DEPARTMENT OF THE ARMY PERMIT EVALUATION AND DECISION DOCUMENT

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1. Introduction:

This is a Department of the Army (DA) permit decision document. This document addresses the requirements contained in the National Environmental Policy Act (NEPA) of 1969 and the Section 404(b)(1) Guidelines (Guidelines) published at 40 CFR Part 230.

1.1. Authorities:

This decision is issued under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344). This review was conducted in accordance with the procedures described at 33 CFR Part 320-331, including Appendices B and C.

1.2. Permit Decision:

I have reviewed and evaluated the subject DA permit applications, in light of the overall public interest, the environmental, social, engineering, and economic considerations, and in accordance with the laws, regulations and policy cited above. I have decided to issue DA permit authorization for applications numbered 2001-01429, 2001-01430, 2001-01431, and 2001-01434 subject to modifications and special conditions described below subject to the issuance of Section 401 Water Quality Certification by the State of Missouri and the State of Kansas and modify DA permits numbered 1996-01648, 1996-01654, 1996-01649, and 1996-01652 to limit the annual extraction levels to those reported in 2006 and listed below. I have also decided to deny DA permit authorization for applications numbered 2001-01432, 2001-01433, 2001-01435, 2001-01436, 2003-01640, and 2004-00378.

2. Project Information:

Application Number	Applicant Name and Address	Annual Tons of Dredged Material Currently Requested	Annual Tons of Dredged Material Previously Authorized	Tons of Material Dredged in 2006	River Miles Authorized for Dredging by This Permit	Annual Tons of Material Authorized by This Permit
2001-01429 (Renewal of 1996-01648)	**Capital Sand Company, Inc. (Capital Sand)** Post Office Box 104990 Jefferson City, Missouri 65110-4990	2,500,000	1,500,000	2,253,862 (Also dredged for Con-Agg)	62.00-75.00 109.00-115.20 115.95-118.40 119.15-119.35 119.85-124.35 124.95-126.05 126.90-127.50 140.00-150.00 158.45-164.00 172.00-176.40 177.85-184.75 185.65-186.90 188.20-192.00 193.00-193.40	2,255,000

					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.	
2001-01430 (Renewal of 1996-01654)	**Hermann Sand and Gravel, Inc. (Hermann Sand)** Route 3, Box 261 Hermann, Missouri 65041	500,000	100,000	301,034	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
2001-01431 (Renewal of 1996-01649)	**Holliday Sand and Gravel Company (Holliday Sand)** 6811 West 63rd Street Overland Park, Kansas 66202	3,800,000			320.00-328.00	450,000 in 2008 and 900,000 in 2009
			2,450,000 Kansas City	3,395,525	328.00-330.90 331.65-336.00 338.00-339.15 350.00-356.30 356.50-358.16 358.36-359.24 359.44-360.17 360.37-361.20 361.44-362.15 362.35-364.25 364.45-364.64 364.84-365.43 365.79-366.02 366.30-367.00 367.90-373.30 374.20-375.10 375.30-377.81 378.90-379.70 380.70-382.70	3,400,000 in 2007 2,950,000 in 2008 2,500,000 in 2009 Can compensate for reduction below river mile328
			St. Joseph		445.00-455.50	360,000
			Total	364,830 3,760,355		3,760,000
2001-01432 (Renewal of 1996-01655)	**Washington Sand Company, Inc. (Washington Sand)** 528 West Front Street Washington, Missouri 63090	130,000	130,000	0	62.00-75.00	Permit Denied

2001-01433 (Renewal of 1996-01680)	**St. Charles Sand Company (St. Charles Sand)** 14580 Missouri Bottom Road Bridgeton, Missouri 63044	200,000	200,000	0	None Permit Denied	Permit Denied
2001-01434 (Renewal of 1996-01652)	**Con-Agg of MO, L.L.C. (Con-Agg)** 2604 North Stadium Blvd. Columbia, Missouri 65202	250,000	250,000	175,000 (Dredging done by Capital Sand)	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	250,000
2001-01435 (Renewal of 1996-01656)	**Edward N. Rau Contractor Company (Rau)** 2809 Highway A, Suite A Washington, Missouri 63090	100,000	100,000	0	None Permit Denied	Permit Denied
2001-01436 (Renewal of 1996-01650)	**Kaw Valley Sand and Gravel, Inc. (Kaw Valley Sand)** 1615 Argentine Blvd. Kansas City, Kansas 66105	1,000,000	300,000	0	None Permit Denied	Permit Denied
2003-01640 (New Applicant)	**85th Street, Inc. (Lafarge)** 3101 East 85th Street Kansas City, Missouri 64132	1,300,000	0	0	None Permit Denied	Permit Denied
2004-00378 (New Applicant)	**Muenks Bros. Quarries (Muenks Bros.)** 3717 Highway 50 West Loose Creek, Missouri 65054	600,000	0	0	None Permit Denied	Permit Denied
TOTAL		10,380,000	5,030,000	6,490,251		6,490,000

2.1. Existing Conditions:

The proposed dredging will occur in the deep open water of the Missouri River.

2.2. Project Description:

Hydraulic cutter suction dredging of sand and gravel from the Missouri River by a mobile, floating dredge plant. Water and dredged materials will be passed through onboard screens allowing the desired material to be loaded into barges and undesired material and water to be discharged back into the river at the dredging location. Filled hopper barges will be transported to existing offloading facilities where a crane or front end loader will unload the material for stockpiling and commercial sale.

2.3. Jurisdiction:

The proposed work will take place in the Missouri River, a navigable waterway jurisdictional under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Dredging in accordance with the Standard Missouri River Commercial Dredging conditions will preclude impacts to wetlands and other special aquatic sites.

2.4. Project Purpose:

2.4.1. Basic Project Purpose:

To produce sand and gravel for use in concrete, asphalt, mortar, and fill needed for highway, road, residential, commercial, and industrial construction.

2.4.2. Overall Project Purpose:

To economically produce sand and gravel for use in concrete, asphalt, mortar, and fill needed for highway, road, residential, commercial, and industrial construction. The sand needs to meet the Missouri and Kansas Departments of Transportation standards and be produced sufficiently close to major markets in metropolitan areas so that water and/or land transportation costs are not prohibitive.

2.5. Project Need:

Historically the majority of the sand used for construction in the St. Joseph, Kansas City, Columbia, and Jefferson City metropolitan areas has been extracted from the Missouri River. Dredging in the Kansas River has been reduced over the years and is not a potential substitute. The applicants do not have sufficient existing land based sand and gravel quarries to replace the material currently extracted from the Missouri River and developing alternate sources on land would take several years.

3. Public Notification:

3.1. Public Notice Dates:

3.1.1. June 27, 2003. Expiration Date: July 28, 2003. (Enclosure 12.1)

3.1.2. January 12, 2004. Expiration date: February 2, 2004. (Enclosure 12.2)

3.2. Respondents:

Federal Agencies (U.S. Fish and Wildlife Service (FWS Enclosure 12.5, Enclosure **12.6**, Enclosure 12.49, and Enclosure 12.85)), State Agencies (Missouri Department of Conservation (MDC Enclosure 12.7, Enclosure 12.8, and Enclosure **12.9**),

Missouri Department of Natural Resources (MDNR Enclosure **12.10** and Enclosure 12.11), Missouri State Historic Preservation Office (MSHPO Enclosure 12.12), Kansas State Historic Preservation Office (KSHPO Enclosure 12.13), Missouri Department of Economic Development (MDED Enclosure 12.77), Missouri Department of Transportation (MoDOT Enclosure **12.68**), Missouri Office of the Governor (Governor Blunt Enclosure 12.57 and Enclosure 12.74)), Other Organizations (Water District No. 1 of Johnson County Kansas (WaterOne Enclosure 12.14), Sac & Fox Nation of Missouri in Kansas & Nebraska (Enclosure 12.15), Friends of the Kaw, Inc. (Enclosure 12.18), Winnebago Tribe of Nebraska (Enclosure 12.16), Prairie Band Potawatomi Nation (Enclosure **12.17**), Missouri Chamber of Commerce (Enclosure 12.67), Missouri Farm Bureau Federation (Enclosure 12.69), and Kaw Valley Drainage District (Enclosure 12.22)), and Kansas City District Corps of Engineers (CENWK (Hydrologic Engineering Branch (CENWK-EC-HH Enclosure 12.19, Enclosure 12.24, Enclosure **12.55**, Enclosure 12.56, Enclosure 12.75, Enclosure 12.82, and Enclosure **12.83**), Project Management Section (CENWK-PM-CJ Enclosure 12.37), and Environmental Resources Section (CENWK-PM-PR Enclosure 12.38 and Enclosure **12.39**).

3.3. Substantive Issues, Applicant Reply and Corps Resolution:

3.3.1. Water Quality:

MDNR (Enclosure 12.10 and Enclosure 12.11) and Friends of the Kaw (Enclosure 12.18) expressed concerns regarding potential impacts the dredging operations could have on water quality from sedimentation, suspension of sediment and toxins, excess material discharge, and accidental discharge of petroleum, other pollutants, and waste. Holliday Sand (Enclosure **12.33**) and Lafarge (Enclosure 12.31) replied that existing permit conditions adequately protect water quality. The Kansas City District Corps of Engineers Regulatory Branch (CENWK-OD-R) had in previous permit decisions developed conditions intended to maintain water quality standards. Subsequent testing has confirmed that these operations negatively impact water quality in a very limited area for a short time. The proposed permit conditions combined with 401 Water Quality Certification conditions will adequately address these issues.

3.3.2. Fish and Wildlife Habitat:

Friends of the Kaw (Enclosure 12.18) expressed concerns that dredging would remove sand and gravel bars and cause river banks to cave in, negatively impacting upland and aquatic habitat and associated fish and wildlife species and their predators. MDC (Enclosure 12.7) also expressed concerns about potential affects on fish habitat and recommended restricting dredging to the main navigation channel and protecting important habitat areas including dike fields, natural cut bank areas, tributary mouths, sand islands, and the mouths and areas within chutes and sloughs. The FWS expressed concerns about the

potential dredging effects to pallid sturgeon, primarily from alteration of shallow water habitat and possible entrainment of fish (Enclosure 12.26). CENWK-OD-R, in informal consultation with the FWS and the applicants, has developed permit conditions intended to help identify potential and critical habitat, limit dredging to the main navigation channel, and prevent impacts to the identified potential and critical habitats.

3.3.3. Bed Degradation:

The FWS (Enclosure 12.5 and Enclosure 12.6) expressed concern that bed degradation can negatively impact riverine habitat in the affected reach as well as upstream via head cutting. CENWK-EC-HH expressed concerns in 2002 that total extraction from the Missouri River was near or exceeding the average bed load and could result in bed degradation and endanger infrastructure including utility crossings, water intakes, dikes, revetments, and levees (Enclosure 12.20). Later, several commenters indicated that bed degradation has disabled water intake structures and contributed to levee slope failure, and sheet piling failure, bank failure, and tributary head cuts in recent years and further degradation could jeopardize Missouri River infrastructure and endanger communities on the floodplain during future flood events (Enclosure 12.22, Enclosure 12.47, Enclosure 12.14, and Enclosure 12.19). Based on review of stage trends and water surface profiles at river gages, in 2004 CENWK-EC-HH identified significant degradation within the Kansas City Reach (RM 340 to 400) and recommended that the annual allowable extraction rates should not exceed approximately 70 percent of the annual bed material load. Because annual bed material flow is dependent on annual flow volume, and flow volume data is readily available and easily interpreted, CENWK-EC-HH recommended that allowable extraction rates within this reach should be tied to the average annual flow volume for the previous two calendar years with a maximum of 2,500,000 tons when the flow drops below 27,000,000 acre feet per year. The one active dredger in that reach had extracted more than 3,100,000 tons of sand per year in recent history and the annual river flow had been below 27,000,000 acre feet for several years so this restriction would immediately require around a 25 percent reduction.

CENWK-OD-R included a plan to implement these recommendations with the comments received from the public notice in a letter sent to the applicants in March 2004 (Enclosure 12.30). Several applicants responded and all thought that the existing permit condition excluding dredging within 4000 feet upstream and 500 feet downstream of municipal water intake structures adequately protected those structures from degradation and disputed that any damage to those structures or bed degradation had actually occurred. We agree that the exiting buffer zone around water intake structures adequately protects water quality for those users but believe there is ample evidence that they have not prevented degradation and damage to those structures under the increasing dredging rates and low water conditions occurring in the Kansas City reach.

Reducing dredging in the Kansas City reach and capping it at current levels in all other reaches should limit the potential for further degradation and damage to infrastructure.

Lafarge (Enclosure 12.31) and Kaw Valley (Enclosure 12.35) both indicated that the only fair division of the resource was that they should get an equal division of the annual extraction limit while Holliday Sand said that because they are the only active dredgers, the other applicants should only be allowed to dredge when the limit exceeds Holliday Sand's authorized amount (Enclosure 12.33). Various commenters stated that inactive dredgers should not lose their permits because it would deprive those companies of a valuable asset they previously had, eliminate competition, and raise sand prices. The new applicants indicated that denying their permits was unfair because they had invested substantial time and resources to expand their operations based on their expectations of receiving a dredging permit. We believe that capping extraction at current reported levels for each applicant generally reflects the need, ability, and investment of each applicant, is the fairest way to divide the available resource, and will have the least negative impact on the regional economy as a whole. For new and previously inactive applicants, this means they could dredge nothing without increasing the cumulative dredging total. Because Capital Sand and Con-Agg are willing to split up the tonnage that Capital Sand had historically included in their total tonnage, we have decided to issue a permit to each company for the amount that they reported in 2006. Because Washington Sand did not report dredging any material under their permit and is partially owned by Capital Sand who operates the Washington Sand facility, we did not believe it was necessary to reissue the permit to Washington Sand. Because AmerenUE will seek a separate permit for maintenance dredging at their water intake structure, St. Charles Sand no longer needs a dredging permit for that area. Even though Muenks Brothers has bought sand from Hermann Sand, they have no basis to claim that amount previously authorized to Hermann Sand and it would not be fair to Hermann Sand to take part of their previously authorized amount to give to Muenks Brothers. Therefore we have decided to deny Muenks Brothers' permit application in addition to those of Lafarge, Kaw Valley Sand, Rau, Washington Sand, and St. Charles Sand.

In 2003 dredgers in the Kansas City reach commented that the restrictions proposed for the Kansas City reach at that time were unexpected based on the EA for L385. CENWK-OD-R continued informal consultation with the applicants and FWS regarding endangered species concerns with the understanding that only the Kansas City reach was being degraded. In May 2006, when Hermann Sand requested an increase in their annual extraction limit, CENWK-EC-HH commented that their analysis in the interim had shown that significant degradation has occurred throughout the river where dredging is occurring. At that time CENWK-EC-HH

recommended that annual extraction rates be capped at or below current rates throughout the Missouri River within the Kansas City District (Enclosure **12.56**, Enclosure 12.75, and Enclosure 12.83). In September and October 2006, CENWK-OD-R told Herman Sand and the attorney for Capital Sand by telephone conversation of this new information and the possible new dredging restrictions. In December 2006 CENWK met with the applicants to share our findings about bed degradation in the Missouri River throughout Missouri (Enclosure 12. **59**). We stated our intentions to deny the applications for new and unused dredging permits, limit extraction to 2005 levels throughout the Missouri River within the Kansas City District, incrementally reduce extraction with the Kansas City Reach to 2,500,000 tons by 2009, and limit the permits to 3 years while an Environmental Impact Statement (EIS) is prepared. Various commenters dispute that degradation is occurring in the lower reaches and believe that we have not considered the economic impact that these restrictions will have on the regional economy. They request that restrictions on dredging be delayed until a study has been completed. We agree that our understanding of the effects of dredging on bed degradation and of the economic impacts of our decision is incomplete and that a comprehensive study needs to be done. However, the studies done to date sufficiently indicate that degradation is occurring under current dredging practices and continued increases in dredging amounts or long term dredging at current rates creates potential for significant impact. Under NEPA, the government action (issuing dredging permits, not restricting dredging) should not proceed until an EIS is prepared unless a more limited EA (EA) concludes in a Finding of No Significant Impact (FONSI). Applied to this situation, that means that the previously authorized dredging should come to an end in accordance with the terms of the previous permits and should not be reauthorized unless an EIS is completed or the dredging operations are sufficiently restricted and conditioned enough to allow us to make a FONSI and reissue the permits now. We believe that by limiting annual extraction to the levels reported in 2006 in general; limiting total annual extraction in any 10-mile reach to 1,200,000 tons; incrementally reducing annual extraction in the severely degrading Kansas City reach from 3,400,000 tons to 2,500,000 tons by 2009; requiring full and real time electronic monitoring of dredge status and location; requiring an annual hydrography survey of all areas dredged; and reducing the permit period to 3 years will allow us to make a FONSI and reissue the permits. Dredging with some restrictions and reductions is preferable to the alternative, stopping dredging until and EIS is prepared.

In 2004 Holliday Sand requested that the restrictions be delayed to allow them to adjust their operations and find alternate sites (Enclosure 12.33). Once again in December 2006 (Enclosure 12.61) Holliday Sand requested more time before reductions were imposed if they had not yet received their new equipment needed to extend their operation downstream out of the restricted zone. These permits were to expire on December 31, 2001, but were extended

while we worked to complete their reevaluation. While we have been working to complete our evaluation and issue the permits, the Missouri River has had mild to extremely low flows, yet extraction has increased from a total of 5,457,320 tons in 2003 to 6,490,251 tons in 2006. We will not delay implementation of the recommended reductions another year because implementation has already been delayed three years and because of potential impacts to the river.

Holliday Sand indicated they were preparing plans to make up reductions within the Kansas City reach by purchasing the additional equipment needed to extract and transport material from immediately up and downstream of the restricted reach. They requested that their permitted reach be extended to be between river miles 335.0 and 405.0 unless we would reduce the upper limit of the restricted reach to river mile 395.0 (Enclosure 12.61). In response to this request, CENWK-EC-HH recommended that the restricted reach be extended down to river mile 329.0 and that for the reduction to positively effect degradation, the shortfall should only be made-up downstream of the restricted reach because data shows that the river is relatively stable or aggrading from that point to about river mile 300.0 (Enclosure 12.75 and Enclosure 12.83). Dredging upstream of the degrading reach would still reduce the bed load coming into the degrading reach and potentially cause continued degradation or at least prevent any aggradation.

In lieu of capping extraction, various commenters suggest that we extend dredging reaches, preferably upstream; limit the time dredging in a reach; rest a reach before dredging again; and coordinate dredging by multiple operations in the same reach (Enclosure 12.81). We agree that these actions could reduce the potential for localized impacts. However, degradation results when sand and gravel extraction exceeds the bed material load. Comparison of the construction reference plane (CRP) water surfaces from 1990 with those of 2002 and 2005 indicate that over ninety percent of the Missouri River below Rulo, Nebraska, is degrading. Any increase in the total extraction rate would potentially increase the average rate of degradation over the entire river. The increased average rate of degradation would result in the potential for major negative impacts. Also, implementing these strategies would require further evaluation and negotiations between the applicants and the various agencies and would significantly delay a permit decision.

Several applicants indicated that the proposed monitoring of dredge operations for compliance purposes was impractical because an accurate, secure, and continuously transmitting system that cannot be manipulated or disabled would impose excessive cost to the dredgers that would ultimately be passed onto the consumer. Several applicants suggested alternatives including cheaper monitoring equipment or methods, imposing fines for noncompliance to be used for conservation rather than monitoring, phasing in monitoring, reimbursement for monitoring equipments if permits are later discontinued,

and imposing additional restrictions in lieu of requiring monitoring (Enclosure **12.28**,Enclosure 12.64, Enclosure 12.65, Enclosure 12.66, and Enclosure 12.70). The proposed fines and alternative restrictions are themselves based on parameters that would need monitoring so are not a viable replacement. Also fines for noncompliance of permit conditions go to the general U.S. Treasury, not to CENWK-OD-R for conservation practices. Because our FONSI is based on reducing or excluding dredging within vulnerable areas and limiting total extraction to a more sustainable mount, we believe it is vital to monitor the location and activity of each authorized dredge to ensure compliance with the permit conditions. We also believe that periodic hydrographic surveys are necessary to fully study the effects of dredging on bed degradation and prepare the EIS. We recognize that there is a wide range of available dredge monitoring systems and will not designate any specific system or brand. The expense of these requirements might be reduced by cooperation between the various applicants and their partners in developing a system custom designed for their needs or by using systems already developed by the Corps or others in the industry. We will give 120 days for each dredger to develop and implement their monitoring plan. Last of all, we believe that, despite the expense, monitoring is practicable and necessary because of the importance of dredging to the regional economy.

Several applicants commented that because our proposed restrictions, dredgers in the St. Louis District would have a competitive advantage over those in the Kansas City District because they wouldn't have the same restrictions. We have discussed this issue with the St. Louis District and they agreed to modify their current dredging permits to include the same restrictions and bring them into the same permit time frame so that the future EIS would address all dredging below Rulo, Nebraska.

The applicants, Buchanan County Commission (Enclosure 12.72), Missouri Chamber of Commerce (Enclosure 12.67), Missouri Farm Bureau Federation (Enclosure 12.69), Missouri Governor Matt Blunt (Enclosure 12.74), 21 Missouri State Senators and Representatives (Enclosure 12.73), and Missouri Department of Economic Development (Enclosure 12.77) all requested that we cap the annual extraction at 2006 actual extraction amounts plus a volume for 2007 and issue a full five-year permit. When we proposed to the dredgers a cap at 2005 levels we only had the tonnage reported for 2005. Because our intention is to cap extraction at current levels, we have determined that it would be acceptable to set the cap at 2006 levels. However, authorizing any increase above that level would create the potential for significant impact. We also believe that extending the permit to five years rather than three would create the potential for significant impact.

3.3.4. Horizontal Collector Wells:

In comments submitted long after the public notice period ended, BPU

(Enclosure 12.30) expressed concerns that dredging above their horizontal collector wells that extract water from the substrate below the Missouri River could negatively affect the rate of water flow through the bed material and reduce its ability to filter out river borne pathogens. Permit conditions developed by CENWK-OD-R would exclude extraction 1000 feet upstream and 1000 feet downstream of existing horizontal collector wells.

3.4. Public Hearing Determination (33CFR Part 327):

No requests that CENWK hold a public hearing were received. We did hold various meetings with permit applicants, public utilities, state and federal agencies, and congressional representatives to discuss study findings, alternatives, and potential impacts of our permit decision. We do not believe that a public hearing or additional meetings would provide additional information helpful in our evaluation.

4. Compliance with Other Laws:

4.1. Section 7 of the Endangered Species Act:

All of the proposed dredging areas are within the historic range of the threatened piping plover (*Charadrius melodus*), the endangered least tern (*Sterna antillarum*) and the endangered pallid sturgeon (*Scaphirhynchus albus*). In compliance with the Endangered Species Act, a preliminary determination was made that the described work is not likely to adversely affect these species. After extensive informal consultation with CENWK-OD-R and the commercial dredgers concerning the endangered pallid sturgeon, the FWS has concurred with the CENWK-OD-R' preliminary determination that the proposed dredging activities are not likely to adversely affect the piping plover, least tern, or pallid sturgeon and their habitats. This determination that the proposed activity is not likely to adversely impact the listed species or their designated critical habitats is 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. (We have since determined that continuous monitoring, reliability, and accuracy sufficient for compliance purposes are available, practicable, and will be required.)
- 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. (We have since determined

that in the 120 days allowed for implementation of the continuous dredge monitoring system, the dredge operators will be required to submit a monthly report of daily GPS readings and production.)

- 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

4.2. Section 106 of the National Historic Preservation Act:

The National Register of Historic Places and the Federal Register have been checked to determine if any properties listed or proposed for listing in the National Register would be impacted by the project. In addition, the State Historic Preservation Officer has been contacted to determine if any properties eligible or potentially eligible for listing in the National Register would be impacted by the work.

During the public interest review of the previously issued permits (1996), it was determined that dredging would occur near the location of several historic riverboat wrecks. A no-dredge protection zone was established for the Lexington, Missouri riverfront between river miles 316.4 through 317.3. This condition is retained in the renewal permit.

The MSHPO did not respond to the initial public notice. This lack of response is assumed to be concurrence that renewal of dredging will not affect any property listed on the National Register of Historic Places or any historic or archaeological site listed in the state inventory. The MSHPO did respond to the public notice for the Muenks Brothers application that there will be no historic properties affected by that proposed dredging (Enclosure 12.12). The KSHPO also responded to the initial public notice that the proposed dredging should have no effect on historic properties (Enclosure 12.13). The Kansas City District's evaluation of potential impacts to historic properties indicates that the project would not effect any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. No reconnaissance survey, to identify historic properties, has been conducted by the Kansas City District or the applicants.

Based on the District's findings, no survey will be required since no recorded properties exist in the affected area, except as noted above, and since the permit area has been extensively modified by previous work and natural river processes. The District presumes that any historic properties which may have existed within the permit area t one time have been lost due to extensive modification of the site and the lack of any information which indicates the presence of such properties (see 33 CFR 325, Appendix C, paragraphs 3b(1) and 3b(3)).

4.3. Section 401 Water Quality Certification:

The Missouri Department of Natural Resources and the Kansas Department of Health and Environment certified in accordance with Section 401 of the Clean Water Act (33 USC 1341), that the work would not violate applicable water quality standards (Enclosure 12.3 and Enclosure 12.4). These certifications contain several conditions which address water quality concerns. The applicants will be informed by the proposed permit transmittal letters that the conditions presented in the certifications are incorporated into the special conditions of the Department of the Army permit by reference, as stated in General Condition "5" of the permit document.

4.4. Executive Orders:

4.4.1. Order 11990 Protection of Wetlands:

The decision described in this document is consistent with this executive order.

4.4.2. Order 11988 Flood Plain Management:

The decision described in this document is consistent with this executive order.

4.4.3. Order 11898 Environmental Justice:

The decision described in this document is consistent with this executive order.

5. Alternatives (NEPA and Section 404(b)(1))

5.1. No action (denial):

Denial of the requested permits would prevent direct impacts from dredging on bed degradation and on pallid sturgeon and their habitat. However, it is not yet known how much of these problems can be directly attributed to dredging in the Missouri River. In-channel dredging is the principle source of sand and gravel for the rapidly growing St. Joseph, Kansas City, Columbia, and Jefferson City areas within the Kansas City District. Denial of all the requested permits would result in a significant shortfall of sand and gravel suitable for the concrete and asphalt required in highway, residential, and commercial construction in these regions. Transporting the needed sand from other sources such as the Mississippi River or the Arkansas River would greatly increase the cost of construction sand and negatively impact the economy of Missouri. This alternative is not recommended.

5.2. Alternate site and/or design:

In recent years, sand and gravel dredging has been has been increasingly limited in the Kansas (Kaw) River and will be unable to replace any portion of the material currently extracted from the Missouri River. Dredging in other rivers in the area already provides some sand and gravel but most of these rivers are already experiencing some amount of stress from dredging and won't be able to replace all the material currently extracted from the Missouri River. Mining sand and gravel deposits from uplands and floodplains of the Missouri, Mississippi, and other tributary rivers of the area could eventually replace a portion of the material currently extracted from the Missouri River and prevent or reduce direct impacts on the Missouri Rive bed degradation and on pallid sturgeon and their habitat. However, it is not yet known how much of these problems can be directly attributed to dredging in the Missouri River and halting dredging in the Missouri River may not solve

either problem. Additionally, upland sand and gravel deposits are a finite resource and probably could not meet demands indefinitely. Mining sand and gravel from floodplains and uplands could impact valuable farmland and upland wildlife habitat. Acquiring property with sand and gravel deposits, getting necessary authorization, and developing these sites by the applicants or other companies would require some amount of time during which construction activities in the four main developing urban areas of the Kansas City District would be slowed or halted due to lack of suitable sand and gravel. Immediate cessation of dredging in the Missouri River and translocation of sand mining to other rivers or upland sites is not the recommended alternative.

5.3. Proposed Activity:

Authorizing all the proposed dredging activities to the extent requested would allow extraction of up to 10,380,000 tons per year. This is approximately twice the previously authorized amount of 5,030,000 tons per year and the 2006 total dredged amount of 6,490,251 tons. Available sediment data indicates that total sand extraction is at or near the available bed material load. Although we do not know enough yet to determine how much dredging is directly responsible for the bed degradation and the endangered status of pallid sturgeon, we do know that increasing the extraction rate will likely exacerbate the degradation trend because degradation occurs when more sediment is leaving the system than is entering. This alternative is not recommended.

5.4. No Cap Mine-and-Relax Strategy:

In March 2007 Mr. David Shorr, legal counsel for Capital Sand and Con-Agg, proposed an alternative to dredging strategy to address bed degradation. He explained that placing an absolute limit to sand extraction would have the most dramatic effect on the price of sand. Therefore he proposed that we focus on a strategy that limits the time in which a mile is dredged and assures sufficient time for recover before it is dredged again. He proposed expanding reaches to be mined, preferably upstream of currently dredged reaches, limiting dredging in a one mile reach to one week, then resting that mile reach for at least four weeks before dredging again. To accomplish this, there would have to be greater coordination where multiple dredgers operate in the same reaches. Mr. Shorr pointed out that MoDOT's increasingly stringent sand specification may also impact bed degradation because the Missouri River is the main source of sand in Missouri that meets these specifications. Also, because the river naturally classifies and deposits the sand, not all reaches are good sources of high quality sand. We agree that this strategy could reduce the potential for localized impacts. However, degradation results when material extraction exceeds the bed material load. Comparison of the CRP water surfaces from 1990 with those of 2002 and 2005 indicate that over ninety percent of the Missouri River below Rulo, Nebraska, is degrading. Any increase in the total extraction rate would potentially increase the average rate of degradation over the entire river and would create the potential for significant negative impacts. Also,

expanding the reaches would require further consultation with FWS and further delay of a permit decision. For these reasons this is not the recommended alternative. While this proposal may prove to be a very good strategy once a detailed EIS is completed, until such a study better shows the contribution of sand and gravel mining to river wide degradation, it is not prudent for CENWK to permit increases in extraction.

5.5. Limiting/Reducing Extraction:

Comparison of the CRP water surfaces from 1990 with those of 2002 and 2005 and correlation with the volume of material commercially extracted during that period indicates that the river bed has degraded throughout most of the Missouri River below Rulo, Nebraska but particularly where dredging has been concentrated. Available sediment data indicates that total sand extraction is at or near the available bed material load. Any increase in the total extraction rate would potentially increase the average rate of degradation over the entire river and would create the potential for significant negative impacts. Maintaining the current extraction and degradation rates within the Kansas City reach at current levels would also create the potential for significant negative impacts. Limiting and strictly enforcing the overall annual extraction volume to current levels, reducing extraction in the Kansas reach and other areas of concentrated dredging, limiting the permit period to a shorter time period, and better monitoring of the river bed where dredging occurs should reduce the potential for significant negative impacts and allow us to make a FONSI. During that shorter permit period, an EIS can be prepared to help determine a long term course of action. Several approaches to capping annual extraction limits and reducing annual extraction limits in critical areas are outlined below.

5.5.1. Reissue Current Permits/Deny New Operations and Increased Limits:

Eight companies are currently authorized to extract a total of 5,030,000 tons of material from the Missouri River within the Kansas City District. Only three of those companies have extracted any material since the last permits were issued in 1997, except for Washington Sand Company, who last extracted 82,200 tons in 1997. In 2006, Con-Agg and Washington Sand reported that Capital Sand had dredged for them and reported an amount only when CENWK-OD-R specifically requested them. The five companies have gradually increased their combined annual extraction volume to 6,490,251 tons in 2006 without formally authorized increase or enforcement of the authorized limit by CENWK-OD-R. Reissuing and enforcing the previous permits at currently authorized annual extraction limits would allow all currently authorized companies to continue operations while keeping the maximum potential annual extraction below current levels. In actuality, it would immediately result in a 1,450,251 ton shortfall of sand and gravel, more in the rapidly growing urban areas of the Kansas City District if the smaller companies are unable to fill in for the reduced extraction imposed on the current producers. The shortfall could be a third or more of the Kansas City

metropolitan area. Denying the requests of two new companies to extract an additional 1,900,000 tons from the River would keep annual extraction volumes below current levels and minimally impact these companies that have not yet been involved in river dredging. This alternative would protect the interests of currently authorized but inactive dredging companies and prevent exacerbation of the bed degradation due to dredging but would severely impact the currently active dredging companies and the rapidly growing urban areas, particularly Kansas City, therefore this alternative is not recommended.

5.5.2. March 31, 2004 Rationing and Reduction Proposal:

By letter dated March 31, 2004 to the Missouri River Dredgers, CENWK-OD-R proposed to limit annual extraction between river miles 340 and 400 to 5,000,000 tons when the average annual river flow volume for the two prior years exceeds 45 MAF, 2,500,000 tons when the average annual flow volume for the two prior years is at or below 27 MAF, and prorated between the above two points when the average annual flow volume for the two prior years is between 27 and 45 MAF. Allocation of the available sand was not outlined in the proposal and input was solicited and received from the various applicants. This alternative as proposed would allow the annual extraction rate between river mile 340 to 400 (the most rapidly degrading stretch) to actually increase by about 35 percent over the current extraction volume when the annual average river flow volume for the prior two years eventually exceeds 45 MAF and would result in a 26 percent shortfall for 2007 because of the recent low flow conditions. This alternative is not recommended.

5.5.3. Rationing/Reduction Proposal by Holliday Sand:

In response to the above stated alternative, Holliday Sand offered another alternative. They requested that they be allowed to extend their dredging area to the area between river miles 335.0 and 405.0 to compensate for the proposed reduction between river miles 340 and 400. They also requested that any reduction in annual extraction limits be delayed for three years so they could develop another source and facility. The reductions would then be phased in over a four year period, 25 percent each year, based on the annual river flow volume of three years. They proposed that the reductions would be implemented one year after the third year in the average. Only operators that can show the need and ability to dredge, process, and market the material would be permitted and new operations would only be permitted to extract material after established dredgers had filled their quota. This alternative is not recommended for several reasons. Most of the Missouri River is experiencing some degree of bed degradation and the total annual extraction is at or near the annual bed material load for the Missouri River within Missouri. Even if dredging is allowed in new areas, the total extraction should still be limited to current extraction levels. Moving dredging from a degrading reach to the reach immediately upstream still leaves the degrading reach with a depleted

bed load and prone to continued degradation. Allowing the dredgers to increase or extend their dredging up stream of the Kansas City reach to make up for the imposed reduction within that reach would likely not result in any net benefit to the Kansas City reach. Implementing extraction limits and reductions should not be delayed another three years because extraction levels have continued to increase since reductions were proposed in 2004. Basing restrictions on a three year average with a one year lag in implementation would not reflect current or recent river conditions.

5.5.4. Deny Inactive and New Permits/Cap Active Permits at Actual Current Extraction Rates/Phase in Reduced Extraction Rates in the Kansas City Reach:

The recommended alternative is to grant permits for three years with extraction capped at rates reported in 2006 with some phased-in reductions in the Kansas City reach. The four viable and independent companies that reported extracting sand in 2006 will receive new permits while those applicants that have not reported any extraction previously will not be granted permits until an EIS can be completed.

Holliday Sand would be authorized to extract up to 360,000 tons of material per year from between river miles 445.00 and 455.50. Holliday Sand will also be authorized to extract 3,400,000 tons in 2007, 2,950,000 tons in 2008, and 2,500,000 tons in 2009 from the following reaches of the Missouri River: river miles 331.65 to 336.00, 338.00 to 339.15, 340.00 to 345.25, 345.46 to 356.30, 356.50 to 358.16, 358.36 to 359.24, 359.44 to 360.17, 360.37 to 361.20, 361.44 to 362.15, 362.35 to 364.25, 364.45 to 364.64, 364.34 to 365.43, 365.79 to 366.02, 366.30 to 367.00, 367.90 to 373.30, 374.20 to 375.10, 375.30 to 377.81, 378.90 to 379.70, and 389.70 to 382.70. In 2008 and 2009 Holliday Sand will be authorized to extract up to 450,000 and 900,000 tons per respective year from between river miles 301.05 and 328.00.

Capital Sand will be authorized to extract up to 2,255,000 tons of material per year from the following reaches of the Missouri River: river miles 62.00 to 75.00, 118.00 to 118.40, 119.15 to 119.35, 119.85 to 124.35, 124.95 to 126.05, 126.90 to 127.50, 140.00 to 150.00, 172.00 to 176.40, 177.85 to 184.75, 185.67 to 186.90, 188.20 to 192.00, 193.00 to 193.40, 195.75 to 202.10, 202.75 to 210.00, 220.00 to 226.95, 227.55 to 230.00, 245.00 to 249.65, 250.30 to 265.00, 283.00 to 297.90, 299.05, to 303.00, and 314.00 to 324.00.

Herman Sand will be authorized to extract up to 300,000 tons of material per year from the following reaches of the Missouri River: river miles 56.00 to 56.85, 61.25 to 66.00, 70.00 to 80.00, 80.50 to 89.75, 93.55 to 101.70, 109.00 to 115.20, 115.95 to 118.40, 146.00 to 157.00, and 158.45 to 164.00.

Con-Agg will be authorized to extract up to 175,000 tons of material per year from the following reaches of the Missouri River: river miles 177.85 to 184.75, 185.65 to 186.90, 188.20 to 192.00, 193.00 to 193.40, and 195.75 to 202.10.

The total extraction of all dredgers in any 10 mile reach may not exceed 1,200,000 tons per year. The new commercial dredging permits will be valid until December 31, 2009. Because the appeal process may delay implementation of the proffered permit for several months, we find it necessary to modify the currently extended permits for Holliday Sand, Capital Sand, Hermann Sand, and Con-Agg to limit annual extraction to those amounts reported for 2006.

St. Charles Sand has indicated that they want to maintain their permit from CENWK-OD-R to allow emergency maintenance dredging for AmerenUE's Labadie Power Plant intake at river mile 57.85. We have determined that the commercial dredging permits do not authorize this kind of maintenance activity, and that it would be best addressed through a permit issued to AmerenUE, rather than the commercial dredging permits. Washington Sand did not report any material dredged under their permit. Capital Sand dredges from and operates the Washington Sand on shore facility and owns part of Washington Sand. When one of Capital Sand's dredges was unable to reach the Washington reach in 2006, St. Charles Sand did dredge and deliver material to the Washington Sand facility that was reported by Capital Sand. However St. Charles Sand did not report any dredging under their permit. Additionally, neither Rau nor Kaw Valley Sand reported any dredging under their permits. Lafarge and Muenks Brothers are new applicants. Therefore St. Charles Sand, Washington Sand, Rau, Kaw Valley, Lafarge, and Muenks Brothers will not be authorized to dredge any material from the Missouri River between river miles 49.80 and 490.00.

6. Impact Evaluation:

The potential environmental consequences, both individually and cumulatively, of the authorized project on the human environment, are discussed below. Alternatives considered in this evaluation are identified in Section 5 above. The final determination of this evaluation is discussed in Section 10.1.

6.1. Affected Environment:

6.1.1. Physical Resources:

MDNR classifies the Missouri River as a Class P or perennial river that provides the following beneficial uses: Livestock and Wildlife Watering; Protection of Aquatic Life and Human Health-Fish Consumption; Whole Body Contact Recreation, Category B; Secondary Contact Recreation; Irrigation; Drinking Water Supply; Industrial. It is a Section 303(d) Listed

Water that is impaired for the beneficial use of Protection of Human Health – Fish Consumption because of Chlordane and Polychlorinated Biphenyls (PCBs) accumulated in fish tissue. (It has been proposed for delisting by MDNR but has not yet been approved by EPA). Elevated Chlordane and PCB levels in water are not the problem. The chemicals remain in soils for long periods of time and are not readily soluble so they adsorb to soil particles in the river bed. The Missouri River was historically known as "The Big Muddy" because of its high bed and suspended material load. The suspended sediment load and turbidity measurements in the Missouri River have been reduced dramatically because of regulation, flood control structures, bank stabilization, and land management. Today the river provides much of the drinking water for St. Joseph, Kansas City, Columbia, Jefferson City, and other towns along the river. Increasingly water is withdrawn through horizontal collector wells drilled underneath the river rather than through traditional river intake structures. River flow volume is determined by precipitation patterns throughout the Missouri River basin and regulated by dams above Gavins Point, Nebraska. River flow volumes have been low for the last several years.

The Missouri River was historically broader and shallower, constantly flooding and shifting course within the floodplain. After the 1943 floods, competing plans for a series of dams on the river were fighting for attention in Washington. One was from the Corps of Engineers, headed by Brig. Gen. Lewis Pick. Pick's plan emphasized flood control and navigation for barges and boats. The other plan was from the U.S. Bureau of Reclamation, headed by William Sloan. It emphasized irrigation, hydroelectric power, fish and wildlife habitat and recreation. Eventually both agencies got together and come up with the "Pick-Sloan Plan" calling for almost 100 reservoirs to be built on the Missouri and its tributaries with hundreds of miles of levies and floodwalls throughout the basin. The plan anticipated that thousands of barges would carry millions of tons of grain out of the Midwest to ports in New Orleans and it called for irrigation channels watering 30 million acres of farmland. The Pick-Sloan Act passed through Congress with the formal name of the "Flood Control Act of December 22, 1944." In the 60 years since, over 50 new dams and lakes have been built, not just on the Missouri, but also on the rivers flowing into it. The River and Harbor Act of 1945 authorized CENWK to provide a permanent 9-foot deep, 735-mile long navigation channel on the Missouri River from Sioux City, Iowa to its mouth just north of St. Louis. Construction of the navigation channel was completed in 1981. The navigation channel with its dikes, levees, and revetments was designed for the normal water velocity to prevent the high bed material load from settling out and causing shoals and sandbars. As a result of these two Acts, the Missouri River is a faster, deeper river that rarely requires dredging to maintain the navigation channel. However, the high bed material load has long provided a free source of sand mined by commercial sand dredgers for use in concrete and asphalt used in construction throughout Missouri and Kansas.

In 2003 CENWK-EC-HH determined that bed degradation has occurred over the last 100 years in the Missouri River throughout the Kansas City District but particularly between river miles 340 and 400 near Kansas City (Enclosure **12.1** and Enclosure 12.19). Bed degradation results if extraction rates exceed total bed material load available. Bed degradation has resulted in lowering of the average bed elevation and lowering of the stage for discharges below 70,000 cfs and has been shown to adversely affect infrastructure in and along the river, be a cause of bank instability, and lead to head cuts on tributaries that can cause tributary bank stability. An Ad Hoc panel of Corps personnel with expertise in sediment transport, hydraulics, and fluvial geomorphology determined that commercial dredging is one of at least four factors contributing to the bed degradation of the Missouri River and that total sand extraction in the river was at or near the normal bed material load. The panel concluded that the total annual extraction should be reduced following low flow years within the Kansas City reach. Subsequent analysis of the CRP water surfaces showed that the river bed has degraded to some degree throughout the river below Rulo, Nebraska, and as much as 4.5 feet around Kansas City (Enclosure 12.56).

6.1.2. Special Aquatic Sites:

The Missouri River is a navigable waterway with a navigation channel designed to retain its nine-foot minimum depth. The channel is delineated by wing-dikes that direct and concentrate the river flow to prevent sandbars or shoals from forming. As a result the river is deep and fast flowing with few special aquatic sites in the main channel where dredging occurs. There are some wetlands, mudflats, and vegetated shallows behind the wing-dikes and the Missouri River passes through several wildlife sanctuaries and refuges. Riffle and pool complexes don't occur on the Missouri River within the Kansas City District.

6.1.3. Fish and Wildlife:

Fish habitat, spawning activities, and feeding areas occur normally in areas with slow current. Navigation and bank stabilization structures on the Missouri River have closed off channels, oxbow lakes, and chutes, reducing fish habitat. Navigation and flood control projects have also reduced turbidity in the Missouri River by more than 50 percent within the last 40 years. However, open L-heads, spur dikes, jetties, and other structures have offered the development of some new feeding and resting areas which partially offset the loss of backwater areas. Additionally shallow water habitat projects constructed as part of the Missouri River Recovery Program have created new feeding, resting, and spawning areas.

The fast water of the navigation channel has very little potential for fish production. Sampling has indicated that at bank revetments, where the current

is strong, few fish are found. Species such as carp, buffalo, and catfish are found predominantly on the downstream side of river structures in slower waters. Most species do not stay in the stronger currents except during movement upstream and downstream.

Excessive turbidity reduces light penetration into the water thereby reducing photosynthesis by phytoplankton, attached algae, and submerged vegetation. However, fish species have adapted to varying turbid conditions and can tolerate high turbidities for short periods. The fish species that were native to the Missouri River were well adapted to very turbid conditions. The decrease in turbidity due to navigation and flood control projects has favored some fish species that feed by sight over those that feed by other senses.

Although no longer considered endangered or threatened, bald eagles are still protected under the Migratory Bird Treaty Act. They are intricately associated with riparian habitat along coasts, rivers, and lakes. Winter roost sites typically consist of clusters of large cottonwoods associated with food sources such as waterfowl and fish. Eagles tend to use the same roosts each year. Roost sites usually are in areas protected from harsh weather and human disturbance. Nests are found in mature, old-growth trees located in close proximity to water with adequate food resources. Quality of habitat appears more important than distance to water. Suitable habitat supports a diversity of prey and experiences little human disturbance. As with winter roost sites, nest trees usually are used for many years. Although bald eagle populations have increased, they continue to be threatened by habitat loss, environmental contaminants (i.e., organophosphate pesticides, heavy metals, and oil spills), electrocution by power lines, and human disturbance. Management strategies include use of buffer zones around nests, and continued monitoring of populations.

6.1.4. Endangered Species:

The Missouri River historically provided habitat for the threatened piping plover, endangered least tern, and endangered pallid sturgeon.

Piping plover and least tern are types of shorebird that nest on sandbars along the Missouri River. Sand bars become too vegetated over time for suitable nest sites unless occasional floods scour them bare. Habitat within CENWK has been practically eliminated through river channelization, construction of upstream impoundments, related changes in water flow, stream bank stabilization, and shoreline development.

Pallid sturgeon is a slow-growing fish species that feeds primarily on small fish and immature aquatic insects. This species is a bottom dweller, found in areas of strong current and firm sand bottom in the main channel of large turbid rivers such as the Missouri River. The pallid sturgeon's habitat within

CENWK has been modified through river channelization, construction of impoundments upstream, and related changes in water flow. These changes have blocked the pallid sturgeon's movements, destroyed or altered spawning areas, reduced food sources or their ability to obtain food, and altered water temperatures and other environmental conditions necessary for the species' survival. Another threat to the species' survival is an apparent lack of reproduction. CENWK with the Corps of Engineers Northwestern Division (CENWD) is actively working for pallid sturgeon recovery through design and construction of shallow water habitat. CENWD has also modified the Missouri River Master Water Control Manual to incorporate bimodal spring pulse releases from Gavins Point Dam, the lowest dam on the System. Spring pulse releases are intended to trigger spawning of the pallid sturgeon.

6.1.5. River Boat Wrecks:

Perhaps as many as 700 different boats operated on the Missouri River between 1819 and the final disappearance of the paddle wheelers in the first decade after 1900. About 300 of these boats were wrecked during this same period of time. A report prepared by U.S. Army Corps of Engineers Captain H.W. Chittenden, secretary of the Missouri River Commission, in 1897, gives the names of 273 steamboats wrecked on the Missouri River from the beginning of navigation until 1897. About 100 of these boats were lost in the period between 1820 and 1860. Before the river was channelized and constrained by dikes and levees it shifted back and forth across the floodplain so the current channel is not located where many of these boats were wrecked. Also, because of the historic dredging and the dynamic and powerful nature of the river, it is not likely that much remains of any boats within the current river channel.

6.1.6. Historic Sites:

There are various historic towns and sites along the banks of the Missouri River including Clark's Hill/Norton State Historic Site, the Missouri State Capitol and Jefferson Landing State Historic Site, Arrow Rock State Historic Site, Battle of Lexington State Historic site, Fort Osage, Fort Leavenworth and the Frontier Army Museum.

6.1.7. River Infrastructure:

The Missouri River Bank Stabilization and Navigation Project (BSNP) was designed to prevent bank erosion and channel meandering and to provide reliable commercial navigation on the Missouri River. This project, authorized by Congress in the Rivers and Harbors Act of 1945, is designed to secure a permanent, continuous, open-river navigation channel with a 9-foot depth and a width of not less than 300 feet under full navigation service conditions for a distance of 735 miles from near Sioux City, Iowa to the mouth near St. Louis,

Missouri. Construction of the navigation works was declared complete in September 1981, although corrective work will be required as the Missouri River continues to form its channel in response to changing flow conditions. The navigation project is not accomplished by using locks, as is the case on most of the inland waterway systems, but by using river structures placed to confine and control the channel. The use of these structures produces velocities high enough to prevent the accumulation of sediment in the channel and permits an open river channel condition for the entire length of the project. Maintenance of these dimensions, however, requires releases from the reservoir system and some infrequent dredging activities, particularly during periods of sub-normal water supply. The velocities in the Missouri River are higher than on other inland navigation systems, which can present challenges to navigating the river. This navigation project is an important link with the Mississippi River waterway system. Low-cost transportation, particularly for bulk commodities, is available at many localities in the Missouri River valley. Cities and commercial interests have provided facilities along the banks of the river for both handling and managing navigation traffic.

Major commodities transported on the Missouri River include agricultural products (farm and food products); chemicals, including fertilizers; petroleum products, including asphalt; manufactured goods, including building products such as cement; and crude materials such as sand, gravel, and materials used to maintain the Missouri River BSNP. Commercial tonnage, which excludes sand and gravel and waterway materials, peaked in 1977 at 3,300,000 tons and has generally declined since then totaling 1,343,600 tons in 2000. Total tonnage continued to set records totaling 8,733,000 tons in 2000. In 2000 sand and gravel accounted for 82.7 percent of all commodities transported on the Missouri River.

Commercial tonnage moves throughout the entire navigation season, but tends to peak in the spring and fall. The state of Missouri is typically an origin or destination for over half of Missouri River commercial tonnage. The Port of Kansas City serves as an origin or destination for about one-third to as much as one-half of Missouri River commercial tonnage. Up-bound movements of commercial products have recently exceeded down-bound movements by as much as two-to-one. This is a reversal of the predominant direction of product movement from earlier decades of Missouri River navigation, when grain movements from the Midwest were more dominant. Approximately 90 percent of Missouri River commercial tonnage is also moved on the Mississippi River. About 120 docks and terminals are located on the lower Missouri River. Approximately one-half of these are located near and downstream of Kansas City, about 26 percent in the reach from Nebraska City and to Kansas City, about 11 percent in the reach from Omaha to Nebraska City, and about 10 percent from Sioux City to Omaha.

In addition to the Missouri River Bank Stabilization and Navigation Project,

numerous levees and other structures have been constructed to prevent flooding of adjacent communities. Communities, industry, and the states have also constructed numerous water intake structures, outfall structures, bridge abutments, boat ramps, wharfs and other important structures. The river bed has degraded several feet since these structures were constructed, disabling several water intake structures, contributing to several levee slope and sheet piling and bank failures, contributing to tributary head cutting and leaving the remaining structures vulnerable to some degree, especially during flood events.

6.2. Expected Impacts:

6.2.1. Special Aquatic Sites:

Special conditions and dredge exclusion zones developed in informal consultation between the Kansas City District, the FWS, MDNR, MDC, KDWP, KDHE, and the applicants, will exclude dredging, discharging unwanted material and water, docking, unloading, and stockpiling operations to prevent or minimize the potential for significant negative impacts within wildlife sanctuaries and refuges, wetlands, mudflats, and vegetated shallows. Riffle and pool complexes don't occur on the Missouri River within the Kansas City District. No new dredging or stockpiling operations that could potentially impact special aquatic sites would be authorized.

6.2.2. Water Quality:

Commercial dredging operations cause a minor increase in turbidity measurements in the vicinity of their operation. Localized turbidity increases also result from commercial navigation and channel maintenance requirements. Any dredging operation could temporarily re-suspend or expose some chemical contaminants in the sediment such as heavy metals, pesticides, DDT, and mercury. This effect, when compared with agricultural land use and industrial and municipal discharges, is not normally a significant factor in the control of water quality. The change in sediment concentration is important from a water quality aspect in that sediment particles absorb and transport pesticide, residues, and other particles.

During 1990, Missouri River elutriate testing data was reviewed by CENWK-EC-HH to identify, under the water quality and drinking water standards current at that time, possible dredging contamination problems. The data also was utilized in calculating a mixing zone for dilution of dissolved contaminants. The available elutriate testing was done in 1985 on the bed materials between miles 370 and 375 for the Missouri River Levee System (MRLS) Unit L-385 project originally to evaluate the potential for contaminants to be released in open water if a dredging operation was used to make the random fill for this MRLS Unit. Additionally, data on dredge-

suspended solids was utilized for determination of a mixing zone for settling of these suspended materials and in determination of dredge exclusion zones around municipal drinking water intakes.

Analysis following the elutriate testing in 1985 revealed that ten contaminants exceeded ambient (receiving) water concentrations in at least one sample each, but none exceeded drinking water standards in effect at that time. During L - 385 project coordination, the Kansas City, Missouri Water & Pollution Control Department and the District agreed that cyanide and five metal contaminants (arsenic, antimony, cadmium, nickel, and zinc) were only slightly greater than the ambient concentrations. Di-n-butyl phthalate and methylene chloride were considered by the District to be contaminants introduced at the lab during analysis although the Water Department felt the former may have been dredging contamination. The Water Department also felt that elevated chloroform and toluene, in addition to taste and odor problems resulting from synergy between dredging and discharges from the contaminated Line Creek area, may make additional water treatment necessary. Experts on dredging from WES reviewed the 1985 data in 1988 and agreed there would be practically no release of contaminants from dredging the sandy bed sediments. WES expressed the belief that mixing would "quickly reduce any elevated concentrations to ambient levels" and eliminate or reduce the potential for significant negative impacts.

6.2.3. Water Quantity and Availability:

There is no significant reduction in the surface water quantity by commercial dredging operations. The materials removed are continually being drained with only a small percent of water retained. Material that has been stockpiled for one day has been shown to have a moisture content equal to three to four percent of the weight of oven dried material.

Degradation of the Missouri River bed in the Kansas City reach has negatively impacted the surface water intake structures of municipal drinking water providers and energy providers. This has required them to shut down or bring in temporary pumping facilities while they retrofit their water intake structures. The recommended alternative includes conditions that will seek to control and mitigate bed degradation and eliminate or reduce the potential for significant negative impacts.

Because of bed degradation and water intake issues, several municipal drinking water providers in the Kansas City area have installed horizontal collector wells along the Missouri River. Dredging can remove the permeable aquifer materials that provide the natural filtration capacity. Additionally, the depressions left by dredging are filled by the discarded finer-grained deposits of silt and clay that the dredger doesn't want. This disruption can reduce the permeability of the river bed and aquifer and reduce the quantity and quality

of water being pumped from the wells. Areas of substantial bed degradation would result in lowering of the surrounding groundwater level. The recommended alternative includes conditions negotiated with the municipal drinking water providers that exclude dredging from within 1000 feet of their collector wells and eliminate of reduce the potential for significant negative impacts.

6.2.4. Fish and Wildlife:

Cutter-head suction dredges can negatively impact fish and other aquatic organisms that are sucked up and dismembered by the intake or buried by the discharge. Commercial dredging activities in the Missouri River, when in compliance with the standard permit special conditions prohibiting dredging within 100 feet of the riverbank or 200 feet from navigation structures. Because the permit conditions limit dredging to the faster moving navigation channel and avoids the main fish habitat sites, we don't anticipate significant negative impacts on the fish populations. Currently growing populations of most game fish species support this conclusion. Indigenous fish species were well adapted to the high sediment load, fluctuating river flows, and meandering river channel with extensive sandbars, sloughs, and islands and have been negatively impacted by the flood control and navigation activities and resulting deeper, faster, and narrower river conditions of the new Missouri River. The dredging operation increases turbidity in the near vicinity of the dredge by the return of water and unwanted material. Considering the historical Missouri River turbidity levels, riverbed characteristics and movement, the increased turbidity is not considered detrimental to indigenous fish populations. The detrimental impacts on the aquatic environment from dredging operations result more from the disposal and placement of dredge material rather than the removal of sand and gravel from the channel.

Silt and sediment are particularly damaging to habitat consisting of gravel and rubble-type bottoms. The sediment fills the interstices between gravel and stones, thereby eliminating the spawning grounds of fish and habitat of many types of aquatic insects and other invertebrate animals. The excavation and adjacent placement of dredged material may result in local relocation and incidental, insignificant mortality of benthic invertebrates.

The Missouri River is a 303(d) listed stream for protection of human health from consumption of fish with elevated levels of PCBs and Chlordane. (It has been proposed for delisting by MDNR but has not yet been approved by EPA.) Even though they have been banned, both chlordane and PCBs degrade very slowly, making them particularly persistent in the environment. They remain in the soil for long periods of time. These pollutants are not soluble so are not readily found in the water column but adsorb to soil particles in the river bed. Bottom-feeding fish, such as carp, become exposed to chlordane and PCBs due to their feeding and dwelling preferences near the river bed

where contaminated sediments persist. Fish uptake these pollutants through the consumption of contaminated aquatic organisms. Once the pollutants are absorbed into the bloodstream, they accumulate primarily in fatty tissues. Once in the fatty tissues, the pollutants are biomagnified, or increased in concentration, as the compound is transferred through the food chain. These fish include fatty fish, such as carp, catfish, buffalo, drum, suckers and paddlefish. Because the dredging occurs in the navigation channel which is not the primary fish habitat, and the areas are regularly dredged and quickly refilled to some degree, we don't believe that it will significantly increase the level of availability or bioaccumulation of contaminants in fish above current conditions and will not create the potential for significant negative impacts.

Some terrestrial vegetation was cleared during the initial construction of the unloading and stockpiling facilities. Consequently, a minor loss of some wildlife habitat did occur. Some indigenous species of animals which may have been affected by habitat loss include raccoon, fox, opossum, squirrel, cottontail rabbit, skunk, mice, voles, and various birds. However, because no new off loading operations will be authorized by this permit, the proposed dredging operations will not create the potential for significant negative impacts to terrestrial wildlife or habitat. Various species of birds such as the bald eagle normally associated with the river and adjacent uplands could be affected by the activity and noise of the dredging vessels. Because they have coexisted with the dredging operations for years and permit conditions restrict the dredges from the shallow water habitat areas, the proposed dredging operations will not create the potential for significant negative impacts to avian wildlife.

