

CENWK-OD-R

SUPPLEMENTAL  
COMBINED DECISION DOCUMENT  
MISSOURI RIVER COMMERCIAL DREDGERS  
PERMIT EXTENSIONS

District-Permit No.	Permittee	Tonnage	River Reach
NWK -200101429	Capital Sand Company, Inc.	2,255,000	62.0-328.0
NWK -200101430	Hermann Sand and Gravel, Inc.	300,000	56.0-164.0
NWK -200101431	Holliday Sand and Gravel Company	2,160,000	320.0-459.0
NWK -200101434	Con-Agg of MO, LLC	175,000	177.85-201.95
MVS -P-2339	J.T.R. Inc. (Jotori Dredging)	750,000	30.0-35.0
MVS -P-2340	J.T.R. Inc. (Jotori Dredging)	300,000	1.0-12.0
MVS -P-2341	J.T.R. Inc. (Jotori Dredging)	500,000	14.0-24.0
MVS -P-2342	St. Charles Sand Company	1,200,000	0.0-47.0

This supplemental combined decision document (CDD) pertains to issuance of a modification to eight Department of the Army (DA) permits for Missouri River commercial sand dredging under authority of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C 403) and Section 404 of the Clean Water Act (33 U.S.C 1344). The Corps of Engineers is extending the expiration date of all eight permits to 31 December 2010. The authorized activities are located in the Missouri River between river miles 0.0 and 459.0 in Kansas and Missouri.

1. The work requested in this modification is associated with previously authorized work at the same location.
2. Reference is made to the Permit Evaluation and Decision Document of August 2007 (<http://www.nwk.usace.army.mil/regulatory/MO%20River%20Dredging/MO%20River%20Dredging%20CDD.pdf>) and the Supplemental Permit Evaluation and Decision Document of March 2008 (<http://www.nwk.usace.army.mil/regulatory/MO%20River%20Dredging/MO%20River%20Supplemental%20Decision.pdf>). This decision authorized four dredging operations within the Kansas City District's regulatory jurisdiction to continue dredging through 31 December 2009. At that time the St. Louis District also extended their Missouri River commercial dredging permits through 2009. As a condition of those decisions, the Kansas City and St. Louis Districts are currently preparing a joint Environmental Impact Statement (EIS) to be used to evaluate the applications for renewal of these permits and two proposed dredging operations. Because the Kansas City District has regulatory authority over 440 of the lower 490 miles and civil works authority over all 490 lower Missouri River miles, we are the lead district over this joint EIS. At the time these permits were issued we believed that an EIS could be completed by 31 December 2009, but the EIS has been delayed for various reasons. At this time we have a plan from the third-party-contractor (ENTRIX) and a contract between ENTRIX and the dredgers to have the EIS completed by 30 September 2010. I have determined that it is necessary to extend the existing permits through 31 December 2010 in order to finalize the EIS, complete the Record of Decision and issue permit decisions.

3. By email dated 1 September 2009, we notified U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (USEPA), Kansas Department of Health and Environment (KDHE), Kansas Department of Wildlife and Parks (KDWP), Kansas State Historic Preservation Office (KSHPO), Missouri Department of Natural Resources (MDNR), Missouri Department of Conservation (MDC) and Missouri State Historic Preservation Office (MSHPO) requesting their input regarding our intention to extend the existing dredging permits (Enclosure 1). No responses were received.

4. By letter dated 30 October 2009, we requested concurrence by the USFWS with our determination that extending the existing permits would not be likely to adversely affect any federally listed threatened or endangered species (Enclosure 2). USFWS concurred with that determination by letter dated 3 December 2009 (Enclosure 3).

5. On 30 October 2009, we sent a letter to the KDHE requesting a 401 Water Quality Certification for the extension (Enclosure 4) and on 10 November 2009, KDHE determined that with updates to the NPDES Permit list and public water supply references in conditions 5 g. and 5 h., the 14 June 2007 certification could be extended (Enclosure 5).

6. On 3 November 2009, we sent a letter to the MDNR requesting a 401 Water Quality Certification for the extension (Enclosure 6) and on 16 December 2009, MDNR extended their Certifications issued in 2007 (Enclosure 7).

7. The following information was considered in evaluating this modification:

a. Comments received in response to the Public Notice for Missouri River Commercial Dredgers, dated 27 June 2003, were discussed and addressed in the Permit Evaluation and Decision Document of August 2007 and the Supplemental Permit Evaluation and Decision Document of March 2008. These decision documents identified the contribution of commercial dredging to bed degradation of the Missouri River as the key issue requiring preparation of an EIS. By memo dated 24 June 2009 (Enclosure 8), the Kansas City District's River Engineering Section (River Engineering) identified concerns about dredging in the Kansas City reach. River Engineering stated that "recent bank failures at river mile 380, where degradation is the most advanced, bring to focus the potential dangers to infrastructure. Levees and floodwalls adjacent to the river channel throughout the reach are susceptible to significant damage if similar bank failures are initiated by degradation." According to River Engineering's analysis of water surface profiles collected since 2005 through the Kansas City reach, the river bed is continuing to degrade, particularly between river miles 360 and 410 where dredging is most active. River Engineering also stated that "continued removal of material will likely result in further degradation of the bed due to removal of the material itself and/or disruption of the natural stratification of sediment particle sizes in the thalweg." River Engineering cited a study completed in 1999 (Final Report Missouri Levee Unit L385 Sediment Analysis, May 1999) which stated "Over the period of record, the average annual bed load amount has been equal to 1.3 million (M) tons/year. Dredging in excess of the bed load amount would be expected to cause impacts to the channel and potentially surrounding infrastructure." Based on this analysis, the revetment failure at river mile 380, and the critical infrastructure such as levees reliant on those revetments, River Engineering recommended that dredging quantities in the Kansas City reach for 2010 be limited to the computed bed load of 1.3 M tons. They also recommended that

the removed material come from the dike-fields (areas between dikes along the inside river bends) instead of the thalweg portion of the river, to prevent disruption to the natural stratification of the sediment particles in the thalweg and to increase the likelihood of bed load capture.

b. The Regulatory Branch (Regulatory), Operations Division (Operations), Engineering Division (Engineering), Office of Counsel (Counsel), Levee Safety Committee and River Engineering met multiple times to discuss the River Engineering comments, and this process resulted in a revised draft proposal to extend the dredging permits with additional restrictions, believed necessary to mitigate potential impacts for the proposed one year extension, for the dredging operations of Holliday Sand and Gravel Company (Holliday Sand) in the Kansas City reach (river mile 328 to 400). Regulatory and River Engineering met with Holliday Sand on 8 September 2009 to discuss the tentative plan. Holliday Sand responded by letter dated 10 September 2009 (Enclosure 9). Regulatory and River Engineering held additional meetings with Holliday Sand on 29 September and 1 October 2009, and presented a general extension plan to all the Dredgers on 7 October 2009. At the 1 October 2009, meeting Regulatory proposed to require the two dredging operations authorized by the St. Louis District to implement the same type of full-time dredge monitoring and GPS systems and provide a hydrographic survey of their authorized dredging reaches in the lower 50 miles of the river as was required of the other four operators by the Kansas City District in 2007. Jotori Dredging and St. Charles Sand Company (Limited Leasing) argued that requiring this expensive upgrade for a one year extension without assured permits after 2010 would be unfair and unnecessary. They said they could use GPS systems they already have to record the dredged location for every barge load of sand and monthly provide this information in the same Excel spreadsheet that the other dredgers use. After discussion, Regulatory concluded that this plan would be adequate for 2010. The two dredgers did not object to the hydrographic survey requirement.

c. I met with Holliday Sand and Ash Grove (their parent company) on 20 October 2009, where they discussed their concerns and presented additional comments (Enclosure 10). In Enclosure 10, Holliday Sand estimated that even with the economic recession they would still need between 1.6 and 1.8 M tons of sand in 2010, and that there would be a projected shortfall of at least 0.3 M tons if dredging is limited to 1.3 M tons in 2010. Holliday Sand concluded that if they are limited to 1.3 M tons to be extracted exclusively from the dike-fields in the Kansas City reach, they would be forced to close their Riverside plant. This is based in their belief that it is practicable to operate within the dike-fields only during high flow conditions and that the proportion of coarse concrete grade sand available is generally low there until after high flow events. Holliday also demonstrated that the Hannibal (BNSF) rail bridge would be a substantial barrier to dredging downstream and transporting sand upstream to the Riverside plant. Additionally, the 1.3 M ton limit, combined with closure of the Riverside plant, would drive up market prices and competition, with ripple impacts to Ash Grove, including the closure of one of Ash Grove's ready-mix plants. Holliday identified 1.6 M tons, split between the Riverside and Randolph plants, as a quantity that would allow them to remain open at both plants. Holliday Sand and their parent company, Ash Grove, have proposed an alternative that they believe would be practicable, financially viable, and would prevent significant impacts to the river and associated infrastructure. Their proposal includes substantial restrictions intended to spread out dredging, limit dredging above the Hannibal Bridge to 0.8 M tons and make a good-faith effort to dredge in the dike-fields.

d. Regulatory evaluated Holliday Sand's comments and proposal (Enclosure 10) and determined that it proposed several tonnage limits that are not necessary and would not decrease the potential for degradation. Regulatory developed three alternatives that fit within and clarify the intent of Holliday Sand's proposal (Enclosure 11). The alternatives incorporate the tonnage limits and essential reach limits proposed by Holliday Sand and require them to confine dredging to the dike fields when the river stage is at or above 17 feet at the Kansas City gage. That is the elevation identified by Holliday Sand as providing adequate water depth to safely dredge areas near or within the dike-fields. Based on USGS gage data since October 1990, we estimate that this stage happens for about 23% of an average year. This would work out to about 2-3 months of no dredging (ice/cold), 7 months of dredging in channel and 3 months of dredging in dike fields. All three alternatives eliminate the no dredging zone between 366.1 and 364 and the 0.3 M ton limit between 353 and 328 in Holliday Sand's proposal. The difference in our three alternatives is to what portion of the Kansas City reach is the dike field dredging requirement applied. Regulatory believes that all three of the alternatives are practicable and viable variations of Holliday Sand's proposal, and recommends option 2 because it would confine dredging to the dike-fields when the Kansas City gage is at or above 17 feet in the most severely degrading portion between river mile 353 and 400, but would provide the opportunity at all times for Holliday to dredge anywhere in the existing authorized areas of the less degraded reach below 353.

e. By memo dated 5 November 2009 (Enclosure 12), Engineering provided a relative risk assessment and ranking of Holliday Sand's proposal and the alternatives Regulatory developed. Recommended option 2 was rated as one of the higher risk options, but Regulatory finds it important to put it in the context of historic dredging. From 1999 to 2003 Holliday Sand extracted in excess of 3.58 M tons peaking at 4.16 M tons in 2001. In 2007 we authorized Holliday Sand to extract up to 3.4 M tons in the Kansas City reach in 2007, up to 2.95 M tons in 2008, and up to 2.5 M tons in 2009. The 1.6 M tons identified by Holliday Sand as the minimum amount to maintain a viable operation is only 38.5% of what was extracted in 2001, 47.1% of what was authorized in 2007, and 64% of what is authorized to be extracted in 2009. It is also noted that while correlation between dredging and degradation has been identified, that relationship and causation of degradation from dredging is the subject of the EIS, which has not yet concluded. Finally, the authorized period being limited to one year is an important factor in determining impacts and the appropriate interim dredging allowance while the EIS is completed.

f. Regulatory acknowledges that from an engineering perspective it is best to avoid *any* additional risk to the river or levees from dredging. However, the Regulatory decision involves more than engineering analysis. The Regulatory decision must fall within the mitigated Finding of No Significant Impact (FONSI) and provide a practicable/viable project for the applicant, or the activity must be denied. The engineering risk analysis is considered and balanced with all of the other public interest factors. The Corps cannot issue a decision that would effectively be a "constructive denial" in that it has conditions so onerous that the project is not practicable or viable.

