a distinct increase in the hypoxic area. The report thus concludes that Corps' restoration projects will not significantly change the size of the "dead zone" in the Gulf.

Missouri River Planning: Recognizing and Incorporating Sediment Management (Report in Brief), National Research Council, p. 5 (National Academies Press, 2010). The NRC's estimate included all of the Corps' projects, not only the Jameson Island Project. Furthermore, the upper-bound estimate was based on the assumption that all of the sediment from these projects would make it to the Gulf in one year. In reality, it would take many years for the sediment to reach the Gulf, if it did at all. NRC Report, p. 110.

It is also important to note that, historically, there were naturally occurring concentrations of phosphorous in the Missouri River's sediment that supported its native ecosystem. *Id.* at 120. The amount of phosphorous that was carried in historic sediment loads was able to be dispersed via accretion along the Missouri and Mississippi River banks. Dams, levees, and channelization currently prevent this accretion from taking place. If more sediment were introduced to the water and allowed to function as it once had, then the natural amounts of phosphorous that are contained in the rivers' sediment would be able to accrete downstream. Allowing accretion from reintroduced sediment would prevent naturally occurring concentrations of phosphorous from reaching the Gulf.

Even if the sediment from the Corps' projects did not deposit along the river system, it would take years for the sediment to reach the Gulf. *Id.* at 110. These Missouri River historic dynamics are different from what happens when the highly soluble phosphorus from farm fertilizers travels quickly down the river into the Gulf. This type of phosphorus becomes immediately available to the biological processes that cause the dead zone. Although people stated at the hearings before the Commission that the dead zone decreased because the Corps stopped creating shallow-water habitat at Jameson Island, this is not true. The NRC noted that "Given the multiple causes of the year-to-year variation in the area of hypoxia in the northern Gulf of Mexico, it is not appropriate to relate discharges from select sites of relatively small nutrient loadings across the river basin with changes in the areal extent of the hypoxic zone in any given year." *Id.* at 114. Meteorologic, hydrodynamic and timing factors also affect dead zone size. *Id.* at 11-12.

Consequently, the NRC study proves that the Project will not release pollutants that will harm the Missouri River's water quality. The purpose of the Clean Water Act is to reduce pollutants in our nation's waterways, not to hinder projects that restore rivers to their natural, historical conditions. The Corps is supported in its position that the Project does not harm the Missouri River's water quality and should be permitted to carry out its federally mandated duties.

C. The Reintroduction of Sediment into the Missouri River Will Benefit  
Water Quality and Habitat Downstream

In addition to enhancing the water quality of the Missouri River, the reintroduction of sediment benefits water quality and habitat downstream. Sediment travels from the Missouri to the Mississippi and is eventually deposited in the Delta north of the Gulf of Mexico. This material is responsible for building up Louisiana's coastal wetlands. Since 1930, 1,900 square miles of coastal wetland in Louisiana have been lost. NRC Report, p. 98. If the Delta had more sediment, it would have helped absorb the impact of flooding during Hurricane Katrina. Wetlands, as they once existed in the Mississippi River Delta and the Gulf Coast, would provide a barrier, which would be better able to withstand a storm surge or waves from hurricanes. The lack of this material has led to losses so massive to Louisiana that they comprise 80 percent of total coastal wetland-loss in the US. Louisiana's Wetlands: A Lesson in Nature Appreciation, John Tibbetts, at para. 19 (Environmental Health Perspectives, 2006).

According to the NRC study on the Missouri River sedimentation processes, lack of sediment moving through the Missouri and Mississippi River systems can result in the following negative consequences:

- reduced turbidity;
- loss of habitat for some native species;
- bed degradation downstream of dams and extensively along the main channel and the lower reaches of tributaries. This causes problems for infrastructure by undermining levees and bridge foundations and lowering water levels at municipal water intakes; and
- reduced volumes of sediments transported downstream to the Mississippi River and delivered to the Mississippi River delta region.