6.2.5. Flood Hazards and Floodplain Values:

The dredging, docking, unloading and stockpiling operations have been evaluated in terms of flood height impacts. The proposed facilities, with material stockpiles included, would result in a negligible impact on flood water heights along the Missouri River. During extreme high water conditions most stockpiles of dredged material along the shore would readily wash away.

Bed degradation has been shown to adversely affect infrastructure in and along the river, to be a cause of bank instability, and to lead to head cuts on tributaries that can cause tributary bank instability. Continued bed degradation on the Missouri River could negatively affect flood control efforts along the Missouri River and its tributaries, increasing damage from floods and devaluing floodplain properties. The recommended alternative includes conditions intended to control and mitigate bed degradation, exclude dredging near those vulnerable structures, and eliminate or reduce the potential for significant negative impacts.

6.2.6. Endangered Species:

All of the proposed dredging areas are within the historic range of the threatened piping plover, endangered least tern, and endangered pallid sturgeon. In compliance with the Endangered Species Act, a preliminary determination was made that the described work is not likely to adversely affect these species. After extensive informal consultation with CENWK-OD-R and the commercial dredgers, the FWS has concurred with CENWK-OD-R preliminary determination that the proposed dredging activities are not likely to adversely affect these species or their habitats. This determination that the proposed activity is not likely to adversely impact the listed species or their designated critical habitats is based upon retaining, as permit conditions, all measures previously identified in our March 18, 1994, Biological Assessment, and including new permit conditions that exclude dredging from specific reaches with identified potential pallid sturgeon habitat features and require better dredging monitoring and reporting.

6.2.7. Cultural Resources and Historic Properties:

The hydraulic dredging activities take place in the navigation channel of the Missouri River. During the public interest review of the previously issued permits (1996), it was determined that the proposed dredging would occur near the location of several historic riverboat wrecks so dredging was restricted in those areas. A no-dredging zone was also established for the Lexington, Missouri riverfront between river miles 316.4 through 317.3. This condition is retained in the renewal permit. Because of the long history of dredging in the Missouri River it is unlikely that any significant remains of unknown riverboat wrecks still exist within the reaches proposed for dredging. The existing docking, unloading and stockpiling facilities are located in areas which have been previously disturbed during their construction. Consequently, any historical and archaeological resources which may have existed in the project vicinity have probably either been previously recovered or destroyed. The National Register of Historic Places has been consulted and no listed properties are located in the potential impact area of this project. Listed properties on shore near dredging sites will not be disturbed by the proposed activity. However, the Department of the Army permits, if issued, will contain a general condition to protect any unknown historical and archaeological resources which might be disturbed by activities authorized by the permit. The preferred alternative has little potential for significant negative impacts to cultural resources and historic properties.

6.2.8. Cumulative and Secondary Impacts:

Analysis of the CRP water surfaces and flood stage water surfaces of the Missouri River since that data has been recorded shows that the river bed has degraded to some degree throughout the river below Rulo, Nebraska

(Enclosure 12.19 and Enclosure 12.57). Dredging is one of several possible causes of the degradation but correlation of the degradation between 1990 and 2005 with the volume of material commercially extracted during that period indicates that the river bed has degraded the most where dredging has been concentrated. Available sediment data indicates that total sand extraction is at or near the available bed material load. Any increase in the total extraction rate would potentially increase the average rate of degradation over the entire river and would create the potential for significant negative cumulative impacts. Maintaining the current extraction and degradation rates within the Kansas City reach at current levels would also create the potential for significant negative cumulative impacts.

Degradation of the Missouri River bed in the Kansas City reach has negatively impacted the intake structures of municipal drinking water providers and energy providers. This has required them to shut down or bring in temporary pumping facilities during low river flows or while they retrofit their water intake structures. Because of bed degradation and water intake issues, several municipal drinking water providers in the Kansas City area have installed horizontal collector wells that extend under the Missouri River. Dredging can remove the permeable aquifer materials that provide the natural filtration capacity. Additionally, the depressions in the river bed left by dredging could be filled by the discarded finer-grained deposits of silt and clay that the dredger doesn't want. This disruption can reduce the permeability of the river bed and aquifer and reduce the quantity and quality of water being pumped from the wells. Areas of substantial bed degradation would result in lowering of the surrounding groundwater level.

Bed degradation has been shown to adversely affect infrastructure in and along the river, to be a cause of bank instability, and to lead to head cuts on tributaries that can cause tributary bank instability. Continued bed degradation on the Missouri River could negatively affect flood control efforts along the Missouri River and its tributaries, increasing damage from floods and devaluing floodplain properties. Dredging near dikes, revetments, levees, utility crossings, water intakes and outfalls, and bridge footers and abutments can undermine them and make them more vulnerable during flood events.

Cutter-head suction dredges can negatively impact fish and other aquatic organisms that are sucked up and dismembered by the intake or buried by the discharge. Commercial dredging activities in the Missouri River, when in compliance with the standard permit special conditions prohibiting dredging within 100 feet of the riverbank or 200 feet from navigation structures. Because the permit conditions limit dredging to the faster moving navigation channel and avoids the main fish habitat sites, we don't anticipate significant negative impacts on the fish populations. Currently growing populations of most fish species support this conclusion. The dredging operation increases turbidity in the near vicinity of the dredge by the return of water and unwanted

material. Considering the normal Missouri River turbidity levels, riverbed characteristics and movement, the increased turbidity is not considered detrimental to indigenous fish populations.

The Missouri River is within the historic range of the endangered pallid sturgeon. The FWS expressed concern that the proposed dredging could negatively impact the pallid sturgeon directly through entrainment in the dredge intake and indirectly through destruction of shallow-water habitats by bed degradation After extensive informal consultation with CENWK-OD-R and the commercial dredgers, the FWS has concurred with CE-NWK-OD-R's preliminary determination that the proposed dredging activities are not likely to adversely affect the pallid sturgeon or their habitat based upon retaining, as permit conditions, all measures previously identified in our March 18, 1994, Biological Assessment, and including new permit conditions that exclude dredging from specific reaches with identified potential pallid sturgeon habitat features and require better dredging monitoring and reporting.

The Missouri River dredgers provide construction material to local concrete companies, construction companies, municipalities, highway and maintenance departments, and the general public. Although many construction activities could impact aquatic resources, those activities generally require DA authorization themselves, are not determined by the dredgers, and should not be considered secondary impacts of the dredging industry. With sand, gravel and manufactured construction materials available from local sources, savings to the consumer accrue in the form of reduced travel distance, fuels, vehicle wear, and labor expenditures. Denial of all dredging permits or severe or sudden reduction in total extraction allowed would create the potential for significant negative impacts on the dredging companies and consumers of dredged material.

The recommended alternative seeks to balance and protect the economic and ecologic interests by limiting total extraction to 2006 levels, incrementally reducing extraction in the most severely degrading Kansas City reach, limiting total extraction in any 10-mile reach to 1,200,000 tons, excluding dredging from near vulnerable structures and sites, requiring more accurate and continuous electronic dredge monitoring, requiring annual hydrographic surveys of dredged reaches, and limiting the permits to 3 years during which an EIS is prepared. The permit conditions should supply sufficient sand to meet most industry needs. The reduction in the Kansas City reach will require sand to be shipped from farther away and increase the cost of sand in the Kansas City area to some degree. The restriction on extraction within any 10-mile reach and the monitoring and survey requirements will cause a minor increase in the cost of dredging. Overall, these permit conditions should not create the potential for significant negative cumulative or secondary impacts.

6.2.9. Consideration of Property Ownership:

Denial or severe restriction of the proposed dredging would require development of alternative sand sources. In the metropolitan areas, there are not many sites with the desired quantities of suitable material. Those sites are often unavailable or to expensive or not zoned for mining. Community government and the public at large often don't want activities like a sand pit near their towns, homes or businesses. Development of upland sand pits could create the potential for significant negative impacts on property ownership.

The Missouri River belongs to the States of Missouri and Kansas and the docking, unloading, and stockpiling areas are already owned or controlled by the dredging companies. Because the recommended alternative would cause minimal reduction in total extraction and not require immediate development of substantial new upland sand pits, it should not create the potential for significant negative impacts on property ownership.

6.2.10. Energy Conservation and Development:

Numerous studies of fuel efficiency have been done, including some sponsored by the United States Departments of Energy and Transportation, and practically every one of these studies show similar results; that shallow-draft water transportation is the most fuel efficient mode of transportation for moving bulk raw materials, is the least energy intensive method of freight transportation when moving equivalent amounts of cargo, and consumes less energy than alternative modes. The no action alternative could cause sand and gravel to be obtained from upland locations where river transportation may not be an option. Transporting materials exclusively by ground transportation would decrease energy efficiency and increase energy expenditures. The recommended alternative would continue to allow sand and gravel to be dredged from and transported on the Missouri River resulting in energy conservation.

Degradation of the Missouri River bed in the Kansas City reach has negatively impacted the intake structures of energy generating facilities. This has required them to shut down or bring in temporary pumping facilities while they retrofit their water intake structures or construct water cooling towers. The recommended alternative includes conditions that will seek to control and mitigate bed degradation, maintain consistent water intake for energy generation, and minimize the potential for significant negative impacts.

6.2.11. Economics:

The need for the dredging activities is directly related to an economic problem that is always a major consideration in the sand and gravel industry; namely, the low unit value and bulky nature of its product. The cost of transporting sand and gravel to markets may amount to much more than production value.

Consequently, markets are extremely confined. Very little sand and gravel enters the interstate market. Therefore, Missouri is dependent upon local supplies to meet its construction needs.

The principle sources of sand and gravel in Missouri are the alluvial deposits associated with streams and their flood plains. Flood plain and in-channel deposits associated with the Mississippi and Missouri River are the source of approximately 75 percent of the sand and 15 percent of the gravel produced annually in Missouri. Missouri River sands consist mainly of quartz and are finer grained, with a higher percentage of silt, than Mississippi River sands.

The commercial dredging activities improve employment opportunities in local contracting and trucking companies. The effect on direct hiring of local labor varies from one operation to the next. A company that dredged, processed, and stockpiled a small amount of material each year would not hire a full-time, year-round work crew at the dredging facility so would not contribute as much as a larger company working year around.

The Missouri River dredgers provide material to local concrete companies, construction companies, municipalities, highway and maintenance departments, and the general public. With the availability of sand, gravel and manufactured construction materials on the local level, savings to the consumer accrue in the form of reduced travel distance, fuels, vehicle wear, and labor expenditures.

The dredging operations directly generate some local tax revenues through sales of construction materials. It indirectly generates a great deal of tax revenue through the other industries that use sand and gravel for tax generating products and services.

Improper or unrestrained dredging and bed degradation could damage dikes, revetments, levees, utility crossings, water intakes and outfalls, and bridge footers and abutments creating the potential for significant negative impacts to life and property within the community.

Denial of all dredging permits or severe or sudden reduction in total extraction allowed would create the potential for significant negative impacts on the dredging companies and consumers of dredged material.

The recommended alternative seeks to balance and protect the economic and ecologic interests by limiting total extraction to 2006 levels, incrementally reducing extraction in the most severely degrading Kansas City reach, limiting total extraction in any 10-mile reach to 1,200,000 tons, requiring more accurate and continuous electronic dredge monitoring, requiring annual hydrographic surveys of dredged reaches, and limiting the permits to 3 years during which an EIS is prepared. The permit conditions should supply sufficient sand to meet most industry needs. The reduction in the Kansas City

reach will require sand to be shipped from farther away and increase the cost of sand in the Kansas City area to some degree. The restriction on extraction within any 10-mile reach and the monitoring and survey requirements will cause a minor increase in the cost of dredging. Overall, these permit conditions should not create the potential for significant negative impacts on the economy of the region.

6.2.12. Navigation:

Authorizing annual extraction limits greater than the amount that has been annually extracted in recent years would probably result in bed degradation adversely impacting navigation and navigation structures on the Missouri River. The standard permit special conditions and annual extraction limits proposed in the recommended alternative will limit annual extraction to levels equal to or less than extraction levels of recent years. Because annual bed material load is dependent on annual flow volume and flow volumes have been extremely low for several years, the recommended alternative would incrementally decrease the annual extraction limit in the Kansas City reach over the next two years. Above and below the Kansas City reach, annual commercial extraction limits would be limited to 2006 extraction levels. The recommended alternative also would include conditions requiring the dredging operations to comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490) and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States and to not cause an unreasonable interference with navigation by the existence or use of the authorized activity. These permit conditions should eliminate or minimize the potential for significant negative impacts on navigation.

6.2.13. Marine Sanctuaries:

There are no marine sanctuaries within the Kansas City District.

6.2.14. Traffic and Transportation Patterns:

Any reduction in dredging would require sand and gravel to be obtained from locations other than the Missouri River. If the material is trucked to its destination and the loads originated outside the commercial haul zone, regulations require smaller payloads. That would require more trucks, create a potential shortage of haulers and drivers, and increase trucking costs because of the added mileage. This would increase the price of sand and gravel needed for highway construction and increase shipping traffic on the highway system. Because the recommended alternative would be to authorize no new dredging operations, limit annual extraction to current levels, phase in reductions in the Kansas City reach, and allow the reduction to be made up down stream, total

sand supplies should remain relatively constant over the next three years and there should be little potential for significant negative impacts on traffic and transportation patterns.

6.2.15. Air Quality and Noise Levels:

The commercial dredging operations on the river are generally some distance from residential and commercial buildings and the offloading facilities are generally in industrial or rural areas. Since the recommended action would not authorize any new dredging operations, it should not create the potential for significant negative impacts on air quality and noise levels. If excessive levels were to occur, enforcement of air and noise standards and ordinances by the appropriate Federal, state, or local agency with jurisdiction, would be required.

6.2.16. Safety:

Normal commercial dredging operations in compliance with the standard permit special conditions and other pertinent laws and regulations would not negatively affect the safety of the operator, other boat or barge traffic on the Missouri River, other automobile or truck traffic, or the public in general. The preferred alternative would not create the potential for significant negative impacts on public safety.

6.2.17. Land Use:

The principle sources of sand and gravel in Missouri are the alluvial deposits associated with streams and their flood plains. Flood plain and in-channel deposits associated with the Mississippi and Missouri River are the source of approximately 75 percent of the sand and 15 percent of the gravel produced annually in Missouri. Missouri River sands consist mainly of quartz and are finer grained, with a higher percentage of silt, than Mississippi River sands. The Mississippi and Missouri River floodplains also include some of the most fertile and productive areas in the state.

Denial of all permits or immediate reduction in total extraction would force dredging companies to immediately find upland sources and provide little time for further analysis of the issue. A shortfall in available sand and gravel could slow local construction activity in both the public and private sector indirectly slowing impacts to undeveloped land in the urban areas. Meeting the shortfall and the increasing demands for sand and gravel may directly impact farmland and wildlife habitat on floodplains and upland areas where deposits are found and developed. The recommended alternative would authorize no new dredging operations, limit annual extraction to current levels, phase in reductions in the Kansas City reach, allow the reduction to be made up down stream, and have little potential to create significant negative impacts on land use.

6.2.18. Food and Fiber Production:

Denial of all permits or immediate reduction in total extraction would force dredging companies to immediately find upland sources and provide little time for further analysis of the issue. A shortfall in available sand and gravel could slow local construction activity in both the public and private sector indirectly slowing impacts to undeveloped farmland in the urban areas. Meeting the shortfall and the increasing demands for sand and gravel may directly impact farmland and wildlife habitat on floodplains and upland areas where deposits are found and developed. The recommended alternative would authorize no new dredging operations, limit annual extraction to current levels, phase in reductions in the Kansas City reach, allow the reduction to be made up down stream, and have little potential to create significant negative impacts on food and fiber production.

6.2.19. Mineral Needs:

The no action and alternate site alternatives would result in an immediate shortfall across the state of about 6,000,000 tons of material that would need to be replaced from other sources. Replacing the shortfall would require substantial additional expense for transportation from distant sources while other sources are found, purchased, permitted, and developed within the regions of demand. The recommended alternative with its phased in reduction of dredging in the Kansas City reach by 450,000 tons in 2008 and 900,000 tons in 2009 would allow the reduction to be made up downstream between river miles 328.00 and 301.05. This phase in could be more easily dealt with by the various parts of the building and construction industry within the state. MoDOT indicated that they used 623,416 tons of sand in 2006 and will need 600,000 and 750,000 tons in 2007 and 2008 respectively. The recommended alternative would cap overall extraction at 2006 levels which would require MoDOT to import approximately 126,584 tons of sand if all other consumers use the same amount as in 2006. This could cost MoDOT approximately $3,038,016. The recommended alternative seeks to balance the mineral needs of the region with the other functions and values of the river and minimizes the potential for significant negative impacts to mineral needs.

6.3. Environmental Benefits:

The dredging, unloading, stockpiling, and sale of sand from the Missouri River will have no expected direct environmental benefits. However, the river is continually transporting bed material from the upper portions of the Missouri River basin down to the Mississippi River and eventually, the Gulf of Mexico. Dredging sand and gravel needed for construction from the river at a sustainable rate does prevent the environmental impacts of mining that material from the floodplain or uplands where it is a non-renewable, finite resource. So indirectly it does benefit or protect the upland environment.

7. Section 404(b)(1) Evaluation:

The subject activity has been evaluated in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The following discussion addresses adverse impacts, individually and cumulatively, for all evaluation factors identified in Subparts C through H of subject regulation. Alternatives considered in this evaluation are identified in Section 5 above. The findings of this evaluation are discussed in Section 10.2 below.

7.1. Physical and Chemical Characteristics (Subpart C):

7.1.1. Physical Substrate:

The substrate of the areas to be dredged consist primarily of fine grained quartz sand, silt, and some gravel deposited during periods of high flow. Missouri River substrates also have some organic material including lignite. The velocity in the main channel is high enough that silt and clay are kept in suspension. The total sediment load of the Missouri River increases to some degree as it progresses downstream because of the sediment added by tributaries. The concentration of the suspended sediment is reduced to some degree because of dilution caused by inflow of water from clearer Ozark streams.

The hydraulic cutter-head suction dredges have rotating cutters on the suction heads that allow them to dig and suck up compacted material and can operate up to 62 feet below the water surface. The water and material are discharged from the suction pipe onto vibrating screens, removing the desired material and discharging the water and unwanted material back into the river. Any course material, such as rocks, coarse gravel, clay balls, or coarse sand will immediately settle to the bottom of the disposal area and usually accumulate directly beneath the discharge point. The vast majority of the fine-grained material also descends rapidly to the bottom where it forms a low gradient circular or elliptical fluid mud mound. A small percentage (usually 1 to 3 percent) of the discharged material is stripped away from the outside of the slurry as it hits the water surface and descends through the water column and remains suspended in the water column as a turbidity plume. If the discharge is moved as the dredge advances, a series of mounds will develop. The majority of the mounded material is usually high-density, non-flowing fluid mud. The short and long-term dispersion characteristics of the discharged slurry depend on many factors including the nature and rate of slurry discharge, the discharge configuration, and the hydrodynamic regime and bottom topography in the disposal area. Because of the relatively high river velocity, no long-term or permanent changes in bottom geometry would occur.

Because dredging constantly extracts the same gradation of sand, in order for

it to not contribute to bed degradation it is necessary that sufficient bed material load be available to replace the material removed by the dredgers. To not change the substrate composition, the available bed material load must be composed of the gradations removed by the dredgers. The bed material load is correlated to the river flow volume so less material is available for extraction during low flow years than is normally available. Based on sediment studies conducted in the Kansas City reach, the median annual bed material load for the Kansas City reach was estimated to be 7.4 million tons. Given the limited sediment contribution by tributaries between Kansas City and the mouth of the Missouri river, it is likely that the current annual extraction volumes are already near or exceeding the annual bed material load since the annual dredging extraction volume for the entire river within Missouri is 7.8 million tons. By reducing the annual extraction limit after drought years and capping the annual extraction limit at current levels, the potential for bed degradation and changes in the substrate composition are reduced.

7.1.2. Suspended Particulates and Turbidity:

Most of the turbidity generated by a cutter-head dredging operation is usually found in the vicinity of the intake and discharge sites. The levels of turbidity associated with the intake are directly related to the type and quantity of material which is cut but not picked up by the suction. The amount of material supplied to the suction is controlled primarily by the rate of cutter rotation, the vertical thickness of the dredge cut, and the swing rate of the dredge. The ability of the dredge's suction to pick up this bottom material determines the amount of cut material that remains on the bottom or suspended in the water column. The water and unwanted material are discharged from the suction pipe onto vibrating screens, removing the desired material and discharging the water and unwanted water back into the river. A small percentage (usually 1 to 3 percent) of the discharged material is stripped away from the outside of the slurry as it hits the water surface and descends through the water column and remains suspended in the water column as a turbidity plume. In addition to the intake and discharge sites, turbidity may be caused by sloughing material from the sides of vertical cuts, inefficient operation techniques, and prop-wash from tenders in shallow water areas outside the navigation channel.

During dredging operations, turbidity will be significantly increased in the shape of a plume downstream from the cutter-head and the discharge pipe. Dissipation of this plume is dependent on several factors such as water depth, current velocity, and the like. Research, as part of the Dredged Material Research Program (DMRP), has concluded that the esthetic impact of the discharge plume is much more serious than the actual physical impact. This severe esthetic impact would dissipate very soon after cessation of the activities.

The Missouri River was historically much more turbid than it is today and

native aquatic organisms are well adapted to more turbid conditions. No direct destructive effects are anticipated. However, nektonic and planktonic organisms would be disturbed by the hydraulic dredging.

7.1.3. Water:

According to the draft "Total Maximum Daily Loads (TMDLS) for Chlordane and Polychlorinated Biphenyls in the Missouri River" published in public notice by MDNR in August 2006, the Missouri River between St. Louis and the Iowa border is impaired for the use of protection of warm water aquatic life and human health associated with fish consumption because Chlordane and PCBs bioaccumulate in the fatty tissue of fish. The levels of dissolved or suspended chlordane and PCBs in water were not elevated sufficiently to pose a danger in drinking water. The dredging will not add any new contaminants to the river. The permit conditions would result in only minimal short term impacts to water quality.

7.1.4. Current Patterns and Water Circulation:

The discharge of dredged material would not permanently change the hydrography of an area with subsequent changes in changes in circulation patterns and shoaling areas. The stockpiling of material on shore would not affect groundwater recharge, wetland areas, or other areas of nutrient and mineral cycling, or natural areas of contaminant detoxification and fixation. Change in the composition or depth of the substrate over existing horizontal municipal drinking water collector wells along the river could negatively affect the existing permeable aquifer material and reduce the quality and quantity of this municipal drinking water source. Excluding dredging within 1000 feet of these wells should avoid or minimize adverse impacts.

7.1.5. Normal Water Fluctuations:

In 2003 an Ad Hoc panel of Corps personnel with expertise in sediment transport, hydraulics, and fluvial geomorphology determined that commercial dredging is one of at least four factors contributing to bed degradation that has occurred over the last 100 years in the Missouri River throughout the Kansas City District but particularly between river miles 340 and 400 near Kansas City. Bed degradation has resulted in lowering of the average bed elevation and lowering of the stage for discharges below 70,000 cfs, has been shown to adversely affect infrastructure in and along the river, and contributes to bank instability and head cuts on tributaries that can cause tributary bank instability. By reducing the annual extraction limit after drought years and capping the annual extraction limit at current levels, the potential for bed degradation and changes in the normal water fluctuations and river stages are minimized.

7.1.6. Salinity Gradients:

The Missouri River contains fresh water. The dredging operation will not introduce salt bearing material or additional water so should neither increase nor decrease the normal salinity level of the river.

7.2. Biological Characteristics (Subpart D):

7.2.1. Threatened and Endangered Species:

All of the proposed dredging areas are within the historic range of the threatened piping plover, endangered least tern, and endangered pallid sturgeon. In compliance with the Endangered Species Act, a preliminary determination was made that the described work is not likely to adversely affect these species. After extensive informal consultation with CENWK-OD-R and the commercial dredgers concerning the pallid sturgeon, the FWS has concurred with CENWK-OD-R preliminary determination that the proposed dredging activities are not likely to adversely affect these species or their habitats. This determination that the proposed activity is not likely to adversely impact the listed species or their designated critical habitats is based upon retaining, as permit conditions, all measures previously identified in our March 18, 1994, Biological Assessment, and including new permit conditions that exclude dredging from specific reaches with identified potential pallid sturgeon habitat features and require better dredging monitoring and reporting.

7.2.2. Fish and Other Aquatic Organisms:

Commercial dredging activities in the Missouri River, when in compliance with the standard permit special conditions prohibiting dredging within 100 feet of the riverbank or 200 feet from navigation structures, have minor adverse effects on fish habitat. A major portion of the dredging and discharging of water and excessively fine and coarse material occurs in or near the navigation channel where fish activity is minimal. The dredging operation increases turbidity in the near vicinity of the dredge by the return of water and unwanted material. Considering the normal Missouri River turbidity levels, riverbed characteristics and movement, the increased turbidity is not considered detrimental to indigenous fish populations. The detrimental impacts on the aquatic environment from dredging operations result more from the disposal and placement of dredge material rather than the removal of sand and gravel from the channel.

Silt and sediment are particularly damaging to habitat consisting of gravel and rubble-type bottoms. The sediment fills the interstices between gravel and stones, thereby eliminating the spawning grounds of fish and habitat of many types of aquatic insects and other invertebrate animals. The excavation and adjacent placement of dredged material may result in local relocation and incidental, insignificant mortality of benthic invertebrates.

The Missouri River is a 303(d) listed stream for protection of human health from consumption of fish with elevated levels of PCBs and Chlordane. (It has been proposed for delisting by MDNR but has not yet been approved by EPA). Even though they have been banned, both chlordane and PCBs degrade very slowly, making them particularly persistent in the environment. They remain in the soil for long periods of time. These pollutants are not soluble so are not readily found in the water column but adsorb to soil particles in the river bed. Bottom-feeding fish, such as carp, become exposed to chlordane and PCBs due to their feeding and dwelling preferences near the river bed where contaminated sediments persist. Fish uptake these pollutants through the consumption of contaminated aquatic organisms. Once the pollutants are absorbed into the bloodstream, they accumulate primarily in fatty tissues. Once in the fatty tissues, the pollutants are biomagnified, or increased in concentration, as the compound is transferred through the food chain. These fish include fatty fish, such as carp, catfish, buffalo, drum, suckers and paddlefish. Because the dredging occurs in the navigation channel which is not the primary fish habitat, and the areas are regularly dredged and quickly refilled to some degree, we don't believe that it will significantly increase the level of available contaminants above current normal conditions.

7.2.3. Other Wildlife:

Some terrestrial vegetation was cleared during the initial construction of the unloading and stockpiling facilities. Consequently, a minor loss of some wildlife habitat did occur. Some indigenous species of animals which may have been affected by habitat loss include raccoon, fox, opossum, squirrel, cottontail rabbit, skunk, mice, voles, and various birds. However, because no new off-loading facilities will be authorized by this permit, no additional loss of terrestrial habitat is anticipated to occur with reauthorization of the currently operating dredging operations.

7.3. Special Aquatic Sites (Subpart E):

7.3.1. Sanctuaries and Refuges:

Numerous local, state, and federal wildlife refuges occur along the Missouri River within areas proposed for dredging. Special conditions and dredge exclusion zones developed in informal consultation between the Kansas City District, the FWS, MDNR, MDC, KDWP, KDHE, and the applicants, will exclude dredging, discharging unwanted material and water, docking, unloading, and stockpiling operations from primary fish and wildlife habitat within wildlife sanctuaries and refuges. The proposed dredging operations, when in compliance with these special conditions, would have minor adverse effects on fish or wildlife habitat within wildlife sanctuaries and refuges.

7.3.2. Wetlands:

Special conditions and dredge exclusion zones developed in informal consultation between the Kansas City District, the FWS, MDNR, MDC, KDWP, KDHE, and the applicants, will exclude dredging, discharging unwanted material and water, docking, unloading, and stockpiling operations within wetlands.

7.3.3. Mud Flats:

Special conditions and dredge exclusion zones developed in informal consultation between the Kansas City District, the FWS, MDNR, MDC, KDWP, KDHE, and the applicants, will exclude dredging, discharging unwanted material and water, docking, unloading, and stockpiling operations within mudflats.

7.3.4. Vegetated Shallows:

Special conditions and dredge exclusion zones developed in informal consultation between the Kansas City District, the FWS, MDNR, MDC, KDWP, KDHE, and the applicants, will exclude dredging, discharging unwanted material and water, docking, unloading, and stockpiling operations within vegetated shallows.

7.3.5. Coral Reefs:

Corals reefs do not occur in the Missouri River within the Kansas City District.

7.3.6. Riffle and Pool Complexes:

The Missouri River within the Kansas City District is a deep, fast flowing navigable river without any riffle and pool complexes.

7.4. Human Use Characteristics (Subpart F):

7.4.1. Municipal and Private Water Supplies:

During 1990, Missouri River elutriate testing data was reviewed by CENWK-EC-HH to identify, under the water quality and drinking water standards current at that time, possible dredging contamination problems. The data also was utilized in calculating a mixing zone for dilution of dissolved contaminants. The available elutriate testing was done in 1985 on the bed materials between miles 370 and 375 for the MRLS Unit L-385 project originally to evaluate the potential for contaminants to be released in open water if a dredging operation was used to make the random fill for this MRLS Unit. Additionally, data on dredge-suspended solids was utilized for

determination of a mixing zone for settling of these suspended materials and in determination of dredge exclusion zones around municipal drinking water intakes.

Analysis following the elutriate testing in 1985 revealed that ten contaminants exceeded ambient (receiving) water concentrations in at least one sample each, but none exceeded drinking water standards in effect at that time. During L - 385 project coordination, the Kansas City, Missouri Water & Pollution Control Department and the District agreed that cyanide and five metal contaminants (arsenic, antimony, cadmium, nickel, and zinc) were only slightly greater than the ambient concentrations. Di-n-butylphthalate and methylene chloride were considered by the District to be contaminants introduced at the lab during analysis although the Water Department felt the former may have been dredging contamination. The Water Department also felt that elevated chloroform and toluene, in addition to taste and odor problems resulting from synergy between dredging and discharges from the contaminated Line Creek area, may make additional water treatment necessary. Experts on dredging from WES reviewed the 1985 data in 1988 and agreed there would be practically no release of contaminants from dredging the sand bed sediments. WES expressed the belief that mixing would "quickly reduce any elevated concentrations to ambient levels".

There is no significant reduction in the water quantity by commercial dredging operations. The materials removed are continually being drained with only a small percent of water retained. Material that has been stockpiled for one day has been shown to have a moisture content equal to three to four percent of the weight of oven dried material.

Degradation of the Missouri River bed in the Kansas City reach has negatively impacted the intake structures of municipal drinking water providers and energy providers. This has required them to shut down or bring in temporary pumping facilities while they retrofit their water intake structures. The recommended alternative includes conditions that will seek to control and mitigate bed degradation.

Because of bed degradation and water intake issues, several municipal drinking water providers in the Kansas City area have installed horizontal collector wells along the Missouri River. Dredging can remove the permeable aquifer materials that provide the natural filtration capacity. Additionally, the depressions left by dredging are filled by the discarded finer-grained deposits of silt and clay that the dredger doesn't want. This disruption can reduce the permeability of the river bed and aquifer and reduce the quantity and quality of water being pumped from the wells. The recommended alternative includes conditions negotiated with the municipal drinking water providers that exclude dredging from within 1000 feet of their collector wells.

7.4.2. Recreational and Commercial Fisheries:

The navigation channel or fast water has very little potential for fish production. Sampling has indicated that at bank revetments, where the current is strong, few fish are found. Species such as carp, buffalo, and catfish are found predominantly on the downstream side of river structures in slower waters. Most species do not stay in the stronger currents except during movement up and down stream.

Commercial dredging activities in the Missouri River, when in compliance with the standard permit special conditions prohibiting dredging within 100 feet of the riverbank or 200 feet from navigation structures, have minor adverse effects on fish habitat. A major portion of the dredging and discharging of water and excessively fine and coarse material occurs in or near the navigation channel where fish activity is minimal. The dredging operation increases turbidity in the near vicinity of the dredge by the return of water and unwanted material. The increased turbidity would have a short term and local negative impact on popular non-indigenous sport fish species such as bass that forage or hunt by sight. Considering the historical Missouri River turbidity levels, riverbed characteristics and movement, the increased turbidity from dredging is not considered detrimental to indigenous fish populations such as catfish, buffalo, paddlefish, and sturgeon.

7.4.3. Water-Related Recreation:

The Missouri River is utilized by recreational motor boaters, canoeists, and kayakers to some extent. Because of the fast current, it is not used for water skiing or swimming. The dredges and associated barges are well marked night and day. The dredges are anchored to the river bottom so the anchor cables are mostly under water and don't pose a significant hazard to the recreation boats or their occupants. Even when they are loading a barge to the side, there is plenty of space in the navigation channel for other recreation boats to pass.

7.4.4. Aesthetics:

Because of the normally turbid nature of the Missouri River, the discharge turbidity plume is indiscernible to the human eye. The noise and lights of the dredge operation would have a minor local impact on the "wildness" and solitude of the river to some recreationists and residents nearby. However, dredging and barge traffic has a long history on the Missouri River and is part of the local flavor and "mystic" that appeal to many other recreationists and residents.

7.4.5. Parks, National and Historic Monuments, National Seashores, Wild and Scenic Rivers, Wilderness Areas, Research Sites and Similar Preserves:

There are several State Historic Sites along the river in stretches that are

dredged. The historic significance of these sites is related to their role as river towns or landings in river borne exploration, commerce, and transportation. Dredging has occurred in these areas for more than a half century and is part of the cultural fabric.

7.5. Contaminant Evaluation and Testing (Subpart G):

7.5.1. Evaluation of Dredged or Fill Material:

The draft "Total Maximum Daily Loads (TMDLS) for Chlordane and Polychlorinated Biphenyls in the Missouri River" published in public notice by MDNR in August 2006, identified chlordane and PCPs as two contaminants impairing the Missouri River. There are several Superfund Sites on the National Priority List for cleanup in the St. Louis, Kansas City, St. Joseph, Topeka, and Omaha areas that have probably contributed contaminants including PCBs to the Missouri River. PCBs were commonly used in transformers and other electrical equipment such as fluorescent light fixtures as coolants and lubricants and were also used as hydraulic oils. U.S. production of PCBs ended in 1977 but it does persist in the environment and bio-accumulate in fish tissue. Chlordane and other chlorinated hydrocarbon pesticides were commonly used in the past for termite control and pest control at nurseries, golf courses, and general agriculture. Chlordane was banned completely by 1988, but due to its persistence, eroding contaminated soil can provide a continuing source of Chlordane to streams and lakes. Several lakes and ponds in the Kansas City area are known to have high levels of chlordane. According to the MDNR report cited above, data collected to date indicates a general downward trend in PCB and Chlordane levels in the Missouri River.

7.5.2. Dredge and Discharge Site Comparison:

When contaminants introduced into the water column become fixed into the underlying sediments, they generally remain dissolved in the sediment interstitial or pore water, become absorbed to the sediment exchange portion as an ionized constituent, form organic complexes, and/or become involved in complex sediment oxidation-reduction reactions and precipitations. The fraction of a chemical constituent that is potentially available for release to the water column when sediments are disturbed is approximated by the interstitial water concentrations and the loosely bound (easily exchangeable) fraction in the sediment. In order to estimate the impact to the water column, an elutriate test would be used in conjunction with a mixing zone analysis.

Analysis of data from elutriate tests conducted by CENWK in 1985 revealed that ten contaminants exceeded ambient water concentrations in at least one sample each, but none exceeded drinking water standards in effect at that time. Results of the 1985 elutriate tests did indicated the presence of a pocket of cadmium near Hermann, Missouri, which would elevate the dissolved

cadmium concentrations above ambient water concentrations and exceed 1990 standards for drinking water.

Based on the test results and the 1990 drinking water standards, a mixing zone was calculated which would allow the greatest distance, worst case scenario, for the dilution of dissolved cadmium concentrations to become equivalent to the background concentrations. In the analysis, two plume conditions were considered where: (1) the dredging would be confined to the thalweg or deepest part of the river and (2) the dredging would occur over the entire cross-section between the Rectified Channel Lines. Since the mixing is inversely proportional to the velocity and depth of flow, the lower flow regime will generate the longer and wider plume. Under thalweg conditions, assuming a flow return of 50 cfs, the plume mixing length is approximately 1.79 feet. By doubling the return flow to 100 cfs, the plume length is 7.1 feet. The widths of the plumes are 0.9 and 1.8 feet, respectively. If the total cross-section is utilized, the plume lengths for the 40 and 100 cfs return flows are 6.9 and 27.7 feet and the widths are 1.3 and 2.6 feet, respectively. All of these numbers are less than the dimensions of a loading barge indicating that the contaminant concentrations of the dredge and discharge site are not significantly different.

Suspended solids or turbidity plumes data collected below a cutter-head dredge using underwater disposal near the confluence of the Kansas and Missouri rivers and in the Missouri River below Waverly, Missouri, indicated that concentrations return to background concentrations within a quarter mile or 1,300 feet. The same was true at other monitoring sites while collecting data below a baffled prop wash LCM. The Waterways Experiment Station under Environmental Effects of Dredging, "Technical Notes EEDP-09-1," December 1986, studied the suspended solids and turbidity plumes initiated from several types of dredging operations. These studies revealed that hopper dredging activities, such as the permittee will use, can become the worst type of dredging operations, depending on how the operation is performed. Two plumes can be generated, one from the dredger's cutter-head and one from the material and water discharge site or the overflow operations at the barge. In streams of less energy including the Mississippi River, some 4,000 feet have been documented for overflow increases of suspended solids concentration to return to background levels. If there is no discharge or overflow site, then only one plume along the bottom at the dredge cutter-head is generated and the return to normal background suspended solids concentrations is less than 1,000 feet.

Unwanted dredged material will be discharged adjacent to the dredged site. The dredge and discharge sites are subject to the same sources of contaminants, and materials and the two sites are substantially similar. Dredging has occurred in the same general reaches of the Missouri River for decades. The river bed is constantly changing and mixing sediments, filling in

recently dredged areas with sediment washed in from above. Based on this information and the results of elutriate testing and mixing zone analysis, it can be concluded that re-dredging these same areas to the same depth and immediately discharging unwanted dredged material won't release significant levels of additional contaminants such as PCBs, chlordane, or cadmium.

7.5.3. Chemical, Biological and Physical Evaluation:

Based on the dredge and discharge site comparison it is not necessary to require the commercial dredging industry to perform chemical, biological, or physical testing for contaminants. The 4,000-foot no-dredge mixing zone required above municipal water intake structures eliminates the need for site specific testing. The 4,000-foot dredge exclusion zone is in effect for all municipal water intake structures, unless the municipality/community/owner and the permitted dredgers agree to a no impact mixing zone or reach distance, other than the minimum distance required to preserve the structural integrity of the banks and manmade structures. When such an exception is agreed to by all parties concerned, a copy of the agreement, signed by both entities, should be submitted to the Kansas City District and an exception may be granted.

7.6. Actions to Minimize Adverse Effects (Subpart H):

7.6.1. Actions Concerning the Location of the Discharge:

The permit special conditions will limit dredging and discharging excess material to the navigation channel between the Rectified Channel Line (RCL) away from shallow water and wetland areas where vertebrate and invertebrate species mainly occur. Dredging and discharging is also excluded near municipal and industrial water intakes and lateral collector wells. The discharge will occur within areas previously and repeatedly dredged with substrate composed of material essentially the same as that being discharged.

7.6.2. Actions Concerning the Material to be Discharged:

Excess material will be discharged in essentially the same place where it was dredged and be essentially the same as the substrate where it is deposited with the exception of the sand or gravel that was retained. The permit special conditions will limit discharge to suitable material that is free from toxic pollutants in other than trace quantities.

7.6.3. Actions Controlling the Material after Discharge:

No action will be taken to control the material after discharge.

7.6.4. Actions Affecting the Method of Dispersion:

Based on the test results and the 1990 drinking water standards, a mixing zone

was calculated which would allow the greatest distance, worst case scenario, for the dilution of dissolved cadmium concentrations to become equivalent to the background concentrations. The size of the estimated mixing zone is less than the dimensions of a loading barge which indicates that the contaminant concentrations of the dredge and discharge site are not significantly different. No actions affecting the method of dispersion are necessary. However, dredging and discharging material are excluded far enough from municipal and industrial water intake structures to accommodate the estimated mixing zone needed to maintain water quality.

7.6.5. Actions Related to Technology:

Special permit conditions would require that if any part of the authorized work is performed by a contractor, before starting work the permittee must discuss the terms and conditions of this permit with the contractor; and must give a copy of this entire permit to the contractor. The dredge operation must store all construction materials, equipment, and/or petroleum products that are part of the on-shore operation, when not in use, above anticipated high water levels. The dredge operation must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States. Each dredge must record the dredge plant location (in river mile and GPS derived longitude and latitude coordinates), tons of material removed, and the locations of any gravel (in higher than normal/unusual concentrations) or hard substrates encountered while dredging. In the initial 120 days after the permits are issued they dredgers could use a hand held GPS unit. However, after 120 days, they would be required to use an automated system that logs the dredge plant position and functional status on a continuous basis. This condition will ensure that material is not dredged or discharged in excluded sensitive areas.

7.6.6. Actions Affecting Plant and Animal Populations:

The permit special conditions limit the dredging operations to the main channel within the RCL and exclude dredging within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government or within 100 feet of any normal bank line or island where plant and animal habitat primarily occurs. The dredging operations are also excluded within reaches specifically identified by FWS as areas critical for endangered species restoration efforts.

7.6.7. Actions Affecting Human Use:

The permit special conditions exclude the dredging operations from the vicinity of municipal and industrial water intakes, horizontal collector wells, levees, pipelines, submerged utility crossings, bridge piers or abutments, dikes, revetments, or other structures built or authorized by the U.S. Government. The dredge operations must comply with all U.S. Coast Guard,

State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States. They also must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation. The annual extraction of each dredge operation will be limited to prevent future bed degradation and its affects on various manmade structures and human uses.

7.6.8. Other Actions:

The dredgers will be required to annually conduct a hydrographic survey extending two miles up and down stream of each dredged reach.

8. Mitigation

8.1. Applicant Proposal:

None submitted, none required.

8.2. Mitigation Rationale:

Not applicable

8.3. Mitigation Function:

Not applicable

8.4. Mitigation Acceptance:

Not applicable

9. Special Conditions

9.1. Mandatory by Regulation/Policy:

The following special conditions, with any exceptions noted after the condition, will be included in all individual DA permit authorizations as required by national policy guidance and/or regulations.

a. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

9.2. Project Specific:

b. Within 30 days of execution of the permit, the permittee must provide a Dredge Monitoring Plan (DMP) for each individual dredge plant to the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District for approval. The DMP must show how the permittee will monitor, record, and report the cutter-head position, cutter-head operating status, extraction tonnage, and the presence of any hard substrates, mussel shells, or unusual concentration of gravel in an impartial, unbiased, reliable, and accurate manner. The DMP must include the specifications of the process and the Dredge Monitoring System (DMS) including sensors, hardware, software, communications devices the permittee will use to: gather data; perform quality control on those data; calibrate, test, and repair sensors/data reporting equipment when they fail; and transfer the data to the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District. The DMS must include automated differential Global Positioning System (DGPS) equipment (or other comparable system) operating with a minimum accuracy level of 1-3 meters horizontal Circular Error Probable with horizontal positions tied into the UTM Zone 15 NAD 83 (feet) coordinate system recorded to the nearest foot. The DMS must always be on, recording cutter-head position and operating status every 5 minutes, 24-hours a day, 365 days a year, even when the dredge is not operating. The DMS must measure the amount of material removed from the river for each day the dredge is operational. 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 extraction material shall be measured by one of the methods described in the attached Standard Operating Procedure for Hydrographic Surveying and Dredge Monitoring. Faulty sensors or other components of the DMP system must be repaired within 96 hours. The DMS must not be inoperable more than 5 percent of the time. An approved DMS must be installed and inspected by the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District within 120 days of execution of the permit or the permittee must cease dredging operations until it is installed and inspected or the permittee submit a justification of the delay and an installation schedule and get an extension of this deadline in writing from the Chief of the Regulatory Branch, Kansas City District, U.S. Army Corps of Engineers.

This condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, water intake structures, and endangered species and their habitat are minimized.

c. The permittee must survey each dredged reach on an annual basis beginning in 2008 in accordance with the attached Standard Operating Procedures for Hydrographic Surveying and Dredge Monitoring. Surveys shall extend 2 miles upstream and 2 miles downstream of each dredged reach. Surveys shall be completed during the summer months and should be completed as close to

a 12-month interval as possible. Where the permitted dredged reach of one dredger overlaps that of one or more other authorized dredging companies, the permittees may choose to cooperate and provide just one survey report for that reach signed by all cooperating companies.

This condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, water intake structures, and endangered species and their habitat are minimized.

d. If any part of the authorized work is performed by a contractor, before starting work the permittee must discuss the terms and conditions of this permit with the contractor and must give a copy of this entire permit to the contractor. After the initial 120 days of this permit, any contracted dredges or barges must also be equipped with and operate in accordance with an approved DMP as required in special condition "b". The DMP and system must be approved by the Regulatory Branch of the U.S. Army Corps of Engineers, Kansas City District prior to starting work.

This condition is necessary to insure compliance with the terms and conditions of the subject permit. Past experience has shown that full compliance with the permit is more likely when all parties conducting the authorized work are familiar with the permit.

e. Until the dredges and barges are equipped with the DMS required by special condition "b", 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 GPS 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. The permittee must furnish a copy of the completed monthly report by email to cody.s.wheeler@usace.army.mil at the Kansas City District Regulatory Branch by the 7th day of the following month. If the permittee does not receive an email confirmation that the report was received, the permittee must contact the Regulatory Branch at 816-389-3990 for revised instructions for filing the monthly report.

This condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, water intake structures, and endangered species and their habitat are minimized prior to installation of the SI system.

f. No more than 1,200,000 tons of material shall be extracted within one year from any 10-mile reach of the Missouri River between river miles 49.8

and 490.0. When the dredge plant monitoring system indicates that total extraction of all dredgers in a 10-mile reach has reached 1,200,000 tons, all dredgers authorized to operate within that reach will be notified that it is closed to further dredging for the remainder of the calendar year unless the permittee request and receive a waiver in writing from the Chief of the Regulatory Branch, Kansas City District, U.S. Army Corps of Engineers.

This condition is necessary to minimize the contribution of dredging to bed degradation and to minimize adverse affects on navigation, flood control, water intake structures, and endangered species and their habitat.

g. In permit conditions that specify a linear distance exclusion zone adjacent to a river feature, "dredging" refers to the operation of hydraulic cutter head suction dredging. The exclusion zone distances will apply to and be measured from the end of the cutter head rather than from a general point on the dredge.

This clarification is necessary because the special conditions designed to minimize adverse impacts to water quality and endangered species and other wildlife and their habitat are concerned with the affect of the dredging and discharge.

h. The permittee must confine dredging between the Rectified Channel Lines (RCL) with the following restrictions. Dredging must be conducted in such a manner to preserve the structural integrity of the landmass landward of the RCL. This must be accomplished by maintaining an adequate "no dredging or discharging" zone riverward of the RCL so that material will stabilize into the dredging area at its natural angle of repose. This slope will vary depending upon river location and the type of material being dredged, but it is the permittee's responsibility to ensure that this shallow water interface landward of the RCL be maintained.

The condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, and water intake structures and endangered species and their habitat are minimized.

i. The permittee must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bank line or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that the permittee can conduct dredging and does not relieve the permittee from liability for damage arising from dredging. The permittee must be satisfied that dredging to these limits will not cause damage to public and private

property.

The condition is necessary to ensure that adverse impacts of the authorized dredging on navigation, flood control, and water intake structures and endangered species and their habitat are minimized.

j. The permittee must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless the permittee obtains an exemption to this condition in writing from the Chief of the Regulatory Branch, Kansas City District, Corps of Engineers.

The condition is necessary to avoid adverse impacts to municipal drinking water intake structures and provide a mixing zone sufficient to reestablish water quality to background conditions on the Missouri River.

k. The permittee must not conduct dredging operations in a zone extending 1,000 feet upstream and 1,000 feet downstream from any municipal drinking water horizontal collector wells located along either bank of the river unless the permittee obtain an exemption to this condition in writing from the Chief of the Regulatory Branch, Kansas City District, Corps of Engineers.

The condition is necessary to preserve the existing permeable aquifer material and avoid adverse impacts to the quality and quantity of this municipal drinking water source.

l. The permittee must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "d" above.

The condition is necessary to avoid adverse impacts to water intake structures and water quality of water users other than municipal drinking water providers.

m. The permittee must confine dredging to the specified reaches listed on page 1 of the permit document. Requests for expansion and/or relocation of the specified reaches must identify the proposed new limits, in river miles, and the location of the unloading facility to be employed. Approval of the requests, if granted, will be provided in writing with modified reaches identified on the Missouri River Hydrographic Survey. Copies of the relocation requests must be furnished to the following agencies:

1. U.S. Fish and Wildlife Service, Columbia Field Office
2. Missouri Department of Natural Resources, Water Pollution Control Program
3. Missouri Department of Natural Resources, State Historic Preservation Office
4. Kansas Department of Health and Environment, Bureau of Water (for operations extending upstream of river mile 367)

5. Kansas State Historical Society, State Historic Preservation Office (for operations extending upstream of river mile 367)
6. Corps of Engineers, Kansas City District, Hydrologic Engineering Branch

This condition is a practicable measure that is necessary to ensure that adverse impacts of the authorized activity on water quality, cultural resources, and river bed degradation are minimized.

n. The permittee must not conduct dredging operations within the reaches identified in the following table as pallid sturgeon habitat features.

Missouri River Miles (including 0.25 mile buffer)		**Pallid Sturgeon 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
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

This condition is necessary to minimize impact to the pallid sturgeon and its habitat. The FWS determination that the dredging activities are not likely to adversely endangered species and their activities is conditional on including this condition.

o. The permittee must discharge only suitable material that is free from toxic pollutants in other than trace quantities.

This condition is a practicable measure that is necessary to ensure that adverse impacts of the authorized activity on water quality are minimized.

p. The permittee must investigate for water supply intakes or other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality. The permittee must furnish the Kansas City District with a copy of any written notification provided in accordance with this condition.

The condition is necessary to avoid adverse impacts to water intake structures and water quality of water users other than municipal drinking water providers.

q. The permittee must employ measures to prevent dredged materials stored or disposed of on shore from running off or eroding into wetlands or tributaries to the Missouri River.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

r. The permittee must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

s. The permittee must store all construction materials, equipment, and/or petroleum products that are part of the on-shore operation, when not in use, above anticipated high water levels.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

t. The permittee may return unwanted dredged material and river water extracted from the Missouri River back to the Missouri River. The permittee must not dispose of waste materials, water, or garbage below the ordinary high water mark of any other water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

This condition is a practicable measure that is necessary to ensure that impacts to aquatic habitats are confined to the authorized area.

u. The permittee must comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States.

This condition is necessary to minimize adverse impacts to navigation.

v. The permittee must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

This condition is necessary to minimize adverse impacts to navigation.

10. Determinations

10.1. Findings of No Significant Impact:

After evaluating the anticipated economic, social, and environmental effects of the currently extended dredging permits and proposed activities, it is my determination that issuance of DA permits to Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and Gravel Company; and Con-Agg of MO, LLC to extract sand and gravel from the Missouri River subject to the quantity, time and other limitations and special conditions described above will not have a significant adverse effect on the quality of the human environment; therefore, they may be permitted to dredge at these levels for the limited permit period without the completion of an EIS. However, I have determined that any dredging in excess of these quantities, time periods, and other limits could have a significant adverse effect on the quality of the human environment, and will require the filing of an EIS.

These companies are currently dredging under extended DA permits numbered 1996 - 01648 (Capital Sand Company), 1996-01654 (Hermann Sand and Gravel, Inc.), 1996-01649 (Holliday Sand and Gravel Company), and 1996-01652 (Con-Agg of MO, LLC). I have determined that modification of these permits to limit the annual extraction levels to those reported in 2006 and to include all the special conditions of the proposed replacement permits would limit the potential for a significant adverse effect on the quality of the human environment, and allow the activity to continue during the short period until any appeals are completed and the

new proffered permits are accepted and executed.

I have also determined that issuance of DA permits to Washington Sand Company, Inc.; St. Charles Sand Company; Edward N. Rau Contractor Company; Kaw Valley Sand and Gravel, Inc.; 85th Street, Inc. (Lafarge), and Muenks Bros. Quarries to dredge as proposed in addition to the currently operating dredgers could have a significant adverse effect on the quality of the human environment and therefore will require the completion of an EIS.

10.2. Section 404(b)(1) Guidelines Compliance:

As required by Section 404(b)(1) of the Clean Water Act (33 USC 1344), the proposed activities have been evaluated in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The 404(b)(1) evaluation has resulted in a conclusion that dredging of sand and gravel from the Missouri River and the discharge of unwanted excess dredged material back into the Missouri River by Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and Gravel Company; and Con-Agg of MO, LLC is not prohibited by 40 CFR 230. There are no less environmentally damaging practicable alternatives for these applicants. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem. With these permit conditions and restrictions, their activities do not appear to (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of CWA; (2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; or (3) violate requirements of any Federally designated marine sanctuary.

The 404(b)(1) evaluation has also resulted in a conclusion that there are less environmentally damaging practicable alternatives for Washington Sand Company, Inc.; St. Charles Sand Company; Edward N. Rau Contractor Company; Kaw Valley Sand and Gravel, Inc.; 85th Street, Inc. (Lafarge), and Muenks Bros. Quarries than the proposed dredging.

10.3. Clean Air Act Conformity (Section 176(c) of the Clean Air Act):

The project has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activity proposed under this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this project.

10.4. Public Interest Review:

I find that issuance of DA permits to Capital Sand Company; Hermann Sand and Gravel, Inc.; Holliday Sand and Gravel Company; and Con-Agg of MO, LLC to

extract sand and gravel from the Missouri River subject to the limitations and special conditions described above and modification of DA permits numbered 1996-01648 (Capital Sand Company), 1996-01654 (Hermann Sand and Gravel, Inc.), 1996-01649 (Holliday Sand and Gravel Company), and 1996-01652 (Con-Agg of MO, LLC) to limit the annual extraction levels to those reported in 2006 and to include all the special conditions of the proposed replacement permits until the replacement permits are executed, as prescribed by regulations published in 33 CFR 320-331, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are no reasonable alternatives available to these applicants that will achieve the purposes for which the work is being conducted; that the 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 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 these permits is consonant with national policy, statutes, and administrative directives; and that on balance the total public interest should best be served by the issuance of Department of the Army permits to these applicants.

I also find that denial of Department of the Army permits to Washington Sand Company, Inc.; St. Charles Sand Company; Edward N. Rau Contractor Company; Kaw Valley Sand and Gravel, Inc.; 85th Street, Inc. (Lafarge), and Muenks Bros. Quarries to extract sand and gravel from the Missouri River as proposed, as prescribed by regulations published in 33 CFR 320-331, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are reasonable alternatives available to these applicants that will achieve the purposes for which the work is being conducted; that there are significant, adverse environmental effects related to the work; that the issuance of these permits is contrary to national policy, statutes, and administrative directives; and that on balance the total public interest should best be served by the denial of Department of the Army permits to these applicants.