Regulatory is convinced that Holliday Sand provided a reasonable description of a viable project, and that permitting less than a project with 1.6 M tons, with half above the Hannibal bridge, and with some in channel dredging, would be a constructive denial. It has concluded that denial or

constructive denial of the Holliday Sand permit extension during the short time period that allows for completion of the EIS is not in the public interest. In looking for a practicable option that considered both the risk factors identified by River Engineering, and viability of Holliday at both plants, Regulatory has determined that the best course of action is to proceed with a one-year extension as follows:

- Up to 1.8 M tons between miles 400 and 320
- Up to 1.6 M tons of that amount between miles 400 and 328.
- Up to 0.8 M tons of the 1.8 M tons between miles 400 and 366.1 (Hannibal Bridge), with no more than 0.5 M Tons in each of the following: 400-378 and 378-366.1)
- Up to 0.5 M tons of the 1.8 M tons between miles 366.1 and 353.
- For miles 400-353, dredging is confined to the dike-fields (defined as existing authorized dredging areas between dikes along the inside river bends extending riverward from the existing landward limit to a line 200 feet beyond the end of the dikes) when ever the Missouri River is at or above 17 feet at the Kansas City gage.

Regulatory concludes that these restrictions, which include a substantial reduction in extraction and are much more restrictive than the current permit and are narrowly tailored to the time required to complete the EIS, do consider the risk to infrastructure in balance with other factors. With these restrictions, extending Holliday Sand's permit through 31 December 2010, will not impact additional landowners, and will not result in any new or additional significant environmental, economic, or social impacts and will allow us to complete the EIS.

g. Although the 2007 Decision Document and 2008 Supplemental Decision Document identified bed degradation as an issue throughout the lower Missouri River between Rulo, Nebraska and the confluence in St. Louis, Missouri, River Engineering has not expressed concern about extending permits for dredging outside the Kansas City reach (between river miles 328 and 400, only affects Holliday Sand) for one more year as currently authorized. Regulatory has determined that no new permit conditions are required for the Capital Sand, Hermann Sand and Con-Agg dredging operations but the Jotori Dredging and St. Charles Sand permits will have the following additional special permit conditions which are already required of the other four dredging operations.

- The permittee must survey each authorized dredging reach in 2010 in accordance with the attached Standard Operating Procedures for Hydrographic Surveying. The Corps will provide to the dredgers the benchmarks and baseline information from the Corps' 2007 hydrographic survey of the river. Surveys shall extend 2 miles upstream and 2 miles downstream of each dredged reach with transects every 250 feet. Surveys shall be completed between June and September. Where the permitted dredged reach of one dredger overlaps that of one or more other authorized dredging companies, the companies may choose to cooperate and provide just one survey report for that reach signed by all cooperating companies. The Corps will continue to provide assistance as needed with regard to the survey plan.

- The permittee must, for each dredge operated, record Global Positioning System (GPS) coordinates, tons of material removed, and the presence of any hard substrates or unusual concentration of gravel daily. If the dredge moves more than 100 feet in any one day then the amount of material removed from each location must be recorded separately. The operators may use hand-held GPS devices or automatically recording devices, but with which ever system used, must identify the device make/model and recording location. This information must be recorded on the attached Missouri River Commercial Dredging Location/Volume Report in an electronic spreadsheet. You must furnish a copy of the completed monthly report by email to [charles.f.frerker@usace.army.mil](mailto:charles.f.frerker@usace.army.mil) at the St. Louis District Regulatory Branch and to [cody.s.wheeler@usace.army.mil](mailto:cody.s.wheeler@usace.army.mil) at the Kansas City District Regulatory Branch by the 7th day of the following month. If you do not receive an email confirmation that the report was received, you must contact the Regulatory Branch at 816-380-3990 for revised instructions for filing the monthly report.

This action will not impact additional landowners, and will not result in any new or additional significant environmental, economic, or social impacts and will allow the Corps to complete the EIS.

h. Therefore, based on the above, I have determined that extending the existing permits with the additional restrictions will not significantly increase the scope of the activity. In accordance with 33 C.F.R. 325.7, an additional public interest review will not be performed.

4. I find that extension of the existing permits with additional restrictions as prescribed by regulations published in 33 C.F.R. 320-332, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are no reasonable alternatives available to the applicant that will achieve the purposes for which the work is being constructed; that the proposed work is in accordance with the overall desires of the public as reflected in the comments of state and local agencies and the general public; that the proposed work is deemed to comply with established state and local laws, regulations, and codes; that there have been no identified, significant, adverse, environmental effects related to the work; that the issuance of this permit is consonant with national policy, statutes, and administrative directives; and that on balance the total public interest should best be served by the approval of the modification.

12 Encls

12/18/2009  
Date



Roger A. Wilson, Jr.  
Colonel, EN  
Commanding

Enclosure 1 September 2009 Email from Regulatory to State and Federal Agencies Requesting Input Regarding the Potential Extension of the Dredging Permits

**Wheeler, Cody S NWK**

**From:** Wheeler, Cody S NWK

**Sent:** Tuesday, September 01, 2009 1:47 PM

**To:** 'Jane\_Ledwin@fws.gov'; Johnson, Vicky MVS External Stakeholder; 'Carrie Schulte'; 'Scott Satterthwaite'; 'James Larson'; Brown, Doyle MVS External Stakeholder; 'tweston@kshs.org'; Deel, Judith MVS External Stakeholder; 'Shepard.Larry@epamail.epa.gov'; 'Cothern.Joe@epamail.epa.gov'; 'Landewe.Rebecca@epamail.epa.gov'; Frerker, Charles F MVS

**Subject:** Missouri River Commercial Dredging EIS and interim permit extension

All of you should already be aware that in August 2007 the Kansas City and St. Louis Districts issued a decision regarding all commercial dredging operations on the Missouri River. The National Environmental Policy Act (NEPA) requires preparation of an Environmental Assessment for government funded or authorized actions that would have less than significant environmental impacts and an Environmental Impact Statement (EIS) for those actions that could have significant environmental impacts. In August 2007, we issued an interim Finding of No Significant Impacts (FONSI) for Missouri River commercial dredging permit applications by imposing restrictions designed to minimize the potential for significant impacts associated with bed degradation. These restrictions included reducing dredging in the most severely degrading reaches, excluding dredging near critical habitat and infrastructure, freezing extraction limits in all remaining reaches, monitoring and reporting of dredging activity, studying the problem to identify sustainable dredging thresholds and completing an EIS before the permits could be reissued at the end of 2009. At the time we thought that was a feasible deadline for the EIS. However, due to various delays the contractor's latest schedule showed the EIS would not be completed until March 2011. That is unacceptable to us and we have told the currently authorized dredgers and the third-party contractor that by 30 September 2009 they must resolve any problems and provide a plan to have the EIS completed by the end of 2010 or we would let their current permits expire on December 31, 2009 and would deny without prejudice their applications for new permits. In anticipation of receiving an acceptable plan, I am currently working with our River Engineering, Geo Tech, and Levee Safety people to determine what additional restrictions will be required to extend the FONSI statement and permits in the interim period and will let you know our strategy when I can. At this time I can say that I anticipate additional restrictions in location and tonnage for the Kansas City reach but probably not many if any additional restrictions elsewhere. We have not yet decided whether to extend the permits for 6 months or 12. At this point I am requesting your input regarding the potential 6 to 12 month interim extension of the existing dredging permits in January 2010. Later this month or early in October I will advise you of our proposed permit conditions and request concurrence with our determination regarding endangered species and cultural resource impacts and request 401 certification.

Cody Wheeler  
Regulatory Project Manager  
Regulatory Branch  
Kansas City District Corps of Engineers  
816-389-3739  
816-389-2032 (FAX)  
<http://www.nwk.usace.army.mil/regulatory/regulatory.htm>

~~~~~  
Complete our Regulatory Service Survey at:  
<http://per2.nwp.usace.army.mil/survey.html>  
~~~~~

Enclosure 2 Request for FWS Concurrence that Extending the Permits is Not Likely to Affect Threatened or Endangered Species



**DEPARTMENT OF THE ARMY**  
KANSAS CITY DISTRICT, CORPS OF ENGINEERS  
700 FEDERAL BUILDING  
601 E 12<sup>TH</sup> STREET  
KANSAS CITY, MISSOURI 64106-2896

REPLY TO  
ATTENTION OF:

30 OCT 2009

Kansas City Regulatory Field Office  
(Missouri River Commercial Dredging Permits)

Mr. Charles M. Scott  
Field Supervisor  
U.S. Fish & Wildlife Service  
Ecological Services  
101 Park De Ville Drive  
Columbia, Missouri 65203-0057

Dear Mr. Scott:

In August 2007 the Kansas City District issued a Combined Decision Document (CDD) regarding permit applications for commercial dredging operations on the Missouri River. The National Environmental Policy Act (NEPA) requires preparation of an Environmental Assessment (EA) for government funded or authorized actions that would have less than significant environmental impacts and an Environmental Impact Statement (EIS) for those actions that could have significant environmental impacts. The federal action in this case was very different from the usual federal action of authorizing a new project. This federal action involved re-authorizing ongoing commercial dredging operations that provide a large portion of the sand used for concrete and asphalt in the metropolitan regions along the Missouri River in Missouri and Kansas. Halting the action until an EIS was complete could have a large economic impact in the region and was not a practicable approach. Therefore, the August 2007 CDD included an EA that concluded with an interim Finding of No Significant Impacts (FONSI). This FONSI was conditioned on proposed restrictions designed to minimize the potential for significant impacts associated with bed degradation associated with historical and ongoing dredging operations while an EIS was being prepared.

Several permit applicants appealed the proffered permits and we addressed their concerns in a Supplemental CDD and issued interim permits valid through December 31, 2009. At that time the St. Louis District also extended their Missouri River commercial dredging permits through 2009 and we believed that an EIS could be completed within that time but the EIS has been delayed for various reasons. At this time we have a plan from the third-party-contractor (ENTRIX) and a contract between them and the dredgers to have the EIS completed by September 30, 2010. Colonel Wilson intends to extend the FONSI statement and permits one last time through December 31, 2010 to accommodate this plan and give us three months to complete the Record of Decision and issue permit decisions. Concurrently, the St. Louis District will also extend their Missouri River commercial dredging permits. The following permits will be extended through December 31, 2010 with the same conditions and restrictions except that



pallid sturgeon (*Scaphirhynchus albus*). In compliance with the Endangered Species Act, during the previous permit evaluation process a preliminary determination was made that the described work was not likely to adversely affect these species. After extensive informal consultation with the Kansas City District and the commercial dredgers concerning the endangered pallid sturgeon, you concurred with our preliminary determination that the dredging activities authorized in 2007 were not likely to adversely affect the piping plover, least tern, or pallid sturgeon and their habitats. This determination that the dredging authorized in 2007 was not likely to adversely impact the listed species or their designated critical habitats was based upon retaining, as permit conditions, all measures previously identified in our March 18, 1994, Biological Assessment, and modification of the current permit conditions as follows:

- Permit conditions that specify a linear distance exclusion zone adjacent to a river feature will be clarified to state that for compliance purposes, distance will be measured from the end of the cutter head, rather than from a general point on the dredge.
- Dredge operators will be required to record Global Positioning System (GPS) coordinates daily or after any significant move in one day. The operators may use hand held GPS devices or automatically recording devices, but, with whichever system used, must identify the device and recording location for CENWK.
- The annual reporting requirement will be changed to quarterly reporting electronically. Dredge operators will also be required to record locations of any gravel (in higher than normal/unusual concentrations) or hard substrates encountered while dredging, in the quarterly reports.
- Modify the former special condition “o” as follows: *o. Dredging is prohibited within the reaches identified in the following table.*