NRC Report, p. 4. If all the Corps' shallow water habitat projects were allowed to go forward, the amount of sediment reintroduced would be 34 million tons per year, or "roughly a 10 to 20 percent increase in sediment delivered to Louisiana for at least the next 15 years, depending on the trapping efficiency of the Mississippi floodplain." *Id.* at Shallow-water habitat restoration would, therefore, alleviate the aforementioned consequences. The Corps' Project Implementation Report also recognized that "[r]estoration of sediment flow to the Gulf of Mexico is an important step needed to rebuild coastal wetlands that can assist [sic] in naturally reducing nutrients and lessen the extent of the associated 'dead zone'". PIR, p. 108.

In enforcing the CWA, regulatory bodies must take into account the Act's broader goals. According to EPA Guidelines, choosing which water quality criteria apply to a particular water body necessitates consideration of downstream water quality effects, as well. NRC Report, p. 115. Acknowledging that sediment is not a pollutant in the Missouri River and allowing the Jameson Island Project to proceed would fulfill these guidelines by taking into account the interests along the Missouri River, Mississippi River and the Gulf Coast.

#### D. Conclusion to Part I

The Coalition strongly supports the Corps of Engineers' proposal to create shallow-water habitat at Jameson Island. The Coalition also agrees that the sediment the Corps will remobilize is not a pollutant in the Missouri River, Mississippi River or Louisiana Delta and does not significantly affect the Gulf of Mexico dead zone. It is within the spirit of the Clean Water Act to reinterpret Missouri's water quality standards to take into account the natural characteristics of the water body to which those standards are being applied. Once that is done, the benefits of this project that will materialize for Missouri will contain broader implications for the Missouri and Mississippi Rivers and the Gulf Coast. Missourians' deserve to have the enhanced water quality and habitat that the Corps' Jameson Island Project will bring to the state.

### **II. The Corps will Comply with the Clean Water Act when Implementing the Jameson Island Project**

The Coalition endorses the Corps' assessment that Jameson Island Project activities will meet the necessary permit requirements under the Clean Water Act given the updated scientific understanding of Missouri River sedimentation processes as expounded by the NRC. The fact that these prerequisites will be satisfied furnishes strong indication that the Project should be allowed to advance.

The policy of the State of Missouri is "to conserve the waters of the state and to protect, maintain, and improve the quality thereof..." as well as "to provide for the prevention, abatement and control of new or existing water pollution." Section 644.011 RSMo. It is the duty of Missouri's Clean Water Commission to enforce the provisions of the Federal Water Pollution Control Act and Missouri's Clean Water Law. Section 644.026 RSMo. The Clean Water Commission will be in compliance with the law if it allows the Corps to implement the Jameson Island Project.

#### A. The Corps will Comply with Section 401 of the Clean Water Act

Under Section 401 of the Clean Water Act, the Corps must receive Water Quality Certification from MDNR to re-initiate the Jameson Island Project. The Corps originally received Water Quality Certification from MDNR in 2003 for its Nationwide Permit to engage in stream and wetland restoration activities. Special Public Notice: Section 401 Water Quality Certification (WQC) Accepted for Select Nationwide Permits (NWP) in Missouri, U.S. Army Corps of Engineers (December 17, 2003). It was this authorization, among others, that allowed the Corps to begin work on the Jameson Island Project. In order to receive Water Quality Certification to begin the Project again, the Water Quality Standards enumerated in 10 CSR 20-7.031 must be satisfied.

The 2008 Order from the Missouri Clean Water Commission to the Corps listed the "discharge of excessive sediment" as the reason for putting a halt to the Project. Order No. 07-001 (March 12, 2008). The Corps should be granted Water Quality Certification as long as the reintroduction of the sediment it plans to use does not violate the standards set in 10 CSR 20-



7.031. In this case, the relevant sections of this regulation in need of reevaluation would be Section (2) "Antidegradation,"<sup>1</sup> Section (3) "General Criteria," and Section (4) "Specific Criteria." While other sections in 10 CSR 20-7.031 may apply generally, Sections (2), (3) and (4) are the only ones that need to be reinterpreted, in light of the proposed addition of sediment to the Missouri River as a part of the Project.