11. Signatures/Approvals.

Prepared by: Cody S. Wheeler

Title: Regulatory Project Manager

Reviewed by: Mark D. Frazier

Title: Regulatory Program Manager

Encls (see attached list)

Roger A. Wilson, Jr.
Colonel, Corps of Engineers
District Commander

20 Aug 2007
Date

Signature

12. List of Enclosures:

12.1. June 27, 2003 Public Notice for Re-authorization of Current Dredgers

12.2. January 12, 2004 Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.3. Missouri 401 Water Quality Certification

12.4. Kansas 401 Water Quality Certification

12.5. July 28, 2003 FWS Response to the Public Notice for Re-authorization of Current Dredging

12.6. March 8, 2004 FWS Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.7. July 24, 2003 MDC Response to Public Notice for Re-authorization of Current Dredgers

12.8. July 2, 2003 MDC Response to Public Notice for Re-authorization of Current Dredgers

12.9. March 10, 2004 MDC Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.10. July 18, 2003 MDNR Response to Public Notice for Re-authorization of Current Dredgers

12.11. January 29, 2004 MDNR Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.12. January 14, 2004 Missouri SHPO Cultural Resource Assessment for the Muenks Brothers Application

12.13. September 5, 2006 Kansas SHPO Cultural Resources Assessment

12.14. August 14, 2003 WaterOne Response to Public Notice for Re-authorization of Current Dredgers

12.15. May 5, 2004 Sac & Fox Response to Public Notice for Re-authorization of Current Dredgers

12.16. February 16, 2004 Winnebago Tribe of Nebraska Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.17. January 6, 2004 Prairie Band Potawatomi Nation Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

12.18. July 28, 2003 Friends of the Kaw Response to Public Notice for Re-authorization of Current Dredgers

12.19. CENWK-EC-HH-R Response to Public Notice for Re-authorization of Current Dredgers

12.20. June 18, 2001 CENWK-OD-R Solicitation of Applications for Renewal of Commercial Dredging Permits

12.21. July 10, 2001 Holliday Sand Application Cover Letter

12.22. December 4, 2001 Kaw Valley Drainage District Letter

12.23. December 19, 2001 CENWK-OD-R Permit Extension Letter

12.24. June 10, 2002 CENWK-EC-H Dredging Memo

12.25. October 9, 2002 CEMVS-OD-F Letter to FWS

12.26. January 17, 2003 FWS Letter to CEMVS-OD-F

12.27. February 26, 2003 CENWK-OD-R Letter to Dredgers

12.28. March 11, 2003 Holliday Sand Letter

12.29. March 27, 2003 Hermann Sand Letter

12.30. March 31, 2004 CENWK-OD-R Letter Transmitting Comments to the Dredgers for their Response and Rebuttal

12.31. April 8, 2004 Lafarge Response and Rebuttal Letter

12.32. April 15, 2004 Kaw Valley Sand Response and Rebuttal Letter

12.33. April 20, 2004 Holliday Sand Response and Rebuttal Letter

12.34. April 27, 2004 Capital Sand Response and Rebuttal Letter

12.35. May 6, 2004 Kaw Valley Sand Response and Rebuttal Letter

12.36. July 2, 2004 Muenks Brothers Response and Rebuttal Letter

12.37. May 17, 2004 CENWK-PM-CJ Response to Proposed Exclusion Zones

12.38. June 3, 2004 CENWK-PM-PR Response to Proposed Exclusion Zones

12.39. November 29, 1004 CENWK-PM-PR Response to Proposed Exclusion Zones

12.40. December 9, 2004 CENWK-OD-R Letter Transmitting Revised Exclusion Zone Proposal and Seeking Comments from the Dredgers

12.41. December 17, 2004 St. Charles Sand Response to Proposed Exclusion Zones

12.42. December 20, 2004 Muenks Brothers Response to Proposed Exclusion Zones

12.43. December 22, 2004 Hermann Sand Response to Proposed Exclusion Zones

12.44. December 28, 2004 Lathrop & Gage Response to Proposed Exclusion Zones

12.45. December 29, 2004 Muenks Brothers Response to Proposed Exclusion Zones

12.46. December 29, 2004 St. Charles Sand Response to FWS Proposed Exclusion Zones

12.47. December 29, 2004 BPU Comments Regarding Degradation

12.48. February 16, 2005 BPU Letter with 2 Supporting Letters Regarding the Effects of Dredging on Horizontal Collector Wells

12.49. February 18, 2005 FWS Correspondence Regarding Proposed Exclusion Zones

12.50. February 25, 2005 CENWK-OD-R Letter Transmitting Revised Exclusion Zone Proposal and Seeking Comments from the Dredgers

12.51. March 11,2005 Lathrop & Gage Acceptance of Proposed Exclusion Zones

12.52. March 16, 2005 Request from Muenks Brothers to increase their Extraction Limit

12.53. October 17, 2005 Lafarge Comments

12.54. January 9, 2006 Hermann Sand Request to Increase their Annual Extraction Limit to 500,000 tons

12.55. February 13, 2006 CENWK-EC-HH Response to Holiday Sand's Alternative Restrictions

12.56. May 2, 2006 CENWK-EC-HH Memo Regarding Request to Increase Herman Sand's Annual Extraction Limit

12.57. CENWK-EC-HH Draft Study: CRP Water Surface and Commercial Dredging Volume Comparisons 1990 vs. 2002 and 2005

12.58. October 25, 2006 Letter from Governor Blunt to Assistant Secretary of the Army (Civil Works)

12.59. December 12, 2006 CENWK Presentation to Commercial Dredgers.

12.60. December 15, 2006 Rau Comments

12.61. December 27, 2006 Holliday Sand Comments

12.62. December 27, 2006 Muenks Brothers Comments

12.63. January 2, 2007 Kaw Valley Comments

12.64. January 3, 2007 Lathrop & Gage Comments on Behalf of Capital Sand

12.65. January 8, 2007 Hermann Sand Comments

12.66. January 9, 2007 Lathrop & Gage Comments on Behalf of Con-Agg

12.67. January 19, 2007 Missouri Chamber of Commerce and Industry Comments

12.68. January 2007 Missouri Department of Transportation Comments

12.69. January 17, 2007 Missouri Farm Bureau Federation Comments

12.70. January 22, 2007 Hermann Sand Comments

12.71. January 21, 2007 Study Submitted by Hermann Sand

12.72. January 22, 2007 Buchanan County Commission Comments

12.73. January 23, 2007 Example Comments from 21 Missouri Senators and Representatives

12.74. January 24, 2007 Letter from Governor Blunt

12.75. January 24, 2007 CENWK-EC-HH Comments Regarding Holliday Sand's Proposal to Extend Dredging Up and Downstream

12.76. January 25, 2007 Con-Agg Dredging Report and Comments

12.77. January 30, 2007 Missouri Department of Economic Development Comments

12.78. February 5, 2007 NWK Response to Governor Blunt

12.79. February 8, 2007 Kansas City District Response to Missouri Agencies and Officials

12.80. March 2, 2007 Email from David Shorr Clarifying Capital Sand and Con-Agg's working arrangement

12.81. March 12, 2007 Proposal for a No Cap Mine-and-Relax Strategy

12.82. March 13, 2007 CENWK-EC-H Recommended Monitoring Requirements

12.83. March 13, 2007 CENWK-EC-H Summary of Recommendations

12.84. March 14, 2007 Con-Agg Report of Tons Dredged in 2006

12.85. March 27, 2007 FWS Comments

12.86. June 6, 2007 Lathrop & Gage Letter Requesting Additional Dredging Reaches for Capital Sand.

Enclosure 12.1 June 27, 2003 Public Notice for Re-authorization of Current Dredgers

PUBLIC NOTICE

Permit No. Mo River Commercial Dredgers
Issue Date: June 27, 2003
Expiration Date: July 28, 2003

US Army Corps of Engineers
Kansas City District

30-Day Notice

JOINT PUBLIC NOTICE: This public notice is issued jointly with the Missouri Department of Natural Resources (MDNR) and the Kansas Department of Health and Environment (KDHE). MDNR and KDHE will use the comments to this notice in deciding whether to grant Section 401 water quality certification. Commenters are requested to furnish a copy of their comments to the **MDNR** Water Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102 and the **KDHE** Bureau of Water, Watershed Management Section, 1000 SW Jackson Street, Suite 420, Topeka, KS 66612-1367

AUTHORITY: Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

ACTIVITY (As shown on/in the attached drawings and tables): The following applicants, as shown in the following table, have requested renewal of their Department of the Army (DA) authorizations, or for 85th Street, Inc., a new DA permit, to dredge sand and gravel for commercial purposes from the Missouri River in the states of Kansas and Missouri. If reauthorized and/or issued, the permits would authorize the dredging for a period of 5 years from December 31, of the year of permit execution. This notice is provided to outline details of the proposed work so that this District may consider all pertinent comments prior to determining if issuance of these permits would be in the public interest.

Concurrent with this notice, all of the existing dredging permits are extended, under the terms and conditions of the existing permits, until no more than thirty days following the District's decision on these applications. The existing permit conditions are attached.

Hydraulic cutter suction dredges would perform all of the proposed dredging operations. Water and dredged material would be passed through screens allowing the desired material to be routed into barges and the undesired material to be returned, with the water, to the river. The barges are then transported to offloading facilities where the material is removed, by front-end loader or crane systems, and stockpiled onshore.

Dredging Extraction History (Annual Permitted = 6,530,000 Tons)

1997	4,624,265 Tons
1998	4,815,757 Tons
1999	5,638,857 Tons
2000	5,672,815 Tons
2001	6,396,464 Tons
2002	5,279,818 Tons

Application Number	Applicant Name and Address	Missouri River Miles; Approximate Tons of Dredged Material per Annum
200101429 (Renewal of 96-01648)	**Capital Sand Company, Inc.** Post Office Box 104990 Jefferson City, Missouri 65110-4990	62-72, 118-128, 140-150, 172-192, 193-210, 220-230, 245-265, 283-303 and 314-324* 2,500,000 tons* *One reach abandoned, and increased extraction included in this request
200101431 (Renewal of 96-01649)	**Holliday Sand and Gravel Company** 6811 West 63rd Street Overland Park, Kansas 66202	355-367*, 367.9-378* and 445-455.5* 2,450,000 tons *Reaches modified (reduced) in this request
200101436 (Renewal of 96-01650)	**Kaw Valley Sand and Gravel, Inc.** 1615 Argentine Boulevard Kansas City, Kansas 66105	360.5-370.5 300,000 tons* *Note: Company maintains permit, but no dredging has been conducted under any prior permits.
200101434 (Renewal of 96-01652)	**Con-Agg of MO, L.L.C.** 2604 North Stadium Boulevard Columbia, Missouri 65202	182-202 250,000 tons
200101430 (Renewal of 96-01654)	**Hermann Sand and Gravel, Inc.** Route 3, Box 261 Hermann, Missouri 65041	56-66, 70-80*, 80.5-90.5, 91.7-101.7, 109-119 and 146-164* 300,000 tons* *Reach and extraction volume increase in this request.
200101432 (Renewal of 96-01655)	**Washington Sand Company, Inc.** 528 West Front Street Washington, Missouri 63090	66.8-75 130,000 tons
200101435 (Renewal of 96-01656)	**Edward N. Rau Contractor Company** 2809 Highway A, Suite A Washington, Missouri 63090	62-65 and 70-75 100,000 tons
200101433 (Renewal of 96-01680)	**St. Charles Sand Company** 14580 Missouri Bottom Road Bridgeton, Missouri 63044	49.8-58 200,000 tons
200301640 (New Applicant)	**85th Street, Inc.** 3101 East 85th Street Kansas City, Missouri 64132	352.6-383.3 1,300,000 tons

WETLANDS: No jurisdictional wetlands would be impacted by the proposed work.

ADDITIONAL INFORMATION: Additional information about this application may be obtained by contacting **Mark D. Frazier**, ATTN: OD-R, U.S. Army Corps of Engineers; 601 East 12th Street, Kansas City, Missouri 64106-2986, at telephone 816-983-3664 (FAX 816-426-2321) or via email at **mark.d.frazier@usace.army.mil.** All comments to this public notice should be directed to the above address.

CULTURAL RESOURCES: Kansas City District will comply with the National Historic Preservation Act of 1966 and 36 CFR 800. We have checked the National Register of Historic Places and the Federal Register and no property listed in the Register or proposed for listing is located in the permit area. We will examine records of known riverboat wrecks and restrict dredging limits where appropriate to avoid destruction of historic properties. This is the extent of our knowledge about historic properties in the permit area at this time. However, we will evaluate input by the State Historic Preservation Officer and the public in response to this public notice, and we may conduct or require a reconnaissance survey of the permit area to check for unknown historic properties, if warranted.

ENDANGERED SPECIES: All of the proposed dredging areas are within the historic range of the threatened Piping Plover (*Charadrius melodus*), threatened Bald Eagle (*Haliaeetus leucocephalus*) and the endangered Least Tern (*Sterna antillarum*). In compliance with the Endangered Species Act, a preliminary determination has been made that the described work is not likely to adversely affect these species.

Prior to issuance of this public notice, the Corps entered into informal consultation with U.S. Fish and Wildlife Service (FWS) concerning the proposed work and the endangered Pallid Sturgeon (*Scaphirhynchus albus*). The FWS has concurred, in general, with the Corps preliminary determination that the proposed dredging activities are not likely to adversely the Pallid Sturgeon and its habitat. This preliminary determination is 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:

1. 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.

2. Condition "m" will be modified to require the dredge operators 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 the Corps. (The purpose of this GPS data collection is primarily for display of dredging activities in a Geographic Information System (GIS), and for macro-level compliance. Given the limitations of the devices, real time and micro-level compliance cannot be determined by this method.)

3. The annual reporting requirement of condition "m" 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.

4. Condition "o" will be modified to add the Lourte River confluence, near Missouri River mile 97, to the dredging exclusion list, and the exclusion zone will be expanded for all listed tributaries to ¼ mile upstream or downstream. Additionally, these exclusion provisions will be expanded to include river chutes and side channels, and areas adjacent to conservation lands (Missouri River Mitigation Project lands; FWS refuge lands; and Missouri Department of Conservation wildlife areas). FWS acknowledged that due to extensive conservation lands between Rocheport and Jefferson City, that most areas in this reach would be excluded, and FWS has stated their availability to meet with affected dredgers and the Corps to consider alternatives.

In order to complete our evaluation of this activity, comments are solicited from the FWS and other interested agencies and individuals. FWS concurrence is requested for the stated preliminary determinations.

FLOODPLAINS: This activity is being reviewed in accordance with Executive Order 11988, Floodplain Management, which discourages direct or indirect support of floodplain development whenever there is a practicable alternative. By this public notice, comments are requested from individuals and agencies that believe the described work will adversely impact the floodplain.

WATER QUALITY CERTIFICATION: Section 401 of the Clean Water Act (33 USC 1341) requires that all discharges of dredged or fill material must be certified by the appropriate state agency as complying with applicable effluent limitations and water quality standards. This public notice serves as an application to the state in which the discharge site is located for certification of the discharge. The discharge must be certified before a Department of the Army permit can be issued. Certification, if issued, expresses the state's opinion that the discharge will not violate applicable water quality standards.

PUBLIC INTEREST REVIEW: The decision to issue a permit will be based on an evaluation of the probable impact including the cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, esthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (33 USC 1344). The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COMMENTS: This notice is provided to outline details of the above-described activity so this District may consider all pertinent comments prior to determining if issuance of a permit would be in the public interest. Any interested party is invited to submit to this office written facts or objections relative to the activity on or before the public notice expiration date. Comments both favorable and unfavorable will be accepted and made a part of the record and will receive full consideration in determining whether it would be in the public interest to issue the Department of the Army permit. Copies of all comments, including names and addresses of commenters, may be provided to the applicant. Comments should be mailed to the address shown on the bottom of page 2 of this public notice.

PUBLIC HEARING: Any person may request, in writing, prior to the expiration date of this public notice, that a public hearing be held to consider this application. Such requests shall state, with particularity, the reasons for holding a public hearing.

NOTICE TO EDITORS: This notice is provided as background information for your use in formatting new stories. This notice is not a contract for classified display advertising.

ADJACENT PROPERTY OWNERS IDENTIFIED BY APPLICANTS

Missouri Pacific Railroad 6400 Martin Avenue Kansas City, Missouri 64120	City of Washington, Missouri 405 Jefferson Street Washington, Missouri 63090	Douglas E. Hazel No. 5 Catawba Place Washington, Missouri 63090
Missouri Department of Transportation Post Office Box 270 Jefferson City, Missouri 65102	Missouri-American Water Company Post Office Box 1588 Jefferson City, Missouri 65102	Rubin Haeberle Route 3 Hermann, Missouri 65041
John and Leona Werdehausen 276 Major Terrace Holts Summit, Missouri 65043	Gerald and Denis Engemann Route 3, Box 139A Hermann, Missouri 65041	Gary Riechers 401 Cedar Street Washington, Missouri 63090
Farmers Concrete Post Office Box 543 Jefferson City, Missouri 65102	MFA CO-OP Association Glasgow, Missouri 65254	City of Glasgow Glasgow, Missouri 65254
McDonald 704 Ruby Carrollton, Missouri 64633	Matt Waller Estate c/o Jenny Goddin 509 North 33rd Street Higginsville, Missouri 64037	Courtney Bend WasteWater Treatment Plant 3008 North Cement City Road Sugar Creek, Missouri
Santa Fe Railroad 3500 Vermont Street Sugar Creek, Missouri	Betty Fischer Zumwalt	

Mile	Feature	Mile	Feature
49.8	End Kansas City District	226.3	Glasgow MO Rt. 240/87 Bridge
58	Labadie Power Plant RDB	250	Grand River LDB
67.6	Washington MO Rt. 47 Bridge	262.6	Miami MO Rt. 41 Bridge
81.5	New Haven MO RDB	293.4	Waverly MO RDB
98	Hermann MO Rt. 19 Bridge	317.3	Lexington MO Bridge
104.4	Gasconade River RDB	352.7	Sugar Creek MO Rt. 291 Bridge
114.3	Portland MO LDB	367.4	Kansas River RDB MO/KS boundary
130	Osage River RDB	377.3	Parkville MO boat ramp LDB
143.9	Jefferson City MO Rt. 63/54 Bridge	387.6	Leavenworth KS Rt. 92 Bridge
158	Marion MDC Boat Ramp RDB	422.5	Atchison KS Rt. 59 Bridge
185	I-70 Bridge	447.8	St. Joseph MO Rt. 36 Bridge
196.6	Booneville MO Rt. 40 Bridge	455.5	Upstream end of proposed dredging

Missouri River Commercial Dredging (current) Special Conditions

a. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor. You must maintain a copy of this entire permit on each dredge operated under this permit.

b. You must confine your dredging to the area between the Rectified Channel Lines (RCL) with the following restrictions. Dredging must be conducted in such a manner to preserve the structural integrity of the landmass landward of the RCL. This must be accomplished by maintaining an adequate "no dredging" zone riverward of the RCL so that material will stabilize into the dredging area at its natural angle of repose. This slope will vary depending upon river location and the type of material being dredged, but it will be the permittee's responsibility to ensure that this shallow water interface landward of the RCL be maintained.

c. You must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bankline or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that you can conduct dredging and does not relieve you from liability for damage arising from dredging. You must satisfy yourself that dredging to these limits will not cause damage to public and private property.

d. You must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless you obtain an exemption to this condition in writing from the Chief of the Construction-Operations Division of the Kansas City District, Corps of Engineers.

e. You must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "d" above.

f. You must discharge only suitable material that is free from toxic pollutants in other than trace quantities.

g. You must investigate for water supply intakes for other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality. You must furnish the Kansas City District with a copy of any written notification provided in accordance with this condition.

h. You must dispose of dredged materials on shore in such a way that sediment runoff and soil erosion to the watercourse are controlled and minimized. Spoil materials from the watercourse or on-shore operations, including sludge deposits, must not be dumped into the watercourse.

i. You must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States.

j. You must not dispose of waste materials, other than on-dredge processing waste and return water, below the ordinary high water mark of any water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

Missouri River Commercial Dredging (current) Special Conditions - continued

k. You must comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States.

l. You must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

m. You must, for each dredge operated, record daily the dredge location and tons of material removed on the attached Missouri River Commercial Dredging Location/Volume Report. You must furnish a copy of the completed report to the Kansas City District Regulatory Branch by 30 January of each year.

n. You must confine dredging to the specified reaches listed on page 1 of the permit document. Requests for expansion and/or relocation of the specified reaches must identify the proposed new limits, in river miles, and the location of the unloading facility to be employed. Approval of the requests, if granted, will be provided in writing with modified reaches identified on the Missouri River Hydrographic Survey. Copies of the relocation requests must be furnished to the following agencies:

(1) U.S. Fish and Wildlife Service, Columbia Field Office

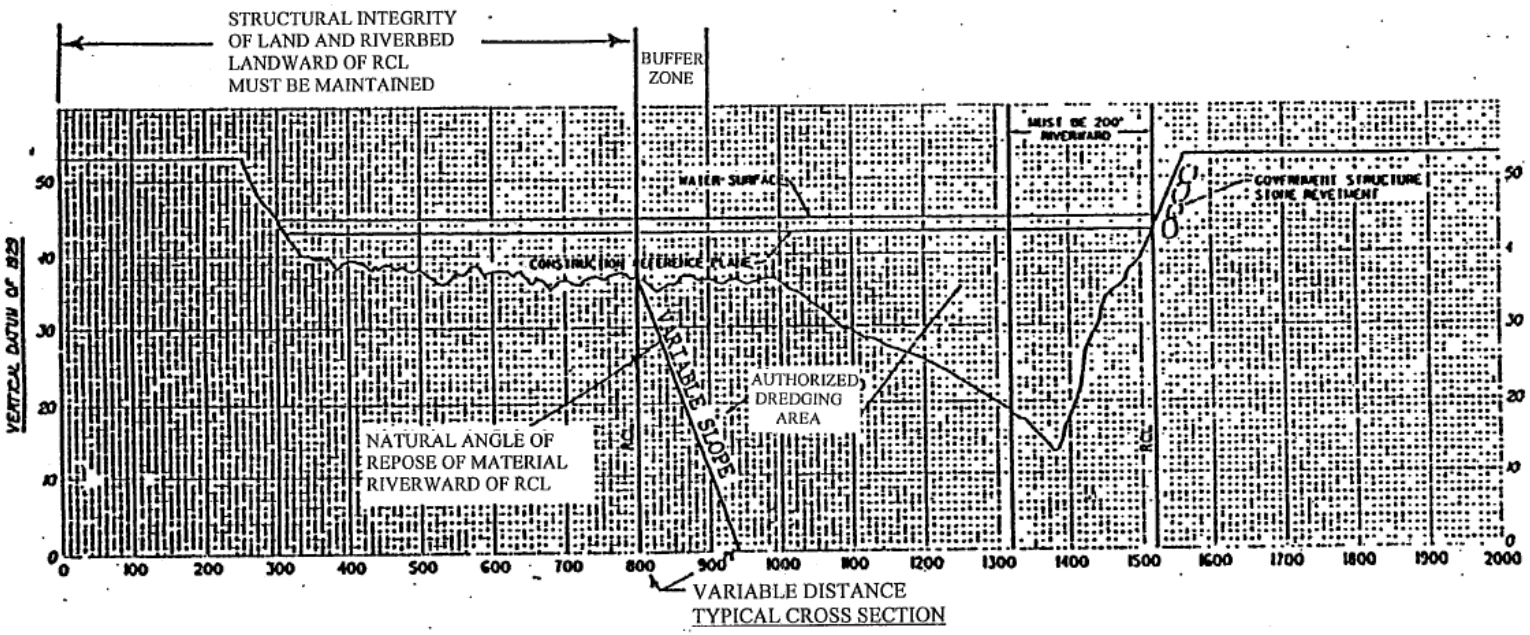
(2) Missouri Department of Natural Resources, Water Pollution Control Program

(for operations extending upstream of river mile 367)

(3) Kansas Department of Health and Environment, Bureau of Water

o. Dredging is prohibited within 500 feet upstream and 2,000 feet downstream of the confluence of the Missouri River and the following tributaries:

Tributary	Approximate River Mile
Big Nemaha River	495
Wolf Creek	479
Nodaway River	473
Platte River	391
Kansas River	367
Grand River	250
Chariton River	239
Little Chariton River	227
Lamine River	202
Osage River	130
Gasconade River	104



TYPICAL CROSS SECTION

RCL = Rectified Channel Line

NOTE: THE ATTACHED HYDROGRAPHIC SHEETS SHOW THE AUTHORIZED DREDGING ZONES. THESE MAPS ARE SUBORDINATE TO THE PERMIT SPECIAL CONDITIONS. THE PERMITTEE IS RESPONSIBLE FOR ADJUSTING DREDGING ZONES IN ACCORDANCE WITH LEVEE REALIGNMENT, CONSTRUCTION OF NEW STRUCTURES AND FACILITIES, AND OTHER CHANGES.

LEGEND

1987 MISSOURI RIVER HYDROGRAPHIC SURVEY

- PILE DIKE W/TERMINAL
- PILE DIKE OR REVETMENT (BURIED)
- ROCK FILL DIKE, REVETMENT OR CHUTE CLOSURE
- ROCK FILL BANK PROTECTION
- PILE DIKE W/ROCK FILL
- PILE REVETMENT
- PILE REVETMENT W/SCREEN PILES
- PILE REVETMENT W/SUSPENDED MATTRESS
- PILE REVETMENT W/ROCK FILL
- PILE REVETMENT W/ROCK FILL (PILING BROKEN OFF)
- STANDARD REVETMENT
- ABATIS
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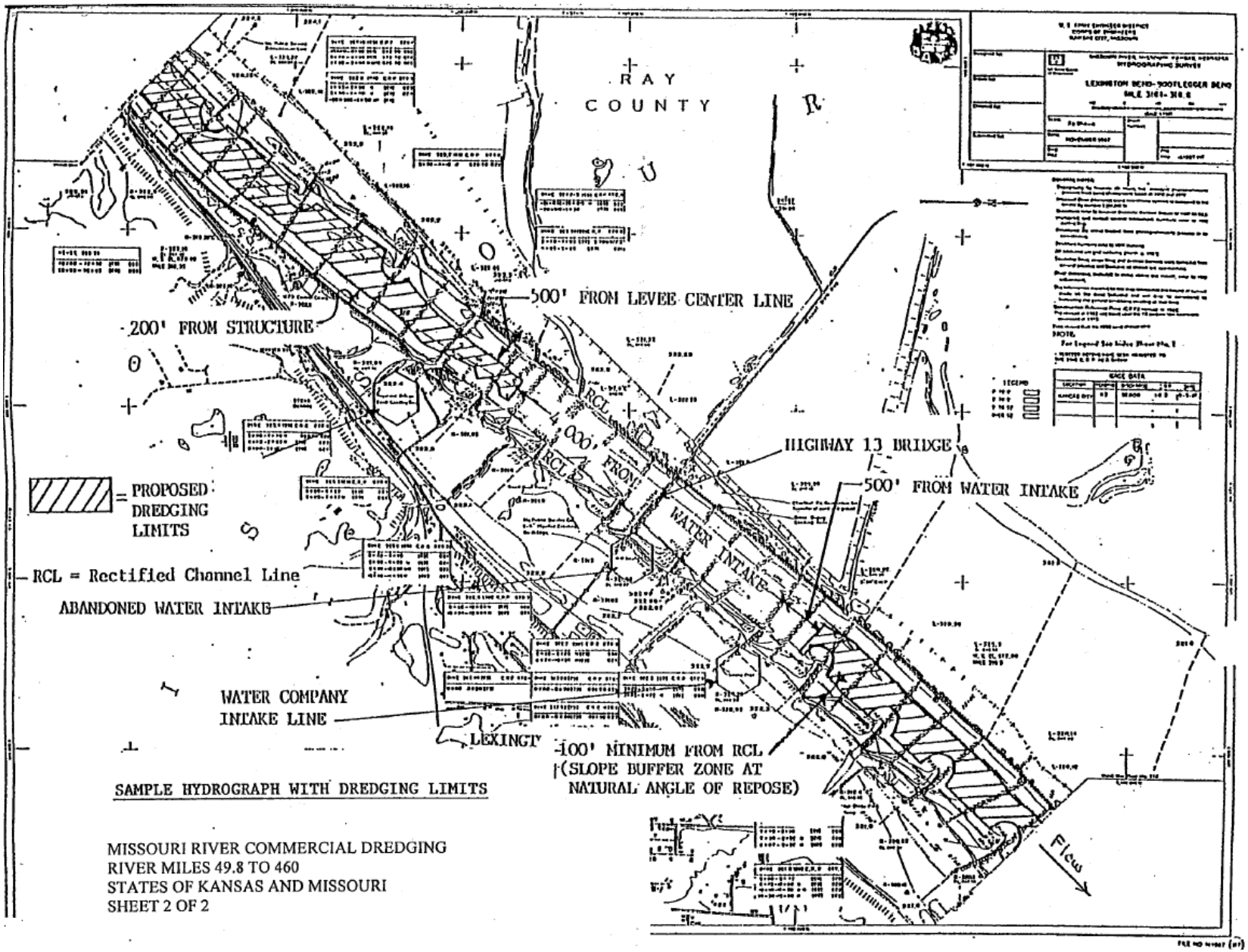
DREDGING PROHIBITED WITHIN 200' OF STRUCTURE

- LEVEES — DREDGING PROHIBITED WITHIN 500' OF CENTER LINE
- PROPOSED STABILIZED CHANNEL LINE — DREDGING PROHIBITED WITHIN 100' OF RCL

MISSOURI RIVER COMMERCIAL DREDGING
RIVER MILES 49.8 TO 460
STATES OF KANSAS AND MISSOURI
SHEET 1 OF 2



SAMPLE HYDROGRAPH WITH DREDGING LIMITS

MISSOURI RIVER COMMERCIAL DREDGING
RIVER MILES 49.8 TO 460
STATES OF KANSAS AND MISSOURI
SHEET 2 OF 2

Enclosure 12.2 January 12, 2004 Public Notice for Authorization of Proposed Muenks Brothers Dredging

PUBLIC NOTICE

Permit No. 200400378
Issue Date: January 12, 2004
Expiration Date: February 2, 2004

US Army Corps of Engineers
Kansas City District

21-Day Notice

JOINT PUBLIC NOTICE: This public notice is issued jointly with the Missouri Department of Natural Resources, Water Pollution Control Program. The Department of Natural Resources will use the comments to this notice in deciding whether to grant Section 401 water quality certification. Commenters are requested to furnish a copy of their comments to the Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102.

APPLICANT: Muenks Brothers Quarries
3717 Highway 50 west
Loose Creek, MO 65054

PROJECT LOCATION (As shown on the attached drawings): Missouri River between river miles 144 (at Jefferson City) and 164 (near Sandy Hook), in Boone, Callaway, Cole and Moniteau Counties, Missouri.

AUTHORITY: Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

ACTIVITY (As shown on the attached drawings): (PROPOSED): Hydraulic dredging of sand and gravel from the Missouri River by a mobile, floating dredge plant. Dredge material will be processed onboard, with fines and oversized material returned to the river, for an approximate total extraction of 350,000 tons of material per year. This extracted material will be offloaded onto barges for transport to a land processing facility near Missouri River mile 147. The land facility is authorized under Department of the Army permit No. 200001901.

WETLANDS/SPECIAL AQUATIC SITES: Dredging in accordance with the standard Missouri River Commercial Dredging conditions will preclude impacts to wetlands and other special aquatic sites.

ADDITIONAL INFORMATION: Additional information about this application may be obtained by contacting **Mark D. Frazier; U.S. Army Corps of Engineers; Regulatory Branch; 700 Federal Building; 601 East 12th Street; Kansas City, Missouri 64106-2896 at telephone 816-983-3664 (FAX 816-426-2321) or via email at mark.d.frazier@usace.army.mil**. All comments to this public notice should be directed to the above address.

CULTURAL RESOURCES: Kansas City District will comply with the National Historic Preservation Act of 1966 and 36 CFR 800. We have checked the National Register of Historic Places and the Federal Register and no property listed in the Register or proposed for listing is located in the permit area. This is the extent of our knowledge about historic properties in the permit area at this time. However, we will evaluate input by the State

Historic Preservation Officer and the public in response to this public notice, and we may conduct or require a reconnaissance survey of the permit area to check for unknown historic properties, if warranted.

ENDANGERED SPECIES: All of the proposed dredging areas are within the historic range of the threatened Piping Plover (*Charadrius melodus*), threatened Bald Eagle (*Haliaeetus leucocephalus*) and the endangered Least Tern (*Sterna antillarum*). In compliance with the Endangered Species Act, a preliminary determination has been made that the described work is not likely to adversely affect these species.

The Corps is currently in the process of informal consultation with the U.S. Fish and Wildlife Service (FWS) concerning the renewal of existing Missouri River Commercial Dredging permits and the endangered Pallid Sturgeon (*Scaphirhynchus albus*). This process is nearing a conclusion, subject to certain modification of the standard conditions for dredging operations, that continued dredging operations will not likely adversely affect this species and its habitat. The current/unmodified dredging conditions are attached.

The Corps proposes to include the modified standard conditions developed in the ongoing consultation in any permits issued pursuant to this application. Accordingly, the Corps preliminary determination is that the proposed new dredging activity is not likely to adversely affect the pallid sturgeon and its habitat.

In order to complete our evaluation of this activity, comments are solicited from the FWS and other interested agencies and individuals. FWS concurrence is requested for the stated preliminary determinations.

FLOODPLAINS: This activity is being reviewed in accordance with Executive Order 11988, Floodplain Management, which discourages direct or indirect support of floodplain development whenever there is a practicable alternative. By this public notice, comments are requested from individuals and agencies that believe the described work will adversely impact the floodplain.

WATER QUALITY CERTIFICATION: Section 401 of the Clean Water Act (33 USC 1341) requires that all discharges of dredged or fill material must be certified by the appropriate state agency as complying with applicable effluent limitations and water quality standards. This public notice serves as an application to the state in which the discharge site is located for certification of the discharge. The discharge must be certified before a Department of the Army permit can be issued. Certification, if issued, expresses the state's opinion that the discharge will not violate applicable water quality standards.

PUBLIC INTEREST REVIEW: The decision to issue a permit will be based on an evaluation of the probable impact including the cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, esthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (33 USC 1344). The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public

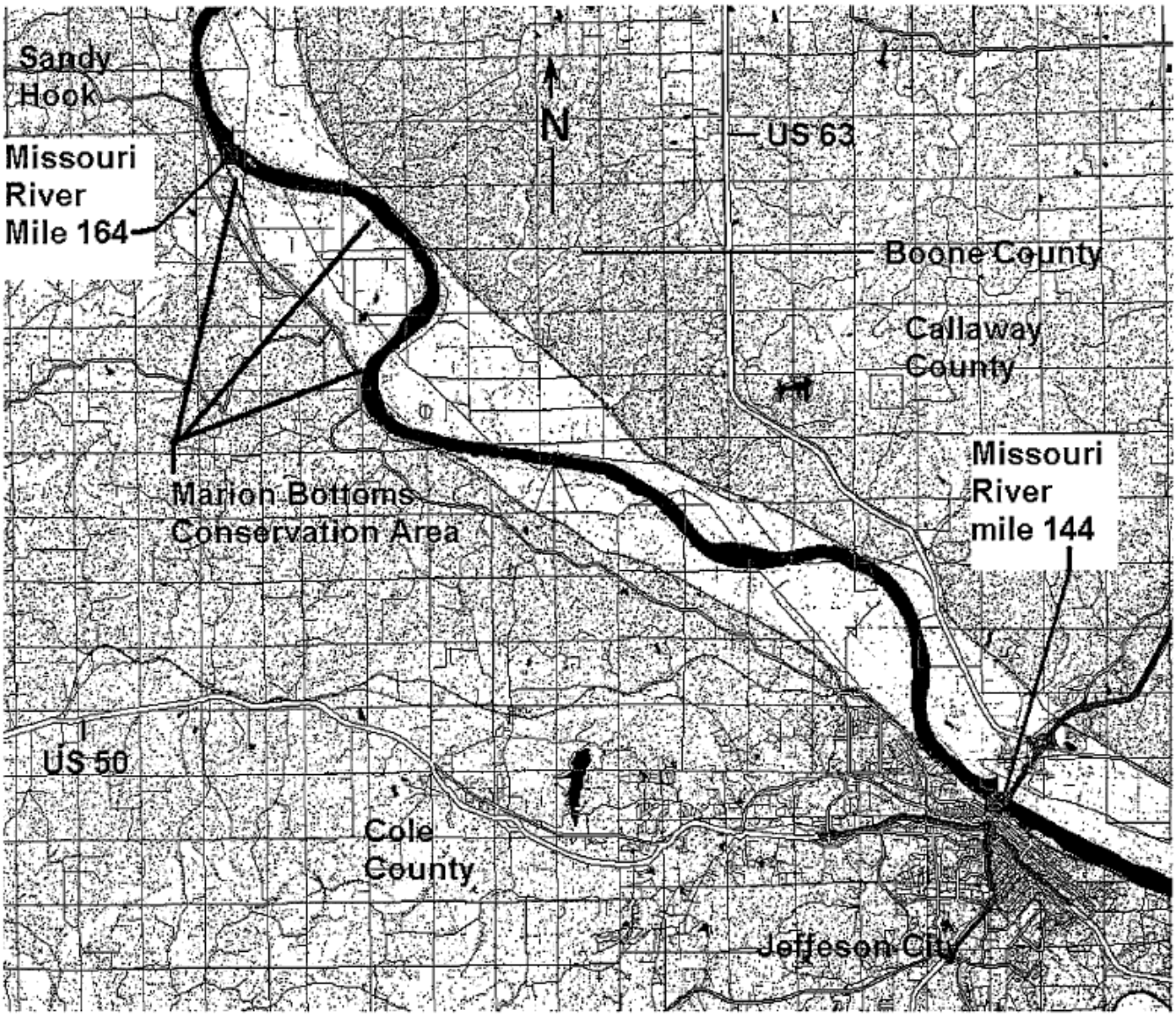
interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COMMENTS: This notice is provided to outline details of the above-described activity so this District may consider all pertinent comments prior to determining if issuance of a permit would be in the public interest. Any interested party is invited to submit to this office written facts or objections relative to the activity on or before the public notice expiration date. Comments both favorable and unfavorable will be accepted and made a part of the record and will receive full consideration in determining whether it would be in the public interest to issue the Department of the Army permit. Copies of all comments, including names and addresses of commenters, may be provided to the applicant. Comments should be mailed to the address shown on page 1 of this public notice.

PUBLIC HEARING: Any person may request, in writing, prior to the expiration date of this public notice, that a public hearing be held to consider this application. Such requests shall state, with particularity, the reasons for holding a public hearing.

NOTICE TO EDITORS: This notice is provided as background information for your use in formatting new stories. This notice is not a contract for classified display advertising.

Plan View, Proposed Dredging Reach



Adjacent Property Owners:
John Werdenhausen
William Zumwalt

APPLICATION NO. 200400378
BY MUENKS BROTHERS QUARRIES
FOR COMMERCIAL SAND DREDGING
MISSOURI RIVER
BETWEEN MILES 144 AND 164
CALLAWAY, COLE, BOONE AND
MONITEAU COUNTIES, MISSOURI
SHEET 1 OF 1

Missouri River Commercial Dredging (current) Special Conditions

a. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor. You must maintain a copy of this entire permit on each dredge operated under this permit.

b. You must confine your dredging to the area between the Rectified Channel Lines (RCL) with the following restrictions. Dredging must be conducted in such a manner to preserve the structural integrity of the landmass landward of the RCL. This must be accomplished by maintaining an adequate "no dredging" zone riverward of the RCL so that material will stabilize into the dredging area at its natural angle of repose. This slope will vary depending upon river location and the type of material being dredged, but it will be the permittee's responsibility to ensure that this shallow water interface landward of the RCL be maintained.

c. You must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bankline or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that you can conduct dredging and does not relieve you from liability for damage arising from dredging. You must satisfy yourself that dredging to these limits will not cause damage to public and private property.

d. You must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless you obtain an exemption to this condition in writing from the Chief of the Construction-Operations Division of the Kansas City District, Corps of Engineers.

e. You must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "d" above.

f. You must discharge only suitable material that is free from toxic pollutants in other than trace quantities.

g. You must investigate for water supply intakes for other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality. You must furnish the Kansas City District with a copy of any written notification provided in accordance with this condition.

h. You must dispose of dredged materials on shore in such a way that sediment runoff and soil erosion to the watercourse are controlled and minimized. Spoil materials from the watercourse or on-shore operations, including sludge deposits, must not be dumped into the watercourse.

i. You must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States.

j. You must not dispose of waste materials, other than on-dredge processing waste and return water, below the ordinary high water mark of any water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

k. You must comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States.

Missouri River Commercial Dredging (current) Special Conditions - continued

l. You must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

m. You must, for each dredge operated, record daily the dredge location and tons of material removed on the attached Missouri River Commercial Dredging Location/Volume Report. You must furnish a copy of the completed report to the Kansas City District Regulatory Branch by 30 January of each year.

n. You must confine dredging to the specified reaches listed on page 1 of the permit document. Requests for expansion and/or relocation of the specified reaches must identify the proposed new limits, in river miles, and the location of the unloading facility to be employed. Approval of the requests, if granted, will be provided in writing with modified reaches identified on the Missouri River Hydrographic Survey. Copies of the relocation requests must be furnished to the following agencies:

(1) U.S. Fish and Wildlife Service, Columbia Field Office

(2) Missouri Department of Natural Resources, Water Pollution Control Program

(for operations extending upstream of river mile 367)

(3) Kansas Department of Health and Environment, Bureau of Water

o. Dredging is prohibited within 500 feet upstream and 2,000 feet downstream of the confluence of the Missouri River and the following tributaries:

Tributary	Approximate River Mile
Big Nemaha River	495
Wolf Creek	479
Nodaway River	473
Platte River	391
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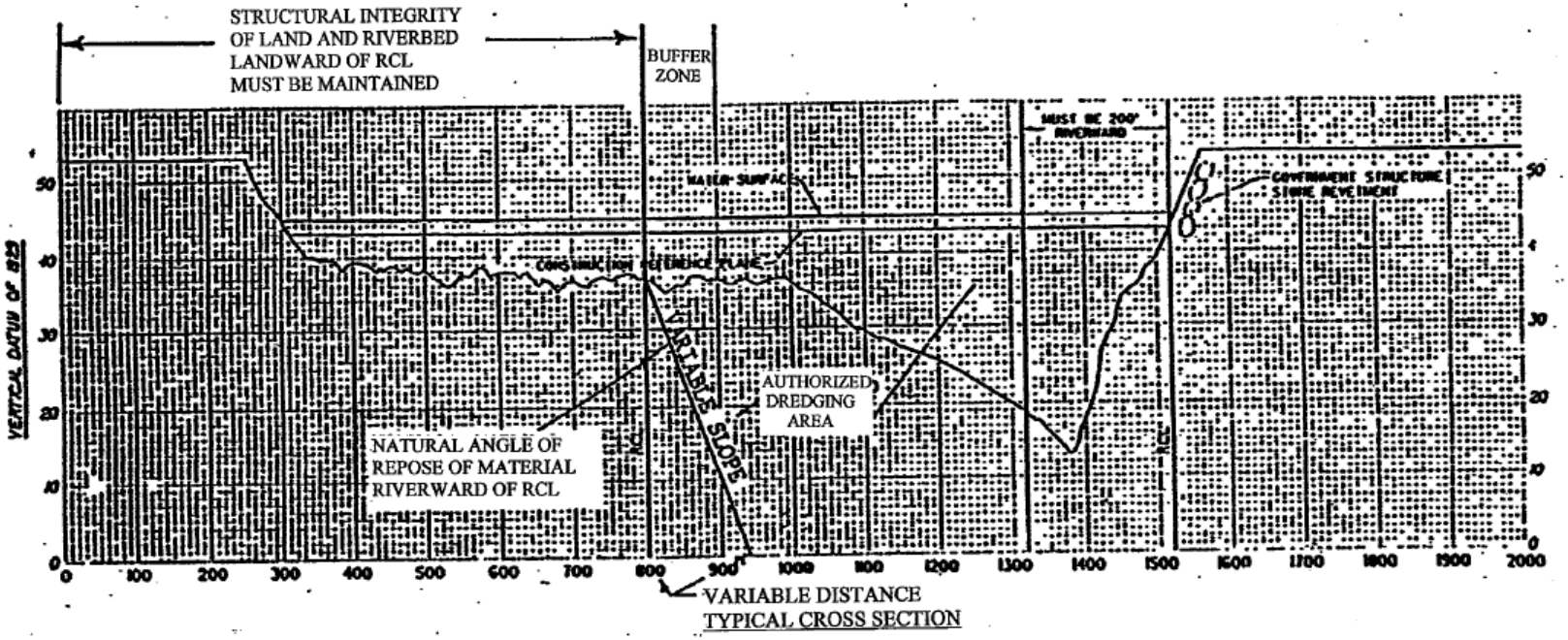

TYPICAL CROSS SECTION

RCL = Rectified Channel Line

NOTE: THE ATTACHED HYDROGRAPHIC SHEETS SHOW THE AUTHORIZED DREDGING ZONES. THESE MAPS ARE SUBORDINATE TO THE PERMIT SPECIAL CONDITIONS. THE PERMITTEE IS RESPONSIBLE FOR ADJUSTING DREDGING ZONES IN ACCORDANCE WITH LEVEE REALIGNMENT, CONSTRUCTION OF NEW STRUCTURES AND FACILITIES, AND OTHER CHANGES.

LEGEND

1987 MISSOURI RIVER HYDROGRAPHIC SURVEY

- PILE DIKE W/TERMINAL
- PILE DIKE OR REVETMENT (BURIED)
- ROCK FILL DIKE, REVETMENT OR CHUTE CLOSURE
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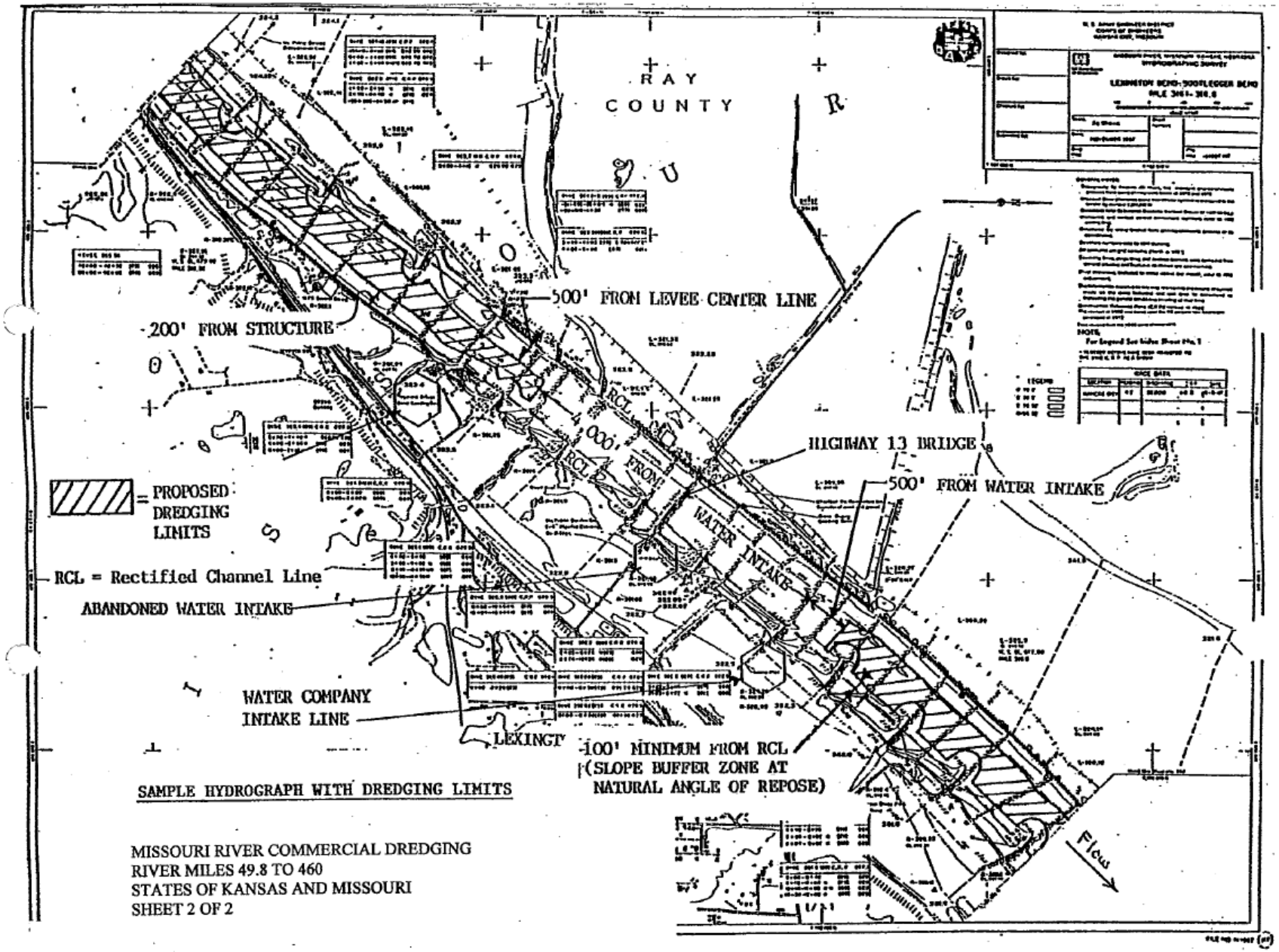
MISSOURI RIVER COMMERCIAL DREDGING
RIVER MILES 49.8 TO 460
STATES OF KANSAS AND MISSOURI
SHEET 1 OF 2



SAMPLE HYDROGRAPH WITH DREDGING LIMITS

MISSOURI RIVER COMMERCIAL DREDGING
RIVER MILES 49.8 TO 460
STATES OF KANSAS AND MISSOURI
SHEET 2 OF 2

Enclosure 12.3 Missouri 401 Water Quality Certification

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

June 11, 2007

Mr. Steve Engemann
Hermann Sand & Gravel, Inc.
Route 3, Box 261
Hermann, MO 65041

PN01-01430/CEK001021

Dear Mr. Engemann:

The Missouri Department of Natural Resources' Water Protection Program has reviewed Public Notice No. PN01-01430/CEK001021 in which the applicant has proposed to extract up to 300,000 tons of material per year from the following reaches of the Missouri River: river miles 56.00 to 56.85, 61.25 to 66.00, 70.00 to 80.00, 80.50 to 89.75, 93.55 to 101.70, 109.00 to 115.20, 115.95 to 118.40, 146.00 to 157.00, and 158.45 to 164.00.

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 the following condition is met:

1. The U.S. Army Corps of Engineers (Corps) permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this 401 Water Quality 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 of Engineers to inform them the certification is now in effect and final.

You may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing 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 administrative hearing commission.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Shannon Slater of the NPDES Permits and Engineering Section at (573) 526-1535, e-mail *shannon.slater@dnr.mo.gov*, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:ssp

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Larry Coen, DNR/LRP
DNR - SLRO

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

June 11, 2007

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

PN01-01429/CEK001017

Dear Mr. Bohlken:

The Missouri Department of Natural Resources' Water Protection Program has reviewed Public Notice No. PN01-01429/CEK001017 in which the applicant has proposed to extract up to 2,255,000 tons of material per year from the following reaches of the Missouri River: river miles 62.00 to 75.00, 118.00 to 118.40, 119.15 to 119.35, 119.85 to 124.35, 124.95 to 126.05, 126.90 to 127.50, 140.00 to 150.00, 172.00 to 176.40, 177.85 to 184.75, 185.65 to 186.90, 188.20 to 192.00, 193.00 to 193.40, 195.75 to 202.10, 202.75 to 210.00, 220.00 to 226.95, 227.55 to 230.00, 245.00 to 249.65, 250.30 to 265.00, 283.00 to 297.90, 299.05 to 303.00, and 314.00 to 324.00.

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 the following condition is met:

1. The U.S. Army Corps of Engineers (Corps) permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this 401 Water Quality 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.

You may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing 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 administrative hearing commission.

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Sincerely,

WATER PROTECTION PROGRAM

Robert K. Morrison

Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:ssp

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Larry Coen, DNR/LRP
DNR - NERO

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

June 11, 2007

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

PN01-01434/CEK001020

Dear Mr. Moore:

The Missouri Department of Natural Resources' Water Protection Program has reviewed Public Notice No. PN01-01434/CEK001020 in which the applicant has proposed to extract up to 175,000 tons of material per year from the following reaches of the Missouri River: 177.85 to 184.75, 185.65 to 186.90, 188.20 to 192.00, 193.00 to 193.40, and 195.75 to –202.10.

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 the following condition is met:

1. The U.S. Army Corps of Engineers (Corps) permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

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You may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing 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 administrative hearing commission.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Shannon Slater of the NPDES Permits and Engineering Section at (573) 526-1535, e-mail *shannon.slater@dnr.mo.gov*, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Robert K. Morrison

Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:ssp

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Larry Coen, DNR/LRP
DNR - NERO

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

June 11, 2007

Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, KS 66202

PN01-01431/CEK001018

Dear Mr. Odell:

The Missouri Department of Natural Resources' Water Protection Program has reviewed Public Notice No. PN01-01431/CEK001018 in which the applicant has proposed to extract up to 360,000 of material per year from the Missouri River between river miles 445.00 and 455.50. Holliday Sand will also be authorized to extract 3,400,000 tons of material in 2007; 2,950,000 tons in 2008; and 2,500,000 tons in 2009 from the following reaches of the Missouri River: river miles 331.65 to 336.00, 338.00 to 339.15, 340.00 to 345.25, 345.46 to 356.30, 356.50 to 358.16, 358.36 to 359.24, 359.44 to 360.17, 360.37 to 361.20, 361.44 to 362.15, 362.35 to 364.25, 364.45 to 364.64, 364.84 to 365.43, 365.79 to 366.02, 366.30 to 367.00, 367.90 to 373.30, 374.20 to 375.10, 375.30 to 377.81, 378.90 to 379.70, 380.70 to 382.70. In 2008 and 2009 Holliday Sand will be authorized up to 450,000 and 900,000 tons per respective year from between Missouri River miles 301.05 and 328.00.

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 the following condition is met:

1. The U.S. Army Corps of Engineers (Corps) permit decision and all conditions are followed as authorized by the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-330.

Pursuant to Chapter 644.052.9, RSMo, commonly referred to as the Missouri Clean Water Law, this 401 Water Quality 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 of Engineers to inform them the certification is now in effect and final.

You may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing 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 administrative hearing commission.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Shannon Slater of the NPDES Permits and Engineering Section at (573) 526-1535, e-mail *shannon.slater@dnr.mo.gov*, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:ssp

Enclosure

c: Mr. Cody Wheeler, Army Corps of Engineers, Kansas City District
Mr. Larry Coen, DNR/LRP
DNR - KCRO

Enclosure 12.4 Kansas 401 Water Quality Certification

KANSAS

Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

Division of Environment

June 14, 2007

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

Section 401 Water Quality Certification

Regarding: Public Notice for Permit No. Missouri River Commercial Dredgers. The only dredging company from Kansas authorized to renew their permit is Holiday Sand and Gravel therefore the Section 401 certification refers only to them even though 8 other companies were referenced in the public notice issued June 27, 2003. Holliday Sand will be authorized to extract up to 360,000 tons of material per year from the Missouri River between river miles 445.00 and 455.50. Holliday Sand will also be authorized to extract 3,400,000 tons of material in 2007, 2,950,000 tons in 2008, and 2,500,000 tons in 2009 from the following reaches of the Missouri River: river miles 331.65 to 336.00, 338.00 to 339.15, 340.00 to 345.25, 345.46 to 356.30, 356.50 to 358.16, 358.36 to 359.24, 359.44 to 360.17, 360.37 to 361.20, 361.44 to 362.15, 362.35 to 364.25, 364.45 to 364.64, 364.84 to 365.43, 365.79 to 366.02, 366.30 to 367.00, 367.90 to 373.30, 374.20 to 375.10, 375.30 to 377.81, 378.90 to 379.70, 380.70 to 382.70. In 2008 and 2009 Holliday Sand will be authorized to extract up to 450,000 and 900,000 tons per respective year from between Missouri River miles 301.05 and 328.00 subject to Special Condition F of the USACE 404 permit. The permit will be subject to all the special conditions attached and will expire on December 31, 2009. The 2007 tonnage limits will retroactively apply to all dredging since the beginning of 2007. These tonnage limits are of sand when it is offloaded from the barge with a moisture content of approximately 10%. Permit conditions that specify a linear distance exclusion zone adjacent to a river feature will be measured from the end of the cutter head rather than from a general point on the dredge. No wetlands will be impacted.

The Kansas Department of Health and Environment has received your request for Section 401 Water Quality Certification. We have reviewed the project and have determined the project has the following water pollutant discharge sources:

1. Dredging, depositing, filling, etc
2. Mechanical fluid spills/leaks.

The Missouri River is classified (K.A.R. 28-16-28d (B)(b,c)(2), for designated uses including all types of contact recreation by law or written permission, **special aquatic life support**, domestic water supply, food procurement use, ground water recharge, industrial water supply, irrigation, livestock watering, and food procurement (KS Surface Water Quality Register, KDHE, April 18 2007).

Discharges from these sources if not minimized or otherwise controlled may cause surface waters of the state [KAR 28-16-28b(eee). Pursuant to Section 401and KAR 28-16-28(c) the Kansas Department of Health and Environment finds this project will not result in a violation of Kansas Water Quality Standards and herewith issues a Water Quality Certification for execution and subsequent operation of the project subject to the USACE's permit conditions and the following KDHE conditions:

1. The Holliday Sand and Gravel Company shall avoid or control the discharge of suspended solids from construction activities and removal of riparian vegetation so that they may not cause:

   a. Any surface waters of the state within and below the project area to contain discarded solid material, including trash, garbage rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire and other unwanted or discarded materials [KAR 28-16-28e(b)(1)].

   b. Any surface waters of the state within and below the project to have floating debris, scum, foam, froth and other floating materials directly or indirectly attributable to the project [KAR 28-16-28e(b)(8)].

   c. Any surface waters of the state within or below the project to have deposits of sludge or fine solids [KAR 28-16-28e(c)(2)(D)].

   d. Alteration of the natural appearance of surface waters of the state within or below the project by the addition of color-producing or turbidity-producing substances of artificial origin [KAR 28-16-28e(c)(2)(D)].

e. The concentration of dissolved oxygen in the Missouri River to be lower than 5.0 mg/L, Kansas Surface Water Quality Standards [KAR 28-16-28e(d)] in table1g, found in a separate document found at: http://www.kdhe.state.ks.us/water/download/swqs_numeric_criteria.pdf.

f. Addition of suspended solids to the Missouri River in amounts and concentrations that will interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semi aquatic life or terrestrial wildlife [KAR 28-1628e(c)(2)(D)].

2. The Holliday Sand and Gravel Company shall avoid or control the discharge of toxic substances, oil and grease and other fluids from construction activities, so that the project does not cause:a. Any surface waters of the state within and below the project area to have a public health hazard, nuisance condition or impairments of designed uses [KAR 28-1628e(c)(2)(A,B,C,D,E,F)].

b. Any surface waters of the state within and below the project area to have toxic substances, radioactive isotopes, and infectious microorganisms in concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife or aquatic or semiaquatic life [KAR 28-16 28e(c)(2)(A,B,C,D,E,F)].

c. Any surface waters of the state within and below the project area to have a visible oil and grease film or sheen on the water surface or on submerged substrate or adjoining shore lines, nor have a sludge or emulsion deposit below the water surface of adjoining shorelines 28-16-28e(c)(2)(A,B,C,D,E,F)].

d. The pH in the Missouri River to be below 6.5 or above 8.5. Refer to Surface Water Quality Standards [KAR 28-16-28e(d)] in table1g, a separate document found at: http://www.kdhe.state.ks.us/water/download/swqs_numeric_criteria.pdf,

e. In the Missouri River listed harmful concentrations of any substance alone or in combination with other substances causing toxic, carcinogenic, teratogenic, or mutagenic effects in humans [KAR 28-16-28e(c)(3)(C)].

f. Concentrations of substances that bio-accumulate in the tissues of edible organisms to exceed a cancer risk level of (10^{-6}) in persons consuming organisms taken from the Missouri River [KAR 28-16-28e(c)(4)(B)].

g. The concentration of dissolved oxygen in the Missouri River to be lower than 5.0 mg/L, Kansas Surface Water Quality Standards [KAR 28-16-28e(d)] in table1g, found in a separate document found at: http://www.kdhe.state.ks.us/water/download/swqs_numeric_criteria.pdf.

3. Placement of this material upland which disturbs one acre or more maybe subject to the National Pollutant Discharge Elimination System (N.P.D.E.S.) storm water permit requirements of 40 C.F.R. 122.26. This certification does not relieve The Holliday Sand and Gravel Company of its obligation to secure such permit. Information on construction site NPDES permits is available from Bureau of Water - Industrial Programs website: www.kdheks.gov/stormwater or Mr. Larry Hook at 785/296-5549.

4. The Holliday Sand and Gravel Company shall avoid or control the discharge of *Escherichia-coli* bacteria from the project site, especially construction activities so that the project does not cause the *Escherichia-coli* bacteria concentration of the Missouri River to exceed a geometric mean of262 organisms per 100 milliliters during the period of April 1 through October 31 and geometric mean of 2,358 organisms per 100 milliliters during the period of November 1 through March 31. [KAR 28-16-28e(e)(c)(7)(D)].

   a. In the Missouri River listed harmful concentrations of any substance alone or in combination with other substances causing toxic, carcinogenic, teratogenic, or mutagenic effects in humans [KAR 28-16-28e(c)(3)(C)].

   b. Concentrations of substances that bio-accumulate in the tissues of edible organisms to exceed a cancer risk level of (10^{-6}) in persons consuming organisms taken from the Missouri River [KAR 28-16-28e(c)(4)(B)].

   c. The concentration of dissolved oxygen in the Missouri River to be lower than 5.0 mg/L, Kansas Surface Water Quality Standards [KAR 28-16-28e(d)] in table1g, found in a separate document found at: http://www.kdhe.state.ks.us/water/download/swqs_numeric_criteria.pdf.