Missouri River Miles (including 0.25 mile buffer)		Habitat Feature
Downstream	Upstream	
49.15	50.05	RDB Centaur Chute
56.85	59.05	LDB Chute/Island
58.55	61.25	RDB Chute/Island
89.75	91.10	RDB Island
89.90	91.45	LDB Loutre Slough
91.20	93.55	LDB Lunch Island
103.00	104.95	Both Gasconade Confluence and Dike Field
105.20	106.25	RDB Dike Field
115.20	115.95	RDB Island – Revised - 114.75 to 115.20 deleted
118.40	119.15	RDB Dike Field
119.35	119.85	RDB St. Albert Chute
124.35	124.95	RDB St. Albert Chute
126.05	126.90	LDB Dike Field
127.50	130.20	Both Osage River Confluence and Dike Field
157.00	158.45	LDB Island
176.40	177.85	LDB Island
184.75	185.65	RDB Chute
186.90	188.20	RDB Chute and Dike Field

193.40	195.75	RDB Dike Field/Island
202.10	202.75	RDB Lamine River Confluence
212.95	214.05	RDB Dike Field
214.25	215.00	LDB Chute
217.75	218.55	LDB Chute
218.40	219.65	RDB Island
226.95	227.55	LDB Little Chariton Confluence
238.40	239.10	LDB Chariton River Confluence
249.65	250.30	LDB Grand River Confluence
269.85	271.35	RDB Shallow/Island
280.40	282.05	RDB Island
297.90	299.05	RDB Island
300.00	301.05	LDB Island
367.00	367.75	RDB Kansas River Confluence
390.85	391.45	LDB Platte River Confluence
462.65	463.25	LDB Nodaway River Confluence
478.55	479.15	RDB Wolf Creek Confluence
494.55	495.20	RDB Big Nemaha River Confluence

Because we are in the process of preparing an EIS and a new Biological Assessment, we believe it is prudent to extend the current Missouri River commercial dredging permits for another year, through December 31, 2010. We have made a preliminary determination that extension of these permits is not likely to adversely affect the threatened piping plover, the endangered least tern or the endangered pallid sturgeon. We submit this request for your concurrence with this preliminary determination. If you have any questions concerning this matter, please feel free to write me or call Cody Wheeler at (816) 389-3739 or FAX (816)-389-2032.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. We have placed an automated version of our Customer Service Survey form at: <http://per2.nwp.usace.army.mil/survey.html>. At your request, we will mail you a paper copy that you may complete and return to us by mail or fax.

Sincerely,



Mark D. Frazier  
Chief, Regulatory Branch  
Operations Division

Copy furnished:

Charles Frerker  
St. Louis District, Corps of Engineers



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Columbia Ecological Services Field Office  
101 Park DeVille Drive, Suite A  
Columbia, Missouri 65203-0057  
Phone: (573) 234-2132 Fax: (573) 234-2181



December 3, 2009

Mr. Cody Wheeler  
Regulatory Project Manager  
Kansas City District  
U.S. Army Corps of Engineers  
700 Federal Building  
Kansas City, Missouri 64106-2896

Dear Mr. Wheeler:

Please refer to your October 30, 2009, letter requesting the U.S. Fish and Wildlife Service's (Service) concurrence with the U.S. Army Corps of Engineers' (Corps) determination that a one-year extension of the Missouri River commercial dredging permits will not adversely affect federally listed species. Your letter noted that the Corps is preparing an EIS to evaluate comprehensively the effects of commercial dredging in the Kansas City District, with an anticipated completion by the end of 2010. The Service submits the following comments pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544).

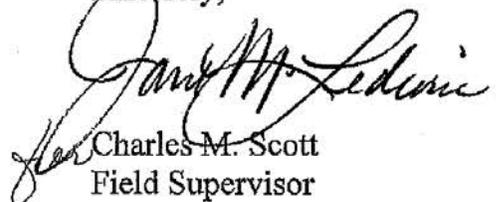
Over the past fifteen years, the Service has worked with the Corps to evaluate multiple Missouri River commercial dredging permit extensions and renewals. With each extension or renewal cycle, the Service has consistently expressed concerns regarding the potential impacts to aquatic habitats from continued removal of bed load sands and gravels which are the basic foundation for that habitat. In that time, not only has our understanding of the federally endangered pallid sturgeon increased, but also our knowledge of river dynamics and the distribution and extent of commercial dredging. The significance of this information is a major factor in the Corps' efforts to re-evaluate the commercial dredging program along the river.

While we are encouraged by the Corps' effort to address this program, we are also aware of the time it has taken to get started. As recently as 2008, the Service attended an interagency meeting for the EIS effort that was anticipated to have been completed *without* the need for a permit extension. The EIS is overdue and our ability to evaluate the effects of commercial dredging is constrained. The Corps has committed to the 2010 completion date, and the proposed extensions would exclude the river reach with the

greatest bed degradation. We believe that one year of continued dredging, minus the most problematic reach, would have insignificant and discountable effects to riverine environments and the pallid sturgeon. Therefore, the Service concurs with the Corps' determination that the proposed permit extension will not adversely affect the pallid sturgeon. The Service will require a complete biological assessment on the effects of the Missouri River commercial dredging program, prior to any additional evaluation of permit extensions or renewals beyond the 2010 date, regardless of the status of the EIS.

We consider the EIS an important element in our Missouri River restoration efforts, as well as recovery of the pallid sturgeon, and look forward to working with the Corps as this effort progresses. If you have questions or need additional information, please contact Jane Ledwin (573-234-2132, extension 109) of my staff.

Sincerely,



Charles M. Scott  
Field Supervisor

cc: USFWS, MO River Coordinator, Bismarck, ND (Olson)  
USFWS, ES Office, Manhattan, KS (LeValley)  
USACE, St. Louis District, Regulatory (Frerker)

O:\STAFF Folders\Ledwin\Letters\2009 Action Letters\2010 dredging extensions.doc



**DEPARTMENT OF THE ARMY**  
KANSAS CITY DISTRICT, CORPS OF ENGINEERS  
700 FEDERAL BUILDING  
601 E 12<sup>TH</sup> STREET  
KANSAS CITY, MISSOURI 64106-2896

October 30, 2009

REPLY TO  
ATTENTION OF:

Kansas City Regulatory Field Office  
(Missouri River Commercial Dredging Permits)

Mr. Scott Satterthwaite  
Kansas Department of Health and Environment  
Bureau of Water  
NPS Section  
1000 SW Jackson Street, Suite 420  
Topeka, KS 66612-1367

Dear Mr. Satterthwaite:

In August 2007 the Kansas City District issued a Combined Decision Document (CDD) regarding permit applications for commercial dredging operations on the Missouri River. The National Environmental Policy Act (NEPA) requires preparation of an Environmental Assessment (EA) for government funded or authorized actions that would have less than significant environmental impacts and an Environmental Impact Statement (EIS) for those actions that could have significant environmental impacts. The federal action in this case was very different from the usual federal action of authorizing a new project. This federal action involved re-authorizing ongoing commercial dredging operations that provide a large portion of the sand used for concrete and asphalt in the metropolitan regions along the Missouri River in Missouri and Kansas. Halting the action until an EIS was complete could have a large economic impact in the region and was not a practicable approach. Therefore, the August 2007 CDD included an EA that concluded with an interim Finding of No Significant Impacts (FONSI). This FONSI was conditioned on proposed restrictions designed to minimize the potential for significant impacts associated with bed degradation associated with historical and ongoing dredging operations while an EIS was being prepared.

Several permit applicants appealed the proffered permits and we addressed their concerns in a Supplemental CDD and issued interim permits valid through December 31, 2009. At that time the St. Louis District also extended their Missouri River commercial dredging permits through 2009 and we believed that an EIS could be completed within that time but the EIS has been delayed for various reasons. At this time we have a plan from the third-party-contractor (ENTRIX) and a contract between them and the dredgers to have the EIS completed by September 30, 2010. Colonel Wilson intends to extend the FONSI statement and permits one last time through December 31, 2010 to accommodate this plan and give us three months to complete the Record of Decision and issue permit decisions. The Holliday Sand and Gravel

Company dredging permit numbered 2001-01429 will be extended through December 31, 2010 with the same conditions and restrictions except that the overall annual extraction limit in the most severely degrading Kansas City reach (river miles 320 to 400) will be reduced from 3,400,000 tons to no more than 1,800,000 tons with the additional limit of no more than 1,600,000 tons being extracted from between river miles 328 and 400.

Because we are in the process of preparing an EIS we believe it is prudent to extend the current Missouri River commercial dredging permits for another year. We request the extension of the previous 401 water quality certification or a new 401 water quality certification for an additional year. If you have any questions concerning this matter, please feel free to write or call me at (816) 389-3739 or FAX (816)-389-2032.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. We have placed an automated version of our Customer Service Survey form at: <http://per2.nwp.usace.army.mil/survey.html>. At your request, we will mail you a paper copy that you may complete and return to us by mail or fax.

Sincerely,

A handwritten signature in black ink that reads "Cody Wheeler". The signature is written in a cursive, slightly slanted style.

Cody Wheeler  
Regulatory Project Manager



Mark Parkinson, Governor  
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH  
AND ENVIRONMENT

[www.kdheks.gov](http://www.kdheks.gov)

November 10, 2009

Mr. Cody S. Wheeler  
U.S. Army Corps of Engineers,  
Regulatory Branch  
601 East 12th St., Room 843  
Federal Building,  
Kansas City, MO 64106.

Amendment to Section 401 Water Quality Certification

Regarding: Letter of request for 401 for Missouri River Commercial Dredgers dated October 30, 2009. This Section 401 water quality certification refers to Holiday Sand and Gravel on the Kansas side.

Mr. Wheeler:

We have reviewed the referenced information mailed to us. We have concluded the existing 401 water quality certification conditions are sufficient to minimize water quality impacts. However, we are adding to the NPDES Permit list and public water supply reference. Therefore, the applicant should recognize the following revision of conditions 5 g. and 5 h. from the 401 issued June 14, 2007:

1. National Pollutant Discharge Elimination System (N.P.D.E.S.)  
Permits are also issued to the following entities.
  - a. Leavenworth County- City of Lansing
  
2. Public Water Supply Ground/Surface Water Collector Wells:
  - a. Kansas City Board of Public Utilities (near intake)
  - b. Water District One of Johnson County- Section 6, 10S, Range 24E

CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 420, TOPEKA, KS 66612-1367  
Bureau of Water- Watershed Management Section

Voice 785-296-4195 Fax 785-296-5509

Mr. Wheeler (Missouri River Commercial Dredgers  
November 10, 2009  
Page 2 of 2

We are requesting you to accept this letter as an amendment to the Section 401 Water Quality Certification issued June 14, 2007. Thank you for your consideration in this matter. If you need anything further, please contact me at 785/296-5573 or [ssatterthwaite@kdheks.gov](mailto:ssatterthwaite@kdheks.gov).