*1. The Corps will Comply with Missouri's General Water Quality Criteria (Section 3)*

The Corps' remobilization of sediment must meet the requirements of Section 3. "Water contaminant" is defined as: "any particulate matter...which causes or would cause pollution upon entering the waters of the state..." Section 644.016(23) RSMo. Under Section (3) "General Criteria," it states that "[n]o water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions..." 10 CSR 20-7.031(3). It then enumerates nine conditions. Of those, three conditions could be disputed as to whether the remobilization of sediment violates them:

a. The Project Complies with 10 CSR 20-7.031(3)(A)

10 CSR 20-7.031(3)(A) states that "[w]aters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly, or harmful bottom deposits or prevent full maintenance of beneficial uses." Remobilizing river sediments is beneficial to the Missouri's waters because it restores them to their natural state and, thus, would not cause putrescent, unsightly or harmful bottom deposits. The Missouri River's beneficial uses include irrigation, livestock watering, the protection of aquatic life and fish consumption, whole body contact recreation, secondary contact recreation, drinking water supply and industrial water supply. PIR, p. 49-50. Reintroduction of sediment would not prevent any of these uses from being maintained. In fact, the Project would actually benefit the protection of aquatic life.

b. The Project Complies with 10 CSR 20-7.031(3)(C)

10 CSR 20-7.031(3)(C) states that "[w]aters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor, or prevent full maintenance of beneficial uses." Adding sediment that was created by the river would make the water more turbid, but because the Missouri River has historically been more turbid than it is in its present-day state, this change would have a favorable impact. Restoring the river to its original turbidity would benefit the wildlife that evolved in turbid waters. As previously discussed, sediment remobilization would not prevent full maintenance of beneficial uses.

c. The Project Complies with 10 CSR 20-7.031(3)(G)

10 CSR 20-7.031(3)(G) states that "[w]aters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community." While introducing

---

<sup>1</sup> Under Antidegradation Policy, remobilization of sediment does not interfere with any Missouri River beneficial or designated uses listed below in Section (II)(A)(1)(a).

sediment would change the Missouri River's waters, this would enhance, rather than impair the natural biological community. It would recover the habitat this community depends upon that has been depleted over the last half of a century.

*2. The Corps will Comply with Missouri's Specific Water Quality Criteria (Section 4)*

These criteria apply to the Missouri River because it is protected under the Clean Water Act. The enumerated criteria break down into 19 sections. Some of these sections have requirements that are based on numeric criteria, which do not apply to sediment because no numeric criteria have been set for it. Of these criteria, two conditions could be disputed as to whether the remobilization of sediment violates them:

a. This Project Complies with 10 CSR 20-7.031(4)(G)

10 CSR 20-7.031(4)(G) states that “[w]ater contaminants shall not cause or contribute to turbidity or color that will cause substantial visible contrast with the natural appearance of the stream or lake or interfere with beneficial uses.” This requirement would not apply to the Corps’ reintroducing sediment to the Missouri River because, while the addition of the sediment to the water contributes to its turbidity, this would not be in contrast to the water's natural appearance. To restore the Missouri's water quality to its original state requires that *more* sediment be introduced to cause increased turbidity. Remobilizing sediment also does not interfere with any of the beneficial uses listed above, but is, in fact, beneficial to the Missouri's natural ecosystem as well as to the downstream ecosystems all the way to the Gulf.

b. This Project Complies with 10 CSR 20-7.031(4)(H)

10 CSR 20-7.031(4)(H) states that “[w]ater contaminants shall not cause or contribute to solids in excess of a level that will interfere with beneficial uses. The stream or lake bottom shall be free of materials which will adversely alter the composition of the benthos, interfere with the spawning of fish or development of their eggs or adversely change the physical or chemical nature of the bottom.” Sediment cannot accurately be considered a “water contaminant” with respect to the Missouri River because a high sediment load is an essential quality of that water body. The manner by which the Corps will reintroduce sediment to the river will benefit fish spawning and development by creating the shallow-water habitat that enables these biological processes to take place. There is currently too little of this environment available for spawning, so sediment remobilization benefits rather than interferes with fish life-cycle development. No beneficial uses will be impacted.