5. Holliday Sand and Gravel Company shall submit an updated WQPPP to this office describing the actions that will be taken to comply with Certification Conditions 1,2,3 &4. This plan shall be submitted to the Kansas Department of Health and Environment - Bureau of Water, Watershed Management Section, Curtis State Office Building, 1000 SW Jackson Street, Suite 420, Topeka, Kansas 66612. This condition may be waived depending on the content of the "stormwater pollution prevention plan" prepared pursuant to condition 3.0 above.

   The project water quality protection plan shall specifically address the following items:

   a. **Riparian Areas**: Minimize removal or disturbance of riparian areas (areas adjacent to water bodies). KDHE encourages the use of vegetation consistent with adjoining vegetation materials to minimize impacts from improper handling of fertilizers and pesticides.

   b. **Solid Waste**: All waste materials produced by the construction project shall be disposed of in accordance with the provisions of the Kansas solid waste management statutes and regulations (K.S.A. 65-3401 and K.A.R. 28-29-1 et. seq.) or applicable local rules. Good house keeping including personal refuse such as food containers, sacks etc. shall be addressed.

c. **Fuels: Chemicals and Maintenance Areas**: All fuels and chemicals necessary to complete the project shall be stored in such a manner that accidental spillage is minimized or can be temporarily contained before reaching the water body. Equipment maintenance areas shall also be located in this manner.

d. **Spills:** Should a spill of fuel or discharge of pollutants occur, the local emergency staff should be contacted first by dialing 911. The Kansas Department of Health and Environment shall then be notified immediately: (785)- 296-1679 (24 hours a day.) These incidences should also be reported to the National Spill Response Center (1-800-*424-8802). Hazardous materials spills and air releases that meet federal reportable quantities must also be reported to Kansas Division of Emergency Management (800-275-0297).*" These reporting numbers shall be posted in several locations around the site. A Spill Prevention and Response Plan should be prepared.

e. **Floating Debris** The applicant shall take appropriate measures to capture any floating debris released to surface waters as a result of this project.

f. **Persons** initiating a dredging activity shall contact the Kansas Department of Health and Environment, Northeast District Office using the information below, at least 36 hours prior to dredging.
Kansas Department of Health and Environment, Northeast District Office
800 W. 24th St.
Lawrence, KS 66046-4417
Phone 785/842-4600
Fax 785/842-3537 Attention: Julie Coleman

g. **Drinking Water Intakes**: The person responsible for the permitted activity shall avoid adverse impacts on public water supplies. When ever permitted activities occur within one mile upstream of a public drinking water supply - surface water intake, the applicant shall contact the official in charge of the public drinking water supply to apprize the drinking water supply official of the permitted activity. The person responsible for the permitted activity shall consider the suggestions and recommendations of the public water supply official when preparing the PWQPP.

Public water supply surface drinking water intakes are located in: SWSESESW of T05 R21E S31-- City of Atchison
SWSWSESE T11 R24E S31 & NENWSENE T11 R24E S22--JO County Water District#1
NESENWSW - T08 22E S25--City of Leavenworth
SWNESWNW T10 R25E S28--Kansas City Board of Public Utilities

h. Treated Wastewater Effluent Mixing Zones: As a general guideline any Section 404 activity within one-half mile upstream or one-half mile downstream of a permitted wastewater *effluent* discharge may impact the effluent mixing zone. The person responsible for the permitted activity shall determine if the project will adversely impact the wastewater effluent mixing zones and take appropriate measures to avoid altering or changing the mixing zone. This may include but is not limited to:

Any activity which may alter or remove the stream channel geometry or natural oxygenation abilities of the stream such as bridge construction, channelization, stream channel substrate modification etc.

National Pollutant Discharge Elimination System (N.P.D.E.S.) Permits are issued to the following entities.

Atchison County, KS -City of Atchison
Doniphan County, KS- City of Elwood, City of Wathena
Leavenworth County, KS- City of Leavenworth
Wyandotte County, KS- City of Kansas City, Board of Public Utilities, Kansas City
Inquiries should be directed to KDHE Bureau of Water 785/296-5527.

i. *This activity is on the Missouri River designated by the State of Kansas as a Special Aquatic Life Use (SALU) water, due to the presence of a combination of habitat and rare, threatened or endangered species K.A.R.* 28-16-28 *(a)* (2) *(A). Therefore. the water quality protection plan. referenced to earlier in condition #5. shall be submitted to this office at :* Kansas Department of Health and Environment, Bureau of Water, Watershed Management Section, 1000 SW Jackson, Ste 420, Topeka, KS 66612-1367.

j. The Kansas Department of Wildlife and Parks should be consulted as to the requirement for authorization of this activity to meet the requirements of the Kansas Nongame and Endangered Species Conservation Act, K.S.A. 32-957 to 963, 32-1009 to 1012, and 32-1033.

k. All precautions shall be taken to avoid causing bed, toe or bank erosion resulting from these activities.

5. This certification does not relieve the USACE of the responsibility for any discharge into waters of the state. The Kansas Department of Health and Environment retains the option of revoking this certification anytime an inappropriate discharge may occur. As provided by K.S.A. 65-171 (t), failure to comply with the conditions of this certification may subject the responsible party to fines up to $ 10,000 per violation with each day the violation occurs constituting a separate violation.

6. If the applicant believes the conditions of this certification will result in impairment of important social and economic development, the applicant is advised of the variance provisions of KAR 28 16-28b(jjj) and KAR 28-16-28f(e).

Questions concerning this certification may be directed to Mr. Scott Satterthwaite, 785-296-5573.

Sincerely

Scott L. Satterthwaite

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

C: Ms. Beth Rowlands- KDHE NEDO, Larry Hook- BOW-IND.
Carrie M. Schulte, Environmental Specialist IV, Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, MO, 65102
Mr. Jim Hays, KDWP, Environmental Services, Chief, Pratt Operations Office, 512 SE 25th Ave. Pratt, KS 67124-8174
Ms. Susan Blackford, Fish and Wildlife Service, Kansas Field Office, 315 Houston Street, Suite E, Manhattan, KS 66502-6172
Mr. Matt Scherer, P.E., Water Structures Program, Program Manager, Kansas Dept. of Agriculture, Div. of Water Resources, 109 SW 9th Street, 2nd Floor, Topeka, KS 66612-1283,
785-296-6897 Fax 785-296-4835

Enclosure 12.5 July 28, 2003 FWS Response to the Public Notice for Re-authorization of Current Dredging

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Columbia Ecological Services Field Office
608 East Cherry Street, Room 200
Columbia, Missouri 65201
Phone: (573) 876-1911 Fax: (573) 876-1914

July 28, 2003

Mr. Mark Frazier
Regulatory Section
U.S. Army Corps of Engineers
601 East 12th Street
Kansas City, Missouri 64106-2986

Dear Mr. Frazier:

Please refer to the June 27, 2003, Public Notice for Missouri River Commercial Dredgers permit renewal in the reach of the Missouri River under the jurisdiction of the Kansas City District. The U.S. Fish and Wildlife Service (Service) has reviewed that Public Notice, in addition to discussions with your staff, a site-visit, and additional Corps materials (i.e., reports and memoranda) associated with Missouri River sediments and commercial dredging. Based on that information the Service submits the following comments pursuant to the Endangered Species Act of 1973(Act), as amended (16 U.S.C. 1551 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Previously, the Service has informed the Corps that our concerns regarding federally listed species focus on potential dredging effects to pallid sturgeon, primarily from alteration of shallow water habitat and possible entrainment of fish. The Service provided information on both. those topics for the Corps' consideration. We have also coordinated with you regarding the modifications to the previous permit conditions to better understand the amount and location of material removal, and better protect native river fisheries resources. We are pleased to see that those conditions have been included as parts of the proposed permit action.

We do, however, have concerns with the proposed limits of material for the reach of the river in Kansas City. The Public Notice states that three companies will be permitted to move material in the reach between roughly River Mile 350 and 380, for a combined total of 4,050,000 tons per year. The Service has previously raised concerns about the effects of excessive dredging on an already degraded reach of the river. Those concerns were based on information from the Corps that indicates sand dredging can exacerbate bed degradation and recommends that proposed dredging be limited to the average annual bed load. In the Kansas City area the bed load is estimated at approximately 1,570,000 tons per year. In addition to effects to public infrastructure, bed degradation can significantly degrade riverine habitat in the affected reach as

well as upstream via head cutting. Given that the proposed permit amounts greatly exceed the annual bed load, we recommend that the Corps limit the total material removed unless it can demonstrate that a larger amount would have no negative affects to channel stability.

Consultation under section 7 of the Endangered Species Act pertaining to the effects of the action on the endangered pallid sturgeon can be concluded once this issue has been addressed. The Service appreciates the Corps coordination efforts regarding these permit renewals, and we look forward to working with you as we address our shared resource responsibilities. If you have questions regarding our comments, please contact Jane Ledwin at 573/876-1911, extension 109.

Sincerely,

Charles M. Scott
Field Supervisor

cc: MDC, Jefferson City, MO (Canaday)
MDC, Jefferson City, MO (Homer)
MDNR, Jefferson City, MO (Boos)

Enclosure 12.6 March 8, 2004 FWS Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Columbia Ecological Services Field Office
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203-0007
Phone: (573) 234-2132 Fax: (573) 234-2181

March 8, 2004

Mr. Mark Frazier
Regulatory Section
U.S. Army Corps of Engineers
601 East 12th Street
Kansas City, Missouri 64106-2986

Dear Mr. Frazier:

Please refer to the January 12, 2004, Public Notice (Permit No. 200400378) for a permit application by Muenks Brothers Quarries, for commercial sand and gravel dredging on the Missouri River between River Miles 144 and 164. The applicant proposes to dredge no more than 350,000 tons of material per year in the subject reach. The U.S. Fish and Wildlife Service (Service) has reviewed that Public Notice and submits the following comments pursuant to the Endangered Species Act of 1973(Act), as amended (16 U.S.C. 1551 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Previously, the Service has informed the Corps that our concerns regarding federally listed species focus on potential dredging effects to pallid sturgeon, primarily from alteration of shallow water habitat and possible entrainment of fish. The Service provided information on both those topics for the Corps' consideration. We have also coordinated with you regarding the modifications to the previous permit conditions to better understand the amount and location of material removal, and better protect native river fisheries resources. As we have noted in our previous correspondence, operating under our recommended conditions will avoid adverse effects to the pallid sturgeon. Those conditions prohibit dredging within 0.25 miles of any chute, tributary mouth, side channel or refuge (e.g.) Marion Bottoms CA, Plowboy Bend CA, etc. We are pleased to see that those conditions have been included as parts of the proposed permit action.

The Service appreciates the Corps coordination efforts regarding sand and gravel dredging permits, and we look forward to working with you as we address our shared resource

responsibilities. If you have questions regarding our comments, please contact Jane Ledwin at 573/234-2132, extension 109.

Sincerely,

Charles M. Scott
Field Supervisor

cc: MDC, Jefferson City, MO (Canaday)
MDC, Jefferson City, MO (Horner)
MDNR, Jefferson City, MO (Boos)

G:\ledwin\letters\20040223s&gdrgd.doc

Enclosure 12.7 July 24, 2003 MDC Response to Public Notice for Re-authorization of Current Dredgers

Frazier, Mark D NWK

From: Brian Canaday (canadb@mdc.state.mo.us]
Sent: Thursday, July 24, 2003 1:29 PM
To: Frazier, Mark D
Subject: Fwd: Missouri and Mississippi River Dredging Permits

Fwd: Missouri and Mississippi

The Missouri Department of Conservation recently reviewed and discussed feedback we solicited from or field staff regarding the potential need for seasonal dredging restrictions. As it currently sits, the consensus was that we do not have strong evidence to restrict dredging during the spawning season as long as it continues to be restricted to the main navigation channel. However, there was a strong assertion from all that certain areas of the rivers should continue to be declared off limits to dredgers to avoid impacts to river fishes. Those protected areas should include dike fields, natural cut bank areas, tributary mouths, sand islands (especially their tips) as well as at the mouths and within chutes and sloughs.

Permit reviewers should keep in mind that our knowledge of the major rivers continues to grow and at some point we may gather enough scientific data to support some river stretches as refuges for at least some portion of the year.

Please feel free to contact me if you have any questions, or if I can be of any help. Thank you for the opportunity to comment.

Brian D. Canaday
Policy Coordinator
Missouri Department of Conservation
P.O. Box 180
Jefferson City, Missouri 65102
573-522-4115 *3371 ** New Number**
canadb@mdc.state.mo.us

Enclosure 12.8 July 2, 2003 MDC Response to Public Notice for Re-authorization of Current Dredgers

Frazier, Mark D NWK

From: **Gene Gardner [gardng@mdc. state. mo.us]**
Sent: **Wednesday, July 02, 2003 2:20 PM**
To: **Brian Canaday**
Subject: Fwd: **Missouri and Mississippi River Dredging Permits**

Here is the note from Steve Eder you asked about.
>>> Steve Eder 04/30/03 02:40PM >>>
Gene,

Fisheries Leadership recently reviewed and discussed feedback we solicited from the big rivers' management regions and the LTRM station regarding the need for more stringent seasonal dredging restrictions. While there was a little difference of opinion, the consensus was that we do not have strong evidence to restrict dredging during the spawning season as long as it continues to be restricted to the main channel. However, there was a strong assertion from all that certain areas of the rivers should continue to be declared off limits to dredgers to avoid sturgeon impacts. Those protected areas should include dike fields, natural cut bank areas, tributary mouths, sand islands (especially their tips) as well as at the mouths and within chutes and sloughs.

Permit reviewers should keep in mind that our knowledge of the major rivers continues to grow and at some point in time we will gather enough scientific data to support the designation of some river stretches as refuges for at least some portion of the year (much like what has been done for mussels on the Upper Mississippi or for Niangua darters in smaller streams). Given the continued work of the LTRM staff and the regions, our intent to fund a preliminary lake sturgeon movements project for the Upper Mississippi in FY04, and the current work being done by USGS from the Columbia Environmental Research Center to inventory potential pallid sturgeon spawning areas in the Missouri River, we are optimistic about identifying critical life supporting areas for sturgeon and other species and enhancing the long term management of our fish communities.

Thanks for the opportunity to weigh in on this issue.

Steve

Enclosure 12.9 March 10, 2004 MDC Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

Frazier, Mark D NWK

From: Brian Canaday [Brian.Canaday@mdc.mo.gov]
Sent: Wednesday, March 10, 2004 10:17 AM
To: Frazier, Mark D
Cc: Don Boos; jane.ledwin@fws.gov; Tim Grace
Subject: Public Notice 200400378

RE: Public Notice 200400378
Muenks Brothers Quarries
3717 Highway 50 West
Loose Creek, MO 65054

Thank you for the opportunity to review and provide comments on this permit application. The comments and recommendations submitted herein pertain to PN# 200400378. This joint public notice regards hydraulic dredging of sand and gravel from the Missouri River by a mobile, floating dredge plant between Missouri River mile 144 (Jefferson City) and mile 164 (Sandy Hook).

The Missouri Department of Conservation recently reviewed and discussed feedback we solicited from field staff regarding the potential need for seasonal dredging restrictions for the Missouri River. As it currently sits, the consensus was that we do not have enough evidence to restrict dredging during the spawning season as long as it continues to be restricted to the main navigation channel. However, we have documentation that certain areas of the rivers should continue to be declared off limits to dredgers to avoid impacts to river fishes. Those protected areas should include natural cut bank areas, dike fields tributary mouths, sand islands (especially their tips) as well as the mouths of chutes and within chutes and sloughs.

Permit reviewers should keep in mind that our knowledge of the major rivers continues to grow and at some point we may gather enough data to support some river reaches as refuges for at least some portion of the year.

Please feel free to contact me if you have any questions or if I can be of any help.

Brian D. Canaday
Policy Coordinator
Missouri Department of Conservation
2901 West Truman Blvd
Jefferson City, Missouri 65102
573-522-4115 *3371
573-526-4495 (fax)
Brian.Canaday@mdc.mo.gov

Enclosure 12.10 July 18, 2003 MDNR Response to Public Notice for Re-authorization of Current Dredgers

Frazier, Mark D NWK

From: Don Boos [nrboosd@mail.dnr.state.mo.us]
Sent: Friday, July 18, 2003 8:51 AM
To: Frazier, Mark D
Cc: canadb@mdc.state. mo.us; daniels.jason@epa.gov; rick_hansen@fws.gov; Melissa Shiver; Becky Shannon

Subject: RE: MO River Commercial Dredgers, CEK001017 ?CEK001025

The Missouri Department of Natural Resources' Water Pollution Control Program has reviewed Public Notice Permit No. MO River Commercial Dredgers in which the applicants seek renewed authorization to dredge sand and gravel for commercial purposes from the Missouri River in the states of Kansas and Missouri. If reauthorized and/or issued, the permits would authorize the dredging for a period of five years from December 31 of the year of permit execution. This notice is provided to outline details of the proposed work so that this district may consider all pertinent comments prior to determining if issuance of these permits would be in the public interest. Concurrent with this notice, all of the existing dredging permits are extended under the terms and conditions of the existing permits until no more than thirty days following the district's decision on these applications. The existing permit conditions and the listing of commercial dredges to which this applies are listed in the public notice. Hydraulic cutter suction dredges would perform all of the proposed dredging operations. Water and dredged material would be passed through screens allowing the desired material to be routed into barges and the undesired material to be returned, with the water, to the river. The barges are then transported to offloading facilities where the material is removed, by front-end loader or crane systems, and stockpiled onshore.

The project area is on the Missouri River in various counties within Missouri.

We offer the following comments:

1. Best management practices should be used during dredging to limit the amount of sedimentation into the Missouri River and associated waterbodies.

2. The quality of downstream water supplies should not be adversely affected by this project.

3. Redeposited material should not be placed such that the flow is altered or that increased bank erosion is realized.

4. Care should be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste should not be stored below the ordinary high water mark (OHWM) at any time or in the adjacent floodway beyond normal working hours. All precautions should be taken to avoid the release of wastes or fuel to streams and other adjacent waterbodies as a result of this operation. Petroleum products spilled into any waterbody or on the banks where the material may enter waters of the state should be immediately cleaned up and disposed of properly. Any such spills of petroleum should be reported as soon as possible to the Missouri Department of Natural Resources' 24-hour Environmental Emergency Response number- at (573) 634-2436.

Thank you for the opportunity to comment on this proposed project. If you have any questions, please call Melissa Shiver at (573)-526-0983.

Enclosure 12.11 January 29, 2004 MDNR Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

Frazier, Mark D NWK

From: Don Boos [don.boos@dnr.mo.gov]
Sent: Thursday, January 29, 2004 9:44 AM
To: Frazier, Mark D
Cc: canadb@mdc.state.mo.us; daniels.jason@epa.gov; rick_hansen@fws.gov; Scott Hamilton
Subject: RE: Public Notice Permit No. 200400378/CEK001249, Muenks Brothers Quarries

The Missouri Department of Natural Resources' Water Protection Program has reviewed Public Notice Permit No. 200400378/CEK001249 in which the applicant proposed hydraulic dredging of sand and gravel from the Missouri River by a mobile, floating dredge plant. Dredge material will be processed onboard, with fines and oversized material returned to the river, for an approximate total extraction of 350,000 tons of material per year. This extracted material will be offloaded onto barges for transport to a land processing facility near Missouri River mile 147. The land facility is authorized under Department of the Army Permit No. 200001901.

The project is located in the Missouri River between river miles 144 (at Jefferson City) and 164 (near Sandy Hook) in Boone, Callaway, Cole and Moniteau Counties, Missouri.

We offer the following comments:

1. The Missouri River is a classified waterbody with designated uses of Livestock and Wildlife Watering, Protection of Warm Water Aquatic Life and Human Health- Fish Consumption, Boating and Canoeing, and Drinking Water Supply, Industrial and Irrigation. Any activities occurring within these jurisdictional waters must abide by the State's Numeric and General Water Quality Criteria, including criteria related to turbidity [10 CSR 20-7.031 (3) C].

2. The timing of the dredging should be such that impacts to the natural biological community should be minimized to the greatest extent possible, taking into account such events as fish spawning periods and the release of mussel glochidia. Known mussel beds should be avoided.

3. The location of dredging should be such that minimal impacts to channel morphology will occur. Dredging in areas near the mouths of tributaries may cause headcuts to run up those tributaries and cause bank instability upstream. Dredging in areas near the toe of slopes on the outside bend of meanders may cause excessive erosional forces that may lead to bank instability.

4. Have alternative methods of acquiring sand and gravel that would have less potential for impact on the environment such as Streamsidesystems' gravel collectors been considered?

5. Access points should be appropriately constructed and maintained such that stream banks and access roads are protected from erosion.

6. Care should be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste shall not be stored below the ordinary high water mark (OHWM) at any time or in the adjacent floodway beyond normal working hours. All precautions shall be taken to avoid the release of wastes or fuel to streams and other adjacent waterbodies as a result of this operation. Petroleum products spilled into any waterbody or on the banks where the material may enter waters of the state shall be immediately cleaned up and disposed of properly. Any such spills of petroleum shall be reported as soon as possible to the Missouri Department

Frazier, Mark D NWK

From: Don Boos [don.boos@dnr.mo.gov]
Sent: Thursday, January 29, 2004 9:44 AM
To: Frazier, Mark D
Cc: canadb@mdc.state.mo.us; daniels.jason@epa.gov; rick_hansen@fws.gov; Scott Hamilton
Subject: RE: Public Notice Permit No. 200400378/CEK001249, Muenks Brothers Quarries

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The project is located in the Missouri River between river miles 144 (at Jefferson City) and 164 (near Sandy Hook) in Boone, Callaway, Cole and Moniteau Counties, Missouri.

We offer the following comments:

1. The Missouri River is a classified waterbody with designated uses of Livestock and Wildlife Watering, Protection of Warm Water Aquatic Life and Human Health- Fish Consumption, Boating and Canoeing, and Drinking Water Supply, Industrial and Irrigation. Any activities occurring within these jurisdictional waters must abide by the State's Numeric and General Water Quality Criteria, including criteria related to turbidity [10 CSR 20-7.031 (3) C].

2. The timing of the dredging should be such that impacts to the natural biological community should be minimized to the greatest extent possible, taking into account such events as fish spawning periods and the release of mussel glochidia. Known mussel beds should be avoided.

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4. Have alternative methods of acquiring sand and gravel that would have less potential for impact on the environment such as Streamsidesystems' gravel collectors been considered?

5. Access points should be appropriately constructed and maintained such that stream banks and access roads are protected from erosion.

6. Care should be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste shall not be stored below the ordinary high water mark (OHWM) at any time or in the adjacent floodway beyond normal working hours. All precautions shall be taken to avoid the release of wastes or fuel to streams and other adjacent waterbodies as a result of this operation. Petroleum products spilled into any waterbody or on the banks where the material may enter waters of the state shall be immediately cleaned up and disposed of properly. Any such spills of petroleum shall be reported as soon as possible to the Missouri Department

of Natural Resources' 24-hour Environmental Emergency Response number at (573) 634-2436.

Thank you for the opportunity to comment on this proposed project. If you have any questions, please call Scott Hamilton of the Watershed Protection Section at (573) 751-7428.

SH:pc

DNR is changing all e-mail addresses to a new format. Old e-mail addresses will only work during a transition period. Please update your records with my new e-mail address, above.

Enclosure 12.12 January 14, 2004 Missouri SHPO Cultural Resource Assessment for the Muenks Brothers Application

CULTURAL RESOURCE ASSESSMENT
Section 106 Review

CONTACT PERSON/ADDRESS

Mark D. Frazier, Regulatory Branch
Kansas City District, Corps of Engineers
700 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

C:

Niama Chestnut, EPA

PROJECT:

Muenks Brothers Quarries Application No. 200400378

FEDERAL AGENCY

COE

COUNTY:

BOONE

The State Historic Preservation Office has reviewed the information submitted on the above referenced project. Based on this review, we have made the following determination:

☐ After review of initial submission, the project area has a low potential for the occurrence of cultural resources. A cultural resource survey, therefore, is not warranted.

☒ Adequate documentation has been provided (36 CFR Section 800.11). There will be "no historic properties affected" by the current project.

☐ An adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be "no historic properties affected".

For the above checked reason, the State Historic Preservation Office has no objection to the initiation of project activities. PLEASE BE ADVISED THAT, IF THE CURRENT PROJECT AREA OR SCOPE OF WORK ARE CHANGED, A BORROW AREA IS INCLUDED IN THE PROJECT, OR CULTURAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, APPROPRIATE INFORMATION MUST BE PROVIDED TO THIS OFFICE FOR FURTHER REVIEW AND COMMENT. Please retain this documentation as evidence of compliance with Section 106 of the National Historic Preservation Act, as amended.

By: Mark A. Miles — January 14, 2004

Mark A. Miles, Deputy State Historic Preservation Officer — **Date**

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
P.O. Box 176, Jefferson City, Missouri 65102
For additional information, please contact Judith Deel, (573) 751-7862. Please be sure to refer to the project number: 015-BO-04

Enclosure 12.13 September 5, 2006 Kansas SHPO Cultural Resources Assessment

KSR&C No. 06-09-030

KANSAS

Kansas State Historical Society
Cultural Resources Division

KATHLEEN SEBELIUS, GOVERNOR

RECEIVED
REGULATORY BRANCH
06 SEP -7 AM 10: 32

September 5, 2006

Cody Wheeler
Regulatory Branch
Kansas City District Corps of Engineers
601 E 12th St
Kansas City MO 64106

RE: Dredging Permit Renewals
Missouri River Commercial Dredgers

Dear Mr. Wheeler:

The Kansas State Historic Preservation Office has reviewed its cultural resources files for the area of the above referenced project in accordance with 36 CFR 800. The project as proposed should have no effect on properties listed on the National Register of Historic Places or otherwise identified in our files. This office has no objection to implementation of the project.

Any changes to the project area that include additional ground disturbing activities will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston 785-272-8681 (ex. 214). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Jennie Chinn
State Historic Preservation Officer

Patrick Zollner
Deputy State Historic Preservation Officer

6425 SW Sixth Avenue • Topeka, KS 66615-1099
Phone 785-272-8681 Ext. 240 • Fax 785-272-8682 • TTY 785-272-8683
www.kshs.org

Enclosure 12.14 August 14, 2003 WaterOne Response to Public Notice for Re-authorization of Current Dredgers

WaterOne

Water District No. l of Johnson

One Mission. . .
Quality Water

August 14, 2003

Mr. Mark D. Frazier
ATTN: D-R
U.S. Army Corps of Engineers
601 East 12th Street
Kansas City, MO 64106-2986

Re: Comments on Permit No. Mo River Commercial Dredgers

Dear Mr. Frazier:

As we discussed in our telephone conversation of yesterday, this letter is to address WaterOne's concerns about approval of the multiple Dredging permits mentioned in your June 27, 2003 Public Notice.

The permit includes a new applicant authorized to operate in front of our intake. From a water quality standpoint, WaterOne has serious reservations about allowing any dredging in the reach immediately upstream of our intake and asks that the 85" Street, Inc. river mile range exclude any activity above our intake at river mile 379.9 or within one mile downstream of the intake. This would reduce their operating range to 352.6 - 378.9.

For a number of years Water One has had concerns about riverbed degradation in the Kansas City area. From our records and from conversations with other members of the Corps of Engineers, there has been a three-foot drop in the riverbed in our area since the early 1990's. This degradation is severe enough that the pumping equipment installed at our water intake is rapidly becoming ineffective, particularly during the winter when the Corps operates the river at low levels. It should be noted that WaterOne is spending approximately two million dollars this year in additional pumping equipment to help assure that the approximately 370,000 persons whom we serve have a reliable supply of drinking water in the winter.

WaterOne is concerned that the authorized dredging will aggravate the bed degradation and would like some assurance from the Corps that this permit will not make the problem worse.

We respectfully request that the Corps of Engineers consider our comment by not allowing dredging in our area and address the bed degradation issues. If there are any questions regarding this letter, please feel free to contact me at 913-895-5813.

Sincerely,

P Corkill

Paul D Corkill, P.E.
Manager of Facilities Engineering

PDC:jw

cc: Tom Schrempp
Mike Armstrong
Eric Arner

Enclosure 12.15 May 5, 2004 Sac & Fox Response to Public Notice for Re-authorization of Current Dredgers

Sac & Fox Nation of Missouri
in Kansas & Nebraska

305 North Main St., Reserve, KS 66434
Phone: (785) 742-7471 Fax: (785) 742-3785

May 5, 2004

Mark Frazier
U.S. Army Corps of Engineers
Regulatory Branch
700 Federak Building
601 East 12th Street
Kansas City, Missouri 64106-2896

Dear Mr. Frazier:

Thank you for your letter, which is in compliance with Section 106 of the National Historic Preservation Act, and Section 110. I apologize for not meeting your deadline; I am sending this reply for your file so that you have documentation that we were interested in the following projects. If in the future any issues arise with these projects you will have a record of our response.

The Sac and Fox Nation of Missouri in Kansas and Nebraska have an interest in this site in issues that result in inadvertent finds of human remains or funerary objects pertaining to:

Muenks Brothers Quarries - Boone, Callaway, Cole and Moniteau Counties in Missouri

There are two other bands of Sac and Fox that also need to be contacted, the Sac and Fox Nation of Oklahoma and the Sac and Fox of the Mississippi in Iowa.

If you have any questions, please contact me at the number or address above.

Sincerely,

Deanne Bahr
Sac and Fox Nation of Missouri in Kansas and Nebraska
NAGPRA Contact Representative

Enclosure 12.16 February 16, 2004 Winnebago Tribe of Nebraska Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

February 16, 2004

Mark D. Frazier
U. S. Army Corps of Engineers
Regulatory Branch
700 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

RE: Permit # 200400378

Mr. Frazier
Project Director

Thank you for letter dated January 12, 2004. The Winnebago Tribe of Nebraska has to my knowledge no sacred sites or historical properties in this project area. Thank you for your information.

Sincerely,

David Smith
Winnebago Tribe of Nebraska
Cultural Preservation/Repatriation Director

RLH

Enclosure 12.17 January 6, 2004 Prairie Band Potawatomi Nation Response to Public Notice for Authorization of Proposed Muenks Brothers Dredging

Prairie Band Potawatomi Nation
Government Center

January 6, 2004

Mark D. Frazier
U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Builidng
601 East 12th Street
Kansas City, Missouri 64106-2896

Dear **Sir or Madam:**

I am writing to inform you that I am in receipt of your recent National Historic Preservation Act (NHPA), Section 106 and Section 110 correspondence.

After reviewing the contents of your recent mailing we would like to inform that we have no objections to the following project:

Project: **Permit No. 200400378**

At this time we are unaware of any historical cultural resources in the proposed development area. However, we do request to be immediately contacted if any inadvertent discoveries are uncovered at anytime throughout the various phases of the project.

Please feel free to call me at (785) 966-4007 or additional information can be faxed to (785) 966-4009. We look forward to working with you.

Respectfully,

Zach Pahmahmie
Tribal Chairman
NAGPRA Representative
Prairie Band Potawatomi Nation

ZP/vrs

Enclosure 12.18 July 28, 2003 Friends of the Kaw Response to Public Notice for Re-authorization of Current Dredgers

July 28, 2003

Re: Missouri River dredging permits

Dear Mr. Frazier,

Friends of the Kaw, Inc. would like to go on record to oppose the issuance of Missouri River Dredging Permits. The following are our concerns relating to sand and gravel dredging in the Missouri River:

l. Dredging eliminates sand and gravel bars used for recreation.
2. Wildlife suffers when sand and gravel bars used for feeding and nesting are removed.
3. Sand and gravel bars filter the water and are a natural cleanser.
4. Dredging causes riverbanks to cave-in, destroying wildlife habitat and riparian forests, this activity robs farmers of cropland through accelerated erosion.
5. Dredging pumps hundreds of thousands of tons of sediment into suspension each year, soil which contains unsafe toxins that must be treated at great expense. Dredging kicks-up dormant sediments that must be removed to provide drinking water at greater costs.
6. Dredging causes destruction of aquatic habitat which affects the food chain of predators.

Friends of the Kaw is a non-profit, grass roots environmental organization whose mission is to protect and preserve the Kansas, River for present and future generations. For over ten years our organization has been actively monitoring the sand dredging industry on the Kansas River because of the irreparably damaged caused in the lower 52 miles by in-river dredging as documented in the U.S. Army Corps on Engineers in their Environmental Impact Statement prepared in the 1980's.

We believe that commercial mining of sand and gravel are harmful to any river's ecosystem and oppose the issuance of Missouri River permits for these industries.

Sincerely,

Laura Calwell, Kansas Riverkeeper
Friends of the Kaw, Inc.
P.O. Box 1612
Lawrence, Kansas 66044
785 312 7200 or 913 963 3460
riverkeeper@kansasriver.com

Enclosure 12.19 CENWK-EC-HH-R Response to Public Notice for Re-authorization of Current Dredgers

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF

CENWK-EC-HH-R

MEMO TO OD-R

SUBJECT: EC Comments on Public Notice `Missouri River Commercial Dredgers'

1. To provide engineering input for subject permit, EC-HH convened an Ad-Hoc panel of Corps personnel with expertise in sediment transport, hydraulics, and fluvial geomorphology.

2. The enclosed memorandum contains panels recommendations and outlines the decision making process.

3. If you have any questions please contact Mr. Michael Chapman, 816-983-3310.

Enclosure

WILLIAM J. ZANER, P.E.
Chief, Engineering Division

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF

CENWK-EC-HH-R

MEMORANDUM FOR FILE

SUBJECT: Documentation of Decision to Recommend Quantity Restrictions for Commercial Sand Dredgers Between River Miles 340 and 400 on the Missouri River

1. Commercial sand dredging on the Missouri River has been an ongoing activity for at least the last 30 years. The regulatory office of the Kansas City District, US Army Corps of Engineers, permits dredging activity under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. On June 27, 2003, CO-R issued a Public Notice for renewal of and/or new Department of the Army authorizations for all commercial sand dredging between river miles (RM) 456 and 49. The authorizations, if approved, will be for a period of 5 years.

2. Stage trend data indicates that significant bed degradation has occurred in the Kansas City Reach of the Missouri River over the last 40 years. The degradation has resulted in lowering of the average bed elevation and lowering of the stage for discharges below 70,000 cfs. The degradation, along with drought conditions over the last 3 years, has resulted in the need to retrofit at least two water intakes and has likely been a significant factor in numerous bank failures and tributary headcuts observed in recent years.

3. Due to the potential impacts of degradation to private and Corps constructed infrastructure along the river, EC-HH determined that an analysis of the contribution of sand dredging to the degradation problem should be conducted. EC-HH decided that the best approach would be to convene an Ad Hoc panel of Corps personnel with expertise in sediment transport, hydraulics, and fluvial geomorphology. The panel convened on 18-19 November, 2003 and consisted of David Biedenharn, Research Hydraulic Engineer ERDC; Albert Swoboda, Senior Regional Engineer for Civil Works CENWD-MT-E; John LaRandeau, Operations Program Manager CENWD-CM-OC; Michael Chapman, Unit Leader-River Engineering and Restoration Unit CENWK-EC-HH-R; and Gordon Lance, Hydraulic Engineer CENWK-EC-HH. The panel consisted of members with a diverse breath of riverine experience and/or in-depth knowledge of the Missouri River.

4. The panel was presented with a `Mission Statement' (enclosure 1) that served as the focus of the meeting. The meeting agenda (enclosure 2) consisted of the presentation of data (see file in EC-HH-R) to the panel on the first day followed by the formulation of the panel's recommendation for dredging restrictions the second day. Members of NWK's River Engineering and Restoration Unit presented the data during the meeting.

5. A review of stage trends and water surface profiles showed that the Kansas City Reach (RM 340 to 400) is the only section of the river that has experienced significant degradation. Other reaches of the river are stable, aggrading, or showing slight degradation. It was also shown that over half of the annual volume of sand removed from the river is removed from this reach and that extraction rates from this reach have increased significantly over the last 9 years. For these reasons, the panel determined that restrictions on dredging in the Kansas City reach were warranted and that restrictions outside of this reach were not warranted.

6. The panel concluded that the cause or combination of causes of degradation within the Kansas City Reach cannot be positively identified with the available data, but that there are at least four contributing factors (see paragraph 4 of enclosure 3). However, the panel determined that a negative mass balance will result if extraction rates exceed total bed material load available and that a negative mass balance will result in degradation. Therefore, the panel concluded that annual extraction rates should be tied to the annual bed material load available. Because of the uncertainty and variability of sediment data and because of the need to have some bed material load pass through, it was determined that annual allowable extraction rates should not exceed approximately 70% of the annual bed material load.

7. An analysis of bed material data for the Kansas City gage (enclosure 4) indicates that total annual bed material load has ranged between 3.6 and 35 million tons since 1968. Therefore, using the 70% extraction rate, the maximum allowable extraction during low bed material years should be 2.5 million tons. Conversely, during high bed material years, the full amount of extraction requested could be allowed.

8. Because annual bed material load is dependent on annual flow volume, and because flow volume data is readily available and easily interpreted, it was decided that extraction rates should be tied to flow volume. To insure that there is a close connection between available bed material and the material being removed on an ongoing basis, allowable extraction rates should be tied to average annual flow volume for the previous two calendar years.

9. A base annual amount of 2.5 million tons, along with the recommendation for using the two previous flow years as the basis for the upcoming year's allowable dredging amount, should allow the dredging industry a sufficient level of predictability.

10. Enclosure 3 summarizes the findings and enumerates the recommendations of the panel.

Enclosures

MICHAEL CHAPMAN, P.E
Unit Leader, River Engineering and Restoration Unit

Enclosure 12.20 June 18, 2001 CENWK-OD-R Solicitation of Applications for Renewal of Commercial Dredging Permits

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

June 18, 2001

REPLY TO
ATTENTION OF:

Regulatory Branch
(200101429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

This letter concerns your Department of the Army (DA) permit for commercial sand dredging in the Missouri River in the States of Kansas and Missouri. Your DA permit is scheduled to expire on December 31, 2001. Accordingly, we are initiating the combined renewal process, and have assigned the following identification numbers to your renewal applications:

200101429: Capital Sand Company, Inc.
200101430: Hermann Sand and Gravel, Inc.
200101431: Holliday Sand and Gravel Company
200101432: Washington Sand Company, LLC
200101433: St. Charles Sand Company
200101434: Con-Agg of MO, LLC
200101435: Edward N. Rau Contractor Company
200101436: Kaw Valley Sand and Gravel, Inc.
200101437: Mertens Construction Company, Inc.

Please complete the enclosed DA application and return by July 13, 2001. Please be sure that you include the following information in your application:

a. Specific proposed dredging reaches in river miles. Reaches should be limited to only the areas you expect to work in for the next renewal cycle. Should reaches need to be expanded or modified in the future, these can be handled by permit modification. Proposing speculative or excessive reaches will result in a public perception that impacts to the Missouri River are greater than they actually are, and may result in more restrictive permit conditions. There is no policy concerning overlapping reaches in the Missouri River (i.e., two or more dredging operations can be permitted in the same reach), therefore, no competitive advantage is gained by retaining reaches that will not be used.

b. Locations and ownership of all off-loading facilities your plan to employ.

c. The number, type and specifications of dredges/vessels you plan to employ.

d. The names/addresses of any subcontractors you propose to allow to dredge under your DA permit.

Please note that over the last four years, only three of the permitted Missouri River dredgers within the Kansas City District have been active. There is a high potential that permitted dredgers will be required to finance studies to determine sustainable dredging rates and/or effects on habitat for Federally listed endangered species. This would be a good time for any company that does not have serious intentions to continue dredging to withdraw from the process.

If you have any questions concerning this matter, please feel free to write or call Mr. Mark D. Frazier at 816-983-3664 (FAX 816-426-2321, email mark.d.frazier@usace.army.mil).

Enclosure

Correspondence sent to:

Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

Mr. Denis Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261
Hermann, Missouri 65041

Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, Kansas 66202

Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

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

Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 State Road A, Suite A
Washington, Missouri 63090

Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
1615 Argentine Boulevard
Kansas City, Kansas 66105

Mr. K. Douglas Mertens
Mertens Construction Company, Inc.
Post Office Box 52
Old US Highway 40 East
Kingdom City, Missouri 65262

Informational copy to: CEMVS-CO-F

Enclosure 12.21 July 10, 2001 Holliday Sand Application Cover Letter

Holliday Sand & Gravel Company

6811 W. 63rd Street
Overland Park, Kansas 66202

Phone: 913-236-5920
Fax: 913-236-4052

7/10/01

Mr. Mark Frazier
Regulatory Branch
KC District Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Re: Missouri River Dredge Permit Renewal (200101431)

Dear Mr. Frazier:

Please find enclosed our application for the renewal of our Missouri River Dredge Permit.

We have proposed the following changes in no-dredge zones from our existing permit:

- St. Joseph Water Intake (See Dwg. #13 of 14)

The Missouri-American Water Company has abandoned their water intakes at RM 450.05 and 450.25. We would ask that the no-dredge zone revert to the standard 500 feet either side of these intakes.

- Jersey Creek Outfall (See Dwg. #6 of 14):

We have voluntarily agreed to extend the no-dredge zone at the confluence of the Kansas River up to RM 367.9 (an additional 1500 feet) to address concerns of the Kaw Valley Drainage District.

You may contact Mike Odell at 913-236-5955 X 1240, or by email at mrodell@hollidaysand.com.

Sincerely,
Holliday Sand & Gravel Company

M.N. Odell

Mike Odell
Vice President

encl.

Enclosure 12.22 December 4, 2001 Kaw Valley Drainage District Letter

THE KAW VALLEY DRAINAGE DISTRICT

719 Osage Avenue
Kansas City, Kansas 66105
342-2382

DIRECTORS
JAMES L. JENKINS
DAVID R. MORALES
VICTOR L. HERNANDEZ

M. WARREN McCAMISH, JR., ATTORNEY
LAWRENCE J. BRENNAN, ENGINEER

December 4, 2001

Colonel Donald R. Curtis
District Engineer, Kansas City District
Corps of Engineers
700 Federal Bldg.
Kansas City, Missouri 64106

Attention- Larry Cavin
Chief, Regulatory Branch

Re: Department of the Army Permit
Holliday Sand and Gravel Company
Permit No. 96-01649
Expiration Date-Decembe 31, 2001
Station 28+71, Fairfax-Jersey Creek Unit
MIssouri River Mile 367.8

Dear Sir,

This letter concerns dredging activity of the permittee in the Missouri River adjacent to the flood protection levees in the Fairfax Unit and the Fairfax-Jersey Creek Units, operated and maintained by the Fairfax Drainage District and the Kaw Valley Drainage District.

On October 26th. of 2000, levee slope and sheet piling failure on the right bank was noted at the referenced river mile. At this point a storm sewer, known as the Jersey Creek Outfall, penetrates the levee, discharging to the Missouri River. The sewer is owned and operated by the Unified Government of Wyandotte County. The levee and gate well structure at this point are maintained and operated by the Kaw Valley Drainage District of Wyandotte County, Kansas.

The Drainage District has reviewed dredging locations, and amounts dredged, upstream and downstream of the outfall, in September and October of 2000. The records indicate dredging at mile 367.8, 368.1, and 368.2, a total volume of 192,000 tons.

Special Conditions b & c of the referenced permit describes lateral limits for dredging with reference to the RCL, and with reference to the levee centerline. We can not state that these restrictions were violated, or that the dredging had any relationship to the damage to the outfall structure.

The Unified Government has indicated that the storm water discharges from the Jersey Creek Outfall sewer may have contributed to or caused the failure.

In any event, we request that the Department of the Army conduct any investigation or examination that it deems appropriate to determine whether permit violations have occurred, and to assess whether dredging restrictions should be placed upstream and downstream from the Jersey Creek Outfall.

Sincerely,

Lawrence J. Brennan
Kaw Valley Drainage District

cc: Mary Perlea, Corps of Engineers
Larry Cavin, Corps of Engineers

Enclosure 12.23 December 19, 2001 CENWK-OD-R Permit Extension Letter

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

December 19, 2001

Regulatory Branch
(200101429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

This letter concerns your Department of the Army (DA) permit for commercial sand dredging in the Missouri River in the States of Kansas and Missouri. In a letter dated June 18, 2001, we had requested applications for renewal of all the Missouri River commercial dredging applications. Concurrently, we began discussion with the U.S. Fish and Wildlife Service (FWS) concerning the Federally listed endangered pallid sturgeon (*Scaphirhynchus albus*). In order to prevent the lapse of permit authority while we continue coordination with FWS, we have extended the expiration dates of the following DA permits until June 30, 2002, or until we reach a decision on the renewal applications, whichever comes first.

Permit No.	(renewal No.):	Permittee
199601648	(200101429):	Capital Sand Company, Inc.
199601654	(200101430):	Hermann Sand and Gravel, Inc.
199601649	(200101431):	Holliday Sand and Gravel Company
199601655	(200101432):	Washington Sand Company, LLC
199601680	(200101433):	St. Charles Sand Company
199601652	(200101434):	Con-Agg of MO, LLC
199601656	(200101435):	Edward N. Rau Contractor Company
199601650	(200101436):	Kaw Valley Sand and Gravel, Inc.

This decision to modify your DA permit has been reviewed in accordance with Federal regulation 33 CFR 325.7, and with Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344). It has been determined that the modification will not significantly increase the scope of the previously authorized activity.

All existing conditions of the extended permits remain in place, including the requirement to submit an annual dredging report by 30 January of each year.

If you do not agree that the conditions of this modification are acceptable and correct, you must notify the District Engineer within 10 days of the date of this letter or be legally bound by the terms and conditions thereof. This is a legal document. We request that you attach this letter of modification to your copy of the DA permit in order to reflect all work authorized under the permit. This modification does not preclude the necessity of obtaining other Federal, state, or local approval for the work.

If you have any questions concerning the work authorized by this letter, please feel free to write me or call Mark D. Frazier at 816-983-3664 (FAX 816-426-2321).

Sincerely,

Donald R. Curtis, Jr.
Colonel, Corps of Engineers
District Engineer

Lawrence M. Cavin

By: Lawrence M. Cavin
Chief, Regulatory Branch
Operations Division

Correspondence sent to:

Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

Mr. Denis Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261
Hermann, Missouri 65041

Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, Kansas 66202

Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

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

Correspondence sent to (continued):

Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 State Road A, Suite A
Washington, Missouri 63090

Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
12749 South Hagan Court
Olathe, Kansas 66062

Copies furnished to:

U.S. Environmental Protection Agency
  Water Resources Protection Branch
U.S. Fish and Wildlife Service
  Columbia, Missouri
Missouri Department of Natural Resoucres
  Water Pollution Control Program
Kansas Department of Health and Environment
Missouri Department of Conservation

Enclosure 12.24 June 10, 2002 CENWK-EC-H Dredging Memo

CENWK-EC-H 10 June 2002

MEMORANDUM TO CO-R

SUBJECT: Missouri River Commercial Dredging River Mile 1 to 49.8

1. The Missouri River's sediment load has been dramatically reduced since the completion of the many dams in the basin. See the Table 1. Average Annual Suspended-Sediment Load in tons (USACE, 1981), for the amount of average annual suspend-sediment load on the Missouri River. There are no major tributaries below Hermann, Missouri and the shape of the watershed has narrowed down near Hermann. Therefore the Hermann, Missouri gauge located at river mile 97.9 is representative of the amount of water and sediment leaving the Missouri River at the confluence with the Mississippi River. In addition, the amount of water and sediment passing the Hermann gauge may also be considered representative of the reach from river mile 1 to 49.8. Before 1953, which is prior to the placement of most of the large multiple purpose dams, the average annual suspended-sediment load was 319,000,000 tons at Hermann. After 1967, which is after completion of the most of the large multiple purpose dams, the average annual suspended-sediment load was 86,400,000 tons at Hermann (USACE, 1981). Therefore, the Missouri River is only carrying approximately one-forth of the pre-dam average annual suspended-sediment load near the confluence. Also, the riverbed at Hermann, Missouri is lowering 1 foot every seven to eight years. The bed lowering is reflected in the lowering stage for discharges of 70,000 cubic feet per second or less. (USACE, 1999).

2. Table 1. Average Annual Suspended-Sediment Load in tons (USACE, 1981)

Gauging Station	River Mile	Before 1953	1953 to 1967	After 1967
St. Joseph	448.2	257,000,000	64,400,000	53,400,000
Kansas City	366.1	328,000,000	80,400,000	68,300,000
Hermann	97.9	319,000,000	98,100,000	86,400,000

3. The total sediment load can be broken down in a couple of ways. One way is to say the total load is the suspended load plus the bed load. Another way is to say the total load is the bed material load plus the wash load. The bed load is the material that moves along the bed of the river. The suspended load is the sediment particles held in suspension. There can be an exchange of sediment particles between the bed load and the suspended load. Hence, some bed material is held in suspension. The wash load is typically fines, which are rarely found in the riverbed.

4. West Consultants conducted a study for the Kansas City District in 1999 titled, "Missouri River Levee Unit L385 Sediment Analysis." They calculated the sediment transport at the Kansas City and St. Joseph gauges based on daily flows from 1967 to 1997. The primary focus was on the amount of sand transported in the river. Therefore, the wash load was not calculated.

5. West Consultants assumed the suspended bed material was the portion of the suspended load that had a diameter greater than 0.125 mm. See Table 2. Average Annual Transport Rates from West Consultants based on daily flows from 1967 to 1997, for the transport rates on the Missouri River.

6. Table 2. Average Annual Transport Rates from West Consultants Based on Daily Flows from 1967 to 1997.

	St. Joseph Gauge	Kansas City Gauge
Average Annual Suspended Bed Material Load (tons)	8,060,000	9,320,000
Average Annual Bed Load (tons)	890,000	1,570,000

7. For an estimate of the average annual suspended bed material load and bed load at the Hermann gauge, the ratio between the Hermann and Kansas City gauge in Table 1 (After 1967) is multiplied by the Kansas City Gauge transport rates in Table 2. The estimate of the average annual transport rate at Hermann, Missouri is shown in Table 3 below.

8. Table 3. Estimate of the Average Annual Transport Rates at Hermann, Missouri

Average Annual Suspended Bed Material Load (tons)	11,800,000
Average Annual Bed Load (tons)	1,990,000

9. In order, to maintain the sand of the river as a sustainable resource, it is recommended that the proposed dredging be limited to the average bed load, which is estimated to be 2 million tons per year at Hermann, Missouri. If the applicants are allowed to extract more than 2 million tons per year, it is recommended that annual hydrograph surveys be required of the applicant. The permits should require future dredging restrictions if the hydrographic surveys indicate that the river is degrading. It is in the best interest of the Corps' to prevent bed lowering on the Missouri River. Degradation can be a problem for infrastructure including utility crossing and water intakes. Degradation can also generate bank erosion. Bank erosion has caused several dike structures on the Missouri to be flanked in recent years. Flanked dikes are deficient, and require funding to bring the structure back to satisfactory condition. Head cutting on the Missouri could lead to head cutting on the tributaries. The worse place for head cutting would be at or near the confluence because it could spread throughout the entire system.

CENWK-EC-H 10 June 2002 SUBJECT:
Missouri River Commercial Dredging River Mile 1 to 49.8

11. References:

a. USACE. *Characterization of the Suspended-Sediment Regime and Bed-Material Gradation of the Mississippi River Basin. U. S.* Army Engineer Waterways Experiment Station, 1981.

b. USACE. Memorandum For File: Missouri River Average River Bed with Stage Trends, August 11, 1999.

c. WEST. "Missouri River Levee Unit L385 Sediment Analysis," WEST Consultants, 1999.

Ken Stark for

ALLEN R. TOOL
Chief, Hydrology and Hydraulic Section

Enclosure 12.25 October 9, 2002 CEMVS-OD-F Letter to FWS

Construction-Operations
Readiness Division
Regulatory Branch

Mr. Charlie Scott
Field Supervisor
US Fish and Wildlife Service
608 East Cherry Street, Room 200
Columbia, Missouri 65201

Dear Mr. Scott:

I am writing in response to your comments regarding commercial dredging activities located on the Missouri River (please refer to your August 5, 2002 letter). As you are aware, we are conducting an evaluation to reauthorize commercial dredging activities on the lower Missouri River. In our public notice dated May 22, 2002, we solicited comments regarding any potential impacts to the Pallid Sturgeon (*Scaphirhynchus albus*), or any critical habitat. The two commercial dredging operations in review have requested reauthorization to remove approximately 2.75 - million tons per annum between approximate Missouri River miles 0 – 50.

Section 7 of the Endangered Species Act, as amended, and its implementing regulations at 50 CFR, Part 402, requires that the action agency consult with the Secretary of the Interior (USFWS) on endangered species. This consultation is to ensure that any action authorized will not likely jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of habitat of such species, which is determined to be critical by the USFWS.

Based upon your letter, the primary concern is the potential effects of commercial dredging on Pallid Sturgeon by reducing, degrading, or limiting shallow water areas along the lower Missouri River. As your concerns would imply, research indicates Pallid Sturgeon tend to occur more often in diverse microhabitats characterized by sinuous side channel patterns, side channels, islands and alluvial bars, as opposed to straight channels without these features. Conditions on existing permits, which have been previously agreed to by our agencies, will remain to ensure protection of these areas. In conversations and documentation provided by your office there has been no reference made of designated critical habitat, potential listing of designated critical habitat, or potential taking of Pallid Sturgeon as the activities are currently authorized.

We have conducted our review and conclude the following. We believe that there is no evidence of potential effects to shallow water habitats by these two commercial dredging

operations. An extremely cumbersome analysis would be required in order to determine the correlation of bed load removal and the effect it would potentially have on shallow water habitat. At this time the Corps will not require this study. This type of analysis is not only difficult, but also financially burdensome to the applicants. We believe there are other factors (e.g. erosion stewardship practices, dams, navigation structures, etc.) historically contributing to the bed load and river trends. In addition, we are cognizant of efforts underway that will look holistically at the Missouri River basin (e.g. notching of dikes, sediment analysis). These two dredging operations in review are not considered a significant contributor to effects on shallow water habitats. We would also point out that at anytime the Corps may suspend or revoke authorization if significant issues arise.

In an attempt to resolve some concerns, the following changes and/or additions to existing conditions are proposed.

1. In the May 22, 2002, public notice, the Jotori operation requested authorization to increase their quantity from 1.2 to 1.55 mil tons per annum. However, they now request maintaining the previously authorized 1.2 mil tons. Thus, the combined total authorized for both operations would remain, as previously authorized, at 2.4 mil tons per annum.

2. For the Jotori operation, the cumulative amount of material dredged from RM 1.0-4.0, 6.0-12.0, 14.0-24.0 and 30.0-35.0 will not exceed 1,200,000 tons per annum without prior notification, coordination, and approval by the Corps and USFWS. The amount of material dredged from the permitted reach (4 different reaches permitted under 3 different permits) shall not exceed "X" (where "X" is 300,000 tons for RM 1.0-4.0 & 6.0-12.0; 500,000 tons for RM 14.0-24.0; and 750,000 tons for RM 30.0-35.0) per annum without prior notification, coordination, and approval by the Corps and USFWS.

3. In the previous permit, St. Charles Sand Company was authorized to commercially dredge between Missouri River miles 0 – 49.8. However, in reality, they typically operate in confined reaches of the river. For purposes of both consistency and compliance, the reauthorization will be narrowed as follows: 200,000 tons per annum RM 0 –12; 650,000 tons per annum RM 20 –35; 350,000 tons per annum RM 40 – 47. The cumulative amount of material dredged will not exceed 1,200,000 tons per annum without prior notification, coordination, and approval by the Corps and USFWS.

4. Both permitted operations have an existing condition requiring daily logs of dredging locations. However, as an amendment to this condition, both operations will provide a log based upon some form of geographic automation (e.g. GPS, laser range finder, or form of) regarding daily dredging locations. This will be provided to the Corps and USFWS with their yearly reports. This will improve upon current generalities for monitoring compliance regarding dredging location restrictions.

Based upon the dynamic character of the Missouri River basin, we believe that these activities will have a minimal impact on shallow water habitat. The lack of substantive information to support potential effects leads us to the conclusion that these activities will not likely adversely affect Pallid Sturgeon, or their shallow water habitats.

For reasons discussed above, and existing and proposed conditions of the permits, we find that the project is not likely to adversely affect endangered/threatened species or their critical habitat. Pursuant to applicable regulations, we request that the USFWS concur with the determination, and that the USFWS provide a response within 30 days from the date of this letter. If you have any questions concerning this matter, please contact Phil Brown of my Regulatory Branch at 314-331-8581.

Sincerely,

Danny D. McClendon
Chief, Regulatory Branch

Copies Furnished:

J.T.R. Inc. (Jotori Dredging)
Mr. Tony Giordano
2320 Creve Coeur Mill Road
Maryland Heights, Missouri 63043

St. Charles Sand Co
Mr. Brain J. Viehmann
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

Reitz & Jens, Inc.
Mr. Paul Reitz
1055 Corporate Square Dr.
St. Louis, MO 63132

Enclosure 12.26 January 17, 2003 FWS Letter to CEMVS-OD-F

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Columbia Ecological Services Field Office
608 East Cherry Street, Room 200
Columbia, Missouri 65201
Phone: (573) 876-1911 Fax: (573) 876-1914

January 17, 2003

Mr. Danny McClendon, Chief
Regulatory Section
U.S. Army Corps of Engineers
1222 Spruce Street
St. Louis, Missouri 63103-2833

Dear Mr. McClendon :

Please refer to your October 9, 2002, letter requesting U.S. Fish and Wildlife Service's (Service) concurrence regarding effects to federally listed species resulting from the proposed renewal of commercial sand dredging permits P-2339, P-2340, P-2341, and P-2342, in the lower 50 miles of the Missouri River. We have reviewed that letter, in addition to discussions with your staff, a site-visit, and additional Corps materials (i.e., reports and memoranda) associated with Missouri River sediments and commercial dredging. Based on that information the Service submits the following comments pursuant to the Endangered Species Act of 1973(Act), as amended (16 U.S.C. 1551 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Previously, the Service has informed the Corps that our concerns regarding federally listed species focus on potential dredging effects to pallid sturgeon, primarily from alteration of shallow water habitat and possible entrainment of fish. The Service provided information on both those topics for the Corps' consideration.