Sincerely



Scott L. Satterthwaite, M.S.  
NPS Pollution Control Specialist  
Bureau of Water  
Watershed Management Section

Enclosure 6 Request for MDNR Section 401 Water Quality Certificate for Extending the Permit through 2010



**DEPARTMENT OF THE ARMY**  
KANSAS CITY DISTRICT, CORPS OF ENGINEERS  
700 FEDERAL BUILDING  
601 E 12<sup>TH</sup> STREET  
KANSAS CITY, MISSOURI 64106-2896

November 3, 2009

REPLY TO  
ATTENTION OF:

Kansas City Regulatory Field Office  
(Missouri River Commercial Dredging Permits)

Ms. Carrie Schulte  
Missouri Department of Natural Resources  
Water Pollution Control Program  
Post Office Box 176  
Jefferson City, Missouri 65102-01767

Dear Ms. Schulte:

In August 2007 the Kansas City District issued a Combined Decision Document (CDD) regarding permit applications for commercial dredging operations on the Missouri River. The National Environmental Policy Act (NEPA) requires preparation of an Environmental Assessment (EA) for government funded or authorized actions that would have less than significant environmental impacts and an Environmental Impact Statement (EIS) for those actions that could have significant environmental impacts. The federal action in this case was very different from the usual federal action of authorizing a new project. This federal action involved re-authorizing ongoing commercial dredging operations that provide a large portion of the sand used for concrete and asphalt in the metropolitan regions along the Missouri River in Missouri and Kansas. Halting the action until an EIS was complete could have a large economic impact in the region and was not a practicable approach. Therefore, the August 2007 CDD included an EA that concluded with an interim Finding of No Significant Impacts (FONSI). This FONSI was conditioned on proposed restrictions designed to minimize the potential for significant impacts associated with bed degradation associated with historical and ongoing dredging operations while an EIS was being prepared.

Several permit applicants appealed the proffered permits and we addressed their concerns in a Supplemental CDD and issued interim permits valid through December 31, 2009. At that time the St. Louis District also extended their Missouri River commercial dredging permits through 2009 and we believed that an EIS could be completed within that time but the EIS has been delayed for various reasons. At this time we have a plan from the third-party-contractor (ENTRIX) and a contract between them and the dredgers to have the EIS completed by September 30, 2010. Colonel Wilson intends to extend the FONSI statement and permits one last time through December 31, 2010 to accommodate this plan and give us three months to complete the Record of Decision and issue permit decisions. Concurrently, the St. Louis District will also extend their Missouri River commercial dredging permits. The following permits will

be extended through December 31, 2010 with the same conditions and restrictions except that overall annual extraction limit of the Holliday Sand dredging operations in the most severely degrading Kansas City reach (river miles 320 to 400) will be reduced from 3,400,000 tons to no more than 1,800,000 tons with the additional limit of no more than 1,600,000 tons being extracted from between river miles 328 and 400.

Application Number	Applicant Name and Address	River Miles Authorized for Dredging by This Permit	Annual Tons of Material Authorized by This Permit
<b>NWK 2001-01429</b>	<b>Capital Sand Company, Inc. (Capital Sand)</b> Post Office Box 104990 Jefferson City, MO 65110-4990	62.00-75.00, 109.00-115.20, 115.95-118.40, 119.15-119.35, 119.85-124.35, 124.95-126.05, 126.90-127.50, 130.20-157.00, 158.45-164.00, 172.00-176.40, 177.85-184.75, 185.65-186.90, 188.20-192.00, 193.00-193.40, 195.75-202.10, 202.75-210.00, 220.00-226.95, 227.55-230.00, 245.00-249.65, 250.30-265.00, 283.00-297.90, 301.05-303.00, 314.00-328.00.	2,255,000
<b>NWK 2001-01430</b>	<b>Hermann Sand and Gravel, Inc. (Hermann Sand)</b> Route 3, Box 261 Hermann, Missouri 65041	56.00-56.85, 61.25-66.00, 70.00-80.00, 80.50-89.75, 93.55-101.70, 109.00-115.20, 115.95-118.40, 146.00-157.00, 158.45-164.00	300,000
<b>NWK 2001-01431</b>	<b>Holliday Sand and Gravel Company (Holliday Sand)</b> 6811 West 63rd Street Overland Park, Kansas 66202	320.00-330.90, 331.65-336.00, 338.00-339.15, 350.00-356.30, 356.50-358.16, 358.36-359.24, 359.44-360.17, 360.37-361.20, 361.44-362.15, 362.35-364.25, 364.45-364.64, 364.84-365.43, 365.79-366.02, 366.30-367.00, 367.90-373.30, 374.20-375.10, 375.30-377.81, 378.90-379.70, 380.70-386.00  445.00-459.00	1,800,000 with no more than 1,600,00 between river mile 328 and 400          360,000 Total 2,160,000
<b>NWK 2001-01434</b>	<b>Con-Agg of MO, L.L.C. (Con-Agg)</b> 2604 North Stadium Blvd. Columbia, Missouri 65202	177.85-184.75, 185.65-186.90, 188.20-192.00, 193.00-193.40, 195.75-196.50, 196.70-197.00, 198.50-199.15, 199.40-201.95	175,000
<b>MVS P-2339 P-2340  P-2341</b>	<b>J.T.R. Inc. (Jotori Dredging)</b> 2320 Creve Coeur Mill Road Maryland Heights, MO 63043	30.0 -35.0  1.0-4.0 <u>And 6.0 -12.0</u> 14.0-24.0	750,000  300,000  <u>500,000</u> Total 1,550,000
<b>MVS P-2342</b>	<b>Limited Leasing Company</b> 1777 Highway 79 South Old Monroe, MO 63369	<u>0-12.0</u> <u>20.0-35.0</u> <u>40.0-47.0</u>	<u>200,000</u> <u>650,000</u> <u>350,000</u> Total 1,200,000
<b>TOTAL</b>			6,640,000

Because we are in the process of preparing an EIS we believe it is prudent to extend the

current Missouri River commercial dredging permits for another year. We request the extension of the previous 401 water quality certifications or new 401 water quality certifications for an additional year. If you have any questions concerning this matter, please feel free to write or call me at (816) 389-3739 or FAX (816)-389-2032.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. We have placed an automated version of our Customer Service Survey form at: <http://per2.nwp.usace.army.mil/survey.html>. At your request, we will mail you a paper copy that you may complete and return to us by mail or fax.

Sincerely,

A handwritten signature in black ink that reads "Cody Wheeler". The signature is written in a cursive, flowing style.

Cody Wheeler  
Regulatory Project Manager



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Larry W. Moore  
Con-Agg of MO, LLC  
2604 North Stadium Blvd.  
Columbia, MO 65202-1271

Various Counties  
PN01-01434/CEK001020  
Extension

Dear Mr. Moore:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that Con-Agg of MO, LLC has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

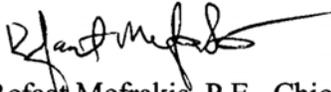
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Larry W. Moore  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Dorothy Franklin, Kansas City Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Mike Odell  
Holliday Sand & Gravel Company  
9660 Legler Rd.  
Lenexa, KS 66219

Various Counties  
PN01-01431/CEK001018  
Extension

Dear Mr. Odell:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that Holliday Sand & Gravel Company has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions except that the overall annual extraction limit of dredging operations in the most severely degraded Kansas City reach (River Miles 320 to 400) will be reduced from 3,400,000 tons to no more than 1,800,000 tons with the additional limit of no more than 1,600,000 tons being extracted from between River Miles 328 and 400.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

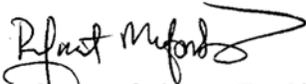
Mr. Mike Odell  
Page 2

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov), or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Dorothy Franklin, Kansas City Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

# DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Steve Engemann  
Hermann Sand & Gravel, Inc.  
Box 261  
Hermann, MO 65041

Various Counties  
PN01-01430/CEK001021  
Extension

Dear Mr. Engemann:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that Hermann Sand & Gravel, Inc. has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

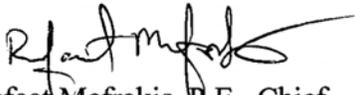
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Steve Engemann  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

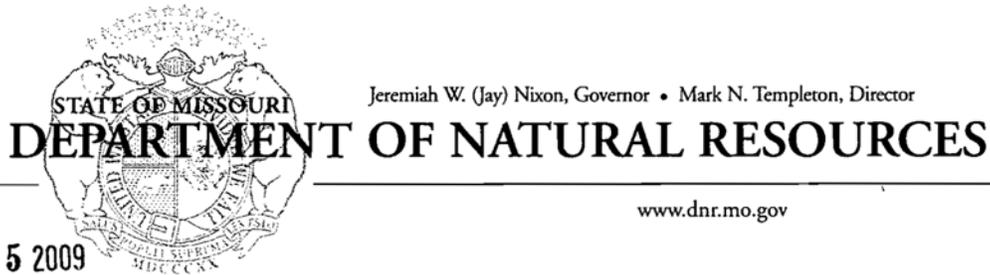
WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Dorothy Franklin, Kansas City Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Steve Bohlken  
Capital Sand Co., Inc.  
P.O. Box 104990  
Jefferson City, MO 65110-4990

Various Counties  
PN01-01429/CEK001017  
Extension

Dear Mr. Bohlken:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that Capital Sand Co., Inc. has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

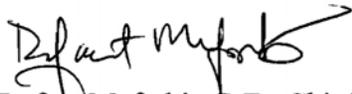
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Steve Bohlken  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Dorothy Franklin, Kansas City Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Brian J. Viehmann  
Limited Leasing Company  
1777 Highway 79 South  
Old Monroe, MO 63369

Various Counties  
P-2342/CES000142  
Extension

Dear Mr. Viehmann:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that Limited Leasing Company has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

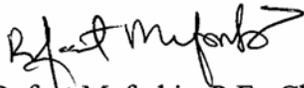
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Brian J. Viehmann  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Donna Riebeling, St. Louis Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

**DEC 15 2009**

Mr. Thomas Dunne Sr.  
J.T.R. Inc. (Jotori Dredging)  
2320 Creve Coeur Mill Rd.  
Maryland Heights, MO 63043

Various Counties  
P-2341/199607591/CES000141  
Extension

Dear Mr. Dunne:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that J.T.R. Inc. (Jotori Dredging) has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

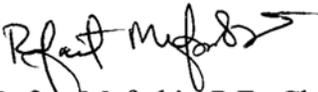
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Thomas Dunne Sr.  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Donna Riebeling, St. Louis Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

DEC 15 2009

Mr. Thomas Dunne Sr.  
J.T.R. Inc. (Jotori Dredging)  
2320 Creve Coeur Mill Rd.  
Maryland Heights, MO 63043

Various Counties  
P-2340/199607581/CES000140  
Extension

Dear Mr. Dunne:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that J.T.R. Inc. (Jotori Dredging) has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

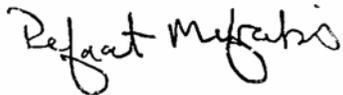
If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

Mr. Thomas Dunne Sr.  
Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Donna Riebeling, St. Louis Regional Office



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

DEC 15 2009

Mr. Thomas Dunne Sr.  
J.T.R. Inc. (Jotori Dredging)  
2320 Creve Coeur Mill Rd.  
Maryland Heights, MO 63043

Various Counties  
P-2339/199607571/CES000126  
Extension

Dear Mr. Dunne:

The Missouri Department of Natural Resources' Water Protection Program (Department) is in receipt of the U.S. Army Corps of Engineers' (Corps) letter dated November 3, 2009, and understands that J.T.R. Inc. (Jotori Dredging) has requested to extend the Clean Water Act Section 401 Water Quality Certification (certification) for commercial dredging operations in the Missouri River.

The extension will accompany the Corps' Clean Water Act Section 404 Permit (permit) which the Corps intends to extend one last time through December 31, 2010, in order to complete the Environmental Impact Statements required by the National Environmental Policy Act. This certification is extended with the same conditions and restrictions.