Based on the above analysis, the Corps should be granted Water Quality Certification under Section 401 of the Clean Water Act so it may commence its Jameson Island Project.

B. The Corps Will Comply with Section 402 of the Clean Water Act

*1. The Missouri Department of Natural Resources Determined the Corps was in Compliance when the DNR Issued a General Permit*

In 2005, the Corps, in concert with MDNR, developed a General Permit (GP-699000) under the National Permit Discharge Elimination System (“NPDES”) as required by Section 402 of the Clean Water Act for its Jameson Island Project. PIR, p. 107. This permit authorized “return water and stormwater runoff from dredged material deposition sites, bank notching/chute excavation to allow the river to actively scour and widen and other disturbances along the Missouri and Mississippi Rivers for fish and wildlife mitigation projects and shallow water habitat development projects.” Missouri River Recovery Program Project Implementation Report With Integrated Environmental Assessment And Section 404(b)(1) Evaluation, Appendix A, United States Army Corps of Engineers, p. 14 (U.S. Army Corps of Engineers, 2012). The permit contained no sampling requirements. In its 2008 Order halting the Jameson Island Project, the Missouri Clean Water Commission stated that the permit only authorized the discharge of storm water runoff and did not authorize the discharge of sediment into the Missouri River. Order No. 07-001 (March 12, 2008). Since the Order has been in place, the original General Permit expired. To resume the Project, the Corps must be reissued a general permit.

Based upon the nature of Jameson Island Project activities, which include remobilizing sediment in the Missouri River, the Corps should be reissued a general permit so it may continue Jameson Island habitat restoration. When analyzing the terms of the original General Permit, it is clear that the Corps' Project was (and would continue to be) in compliance with all of the General Permit's stipulations. The permit stated that “[d]ischarges shall not violate Water Quality Standards 10 CSR 20-3.017.” *Id.* at 15. As was set forth in the analysis for Section 401 Water Quality Certification, the Project has not violated and will not violate any general or specific water quality criteria. When MDNR and the Corps worked together to create the original General Permit, the actions that were necessary to create shallow-water habitat were well understood. When the permit was drafted, the Corps and MDNR were aware of Missouri River's historical water body characteristics regarding sediment and turbidity and made sure not to include any requirements that were inconsistent with the Project's purpose of restoring those characteristics. PIR, p. 109. Given that MDNR attended the Corps' meetings on its Project, it would not have granted an NPDES permit had it believed the Jameson Island operation would be out of compliance with the Clean Water Act.

The NRC's study on Missouri River sedimentation processes substantiates the Corps' position that its activities will be in compliance with water quality requirements. In *Missouri River Planning: Recognizing and Incorporating Sediment Management (Report in Brief)*, the NRC stated:

...[T]he Missouri Clean Water Commission contends that sediment discharges from habitat construction projects violate state water quality standards. Under the Clean Water Act, water quality managers are expected to create water quality standards that are protective of the river's uses, and native species habitat is one

use that could be protected. In that case, nutrient and sediment water quality criteria to protect that use should recognize that the river historically carried sediments and nutrients, and characteristics of those historical sediment conditions would be considered in the process of developing water quality standards for the Missouri River.

*Id.* The Corps and MDNR used this understanding of sedimentation processes and water quality in creating the General Permit for the Jameson Island Project.

The General Permit granted to the Corps under Section 402 took into account the fact that habitat construction activities are wholly different from the typical permitted construction activities which involve permanent facilities that introduce toxic pollutants to water bodies. PIR, p. 108. The Corps' currently planned habitat restoration activities are no different from those that were approved when it received its original General Permit. If the Corps is reissued a similar general permit in the future, it will be bound to use the good housekeeping practices and best management practices that were described in the original permit. Furthermore, the Corps has had a good working relationship with MDNR and, in consultation with the agency, the General Permit that was developed provided direction on when individual permits would be required if project activities could not be accomplished under the General Permit. *Id.* at 109. The Commission's 2008 Order neglected to take into account the fact MDNR and the Corps had been working together to allow the Corps to carry out its federally mandated duties in a manner consistent with protecting Missouri River water quality. Because the Corps' Jameson Island Project activities have already been authorized as complying with water quality standards under its first NPDES permit, it should be granted a new 402 general permit so it may resume enhancement of the Missouri River's water quality and ecosystem.