In our latest coordination we became aware of some issues we hope will be better addressed in the renewed permits. When we requested from the Corps the annual dredger reports that are a condition of the existing permits, the Corps was unable to produce those for the last two years (for one dredger). In addition, the current permit limits are not clear. The May 22, 2002, public notice requested approval to "continue" dredging a total of 2.7 million tons of sand/year. However, an August 3, 2002, email from Phil Brown, Corps, to our offices stated existing permit limits total 2.2 million tons/year (approximately 20 percent difference). This again is at odds with your October letter, noting the "combined total authorized for both operations would remain, as previously authorized, at 2.4 million tons/year." According to information from the Corps and the operators, one operator exceeded authorized limits 3 or 4 times during the last 5 years, depending on which is the actual permitted limit). We hope that the new permits with the specific reaches identified, logging and reporting requirements, and other measures identified in

your October 9, 2003, letter will eliminate these inconsistencies and inability to adequately track permitted activities. In addition, although one operator, Jotori, is requesting up to 1.2 million tons/year, the only numbers provided to the Service on existing operations never exceeded 500,000 tons (from River Miles 31-36). Therefore, it is not apparent why the operator was requesting the increase in the original public notice.

The Service supports the proposed permit condition to include GPS locations of daily dredging operations as part of the annual reporting requirements. We also support the increased specificity of dredging reaches in the permit authorization, and recommend that the operators make note of areas gravel or hard substrates. This may help the Corps fulfill its responsibility of mapping potential spawning areas as part of the Missouri River biological opinion. In the last few years, increased fisheries monitoring in the lower river has documented the importance of off-channel habitats and shallow water areas for native river fishes, particularly young and juveniles. We note those studies have found sturgeon species, and other species of special concern (i.e., sicklefin and sturgeon chubs) in shoal areas *within* the rectified channel, thus potentially subject to the effects of dredging. Given the ongoing restoration efforts in the Missouri River, and the documented occurrence of pallid sturgeon and other species of concern in side channels, we also recommend the Corps include a permit condition similar to those on the Mississippi River that prohibits dredging within 0.25 miles of any chute, tributary mouth, side channel, or refuge area. We believe the adoption of these conditions, in concert with the implementation of those noted in the existing permits and the Corps' October 9, 2003, letter, would be a substantial improvement over the existing system, and would avoid adverse effects to federally listed species. Please notify us concerning the acceptability of these conditions by the Corps and the applicants. No further consultation under section 7 of the Act is needed if these avoidance measures are adopted. If the applicants fail to provide the required annual reports in a timely manner, the Corps will need to reinitiate informal consultation with the Service on the renewed permits.

The Service is discussing with the Kansas City District Corps of Engineers ways to better address the continuing concerns related to bed degradation, alteration of shallow water habitat, and potential entrainment. We encourage the St. Louis District to participate in those efforts to better address our shared resource responsibilities. If you have questions regarding our comments, please contact Ms. Ledwin at 573/876-1911, extension 109.

Sincerely,

Charles M. Scott

Charles M. Scott
Field Supervisor

cc: MDC, Jefferson City, MO (Epperson)
MDC, Jefferson City, MO (Horner)
FWS, Marion, IL (Collins)
KCD, Kansas City, MO (Frazier)

Enclosure 12.27 February 26, 2003 CENWK-OD-R Letter to Dredgers

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

February 25, 2003

Regulatory Branch
(200101429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

As noted in our previous letters, we have been conducting informal consultation with the U.S. Fish and Wildlife Service (FWS), with the goal of developing conditions that allow dredging to continue without having an adverse impact on the Federally listed endangered pallid sturgeon (*Scaphirhynchus albus*) and its habitat. Good research is being conducted by a number of organizations, and we have a much better understanding of the needs of this species than we had at the last permit reissuance.

I want to emphasize that no agreements have been reached, nor will they until the formal renewal begins. However, I want to provide you with an opportunity to review, and reply if you wish, to a preliminary set of conceptual conditions. These preliminary conditions are:

1. Retain all the existing conditions, except for the following modifications and additions:

2. All conditions that specify a distance in linear feet will be clarified to indicate that the distance is measured from the dredge head, not the plant, barge or control room.

3. The annual reporting provision will be modified to require the use of an automatic GPS datalogger to record the location. The modified report will also require reporting of occurrences of gravel. Reports must be submitted electronically in a Corps identified standard format to both the Corps and FWS. The frequency of reporting may be increased.

4. Currently, dredging is excluded from zones 500 feet upstream and 2,000 feet downstream of 11 named tributaries. FWS has requested that this exclusion list be expanded to prohibit dredging within 0.25 miles of any chute, tributary mouth, side channel or refuge. We will need to develop a definition of what constitutes a chute, tributary or side channel for the purposes of dredging. A *partial* list of refuge areas is enclosed.

If you wish to comment or suggest alternate provisions, please reply within 15 days of the date of this letter. We expect to issue the Public Notice soliciting public comment on the proposed reissuance immediately following this preliminary review period. Please note that following the close of the public notice comment period, you will be provided with copies of all substantive comments received and an additional opportunity to comment on or rebut any of the comments.

If you have any questions concerning the work authorized by this letter, please feel free to write me or call Mark D. Frazier at 816-983-3664 (FAX 816-426-2321).

Sincerely,

By: Joseph S. Hughes
Chief, Regulatory Branch
Operations Division

Enclosure

Correspondence sent to (w/encl):

Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

Mr. Denis Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261
Hermann, Missouri 65041

Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, Kansas 66202

Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

Correspondence sent to (continued):

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

Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 Highway A, Suite A
Washington, Missouri 63090

Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
1615 Argentine Boulevard
Kansas City, Kansas 66105

Ms. Jane Ledwin
U.S. Fish and Wildlife Service
Columbia, Missouri

Enclosure 12.28 March 11, 2003 Holliday Sand Letter

Holliday Sand & Gravel Company

9660 Legler Road
Lenexa, Kansas 66219

Phone: 913-492-5920
email: mrodell@hollidaysand.com

3/11/03

Mr. Mark Frazier
Regulatory Branch
Department of the Army
U.S. Army Corps of Engineers, Kansas City District
700 Federal Building
Kansas City, Missouri 64106-2896

Re: 200101429 MO RIV COM DREDGE

Dear Mark:

Please consider these comments addressing the four preliminary conditions.

1. Some existing special conditions on specific permits may not be necessary anymore and should be reconsidered. For example the 2000 foot no dredge zone upstream of the Missouri American Water Company is no longer necessary because the facility has been abandoned.

2. This is not a problem currently, but will be a problem if GPS is used - the antennae can't be mounted on the dredge head and calculating the bearing of the dredge head from the antennae location would require two units to triangulate (big bucks). In addition, the distance from the antennae to the dredge head is dependent on the depth of dredging and the angle of the dredge head arm, so in the end the exact location of the dredge head can't be monitored precisely (so the reference to the dredge head would be for definition only).

3. If the purpose of a GPS is a tattletale, then anything short of a system that continuously transmits remotely to the Corps office can be doctored. This type of system could be six figures or more. Automatic GPS dataloggers are available for around $22,000 a piece, but the data is not secure and could be doctored on the disc.
We feel that this level of monitoring is ludicrous and excessive and this money would be much better spent on positive programs rather than for something that will not have a measurable benefit and require extensive monitoring and maintenance.
Stiff fines that would benefit conservation areas would be a better deterrent.

Concerning the occurrence of gravel - this would be an unscientific and arbitrary judgment made by the dredge operator since there is always gravel present in small amounts. We have never found a gravel mother lode - it averages around three percent every year.
We can submit our current data in tenths of a mile by email in an Excel format. We prefer at least quarterly reporting if not annual as we correct up our barge estimates with sales, stockpile and interplant tonnage reports. Otherwise our barge reports usually run three to fifteen percent over the actual tons (this is due to water content, length of tow, sand left on the barge and compartment leaks).

4. We strongly oppose the 1320 feet prohibition upstream and downstream of any tributary. There are too many creeks in our very limited existing dredge permit areas. We are impacting such as limited amount of river now, this restriction will require us to expand our permit areas and would increase costs hundreds of thousand of dollars each year. For example, at the Riverside location, with the other restrictions we wouldn't be able to operate anywhere near the plant. Is there a measurable benefit for this cost to the public? The existing 100 foot distance from the bank already affords a buffer that doesn't cost a thing.
The refuge requirement does not appear to impact our existing dredge areas, but if it did we would propose a 250 foot standoff which would still allow dredging across the river from the refuge.

Thank you very much for the opportunity to comment at this early stage.

Sincerely,
Holliday Sand & Gravel Company

M. M. Odell

Mike Odell
Vice President

March 27, 2003

Mr. Joseph S. Hughes
Chief Regulatory Branch
Operations Division
U.S. Army Corps of Engineers
Kansas City District
700 Federal Building
Kansas City, MO 64105-2896

REF: USACE Memo 25 Feb 2003

Dear Mr. Hughes:

This letter is in response to your letter of 25 February 2003 where you ask for input on plans being developed to restrict dredging on the Missouri River to limit adverse affects of dredging operations on the endangered pallid sturgeon. The suggested plan had four elements and was based on a preliminary set of conceptual conditions. First, we in the dredging industry on the Missouri River wish to cooperate in efforts to help the pallid sturgeon survive. However, the blanket approach of creating an exclusion zone from any chute, tributary mouth, side channel, or refuge is likely to be too encompassing because most tributaries, chutes, are not spawning areas. Additionally, it not known if most of the tributaries and chutes have ever been spawning sites. As you are aware, present information indicates that pallid sturgeon spawning is initiated when water reaches about 18 degrees centigrade. Sturgeons are known to swim up tributaries significant distances to locations of fast water and clean gravel bottoms where the eggs are laid and attached to the gravel. After about 7, days depending on the temperature, the eggs hatch and the pelagic larval sturgeon drift for about 13 days. It is believed that during this drifting stage that if they drift into slower water the possibility of survival increases.

Based on the above information, it would seem that unless the dredging was destroying spawning sites, that dredging would not be harmful to sturgeon spawning. Further, because dredging is from the bottom and the larvae are pelagic drifters, it is questionable if dredging could adversely affect the larvae. It also should be noted that dredging removes material from the bottom of the stream and increases water depth. The increased depth results in lessened water velocity, which would likely to be beneficial to sturgeon larvae. Further, there seems to be no rational to exclude dredging adjacent to refuges in relation to affects on pallid sturgeon.

The above information suggests that unless dredging operations were removing spawning habitat, it is unlikely that dredging operations would have any deleterious affect on pallid sturgeons. As stated previously, we are concerned with the well-being of the pallid sturgeon and the environment in general. We suggest the following:

1) Criteria should be developed to identify spawning areas in tributaries.

2) All tributaries or flowing chutes should be examined to determine if suitable spawning sites exist that need protection. (If a tributary has a dam relatively close to the mouth, it is

possible that the dam has "flooded" previous spawning sites and or blocks access to any remaining suitable gravel sites upstream.)

We believe the single best thing that could be done to naturally increase the pallid sturgeon population is to not allow any fishing take of sturgeon of any species in the Missouri River and its tributaries. It is nearly impossible for the average person to differentiate between shovelnose sturgeon, pallid sturgeon, and lake sturgeon. All of these species are experiencing declines, even the shovelnose sturgeon.

Your consideration of these ideas would be appreciated and we would welcome working with you on how to best help the pallid sturgeons and other native sturgeons.

Sincerely,

Steven Engemann

Steve Engemann
Herman Sand and Gravel Company
Route 2, Box 261
Hermann, Missouri 65041

Enclosure 12.30 March 31, 2004 CENWK-OD-R Letter Transmitting Comments to the Dredgers for their Response and Rebuttal

March 31, 2004

Regulatory Branch
(2001-01429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

This letter pertains to your application for a Department of the Army permit for ongoing or proposed commercial sand dredging in the Missouri River. On June 27, 2003 (correction issued July 2, 2003, for Holliday Sand and Gravel), and 12 January 2004 (Muenks Brothers Quarries), we circulated public notices describing your activities and received substantive comments from the U.S. Fish and Wildlife Service (FWS), Missouri Departments of Conservation and Natural Resources (MDC and MDNR), Water District No. 1 of Johnson County, Kansas (WaterOne), and from the Friends of the Kaw, Inc. Those substantive comments are summarized in the following paragraphs and we have indicated where your specific response is essential for finalization of our permit decisions. However, you are encouraged to respond to any of the comments and your comments will be evaluated as part of our decision.

Section 401 Water Quality Certification

Section 401 of the Clean Water Act (33 USC 1341) requires that all discharges of dredged or fill material must be certified by the appropriate state agency as complying with applicable effluent limitations and water quality standards. The discharge must be certified before a Department of the Army permit can be issued. Certification, if issued, expresses MDNR's (and the Kansas Department of Health and Environment's (KDHE) for Kansas waters) opinion that the discharge will not violate applicable water quality standards. The Kansas City District will request that MDNR and KDHE issue their decision on certification, as requested in the public notices, upon resolution of the issues described in this letter. MDNR may assess a state fee for certification.

MDNR provided the following nine comments concerning the commercial dredging applications:

1. Best management practices should be used during dredging to limit the amount of sedimentation into the Missouri River and associated water bodies.

2. The quality of downstream water supplies should not be adversely affected by this project.

3. Redeposited material should not be placed such that the flow is altered or that increased bank erosion is realized.

4. Care should be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste should not be stored below the ordinary high water mark (OHWM) at any time or in the adjacent floodway beyond normal working hours. All precautions should be taken to avoid the release of wastes or fuel to streams and other adjacent water bodies as a result of this operation. Petroleum products spilled into any water body or on the banks where the material may enter waters of the state should be immediately cleaned up and disposed of properly. Any such spills of petroleum should be reported as soon as possible to the Missouri Department of Natural Resources' 24-hour Environmental Emergency Response number at 573-634-2436.

5. The Missouri River is a classified water body with designated uses of Livestock and Wildlife Watering, Protection of Warm Water Aquatic Life and Human Health- Fish Consumption, Boating and Canoeing, and Drinking Water Supply, Industrial and Irrigation. Any activities occurring within these jurisdictional waters must abide by the State's Numeric and General Water Quality Criteria, including criteria related to turbidity [10 CSR 20-7.031 (3) C].

6. The timing of the dredging should be such that impacts to the natural biological community should be minimized to the greatest extent possible, taking into account such events as fish spawning periods and the release of mussel glochidia. Known mussel beds should be avoided.

7. The location of dredging should be such that minimal impacts to channel morphology will occur. Dredging in areas near the mouths of tributaries may cause headcuts to run up those tributaries and cause bank instability upstream. Dredging in areas near the toe of slopes on the outside bend of meanders may cause excessive erosional forces that may lead to bank instability.

8. Have alternative methods of acquiring sand and gravel that would have less potential for impact on the environment such as Streamside systems' gravel collectors been considered?

9. Access points should be appropriately constructed and maintained such that stream banks and access roads are protected from erosion.

MDC

MDC provided the following <u>two</u> comments concerning the commercial dredging applications:

1. MDC recently reviewed and discussed feedback we solicited from field staff regarding the potential need for seasonal dredging restrictions for the Missouri River. As it currently

sits, the consensus was that we do not have enough evidence to restrict dredging during the spawning season as long as it continues to be restricted to the main navigation channel. However, we have documentation that certain areas of the rivers should continue to be declared off limits to dredgers to avoid impacts to river fishes. Those protected areas should include natural cut bank areas, dike fields tributary mouths, sand islands (especially their tips) as well as the mouths of chutes and within chutes and sloughs.

2. Permit reviewers should keep in mind that our knowledge of the major rivers continues to grow and at some point we may gather enough data to support some river reaches as refuges for at least some portion of the year.

Friends of the Kaw, Inc.

Friends of the Kaw, Inc. provided the following three comments concerning the commercial dredging applications:

1. Friends of the Kaw, Inc. would like to go on record to oppose the issuance of Missouri River Dredging Permits. The following are our concerns relating to sand and gravel dredging in the Missouri River:

    a. Dredging eliminates sand and gravel bars used for recreation.
    b. Wildlife suffers when sand and gravel bars used for feeding and nesting are removed.
    c. Sand and gravel bars filter the water and are a natural cleanser.
    d. Dredging causes riverbanks to cave-in, destroying wildlife habitat and riparian forests, this activity robs farmers of cropland through accelerated erosion.
    e. Dredging pumps hundreds of thousands of tons of sediment into suspension each year, soil which contains unsafe toxins that must be treated at great expense. Dredging kicks-up dormant sediments that must be removed to provide drinking water at greater costs.
    f. Dredging causes destruction of aquatic habitat which affects the food chain of predators.

2. Friends of the Kaw is a non-profit, grass roots environmental organization whose mission is to protect and preserve the Kansas River for present and future generations. For over ten years our organization has been actively monitoring the sand dredging industry on the Kansas River because of the irreparably damaged caused in the lower 52 miles by in-river dredging as documented in the U.S. Army Corps on Engineers in their EIS prepared in the 1980's.

3. We believe that commercial mining of sand and gravel are harmful to any river's ecosystem and oppose the issuance of Missouri River permits for these industries. Laura

Calwell, Kansas Riverkeeper, Friends of the Kaw, Inc., P.O. Box 1612, Lawrence, Kansas 66044, 785 312 7200 or 913 963 3460, riverkeeper@kansasriver.com

WaterOne

WaterOne provided the following three comments concerning the commercial dredging applications:

1. The permit includes a new applicant authorized to operate in front of our intake. From a water quality standpoint, WaterOne has serious reservations about allowing any dredging in the reach immediately upstream of our intake and asks that the 85th Street, Inc. river mile range exclude any activity above our intake at river mile 379.9 or within one mile downstream of the intake. This would reduce their operating range to 352.6 -378.9.

2. For a number of years Water One has had concerns about riverbed degradation in the Kansas City area. From our records and from conversations with other members of the Corps of Engineers, there has been a three-foot drop in the riverbed in our area since the early 1990's. This degradation is severe enough that the pumping equipment installed at our water intake is rapidly becoming ineffective, particularly during the winter when the Corps operates the river at low levels. It should be noted that WaterOne is spending approximately two million dollars this year in additional pumping equipment to help assure that the approximately 370,000 persons whom we serve have a reliable supply of drinking water in the winter.

3. WaterOne is concerned that the authorized dredging will aggravate the bed degradation and would like some assurance from the Corps that this permit will not make the problem worse. We respectfully request that the Corps of Engineers consider our comments by not allowing dredging in our area and address the bed degradation issues. Paul D. Corkill, P.E., Manager of Facilities Engineering, WaterOne, 7601 Holliday Drive, Kansas City, Kansas 66106, 913-895-5800

Currently, all permitted dredging operations are subject to the following condition: *You must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless you obtain an exemption to this condition in writing from the Chief of the Construction-Operations Division of the Kansas City District, Corps of Engineers.* Where dredgers have obtained an exemption to this condition in the past, that exemption will be retained in the renewed permits. For those dredgers that operate or propose to operate within the exclusion area proposed by WaterOne, please reply to these comments.

FWS Endangered Species Consultation

Note: Comments were provided by FWS by mail, email and verbally over this

consultation process and are not directly incorporated into this letter. We have chosen to simply describe the status of this consultation.

As described to you all in prior correspondence, and with the concurrence of FWS, we extended the expiration date of the existing dredging permits and entered into informal consultation with the FWS, pursuant to the Endangered Species Act. All of the proposed dredging areas are within the historic range of the threatened piping plover (*Charadrius melodus*), threatened Bald Eagle (*Haliaeetus leucocephalus*) and the endangered least tern (*Sterna antillarum*). At issuance of the public notices, FWS had concurred, *in general*, with the Corps preliminary determination that the proposed dredging activities are not likely to adversely affect these species and their habitats. This preliminary concurrence 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 (copy enclosed) as follows:

1. 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.

2. Condition “m” will be modified to require the dredge operators 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 the Corps. (The purpose of this GPS data collection is primarily for display of dredging activities in a Geographic Information System (GIS), and for macro-level compliance. (Given the limitations of the devices, real time and micro-level compliance cannot be determined by this method.)

3. The annual reporting requirement of condition “m” 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.

4. Condition “o” will be modified to add the Loutre River confluence, near Missouri River mile 97, to the dredging exclusion list, and the exclusion zone will be expanded for all listed tributaries to ¼ mile upstream or downstream. Additionally, these exclusion provisions will be expanded to include river chutes and side channels, and areas adjacent to conservation lands (Missouri River Mitigation Project lands; FWS refuge lands; and Missouri Department of Conservation wildlife areas). FWS acknowledged that due to extensive conservation lands between Rocheport and Jefferson City, that most areas in this reach would be excluded, and FWS has stated their availability to meet with affected dredgers and the Corps to consider alternatives.

   First, we have determined that the proposed Loutre River confluence was misidentified. The proposed exclusion addition would be the Loutre Slough confluence at approximate

river mile 91.2.

Secondly, **this provision will affect most dredgers**, and especially those between Boonville and Jefferson City. We are currently mapping these areas to produce a list of exclusion areas. However, **if you wish to discuss an exception to this provision**, you need to compare your dredging reaches against existing maps of these areas, and respond to this letter. Dredgers who wish to propose alternate dredging reaches may do so at this time. The following tools/maps are suggested.

- Missouri's Conservation Atlas, published by MDC.
- Corps of Engineers Missouri River Mitigation Project maps at http://www.nwk.usace.army.mil/projects/mitigation/locationmaps.htm
- FWS's Big Muddy Fish and Wildlife Refuge information at: http://midwest.fws.gov/BigMuddy/

The Corps will seek final FWS concurrence, as required by the Endangered Species Act, once all issues identified in this letter have been resolved.

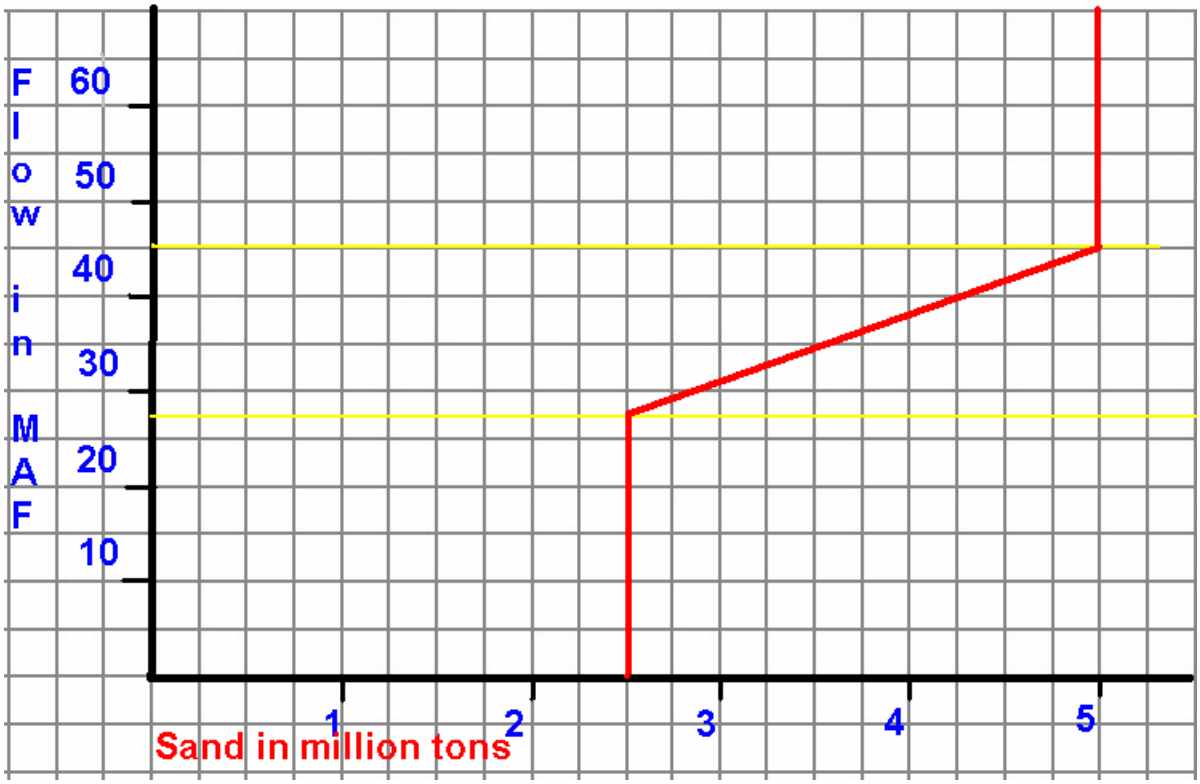
Missouri River Bed Degradation

In a series of meetings with experts in the field of sediment transport, and through investigation of available data, the Kansas City District has determined that significant riverbed degradation has occurred in the Kansas City Reach of the Missouri River. The multiple processes and mechanisms that lead to this condition have been identified, but no partitioning of the impact between the various processes and mechanisms has been attempted. We have concluded that rationing of sand extraction in this reach is necessary to prevent commercial dredging from contributing to any additional degradation.

- The affected reach is the Missouri River between river miles 340 (near the confluence of the Little Blue River in Jackson County, Missouri) and 400 (just above Fort Leavenworth in Leavenworth County, Kansas).
- Annual extraction limits will be determined by 1 January of each year, based upon the average flow volume passing the Missouri River Gage at St. Joseph for a two-year period ending 30 November of the preceding year.
- The maximum annual extraction within this reach for this dredging permit cycle will be 5 million tons. This maximum will only be allowed when flows passing the Missouri River Gage at St. Joseph average above 45 million acre feet (MAF) for the prior two-year period.
- The maximum annual extraction for this permit cycle will be 2.5 million tons when the prior two-year average is at or below 27 MAF.
- The maximum annual extraction rate will be prorated between the above two points, for prior two-year periods with flows between 27 and 45 MAF (see graph below).
- Under these provisions, the maximum annual extraction for calendar year 2004 would be 2.5 million tons based on a prior two-year flow average of 23.4 MAF.

We request that dredgers affected by this issue (i.e. those who dredge or propose to dredge between river miles 340 and 400), respond to the following items.

- If your dredging operation extends beyond this reach, please report the volume of proposed extraction, from your application, that falls within this reach and that volume that would be outside of that reach.
- If you wish to modify your application to propose an alternate dredging reach outside of the mile 340 to 400 zone, you may do so now.
- Currently, it appears that even at the 45 MAF average flow, not enough sand is available to satisfy the requested extraction volume limits. We request your input on how we should divide or ration the available sand among the competing dredgers.



Annual Total Extraction Volumes between Missouri River Miles 340 and 400

General Information About the Permit Process and Responding to Comments

If you choose, you may respond to this letter or to the public comments described above in one or more ways. You may try to resolve any specific comments by modifying your proposal on your own initiative and notifying us. If you wish to meet with any agency or other commenter, please contact us and we will arrange a meeting. Also, you may rebut or comment to us on any or all of the substantive points in the enclosed comments or furnish justification of the need for your activity. However, we emphasize that you are not assured that a permit would be issued merely because you resolve objections or modify your proposal.

The Corps of Engineers will make the final decision on your application, and we will not issue a permit if issuance would be contrary to the public interest. We will consider the enclosed comments and your response, if any, along with other relevant factors in our determination of the public interest. Finally, you may choose to take no action on the enclosed objections. In that case, we will decide whether to issue the requested permit based on the information in your application, on the public notice comments, and on any other information we have developed about your activity from our own evaluation.

If we issue the permit, it may contain conditions that are necessary to address specific environmental issues or other public interest concerns. Some of those issues may be included in the enclosed comments, and others may be minor issues which are not in the enclosed comments.

In summary, we are providing you the comments received in response to our public notices for your information and you do not have to respond. If you wish to respond in any way for consideration in our final decision, we encourage you to do so. However, we intend to finish processing your application as soon as possible. If you do not reply within 15 days, we will assume you are declining this opportunity to respond. If you have any questions concerning this matter, please feel free to write or call me at 816-983-3664 (FAX 816-426-2321).

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
Regulatory Program Manager
Regulatory Branch, Operations Division

Enclosure

Copies Furnished (**by Certified Mail**, with enclosure):

Copies Furnished (**by Certified Mail**, with enclosure):

(Application No. 2001-01429)
Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

(Application No. 2001-01430)
Mr. Denis Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261, 114 Hermann Sand and Gravel Lane
Hermann, Missouri 65041

(Application No. 2001-01431)
Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, Kansas 66202

(Application No. 2001-01432)
Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

(Application No. 2001-01433)
Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

(Application No. 2001-01434)
Mr. Larry W. Moore
Con-Agg of MO, LLC
2604 North Stadium Boulevard
Columbia, Missouri 65202-1271

(Application No. 2001-01435)
Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 Highway A, Suite A
Washington, Missouri 63090

(Application No. 2001-01436)
Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
12749 South Hagan Court
Olathe, Kansas 66062

(Application No. 2003-01640)
Mr. Peter R. Jabbour
85th Street, Inc.
3101 East 85th Street
Kansas City, Missouri 64132

(Application No. 2004-00378)
Mr. Chris Boeckmann
Compliance Officer
Muenks Brothers Quarries
3717 Highway 50 West
Loose Creek, Missouri 65054

Copies Furnished (by Ordinary Mail, with enclosure):

Environmental Protection Agency,
Water, Wetlands, and Pesticides Division
U.S. Fish and Wildlife Service,
Columbia, Missouri
Missouri Department of Natural Resources
Missouri Department of Conservation
Kansas Department of Health and Environment
Kansas Department of Wildlife and Parks
WaterOne,
Friends of Kaw, Inc.

EC-HH (Chapman)
PAO (Frazier)

a. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor. You must maintain a copy of this entire permit on each dredge operated under this permit.

b. You must confine your dredging to the area between the Rectified Channel Lines (RCL) with the following restrictions. Dredging must be conducted in such a manner to preserve the structural integrity of the landmass landward of the RCL. This must be accomplished by maintaining an adequate "no dredging" zone riverward of the RCL so that material will stabilize into the dredging area at its natural angle of repose. This slope will vary depending upon river location and the type of material being dredged, but it will be the permittee's responsibility to ensure that this shallow water interface landward of the RCL be maintained.

c. You must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bankline or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that you can conduct dredging and does not relieve you from liability for damage arising from dredging. You must satisfy yourself that dredging to these limits will not cause damage to public and private property.

d. You must not conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless you obtain an exemption to this condition in writing from the Chief of the Construction-Operations Division of the Kansas City District, Corps of Engineers.

e. You must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "d" above.

f. You must discharge only suitable material that is free from toxic pollutants in other than trace quantities.

g. You must investigate for water supply intakes for other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality. You must furnish the Kansas City District with a copy of any written notification provided in accordance with this condition.

h. You must dispose of dredged materials on shore in such a way that sediment runoff and soil erosion to the watercourse are controlled and minimized. Spoil materials from the watercourse or on-shore operations, including sludge deposits, must not be dumped into the watercourse.

i. You must employ measures to prevent or control spilled fuels or lubricants from entering the waters of the United States.

j. You must not dispose of waste materials, other than on-dredge processing waste and return water, below the ordinary high water mark of any water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

Existing/Current Missouri River Commercial Dredging Special Conditions - continued

k. You must comply with all U.S. Coast Guard, State of Missouri, State of Kansas (river mile 367 to 490), and Corps of Engineers regulations concerning the prevention of navigation obstructions in navigable waters of the United States.

l. You must conduct operations in the Missouri River such that there will be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

m. You must, for each dredge operated, record daily the dredge location and tons of material removed on the attached Missouri River Commercial Dredging Location/Volume Report. You must furnish a copy of the completed report to the Kansas City District Regulatory Branch by 30 January of each year.

n. You must confine dredging to the specified reaches listed on page 1 of the permit document. Requests for expansion and/or relocation of the specified reaches must identify the proposed new limits, in river miles, and the location of the unloading facility to be employed. Approval of the requests, if granted, will be provided in writing with modified reaches identified on the Missouri River Hydrographic Survey. Copies of the relocation requests must be furnished to the following agencies:

(1) U.S. Fish and Wildlife Service, Columbia Field Office

(2) Missouri Department of Natural Resources, Water Pollution Control Program

(for operations extending upstream of river mile 367)

(3) Kansas Department of Health and Environment, Bureau of Water

o. Dredging is prohibited within 500 feet upstream and 2,000 feet downstream of the confluence of the Missouri River and the following tributaries:

Tributary	Approximate River Mile
Big Nemaha River	495
Wolf Creek	479
Nodaway River	473
Platte River	391
Kansas River	367
Grand River	250
Chariton River	239
Little Chariton River	227
Lamine River	202
Osage River	130
Gasconade River	104

Enclosure 12.31 April 8, 2004 Lafarge Response and Rebuttal Letter

LAFARGE
NORTH AMERICA

Construction Materials

Mr. Mark Frazier
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

April 8, 2004

RE: Application No. 200301640 - Missouri River Dredging

This letter is in response to our application for commercial sand dredging in the Missouri River and the public notice responses outlined in your letter dated March 31, 2004. It is our intention to cooperate fully with all applicable rules and regulations set forth by the Corps of Engineers, the EPA, DNR and all other concerned parties.

In response to the comments made by WaterOne pertaining to the request to limit the proposed operations within the range of mile markers 352.6 and 378.9: It is our opinion that the current conditions set forth by the Corps of Engineers to restrict operating 4000 feet upstream and 500 feet downstream of municipal water intake structures is applicable and our proposed permit can exclude the areas that apply under this condition.

In response to the proposed rationing of sand extraction between river miles 340 and 400: As our permit request indicates, our proposed extraction area (MM 353 to 378) falls within the rationing extraction area (MM 340 to 400) and is the only area of extraction suitable for 85th Street, Inc. Other dredgers in this market have alternative sources for material. In order to satisfy all interested parties, we would respectfully request an equal division of the annual extraction amount currently defined as 2.5 million tons, given present flow rates. We believe that this is the only fair division of resources to allow for all operators to conduct dredging within the rationing extraction area. Assuming that this formula for rationing is approved, the annual amount requested by 85ti' Street, Inc. could be modified to reflect this new rationed amount, with the expectation of increased tonnage whenever water flow permits.

We look forward to hearing from the Corps of Engineers on their final decision on our application and our subsequent permit. If you have any further questions or need clarification on any item, please feel free to contact Kevin Peart, General Manager Aggregates (816-257-4021) or myself.

Sincerely,

Peter R Jabbour

Peter R. Jabbour

Enclosure 12.32 April 15, 2004 Kaw Valley Sand Response and Rebuttal Letter

KAW VALLEY COMPANIES
1615 Argentine Boulevard
Kansas City, Kansas
Phone 913-281-9950
Fax 913-281-9955

April 15, 2004

Mark Frazier
Regulatory Program Manager
Regulatory Branch, Operations Division
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
601 E. l2t" Street,
Kansas City, Mo. 64106
816-983-3664
816-426-2321 fax

Mark,

I was out of town the week you sent the letter concerning the Missouri River dredge permits. Someone wrote on the envelope, "notified 4/2/04". Your letter was dated March 31, 2004. I opened it today, Thursday, April 15, 2004. Please consider this letter as a response within your 15 day time frame to pursue approval of application number 200101436, submitted by Kaw Valley Sand and Gravel, Inc. on July 12, 2001.

Please allow me to respond as soon as possible to the permitting issues and make suggestions concerning the dredging between river miles 340 and 400.

I called your office today. The recording said you would be out until tomorrow. I then spoke with Doug Berka at 816-983-3657. He told me it would be acceptable to document our phone conversation concerning the 15-day limitation, then write you a note stating interest in retaining our dredging rights on the Missouri River.

My cell phone number is 913-915-7444. Thank you for your time, interest and understanding.

Sincerely,
Kaw Valley Sand and Gravel, Inc.

Alan R. Teutemacher
General Manager

Enclosure 12.33 April 20, 2004 Holliday Sand Response and Rebuttal Letter

Holliday Sand and Gravel Company
9660 Legler Road
Lenexa, Kansas 66219
Phone: 913-492-5920
Email: mrodell@hollidaysand.com

4/20/04

Mr. Mark Frazier
Regulatory Program Manager
Department of the Army
U.S. Army Corps of Engineers, Kansas City District
700 Federal Building
Kansas City, Missouri 64106-2896

Re: 200101429 MO RIV COM DREDGE

Dear Mark:

We appreciate the opportunity to respond to the comments concerning our request for a DA permit for ongoing commercial sand dredging in the Missouri River.

First we want to respond that 3.4 million tons of our requested 3.8 million tons would need to come from the RM 340 to 400 restricted reach. Second since there is a high likelihood that we will be restricted to amounts below the 3.4 million tons in the restricted reach we find it necessary to request that our lower dredge reach extend from RM 335.0 to RM 405.0 in lieu of the two reaches of 355.0 to 367.0 and 367.9 to 378.0 previously requested. The requested reach at St. Joe of 445.0 to 455.5 remains unchanged.

Since our requested reach now extends past the Water One intake near RM 379.9 and the Leavenworth intake at 397.5 we propose no-dredge zones of 4000 feet above and 500 feet below, as this is being used near Kansas City without impact. We refer to page 33, paragraph 4.6.1 of the WEST study as part of the EA for L385 ("Information obtained from the infrastructure owners indicate no significant infrastructure problems can be attributed to dredging and/or scour along the river reach.") Holliday Sand has their own shallow pile structures and we have not seen any signs of failure that would be expected with the amount of bed degradation feared from lowering river stages.

In response to the request by KCD on how to divide the available sand among the competing dredgers Holliday Sand & Gravel Company respectfully submits the following comments.

1. There are no competing dredgers. Only Holliday Sand has made major investments in Missouri River facilities near Kansas City.
When the KCD instituted tonnage quotas on the Kansas River, Holliday Sand acted to find alternate sources and invested heavily at that time in Missouri River production. No other producer (at that time or since) was willing to make the level of investment needed to produce on the Missouri River (for example: seven man crews, large dredges, floating plants, towboats, barges, unloading docks, drydock, lignite removal process, etc.). Although there are two other permit applicants, neither has invested to date in Missouri River sand dredging. Only Holliday Sand stands to lose from rationing sand. The other two applicants can only gain by getting something that they currently don't have or need - a quota of sand from the Missouri River.
2. We didn't see this coming.
In regard to in-stream dredging, the Environmental Assessment for L385 concluded that " based on studies to date, it would be purely speculative to attribute changes in stage trends to any one of these possible causes." (page EA-12 paragraph 2.3.12) This was echoed to Holliday Sand in phone conversations with regulatory personnel during the permitting period. The only special conditions mentioned to us prior to receiving a copy of the comments on March 31, 2004, were quarterly production reporting, GPS dredge locating, additional dredging restrictions at tributaries and possibly some form of cost sharing for ongoing river surveying. There was never any mention to applicants of quotas or rationing before that time.
3. We need time to react. We request a three year freeze (from 2005 - 2007) at 2003 dredging levels.
Immediate implementation of the low flow limit of 2.5 million tons per year will result in an immediate sand shortfall of approximately 900,000 tons in the metro area. Holliday does not have an affordable or practical alternative at this time. It will take at least three years to establish another facility close to the metro area that can economically makeup the potential shortage.

We estimate that immediate implementation will increase construction costs six million dollars a year, and most of the cost would be used for burning fuel and deteriorating our roads (does anyone care about this impact to the environment?) To immediately make up this level of volume two or three out of town producers would need to gear up with additional crews, arrange for additional trucking (which is already in short supply), and charge an additional six to seven dollars a ton. This price increase results from increased trucking costs because of the added mileage, the shortage of haulers and drivers, and higher trucking rates as a result of forty percent smaller payloads because the loads would originate outside the commercial haul zone. Most contractors and ready mixes will not be able to recoup this kind of price increase.

4. We request a phase-in period of four years to minimize economic impacts.
Any reductions below our requested tonnage in the restricted area calculated from the first three years (the freeze period described above) would be phased in at 25% of the total reduction in 2008, 50% in 2009, 75% in 2010 and 100% in 2011.

5. We propose a three year annual flow average in lieu of two years.
Our calculations show that using a three year average of flows accomplishes the same correlation to flow and average extraction rate, but reduces the degree of change in any one year and reduces some of the extreme years, both high and low.
6. We request a one year cushion or delay in assigning tonnage quotas.
Because the impact of flow on production volumes cannot be fully determined until near the end of the year and because of the great potential cost impact, one year of delay is needed before the implementation of the restrictions based on the previous three year (proposed) flow average. This allows the sand producer one year to anticipate a shortage, to plan production methods, and time for the market to absorb any increased costs. It would work this way: the extraction limit taken off the cure from the average of the last three years - say 2004 through 2006, would be the limit for 2008, rather than 2007 (and so on...).

7. We oppose granting a permit that includes an extraction ration until the applicant proves need and is ready to dredge, process and market the sand.
We propose that new permits would be available after the three year freeze period and would be granted tonnage in 300,000 ton maximum increments upon demonstrating that the ration would immediately enter the metro market and would be all be sold that year. This would require proof that dredging and processing facilities are in place and that the new operator had orders for at least 75% of the amount rationed that year and successive years. This prevents speculation on permits or only producing a portion of the quota to place in stockpile and not making it available to the market. It is too difficult to take quota away, so it's better not to grant the permit without proof that it will be fully utilized to meet the demands of the construction industry in the greater Kansas City area.

8. In addition to the above, we oppose granting any additional permits that would include tonnage allocations within the restricted dredge area unless the average river flow exceeds 33 MAF.
When flows are below 33 MAF the extraction volume allowed will be less than what is currently needed and produced by Holliday Sand for it's customers. In turn, Holliday Sand agrees to permanently limit its quota to 3.4 million tons (or less as required when the average flow is less than the 33 MAF).

Why this is fair and just:
Holliday can not economically tow sand from outside the restricted dredge area.
Even though we have requested permit area beyond the restricted reach, our maximum efficient operating range is 25 miles upstream and 15 miles downstream. The assigned limits of the restricted dredge zone extend 3.3 miles further upstream and 5 miles further downstream. That may not seem critical but that additional 3.3 miles up and 5 miles down would require eight barges instead of three and two towboats instead of one. This represents an additional investment of 5 million dollars that may or may not be used each year along with two to three additional crews that would have to be trained and available from year to year, whether they

were needed or not. Leasing this equipment rather than purchasing is not a likely option as the barges we need are rarely available (double rake, shallow draft, with cargo boxes) and would require long term leases for the modifications needed and due to our remote location from brokers.

The other permit applicants have the option to tow sand from outside the restricted dredge area.

Kaw Valley doesn't currently have a Missouri River site so they have the option of locating near or outside of the restricted area. They lose nothing.

85th Street, Inc. has a potential unloading site within 15.8 miles of the lower limit of the restricted area, which places them close the feasible towing limit. Regardless, the site was purchased by 85th Street, Inc. not to produce sand, but to market cement by rail.

For the last thirty years only Holliday Sand & Gravel Company has been dredging the Missouri River in Kansas City. Only Holliday Sand has dredges and sites operating full time. The other two applicants are speculative. Kaw Valley keeps its permit as an asset in itself and 85th Street, Inc. recently acquired a rail terminal next to the river and may or may not try to convert it to unload sand. It is our understanding that neither of them intend to dredge Missouri River sand and should not be granted any tons they don't immediately need. Reducing Holliday Sand's sand volume and giving it to either of the other applicants is synonymous to reducing the permitted volume of water needed and pumped by the City of Kansas City, Missouri, and allocating it to the City of Lee's Summit (who wanted to be assured that they would always get the water they need). Lee's Summit will testify that they may need it, but where is their water plant?

Holliday Sand only sells sand and sells it to everyone at a fair price.

85th Street, Inc. is our customer and is in the ready mix business. Taking tons away from us and giving tons to them will create competitive inequity in the ready mix business. Holliday Sand is already the only producer in the reach so nothing will change by granting Holliday the first 3.4 million tons allowed in the restricted reach. Holliday Sand is the only applicant with an investment in Missouri River sand dredging.

9. For rationing after the initial freeze period, this formula would be used:

Individual Permitholder's Share of by the total sales of all permit holders in the reach, multiplied by the annual Restricted Area Tons, equals their sales for the previous year, multiplied by 1.1 divided limit determined by flow.

10. How Urgent is the Problem?

We believe that the studies to date published with the L385 EA indicate the need for long term control but not an urgent response. We believe that any problems just appearing may be the result of large scale concentrated L385 dredging combined with our own very busy dredge during a severe drought period. We believe that speculative permit applications have unnecessarily alarmed several agencies. We believe that the phenomena of bed degradation is related to extended very low clearer water flows which normally occur for short periods of time

in the winter outside of navigation season. In other words, the longer less water is released, the lower the thalweg will go. Dredging may aggravate this, but we believe it is only temporary. We are not scientists or hydrologists, but we are on the river twentyfour-seven and we don't think there is any cause to rush into this program.

Thank you again for allowing us to comment one week late and for the many hours you have spent evaluating the situation in order to do the right thing.

Sincerely yours,
Holliday Sand & Gravel Company

Michael Odell
Vice President

Enclosure 12.34 April 27, 2004 Capital Sand Response and Rebuttal Letter

Capital Sand Company, Inc.
P.O. Box 104000
Jefferson City, Missouri 65110-4000
(573) 634-3620
Fax # (573) 636-6754

2:53

15 Construction Industry

April 27, 2004

Mark D. Frazier
Regulatory Program Manager
Regulatory Branch, Operations Division
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106-2596

Dear Mr. Frazier:

This letter is a response to your correspondence of March 31, 2004 in which you forwarded some of the comments that had been received by the Department of the Army, Corps of Engineers (COE) related to commercial sand dredging in the Missouri River. Your letter transmitted the substantive comments that had been forwarded by the U.S. Fish and Wildlife Service (FWS), Missouri Department of Conservation (MDC), Missouri Department of Natural Resources (MDNR), Water District No. 1 of Johnson County (WaterOne), and Friends of the Kaw, Inc.

Of particular concern to Capital Sand Company, Inc is a seeming discrepancy between comments that have been submitted by FWS and MDC. The discrepancy relates to the basis, or lack thereof, for a prohibition or exclusion of commercial dredging in certain areas of the river.

According to your letter, MDC provided comments as follows:

> "l . MDC reviewed and discussed feedback we solicited from field staff regarding potential need for seasonal dredging restrictions for the Missouri River. As it currently sits, the consensus was that we do not have enough evidence to restrict dredging during the spawning season as long as it continues to be restricted to the main navigation channel. However, we have documentation that certain areas of the rivers should continue to be declared off limits to dredgers to avoid impacts to river fishes. Those protected areas should include natural cut bank areas, dike fields, tributary mouths, sand islands (especially their tips) as well as the mouths of chutes and within chutes and sloughs."

> "Permit reviewers should keep in mind that our knowledge of the major rivers continues to grow and at some point we may gather enough data to support some river reaches as refuges for at least some portion of the year"

In contrast the FWS provided the following comment that appears to be somewhat divergent from the MDC comment. FWS commented as follows:

> "4. Condition "o" will be modified to add the Loutre River confluence,..to the dredging exclusion list, and the exclusion list will be expanded for all listed tributaries to ¼ mile upstream or downstream. Additionally, these exclusion provisions will be expanded to include river chutes and side channels, and areas adjacent to conservation lands (Missouri River Mitigation Project lands; FWS refuge lands; and Missouri Department of Conservation wildlife areas). FWS acknowledged that due to the extensive conservation lands between Rocheport and Jefferson City, that most areas in this reach would be excluded, and FWS has stated their availability to meet with affected dredgers and the Corps to consider alternatives."

Capital Sand, Inc. is concerned that FWS is commenting on behalf of MDC who has not established such an exclusionary policy for protection of those portions of the river that simply border its wildlife areas. We are aware of internal MDC correspondence and research reports that indicate MDC does not have evidence to restrict dredging during the spawning (or non-spawning) season as long as dredging occurs in the main channel.

Although the Department of Conservation believes that certain areas of the river should be declared off limits to dredgers to avoid sturgeon impacts, these areas are described by their physical attributes (as stated in the MDC comment letter) rather than by their political or governmental boundaries (i.e. "MDC wildlife areas") as has been inferred by FWS.

If the COE intends to restrict areas between Jefferson City and Boonville based on the political or governmental boundaries of MDC, it would seem appropriate for MDC to explain the rationale for such exclusion. It would also follow that MDC would describe the specific habitats, bottom and bank characteristics of the river, and other physical attributes in the vicinity of their properties that were of concern for the effective management of the individual conservation lands. On the contrary, MDC has told us on multiple occasions that they do not have a problem with commercial sand dredging as long as the dredging is confined to specified areas and appropriate protective removal practices are followed.

The amount of sand that is removed from the Missouri River between Boonville and Jefferson City represents a significant portion of the product that is supplied by Capital Sand and other river sand producers, to central and southern Missouri. The exclusion of sand dredging in this area will have a resultant impact on the concrete and other construction industries. Before Capital Sand acquiesces to the exclusionary desires of the FWS, which appear to be based on speculative reasoning, we request a meeting of appropriate entities including COE, MDC, FWS to discuss this matter.

Sincerely,

Ray Bohlk

F. Ray Bohlken, President
Capital Sand Company, Inc.

Enclosure 12.35 May 6, 2004 Kaw Valley Sand Response and Rebuttal Letter

KAW VALLEY COMPANIES
1615 Argentine Boulevard
Kansas City, Kansas 66105
Phone 913-281-9950
Fax 913-281-9955

May 6, 2004

Mark Frazier
Regulatory Program Manager
Regulatory Branch, Operations Division
Department of the Arnry
Kansas City District, Corps of Engineers
700 Federal Building
601 E. 12th Street,
Kansas City, MO 64106

816-983-3664
816-426-2321 fax

Mark,

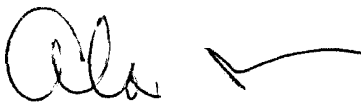
This letter is in response to your inquiry of March 31, 2004. Thank you for the additional time.

Kaw Valley Sand and Gravel, Inc. has been granted a permit to dredge in the Missouri River since 1984. We consider ourselves a viable sand producer in the Kansas City area. Production restrictions on the Kansas River, imposed by the Army Corps of Engineers, have made the Missouri River option all the more valuable to us as a small business. Your underlying motivation for this activity concerning the Missouri River is conservation and regulation.

In my estimation, Kaw Valley Sand and Gravel, Inc. has been conserving within the regulations for twenty years. As long as you have requested my input on the distribution of sand, I would like to propose that Kaw Valley Sand and Gravel, Inc. be issued a permit to mine at least one million tons per year from the Missouri River. This action will give us the opportunity to regain some of the base we lost to regulations on the Kansas River.

Please keep me informed throughout this process. My cell phone number is 913-915-7444. Thank you again for your time and interest.

Sincerely,
Kaw Valley Sand and Gravel, Inc.



Alan R. Teutemacher
General Manager

Enclosure 12.36 July 2, 2004 Muenks Brothers Response and Rebuttal Letter

Frazier, Mark D NWK

From: Chris Boeckmann [cboeckmann_efs@hotmail.com]
Sent: Friday, July 02, 2004 1:01 PM
To: Frazier, Mark D
Subject: RE: Commercial Dredging Meeting(s) Wednesday 7 July 2004 at ConAgg Offices in Columbia

Mark,

Upon review of the materials related to the Dredging Permits which you have forwarded to me and the packet of information which accompanied the Public Notice packet, I have a few questions and/or comments which I feel need to be addressed prior to any permitting determinations. They may not be addressed at or before the July meeting; however, failure to address these issues at some point in the process would indicate the system has failed the regulated community and the associated industries which will be impacted.

The Public Notice packet related to the dredging activities, which was issued June 27, 2004, states that 'the decision to issue a permit will be based on an evaluation of the probable impact including the cumulative impacts of the proposed activity on public interest. The concerns of Muenks Bros. are follows:

1. The FWS has requested that the exclusion zone be expanded to include river chutes and side channels and areas adjacent to conservation lands. This expanded exclusion zone request has not been substantiated by any scientific data indicating the proposed activities will negatively impact the threatened Piping Clover, the threatened Bald Eagle, and the endangered Least Tern. Will the FWS present scientific data which specifically describes and entails any purported impacts of the dredging activities for review by the Corp of Engineers and the regulated community?

2. The FWS has not requested such exclusion zone expansions along conservation lands within the St. Louis district. Will the FWS explain the conditions and/or impacts that are different between the two districts and the scientific data which substantiate and justify the variation in permit conditions.

3. The Public Notice issued on June 27, 2004 states: 'All of the proposed dredging areas are within the historic range of the threatened Piping Plover, threatened Bald Eagle, and the endangered Least Tern. In compliance with the Endangered Species Act, a preliminary determination has been made that the described work is not likely to adversely affect these species'. If this determination has been made and publicized as such, Muenks Bros. respectfully requests the scientific data which would justify the expansion of the exclusion zones.

4. Your letter dated March 31, 2004 details the degradation of the Missouri riverbed within the Kansas City Reach of the Missouri River. The Corp has enacted a 'rationing of sand extraction in this reach to prevent commercial dredging from contributing to any additional degredation. Will the Corp please explain the logic of expanded exclusion zones in a district with no scientific data to support such restrictions; while a reach of the river which has documented riverbed degradation and the 'processes and mechanisms that lead to this condition have been identified' has a rationing system applied.

5. Comments submitted by the Missouri Department of Natural Resources and Department of Conservation do not reflect the need for the proposed exclusion zones. Will the Corp interpret this as an indication that such zones are not justified? If not, why?

6. The Public Notice lists several factors which will be considered in the determination process. Among those factors are included economics, land use and the needs and welfare of the people. Has the Corp collected data necessary to provide an economic impact statement upon the associated industries (ie. concrete, construction, etc.) which will ultimately have tremendous consequences upon such issues as land use, and the needs and overall welfare of the people.

Will the regulate community be presented with any economic impact statements performed?

7. Please specifically define 'areas adjacent to conservation lands'.

Though there are several additional issues that will need to be considered the items which I have listed are the issues which are of greatest concern. Ultimately, the Corp will need to make the determination of how to proceed with the dredging industry; however, it is imperative that such decisions are consistent and based on scientific data that clearly defines the issues and the precise impact of the proposed activity. Additionally, the economic issues and repercussions to the welfare of the people are critical considerations in the final determination.

I pose one last question: How can the Corp justify such exclusion zones as permit restrictions when the entity that is proposing them has no scientific justification and the Missouri Department of Conservation's comments do not call list 'areas adjacent to conservation lands' as an area for which they have documentation to support exclusion of dredging to avoid impacts to fish.

Chris Boeckmann
Compliance Coordinator
Muenks Bros. Quarries

>From: "Frazier, Mark D NWK" <Mark.D.Frazier@nwk02.usace.army.mil> >To: "Frazier, Mark D NWK" <Mark.D.Frazier@nwk02.usace.army.mil>, >'-dshorr@lathropgage.com "' <dshorr@lathropgage.com>, "'Steve Engemann >(E-mail)"' <engemann454@yahoo.com>, "'dsmart@mecpc.com "' ><dsmart@mecpc.com>, "'Ray Bohlken (E-mail)"' <jschokker@jcrt.com>, "'Larry >Moore (E-mail)"' <lmoore@conagg-mo.com>, "'Jane Ledwin (E-mail)"' ><jane-ledwin@fws.gov>, "Wheeler, Cody S NWK" ><Cody.S.Wheeler@nwk02.usace.army.mil>, "Jeppson, Matthew P NWK" >,<Matthew.P.Jeppson@nwk02.usace.army.mil>, "'Chris Boeckmann (E-mail) "' ><muenksbros@midamerica.net>, "White, Christopher M NWK" ><Christopher.M.White@nwk02.usace.army.mil>, "Covington, William G NWK" ><William.G.Covington@nwk02.usace.army.mil>, 'Brian Canaday' ><Brian.Canaday@mdc.mo.gov>, "'cboeckmann efs@hotmail.com "' ><cboeckmann_efs@hotmail.com>, "Hibbs, David R NWK" ><David.R.Hibbs@nwk02.usace.army.mil>
>CC: '-mike.wells@dnr.mo.gov "' <mike.wells@dnr.mo.gov>

Enclosure 12.37 May 17, 2004 CENWK-PM-CJ Response to Proposed Exclusion Zones

CENWK-PM-CJ

17 May 04

MEMORANDUM FOR CENWK-OD-R

SUBJECT: Dredging Exclusion on Adjacent Lands, Missouri River Fish and Wildlife Mitigation Project

1. Reference Regulatory Permit Application No. 200101429.

2. The USFWS, Columbia Ecological Services Office has provided a comment that recommends that the Corps exclude certain areas from dredging allowed by the referenced permit. This condition would exclude areas adjacent to USFWS Refuge lands, State Conservation lands, and Federal lands set aside for mitigation, e.g. the Fish and Wildlife Mitigation project.

3. The Fish and Wildlife Mitigation project would benefit from excluding the reach of the river adjacent to currently owned properties from commercial dredging. We are in the process of developing riverine habitats adjacent to these lands that could be impacted if dredging were to take place for commercial purposes. Therefore, we support the condition of excluding these areas from the permit action.

4. If you have any questions, please contact the undersigned at x3324.

Kelly Ryan
Project Manager

Enclosure 12.38 June 3, 2004 CENWK-PM-PR Response to Proposed Exclusion Zones

CENWK-PM-PR

MEMORANDUM FOR OD-R

SUBJECT: Comments on the Renewal of Missouri River Commercial Sand and Gravel Dredging Permits.

Recently there have been discussions with your office concerning the pending renewal of commercial sand and gravel dredging permits on the Missouri River. It is our understanding that the U. S. Fish and Wildlife Service (USFWS) have recommended that the new permit eliminate any commercial dredging along public lands. This office has several concerns relating to this pending action as detailed below.

l. USFWS has not presented compelling evidence in the form of peer-reviewed studies to support any proposed cessation of dredging along public lands. In discussing factors affecting the habitat loss and reasons for the decline of the species, both the USFWS Missouri River Biological Opinion and the Pallid Sturgeon Recovery Plan are silent as to any discussion on sand and gravel dredging as a factor that affects habitat loss or degradation or the species' decline. Several studies are being initiated, that will determine if dredging is likely to adversely impact shallow water habitat (SWH) and/or the pallid sturgeon. However, to date there is no evidence that dredging has an adverse effect.

2. The U.S. Geologic Survey Columbia Environmental Research Center is initiating sediment studies of the Missouri River to determine if sediment availability is a limiting factor in attempts to construct new aquatic habitat. In addition, the Corps and USFWS are developing a monitoring program to assess the efficacy of shallow water habitat and determine if and how pallid sturgeon use this habitat. If the study finds dredging may be adversely impacting shallow water habitat, the magnitude of the impact will need to be assessed. Less severe limiting conditions could be imposed; such as limiting quantities authorized for dredging, applying seasonal restrictions, and restricting dredging to the main channel and main channel border

3. In 2000, the Missouri River Biological Opinion established a shallow water habitat goal of 20-30 acres/mile by 2020 in the channelized Missouri River. Data provided by the Corps in the November 2003 Biological Assessment documented that existing conditions with ongoing sand and gravel dredging on the lower Missouri River (RM 250130) are close to meeting this goal (averaging 18.3 acres/mile). Due to the local channel geometry and the reach hydrology, it is likely that this goal is already met from the mouth of the Osage River (RM 130) to the mouth of the Missouri River (RM 0).