This office certifies that the ongoing activities apparently will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in Water Quality Standards, 10 CSR 20-7.031, provided all federal and state conditions of the original permit are met. This extension shall be affixed to the original certification and is a part thereof.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this certification shall be valid only upon payment of a fee of seventy-five dollars (\$75.00). The enclosed invoice contains the necessary information on how to submit your fee. Payment must be received within ten (10) days of receipt of this certification. Upon receipt of the fee, a copy of the certification will be mailed to the applicable office of the Corps to inform them the certification is now in effect and final.

If you were affected by this decision, you may appeal to have the matter heard by the Administrative Hearing Commission (commission). To appeal, you must file a petition with the commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the commission.

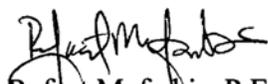
Mr. Thomas Dunne Sr.

Page 2

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte by phone at (573) 751-7023, e-mail at [carrie.schulte@dnr.mo.gov](mailto:carrie.schulte@dnr.mo.gov) or by mail at Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for working with the Department to protect our environment.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief  
NPDES Permits and Engineering Section

RM:csp

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District  
Mr. Charles Frerker, Army Corps of Engineers, St. Louis District  
Ms. Donna Riebeling, St. Louis Regional Office

CENWK-ED-HR

24 Jun 09

MEMORANDUM FOR OD-R

SUBJECT: Recommended Commercial Sand Dredging Quantity Limit For 2010 in Kansas City Reach

1. The Kansas City reach of the Missouri River (river mile 320 to 400) is degrading. The degradation is adversely affecting infrastructure such as water intakes, revetments, and pipelines. Multiple engineering studies to date have shown a strong correlation between dredging and degradation. This memorandum addresses the risk of continuing dredging in the Kansas City reach after December 2009.
2. The completion of a Missouri River commercial dredging EIS prior to issuing new permits is required by the current commercial dredging permits. This requirement is based on ongoing degradation in the riverbed and the resulting impacts. Within the Kansas City District, the Kansas City reach of the river has experienced the greatest amount of degradation and hence the greatest negative impacts. The Commercial Dredging EIS, when complete, will provide the necessary information to establish appropriate limits for dredging activities along the entire river.
3. As defined in the Department of the Army Permit Evaluation and Decision Document signed 20 August 2007 by Roger A Wilson, Jr. Colonel, Corps of Engineers District Commander, the permits specify that no more than 2.5 million tons of material can be removed from the river between RM 328.00 and RM 382.70 in calendar year 2009. The permits and the quantity limits expire at the end of 2009.
4. Ongoing studies subsequent to enactment of the current permits continue to provide strong evidence that dredging contributes to degradation and that the degradation is continuing. In the Kansas City reach this is especially troublesome due to the close proximity of important infrastructure next to the river. It is essential that degradation in the Kansas City reach be held to a minimum in order to slow the evolution of damages in the reach. Recent bank failures at river mile 380, where degradation is the most advanced, bring to focus the potential dangers to infrastructure. Levees and floodwalls adjacent to the river channel throughout the reach are susceptible to significant damage if similar bank failures are initiated by degradation. A bank failure occurring during a flood event could be catastrophic. The Kansas City District Levee Safety Committee has been briefed on these conditions and concurred that there is a potential for adverse impacts to federal levees conditions.
5. Should an EIS not be completed by the end of 2009, Engineering Division supports the cessation of dredging in the Kansas City reach as specified in the current permits. The anticipated completion date for the EIS is June 2010. However, given the pace of activity on the EIS, it appears unlikely that the EIS will actually be complete by the end of calendar year 2010.

CENWK-ED-HR

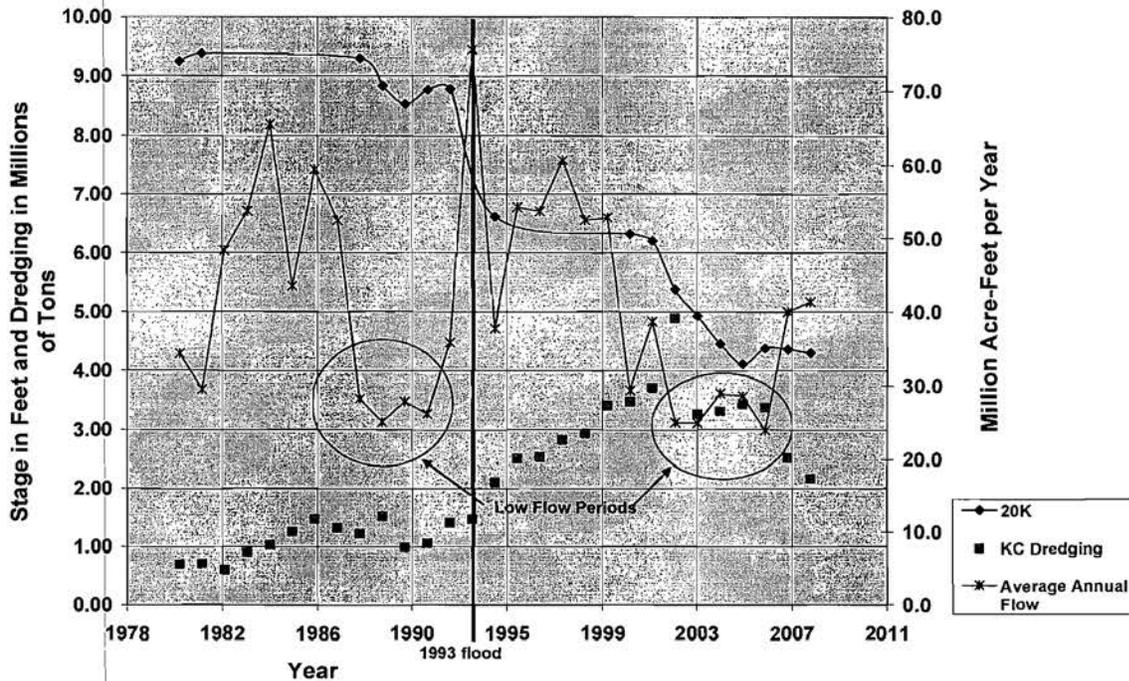
SUBJECT: Recommended Commercial Sand Dredging Quantity Limit For 2010 in Kansas City Reach

6. Given the current knowledge of the impacts of degradation and the propensity of dredging to exacerbate degradation, it is concluded that dredging beyond 31 December 2009 at current levels, even for one year, represents a potentially unacceptable risk to critical infrastructure. If OD-R chooses to renew the permits at the end of 2009 without a completed EIS, it is essential that further quantity restrictions be enacted within the Kansas City reach. The following is the rationale behind ED's recommended quantity limit for the Kansas City reach for 2010.

a. The formulation of the current restrictions was initiated by an Ad-Hoc panel in November 2003 whose members had expertise in sediment transport, hydraulics, and fluvial geomorphology. The panel recommended that quantities in the Kansas City reach be limited to 2.5 million tons per year when annual flows are at or below 27 million acre-feet (MAF). This recommendation was subsequently uncoupled from average annual flow due to the extended drought and accelerating bed degradation.

b. More detailed evaluations of river flows, dredging extraction, and bed degradation have shown the potential impact of dredging on degradation to be greater than elucidated by the panel. Figure 1 shows river stage for 20,000 cubic feet per second (cfs), annual flow at the Kansas City USGS gage, and dredging extraction quantities for the years 1980 to 2008. The data indicate that in years of less than approximately 30 MAF of average annual flow at Kansas City, an annual dredging quantity of approximately 1.4 million tons may be sustainable while an annual dredging quantity of 3.7 million tons is not sustainable. Additionally, during high flow periods of greater than 50 MAF, an annual dredging quantity of less than 3.0 million tons may be sustainable. The three most recent flow years have had an average annual flow volume of approximately 34 MAF. By prorating between the potentially sustainable values of 1.4 and 3.0 million tons a value less than 1.7 million tons is obtained. However, the average annual take during this period was 2.7 million tons. Based on these computations, no more than 1.7 million tons of dredging should be permitted during 2010.

Figure 1. Stage at 366.1 for 20 kcfs (KC USGS Gage)

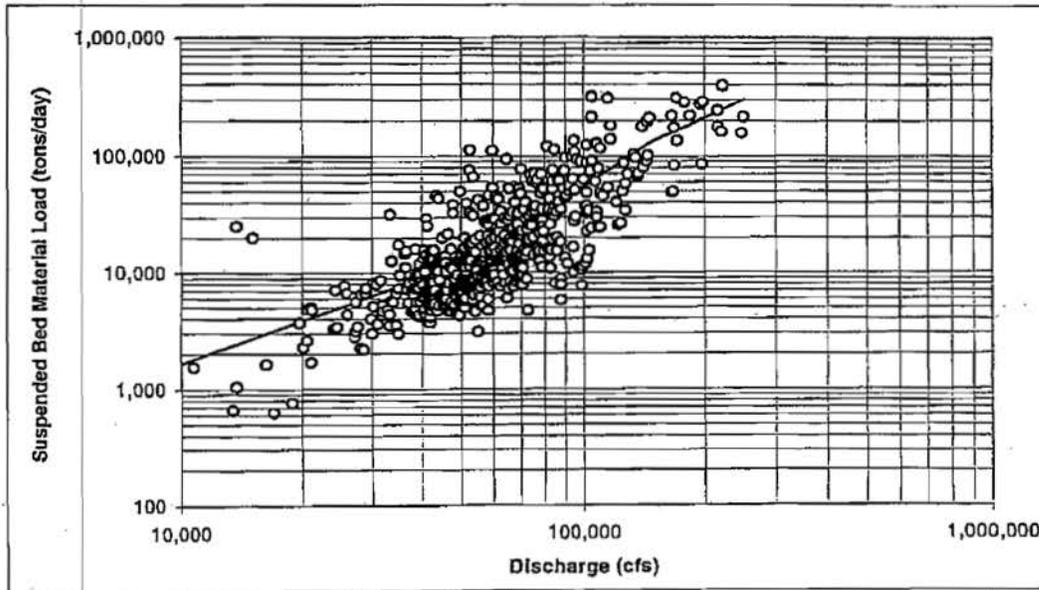


c. Studies completed in 1999 (Final Report Missouri Levee Unit L385 Sediment Analysis, May1999) and 2000 (Final Report Missouri River Levee Unit L-385 Dredging Impact Study, April 2000), in support of dredging for construction of L-385 levee, provide information regarding predictions of long term sustainable dredging levels. (These studies were not presented to the Ad-Hoc panel.) Estimates of bed sediment transport at the Kansas City USGS gage location were made using suspended sediment measurements, flow records and the Modified Einstein Method. The 1999 report states on page 58, “Over the period of record, the average annual bed load amount has been equal to 1.3 million tons/year. Dredging in excess of the bed load amount would be expected to cause impacts to the channel and potentially surrounding infrastructure.” This statement was in reference to dredging upstream of the mouth of the Kansas River and it was assumed that the Kansas River contributed approximately 20 percent of the flow and bed load at the Kansas City gage. Neither the 1999 or 2000 studies considered the added impacts of dredging in the Kansas City reach downstream of the USGS gage. Although these computations are valuable in the general understanding of the bed material transport of a stream, there is often an order of magnitude of scatter associated with such computations (pp. 221-222, ASCE No.54 Sedimentation Engineering, 1975). The following

CENWK-ED-HR

SUBJECT: Recommended Commercial Sand Dredging Quantity Limit For 2010 in Kansas City Reach

figure from page of 15 of the 1999 report attests to the scatter of the data used to draw conclusions.