### C. The Corps Will Comply with Section 404 of the Clean Water Act

The Corps administers the 404 program and must evaluate whether its activities meet 404(b)(1) guidelines, which require that dredging activities minimize adverse impacts, not violate other laws, not have practicable alternatives, and not significantly degrade water quality. The Jameson Island Project complies with the Clean Water Act's Section 404(b)(1) guidelines and should be permitted. The materials used to create shallow-water habitat consist of sand, silt, and clay that is natural to the Missouri River and will be, in fact, directly withdrawn from the river bed and banks. *Id.* at 4. The Corps' anticipation of using Best Management Practices to ensure the minimal amount of material is moved shows its commitment to complete the Project with the least adverse effect possible. Missouri River Recovery Program Project Implementation Report With Integrated Environmental Assessment And Section 404(b)(1) Evaluation (Appendix H), United States Army Corps of Engineers, p. 8 (U.S. Army Corps of Engineers, 2012). The Corps found that the alternative selected for the Project:

- had the least impact on the environment;
- met state water quality standards;
- did not have adverse impact on human health or welfare;
- contained actions to minimize impact on the environment; and

- did not jeopardize endangered/threatened species or the species' habitat.

*Id.* at 13-14. Therefore, the Corps is in compliance with Section 404 of the Clean Water Act.

#### D. Conclusion to Part II

The requirements of sections 401, 402 and 404 of the Clean Water Act have been satisfied by the Corps with respect to the Jameson Island Project. The NRC study demonstrates that the former obstacles to the continuation of the Project centered upon an outdated definition of what constitutes pollution in the Missouri River's waters. With the new understanding that sediment is a beneficial and, indeed, crucial component to the river's water quality, the Missouri Clean Water Commission has the duty to promote programs that enhance this characteristic. The Coalition supports the decision to give the Corps the appropriate authorization to pursue its MRRP objectives.

### III. Missouri Will Benefit from the Jameson Island Project

#### A. The Project will Restore Natural Characteristics of the Missouri River Ecosystem

This project will enhance the Missouri River ecosystem by restoring some of its natural characteristics that supported native wildlife, including three endangered species. So far, it has been proven that several endangered pallid sturgeons have been caught on the stretch of the Missouri River where the Big Muddy National Fish and Wildlife Refuge is located. PIR, p. 21. The Project area has also hosted migrating endangered birds such as the piping plover and interior least tern. *Id.* at 24. Chutes, such as the one being constructed at the Jameson Island Project, fall within the definition of "shallow-water habitat" and are proven to shelter predominately juvenile fish species. Other chutes constructed as a part of the MRRP have hosted an average of 57 different species and are used by adult pallid sturgeons in their migration route. Between the years of 2006 and 2008, 22 pallid sturgeons were caught in chutes similar to the Jameson Island chute in other MRRP restoration locations. *Id.* at 29. The Corps will be using performance metrics and adaptive management to make sure the Jameson Island chute is providing spawning and rearing habitat as planned. *Id.* at 111. Furthermore, representative shallow-water habitat projects that are currently monitored will be used as a comparison to the Jameson Island Project to address issues having to deal with productivity or water quality. *Id.* at 16. The enhancement of these natural resources will be a great benefit to Missourians.

#### B. The Project Will Result in Increased Funds for Missouri

Protection and restoration of Missouri's natural resources increases funds for the state and creates jobs. The natural processes that would take place after the Corps' restoration would contribute to the creation of backwaters, sandbars, side-channels and wetlands in the Project area. Conservation of these types of habitats encourages such recreational activities as fishing, boating, hiking, hunting, nature study, wildlife watching and photography. *Id.* at 58. Contributing to these benefits is the fact that approval of the Project would not require the expenditure of any state funds. As the Corps recognized in its *Project Implementation Report*,