4. We also have a concern that the USFWS is not consistent in expressing its concerns about and setting requirements relating to commercial dredging and its impacts. It is also requesting a new requirement that needs to be coordinated with the two other Missouri River Districts. In a recent telephone conversation with the St. Louis District Chief of Regulatory, he indicated that the FWS has different issues on dredging on of the

Mississippi River then on the Missouri River. On the Mississippi River, their concern is the potential for dredging to entrain pallid sturgeon, while on the Missouri River it is the potential for the loss of shallow water habitat. In the St. Louis District the USFWS has not restricted or banned commercial dredging along public lands on either the Missouri or Mississippi Rivers.

5. The BSNP Mitigation Project recently completed a supplemental Environmental Impact Statement for additional land acquisition and did not identify any adverse impacts to the sand and gravel dredging industry resulting from additional land acquisition. The proposed commercial dredging ban could increase public opposition to future public land acquisition along the Missouri River, including for the BSNP Mitigation Project.

We look forward to working with your office to achieve a mutually agreeable solution. Please contact Glenn Covington (3141) or Chris White (3158) if you have any questions.

David L. Combs
Chief, Planning Branch
Planning, Programs and
Project Management Division

Enclosure 12.39 November 29, 1004 CENWK-PM-PR Response to Proposed Exclusion Zones

CENWK-PM-PR
MEMORANDUM FOR OD-R
SUBJECT: PM-PR Additional Comments on the Renewal of Missouri River Commercial Sand and Gravel Dredging Permits.

This memorandum is in response to your request for review and comment on the proposed U. S. Fish and Wildlife Service (USFWS) exclusion areas. Our comments below are based on the revised proposal that recommends that a large number of smaller micro-reaches (-0.5 mile to 1-2 miles long) associated with chutes, islands, and bar areas on the Missouri River be excluded from commercial dredging activities.

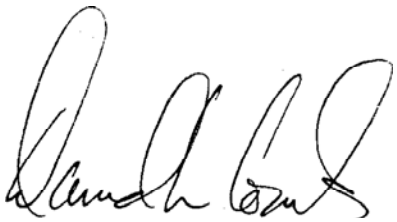
1. On the list of micro-reaches, forty-five percent (twenty-nine of sixty-five) of the sites are within the St. Louis District reach of the Missouri River. It is our understanding that the St. Louis District issued permits for commercial dredging in this reach of river just last year and these permits are good for the next four years.

2. USFWS has not provided peer-reviewed studies to support the proposed dredging prohibition along these reaches of the river. The existing special conditions in the dredging permits are intended to protect these smaller micro- habitats. Is there anything to indicate that these conditions are not sufficient? Neither the Missouri River BiOp nor the Pallid Sturgeon Recovery Plan specifies that USFWS considers sand and gravel dredging a factor that affects habitat loss and/or the species' decline.

3. The Corps is starting several studies that will hopefully indicate if dredging is likely to adversely impact shallow water habitat (SWH) and/or the pallid sturgeon. But we are not aware of any current published research that would indicate that commercial sand and gravel dredging has an adverse effect on the pallid sturgeon or its associated microhabitats.

4. On the channelized sections of the Missouri River, the lower 130 miles have the best existing aquatic habitat. Last spring in a letter to NWK (3/5/04) the USFWS states "a critical mass of diverse aquatic habitat already exists from the Osage River (RM 130) to the mouth (RM 0)" On the USFWS list of micro-reaches sixty-three percent (41 out of 65) of the sites are in this section. Could we have the USFWS clarify their specific concerns based on the above statement?

Without additional information or documentation on impacts of commercial operations, PM-PR cannot make a definitive call in supporting specific exclusion areas. We are hampered based on a lack of information noted above and suggest that the Service be asked to provide answers to the issues listed above. Please contact Glenn Covington (3141) or Dr. Chris White (3158) if you have any questions regarding the comments.



David L. Combs
Chief, Planning Branch

Enclosure 12.40 December 9, 2004 CENWK-OD-R Letter Transmitting Revised Exclusion Zone Proposal and Seeking Comments from the Dredgers

December 9, 2004

Regulatory Branch
(2001-01429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

This letter pertains to your application for a Department of the Army permit for ongoing or proposed commercial sand dredging in the Missouri River. In our letter of March 31, 2004, we provided you with a detailed list of all issues and concerns that had been identified during the public interest review process, and we requested your response to those issues and concerns. We are considering your responses in our decisions on those issues.

We again want to apprise you of the status of this process and seek your review of our proposed conclusion to the informal consultation process of the Endangered Species Act (ESA) with the U.S. Fish and Wildlife Service.

Project Status: The two issues/processes remaining are:

- Conclusion of the ESA consultation. Additional discussion follows.
- Requesting a final decision concerning issuance of Section 401 Water Quality Certification from the Missouri Department of Natural Resources and the Kansas Department of Health and Environment. We will make our request to these agencies immediately upon conclusion of the ESA process.

In July and August, two general meetings with dredgers in the central-Missouri reach, FWS and other invitees were held to discuss the ESA consultation process and to exchange information. In September, we started the process of meetings with individual dredgers and FWS. However, at the first individual meeting, FWS proposed a new approach that removes any connection to parks, refuge and conservation lands, and focuses reaches with chute, side channel, bar, island and other important habitat areas. We believe this new approach also addresses most individual dredger concerns with the extent of the originally proposed buffer/exclusion zones, and propose to incorporated this approach into the permit special conditions as follows:

1. Retain special condition ‘c” as is: *c. You must not dredge within 500 feet of any levee centerline, pipeline or submerged utility crossing, bridge pier or abutment; nor within 200 feet of any dike, revetment, or other structure built or authorized by the U.S. Government; nor within 100 feet of any normal bankline or island, without special authorization. When dredging is performed adjacent to river stabilization structures, the dredging may be conducted only in the present streambed of the river at the authorized locations. This condition represents only the minimum distances away from structures and natural features that you can conduct dredging and does not relieve you from liability for damage arising from dredging. You must satisfy yourself that dredging to these limits will not cause damage to public and private property.*

2. Modify 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 notes
Site	Downstream	Upstream	
26	49.15	50.05	RDB Centaur Chute
27	56.85	59.05	LDB Chute/Island
28	58.55	61.25	RDB Chute/Island
29	65.15	66.20	RDB Dike Field Dubois Creek
30	89.75	91.10	RDB Island
31	89.90	91.45	LDB Loutre Slough
32	91.20	93.55	LDB Lunch Island
33	103.00	104.95	Both Gasconade Confluence and Dike Field
34	105.20	106.25	RDB Dike Field
35	113.90	115.20	RDB Island
36	114.75	115.95	RDB Island
37	118.40	119.15	RDB Dike Field
38	119.35	119.85	RDB St. Albert Chute
39	124.35	124.95	RDB St. Albert Chute
40	126.05	126.90	LDB Dike Field
41	127.50	130.20	Both Osage River Confluence and Dike Field
42	144.75	145.80	LDB Dike Shallow
43	149.90	151.25	LDB Island
44	157.00	158.45	LDB Island
45	176.40	177.85	LDB Island
46	177.75	178.45	RDB Chute
47	179.75	180.60	RDB Chute
48	181.35	182.10	RDB Chute
49	182.75	183.55	RDB Chute
50	184.75	185.65	RDB Chute
51	186.90	188.20	RDB Chute and Dike Field
52	193.40	195.75	RDB Dike Field/Island
53	202.10	202.75	RDB Lamine River Confluence
54	212.95	214.05	RDB Dike Field
55	214.25	215.00	LDB Chute
56	217.75	218.55	LDB Chute
57	218.40	219.65	RDB Island
58	226.95	227.55	LDB Little Chariton Confluence
59	238.40	239.10	LDB Chariton River Confluence
60	249.65	250.30	LDB Grand River Confluence
61	269.85	270.85	RDB Shallow
62	280.40	282.05	RDB Island
63	297.90	299.05	RDB Island
64	367.00	367.75	RDB Kansas River Confluence
65	390.85	391.45	LDB Platte River Confluence
66	462.65	463.25	LDB Nodaway River Confluence
67	478.55	479.15	RDB Wolf Creek Confluence
68	494.55	495.20	RDB Big Nemaha River Confluence

In summary, we request your review of the proposed conclusion of our ESA consultation process. Please respond within 15 days of your receipt of this letter if you believe that the proposed permit special conditions would create significant problems for your operations, and if you wish the Corps to schedule a meeting to discuss individual dredger operations with the FWS.

Please note that other conditions of the existing permits, specifically those concerning reporting of dredge location and volume of material removed from the river, may be modified to address other public interest concerns.

If you have any questions concerning this matter, please feel free to write or call me at 816-983-3664 (FAX 816-426-2321) (email: mark.d.frazier@usace.army.mil).

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
Regulatory Program Manager
Regulatory Branch, Operations Division

Copies Furnished (**by Certified Mail**):

(Application No. 2001-01429)
Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

(Application No. 2001-01430)
Mr. Denis Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261, 114 Hermann Sand and Gravel Lane
Hermann, Missouri 65041

Copies Furnished (**by Certified Mail**) continued:

(Application No. 2001-01431)
Mr. Mike Odell
Holliday Sand and Gravel Company
6811 West 63rd Street
Overland Park, Kansas 66202

(Application No. 2001-01432)
Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

(Application No. 2001-01433)
Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

(Application No. 2001-01434)
Mr. Larry W. Moore
Con-Agg of MO, LLC
2604 North Stadium Boulevard
Columbia, Missouri 65202-1271

(Application No. 2001-01435)
Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 Highway A, Suite A
Washington, Missouri 63090

(Application No. 2001-01436)
Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
1615 Argentine Boulevard
Kansas City, Kansas 66105

(Application No. 2003-01640)
Mr. Peter R. Jabbour
85th Street, Inc.
3101 East 85th Street
Kansas City, Missouri 64132

Copies Furnished (**by Certified Mail**) continued:

(Application No. 2004-00378)
Mr. Chris Boeckmann
Compliance Officer
Muenks Brothers Quarries
3717 Highway 50 West
Loose Creek, Missouri 65054

Copies Furnished (by Ordinary Mail):

U.S. Fish and Wildlife Service,
Columbia, Missouri
Missouri Department of Natural Resources
Missouri Department of Conservation
Kansas Department of Health and Environment
Mr. David Shorr
Lathrop & Gage
314 East High Street
Jefferson City, Missouri 65101

Enclosure 12.41 December 17, 2004 St. Charles Sand Response to Proposed Exclusion Zones

St. Charles Sand Company Response to Proposed Dredging Restrictions

December 17, 2004

Mark D. Frazier
Corps of Engineers
700 Federal Building
Kansas City, MO 64106

Mark:

In response to the letter dated December 9, 2004, we would like to make the following comments.

Issue 1: We are pleased with the removal of the language concerning government property and other bank areas.

Issue 2: We feel this table is unacceptable for a few reasons. First, RDB or LDB does not state how far off of these areas. Does it mean 10', 20', out to the channel, or previously stated setbacks? This is very vague and leaves a lot for interpretation. Second, these areas seem very restrictive and targeted to the areas presently dredged. These areas have been worked for many years without restrictions. Unless some bonafide documentation is presented stating why these areas need to be protected, the areas should not be restricted. Finally, the table includes a .25 mile buffer zone. This also leads to further interpretation by third parties. Is this a buffer upstream, or downstream, or channel side, etc? This is just another attempt to tie up more property and further restrict dredging activity.

We feel there is enough area along the river that conservation and dredging can coexist. These restrictions unfairly target dredging activities and commercial areas. Please consider our concerns in your discussions. If you have any questions please call me at 314-739-0169.

Brian J. Viehmann
St. Charles Sand Company
Treasurer

Enclosure 12.42 December 20, 2004 Muenks Brothers Response to Proposed Exclusion Zones

MUENKS BROS. QUARRIES, INC.
3515 HIGHWAY 50 WEST LAKE OZARK, MO

12-20-04

Mark Frazier
Regulatory Program Manager
U.S. Armv Corps of Engineers
700 Federal Building
Kansas City, Mo. 64106-2896

RE: Commercial Dredging Permit Application Number 200400378

Dear Mr. Frazier:

Muenks Bros. Quarries (MBQ) received your letter dated December 9, 2004 regarding the Commercial Dredging Permit Application referenced above. Additionally, Muenks Bros. is in receipt of the revised list of proposed habitat features related to Permit Special Condition "O". Upon review of the latest proposal, M-BQ respectfully request the following information and/or clarifications in order to allow a better determination of the impact upon MBQ operations. Please provide the following:

1. A definition of `dike field' and `dike shallow' and a clear explanation of the difference between the two. Additionally, will the river level dynamics create a situation in which the potential areas designated and/or interpreted as a `dike field' and/or `dike shallow' are not absolute and/or consistently defined?
2. The list specifies LDB Island at Downstream River Mile 149.90 and 157.00. Please specify what areas in the vicinity of the respective islands are to be exempted from dredging activities. Again, how will the river levels impact the area to be designated as an 'island' and the associated buffer zone.
3. The letter indicates this proposal is a `new approach' focusing on reaches with important habitat areas. Please disclose the determining factors and overall criteria evaluated in the important habitat areas' designation for the specified sites.

While initial review of this latest proposal indicates that it is preferential to the determination of exemption zones based entirely on the mere ownership of property by a state or federal entity, the above listed inquiries need to be addressed before an accurate determination of the impact upon MBQ operations can be reached. The information you provide in response to our concerns will be reviewed and a further correspondence forwarded to your attention in a timely manner to avoid delays of the overall process. If you have any questions or comments regarding the issues discussed above please feel free to contact me at (573) 897-4141.

Sincerely,

Chris Boeckmann
Compliance Coordinator
Muenks Bros. Quarries

Enclosure 12.43 December 22, 2004 Hermann Sand Response to Proposed Exclusion Zones

Hermann Sand & Gravel, Inc.
114 Sand Plant Lane, Hwy 19
Po Box 261
Hermann Mo 65041

December 22, 2004

Mark D. Frazier Regulatory Branch
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Dear Mark D. Frazier Regulatory Branch:

I have reviewed the proposed special conditions and the sites 27, 28, 35, 36, 43, and 44 could create significant problems in our operations. We do work for Ameren UE and in the past we have given them prices for sand. The plant is located at MO river mile 57.6 which would be in sites 27, and 28. We own property in Portland MO and from time to time have done work at this location which would be in sites 35 and 36. We dredge sand at the 146.5 area and in low flow years sites 43 and 44 could come into play. I would like to see sites 27, 28, 29, 35, 36, 43, and 44 removed from the special conditions list. Also if they can't be removed would it be possible to allow temporary dredging in these sites if a particular job came up.

Steve Engemann
Manager

Enclosure 12.44 December 28, 2004 Lathrop & Gage Response to Proposed Exclusion Zones

LATHROP GAGE

04 DEC 30 PM 2:35

DAVID A. SHORR
(573) 761-5005
EMAIL: DSHORR@LATHROPGAGE.COM
WWW.LATHROPGAGE.COM

314 EAST HIGH STREET
JEFFERSON CITY, MISSOURI 65101
(573) 893-4336. FAX (573) 893-5398

December 28, 2004

VIA FAX TRANSMISSION
(816) 426-2321
AND U.S. MAIL

Mr. Mark D. Frazier
Regulatory Program Manager
Assistant Branch Chief
Kansas City District Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Re: Comments of Capital Sand Company, Inc. and Con-Agg, L.L.C. on 404 Permit Consultations

Dear Mr. Frazier:

This letter is in response to your letter originally received on December 13, 2004, and modified by e-mail on December 15, 2004.

In your letter, the Corps proposes, as part of consultation with the Fish and Wildlife Service on endangered species issues under the Endangered Species Act, a modification to the original proposal submitted on March 31, 2004.

In the original consultation, the Fish and Wildlife Service proposed exclusion zones throughout the reach of the Missouri River immediately adjacent to all federal and state lands held for wildlife purposes. This solution of correlating mere land ownership to exclusion areas in an effort to provide species enhancement for the pallid sturgeon was unacceptable to many parties.

We appreciate the effort on the part of the Fish and Wildlife Service and the Corps to review alternative strategies that are based on increased prospects for the pallid sturgeon's success versus more arbitrary ideas. The specific focus at this time is an effort to preserve areas with high likelihood for success of the pallid sturgeon including

tributaries, chutes, and island areas that have some demonstrated success prospect for this fish species.

You have requested comment about the result of this revised strategy. Capital Sand and Con-Agg jointly submit the following comments to this revision:

1. The revisions is less arbitrary, relies on some scientific core rather than the mere ownership of adjacent property and is a positive direction in the overall discussion.

2. It would be helpful to have the term "dike field" defined. This is the first time it has been used as a delineation for potential habitat discussion. Dike fields were not discussed at our last meeting and their inclusion does modify the outcomes.

3. The result of the revision modifies and impacts different areas than in the original proposal and our meeting of September 22, 2004, resulting in different concerns on the part of Capital Sand and Con-Agg. As a specific example, the area between downstream 144.75 and 145.80 (site 42), referred to as a "Dike Shallow," was not included in any previous discussions by the parties. This segment dramatically impacts Capital Sand's operations in Jefferson City at their Jefferson City River Terminal and was never a subject in any of the previous iterations. This will equally apply to Muenks Brothers and their dredging operation in the same reach. This excluded section lies in the key area for both Capital Sand and Muenks Brothers. Based on the inventory maps provided by the Fish and Wildlife Service, there were no known collections of pallid sturgeon in this excluded segment.

As such, we request the channel portion of this reach be available for dredging for the distribution of sand from the Jefferson City area.

4. The same discussion as provided in paragraph 3 would be applicable for other segments critical to Capital Sand's operations within its current permitted zone. Capital Sand maintains operations in Washington, Missouri. You have requested exclusions at River mile marker 65.15 to 66.20 (site 29) in the Washington area referred to as "Dike Field Dubois Creek." We request that the channel side in this reach be made available for dredging for distribution of sand in the Washington area.

5. We believe in the reaches cited above the administration of the River is maintained with a partial restriction allowing dredging in the navigation channel.

6. We believe with these changes the consultation can be rendered complete, the 404 permit can be proffered for public comment, and an acceptable compromise can be established.

We continue to remain open to discussion regarding these requested changes and look forward to discussing this topic further. We appreciate the progress made to date.

Very truly yours,

LATHROP & GAGE L.C.

By: David A. Shorr

DAS/jf

cc: Ray Bohlken
Larry Moore

Enclosure 12.45 December 29, 2004 Muenks Brothers Response to Proposed Exclusion Zones

MUENKS BROS. QUARRIES
3717 HIGHWAY 50 WEST LOOSE CREEK, MO

12-29-2004

Mark Frazier
Regulatory Program Manager
U.S. Army Corps of Engineers
700 Federal Building
Kansas City, Mo 64106-2896

RE: Commercial Dredging Permit Application

Dear Mr. Frazier,

Muenks Bros. Quarries, Inc. (MBQ) received your letter dated December 9, 2004 regarding the status of the Commercial Dredging Permits. A response, which listed our questions and concerns, was sent to you on December 20, 2004. I received your e-mail response to those comments yesterday. Thank you for those comments.

I would like to emphasize that MBQ feels very strongly that the present proposal is definitely preferential to the original approach, which relied on the mere ownership of property by a state or federal agency as the basis for the determination of exemption zones for dredging activities. Though no actual peer reviewed data has been produced for analysis by the dredging community. the identification of specific zones in which the United States Fish and Wildlife Service (USFWS) has identified as areas of `important habitat areas' based on their knowledge of sturgeon needs and/or past observations can be construed as progress. This specific identification process allows for the issues related to the Endangered Species Act to be addressed in a responsible manner, while striving to protect the interest of the dredging community and the vital role it plays in the Missouri economy.

The maps depicting habitat concerns and actual collection areas for the Pallid Sturgeon, which were submitted by the USFWS in the meetings in Columbia, fail to identify any such area of concern in the area designated as Site #42 or downstream River Mile 144.75. A key component of this process was to include the impacted dredgers the opportunity to specifically identify critical areas in our respective operations and to which we need to maintain access. Site #42 is such a site in the current and future operations of MBQ. Therefore; MBQ respectfully requests, based on lack of documentation to support habitat concerns and the imperative role the area plays in MBQ current and future operations, Site #42 be removed from your list of exemption zones. The inclusion of Site #42 as an exemption zone would be in direct contradiction with the current proposal of identifying important habitat areas while allowing us to protect our interests when it can be done without negatively impacting identified habitat or populations. In addition, Sites #43 and #44, which have been identified Islands, will also impose an undue hardship upon current and future MBQ operations. Furthermore; consistent with Site #42, the map data submitted the USFWS does not indicate Sites #43 and #44 to be key, areas of identified habitat concern. Thus, in an effort to reach a compromise and attain acceptable conclusion to all parties involved, MBQ will accept Sites #43 and #44 with the condition that we maintain dredging access in the main channel of the river along side

of the island area. MBQ will accept an exclusion zone on the tail side of the island: however, we feel it is vital for current and future operations to maintain access to the main channel in the areas designated as islands. This approach would still afford the non-channel side and tail side of the river for habitat establishment. While concerns have been expressed about the potential enforcement concerns. MBQ is confident that enforceable stipulations regarding channel access can be maintained without creating a situation in which the terms of the respective permit are not enforceable. MBQ respectfully requests discussions regarding the attainment of enforceable permit conditions, which would allow channel access prior to a determination by any parties that such a situation is not attainable.

As discussed previously, MBQ is confident the current proposal to the establishment of exemption areas is far superior to prior approaches. However, to reach a workable resolution the interests of all parties must be established and factored into the proposal. The impacted dredgers were assured the process would afford them the opportunity to protect areas vital to their operations. Upon review of the latest proposal, MBQ feels the current proposal to include Sites #42, 43, and 44 as exemption zones would cumulatively place an undue burden on present future operations. Vital to this discussion is that the three areas in question were not identified on USFWS maps as areas in which Pallid Sturgeon populations have been identified. Thus, if a counterproposal of eliminating Site #42 as an exemption zone coupled with the main channel access along the islands designated as Sites #43 and #44 can be accepted by the Corps of Engineers and the USFWS it would create conditions that are acceptable to MBQ. We respectfully request your cooperation and consideration of this s counterproposal and would seek additional discussions to draft enforceable permit conditions to allow main channel access at Sites #43 and #44.

Your cooperation in this process is sincerely appreciated. If you have any questions or comments please feel free to contact me at (573) 897-4141 or (573) 619-2914.

Sincerely,

Chris Boeckmann
Compliance Coordinator
Muenks Bros. Quarries

Enclosure 12.46 December 29, 2004 St. Charles Sand Response to FWS Proposed Exclusion Zones

----Original Message----
From: Vmann4@aol.com [mailto: Vmann4@aol.com]
Sent: Wednesday, December 29, 2004 6:41 AM
To: Frazier, Mark D NWK
Subject: Re: Permit Response

Mark,

The restriction would really hurt us on the stretch Miles 56.85 to 59.05 and 58.55 to 61.25. That would be 4.4 miles of the 8.2 miles requested. Also, one of the main reasons for the permit is to service the power plant at Labadie. This would totally eliminate our access to the power plant.

The second area is the range of mile 65.15 to 66.2. This would add additional time and cost to anyone wanting to dredge and work around Washington, MO. If you dredge further downstream the push up river would be increased and expensive.

The hardship or costs to dredgers is they can no longer work in these areas. They are either out of business or the costs are increased a lot. If you are paying employees over $20/hr and increases in fuel, it does not take long to run up costs. Those kinds of costs are hard to pass on to customers. I feel the groups involved don't understand the magnitude of what they are proposing. These restrictions would increase costs on 70-80% of the construction projects. Concrete, asphalt, concrete blocks, etc., all use our product from the river. All the new highway construction funding would need to be increased to handle the changes. The effect is large and involves many companies and organizations.

Finally,why would the Corps abandon the dredges. The main purpose of Corps is to maintain navigation on the river. The dredgers have performed this service for many years and each have received benefits. We would be extremely disappointed if the Corps would step away from this commitment. I hope this helps explain the severity of the actions proposed. Thank you for your time.

Brian Viehmann
St. Charles Sand Co.

Enclosure 12.47 December 29, 2004 BPU Comments Regarding Degradation

Kansas City
Board of Public Utilities

December 29, 2004

Mark D. Frazier
ATTN: OD-R
U.S. Army Corp of Engineers
601 East 12th Street
Kansas City, Missouri 64106-2986

Re: Missouri River Commercial Dredgers Permits

The Board of Public Utilities operates several water intakes on the Missouri and Kansas Rivers. These intake structures have been severely impacted by the degradation of the Missouri River bed. Flows that once provided the river levels required to service our intakes are now found to be totally inadequate.

Our power generation units have been both derated and, at times, shut down completely. This ongoing problem has already cost the utility rate payers millions of dollars to fund the purchase of replacement power and capital projects to provide temporary pumping facilities. As the degradation continues, it will cost millions more. In fact, the addition of a cooling tower at just one station is going to cost over $20 million.

Consequently, we remain very concerned about any activities that would in any way contribute to the further degradation of the river bed. Though dredging is not the sole cause of the degradation problem, dredging is a contributing factor. We would therefore request that severe restrictions be placed on all future dredging activities in the Kansas City reach, including the following:

1- All dredging permits be issued on a temporary basis with the understanding that such permits are subject to cancellation in the event that additional degradation is experienced in the reach of the river where the dredging occurs.

2- Establish a monitoring program adequate to track all dredging activities and the related impacts on river bed degradation.

3- The USACE immediately launch a more extensive study of the degradation issues in the Kansas City reach, to include more accurately identifying the contributory effects of dredging operations.

4- All dredging operations must then be limited to the extent required to eliminate any and all detrimental impacts on the Missouri river that contribute to further degradation of the river bed.

5- Dredge operators must be required to adjust to the changing river conditions and, in the immediate future, be required to move their operations to areas of the river where degradation is not occurring.

We have heard repeated arguments of the value of dredged materials to the local economy. We have heard further arguments that the dredge operators should not have to bear the burden of river degradation because their operations are only a small factor in the degradation issues. Last of all, we have heard the arguments that it is the intakes that must make adjustments for the degradation, because the degradation would occur even if the dredge operations were completely removed.

We disagree.

The value of power and water service to the metropolitan area is beyond measure. The operation of our intakes has in no way contributed to the degradation of the river bed. We should not be required to spend a dime adjusting to any degradation caused by dredging. And if we are required to bear the financial burden of adjusting to river degradation caused by other factors besides dredging activities, then so must the dredge operators bear a similar financial burden by modifying their operations to eliminate any further impacts. This should, and must, include moving their operations to areas of the river that are unaffected by the ongoing degradation of the Missouri River, should such actions prove to be warranted in the future.

Please add me to any future mailings regarding public notices for dredging permits on the Missouri in the Kansas City reach. I would also like to receive a copy final permit and any associated attachments such as special conditions.

Thank you for giving our concerns due consideration.

Darrell Dorsey, P.E.
Manager of Electric Production
Board of Public Utilities
P.O. Box 4088
Kansas City, Ks 66109

Enclosure 12.48 February 16, 2005 BPU Letter with 2 Supporting Letters Regarding the Effects of Dredging on Horizontal Collector Wells

Kansas City
Board of Public Utilities 540 MINNESOTA AVENUE • KANSAS CITY, KANSAS 66101 • (913) 573-9000

February 16, 2005

05 FEB 23 AM 6:23

Mr. Mark D. Frazier
U.S. Army - Corps of Engineers
Kansas City District
700 Federal Building – 601 E. 12th Street
Kansas City, Missouri 64106-2896

Re: Missouri River Dredging

Dear Mr. Frasier:

The Board of Public Utilities provides drinking water to over 180,000 customers in Wyandotte, Johnson and Leavenworth Counties in Kansas. The utility has major concerns about the ramifications of dredging operations occurring in the vicinity of our Nearman Water Treatment Plant raw water supply source.

Our raw water supply comes from two horizontal collector wells. These are the two largest alluvial water producing wells in the world. Both wells can produce in excess of 40 million gallons of source water per day. Collector well #1 is approximately 850.feet northeast of the Nearman Creek Power Plant surface water intake and collector well #2 is 1000 feet northeast of the first. The State of Kansas has approved water rights for these wells based on scientific data demonstrating that the wells acquire 90% of their water from surface water, the Missouri River, and the remainder from groundwater. Within the next two years, these two wells will become our sole source for water. I have included Figures 1, 2 and 3 to help you in locating the wells.

We were first alerted of the potential adverse impact of dredging in the attached letter from our collector well contractor, Collector Wells International, Inc (CWI). CWI is a nationally known specialist in collector wells due to their 30 years of experience in site selection, well construction, and operation and riverbank filtration research. They write that "... (dredging) can remove significant amounts of permeable aquifer materials and disrupt the natural filtration capacity of the streambed." We know that this disruption not only affects the rate of water flowing down through the streambed and into our laterals, but also changes the

ability of the streambed to filter out river borne pathogens. In discussing our concerns with our engineering consultant, Black & Veatch, we were presented with similar arguments about the adverse impact of river dredging in the entire area of our Nearman Power Plant surface intake and the collector wells. In their letter, they write that "...riverbank filtration relies upon the riverbed material to reduce turbidity, pathogens, bacteria, and viruses. Reduction of the riverbed through dredging increases the possibility that these contaminants can pass through the river to the treatment plant and reduce the quality of water." From our further investigations, we know that the U.S. Geological Society, the Environmental Protection Agency, and the American Water Works Association Research Foundation are studying riverbed degradation affecting riverbank filtration systems.

The Board of Public Utilities believes that current scientific data provides justification to demand the immediate discontinuance of dredging from 2000 feet upstream of our Nearman Power Station surface water intake to 2000 feet beyond our well #2. Our concerns are great enough that Johnson County Water District No. 1 will be joining us as members of the American Water Works Association brief legislators on water issues in Washington, D.C. this April.

Sincerely,

Lanny L. Uden

Lanny L. Uden, P.E.
Director of Civil Engineering

Attachments

c: Leon Daggett
Tony Pike
Don Gray
Frank Yau
Darrell Dorsey

Collector Wells International, Inc.

6360 Huntley Road • Columbus, Ohio 43229
Tel: (614) 888-6263 • Fax: (614) 888-9208
email: collectorwells@collectorwellsint.com

December 15, 2004

Lanny L. Uden
Director of Civil Engineering
Board of Public Utilities
540 Minnesota Avenue
Kansas City, Kansas 66101

RE: River Dredging – Potential Adverse Impacts
Riverbank Filtration - Collector Well Nos. 1 & 2

Dear Mr. Uden:

It is understood that a river barge dredging operation was observed today in the Missouri River very close to your existing horizontal collector wells. It has been our experience that in-river dredging operations can be detrimental to riverbed filtration (RBF) conditions and therefore potentially adversely impact the water quality/quantity available from high-yielding horizontal collector wells such as yours.

It is understood that some dredging may be required to maintain navigational channels or control bank erosion and is therefore unavoidable. Others for sand and gravel mining should be avoided near RBF collection systems, such as yours. These operations can remove significant amounts of permeable aquifer materials and disrupt the natural filtration capacity of the streambed. Generally the depressions, which are developed as the streambed materials are removed, are filled by finer-grained deposits of silt and clay. These deposits reduce the permeability of the stream and aquifer and reduce the amount of water that can be pumped by your collector wells. Additionally the fine-grained materials may lead to reducing conditions and oxygen reduction in the aquifer. These conditions can result in poorer quality water being pumped by your wells.

Additionally, the dredging operations can accelerate the natural process of down-cutting (degrading) of the streambed. This leads to lower water levels in the river (and aquifer) and less available drawdown and therefore reduced yields.

For the reasons discussed above, it is recommended that steps be taken prohibit the dredging of the river for the exploitation of sand/gravel deposits (mining) near the existing collector wells. We would recommend a NO-DREDGE ZONE for mining be established that would extend a minimum of 2000 feet upstream of Collector Well No. 1

to 2000 feet downstream of Collector Well No. 2. Also, we recommend that BPU contact the Corp of Engineers to be placed on contact list for prior notification if dredging for navigational purposes (or any purpose) is scheduled within five miles of your facility.

The NO-DREDGE ZONE concept near an existing collector well is not new to the Kansas area. A no-dredging zone was established over five years ago for the first Olathe, Kansas collector well installed along the Kansas River near DeSoto. Additionally, it is understood that in-river mining has been significantly curtailed/eliminated along the Kansas River in recent years by the Corp of Engineers as the adverse impacts of this process have become more evident.

In summary, river dredging/mining can have adverse impacts upon RBF systems such your horizontal collector wells. Your system, once HCW-2 is completed and on-line, will be the largest two-well RBF system in the world, with a pumping capacity of over 100 MGD. It is prudent to take precautions to protect this valuable asset and resource. It is recommended that the wellhead protection plan for the collector wells be expanded to prohibit in-river mining within a minimum of 2000 feet and preferably within a mile.

If you have any questions or comments regarding this letter, please contact us.

Sincerely,

COLLECTOR WELLS INTERNATIONAL, INC.

Samuel M. Stowe
Technical Director

cc: D. J. Johnson, BPU
James A. French, Jr., CWI

BLACK & VEATCH

Black & Veatch Corporation

8400 Ward Parkway
P.O. Box 8405
Kansas City, Missouri 64114 USA

Tel: (913) 458-2000

Board of Public Utilities
Kansas City, Kansas

B&V Project 83104.611
B&V File B-1.1
February 7, 2005

Mr. Lanny Uden
Director of Civil Engineering
Board of Public Utilities
300 N. 65th Street
Kansas City, Kansas 66102

RE: River Dredging – Potential Adverse Impacts

Dear Mr. Uden:

It is our understanding that dredging of the Missouri River bed has occurred in the vicinity of your collector wells. While dredging to maintain the navigation channel is to be expected, any dredging outside of the navigation channel may adversely impact BPU's water supply system and the power plant cooling water supply.

Degradation of the Missouri River bed and consequent lowering of water levels in the river during low flows has been documented in the Kansas City area for some time. The rate of degradation appears to have increased since the 1993 flood. The occurrence of riverbed degradation indicates that sediments are being removed from the area. Dredging outside of the navigation channel will increase the rate of degradation. This has the adverse impact of lowering water levels, especially during low flows, in the river.

The lowering water levels reduce the saturated thickness in the aquifer which will reduce the capacity of your horizontal collector wells. As you are aware, these wells are the only raw water source for the Nearman Water Treatment Plant which serves over 145,000 residents in Kansas City, Kansas and Wyandotte County. In addition, the lower river levels caused by streambed degradation will lower the submergence on the Nearman Power Plant's raw water pumps at the power plant intake which will increase operational costs and reduce the capacity of the pumps. If river levels drop below the intake ports, the cooling water supply may not be functional and the power plant may have to shut down, as has been the concern this winter due to the extremely low levels on the Missouri River. In addition, riverbank filtration relies upon the riverbed material to reduce turbidity, pathogens, bacteria, and viruses. Reduction of the riverbed through dredging increases the possibility that these contaminants can pass through the river to the treatment plant and reduce the quality of water.

Board of Public Utilities
Mr. Lanny Uden

B&V Project 83104.611
February 7, 2005

The U.S. Army Corps of Engineers (COE) is aware of the degrading riverbed. They are considering conducting a study of the river to determine the causes of the increased rate of degradation and potential solutions. It is our recommendation that dredging of the Missouri River, except for that required for navigation, be prohibited in the Kansas City area until the COE determines the causes of the degradation and recommends solutions to the problem. Until this study is completed, a permanent no dredge zone should be established a minimum of 2,000 feet upstream at Collector Well No. 1, the space between the wells and 2,000 feet downstream of Collector Well No. 2.

If you have any questions relating to our recommendation, please contact us.

Sincerely,

BLACK & VEATCH CORPORATION

Michael G. Orth

Michael G. Orth

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) 2-4-2181

February 18, 2005

Mr. Mark Frazier
Regulatory Section
U.S. Army Corps of Engineers
601 East 12th Street
Kansas City, Missouri 64106-2986

Dear Mr. Frazier:

Please refer to our ongoing consultation regarding the permit renewal for Missouri River Commercial Dredgers in the reach of the Missouri River under the jurisdiction of the Kansas City District. The U.S. Fish and Wildlife Service (Service) has reviewed your January 28, 2005 email and attachments detailing the proposed permit conditions and the applicants' responses to those conditions. Based on that information and our previous discussions, the Service submits the following comments pursuant to the Endangered Species Act of 1973 (Act), as amended (16 U-S-C 1551 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.).

The applicants requested a number of proposed buffer zones be removed from the list. We have grouped our comments based on resource concerns and apparent importance of area to the applicant's operations.

Areas the Service concurs to be removed from the buffer zone list:

29, 42, 43 - We have no records of previous dredging in area 29, but we understand the sand plant in Washington is to be relocated just downstream of that reach. Therefore. although there are habitat features in this area, we understand the desirability of having dredging reaches in proximity to the processing plant and the importance of that to the applicant's operations.. Using the same rationale, we also would not object to removing areas 42 and 43. Area 42 is particularly important to more than one applicant and a source of a large proportion of product removed {torn the river. Area 4 3 has no record of historic dredging, yet we understand one of the applicants recently completed a processing facility near that reach and could be expected to dredge this area in the future.

Areas the Service recommends to remain as buffer areas:

44 - Site 44 is at the mouth of Moniteau Creek and young of year (YOY) sturgeon have been collected there (on the channel side of a large sand bar on the left dcscending bank). Just

upstream and downstream from this site, pallid sturgeon and large numbers of sturgeon have been sampled. Dredging records show infrequent historic dredging here in this reach. This reach of the river has some of the highest documented use of pallid sturgeon and early life stages of sturgeon species.

28,35,36 - Our database records going back to 1997 show no reported dredging in reaches 28, 35, and 36. We understand the request to exclude those areas as buffers, was based, in part, on speculation of future dredging needs. All three reaches contain important physical habitat Features associated with young and larval sturgeon, and other native fishes. Given the resource features and historic absence of dredging, we recommend that those areas remain as buffer zones, and be considered on a case-by-case basis as a particular jobcontract/circumstance arises.

Area of question:

27- Area 27 is another reach with no reported dredging. St. Charles Sand Company indicated the need to be able to service the Labadie power Plant within that reach, and they often only have 4 hours lead time once the plant calls for assistance. The primary purpose for this change is not clear. Is it to dredge this reach for commercial sand production or servicing the Labadie Power Plant? If it is the latter, it would seem that a more focused maintenance dredging permit for the plant would adequately meet their needs. The Service would like clarification on the needs/operations in this area.

We believe our recommendations present a reasonable approach to accommodate the applicants operations while avoiding adverse effect to the pallid sturgeon and formal consultation under section 7(a)(2) of the Endangered Species Act.

The Service appreciates the Corps coordination efforts regarding these permit renewals, and we look forward to working with you as we address our shared resource responsibilities. Please feel free to share this letter with the applicants if you wish. If you have questions regarding our comments, please contact Jane Ledwin at 573/234-2132, extension 109.

Sincerely,

Charles M. Scott

Field Supervisor

cc: MDC, Jefferson City, MO (Canaday)

Enclosure 12.50 February 25, 2005 CENWK-OD-R Letter Transmitting Revised Exclusion Zone Proposal and Seeking Comments from the Dredgers

February 25, 2005

Regulatory Branch
(2001-01429, MO RIV COM DREDGE)

Dear Missouri River Dredger:

This letter pertains to your application for a Department of the Army permit for ongoing or proposed commercial sand dredging in the Missouri River. We want to inform you of new issues and progress that have occurred since our letter of December 9, 2004, and our subsequent clarifications and corrections provided to you by email.

Endangered Species Act (ESA) Consultation: We are continuing with the "informal" process under the ESA. St. Charles Sand Company, Muenks Brothers Quarries, Hermann Sand and Gravel and Capital Sand Company (jointly with Con-Agg LLC) responded with comments to the December 9 letter (copies enclosed). Those comments were furnished to the U.S. Fish and Wildlife Service (FWS), and FWS responded in a letter dated February 18, 2005 (copy enclosed). I've revised the attached DRAFT Dredging Buffer/Exclusion zone list to reflect this most recent update. If you have not done so yet, please respond if you concur with our concluding this consultation process by adoption of this most recent revision as a condition of permit reissuance.

Restrictions for Water Intakes: The existing permits contain the following three conditions pertaining to water intake structures for the purposes of protecting water quality:

> c. You agree not to conduct dredging operations in a zone extending 4,000 feet upstream and 500 feet downstream from any municipal drinking water intake structures located along either bank of the river unless you obtain an exemption to this condition in writing from the Chief of the Operations Division of the Kansas City District, Corps of Engineers.
>
> d. You must not conduct dredging operations in a zone extending 500 feet upstream and 500 feet downstream from any other water intake structures other than those used for municipal drinking water. For dredging restrictions for municipal drinking water restrictions refer to special condition "c" above.
>
> f. You must investigate for water supply intakes for other activities which may be affected by suspended solids and turbidity increases caused by work in the watercourse and give sufficient notice to the owners of affected activities to allow preparation for any changes in water quality.

The Kansas City, Kansas Board of Public Utilities (BPU), in a letter dated February 16, 2005 (copy enclosed), requested that we impose a dredging restriction 2,000 feet upstream and downstream of their Horizontal Collector Wells near river mile 378.5. They cited both water quality and quantity concerns, and attached letters from contractors/consultants Collector Wells International, Inc. and Black & Veatch.

We expect that owners of similar systems, or those planning systems, will request similar limits on dredging. In order for the Corps to make a balanced decision, we request your review and response to the BPU request. If you wish to comment, please respond within 15 days of your receipt of this letter.

Missouri River Bed Degradation: We received one additional comment concerning this issue from BPU (copy attached). In order for the Corps to make a balanced decision, we request your review and response to this second BPU comment. If you wish to comment, please respond within 15 days of your receipt of this letter.

If you have any questions concerning this matter, please feel free to write or call me at 816-983-3664, or Mr. Cody Wheeler at 816-983-3739, (FAX 816-426-2321) (emails: mark.d.frazier@usace.army.mil and cody.s.wheeler@usace.army.mil).

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
Regulatory Program Manager
Regulatory Branch, Operations Division

Enclosures

Copies Furnished w/encls (**by Certified Mail**):

(Application No. 2001-01429)
Mr. F. Ray Bohlken
Capital Sand Company, Inc.
Post Office Box 104990
Jefferson City, Missouri 65110-4990

Copies Furnished w/encls (**by Certified Mail**) continued:

(Application No. 2001-01430)
Mr. Steve Engemann
Hermann Sand and Gravel, Inc.
Route 3, Box 261, 114 Hermann Sand and Gravel Lane
Hermann, Missouri 65041

(Application No. 2001-01431)
Mr. Mike Odell
Holliday Sand and Gravel Company
9660 Legler Road
Lenexa, Kansas 66219

(Application No. 2001-01432)
Mr. Mitch Parrish
Washington Sand Company, LLC
11 West Main Street
Washington, Missouri 63090

(Application No. 2001-01433)
Mr. Brian J. Viehmann
St. Charles Sand Company
14580 Missouri Bottom Road
Bridgeton, Missouri 63044

(Application No. 2001-01434)
Mr. Larry W. Moore
Con-Agg of MO, LLC
2604 North Stadium Boulevard
Columbia, Missouri 65202-1271

(Application No. 2001-01435)
Mr. Eric E. Rau
Edward N. Rau Contractor Company
2809 Highway A, Suite A
Washington, Missouri 63090

(Application No. 2001-01436)
Mr. Alan R. Teutemacher
Kaw Valley Sand and Gravel, Inc.
1615 Argentine Boulevard
Kansas City, Kansas 66105

Copies Furnished w/encls (**by Certified Mail**) continued:

(Application No. 2003-01640)
Mr. Kevin Peart
85th Street, Inc.
3101 East 85th Street
Kansas City, Missouri 64132

(Application No. 2004-00378)
Mr. Chris Boeckmann
Compliance Officer
Muenks Brothers Quarries
3717 Highway 50 West
Loose Creek, Missouri 65054

Copies Furnished w/encls (by Ordinary Mail):

U.S. Fish and Wildlife Service,
Columbia, Missouri
Missouri Department of Natural Resources
Missouri Department of Conservation
Kansas Department of Health and Environment
Mr. David Shorr
Lathrop & Gage
314 East High Street
Jefferson City, Missouri 65101

Missouri River Miles (including 0.25 mile buffer)			DRAFT of 24 February 2005 Habitat feature notes
Site	Downstream	Upstream	
26	49.15	50.05	RDB Centaur Chute
27	56.85	59.05	LDB Chute/Island
28	58.55	61.25	RDB Chute/Island
29	Deleted		
30	89.75	91.10	RDB Island
31	89.90	91.45	LDB Loutre Slough
32	91.20	93.55	LDB Lunch Island
33	103.00	104.95	Both Gasconade Confluence and Dike Field
34	105.20	106.25	RDB Dike Field
35*****	*113.90*	*115.20*	*RDB Island – Under Discussion*
36*****	*114.75*	*115.95*	*RDB Island –* ***Under Discussion***
37	118.40	119.15	RDB Dike Field
38	119.35	119.85	RDB St. Albert Chute
39	124.35	124.95	RDB St. Albert Chute
40	126.05	126.90	LDB Dike Field
41	127.50	130.20	Both Osage River Confluence and Dike Field
42	Deleted		
43	Deleted		
44	157.00	158.45	LDB Island
45	176.40	177.85	LDB Island
46	184.75	185.65	RDB Chute
47	186.90	188.20	RDB Chute and Dike Field
48	193.40	195.75	RDB Dike Field/Island
49	202.10	202.75	RDB Lamine River Confluence
50	212.95	214.05	RDB Dike Field
51	214.25	215.00	LDB Chute
52	217.75	218.55	LDB Chute
53	218.40	219.65	RDB Island
54	226.95	227.55	LDB Little Chariton Confluence
55	238.40	239.10	LDB Chariton River Confluence
56	249.65	250.30	LDB Grand River Confluence
57	269.85	271.35	RDB Shallow/Island
58	280.40	282.05	RDB Island
59	297.90	299.05	RDB Island
60	300.00	301.05	LDB Island
61	367.00	367.75	RDB Kansas River Confluence
62	390.85	391.45	LDB Platte River Confluence
63	462.65	463.25	LDB Nodaway River Confluence
64	478.55	479.15	RDB Wolf Creek Confluence
65	494.55	495.20	RDB Big Nemaha River Confluence

Enclosure 12.51 March 11,2005 Lathrop & Gage Acceptance of Proposed Exclusion Zones

LATHROP
GAGE

March 11, 2005

VIA FAX TRANSMISSION
(816) 426-2321
AND U.S. MAIL

Mr. Mark D. Frazier
Regulatory Program Manager
Assistant Branch Chief
Kansas City District Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Re: Capital Sand Company, Inc. and Con-Agg, L.L.C.

Dear Mr. Frazier:

On December 28, 2004, we sent you our comments regarding the proposal of the Fish and Wildlife Service for exempted segments on the Missouri River Fish and Wildlife Service informal consultation. In that letter, we advised you that as it applied to Capital Sand and Con-Agg, if sites 29 and 42 could he made available, then we believed the consultation process was complete from our end and the 404 permit as it applies to these aspects could be issued.

By letter dated February 18, 2005, the Fish and Wildlife Service advised you that sites 29 and 42 could be exempted consistent with our request. Further, in our meeting in Jefferson City on February 22, 2005, you advised that exemption areas may be modified by making a specific site location request and the Corps of Engineers and Fish and Wildlife Service would coordinate efforts to allow dredging in some exempted areas. This action was demonstrated by activities involving Herman Sand and Gravel over the last two weeks.

Those actions having been accomplished, sites 29 and 42 exempted, and a clear, good faith demonstration of Fish and Wildlife's position to non-site specific reviews for

exempted sites leads us to the position that we are complete with consultation and that the parties are of one mind regarding this issue.

By way of this letter, we wish to also further confirm our understanding that with the approval of Missouri American Water in Jefferson City, we may continue to dredge in the Jefferson City Reach near their intake. We specifically ask for reconfirmation of this position along with the issuance of the 404 permit.

We understand the effort that was necessary to coordinate this matter between the Corps of Engineers, Fish and Wildlife Service and the various dredging interest. We appreciate your efforts and those efforts of Charlie Scott and Jane Ledwin to pursue reasonable understandings to assure continued operational capability for the dredging industry and continue positive efforts toward recovery of the pallid sturgeon in the lower river basin.

Very truly yours,

LATHROP & GAGE L.C.

By: 
David A. Shorr

DAS/jf
cc: Ray Bohlken
Larry Moore

Enclosure 12.52 March 16, 2005 Request from Muenks Brothers to increase their Extraction Limit

MUENKS BROS. QUARRIES
3717 HIGHWAY 50 WEST LOOSE CREEK, MO.
PHONE (573) 897-4141 FAX (573) 897-2126

3-16-2005

Mark Frazier
Regulatory Program Manager
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, Mo. 64106-2896

Re: Commercial Dredging Permit Application #200400378

Dear Mr. Frazier,

Muenks Bros. Quarries submitted the above referenced Commercial Dredging Permit Application on December 18, 2003 to authorize dredging activities at our plant located on the Missouri River in Jefferson City, MO. The respective dredging permit application requested an annual tonnage of 350,000 tons. The tonnage request was based on the historical sales and production records for the facility. However, during the spring and summer of 2004 a deligniting processing plant was installed at the Muenks Bros. Quarries Jefferson City Facility. The deligniting equipment involved new technology, which encountered several delays prior to attaining full production in the fall/winter of 2004. The completion of the start-up phase of production and attainment of full production has allowed Muenks Bros. Quarries management to target markets not previously accessible. This has resulted in a very significant increase in sales; furthermore, the management group for Muenks Bros. Quarries (MBQ) is confident the increased sales trend will continue.

Therefore, we respectfully request that the annual tonnage for the Muenks Bros. Quarries Facility be increased to 600,000 ton per year. We recognize that this is a substantial tonnage increase; however, MBQ is basing the request on a combination of current sales data and anticipated sales increases for the next five years. Such an allotment would allow MBQ to meet the needs of our expanding customer base while ensuring a modification for increased tonnage does become a necessity during the life of the dredging permit. We apologize for any inconvenience this request may cause; however, as previously discussed this request is based on data, which was not available at the time of the original permit application submittal. If you wish to discuss this issue further, please feel free to contact me at (573) 619-2914 or (573) 897-4141. Your cooperation and consideration of this request is appreciated.

Sincerely,

Chris Boeckmann
Compliance Coordinator
Muenks Bros. Quarries

Enclosure 12.53 October 17, 2005 Lafarge Comments

LAFARGE
NORTH AMERICA
Construction Materials

Emmanuel Rigaux
Assistant General Manager

Mark D. Frazier
Regulatory Program Manager
Regulatory Branch, Operations Division
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

October 17, 2005

IN RE: Permit Application 200301640

Dear Mark,

This letter pertains to our application for a Department of the Army permit for sand dredging in the Missouri River and is a follow-up to several phone conversations with yourself or your staff in the course of these last few months regarding such application.

It is Lafarge's understanding that due to existing concerns about Missouri River bed degradation the Corps is currently looking at the possibility of restricting the amount of sand to be dredged within the 300-400 mile range on the River, especially when flows are low. As a result of this, based on current permittees' existing investment and the critical size required to have a commercially viable dredging operation, new applicants may be barred from obtaining a dredging permit.

While we understand the Corps's legitimate concerns, we would like to draw your attention to the following:

- Lafarge has already made significant investment in its Sugar Creek terminal facility largely as a result of its sand dredging application on the Missouri River.

- A limited reduction in the tonnage required in Lafarge's application may be acceptable from Lafarge's standpoint if the same effort were asked from all applicants, whether they are current operators or not.

Lafarge is firmly committed to becoming a responsible sand dredger on the Missouri River and is willing to work with the Corps to find a satisfactory solution to this protracted process

Please let me know if you need any additional information (816 257 4030).

Sincerely,

Emmanuel Rigaux

Assistant General Manager - Western and Central Missouri Aggregates and Asphalt

Enclosure 12.54 January 9, 2006 Hermann Sand Request to Increase their Annual Extraction Limit to 500,000 tons

HERMANN SAND AND GRAVEL, INC.
P.O. BOX 261
HERMANN, MISSOURI 65041
TELEPHONE #573-486-2913 **FAX # 573-486-1407**

January 9, 2006

Mr. Mark Frazier
Department of Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Dear Mr. Frazier:

We are requesting an increase in our annual tonnage extraction from 300,000 to 500,000 tons on permit #96-01654 on the Missouri River.

Should you have any questions please feel free to call me at 573-486-2913.

Regards,
Hermann Sand & Gravel, Inc.

Steven W. Engemann
Vice President

Enclosure 12.55 February 13, 2006 CENWK-EC-HH Response to Holiday Sand's Alternative Restrictions

CENWK-EC-HH (1110-2-1403b1) 13 February 2006

MEMORANDUM FOR CENWK-OD-R (M Frazier)

SUBJECT: Missouri River Commercial Dredging

1. Regulatory has requested that EC-HH provide a response to questions and/or suggestions by Holiday Sand pertaining to potential sand dredging restrictions in the Kansas City reach. These questions or suggestions have been evaluated by EC-HH. Responses to each question or comment are listed below.

2. First question or suggestion: Holliday Sand proposes to expand their dredging areas 5 miles above and 5 miles below the segment between RM 340 to 400 proposed for quantity restriction. Will spreading out the dredging over more area decrease degradation?

3. Response to first question: There are no major tributaries between the Kansas River at Missouri River mile 367.4 and upper limit of the restriction zone at Missouri River mile 400. Hence, there is no major supply of sediment being added to the Missouri River between mile 400 and 367.4. Dredging immediately upstream of the restriction zone may spread out the degradation over a larger area, but long term the degradation would be expected to continue. In addition, the limits of the degradation may move upstream if dredging occurs near the upstream limits of the restriction zone. The impacts of extraction downstream of the restriction zone may not affect the degraded reach depending on the amount of material removed. At this time EC-HH does not recommend allowing increased dredging in the immediate vicinity downstream of the current limits of the restricted zone and does not recommend allowing increased dredging upstream of the restricted zone. EC-HH can provide additional information, based on recent studies, as to the upstream and downstream reaches where material removal should not increase. EC-HH recommends that if the restriction zone is expanded upstream and/or downstream the total take still be restricted to those recommended for the current limits.

4. Second suggestion: Holliday Sand proposes to delay implementation of the quantity limits for three years.

5. Response to second suggestion: In December 2003 EC-HH provided OD-R with a recommendation that the amount of sand dredged out of the Kansas City reach be related to the yearly water flow volume at St. Joseph. The yearly flow volumes at St. Joseph during years 2002, 2003, 2004, and 2005 have all been well below the flow volume which would trigger the maximum recommended dredging restriction. Holliday Sand was notified of this potential restriction during early 2004, so they have already had a 2 year delay. The need to implement the 2003 recommendations is urgent. Further delay will only allow for greater degradation.

6. Third suggestion: Holliday Sand proposes to phase in the quantity limits over a 4 year period after the 3 year delay.

7. Response to third suggestion: EC understands the impacts to the industry and the possible economic consequences for the excavation limitations, but degradation has been a long acknowledged problem and needs to be acted upon. Phasing in the limits over a 7 year period will only allow for continued degradation. The degradation has continued this past year with the river basin is in a drought. EC-HH recommends fully implementing the 2003 recommendations and not increasing the delay beyond the period of March 2004 to February 2006.

8. Fourth suggestion: Holliday Sand proposes to base each year's quantity limit on a three year average rather than a two year average.

9. Response to fourth suggestion: The two year average was intended to give the dredges some notice of what to expect in the following year. Going beyond the two year period would not reflect current or recent river conditions. Using a three year average in lieu of the recommended two year average only serves to relax the restriction and is not recommended.

10. Fifth suggestion: Holliday Sand proposes to delay quantity restrictions one year after the 3 year average.

11. Response to fifth suggestion: An additional year of delay would be another year away from the actual flow conditions which the restrictions are based upon. There is already a delay in limiting extractions which gives the dredgers time to anticipate future limits.

12. Since the original proposed restrictions on sand dredging were submitted to OD-R, EC-HH has conducted further analysis of the causes of bed degradation in the Kansas City reach. Most of this analysis has been conducted by Dr. Robert Barkau of EC-HH. His findings suggest that the current recommended restrictions may not be sufficient to adequately address the contribution of sand dredging to the bed degradation problem. Given these preliminary findings, it is imperative that, at a minimum, the 2003 recommendations be implemented as soon as possible. Further, it is very likely that continued study will justify more severe restrictions than those issued in 2003. It is suggested that Holiday Sand and other Kansas City area Missouri River sand dredgers be notified of this possibility as soon as possible.

Allen R. Tool, P.E.
Chief, Hydrologic Engineering Branch

Enclosure 12.56 May 2, 2006 CENWK-EC-HH Memo Regarding Request to Increase Herman Sand's Annual Extraction Limit

MEMORANDUM TO OD-R, HUGHES

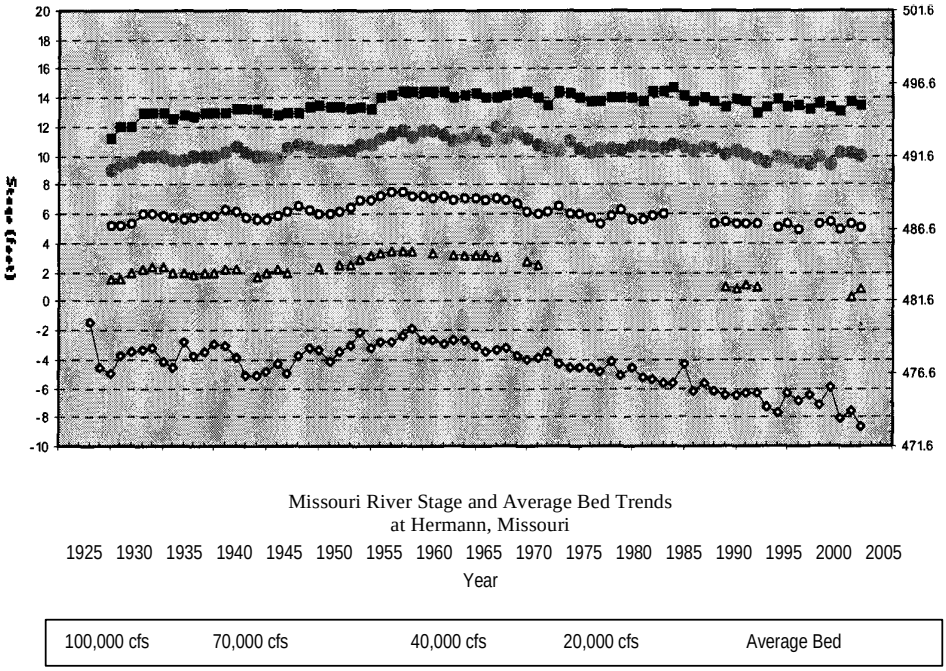
SUBJECT: Request for Increase of Annual Tonnage Extraction Limit from Herman Sand and Gravel

DATE: May 2, 2006

1. Cody Wheeler recently notified EC-HH of a request by Herman Sand and Gravel Inc. (HSG) to increase their annual tonnage extraction limit by an additional 200,000 tons. The increase would allow HSG to annually extract up to 500,000 tons in selected reaches between river mile 56 and river mile 164.