**Figure 4-7: Suspended bed material load at the Kansas City Gage.**

Thus, the 1999 report's estimate of 1.3 million tons of average annual bed load should be viewed as an approximation and should be evaluated against observation of the river bed over time. However, at this time it does serve as our best computed estimate of average annual bed load which is directly related to sustainable dredging levels.

d. Analysis of water surface profiles (WSP) collected annually since 2005 through the KC reach indicate that the river bed is continuing to degrade (figure 3). Three WSP were adjusted to Construction Reference Plane (CRP) flows and then compared to the 2005 CRP water surface profile. The three profiles show a progressive downward trend since 2005 with the most significant downward trend between river miles 360 and 410. The river between river miles 360 to 386 is the most actively dredged area within the Kansas City reach.

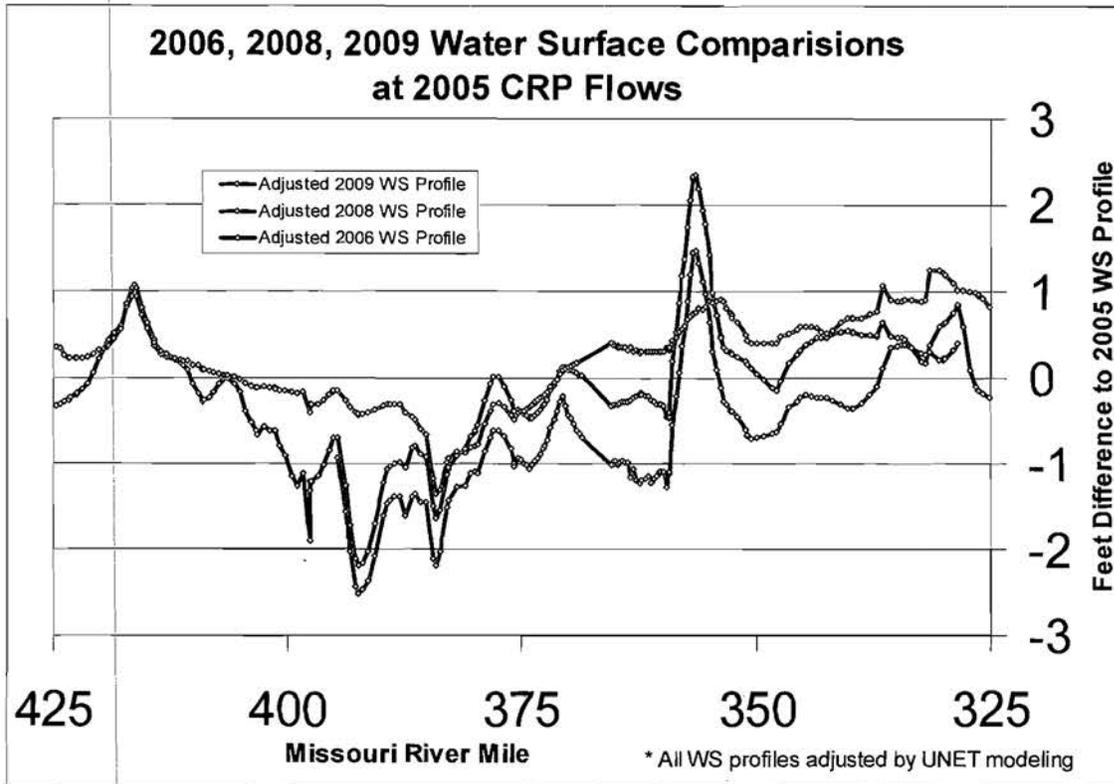


Figure 3.

Figure 3 shows that the causal factors of degradation have not been abated and risk to infrastructure in and along the river is more significant now than at anytime in the past. This fact is manifested in the failure of the revetment at river mile 380.

Continued dredging of the river is likely a significant factor in the downward trend of the water surface shown in figure 3. Continued removal of material will likely result in further degradation of the bed due to removal of the material itself and/or disruption of the natural stratification of sediment particle sizes in the thalweg (defined for this memo as the portion of the river between the ends of the dikes and the opposite bank).

7. Conclusions and Recommendations: If the dredging permits are renewed after December 2009 without a completed EIS, current data indicates that dredging quantities should be reduced from current levels within the KC reach. Given the totality of the analysis presented above, the revetment failure which occurred at river mile 380, and the critical infrastructure such as levees reliant on those revetments, ED recommends that dredging quantities in the KC reach for 2010

CENWK-ED-HR

SUBJECT: Recommended Commercial Sand Dredging Quantity Limit For 2010 in Kansas City Reach

be limited to the computed bed load of 1.3 million tons. Further, to prevent disruption to the natural stratification of the sediment particles in the thalweg and to increase the likelihood of bed load capture, this quantity should not be removed from the thalweg portion of the river. For 2010, the material should be removed from the inside bends of the river and within the dike fields. If this recommendation is adopted, ED-HR staff will work with OD-R staff to further define the limits of these areas.



JOHN J. JAEGER, Ph.D., PE  
Chief, Engineering Division



*Holliday*

**SAND AND GRAVEL COMPANY**

9660 LEGLER ROAD  
LENEXA, KS 66219-1291

PH: (913) 492-5920

FAX (913) 438-0200

September 10, 2009

Mr. Cody Wheeler  
Regulatory Project Manager  
Regulatory Branch  
Kansas City District Corps of Engineers

Re: 2010 Missouri River Dredge Permit

Dear Cody:

We are very grateful to be given the opportunity to provide input concerning the proposed special conditions for our interim dredge permit extension (while the EIS is being completed).

Unfortunately, the proposed restrictions we discussed on the 14<sup>th</sup> at your offices were leaked and we are trying to deal with panicked customers that are already worried about sand shortages. Our customers are keenly aware that no alternative exists for quality concrete sand north of the Missouri River.

Below we respond to the two dramatic changes proposed for the 2010 dredge permit extension: reduction of the Kansas City reach quota from 2.5 MM tons to 1.3 MM tons, and restricting dredging in the KC reach to only those area that are behind the dikes on the inside bends.

Projected needs for 2010:

Our sales from the two Kansas City reach plants, Randolph and Riverside, is at 1.1MM tons through August and is trending toward 1.6MM for 2009. We see some Stimulus projects starting up in 2010, but of more concern is the availability of sand on the Kansas side of Kansas City. Two sand pits and one river operation on the Kansas side could deplete in 2010. Although we have a new site in Shawnee, all permits are not in place, we have not broke ground, and we anticipate a slow startup in late 2010 as we begin pumping in a small body of water. The Riverside Plant on the Missouri River was built to make up for the Kansas River reductions in 1990 and continues to augment Kansas markets. We assumed that the Riverside Plant had the ability to pick up the slack when all three of these Kansas dredge sites deplete sometime in 2010, until the new pit in

Shawnee gets up to speed. For those reasons we request 1.8 MM tons in the Kansas City reach of the Missouri River.

We don't currently have equipment or reserves for alternative methods of dredging in 2010. We will need at least another year to attempt to permit out-of-stream dredging such as in the Nearman Bottoms. We don't have enough large barges to tow outside the KC reach. It would take two years to build and take delivery. The size and design of the barges we use are not readily available. Our current towing distance is limited to 12 miles loaded downstream. To dredge outside the KC reach that has been set downstream at River Mile 328 would entail towing loads 32 miles upstream. That is not currently feasible with our equipment.

At this time, alternatives to in-stream dredging that we have pursued are bogged down with concerns over impacts to collector wells. It will take one year just to study those impacts and redesign for mitigation if possible. Closing on property is scheduled for 2012 and if everything ends up going our way we are looking at a 2013 startup at Nearman. One competitor's pit on the east edge of town is not producing a marketable product because of the excessive fines in the deposit that were a problem for us years ago when we operated a nearby pit. Another proposed pit in that area may not be feasible as they may impact Liberty municipal water quality. Pits proposed on the north side of town are a concern to adjacent property owners that fear short circuiting of federal levees. Other flood plain property we have pursued is not for sale at any price. These proposed remote Missouri sites are a moot issue as they don't provide a feasible alternative for the Kansas side and certainly won't pick up the slack in 2010.

Channel location restrictions:

Prohibiting dredging in the channel is not practical as we can only dredge out of the channel behind the dikes in periods of extended high flows. We need adequate water depth to float the dredge to set the anchors beyond the actual point of excavation (the dredge moves by pulling on the anchor lines). The other even greater issue is the amount of wasted fine sand that must be discharged back in the River near the dredge. Without adequate water depth and current to disperse it, discarded finer sand quickly accumulates causing the dredge, barges and towboat to be grounded (stuck). Dredging out the channel (behind the dikes) can only be done during periods of high water (KC stages over 18 feet). This is not anything we can depend on and should not be mandated in lieu of in-channel dredging.

When we were recently asked about the possibility of dredging behind the dikes, we thought that the Corps was offering additional dredging areas that we don't already have (such as closer to the dikes and to the accreted shoreline) in order for us to excavate those areas to reduce buildup and channel narrowing. Unfortunately, almost all of the adjacent areas behind the dikes have already been dredged over the years and don't fill back in with coarse enough sand to make concrete sand. If this alternative doesn't include previously restricted areas behind the dikes, a plan to make it mandatory, so as to eliminate channel dredging, would put us out of the concrete sand business.

We request that dredging behind the dikes to be similar to dredging outside the KC reach so as to have another option to meet demand should it exceed the quota in the reach. Sand

“stored” behind the dikes that could feasibly be dredged during high flows should be considered a bonus for emergencies, not considered as a substitute for in-channel dredging.

**Dredging the Inside of the Bends:**

Areas of detected levee toe degradation, such as the airport and NKC levee could be considered for no-dredge zones. However, we oppose carte blanche restrictions on the outside of all the KC bends pending a joint meeting to study the actual cross section to determine a more precise setback distance on a case by case basis. We are not sure how far we need to be from the river bank on the outside bends to be able to make concrete sand. Since we are currently kept back 200 feet from a reveted bank, increasing the setback distance from the outside bank may be unnecessary and could diminish the benefits of widening the channel from dredging from the inside of the bend. In other words we aren't sure where that point is when the outside of the bend becomes the inside of the bend. We really need to study the cross sections on each bend.

We hope this explains what is feasible to get us through 2010. We are requesting a 28% reduction in the Kansas City reach (from 2.5MM to 1.8MM tons) for 2010. Thank you so much for requesting our input.

Sincerely,

Holliday Sand & Gravel Company

Mike Odell  
Vice President, Production

**Holliday Sand / Ash Grove's  
Position on the Proposed  
Modifications in the 2010 Permit  
Extension Plan**

# Meeting Agenda

- Introductions
- Brief History of Holliday Sand's Missouri River Dredging Operations
- Brief History of Ash Grove
- Purpose of this Meeting
- Proposed 2010 Modifications to Holliday Sand's Dredge Permit (Compared to 2009)
- Potential Impacts of the 2010 Permit Modifications
- Potential Alternatives to Missouri River Sand
- Holliday's Requested Permit Conditions
- Summary of Impacts, Alternatives, and Requested Conditions
- USACE's Need for the 2010 Permit Modifications
- Holliday's Position on the USACE Dredging Limit Determination

# Brief History of Holliday Sand

- Holliday moves to Missouri River in late 1960's –
  - knowledge/resources from contract dredging experience of parent company

MO River Facility	Ten Year Average Production (tons) (1999-2008)	One Year Maximum Production (tons) (2001)
St. Joseph	354,645	448,113
Randolph	1,438,035	1,665,708
Riverside	1,651,635	2,034,483

- Average barge tow is approx. 3 miles for all facilities
- Maximum barge tow is approx. 5 to 10 miles
- Budgeted tonnage for 2010 – 1.6MM tons.
- Riverside Plant was invested in (\$10 million) when dredging in the Kansas River was reduced to 1MM tons in the KC reach in 1990.
  - Kansas River tonnage reductions included a 4 year transition period.