2. EC-HH reviewed available data to determine the stability of the river throughout this reach. A stable or aggrading river will absorb increased dredging with fewer adverse impacts. We also looked at available sediment data to determine if sufficient bed material load is available. From this review we have determined the following:

a. Memo to File, written July 2003 and titled `Update of the Missouri River Average Bed Calculations Plotted Against the Stage Trends' states that the average bed at the Herman gage (river mile 97.9) has dropped approximately 7' between 1959 and 2002. The memo also states that the stage trend for the 20,000, 40,000, and 70,000 cfs discharges have lowered approximately two feet between 1961 and 2002. The drop in average depth and stage are indicators that the bed is unstable in this area due to imbalances in the system and that the river is adjusting to the imbalance by degrading.
See graph below taken from subject memo.



b. A review of the 1990 and 2005 CRP elevations between river miles 160 and 70 indicate the following changes to the CRP elevations have occurred:

River Mile	.Change in CRP	River Mile	Change in CRP
160	-1.5	110	-1.2
150	-2.6	100	-1.3
140	-2.9	90	-1.8

The average decrease is 1.8' over the 15 year period. However, the discharge used to represent CRP increased approximately 2,000 cfs between 1990 and 2005. Therefore, the average decrease should be increased by 0.5' for a total average decrease of 2.3'. This decrease in CRP elevation is an indicator that that the bed is unstable throughout this reach and that the bed itself is likely degrading.

c. There have been no studies conducted to estimate the annual bed material load through this reach. The bed material load is the material transported by the river courser than 0.062 mm. Sand dredgers rarely remove material finer than 0.062 mm. In order for sand dredging to not contribute to bed degradation, it is necessary that sufficient bed material load be available to replace the material removed by dredgers. In addition, the available bed material load must be composed of the gradations removed by the dredgers.

Without an estimate of annual bed material load through this reach it is not possible to determine the percentage of bed material load that existing sand dredgers are removing. This also prevents determining the magnitude of the impact the increased removal would cause.

Based on sediment studies conducted in the Kansas City reach the median annual bed material load for the Kansas City reach was estimated to be 7.4 million tons. Since the annual dredging extraction volume for the entire river is over 7.8 million tons, it is likely that current dredging volumes are already near or exceeding the annual bed material load given the limited sediment contribution by tributaries between Kansas City and Herman. This is even more likely during drought years.

3. Our review of existing data indicates that the river through this reach is unstable and degrading. In addition, available sediment data indicates that total sand extraction is at or near the available bed material load. Increasing the extraction rate will likely exacerbate the degradation trend because degradation results when more sediment is leaving the system than is entering. Degradation of the river has been shown to adversely affect infrastructure in and along the river, be a cause of bank instability, and lead to head cuts on tributaries that can cause tributary bank instability. Furthermore, degradation and ensuing loss of aquatic habitat could potentially adversely affect the endangered Pallid Sturgeon.

Therefore, it is recommended that OD-R not grant HSG the requested increased extraction volume.

Sincerely,

MICHEAL D. CHAPMAN
Unit Leader, River Engineering and Restoration Unit

Enclosure 12.57 CENWK-EC-HH Draft Study: CRP Water Surface and Commercial Dredging Volume Comparisons 1990 vs. 2002 and 2005

RESULTS OF ONGOING STUDY OF MISSOURI RIVER BED DEGRADATION

Chapter XXX: CRP WATER SURFACE AND COMMERCIAL DREDGING VOLUME COMPARISONS 1990 VS. 2002 AND 2005

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CRP WATER SURFACE AND COMMERCIAL DREDGING VOLUME COMAPRISONS

1.0 KEY TERMS

BSNP: Missouri River Bank Stabilization and Navigation Project. The BSNP, or channelized portion of the river, spans from river mile 0 to 750, or from the mouth near St. Louis, MO to near Sioux City, IA. Kansas City and Omaha District maintain the BSNP downstream and upstream of Rulo, NE (mile 498), respectively.

Dike: Rock and/or timber-pile structures for the BSNP built approximately perpendicular to flow.

Revetment: Rock and/or timber-pile structures for the BSNP built approximately parallel to flow.

CRP: Construction Reference Plane (CRP) is a sloping datum representing the stage, or water surface elevation met or exceeded 75% of the time during navigation season (April to November). Dike and Revetment structures from the BSNP are built and maintained to elevations corresponding to CRP in feet. For example, a dike built to +3 CRP would be protruding three feet above the water surface when the river is flowing at CRP stage, and a dike built to –2 CRP would be submerged two feet below the water surface.

Sill: Riverward portion of a dike, typically designed lower than the landward portion of the dike at 1-feet to 3-feet below CRP.

Channel Width to Sills: Distance between revetment and riverward dike tips, per 1994 design criteria for the BSNP that increases with drainage area. Channel width to sills is 750-feet from mile 0 to 130 at the Osage River, 650-feet from mile 130 to 250 at the Grand River, 600-feet from mile 250 to mile 367 at the Kansas River, 550-feet from mile 367 to 498 at Rulo, and 500-feet upstream of mile 498.

Corps of Engineers Regulatory District Boundaries: St. Louis District is Missouri River mile 0 to 50, Kansas City District is mile 50 to 498, and Omaha District Boundary is the remainder of the river upstream of mile 498. Regulatory issues commercial dredging permits.

2.0 INTRODUCTION

Water surface elevations are monitored annually along the channelized portion of the Missouri River, or the downstream 750 miles between Ponca, NE and the Mouth. If repeated variations of more than a foot are observed, CRP is updated. CRP has been updated most recently in Kansas City District in 1990, 2002, and 2005. Omaha District updated CRP in 1988-89, 2001, and 2006; however, because the focus of the analysis is in Kansas City District, for the remainder of this memo Omaha and Kansas City District CRP updates are referred to as 1990, 2002, and 2005, respectively. In general, CRP elevations have been

dropping between Rulo and the Mouth (mile 498 to mile 0), stable to slightly raising from mile 498 to mile 670, and dropping upstream of mile 670.

It is hypothesized that an observed drop in water surface elevation could be attributed to a number of factors. Three of which include dam construction, commercial dredging, and the flooding of the 1990's. A report from the Meade Laboratory, most recently updated in 2001, shows that degradation effects as result of the dams occur upstream of mile 635 (USACE NWO 2001). Therefore, it is assumed observed drops in water surface elevation downstream of Rulo are result of factors other than dam construction.

Commercial sand dredging is allowed in St. Louis and Kansas City Regulatory Districts, and is also allowed in Omaha District; however, dredgers are not allowed to mine sand from below the river bed in Omaha District. Therefore, commercial dredging has developed only in Kansas City and St. Louis Districts.

3.0 METHODS

Discharge is not constant for each CRP revision; therefore, the 1990 and 2002 CRP elevations were "flow adjusted" to match the 2005 discharges. Table 1 presents CRP flows and the corresponding flow adjustments for 1990 and 2002 CRP. Flow adjustments were first computed at each gage, interpolated by river mile between gages, then added to the published CRP elevations. For the end points, flow adjustments were held constant both upstream of Sioux City and downstream of Herman. Flow adjustment was done for the purpose of comparing water surface profiles at the same discharge at each CRP update.

TABLE 1: CRP DISCHARGES AND FLOW ADJUSTMENTS

Gage	River Mile	1990 CRP Discharge (cfs)	2002 CRP Discharge (cfs)	2005 CRP Discharge (cfs)	2005 - 1990 Discharge (cfs)	1990 CRP Flow Adjustment (ft)	2005 - 2002 Discharge (cfs)	2002 CRP Flow Adjustment (ft)
Sioux City	732.2	30,000	30,000	30,000	0	0.00	0	0.00
Decatur	691.0	30,200	31,000	31,000	800	0.20	0	0.00
Omaha	615.9	31,000	33,400	33,400	2400	0.63	0	0.00
Neb. City	562.6	36,000	37,500	37,500	1500	0.33	0	0.00
Rulo	498.1	36,500	38,900	38,900	2400	0.60	0	0.00
St. Joe	448.2	37,500	41,200	40,600	3100	0.80	-600	-0.13
KC	366.1	43,000	46,000	44,200	1200	0.30	-1,800	-0.42
Waverly	293.4	43,500	46,800	45,100	1600	0.30	-1,700	-0.30
Boonville	197.1	46,000	50,600	48,300	2300	0.40	-2,300	-0.40
Hermann	97.9	54,000	59,500	55,900	1900	0.30	-3,600	-0.53

NOTE: Flow adjustments use 2005 rating curves and historic CRP discharges. Adjustments were interpolated between gages.

Commercial dredging quantities were compiled from data provided by both Kansas City and St. Louis District regulatory groups. Figure 1 presents a dual axis plot showing CRP change between the flow-adjusted 1990 and 2002 CRP elevations and 2005 CRP elevation, and location and amount of dredging from 1990 to 2005. Dredging quantities were summed by reach, starting at the downstream end. It should be noted that CRP elevation at mile zero is controlled by Chain of Rocks Dam on the Mississippi River, and that backwater influences

approximately the lower 15 miles of the Missouri River, which somewhat skews water surface profiles and CRP elevations in the area.

Commercial dredging quantities were summed cumulatively for the entire river, and were converted to volume using a unit weight of 93 pounds per cubic feet, or 1.26 tons/cubic yard. . CRP changes were converted to a volume as channel length times channel width to sills times change in flow-adjusted CRP elevations. Channel width to sills was selected for the computations because the area between the dike tips and revetments (1) is uncontrolled by river structures and the most susceptible to erosion, (2) conveys over 95% of the flow at CRP discharge, (3) is the area where commercial dredgers mine sand. Figures 2 and 3 present the volumetric comparison for 1990 to 2005 and 2002 to 2005, respectively.

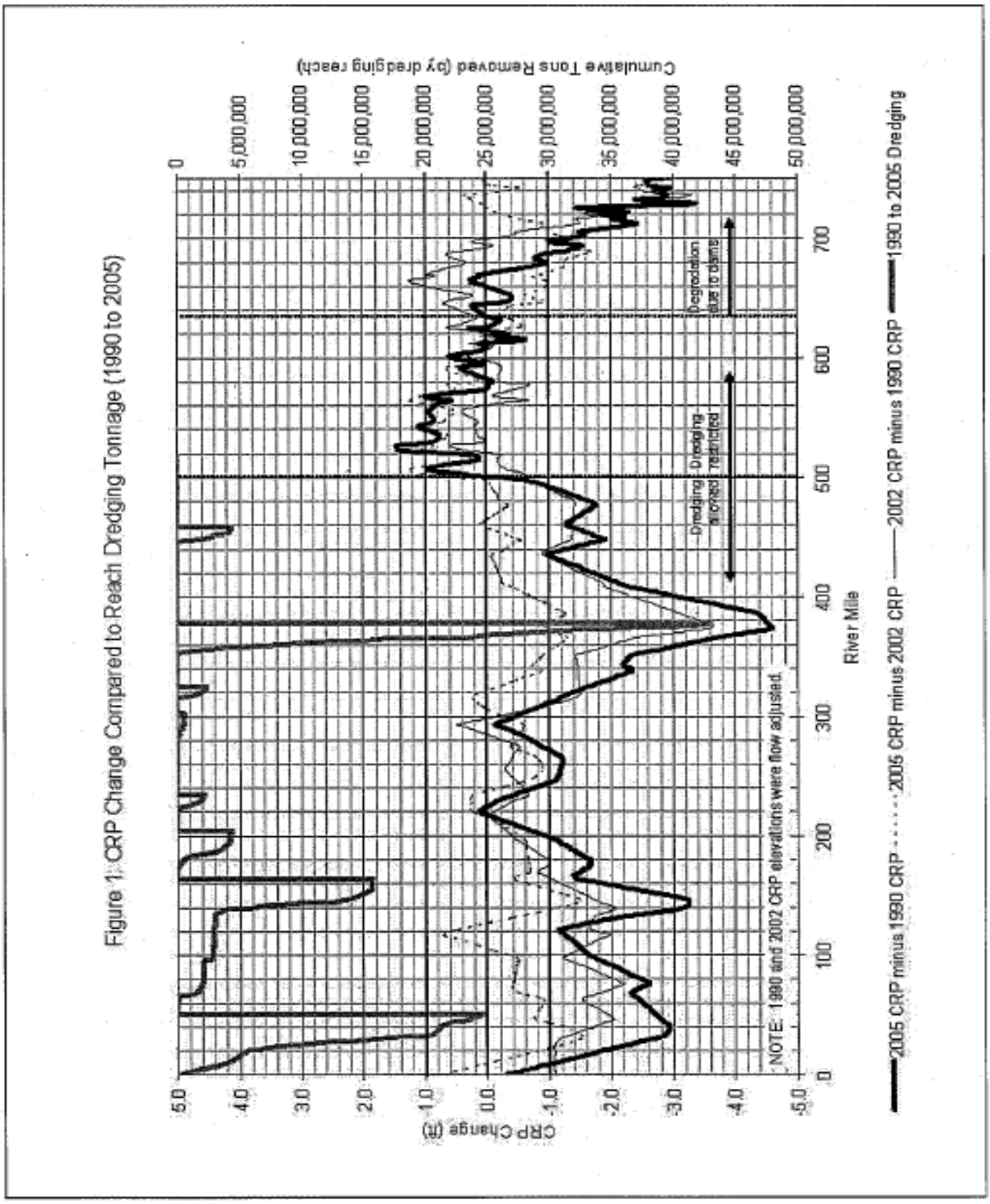


Figure 1: CRP Change Compared to Reach Dredging Tonnage (1990 to 2005)
CRP Change (ft)
Cumulative Tons Removed (by dredging reach)
River Mile
Degradation due to dams
Dredging allowed
Dredging restricted
NOTE: 1990 and 2002 CRP elevations were flow adjusted.
2005 CRP minus 1990 CRP
2005 CRP minus 2002 CRP
2002 CRP minus 1990 CRP
1990 to 2005 Dredging

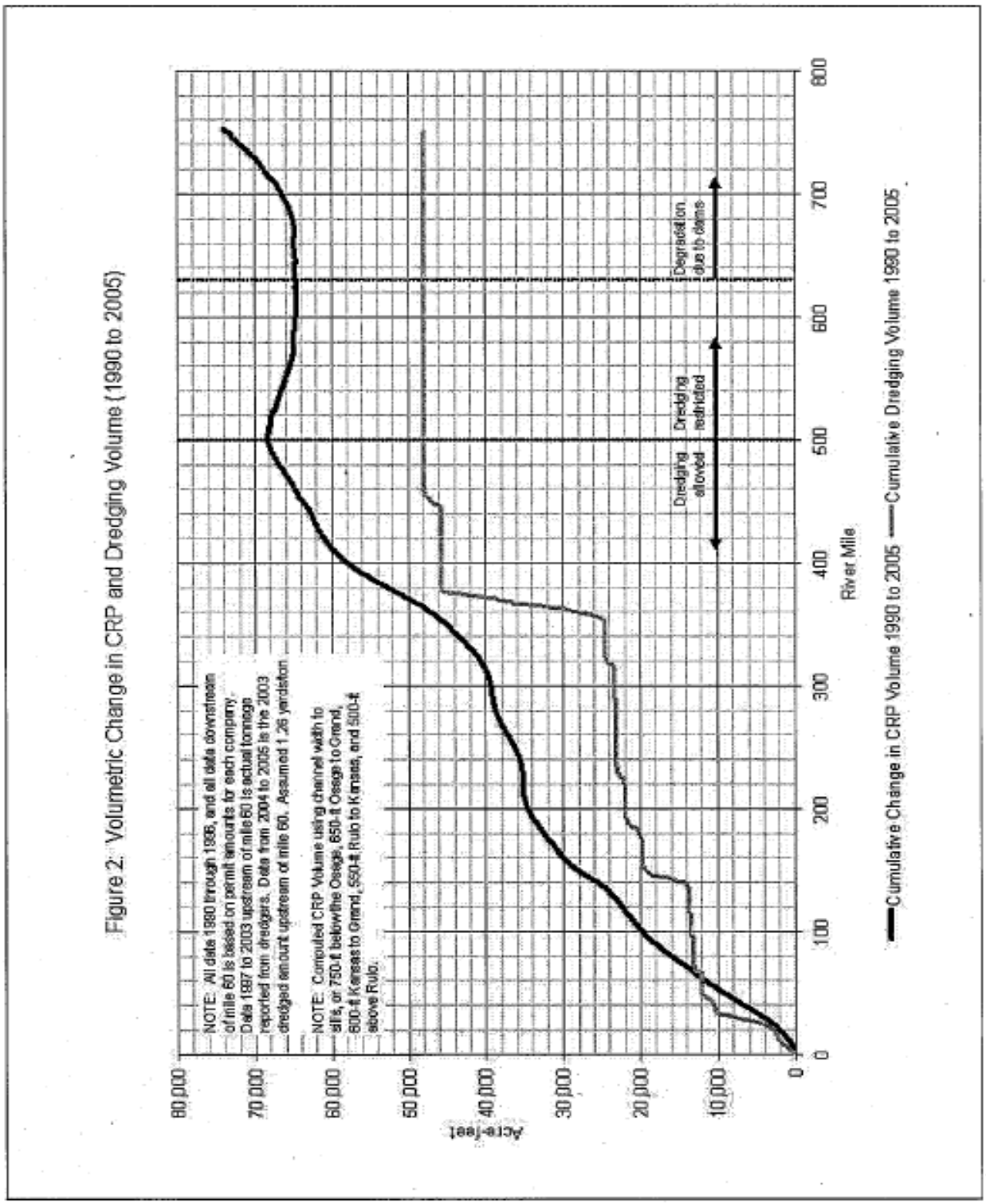
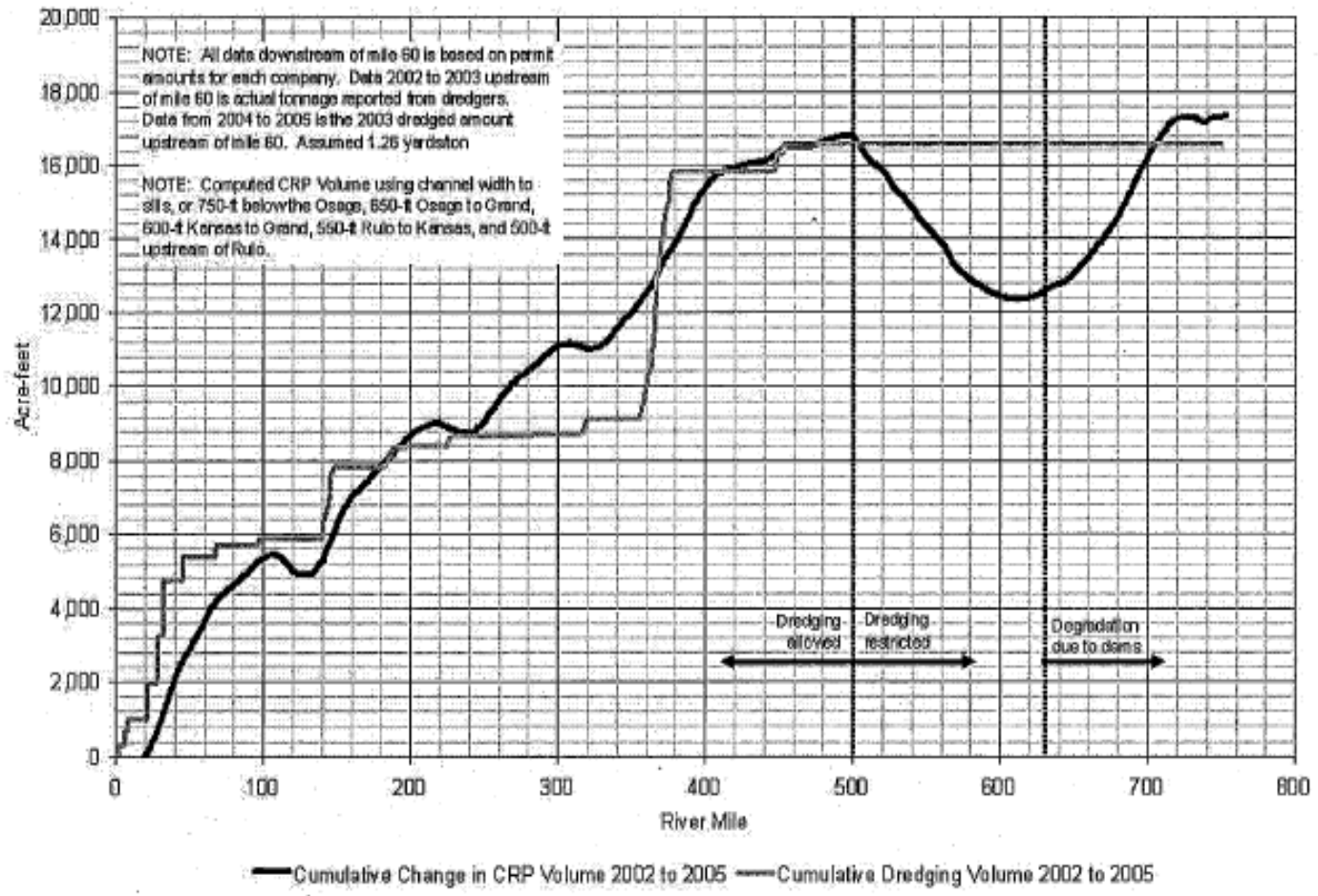


Figure 2: Volumetric Change in CRP and Dredging Volume (1990 to 2005)
NOTE: All data 1980 through 1986, and all data downstream of mile 60 is based on permit amounts for each company. Data 1987 to 2003 upstream of mile 60 is actual tonnage reported from dredgers. Data from 2004 to 2005 is the 2003 dredged amount upstream of mile 60. Assumed 1.26 yards/ton
NOTE: Computed CRP Volume using channel width to sills, or 750-ft below the Osage, 650-ft Osage to Grand, 600-ft Kansas to Grand, 550-ft Rulo to Kansas, and 500-ft above Rulo.
Acre-feet
River Mile
Dredging allowed
Dredging restricted
Degradation due to dams
Cumulative Change in CRP Volume 1990 to 2005
Cumulative Dredging Volume 1990 to 2005

Figure 3: Volumetric Change in CRP and Dredging Volume (2002 to 2005)



4.0 DISCUSSION

CRP change appears to be greatest at locations were commercial dredging is the most intensive, especially St. Charles, Jefferson City, and Kansas City. Exceptions include the area upstream of mile 635 where degradation has been attributed to dams, and near mile 250 as observed 2002 to 2005. Dredging volume is less than 1990 to 2005 volumetric CRP change, though the curves have similar shape in Figure 2; while 2002 to 2005 dredging volume and volumetric CRP change appear to be of similar magnitude. Volumetric CRP change in both Figures 2 and 3 appears to be greatest downstream of Rulo where commercial dredging is allowed.

Figure 2 shows approximately 68,200 acre-feet of volumetric CRP change between Rulo and the mouth, and an additional 5,900 acre-feet of volumetric CRP change upstream of Rulo. Accordingly, volumetric CRP change equates to approximately 8.6 acre-feet/mile/year where dredging is allowed versus approximately 1.4 acre-feet/mile/year where dredging is restricted. Approximately 47,900 acre-feet of sediment was mined from the river downstream of Rulo from 1990 to 2005, or roughly 6.0 acre-feet/mile/year, which is approximately 70% of the observed volumetric CRP change.

Similarly, Figure 3 shows approximately 16,800 acre-feet of volumetric CRP change between Rulo and the mouth, and only an additional 600 acre-feet of volumetric CRP change upstream of Rulo. Accordingly, volumetric CRP change equates to approximately 8.4 acre-feet/mile/year where dredging is allowed versus approximately 0.6 acre-feet/mile/year where dredging is restricted from 2002 to 2005. Approximately 16,500 acre-feet of sediment was mined from the river downstream of Rulo from 2002 to 2005, or roughly 8.3 acre-feet/mile/year, which equates to approximately 98% of the observed volumetric CRP change.

Major Missouri River flood events occurred in 1993, 1995, 1996, and 1997. As a result, a portion of the observed degradation from 1990 to 2005 could be attributed to scouring during flood events, among other factors. As no significant Missouri River flood events occurred from 2002 to 2005, it is assumed that flooding did not contribute to degradation during that time period. However, it should be noted that significant Grand River flood events occurred in 2002 and 2004. The 2002 and 2004 floods were the second highest stage and the fourth highest flow (143,000 cfs) observed at Sumner, MO for the period of record 1909 to 2006, respectively. High Grand River flows could explain the observed drop in CRP near mile 250 shown on Figure 1 from 2002 to 2005. Degradation upstream of mile 635 occurred only during the 1990 to 2002 time period, and little occurred 2002 to 2005, probably due to the difference in peak flows during the two time periods. Only areas with high dredging intensity experience a drop in CRP in both time periods.

Dredging intensity has increased from an average of 5.2 acre-feet/mile/year from 1990 to 2001, to 8.3 acre-feet/mile/year from 2002 to 2005 downstream of Rulo. Continued dredging at the 2002 to 2005 rate would remove enough material to lower the bed of the river approximately 1-foot every 10 years as averaged over the lower 498 mile length.

5.0 REFERENCES

1. USACE NWO (2001). Investigation of Channel Degradation 2001 Update, Missouri River Gavins Point Dam to Platte River Confluence.

2. USACE NWK and NWO 1990, 2002, and 2005 CRP.

3. USACE NWK and MVS Missouri River Commercial Dredging/Location Reports and Permits.

Enclosure 12. 58 October 25, 2006 Letter from Governor Blunt to Assistant Secretary of the Army (Civil Works)

OFFICE OF THE GOVERNOR
STATE OF MISSOURI
JEFFERSON CITY
(573) 751-3222
http://go.missouri.gov

MATT BLUNT
GOVERNOR

ROOM 216
STATE CAPITOL
65101

October 25, 2006

John Paul Woodley, Jr.
Assistant Secretary of the Army (Civil Works)
108 Army Pentagon
Washington, D.C. 20310-0108

Dear Secretary Woodley:

I appreciate you taking the time to visit the State of Missouri and the personal interest you have taken in the management of the Missouri River. I regret that I was unable to meet with you in Jefferson City on October 19, 2006, but hopefully my staff was able to express to you how extremely important these issues are to me personally and to the citizens of Missouri. As a follow-up to the meeting, I want to reiterate how important it is for the U.S. Army Corps of Engineers (Corps) to follow through on the requests that were made on my behalf during the meeting.

Approximately one-half of Missouri's citizens rely on the Missouri River for drinking water. In addition, a high percentage of the state's electricity is generated by power plants that receive their cooling water from the Missouri River. In many locations along the Missouri River, such as the Kansas City area, the Missouri River channel is degrading (i.e. the channel bottom is deepening). Over time, this condition has impacted the ability of water supplies and power plants to access water. Lowering water intakes can be very difficult and extremely costly, especially for the larger plants. The ability to plan for the future is being hampered by the channel degradation. The Corps has proposed limiting the amount of sand being removed from the river as a partial solution to this problem. Limiting the amount of sand removed from the river would seriously impact construction, especially road projects such as the planned improvements to Interstate 70. I appreciate your willingness to have the Corps evaluate the cause of the degradation and request that the Corps present a reasonable solution to the State of Missouri prior to going forward with proposals to remedy degradation problems.

Recent federal court decisions have underscored the fact that navigation and flood control are the two dominant functions of the Missouri River Reservoir System. When the Master Manual was revised in 2004, the Corps committed to provide a reliable navigation channel. Since the Corps chose to increase storage in the reservoirs at the expense of navigation in the new Master Manual, it became even more imperative that the Corps maintain a reliable channel at all times to support the shortened navigation seasons dictated by the Corps in the new management scheme. Due to inadequate releases from

the upstream reservoirs and poorly maintained navigation structures, the Corps was unable to maintain a reliable navigation channel for several weeks during the 2006 navigation season.

Recent experience has shown us that, when coupled with low tributary inflows, merely meeting the Kansas City navigation target does not always provide enough water in the river channel between Kansas City and St. Louis to support navigation. This situation may be, in part, due to the fact that practices to improve fish and wildlife habitat, such as widening the river channel, notching training dikes, and constructing chutes, have altered the channel capacity impacting flow depths in the Missouri River.

Establishing additional navigation targets at Boonville and Hermann is one potential solution for maintaining adequate channel dimensions for safe navigation. I appreciate your willingness to have the Corps evaluate the impacts of adding these navigation targets as one alternative for offsetting the impacts resulting from the channel modifications. If in fact additional navigation targets are essential to truly provide a reliable navigation channel, then I respectfully request that the Corps take the necessary steps to amend the 2004 Master Manual so as to comply with the 1944 Flood Control Act.

Although there have been promises that the federal government would not flood Missouri's farmers, a "manmade" spring rise was implemented this year. Even though the State of Missouri continues to oppose any "manmade" spring rise that increases the risk of flooding for our citizens, we do appreciate the fact that the Corps elected to implement the spring rise this year without changing the flood control constraints. Although the existing flood control constraints do not remove the risk of flooding, they do lessen the risk. Any increase in the constraints would increase the risk of flooding. When Congress authorized the Missouri River Reservoir System in the 1944 Flood Control Act, the body recognized that flood control should be one of the dominant functions of the system (navigation being the other). In August 2005, the 8th Circuit Court of Appeals reaffirmed this priority by writing in its opinion "*...if future circumstances should arise in which ESA compliance would force the Corps to abandon the dominant FCA purposes of flood control or downstream navigation, the ESA would not apply.*" Again, I appreciate your commitment to not change the flood control constraints.

Last year, I asked you to insure that an Emergency Action Plan be put in place by the Corps when faced with the likelihood of closure of the Mississippi River to navigation. I understand that the Corps has performed additional dredging in the Mississippi River this year because of the forecast of lower flows this fall. However, I have yet to see a plan that has been shared with the public that outlines how the Corps will avoid unnecessary impacts to Mississippi River navigation. If the additional dredging is not adequate to keep the Mississippi River open to navigation, I assert that you have the legal right and responsibility to increase releases from the Missouri River Reservoir System to maintain navigation on the Mississippi River.

Again, thank you for taking the time to visit Missouri and for your commitment to address the many challenges of managing our nation's inland waterway system. I look forward to hearing from you about the progress that the Corps is making to address these issues.

Sincerely,

Matt Blunt

li

cc: The Honorable Christopher Bond
The Honorable Jim Talent
The Honorable William Lacy Clay
The Honorable W. Todd Akin
The Honorable Russ Carnahan
The Honorable Ike Skelton
The Honorable Emanuel Cleaver
The Honorable Sam Graves
The Honorable Roy Blunt
The Honorable Jo Ann Emerson
The Honorable Kenny C. Hulshof
General Gregg F. Martin

Enclosure 12. 59 December 12, 2006 CENWK Presentation to Commercial Dredgers.

US Army Corps of Engineers

MISSOURI RIVER COMMERCIAL SAND DREDGING PERMIT APPLICATIONS EVALUATION STATUS

December 12, 2006

US Army Corps of Engineers

BACKGROUND

- 10 applications for hydraulic cutter-head suction dredging on the Missouri River for sand for commercial sale
  - Renewal of 3 active permits
  - Renewal of 5 inactive permits
  - 2 new permit applicants
- 5.95 million tons dredged in 2005
- 10.38 million tons requested

US Army Corps of Engineers

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

- NEPA applies to all federally authorized or funded actions
- NEPA requires
  - Environmental Assessment (EA)
    - Finding of No Significant Impact (FONSI)

OR

  - Environmental Impact Statement (EIS)

US Army Corps of Engineers

KEY NEPA CONSIDERATIONS ABOUT MISSOURI RIVER COMMERCIAL DREDGING

- Bed degradation
- Endangered species
- Economics
- Need for sand & gravel
- Fish & wildlife habitat
- Water quality
- Land use
- Traffic and transportation patterns
- Noise
- Cumulative impacts
- Mitigating factors

US Army Corps of Engineers

ADVERSE IMPACTS OF DEGRADATION

- Modification of water intakes
- Tributary head-cuts
- Bank instability (levee instability)
- Pipeline and bridge instability
- Further encroachment of the high bank
- Loss of aquatic habitat
- Navigation hazards

US Army Corps of Engineers

POTENTIAL ADVERSE IMPACTS OF BED DEGRADATION

Intake Lowering

- Nearman Creek
- Water One
- BPU Water
- Kansas City MO

US Army Corps of Engineers

POTENTIAL ADVERSE IMPACTS OF DEGRADATION

Bank Instability

US Army Corps of Engineers

POTENTIAL ADVERSE EFFECTS OF BED DEGRADATION

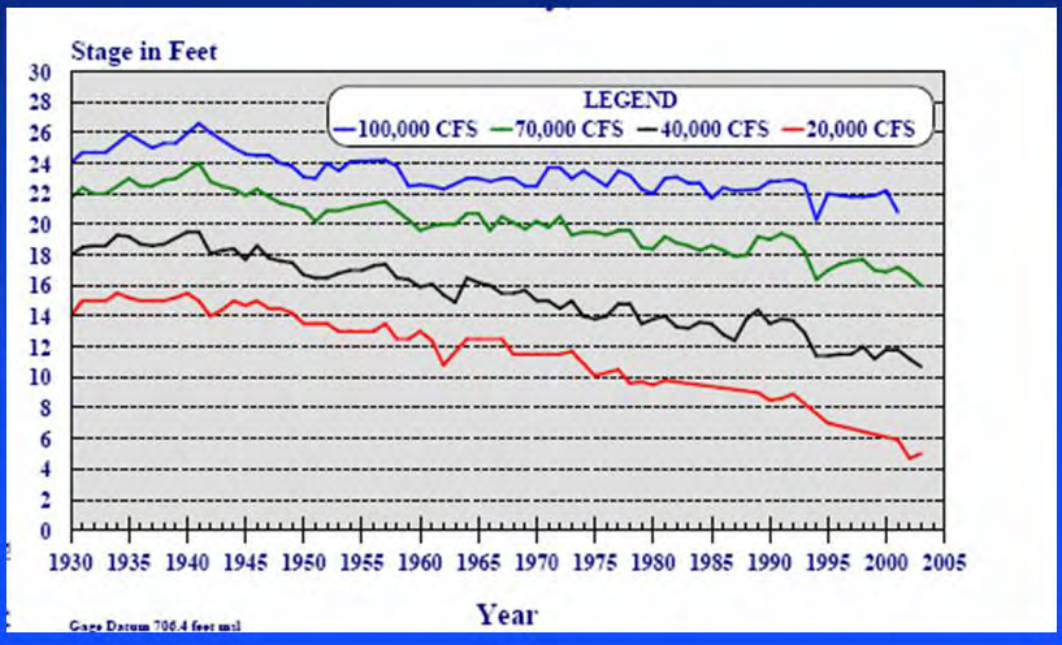
Tributary Head-Cut

US Army Corps
of Engineers

PROXIMITY OF LEVEES TO RIVER IN KANSAS CITY REACH

US Army Corps
of Engineers

Stage Trends Kansas City Gage



US Army Corps of Engineers

Kansas City District Technical Analysis

- Due to district concerns regarding stage trend impacts on federal projects, EC-H provided input to permit renewal process
- Initial input (fall 2003) involved convening Ad-Hoc Panel To determine contribution of dredging to degradation
- Conducted further study and assessment since Ad-Hoc Panel

US Army Corps of Engineers

AD-HOC PANEL Fall 2003

- Panel of regional and national Corps experts
- Degree of degradation could not be apportioned between the various potential causes at that time with available data
- Recommended that River Miles 340-400 be considered a restricted extraction reach
- Determined that available data indicates extraction during low flow periods exceeds replenishment
- Recommended restrictions on extraction amounts

US Army Corps of Engineers

STUDY AFTER AD-HOC PANEL

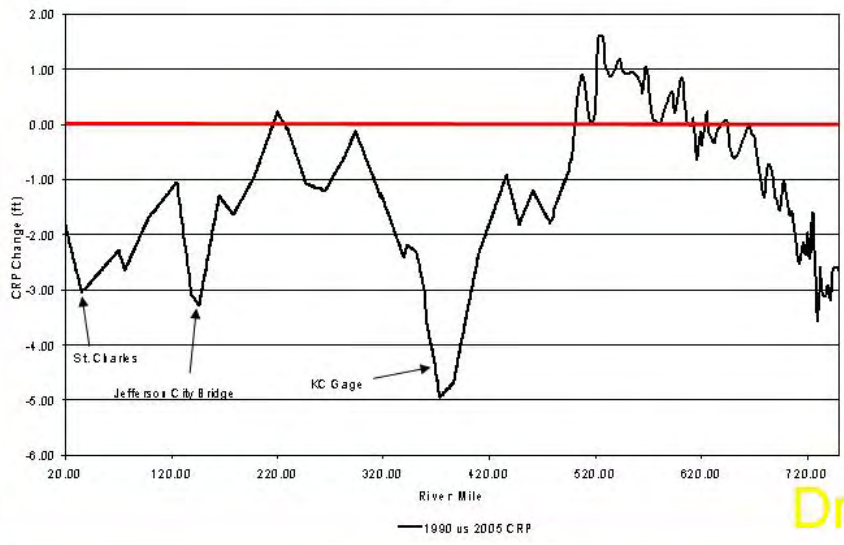
- Corps continued data collection and study after panel
- Determine extent of degradation between gages
- Attempt to quantify amount excavated vs. replenishment
- Locate and review related studies and pertinent data

US Army Corps of Engineers

WATER SURFACE COMPARISON

1990 VS. 2005

CRP is approximately equal to 45,000 cfs



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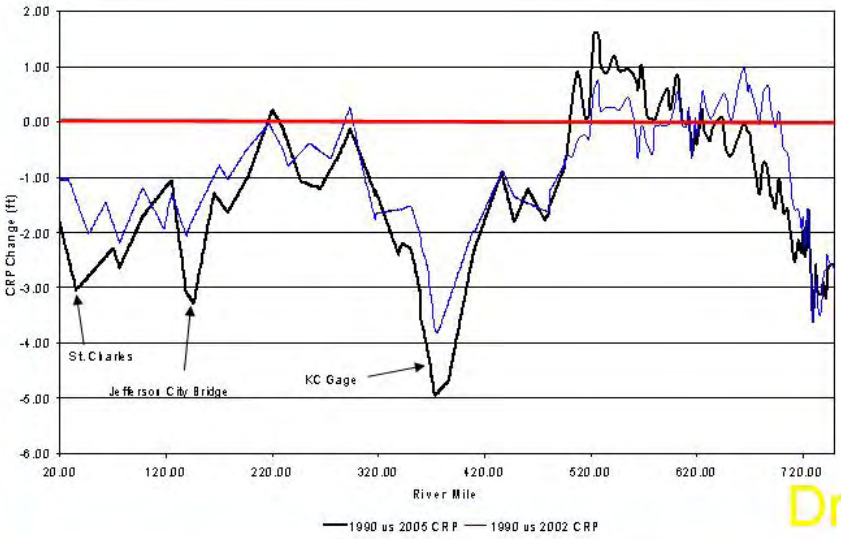
US Army Corps of Engineers

WATER SURFACE COMPARISON

2002 & 2005 vs. 1990

CRP is approximately equal to normal navigation stage



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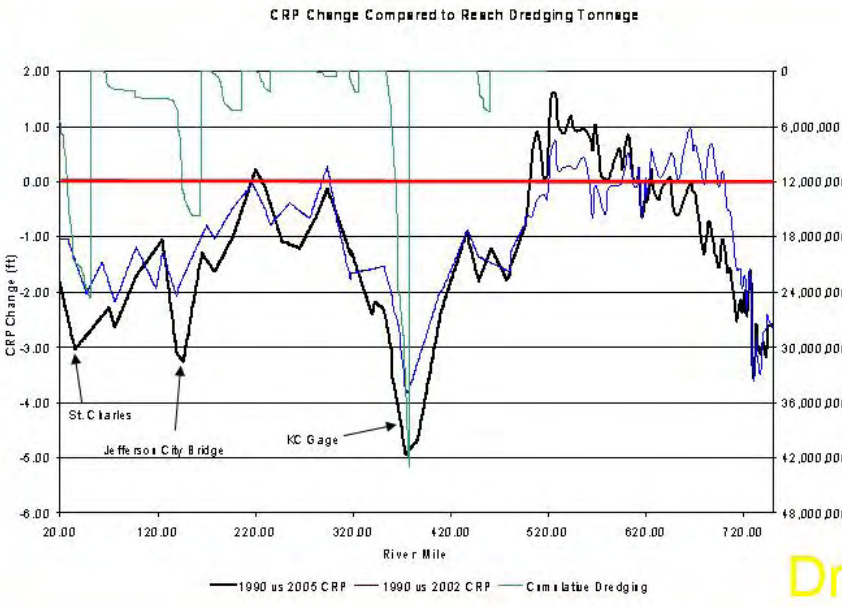
US Army Corps of Engineers

WATER SURFACE COMPARISON With Dredging



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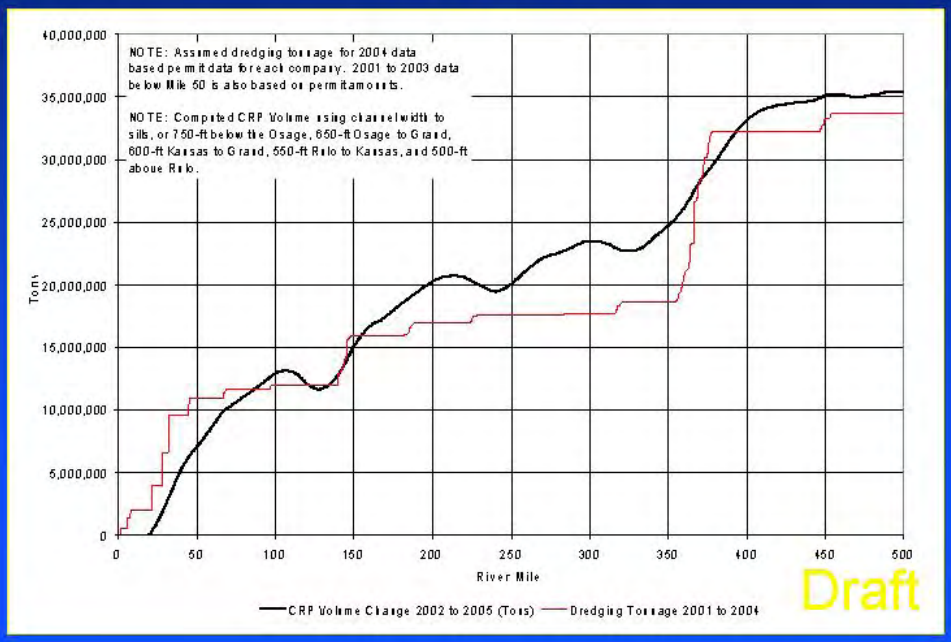
US Army Corps of Engineers

VOLUME OF DEGRADATION VS. DREDGING AMOUNTS

2001 vs. 2004



US Army Corps of Engineers

FUTURE STUDY

- Comprehensive study of Kansas City reach is awaiting funding
- Limited funding to study stage trend effects on aquatic habitat
- Limited funding for data collection for comprehensive study of Kansas City reach

US Army Corps of Engineers

FUTURE STUDY 2007 Work

- Detailed river bed surveys around dredge over time
  - Determine replenishment rate
  - Determine bed changes as dredging takes place
- River bed volume change assessment 1998 vs. 2007
- Sailing line bed profile & depth comparison 1998 vs. 2006

US Army Corps of Engineers

Can we make a FONSI?

- "After evaluating the anticipated economic, social, and environmental effects of the proposed activity, it is my determination that the granting of a Department of the Army permit will not have a significant adverse effect on the quality of the human environment; therefore, the filing of an environmental impact statement is not required."

US Army Corps of Engineers

NWK'S NEPA DETERMINATION REGARDING COMMERCIAL SAND DREDGING ON THE MISSOURI RIVER

- FONSI conditioned on:
  - Capping/reducing dredging to minimize contribution to degradation
  - Excluding dredging near vulnerable structures and sites
  - Shortening the permit cycle to 3 years
  - Further studying of the issues in preparation for an EIS

US Army Corps of Engineers

CAP AND/OR REDUCE DREDGING TO REDUCE DEGRADATION

- Cap sand extraction at current levels in the entire Missouri River
- Gradually reduce extraction in areas with the greatest degradation (Kansas City Reach)

US Army Corps of Engineers

CAP SAND EXTRACTION AT CURRENT LEVELS IN THE ENTIRE MISSOURI RIVER

- Limit annual extraction to 2005 tonnage (the latest reports available)
- Deny new permit applications
- Terminate current permits if not exercised within the last 5 years

US Army Corps of Engineers

DENIAL OF NEW APPLICATIONS

- Muenks Brothers Sand and Gravel
- 85th Street Inc.

US Army Corps of Engineers

INACTIVE PERMITS TO BE TERMINATED

- Con-Agg
- Washington Sand
- Edward N. Rau Contractor Co.
- St. Charles Sand Co.
- Kaw Valley Sand and Gravel

US Army Corps of Engineers

GRADUALLY REDUCE EXTRACTION IN THE KANSAS CITY REACH

- River Miles 340 to 400
- Holliday Sand is the only currently operating dredger

US Army Corps of Engineers

REDUCE/MINIMIZE IMMEDIATE DANGER TO VULNERABLE STRUCTURES/SITES

- Maintain existing exclusion zones and expand if/where warranted
- Exclude dredging near any additional vulnerable structures/sites if/where warranted
- Monitor vulnerable structures/sites

US Army Corps of Engineers

IMPROVE MONITORING

- GPS tracking and navigation system
- Quantity of material removed at each location
- Monitor depth of dredging
- River bottom surveys necessary to determine impacts of dredging on riverbed
- Electronic reporting

US Army Corps of Engineers

ENFORCE PERMIT CONDITIONS

- Annual extraction amount limits
- Buffer and exclusion zones
- Consequences for violation as appropriate

US Army Corps of Engineers

PREPARE FOR NEXT PERMIT RENEWAL

- Monitor dredging
- Study degradation
- Prepare Environmental Impact Statement

Enclosure 12.60 December 15, 2006 Rau Comments

EDWARD N. RAU CONTRACTOR COMPANY

2809 State Road A, Suite A
Washington, MO 63090
PH: (636) 239-4748 (Washington) or (636) 227-3500 (St. Louis)
FAX: (636) 239-9020

December 15, 2006

Mr. Mark Frazier
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896
816-389-3664

Re: Missouri River Dredging

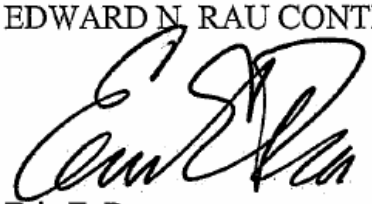
Mark:

We attended your meeting on Tuesday December 12th in Kansas City, MO. I write to express my displeasure and concern over the Corp's proposal to drop our permit to dredge sand on the Missouri River. Please consider the following:

> We have been in the contracting business since 1938. While it is true that we have not dredged sand under this permit in the recent past, we are currently negotiating the lease, or purchase, of dredging equipment. It is our desire to be operating on the river in 2007. Recent changes, including increases in the demand for sand in our area and availability of equipment have presented opportunities that make it possible for us to compete in the sand and dredging business. It is most ironic, and disturbing, that you chose this time to consider dropping our permit just when we believe we are in a position to capitalize on our Missouri river real estate holdings and our dredging permit.

Please our concerns and advise us as to any actions we need to take to keep our permit to dredge sand on the Missouri river.

Sincerely,
EDWARD N. RAU CONTRACTOR CO.



Eric E. Rau
President

Enclosure 12.61 December 27, 2006 Holliday Sand Comments

Holliday Sand & Gravel Company

9660 Legler Road
Lenexa, Kansas 66219

Phone: 913-492-5920
email: mrodell@hollidaysand.com

12-27-06

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

Re: Missouri River Commercial Sand Dredging Permit

Dear Cody:

Thank you for giving us a presentation on December 12th and for the opportunity to comment. We ask that you would allow us these additional comments and request that they be considered before the final special conditions are established for our dredge permit.

We do ask that if possible all cost and production specifics in this letter be kept confidential from the public and other permit holders.

Now that you have officially told us the plan for a tonnage cap and what we hope is a temporary rollback due to low flows, we will have to take immediate action to obtain costly marine equipment needed for long tows from outside the Kansas City reach. Until you informed us of the exact plan we could not place orders for this equipment. The next day after our meeting on December 12th, we confirmed what equipment would be needed and began the process of obtaining quotes from shipyards.

Here's what we will need to purchase to dredge outside the Kansas City Reach in order to maintain adequate production to meet demand for sand:

- Four 1200 ton barges to be able to tow 20 miles and maintain our existing production capability which is already stretched to six days, twenty-four hours a day = $3.0 Million
- 60 foot dredge hull extension to load the longer barges = $250,000.00
- 100 foot dock barge extension to unload the longer barges = $300,000.00
- Larger winches for dredge and unloading dock = $80,000.00

It is unknown at this time whether the equipment can be fabricated and delivered by September 1st, 2008, in order to produce the required "out of reach" 400,000 tons. For that reason we ask that you would consider a time extension if needed to get delivery on the barges. Once the barge quotes come in we will know what is possible.

We also request that the upper limit of the Kansas City reach be reduced five miles to RM 395.0. This is needed to make it feasible to make two round trips in a twelve hour shift from our Riverside Plant at RM 371.8, and will eliminate the need for a third towboat, two additional boat crews and another four barges that we don't have (at an additional up front cost of $3.75 million). Also, the two additional boat crews (since we run two shifts) are not practical to obtain or maintain for just a portion of the year. The additional five miles will add another $1.00 per ton operating cost.

Of course our requested permit reach will need to extend five miles beyond the Kansas City reach or from 335.0 to 405.0 (400.0 if you can revise the upper limit to 395.0).

We are prepared to spend millions of dollars and incur substantial increased operating costs to meet the proposed conditions for Missouri River dredging in Kansas City. However, we ask that you grant these three variances unless you have facts that would show an equal impact level if you do. Again the requested variances are:

1. We request that you would consider a time extension if needed for Holliday Sand to get delivery of the additional barges needed to tow sand twenty miles or more.
2. We request that the upper limit of the Kansas City reach be reduced five miles to RM 395.0, to make it practical to reach from our Riverside location.
3. Revise our requested permit mileage to RM 335.0 - 405.0.

Thank you again for considering these additional comments as a result of your December 12, 2006 presentation.

Sincerely yours,
Holliday Sand & Gravel Company

M. A. Odell

Michael Odell
Vice President

Enclosure 12.62 December 27, 2006 Muenks Brothers Comments

MUENKS BROTHERS QUARRIES, INC.

3857 Highway 50W ♦ Loose Creek, Missouri 65054 ♦ Phone (573)-897-0667 ♦ Fax (573)-897-0006

12-27-2006

Cody Wheeler
Regulatory Project Manager
US Army Corps of Engineers
Kansas City District

Re: Commercial Dredging Permits

Mr. Wheeler:

The US Army Corps of Engineers received a request for a commercial dredging permit from Muenks Bros. Quarries on December 18, 2003. As you are aware, that application (Application # 200400378) requested permission for commercial dredging activities between river miles 144 and 164 in Boone, Cole, Callaway, and Moniteau counties. Furthermore, as you are also aware, Muenks Bros. Quarries has historically contracted with Hermann Sand and Gravel for the dredging of sand required for operations at our Jefferson City plant. In anticipation of the installation of a deligniting plant at our Jefferson City location, Muenks Bros. Quarries (MBQ) determined that such an enormous financial investment warranted a dredging permit for MBQ. Though the contract arrangement with Hermann Sand and Gravel would not be impacted, MBQ needs to attain and maintain security for their clientele and the financial interests of their operations.

MBQ has been working with the Corps on issues related to the commercial dredging permits since that time. Prior to the December 7, 2006 notification of a pending meeting on December 12th, the issues that had been addressed primarily revolved around the Endangered Species Act. The December 7th correspondence was the first indication to MBQ that the Bed Degradation issue would result in such a radical response from the Corp. MBQ has concerns that are specific to the impacts upon our operation, as well as, the implications to all associated industries and the State of Missouri.

ISSUES/CONCERNS:

1. The draft copy of the streambed degradation study attempts to draw a conclusive and direct relationship between the alleged falling CRP and the degree of dredging activities within certain areas of the Missouri River. The study also states that 'no significant flood events occurred from 2002 to 2005, it is assumed that flooding did

not contribute to degradation during that time period' and that 'it is hypothesized' that an observed drop in water surface elevation is attributed to dam construction, commercial dredging, and the flooding of the 1990's.

Comment: What is the impact of continued low river stages on the amount of sediment that is being deposited in the Missouri River? While it is stated that a lack of 'significant flood events' will result in less scouring and degradation, would a lack of rainfall and the subsequent low river stages contribute to the lower CRP readings?

As an example, according to the National Weather Service, total annual precipitation in Columbia Mo for 1990 was 53.62 inches and the monthly totals for the navigation season of April-November was 37.08 inches. In comparison, the total average annual precipitation for the 2002-2005 period was 41.4 inches or 77% of 1990 and the precipitation during the navigational season for 2002-2005 averaged 32.3 inches. Basically, are these variations in precipitation amounts and the resulting lower river stages fully accounted for in the Riverbed Degradation Study document when looking at the potential drop in the CRP?

2. According to the presentation on December 12th, the Ad-hoc Panel (Fall 2003) determined that **extraction during low flow periods exceeds replenishment**.

Comment: As outlined in the above precipitation data, comparison of precipitation total for 1990 vs. 2002-2005 obviously indicates a very significant difference in the precipitation totals. In addition to the impact to the CRP, please provide data that outlines what impact the lower river stages have had on the amount of sediment that was transported by the river water. Specifically, please provide data the shows the level of sediment replenishment for 1990, as well as, 2002-2005.
On an annual basis, what percentage of the total sediment load transported by the Missouri River does the 2005 dredged tonnage represent if compared to the 1990 replenishment rate vs. that of 2002-2005?

3. The average precipitation, as measured in Columbia, Mo by the National Weather Service has averaged 44.6 inches over the last 25 years (1980-2005). That is 83% of the 1990 level and as discussed previously, the 2002-2005 period received only 77% of the annual precipitation total received in 1990.

Comment: The use of 1990 as the base year for comparison with 2002-2005 is not an accurate depiction of the average or typical river stages AND/OR sediment load that is present to 'replenish' the streambed. Therefore, please provide a clear, conclusive discussion detailing how the lower CRP graphs, as outlined in the study, have incorporated these variables into the overall equation.

4. The report states that three factors which impact the CRP are dam construction, commercial dredging, and the flooding of the 1990's. Additionally, the study states that 'major Missouri River flood events occurred in 1993, 1995, 1996, and 1997'. Furthermore, the report states 'a portion of the observed degradation from 1990-2005 could be attributed to scouring during flood events'

Comment: Four major flood events in the 1900's to which a portion of the observed degradation is attributed; BUT, we don't know how large that portion is, or at least we're not discussing that part of the equation. ***IF WE CANNOT ACURATELY DETERMINE HOW MUCH DEGRADATION IS DUE TO THE NOTED FLOODING EVENTS, THEN WE CANNOT ACCURATELY DETERMINE HOW MUCH, IF ANY, DEGRADATION IS DUE TO THE OTHER FACTORS SUCH AS DREDGING.*** Once again, as is consistent with the issues related to river stages and precipitation totals, the comparison of the CRP in 1990 to that of 2002-2005 as the sole means of determining any potential impact of dredging activities is ludicrous.

5. According to presentation on December 12th, Ad-hoc Panel (Fall 2003) recommended River Miles 340-400 be considered restricted extraction reach. Additionally, the presentation enumerated limited dredging as a means to reduce or minimize immediate danger to vulnerable sites or structures.

Comment: In addition to the issues mentioned above, the comments during the Public Comment Period consisted primarily of the concerns of BPU in Kansas City. Their comments included a requested a buffer zone of 2,000 feet from their intake structures. Again, this is within the 340-400 River Mile region. MBQ feels it would be much more prudent to implement larger restrictions in this area where the potential impacts are greatest than to call for smaller restrictions over the entire region. Recall that MBQ's permit request is for River Miles 144-164. How can you justify denying a permit for dredging activities that are **200 miles** from the proposed restricted extraction zone and the structures of concern, especially when the dredging activities are already taking place as a result of the contract arrangement with Hermann Sand and Gravel. We need to remember that the industry is responding to a demand for our products. Therefore, as we strive to supply the industry's needs, any policies that increase the amount or size of the areas that have restricted extraction will ultimately result in fewer areas with greater impact. We believe it is not necessarily the amount of sediment dredged in relationship to the rate of replenishment; but, rather the dredging of materials within concentrated zones as a result of policies that expand the areas that have restricted extraction.

6. Has the Corps of Engineers sought additional data from other agencies such as the Missouri Department of Natural Resources and the USGS to assist in accurately evaluating the issues at hand?

Comment: Please provide data from an independent source, such as the Missouri Department of Natural Resources and/or the USGS that reinforces the concerns of the Corps of Engineers and the Ad-hoc Committee regarding alleged current dredging tonnage totals that exceed the 'replenishment' rate.

7. As stated previously, MBQ originally applied for a Commercial Dredging Permit in December 2003. While MBQ understands that elapsed time is a result of the Corps of Engineers researching and discussing issues related to dredging on the Missouri River, MBQ refutes the notion that our permit should be denied as a new permit. Our operation is established and any potential impacts of the dredging activities are currently reflected as a part of the tonnage that is dredged by Hermann Sand and Gravel. The potential creation of a scenario in which an established business entity's operations are placed in jeopardy solely as a result of radical regulatory policies that are based on inconclusive and highly controversial data is an outrage to all the impacted and associated industries. Not only will the proposal impact the availability of product to meet the established demand, it will ultimately serve to stifle competition within the industry and drive up the prices as a result.