# Brief History of Ash Grove

- In Business Since 1882
- Privately Owned
- Largest American Owned Cement Company
- Corporate Headquarters in Overland Park, KS
- Employs 1,200 people in the KC area
- Purchased Holliday Sand on August 1, 2008

## **Incredible Value to Kansas City Metro of the Sand in the Missouri River**

- Since 1990 has provided 60% of the sand for Greater Kansas City
- River Dredging is the only sustainable source for sand in KC
  - Rivers bring sand to our doorstep
- Eliminates annually over 90,000 truck loads of sand being hauled 20 miles each way from the outskirts of town = 3.6 million fewer truck miles
- Eliminates the annual loss of 80 acres of bottom land – now used for farmland and commercial development – and the tax revenue from those uses.
- Eliminates the energy loss and emissions needed to strip overburden – 1 million cubic yards each year.
- Flood Plain deposits are too fine – waste is often 50% or greater.
- Pits evaporate and potentially pollute municipal water wells

# Cost of Pit Mining

3.6 million more truck miles

- Approx. 35 tons/loads for 2.5 million tons
- Additional 1 million gallons of fuel per year

Annual loss of 80 acres of bottom land

- 60 acres net after setbacks, slopes, and waste
- yields 50K tons/acre
- Loss of 1 square mile every 8 years

Energy loss in stripping 1 million cubic yards/year of overburden

- 10 foot depth over 60 acres
- \$3 million/year due to stripping

Annual pit costs based on 2.5 million tons produced per year:

- Fuel: \$2 million
- Land: \$1 million
- Stripping: \$3 million
- Fines waste: \$3 million

Total pit cost \$9 million/year based on 2.5 million tons per year

River dredging saved KC \$108 million over the last 10 years (3 million tons averaged)

5A

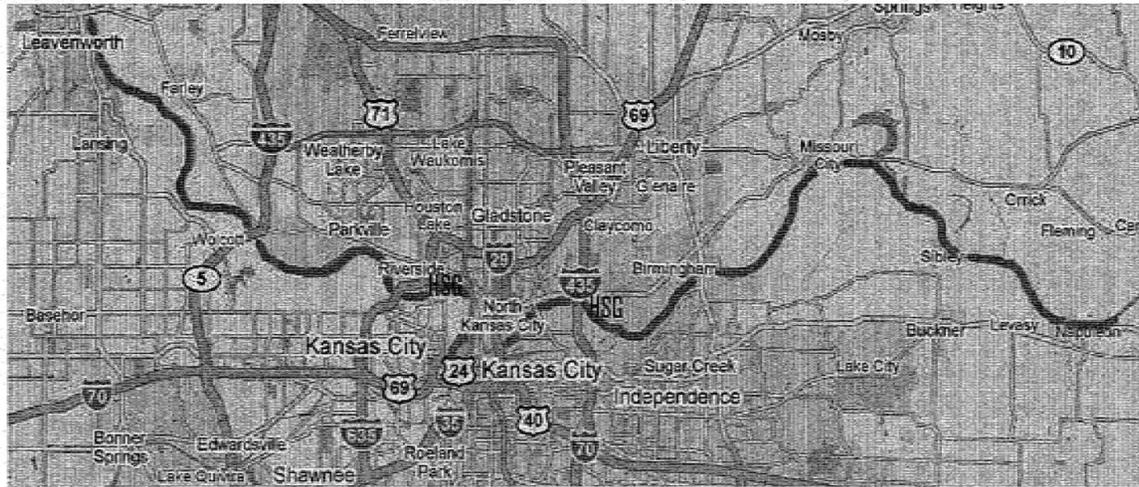
# Purpose of this Meeting

- Discuss the impacts of the COE proffered 2010 Dredge Permit Extension
- Request changes that will not result in significant impacts to: the Missouri River/Levee system, industry/economy of Missouri and Greater KC, or to Holliday Sand. Discuss the impacts of the COE proffered 2010 Dredge Permit Extension
- Request changes that will not result in significant impacts to: the Missouri River/Levee system, industry/economy of Missouri and Greater KC, or to Holliday Sand.

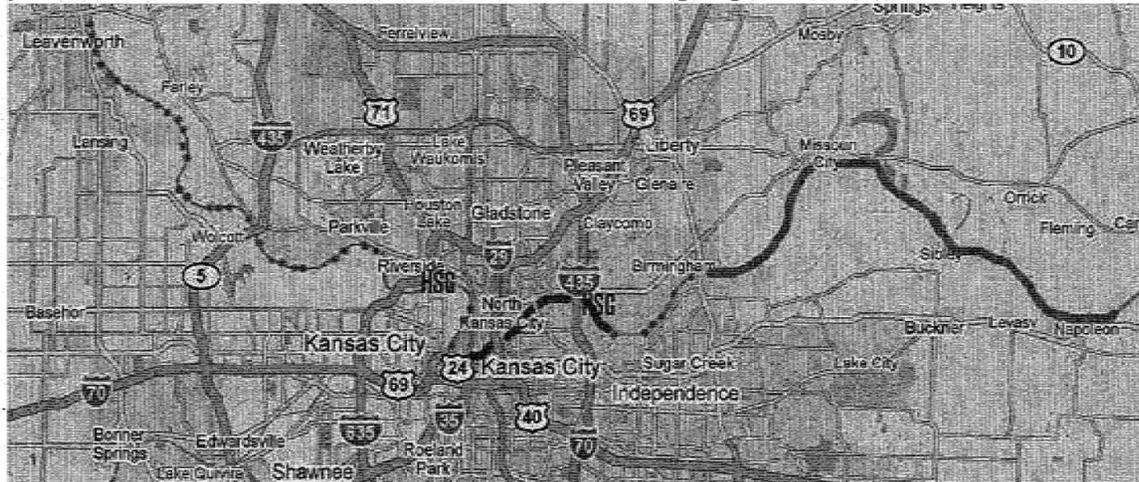
## Substantial Modifications to Holliday Sand Permit Proposed by USACE October 2009

Existing 2009 Permit	Proffered 2010 Modification
<b>2.5MM tons channel dredging in KC Reach (RM 328-400)</b>	<b>0 tons in channel / RM 353-400</b> <b>1.3MM tons in channel / RM 328-353</b>
Dredge between RCL (in channel) / RM 328-400	Limited Dike Field Dredging only in KC reaches + 200' only, between RM 353-400
Currently dredge half our Randolph volume / RM 358-365	No dredging in this reach / RM 358-365
1.2MM tons in a 10 Mile Reach	700K tons in limited dike fields / RM 358-400
Makeup 900K tons below RM 328 if needed	Makeup 500K tons below RM 328 if needed

### Current Permit with Plant Locations



### Proposed 2010 Permit (Purple: Limited Dike Fields, Red: No Dredging, Green: Channel Dredging)



# Practical Limitations Under Proposed Permit Extension Plan

- Tonnage reduction from 2.5MM tons to 1.3MM tons with actual annual sales of 1.6MM tons during 2009
  - A projected shortfall of 300K tons based on historically slow year
- Proposal assumes Holliday can successfully dredge outside of the channel (active stream bed) within the limited dike fields
  - The quality of the material in those areas is unproven. Our experience has been that it takes a high water event to replace the fine sands that fill in the dike fields after they have been dredged once.
  - The portion of sand that cannot be used is returned to the river and grounds our vessels in anything but high water (9 foot raise or more).
  - If saleable material is not found in the dike fields, Holliday would have to move at least 19 miles downstream from our Riverside facility. The farthest we have ever towed upstream with existing equipment is 10 miles with empty barges.
  - **Continued operation of Riverside facility becomes contingent on sufficient saleable material in limited dike fields.**

## Calculations for 19 mile tow from Riverside to Produce 1 Million Tons

- 10 hour round trip
- 1200 tons per barge
- 120 tons per hour
- 8,333 hours of towing per year required  
**(23 hours a day / 365 days a year)**
  
- 7 ½ month towing season
- Conclusion: *not possible*

## Economic Impacts Under Proposed Permit Extension Plan

- We examined profitability at Riverside and Randolph under proposed modifications with only 7-8 months of navigation and productivity losses due to rail bridges.
- Exceptionally long tows to downstream areas increases towing costs 500% due to increasing average tow from 3 miles to over 40 to Riverside unloading facility.
  - \$2.3 million increase in towing cost
  - Pushes Riverside facility into net loss on every ton (\$0.95)
- Randolph also net loss per ton (\$0.33)

# Economic Impacts Under Proposed Permit Extension Plan

- Conclusion: *Close Riverside unloading facility*
  - Choice is between running both plants at \$1.025 million loss or run Randolph alone at full capacity
- Riverside closure company-wide impact:
  - Riverside facility itself: 2 shifts, 25 union plant employees and 15 dedicated truckers
  - Ash Grove's Fordyce Central Ave Ready Mix Concrete Plant shutdown: 25 union employees
  - Holliday mechanical shops: 15 union employees
  - Ash Grove and Holliday Sand: 10 salaried personnel
  - Ash Grove Material Transport (hauling): 12 wage employees

## Holliday Sand Proposes a Plan to Allow Smooth Transition to Alternate Sources

- If we are successful in obtaining permits, property and capital at Nearman for a 2013 start
- Dike field dredging to be attempted first
- Channel dredging in 2010:

RM 400 to 366.1	RM 364 to 353	RM 353 to 328	RM 328 to 320
800,000 tons	500,000 tons	300,000 tons	900,000 tons

# Summary

- Proposed Modifications for 2010 will have drastic impact on supply and delivered cost of sand and gravel in Kansas City, depressing construction activity in the region
- Proposed Modifications will result in direct loss of 100 jobs and \$1 million operating loss to company *after shutdown of Riverside facility*
- EIS and Degradation Study are not complete, but Proposed Modifications are based on the foregone conclusion that dredging is the cause or a major contributor to harm to levees
- With sufficient advance notice, Holliday Sand has and will continue to make the investments needed to assure an efficiently produced, reliable source of sand and gravel for Kansas City

## Doyle and Hauck Agenda

### Proposed Agenda

- Present the USACE Missouri River Bed Degradation Reconnaissance Study
  - Exemplify the numerous assumptions and unscientific conclusions within the document
  - Provide the USACE with solid engineering facts and reasoning about the causes of degradation, and further point out the document does not contain any scientific data providing dredging even causes degradation.
- Present the USACE with the Bed Load Estimator study completed by Dr. Rob Jacobsen, in order to get a “scientific” understanding of the “sediment budget”.
  - Preliminary bed load numbers have been delivered by the USACE. The accuracy and development of these numbers need to be explained. What assumptions were made to identify the bed load?
  - Discussion on Dr. Rob Jacobsen report
- A study completed to date proving dredging has NO short term impact on the Missouri River bed.
  - Why has this study not been mentioned in any report.
  - Why have there not been any follow up on the findings of this study
  - Show the Colonel the ability of a dredge hole to recover

## Holliday Sand / Ash Grove's Position on the Modifications Based on Precedent and Available Evidence

- No verifiable evidence has been presented that links dredging to the unusual degradation observed in the Kansas City reach
- In other locations where there has been extensive dredging, minimal degradation compared to the Kansas City reach.
- Correlation between degradation and:
  - cutoffs (14 feet, per USACE *Recon Report*)
  - flow
  - 1993 flood
  - channel velocity
  - bend radius
  - floodway widthshould be addressed in addition to correlation with dredging activity in determining causation.

## Location Restriction (First Component) Analysis Based on Data Collected at Problematic Site

- The airport bend is basically a curved chute with a clear water jet injected on the outside of the bend with bridge piers adding turbulence.
- During the 1993 flood caused by the Kansas River, the energy and velocity of the flows focused in the downtown reach scoured sediments, flushed them downstream, and resulted in a headcut that is still operating.
- In summary, we feel that surface and bottom soundings from the Hannibal Bridge should not be considered representative of the conditions in the Kansas City reach.

## Volume Restriction (Second Component) Analysis Based on Incomplete Evidence

- There is evidence of aggradation below Kansas City
  - This is not likely unless there is a surplus of sediments going through the Kansas City reach
- Reestablishment of the active stream bed
  - Material will not stay in the downtown area until velocity is reduced
  - There has been no experiment to shorten dikes to reduce the velocity in the Kansas City channel

## Recent Discovery of Revetment Toe Erosion as Related to Dredging Activity

- Levee toe erosion was identified in three critical areas:
  - Right above the Kansas river confluence (367.8), repaired in 1968, is not relevant
    - Other sheet piling failures in area were due to tie-back failures instead of kick-out
  - Below the Paseo Bridge (364.5)
  - At RM 370.1, received emergency repairs in 2009
- No-dredge zones can be established to relieve trouble spots when they occur.
- Effect of 10 foot degradation evaluated in the *Memorandum*
- Current 2-year snapshot at Hannibal Bridge gage shows 1 foot degradation
- Should be a negligible concern for 2010

Enclosure 11 Three options considered by Regulatory as viable alternatives to Holliday Sand's October 19, 2009 proposal

	400	399	398	397	396	395	394	393	392	391	390	389 to 379	378	377	376	375	374	373	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348	347	346	345 to 329	328	327	326 to 322	321	320	
NWK's	UP to 1.8 M Tons 400-320												~													~	~																									
Last	Up to 1.3 M Tons 400-328												~													~	~																									
Plan	Up to 0.7 M Tons 400-358 DF												~													Up to 0.7 M Tons DF 358-353												~	~													
													<== Approximately 6 miles above plant												<== Hannibal Rail Bridge 366.1																											
Holliday's	UP to 2.5 M Tons 400-320												~													~	~																									
Recent	Up to 1.6 M Tons 400-328												~													~	~																									
Proposal	Up to 0.8 M Tons 400-366.1 - Will try DF first												~													No Tons	Up to 0.5 M Tons 364-353												Up to 0.3 M Tons 353-328												~	~
Option 1	UP to 1.8 M Tons 400-320												~													~	~																									
	Up to 1.6 M Tons 400-328 - DF KCG ≥17												~													~	~																									
	Up to 0.8 M Tons 400-366.1												~													Up to 0.5 M Tons 366.1-353												~	~													
	Up to 0.5 M Tons 400-378												~	Up to 0.5 M Tons 378-366.1												~	~																									
Option 2	UP to 1.8 M Tons 400-320												~													~	~																									
	Up to 1.6 M Tons 400-328												~													~	~																									
	Up to 0.8 M Tons 400-366.1 - DF KCG ≥17												~													Up to 0.5 M Tons 366.1-353 - DF KCG ≥17												~	~													
	Up to 0.5 M Tons 400-378												~	Up to 0.5 M Tons 378-366.1												~	~																									
Option 3	UP to 1.8 M Tons 400-320												~													~	~																									
	Up to 1.6 M Tons 400-328												~													~	~																									
	Up to 0.8 M Tons 400-366.1												~													Up to 0.5 M Tons 366.1-353												~	~													
	Up to 0.5 M Tons 400-378												~	Up to 0.5 M Tons 378-366.1 - DF KCG ≥17												~	~																									

DF = Dike Fields at + 200'

KCG = Kansas City Gage



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, KANSAS CITY DISTRICT  
700 FEDERAL BUILDING  
601 E 12<sup>TH</sup> STREET  
KANSAS CITY MO 64106-2896

CENWK-ED-H

NOV 5 2009

MEMORANDUM THRU

ED-G  
OD

FOR OD-R

Subject: Missouri River Dredging - River Mile 320 to 400.

1. References and Supporting Documentation for Cessation or Reduction of Dredging in the Kansas City Reach of the Missouri River:

a. Undated Memorandum, Subject: Documentation of Decision to Recommend Quantity Restrictions for Commercial Sand Dredgers Between River Miles 340 and 400 on the Missouri River. The memorandum documents the recommendations of an ad hoc Corps of Engineers committee that convened on 18-19 November 2003.

b. Memorandum dated 3 December 2008, Subject: Visualization of Potential Failure Modes to Federal Levee Projects Due to Degradation of the Missouri River Channel, Kansas City Reach.

c. Memorandum Dated 24 June 2009, Subject: Recommended Sand Dredging Quantity Limit for 2010 in Kansas City Reach.

d. Missouri River Bed Degradation Reconnaissance Study 905(b) approved 24 August 2009.

e. Missouri River Levee Unit L385 Sediment Analysis, Final Report, May 1999

f. Alternative 2. f., Restrictive take by River Mile, dredge dike fields only when Kansas City Gage is at 17 feet or higher. Holiday Sand Options 1, 2, and 3

2. Eight alternative sand dredging permit extension scenarios for the interim period Jan 2010 through Dec 2010 and relative increase in incremental risk of unsatisfactory performance to infrastructure along Missouri River Mile 320 to 400 were developed and are discussed below. Risks discussed below are relative incremental increases to the risk that exists today due to the current state of degradation of the Missouri River. This engineering risk assessment addresses only physical changes to the river and infrastructure. The scenarios are listed in likely order of

increasing risk of unsatisfactory performance to infrastructure. Each of these scenarios outcomes is contingent on future hydrologic conditions. The relative risk for employing these scenarios through December 2010 is based on expert elicitation using subject matter experts within NWK-ED. Expert elicitation is the same process used within USACE to develop risk screening assessments on levees and dams when there is insufficient information available to do a deterministic risk assessment. Since the risks can not be calculated deterministically due to lack of complete information, there is uncertainty in the expert elicitation process.

a. No dredging:

Pro: Removes the added incremental risk associated with dredging during 2010.  
River degradation may stabilize or reduce during a period of no dredging.

b. Dredge inside of bends and within the dike fields of River Mile 328 to 400. Unrestricted location dredging River Mile 320 to 328. Total take 1.3 M Tons.

Pro: Minimize impact on thalweg degradation thereby reducing the incremental increase in risk to the levee system (see paragraph 4 below)

Widens river and increases conveyance thereby reducing additional incremental risk to the levee system.

Impact to levee systems minimal for 12 month dredging period.

Con: May lead to degradation in vicinity of River Mile 320 to 328.

c. Dredge inside of bends and within the dike fields of River Mile 350 to 400. Unrestricted location dredging up to 1.3M Tons between River Miles 350 to 328. Total take 1.3 M Tons between River Miles 328 to 400.

Pro: Moves dredging away from infrastructure

Con: May lead to continued degradation

d. Dredge 650K Tons in thalweg and 650K Tons inside of bends and within dike fields River Mile 320 to 400. Total take 1.3M Tons.

Pro: Reduces incremental risk of potentially dredging all the quantity from the thalweg.

Con: Will likely cause additional incremental degradation within the Kansas City Reach but less than dredging the entire 1.3 M tons from the thalweg.

e. Extension of existing permit for 12 months at 1.3 M tons between River Mile 320 and 400.

Pro: Reduces risk by reducing take to 1.3 M tons.

Con: May lead to continued degradation

Disturbs stability of stream bed

f. Restrictive take by River Mile, dredge dike fields only when Kansas City Gage is at 17 feet or higher. Total take is 1.8 M tons. Within the overall general ranking for this scenario, these 3 options are sub ranked in order of increasing relative risk as follows:

Option 1 Please see reference 1. e., enclosure 1, Holiday Options

Option 2 Please see reference 1. e., enclosure 1, Holiday Options

Option 3 Please see reference 1. e., enclosure 1, Holiday Options

Pro: Reduces risk by reducing take to 1.8 M tons.

Con: May lead to continued degradation  
Disturbs stability of stream bed

g. Holiday Sand and Gravel Company letter of September 10, 2009 to dredge 1.8 M tons in currently authorized areas.

Pro: Reduces risk by reducing take to 1.8 M tons

Con: May lead to continued degradation

h. Extend existing permit with 2.4 M tons in currently authorized areas.

Con: May lead to continued degradation

### 3. Discussion of uncertainties.

a. Considerable uncertainty exists with respect to direct impact of dredging on existing infrastructure in the Kansas City reach. A comprehensive inventory of the infrastructure has not yet been accumulated and the condition of most is unknown. Even the evaluation of Corps constructed levees has not been detailed and comprehensive, but rather it was a cursory spot check of a few obvious locations where the levee is in close proximity to the river bank.

b. It is understood that the degradation has steepened the submerged levee slopes on some levees and the existing configuration in certain locations does not meet existing Corps slope stability criteria. One possible future failure mode is sloughing of the toe in combination with scour leading to loss of levee crest. The problem is very complex and to date a robust engineering evaluation has not been performed. Considerable uncertainty exists with respect to trigger mechanisms and how quickly the failure mode could develop.

c. Comparison of bed material gradations verses dredged material gradations indicate that an insufficient amount of coarse material exists on the surface of the river bed to meet the required dredged material gradations. It is likely that the coarser material is being extracted from deeper, glacial era deposits located under the river bed. Over time, this practice could make the river bed more susceptible to scour during flood events which could aggravate the degradation problem.

d. There is uncertainty in the total amount of annual movable bed load between river miles 328 to 400. Reference 1.e above estimates the total movable bed load to be approximately 1.3 M Tons. This reference is believed to be the most reliable estimate to date and is the basis for recommending a total take of 1.3 M Tons in scenarios 2.b through 2.e.

### 4. Levee Safety Considerations.

a. The final Missouri River Bed Degradation Reconnaissance Study, dated August 2009, has identified signs of channel bed/slope local integrity problems including water intake supply impacts, bank instability, drainage outfall structure damages, local tributary head cutting, bridge and utility crossings, and potential environmental impacts including loss of shallow water habitat areas. Very limited additional evaluation of bed degradation on the levee/floodwall safety was conducted subsequent to the finalization of the Missouri River Bed Degradation Reconnaissance Study.

b. Based on existing conditions, five critical areas were identified within the Kansas City reach of the Missouri River, between river miles 368 and 378. Preliminary assessment of channel bank slope stability in these areas indicates possible impact to levee safety. Specifically, slope stability results in the lower portions of the impacted channel slopes indicate factors of safety that do not meet Corps of Engineers standards.

c. Special condition requirements in the original permit kept dredge activity at least 500 feet from the centerline of federal levees within the Kansas City reach. This condition appears to remain as the absolute minimum safeguard against direct impacts of dredging to the existing levees. However, the 500-foot restriction does not assure levee safety because it does not prevent the loss of channel bed that is occurring on a macro level.

d. The risk communication plan for the proposed future permit extension is not clear. Levee sponsors and others potentially adversely impacted by future dredging activities should be informed and given the opportunity to comment on the permit extension. This recommendation is based on USACE intent to effectively communicate risk and establish public involvement in risk reduction strategies.

5. Recommendation. Based on the scientific and engineering information currently available, and without the information and knowledge from a completed Sand Dredging EIS due to uncontrollable external delays in completing the EIS work, cessation of dredging in the Kansas City reach is the only scenario to have no adverse impacts to affected infrastructure along the river. Additional possible dredging scenarios are provided in paragraph 2 in order of increasing relative risk. ED recommends that dredging quantities in the Kansas City reach for 2010 be limited to the computed bed load of 1.3 M tons. Further, to prevent disruption to the natural stratification of the thalweg and to increase the likelihood of bed load capture, this quantity should only be removed from within the dike fields.

Encl

  
JOHN J. JAEGER, Ph.D., PE  
Chief, Engineering Division  
Kansas City District

CF: OC