The implementation of the proposal presented at the December 12th meeting in Kansas City will have immediate and drastic economic and social impacts to the entire state of Missouri. MBQ obviously has a vested interest in any determination that is made related to this subject; however, the radical response by the Corps of Engineers based on the limited and questionable data that has been presented is not acceptable to MBQ or the associated industries and citizens of Missouri that it will impact. Additionally, MBQ is adamant that the COE needs to employ additional means to further study this issue and accurately attribute any potential river bed degradation to the potential factors PRIOR TO initiating the proposal that has been set forth. Upon completion of these studies, a rational but effective policy should be drafted and implemented as a means to responsibly protect our resources; yet, meet the needs of the industries and citizens that will be impacted.

Sincerely,

Chris Boeckmann
Muenks Bros. Quarries

Enclosure 12.63 January 2, 2007 Kaw Valley Comments

KAW VALLEY
COMPANIES, INC.

January 2, 2007

Colonel Michael A. Rossi, District Engineer
Regulatory Branch, Operations Division
Kansas City District, Corps of Engineers
700 Federal Building, 601 E. 12th Street,
Kansas City, MO 64106
816-389-3202

Colonel Rossi,
After reviewing the concerns of the Kansas City District regarding dredging on the Missouri River, I would like to make the following observations and requests. The Army Corps seems to be making determinations about dredging before a comprehensive study of the Kansas City reach has even begun. Restrictions on the Kansas River were not implemented until a formal study was concluded, at which time Kaw Valley Sand did not loose their permit nor become the only producer on the river in the Kansas City area.

The permit which Kaw Valley Sand and Gravel, Inc. retains has to be one of the oldest, if not the oldest permit on the Missouri River in the Kansas City area. The Missouri River has always remained an option in lieu of sand not produced in the Kansas River due to governmental restrictions. If nothing else, Kaw Valley has never contributed to any Missouri River bed degradation in our existence. The permit has always represented a viable opportunity for our small business, which I cited in a letter to Mark Frazier on May 6, 2004 (encl.). Everything in that letter remains relevant today. At one point in our discussions, we were told the permit could be slid right outside the Kansas City reach with additional tonnage allotments. Does this offer still remain? What procedures would we have to follow to retain our existing permit where it is? Quantity and location are very critical.

You were able to create an equitable precedent on the Kansas River without implementing a one producer reach. Since we already have our foot in the door, would it be possible to create a category for "inactive permits to be retained" and place Kaw Valley Sand on the top of that list? Some of the "inactive permits to be terminated" do not even belong to sand producers. Representatives of the Corps have always told me my best chance for a fair ruling was to inject plenty of ideas before the final decision. I appreciate this opportunity to offer suggestions. My email address is alant@kvco.net. My cell phone number is 913-915-7444. Thank you for your time and interest.
Sincerely,

Kaw Valley Sand and Gravel, Inc.

Alan R. Teutemacher
General Manager

■ CONTRACTING

■ Dump Yard
(913) 281-9950
ext. 105
(913) 281-9955 FAX

■ Landscape Supply
(913) 596-9752
(913) 287-5959 FAX

■ SAND & GRAVEL
(913) 287-0035

■ WRECKING

5600 Kansas Ave.
Kansas City, KS 66106
Ph: (913) 281-9950
Fx: (913) 281-9955

Enclosure 12.64 January 3, 2007 Lathrop & Gage Comments on Behalf of Capital Sand

LATHROP & GAGE L.C. LAW OFFICES

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January 3, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: Comments on Draft Proposal for 404 permit for Missouri River Dredging

Dear Colonel Rossi:

The undersigned represents Capital Sand Company, Inc. of Jefferson City, Missouri.

These comments are provided in response to your request at our meeting of December 12, 2006. At that meeting, you announced significant position changes regarding your intentions on the 404 permit for commercial sand dredging operations along the Missouri River. We understand at this time that these are not formal comments under a formal comment period, but comments requested by you with regard to proposals presented at the meeting.

We note that we have been working on this permit with you for over three years. In the three-year period we have been working on the permit, the first notice of any issues regarding bed degradation in the Lower River as presented was at this meeting. You now advise us of our ability to reply or respond with no scientific data presented other than a single graph in less than 30 days over the 2006 Christmas and New Year's holiday season.

We have worked with the Corps on many issues regarding this permit. This includes working through the informal consultation on the Endangered Species Act ("ESA") with the Fish & Wildlife Service for the least tern, piping plover and the pallid sturgeon. The appearance provided by the Corps was that the endangered species issue was the only issue of substance, and for the last two years, we have awaited a permit draft while you had discussed the issue of bed degradation with the Kansas City dredging operations. You now request our response to proposals which dramatically alter the

business plans, bidding positions, and the cost of concrete in the State of Missouri statewide in virtually an overnight position.

In an effort to advance our discussions, here are our comments and suggestions from what was presented at our meeting in December.

1. We make our comments having people on the River daily. We believe that your suggestion that bed degradation is a problem in the Lower River is theoretical and not actual. Our pilots and operators do not physically see the results of your theoretical position. We believe that you will be constraining this industry with inadequate data. We believe that no action should be taken until actual comprehensive data collection is derived on the Lower River. We also request all information the Corps' Kansas City office has regarding the bed degradation issue and will make the appropriate request under the Freedom of Information Act.

2. As a result of your analysis, you believe extraction on the River should be capped. You have chosen the year 2005 for that cap. We believe it more appropriate to utilize the actual data from 2006, as the year has been completed, plus an additional projected demand of 9% for 2007 as the tonnage more accurately reflects the immediate demand making transition more responsible. This will allow bids already produced for major transportation projects in the State of Missouri to go forward with reasonable certainty and accuracy. Capital Sand's extractions for the year 2006 are 2.6 million tons. That volume includes tonnage extracted under agreement for Con-Agg and Washington Sand.

3. The length of reaches authorized for extraction should be expanded. While increasing transportation costs, this will allow for a greater reach in which to extract material thereby allowing lesser impact on the bed. If your theory is accurate, the existing permit strategy of locking dredgers into narrower reaches may be a cause for greater impact at specific locations.

4. Unlike some dredges, Capital Sand's dredges do already include GPS units to track our base locations. The enhanced monitoring which you discussed at the meeting has a significantly greater cost than your projections presented. We are willing to increase our monitoring efforts but would suggest that the cost be phased in over the permit cycle. In the event that the 404 permit be discontinued after the permit cycle, we would ask that the United States reimburse the dredgers for this additional expense and the cost of all equipment purchased to execute this change less depreciation.

5. Prior to issuance of the draft permit on public notice, those areas which the Corps wishes to designate as "vulnerable or special" should be formally presented in a draft document so that proper comments may be tendered. If as presented at the meeting, this should not be a major issue as the current permit has significant restrictions in the lower reaches. This is especially true with the additional endangered species restricted areas.

6. The impact of this decision will have significant economic effects in the construction industry. Should you choose 2005 numbers over 2006, this will represent an immediate 20%+ loss of sand material in the mid-Missouri markets for a primary material used in the production of concrete and asphalt. This decision will increase the cost of sand due to increased demand and reduced supplies. It is simple economics. This will drive up the cost of concrete and asphalt for national projects.

7. This decision will only apply to the Kansas City District. The St. Louis District has already issued its permits. As a direct result, those dredging the lower reach of the Missouri River will have a competitive advantage over those in the Kansas City District's reaches of the River. Again, the lack of data becomes troublesome.

8. Terminating permits for Con-Agg and Washington Sand because of "lack of dredging" is inappropriate. With your lowering of the River, having multiple dredges and barges on the same reaches is untenable. As a result, Con-Agg and Washington Sand have contracted with Capital Sand to extract material on their behalf. This is in the interest of river operation, this keeps the number of vessels to a minimum and the coordination with regard to the removal of material at its highest. You are punishing those individuals who wish to coordinate and act responsible. The permits for Con-Agg and Washington Sand should be renewed.

9. We believe that we have had a reasonable discussion regarding this 404 permit up until this point in time. I have contacted your office quarterly since our close of the ESA discussion with the Fish & Wildlife Service. For almost three years, the only bed degradation reference has been the Kansas City reach. The first time any discussion regarding bed degradation in the lower reaches of the River was presented was by phone call from Cody Wheeler on or about September 21, 2006, where he indicated the Corps was examining tonnage extracted from the River and considering caps. No other further information was provided. Our next opportunity to discuss this matter was announced on Thursday, December 7, for a meeting posted for Tuesday, December 12. No data or material had been provided for the meeting, and to date, no science for comparative review presented. In fact, as indicated at the meeting, data and material presented was not even internally reviewed. We believe this decision is being made hastily. We believe

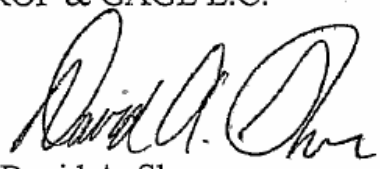
this decision is being made without the input of the industry and the December meeting mere lip service.

This decision will impact the financial well being of all Missourians. This will impact the entire construction industry in the State of Missouri. We believe a more comprehensive dialogue is appropriate and should extend beyond a single discussion, especially since we believe your conclusions are speculative and scientifically flawed.

We do appreciate the difficult decisions the Corps has been given by Congress. We also appreciate the fact that at times inadequate resources are put to bear requiring some extrapolation. We appreciate your willingness to receive these comments. We hope you will discuss them genuinely. On behalf of Capital Sand, I am

Very truly yours,

LATHROP & GAGE L.C.

By: 
David A. Shorr

DAS/jf
cc: Mike Wells
Missouri Department of Natural Resources

Enclosure 12.65 January 8, 2007 Hermann Sand Comments

HERMANN Sand&Gravel, Inc.

January 8, 2007

Colonel Michael Rossi
Department of the Army
Regulatory Branch Kansas City District
700 Federal Building
Kansas City, MO 64106-2896

Comments from Hermann Sand & Gravel Inc. per our meeting on Dec. 12th 2006.

1. Limiting annual extraction to 2005 tonnage is unacceptable. Our company already has 2007 contracts and has more than 260,000 ton sold. Hermann Sand & Gravel Inc. has a permit for 300,000 tons. With a 260,000 ton permit we will not bid MODOT work because of unpredictable sales. We can sell that much to predictable everyday ready mix plants one of them we own. We have worked very hard to build our business, dredging is our livelihood, and also our employees. I have done some research provided by the USGS on the amount of sediment that is discharged out of the Missouri river into the Mississippi. The average being 65,935,819.75 tons per year over a 12 year period 1994 through 2005. These measurements are taken after everyone has dredged all they wanted. When we started this process in 2003 there were a few issues involving habitat. Our company worked with the fish and wildlife service and were told that everything else was fine. Now it's a whole new game. It comes back to the same old game unreliable government. We need more tonnage not less and I truly believe it is there, data from the USGS proves it is there. Dredging is the largest industry on the MO River help us keep it strong instead of letting another district capitalize on the sediment. I don't have science to prove it but I believe the low flows are the cause of the bed degradation. The river between Kansas City to the mouth was not designed for flows below min navigation for a long period of time. We are willing to help with a study and add equipment to our dredge but to absorb the cost we would have to have more tonnage. We applied for 500,000 in Jan 2006 with the impression that Muenks Bros. Inc. (a company that we dredge for) getting a 500,000 ton permit. If permits were only given to the companies operating dredges a 1,000,000 ton permit would be requested.
2. Our company believes it is not right to take a permit away that someone had because they have not been used. These permits have value. As a small business owner these permits were for the future that if the demand for sand was high enough they could be used.
3. The Corps suggested that the industry do testing and monitoring. We are interested in doing these things if there is an immediate benefit. I believe there are

alternatives especially when there is not sound science to prove the industry has a bad effect on the river. Some things that we would entertain are limit depth of dredging to 60 feet, amount removed per mile in a permitted location to 200,000 tons per mile annually, realistic equipment on board the dredge to monitor operations (such as report daily tonnage from a belt scale and GPS location monthly instead of annually), and an extensive study on the effects of dredging on the MO river that would include detailed river bed surveys around dredge, replenish rate, bed changes and other data that might be necessary to have a complete study of the river. We have someone that has experience and is interested in doing an accurate study whatever the outcome. This however costs money and would be easier to pay for if we had a larger permit. We are currently working with MO DNR and the other dredgers to come up with a study objective and what onboard equipment that is feasible and worthwhile. We are requesting the corps leave the 5-year permit cycle. This would give plenty of time to do an accurate study and make any changes if needed to special conditions without missing a permit cycle.

4. On an argumentative note the corps does not issue contract dredging to aid in navigation because it doesn't do any good. The area fills in as fast as the dredge can take it out thus they install structures, which are more effective. Yet my dredge has an effect on the river. Furthermore how much money does the corps spend on dredging in the St. Louis Harbor to keep the channel open it's a nuisance there. The MO River is a self-scouring river to keep the channel open it is designed to erode. The dredger may have a positive effect on the river because the water slows down where we dredge and captures the sediment that was moved out of the channel upstream.
5. I was very disappointed in the way the regulatory branch handled this matter. I feel that the staff was unprepared. I didn't see anything in the data they presented where they showed how much sediment was entering the system. I absolutely didn't appreciate the threats of shutting us down with the EIS. We have always been cooperative in other issues in the past. We would have been more than happy to participate in the AD-HOC PANAL. The problem seems to be in the Kansas City Reach and I don't think we should be drug into that when we are 260 miles away. We should be able to get more tonnage. I don't think we all have to be reduced. The operator has already agreed to reduce and/or take the material from farther away location. The amount of tonnage we are asking for is a third of what is taken out of the Kansas City Reach so a FONSI should be attainable.
6. I will have more info on the study objective and monitoring equipment by the end of the month. It takes some time to get pricing and knowledge of what the corps is suggesting.

Sincerely
Hermann Sand & Gravel, Inc

Steve Engemann
Vice President
CC: Honorable Matt Blunt Governor of Missouri

Enclosure 12.66 January 9, 2007 Lathrop & Gage Comments on Behalf of Con-Agg

LATHROP & GAGE L.C. LAW OFFICES

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January 9, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: Comments on Draft Proposal for 404 Permit for Missouri River Dredging

Dear Colonel Rossi:

The undersigned represents Con-Agg, L.L.C. of Columbia, Missouri.

These comments are provided in response to your request at our meeting of December 12, 2006. At that meeting, you announced significant position changes regarding your intentions on the 404 permit for commercial sand dredging operations along the Missouri River. We understand at this time that these are not formal comments under a formal comment period, but comments requested by you with regard to proposals presented at the meeting.

We note that we have been working on this permit with you for over three years. In the three-year period we have been working on the permit, the first notice of any issues regarding bed degradation in the Lower River as presented was at this meeting. You now advise us of our ability to reply or respond with no scientific data presented other than a single graph in less than 30 days over the 2006 Christmas and New Year's holiday season.

We have worked with the Corps on many issues regarding this permit. This includes working through the informal consultation on the Endangered Species Act ("ESA") with the Fish & Wildlife Service for the least tern, piping plover and the pallid sturgeon. The appearance provided by the Corps was that the endangered species issue was the only issue of substance, and for the last two years, we have awaited a permit draft while you had discussed the issue of bed degradation with the Kansas City dredging operations. You now request our response to proposals which dramatically alter the

business plans, bidding positions, and the cost of concrete in the State of Missouri statewide in virtually an overnight position.

In an effort to advance our discussions, here are our comments and suggestions from what was presented at our meeting in December.

1. Terminating the permit for Con-Agg because of "lack of dredging" is inappropriate. With your lowering of the River, having multiple dredges and barges on the same reaches is untenable. As a result, Con-Agg has contracted with Capital Sand to extract material on their behalf. This is in the interest of river operation; this keeps the number of vessels to a minimum and the coordination with regard to the removal of material at its highest. You are punishing those individuals who wish to coordinate and act responsible. The permit for Con-Agg should be renewed. Con-Agg is prepared to take the necessary steps to preserve its legal and operational capability at its docks and facilities in Rocheport. Your current tack to terminate permits is arbitrary and capricious and not well thought through.

2. We make our comments having people on the River daily. We believe that your suggestion that bed degradation is a problem in the Lower River is theoretical and not actual. Our pilots and operators do not physically see the results of your theoretical position. We believe that you will be constraining this industry with inadequate data. We believe that no action should be taken until actual comprehensive data collection is derived on the Lower River. We also request all information the Corps' Kansas City office has regarding the bed degradation issue and will make the appropriate request under the Freedom of Information Act.

3. As a result of your analysis, you believe extraction on the River should be capped. You have chosen the year 2005 for that cap. We believe it more appropriate to utilize the actual data from 2006, as the year has been completed, plus an additional projected demand of 9% for 2007 as the tonnage more accurately reflects the immediate demand making transition more responsible. This will allow bids already produced for major transportation projects in the State of Missouri to go forward with reasonable certainty and accuracy. Capital Sand's extractions for the year 2006 are 2.6 million tons. That volume includes tonnage extracted under agreement for Con-Agg and Washington Sand.

4. The length of reaches authorized for extraction should be expanded. While increasing transportation costs, this will allow for a greater reach in which to extract material thereby allowing lesser impact on the bed. If your theory is accurate, the

existing permit strategy of locking dredgers into narrower reaches may be a cause for greater impact at specific locations.

5. Unlike some dredges, Capital Sand's dredges do already include GPS units to track our base locations. The enhanced monitoring which you discussed at the meeting has a significantly greater cost than your projections presented. We are willing to increase our monitoring efforts but would suggest that the cost be phased in over the permit cycle. In the event that the 404 permit be discontinued after the permit cycle, we would ask that the United States reimburse the dredgers for this additional expense and the cost of all equipment purchased to execute this change less depreciation.

6. Prior to issuance of the draft permit on public notice, those areas which the Corps wishes to designate as "vulnerable or special" should be formally presented in a draft document so that proper comments may be tendered. If as presented at the meeting, this should not be a major issue as the current permit has significant restrictions in the lower reaches. This is especially true with the additional endangered species restricted areas.

7. The impact of this decision will have significant economic effects in the construction industry. Should you choose 2005 numbers over 2006, this will represent an immediate 20%+ loss of sand material in the mid-Missouri markets for a primary material used in the production of concrete and asphalt. This decision will increase the cost of sand due to increased demand and reduced supplies. It is simple economics. This will drive up the cost of concrete and asphalt for national projects.

8. This decision will only apply to the Kansas City District. The St. Louis District has already issued its permits. As a direct result, those dredging the lower reach of the Missouri River will have a competitive advantage over those in the Kansas City District's reaches of the River. Again, the lack of data becomes troublesome.

9. We believe that we have had a reasonable discussion regarding this 404 permit up until this point in time. I have contacted your office quarterly since our close of the ESA discussion with the Fish & Wildlife Service. For almost three years, the only bed degradation reference has been the Kansas City reach. The first time any discussion regarding bed degradation in the lower reaches of the River was presented was by phone call from Cody Wheeler on or about September 21, 2006, where he indicated the Corps was examining tonnage extracted from the River and considering caps. No other further information was provided. Our next opportunity to discuss this matter was announced on Thursday, December 7, for a meeting posted for Tuesday, December 12. No data or material had been provided for the meeting, and to date, no science for comparative

review presented. In fact, as indicated at the meeting, data and material presented was not even internally reviewed. We believe this decision is being made hastily. We believe this decision is being made without the input of the industry and the December meeting mere lip service.

We understand your concerns. It is regrettable that the Corps does not wish to have a joint dialogue, and we request you change this course and allow our true participation. If we can have such a dialogue with the Fish & Wildlife Service and have a successful strategic compromise, I would expect the same could be accomplished with reasonable staff at the Corps. All that is necessary is time and a willingness to continue River commerce.

This decision will impact the financial well being of all Missourians. This will impact the entire construction industry in the State of Missouri. We believe a more comprehensive dialogue is appropriate and should extend beyond a single discussion, especially since we believe your conclusions are speculative and scientifically flawed.

We do appreciate the difficult decisions the Corps has been given by Congress. We also appreciate the fact that at times inadequate resources are put to bear requiring some extrapolation. We appreciate your willingness to receive these comments. We hope you will discuss them genuinely. On behalf of Con-Agg, I am

Very truly yours,

LATHROP & GAGE L.C.

By: David A. Shorr

DAS/jf
cc: Mike Wells
Missouri Department of Natural Resources

Enclosure 12.67 January 19, 2007 Missouri Chamber of Commerce and Industry Comments

MISSOURI CHAMBER
OF COMMERCE AND INDUSTRY

January 19, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: 404 Permit Renewal, Missouri River Sand Dredging

Dear Colonel Rossi:

I write to you to express my concern over recent activities concerning the Kansas City Water District with regard to 404 permits for commercial sand dredging operations on the Missouri River and the negative impacts it will have on the economy of Missouri.

The recent determination and the manner by which affected parties were notified of changes in policy is simply disappointing and ignores the greater impact that such a determination can and will have on the economy of Missouri. The December 12th announcement in all respects failed to collect reasonable information allowing a sound determination to be made nor did it provide rational and timely information any affected parties. To the best of my understanding, at no time were permit applicants, permit recipients, elected officials or executive offices ever notified of this potential action prior to December 12th or allowed to make comment upon its impacts. This action which if implemented will create great hardship on our Missouri economy.

Although bed degradation is a very serious concern and a concern that all parties who make their living from the Missouri river are ever mindful, we should not arbitrarily cap or eliminate sand dredging until greater information can be developed.

Refusing to grant permits to dredging operators and capping removal at 2005 limits will provide hardships on the Missouri Department of Transportation and could double their cost to acquire the necessary materials for construction projects. Additionally, it makes the ability of commercial contractors to accurately plan for long range construction projects nearly impossible.

On behalf of the members of the Missouri Chamber of Commerce and Industry I would ask that you:

1. Consider utilizing 2006 actual extraction amounts plus a volume for 2007 while you collect further research on bed degradation.
2. Expand the reaches in which you permit dredging operators to extract material to lessen the burden on specific reaches.
3. Issue a full five year permit
4. Make appropriate requests to Congress for funds to fully examine the issue prior to harming Missouri's economy.

Thank you for the work you do, I respect the complicated matter of balancing multiple intrests, but I must ask you to reconsider your direction on this issue and please reevaluate the impact you will have on the economy of Missouri.

Best regards,

Michael Grote
V.P. Governmental Affairs

Enclosure 12.68 January 2007 Missouri Department of Transportation Comments

Missouri
Department
of Transportation

MoDOT

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www.modot.org

Pete K. Rahn, Director

Missouri Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Attention: Mike Wells

Dear Mike:

Mike I am providing you with the following for incorporation into a draft letter for the Governor's signature.

In response to the impacts that MoDOT may incur due to limiting dredging on the Missouri River we submit the following. MoDOT utilizes natural river sand from the Missouri River to produce concrete and asphalt for its transportation improvement projects. Sand for MoDOT projects comes almost exclusively from two sources the Mississippi and Missouri Rivers. There are no other natural deposits of sand that would have the quality and quantity needed. Any other sources would be so minor in nature that they would be insignificant for the following analysis.

Below is a table for all sand used for MoDOT projects from all sources. All numbers are given in tons. These are for the years 2002-2006.

Year	Asphalt Sand	Concrete Sand	Total Sand
2002	163,991	1,004,890	1,168,881
2003	203,989	826,853	1,030,842
2004	231,227	595,750	826,977
2005	232,067	572,312	804,379
2006	272,354	752,224	1,024,578

The new restrictions will affect all roadway projects in Districts 1,2,4,5,7, and 8. The remaining districts 3,6,9, and 10 receive their sand from the Missouri River in St. Charles County and the Mississippi River. The dredging companies that would be affected by the new restrictions are Holiday Sand, Capital Sand, and Hermann Sand. Below are the actual tonnages received from these suppliers for MoDOT projects in 2005 and 2006 and estimates for 2007 and 2008. Estimates were derived from our State Transportation Improvement Program (STIP) for the 2007 and 2008 program. We calculated all sand needs for Asphalt and Concrete in the projects located in Districts 1,2,4,5,7 and 8.

The affected Dredging companies had indicated that they would supply all their regular customers first before supplying to MoDOT. Depending on the demand from their regular customers they may not supply sand to additional MoDOT projects. This would require sand to be obtained from the Missouri River in St. Charles County or the Mississippi River. Therefore we calculated our potential cost increases by two scenarios. One is that suppliers will still supply us at the same tonnage they did in 2005 and the additional quantities would have to be transported in. The second is that all sand quantities for MoDOT projects would be transported in.

Our analysis is that the sand would be transported in to the distribution centers for the three suppliers. For estimating purposes we used Jefferson City as the halfway point of the river. Transporting sand to this location would be approximately 200 miles from the other viable sand sources. The shipping cost for sand by barge from St. Louis to Jefferson City would be $6.50/Ton as quoted from a barge operator. With the unpredictability of the Missouri River shipping season we also included the cost to truck the sand. The estimates we received for trucking sand from the other sand sources in the St. Louis area to Jefferson City (200 miles) would be $24/Ton.

Scenario 1 if Dredgers supply us at 2005 levels and all additional sand needed is imported in.

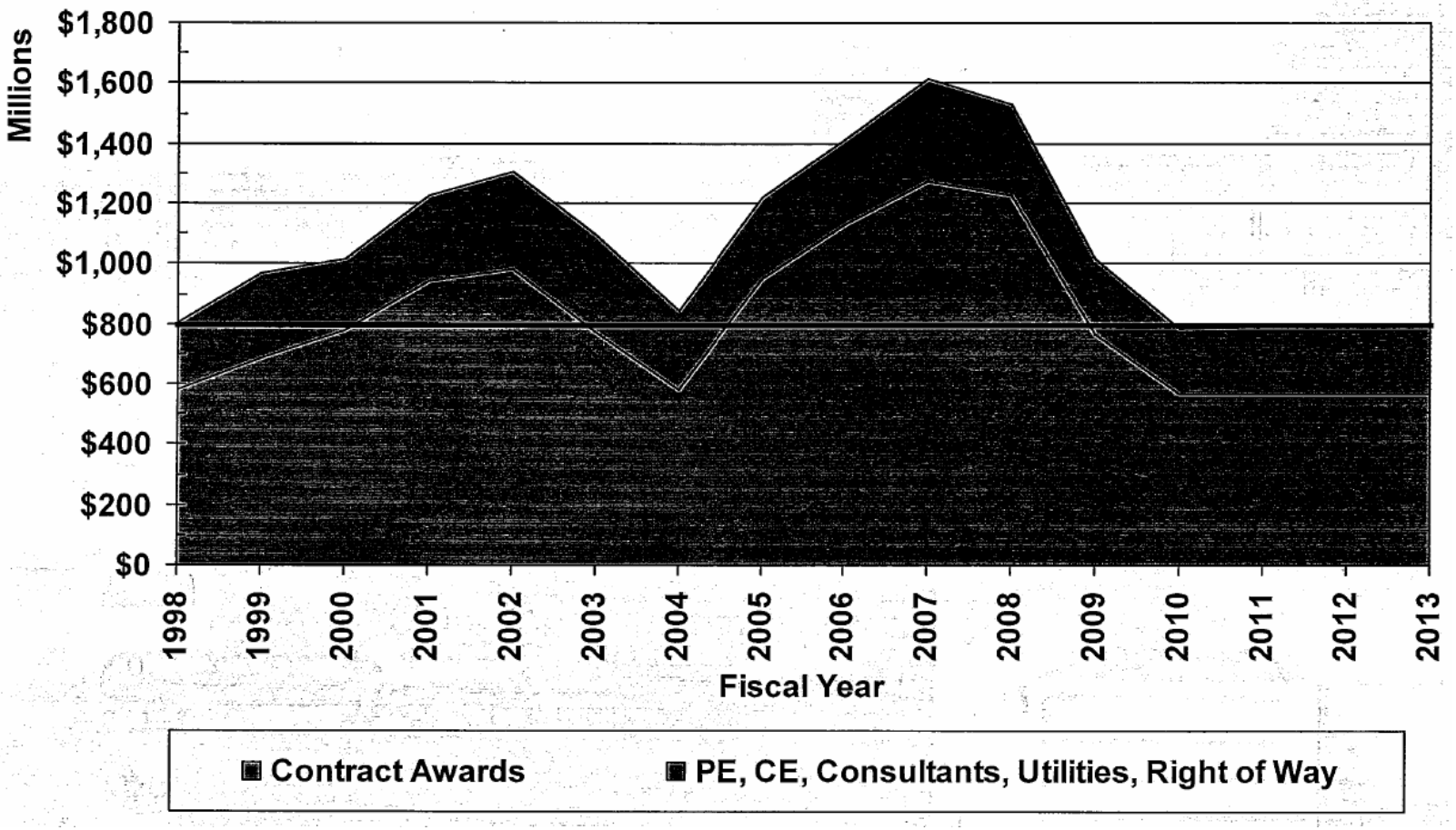
Year	Tons needed	2005 Capped Level Additional Needed.	Cost to Barge	Cost to Truck
2005	372,667	-	-	-
2006	623,416	250,749	$1,629,868	$6,017,976
2007	600,000	227,333	$1,477,664	$5,455,992
2008	750,000	377,333	$2,425,664	$9,055,992

Scenario 2 if Dredgers will no longer supply any sand to MoDOT projects unless imported in.

Year	Tons needed	Cost to Barge	Cost to Truck
2005	372,667	-	-
2006	623,416	$4,052,204	$14,961,984
2007	600,000	$3,900,000	$14,400,000
2008	750,000	$4,875,000	$18,000,000

The proposed limiting of dredging on the Missouri River will have substantial fiscal impacts to MoDOT and the taxpayers of Missouri. Also of great concern to MoDOT is the potential for delivery delays in getting sand to our projects. If there are delays in getting sand from alternate locations this will delay projects for motorists. Extending the duration that work zones are in place exposes motorist and highway workers to greater risk of injury.
motorists to more delays and safety hazards. These delays will also cause significant financial impacts to our contractors.

MoDOT Construction Program



June 12, 2006

NEW PAVEMENT SUMMARY

The information shown below summarizes paving quantities included in the Draft 2007-2011 STIP. A detailed project-by-project list by MoDOT district and fiscal year follows.

The paving quantities listed here represent only projects that have significant quantities of **NEW** full-depth paving. There are other projects with various full- and partial-depth paving included in the draft STIP, such as quantities for construction of ramps, outer roads, shoulders, bridge replacements, etc., that are not necessarily reflected in this summary. The same criteria was used in development of the information shown in the second table that summarizes new full-depth paving awarded during the current fiscal year.

Paving Quantities Included in Draft 2007-2011 STIP

	FY 2007		FY 2008		FY 2009		FY 2010		FY 2011	
DISTRICT	MILES	SQ. YARDS	MILES	SQ. YARDS	MILES	SQ. YARDS	MILES	SQ. YARDS	MILES	SQ. YARDS
1	5.2	87,800	0	0	0	0	0	0	0	0
2	8.405	140,308	22.246	656,992	0	0	0	0	0	0
3	11.235	280,496	18.444	454,850	0	0	0	0	0	0
4	1.446	63,692	4.844	120,094	4.787	119,800	11.388	431,290	1.000	20,000
5	13.291	459,000	22.299	640,000	11.717	321,000	15.402	290,000	0	0
6	13.777	412,000	10.283	245,000	0	0	0	0	0	0
7	7.5	193,000	4.300	247,600	0	0	7.821	279,387	0	0
8	9.446	215,000	17.295	415,000	8.213	150,000	0	0	0	0
9	18.75	506,600	23.800	565,000	0	0	0	0	0	0
10	1.171	52,000	42.792	1,302,000	13.702	355,000	0	0	0	0
TOTAL	90.221	2,409,896	166.303	4,646,536	38.419	945,800	34.611	1,000,677	1.000	20,000

Paving Quantities Awarded in FY 2006

	FY 2006	
DISTRICT	MILES	SQ. YARDS
1	0.927	15,550
2	0	0
3	15.134	413,850
4	1.45	63,400

	FY 2006	
DISTRICT	MILES	SQ. YARDS
5	0	0
6	11.234	224,230
7	3.382	18,689
8	14.628	299,020

	FY 2006	
DISTRICT	MILES	SQ. YARDS
9	11.094	203,640
10	4.9	108.070
TOTAL	62.749	1,346,449

Enclosure 12.69 January 17, 2007 Missouri Farm Bureau Federation Comments

MISSOURI FARM BUREAU FEDERATION
P.O. Box 658, 701 South Country Club Drive, Jefferson City, MO 65102 / (573) 893-1400

January 17, 2007

Colonel Michael Rossi
District Commander
U.S. Army Corps of Engineers
Kansas City District
601 East 12th Street, Room 700
Kansas City, MO 64106

Dear Colonel Rossi:

We recently learned the U.S. Army Corps of Engineers (Corps) may restrict the dredging of sand and gravel on the lower Missouri River. As an organization that has long been involved in Missouri River management issues, Missouri Farm Bureau is extremely concerned about this potential action and the effects it may have on flood control and navigation as well as transportation projects utilizing materials excavated from the river.

It is our understanding that the Corps met with representatives of dredging companies in December to discuss the renewal of their permits to operate on the lower Missouri River and announce regulatory changes under consideration. Degradation of the Missouri River channel was cited as the reason for potential restrictions, but sufficient information was not provided to explain how these actions will resolve the perceived problem.

As you know, Missouri Farm Bureau has requested several times in recent years that dredging be conducted on the Missouri and Mississippi Rivers to clear obstructions and provide support for river transportation. The lower Missouri River channel must be maintained to support navigation and flood control infrastructure, but we do not believe the appropriate solution is to cap sand extraction at 2005 levels or terminate permits for some companies because they did not excavate sand in a particular year.

Furthermore, our organization has serious concerns about reducing or altogether eliminating dredging in segments of the river and the impact it would have on highway and transportation projects in Missouri. From an economic standpoint, materials excavated from the river are essential for the production of concrete and asphalt. Given the serious transportation needs of rural Missouri, critical highway projects must not be delayed due to an escalation in construction material costs that may result from the Corps' actions.

For the above reasons, we urge you to reconsider potential restrictions on sand dredging and devise a plan that meets the needs of Missouri citizens and fulfills the Corps' obligation to manage the Missouri River for multiple purposes.

Sincerely,

Charles E. Kruse

Charles E. Kruse
President

Enclosure 12.70 January 22, 2007 Hermann Sand Comments

HERMANN Sand&Gravel, Inc.

RECEIVED
REGULATORY BRANCH
07 JAN 24 PM 12: 45

January 22, 2007

Colonel Michael Rossi
Department of the Army
Regulatory Branch Kansas City District
700 Federal Building
Kansas City, MO 64106-2896

Comments from Hermann Sand & Gravel Inc. per our meeting on Dec. 12th 2006.

After our meeting on Dec.12 I have done some research on the things the regulatory branch talked about. I contacted Mr. Hauck with the USGS office to hear his thoughts on the river and what equipment was available to monitor the river. He had sent me sediment data and since then I asked him what changes have taken place at Hermann if any. Mr. Hauck contacted Mr. John Doyle to help him and the two of them sent me a reply, which I sent along with my comments.
I have had a chance to see what is available in the market for monitoring equipment. The GPS tracking and navigation system is about $3,500.00 but is not ready for MO River because of lack of maps and it is not recordable. There is a company that makes a unit called the dredgepack, and it cost about $25000. You can upload maps; it records dredge depth, GPS location, and shows material taking out. However it is not accurate on how much material is taking out and requires a survey of the area to be sure the material is gone. I could come up with the same data with a handheld GPS unit for $250 dollars and a digital belt scale for $3,500 dollars. Instead of monitoring dredge depth maybe we could limit it, in our previous letter we suggested 60 feet. We can get our belt scale accurate to within 1%. We use the belt scale already when we contract dredge. I believe that the belt scale and the hand held GPS would get you the info that you need and would be something the dredger could use in the operation with a small amount of expense. I have researched a study to answer what effects a dredge has on the MO River and it was estimated to cost $30,000 for equipment, and 30,000 for labor. That was to check one dredge at one location. As you can see as an operator I'm looking at $85,000.00 plus for equipment and surveys. I want to cooperate as much as we can but need to be reasonable on the amount that we have to spend especially when I see different results from another engineer and hydrologist. I hope this helps you understand our point of view. Please let me know what the regulatory branch wants. I think the corps has the equipment already available to survey the riverbed maybe we can work together.

Hermann Sand & Gravel, Inc. has never been out of compliance and we have not had any complaints presented to us that is related to the dredging we do on the MO River. Mr. Doyle and Mr. Hauck have offered to answer any questions about their letter, and the data they had used. Contact me and I will get the info to you. Thank you for the time to research and comment on this matter.
Sincerely,
Hermann Sand & Gravel, Inc

Steven a/ Enge

Steve Engemann
Vice President

Enclosure 12.71 January 21, 2007 Study Submitted by Hermann Sand

To: Hermann Sand & Gravel, Inc.
From: John Doyle, Henry Hauck
RE: Commercial Sand Dredging on the Missouri River
Date: January 21, 2007

Attention Steve:

We appreciate the opportunity to work with Hermann Sand and Gravel, Inc. In the extreme time constraints we have studied the U.S. Army Corps of Engineers draft report to understand the concerns and potential consequences that may arise from the findings of this report. So you understand the U.S. Army Corps of Engineers plays an important role as the regulatory agency. Their job is to insure the quality and integrity of the Missouri River is kept in tact while allowing you and others to continue dredging.

As previously stated, we have studied the draft report given by the U.S. Army Corps of Engineers. Two major concerns arise when looking at the report:

1. The short study time/period chosen
2. Conclusions made from data

The report focuses on a time period from 1990 to current. This study period appears to be very short and may not accurately define what is happening to the river as a system. During the study period chosen there were two very significant floods. 1993 and 1995, respectively. The effects of these record floods were never discussed or represented in the report. However, in reality these floods had an immense effect on the streambed and sediment within the Missouri River. In our opinion and understanding of the Missouri River to state that dredging has more of an effect on sediment and streambed conditions than a flood of this magnitude would be inconclusive due to the lack of data.

As former employees with the U.S.G.S. and working with stream flows and sediment data on several rivers throughout the state of Missouri we would like to present the following data collected on the Missouri River at Hermann.

Measurement Number	Water Year	Gage Height in ft.	MSL Elevation	Discharge in cfs	Elevation of Current Rating @ given Discharge MSL	Difference from Current Rating in ft.	Difference from mean of Current Rating (1932-1992) in ft.
96	1932	7.45	489.01	52200	487.81	-1.20	+.44
481	1942	6.90	488.46	47100	486.95	-1.51	+.13
1130	1952	7.52	489.08	49300	487.33	-1.75	-.11
1721	1962	7.90	489.46	51900	487.76	-1.70	-.06
2333	1972	7.27	488.83	45800	486.71	-2.12	-.48
2778	1982	8.11	489.67	53000	487.99	-1.68	-.04
3194	1992	7.61	489.17	51300	487.66	-1.51	+.13
3491	2002	6.79	488.35	52600	487.88		
						Mean = -1.64	
*** 0 Datum at Hermann is 481.56							
***Measurements made in 2006 are all 0 shift							

This data shows stream flow measurements taken from 1932 until 2002. We randomly selected stream flow measurements near 50,000 cfs to illustrate that streambed conditions at Hermann vary. Basically, if you have the same cross section measured, at the same elevation, with the same discharge there has been little to no streambed change in the river. As you can tell from the data that changes have occurred to the streambed both fill and scour however no consistent trends are observed for the period 1932 to 1992.

The table continues to correlate the data comparing each measurement to the current rating table used at Hermann. The table shows the difference each measurement plots from the currently used rating table. A mean difference is calculated for the period from 1932 to 1992. The final column in the table shows the difference seen from the calculated mean over the time period. This once again shows the inconsistency of a trend (scour or fill) occurring on the streambed in the Missouri River at Hermann.

In conclusion it appears that the study analyzed a time period that was inadequate to understand the overall effects and natural behavior of the Missouri River streambed at Hermann. The time period chosen experienced two flooding disasters with no mention or correlation of streambed conditions before or after either flood. Finally with the limited existing data available, to conclude that commercial sand dredging has a negative impact and creates advanced bed degradation on the Missouri River streambed at Hermann seems unreasonable.

Finally, we would like to reiterate the importance each entity represents in this situation. With cooperation and compromise both Hermann Sand and Gravel Inc. along with the U.S. Army Corps of Engineers will find a viable solution to the existing problem. If there is anything else we can help you with please let us know.

Sincerely,

John C. Doyle, P.E.

Henry S. Hauck, Hydrologist

Enclosure 12.72 January 22, 2007 Buchanan County Commission Comments

Buchanan County Commission

411 Jules Street, Room 122
St. Joseph, Missouri 64501-1786
(816) 271-1503 • Fax (816) 271-1569

Bud Crockett
Commissioner
Western District

Royal Turner
Presiding Commissioner
Buchanan County

Dan Hausman
Commissioner
Eastern District

January 22, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: 404 Permit Renewal, Missouri River Sand Dredging

Dear Colonel Rossi:

We have received numerous contacts from members of the construction community, local contractors, local ready-mix concrete providers, home builders, members of both county and municipal governments, and special districts, including road districts and school districts, regarding their concerns of the prospect of rising concrete and asphalt prices throughout the City of St. Joseph. These constituents have advised us of their concerns regarding proposed restrictions on Missouri River sand dredging operations and the potential cost increases to public works projects throughout the City.

We have been advised of your intention to cap extracted sand material at 2005 levels, deny permits to dredging operations that did not actually dredge in 2005, and restrict future permits to extract sand.

On behalf of our constituents, We are requesting that you will consider utilizing 2006 actual extraction amounts plus a volume for 2007 while you garner further research. We also request that you expand the reaches in which you permit dredging operations to extract material to lessen the burden on specific reaches and issue a full five-year permit and make appropriate request to Congress for funds to fully examine the issue prior to harming the county's economy.

We recognize the difficult balancing act required while maintaining the nation's waterways, resources and habitat for wildlife. We must emphasize that the changes you are contemplating are dramatic and should not be done hastily. We would appreciate a direct response with regard to your intentions impacting our citizens, as well as the financial well beings of all Missourians.

Very truly yours,

Royal Turner
Presiding Commissioner

Dan Hausman
Eastern District Commissioner

H.D. "Bud" Crockett
Western District Commissioner

Enclosure 12.73 January 23, 2007 Example Comments from 21 Missouri Senators and Representatives

MISSOURI SENATE
JEFFERSON CITY

CHUCK GRAHAM
19TH DISTRICT
ASSISTANT MINORITY FLOOR LEADER

CAPITOL OFFICE:
STATE CAPITOL, ROOM 329
JEFFERSON CITY, MO 65101
TELEPHONE: (573) 751-2162
FAX: (573) 751-4703
E-MAIL: CHUCK.GRAHAM@SENATE.MO.GOV

DISTRICT OFFICE:
102 W. GREEN MEADOWS
COLUMBIA, MO 65203

BILL STATUS HOTLINE
JANUARY–MAY
(800) 877-5982

January 23, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: 404 Permit Renewal, Missouri River Sand Dredging

Dear Colonel Rossi:

I am a member of the Missouri Senate. I represent the 19th District. My District includes a portion of the Missouri River.

I have received numerous contacts from members of the construction community, local contractors, local ready-mix concrete providers, home builders, members of both county and municipal governments, and special districts, including road districts and school districts, regarding their concerns of the prospect of rising concrete and asphalt prices throughout my District. These constituents have advised me of their concerns regarding proposed restrictions on Missouri River sand dredging operations and the potential cost increases to public works projects throughout my District.

I have been advised of your intention to (1) cap extracted sand material at 2005 levels; (2) deny permits to dredging operations that did not actually dredge in 2005; and (3) restrict future permits to extract sand.

On behalf of my constituents, I am requesting that you (1) consider utilizing 2006 actual extraction amounts plus a volume for 2007 while you garner further research; (2) expand the reaches in which you permit dredging operations to extract material to lessen the burden on specific reaches; (3) issue a full five-year permit; and (4) make appropriate requests to Congress for funds to fully examine the issue prior to harming Missouri's economy.

I recognize the difficult balancing act required to maintain the nation's waterways, resources, and habitat for wildlife. I must emphasize that the changes you are contemplating are dramatic and should not be done hastily. I would appreciate a direct response with regard to your intentions impacting the citizens of my District.

Sincerely,

Senator Chuck Graham
19th District

COMMITTEES:
EDUCATION • GUBERNATORIAL APPOINTMENTS
JUDICIARY AND CIVIL AND CRIMINAL JURISPRUDENCE
PENSIONS, VETERANS' AFFAIRS AND GENERAL LAWS

Enclosure 12.74 January 24, 2007 Letter from Governor Blunt

OFFICE OF THE GOVERNOR
STATE OF MISSOURI
JEFFERSON CITY
65101

MATT BLUNT
GOVERNOR

STATE CAPITOL
ROOM 216
(573) 751-3222

January 24, 2007

Colonel Michael Rossi
District Commander
U.S. Army Corps of Engineers
Kansas City District
601 East 12th Street, Room 700
Kansas City, Missouri 64106

Dear Colonel Rossi:

It has come to my attention that the Kansas City District of the Corps has proposed to cap at 2005 levels the quantity of sand that dredging companies are permitted to extract from the Missouri River. I appreciate and share your concerns regarding channel degradation in the Kansas City reach of the Missouri River. However, to cap sand extraction for the entire lower Missouri River is an extreme response to a problem that has been ongoing for years and is only particularly pronounced in the Kansas City area.

The Kansas City District's proposal to restrict the quantities of sand that operators can extract from the Missouri River will have a direct negative economic impact on the state of Missouri. The cost of concrete and asphalt will increase resulting in an overall increase in the costs of construction. The attached information from the Missouri Department of Transportation (MoDOT) outlines the potential impact to road construction in Missouri if the Corps limits sand-dredging quantities to 2005 levels. You will note that MoDOT has projected there will be an increase in more road construction projects in 2007 and 2008. I also have been informed that at least two commercial dredging operations have expanded their activities in anticipation of increased road construction.

Since it appears that the Kansas City District of the Corps has based the proposed restrictions on an extremely limited amount of information, I request that the Corps postpone the decision to restrict sand extraction until a more comprehensive study of the degradation problem is completed. The state of Missouri has supported the channel degradation study in the past and we will continue to support it in the future. If issuing permits without extraction limitations is not an acceptable option to you, then I strongly encourage you to either confine any restrictions on extraction levels to the Kansas City reach where the degradation problem appears to be the most severe or base caps on 2006 extraction levels.

Your consideration of the impacts of the proposed extraction restrictions is appreciated. I look forward to continuing our work together on Missouri River issues.

Sincerely,

Matt Blunt

Enclosures

Enclosure 12.75 January 24, 2007 CENWK-EC-HH Comments Regarding Holliday Sand's Proposal to Extend Dredging Up and Downstream

Wheeler, Cody S NWK

From: Chapman, Michael D NWK
Sent: Wednesday, January 24, 2007 3:00 PM
To: Wheeler, Cody S NWK; Frazier, Mark D NWK
Cc: Tool, Allen R NWK
Subject: Follow-up (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Cody

This email is to follow up on our conversation this morning concerning Holliday Sand's request to move upstream or downstream to dredge quantities above our proposed phased in reductions.

HH does not support allowing Holliday to expand their dredge zone upstream or downstream in order to allow them to dredge annual quantities above the agreed upon phased in reductions. Further study since the meeting of the ad-hoc panel has shown that the degradation extends further upstream and downstream than originally thought. The phased in reductions therefore should apply over a larger area than originally thought. Increased dredging immediately outside the restricted reach will likely increase the amount of degradation at those locations. Due to the close proximity to the severely degraded area, and the dynamic nature of the river, this degradation will propagate through the KC reach. The result would be no net benefit to the phased in reductions.

Keep in mind that the ad-hoc panel recommendations were made over 3 years ago and were intended to be implemented within a reasonable time. The last three years have been severe drought with no restrictions. Restrictions beyond the ad-hoc panel's (no dredging outside the restricted area) recommendation are warranted.

Mike Chapman
Unit Leader-River Engineering and Restoration Unit 816-389-3310
816-808-8924 (cell)
Classification: UNCLASSIFIED
Caveats: NONE

Enclosure 12.76 January 25, 2007 Con-Agg Dredging Report and Comments

Con - Agg of MO, L.L.C.

January 25, 2007

Mr. Mark D. Frazier
Department of the Army
Kansas City District
Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

RE: Permit No. 96-01652

Dear Mr. Frazier:

All 2006 dredging under our permit referenced above was performed by Capital Sand Company as per our contract with them. Accordingly, the tonnages of sand permitted and dredged under our permit are included in the tonnages reported by Capital Sand Company in their annual tonnage reports.

Yours very truly,

Larry W. Moore

Larry W. Moore

LWM/ss

Enclosure 12.77 January 30, 2007 Missouri Department of Economic Development Comments

MISSOURI
DEPARTMENT OF ECONOMIC DEVELOPMENT

Matt Blunt
Governor

Gregory A. Steinhoff
Director

January 30, 2007

Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

Re: 404 Permit Renewal, Missouri River Sand Dredging

Dear Colonel Rossi:

I am the Director of the Department of Economic Development. This decision severely impacts the construction trades, the Missouri Department of Transportation, county and local governments, and public improvements throughout the State of Missouri.

I have received numerous contacts from members of the construction community, local contractors, local ready-mix concrete providers, home builders, members of both county and municipal governments, and special districts, including road districts and school districts, regarding their concerns of the prospect of rising concrete and asphalt prices throughout my District. They all have alerted me of their concerns regarding proposed restrictions on Missouri River sand dredging operations and the potential cost increases to public works projects throughout the state.

I have been advised of your intention to (1) cap extracted sand material at 2005 levels; (2) deny permits to dredging operations that did not actually dredge in 2005; and (3) restrict future permits to extract sand.

I am requesting that you (1) consider utilizing 2006 actual extraction amounts plus a volume for 2007 while you garner further research; (2) expand the reaches in which you permit dredging operations to extract material to lessen the burden on specific reaches; (3) issue a full five-year permit; and (4) make appropriate requests to Congress for funds to fully examine the issue prior to harming Missouri's economy.

I recognize the difficult balancing act required to maintain the nation's waterways, resources, and habitat for wildlife. Your consideration of the impacts of the proposed extraction is appreciated. I look forward to continuing our work together on Missouri River issues.

Sincerely,

Greg Steinhoff
Director

cc: Senator Christopher Bond
Senator Claire McCaskill
Governor Matt Blunt
Director Doyle Childers, Missouri Department of Natural Resources
Director Peter Rahn, Missouri Department of Transportation

Enclosure 12.78 February 5, 2007 NWK Response to Governor Blunt

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

February 5, 2007

Operations Division
Regulatory Branch

Governor Matt Blunt
Office of the Governor
State Capitol, Room 216
201 West Capitol Avenue
Jefferson City, Missouri 65101

Dear Governor Blunt:

I am responding to your letter of January 24, 2007, regarding our pending permit decision for commercial sand dredging in the Missouri River.

A 2004 preliminary assessment indicated that the sand extraction by dredging operations may be contributing to degradation of the Missouri River bed. In response, I convened a panel of experts from the Corps' Omaha District, Northwest Division, and Engineering Research and Development Center to determine the extent of and contribution of dredging to degradation based upon data available at that time. This panel identified significant bed degradation in the Kansas City reach of the Missouri River (miles 340 to 400) and recommended restricting dredging within this reach, particularly following years of low flow. In March 2004 this analysis and recommendation were presented to commercial dredgers in that reach for comment. We continued to study the issue and in the spring of 2006 determined that degradation is also occurring along other reaches of the Missouri River.

Bed degradation can disable water intakes, initiate tributary head cuts, promote bank and levee instability, undermine pipelines and bridge piers, increase encroachment of the high bank, eliminate aquatic habitat, and create navigation hazards. Damage caused by degradation has already cost Kansas City public utilities and drainage districts millions of dollars in remodeling or repair of water intakes, drill wells, build backup cooling towers, repair drainage, and flood control structures damaged by degradation. A major flood event could cause failure of revetments, levees, pipelines, and bridges if they are undermined by degradation. Such an event could have a tremendous economic impact on Missouri. Based on these potential impacts, as required by the National Environmental Policy Act (NEPA), I cannot make a Finding of No Significant Impact (FONSI) decision and issue permits for the proposed commercial dredging unless some steps are taken to minimize the potential contribution of dredging to bed degradation. After considering the potential impacts on the Missouri River, the need for construction sand, and the economic impacts of dredging and degradation, I have determined that those steps will most likely include reducing dredging in the most severely degrading reaches, freezing extraction limits in all remaining reaches, monitoring and reporting dredging activity, limiting the permits to a three-year period, beginning more in-depth study of the problem to identify sustainable dredging thresholds and preparing an Environmental Impact Statement (EIS) for the permit reevaluation in 2009. If I can't conclude a FONSI at this time, then I would have to prepare an EIS regarding the

proposed activity before dredging could be permitted to continue. The three-year period, with the ongoing data-gathering and EIS, should provide understanding of sustainable thresholds without removing sand dredging from the river in the interim. We would also then coordinate the permit cycles of the Kansas City District and St. Louis District Missouri River dredging permits and include them all in the EIS for the next permit cycle.

I have received and considered the 2006 tonnage reports from the commercial dredgers and the sand tonnage required by the Missouri Department of Transportation over the next three years, and I am considering impacts of utilizing the 2006 levels for the caps on the river within our District as a whole. Additionally, except in relatively small areas excluded by Endangered Species Act consultation, extractions will be allowed in areas that appear to have less severe degradation to relieve the burden on more severely degraded areas, and to alleviate impacts to dredgers that may have restrictions in those reaches. Through the last several years of public review process while the existing permits have been extended, we have considered comments related to degradation, particularly in the Kansas City reach. Over the last two months, we have met with the sand dredging companies, representatives of the Governor's Office, the Missouri Department of Transportation, and the Missouri Department of Natural Resources on the degradation issue as it relates to the sand dredging permitting. We have received comments from each and are considering them as we work towards issuing the permits. We recognize potential impacts to the sand industry by the proposed actions, and we have considered measures to minimize these impacts to the extent allowed by law.

Stakeholders affected by degradation including the City of Kansas City, Missouri: Unified Government Board of Public Utilities, Water District One of Johnson County, Kansas, Missouri-Arkansas River Basin Association, and the Kansas City Industrial Council have requested Congress and the Administration to provide funding for a comprehensive investigation of the Missouri River degradation. Recently, you also requested the Corps of Engineers to fund an investigation. The Kansas City District cannot make funding requests to Congress. If you believe this issue to be important, you can request Congress to include funding for an investigation in the 2008 Energy & Water Development Appropriations.

If you need additional information, please contact my Executive Assistant, Larry L. Myers, at 816-389-3205.

Sincerely,

Michael A. Rossi
Colonel, Corps of Engineers
District Commander

Copies Furnished:

CDR USACE (CECW-OR)
OC
OD

Enclosure 12.79 February 8, 2007 Kansas City District Response to Missouri Agencies and Officials

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

February 8, 2007

REPLY TO
ATTENTION OF:

Regulatory Branch
Operations Division

Honorable Chuck Graham
Assistant Minority Floor Leader,
Missouri Senate, District 19
State Capitol, Room 329
201 West Capitol Avenue
Jefferson City, MO 65101

Dear Senator Graham:

I am responding to your letter of January 23, 2007, regarding our pending permit decision for commercial sand dredging in the Missouri River.

A 2004 preliminary assessment indicated that the sand extraction by dredging operations may be contributing to degradation of the Missouri River bed. In response, I convened a panel of experts from the Corps' Omaha District, Northwest Division and Engineering Research and Development Center, to determine the extent of and contribution of dredging to degradation based upon data available at that time. This panel identified significant bed degradation in the Kansas City reach of the Missouri River (miles 340 to 400) and recommended restricting dredging within this reach, particularly following years of low flow. In March 2004 this analysis and recommendation were presented to commercial dredgers in that reach for comment. We continued to study the issue and in the spring of 2006 determined that degradation is also occurring along other reaches of the Missouri River.

Bed degradation can disable water intakes, initiate tributary head cuts, promote bank and levee instability, undermine pipelines and bridge piers, increase encroachment of the high bank, eliminate aquatic habitat and create navigation hazards. Damage caused by degradation has already cost Kansas City public utilities and drainage districts millions of dollars in remodeling or repair of water intakes, drill wells, build backup cooling towers, and repair drainage and flood control structures damaged by degradation. A major flood event could cause failure of revetments, levees, pipelines, and bridges if they are undermined by degradation. Such an event could have a tremendous economic impact on Missouri. Based on these potential impacts, as required by the National Environmental Policy Act (NEPA), I cannot make a Finding of No Significant Impact (FONSI) decision and issue permits for the proposed commercial dredging unless some steps are taken to minimize the potential contribution of dredging to bed degradation. After considering the potential impacts on the Missouri River, the need for construction sand, and the economic impacts of dredging and degradation, I have determined that those steps will most likely include reducing dredging in the most severely degrading reaches, freezing extraction limits in all remaining reaches, monitoring and reporting dredging activity, limiting the permits to a 3-year period, beginning more in-depth study of the problem to identify sustainable dredging thresholds and preparing an Environmental Impact Statement (EIS) for the permit reevaluation in 2009. If I can not conclude a

FONSI at this time, then I would have to prepare an EIS regarding the proposed activity before dredging could be permitted to continue. The three-year period, with the ongoing data-gathering, should provide understanding of sustainable thresholds without removing sand dredging from the river in the interim. We would also then coordinate the permit cycles of the Kansas City District and St. Louis District Missouri River dredging permits and include them all in the EIS for the next permit cycle.

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Stakeholders affected by degradation including the City of Kansas City, Missouri; Unified Government Board of Public Utilities; Water District One of Johnson County, Kansas; Missouri-Arkansas River Basin Association; and the Kansas City Industrial Council have requested Congress and the Administration to provide funding for a comprehensive investigation of the Missouri River degradation. Recently, Governor Blunt has also requested the Corps of Engineers to fund an investigation. The Kansas City District cannot make funding requests to Congress. If you believe this issue to be important, you can request Congress to include funding for an investigation in the 2008 Energy & Water Development Appropriations.

If you need additional information, please contact my Executive Assistant, Mr. Larry L. Myers, at 816-389-3205.

Sincerely,

SIGNED

Michael A. Rossi
Colonel, Corps of Engineers
District Commander

Copies Furnished:

CDR USACE (CECW-OR)
OC
~~OD~~

Same letter furnished:

January 24, 2007
Honorable Brad Lager
Missouri Senate
District 12
State Capitol, Room 429
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Wm. H. "Bill" Stouffer
Missouri Senate
District 21
State Capitol, Room 332
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Mike McGhee
Majority Deputy Floor Whip
Missouri House of Representatives
District 122
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

January 22, 2007
Honorable Joe Aull
Missouri House of Representatives
District 26
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

January 23, 2007
Honorable Curt Dougherty
Missouri House of Representatives
District 53
State Capitol, Room 102BB
201 West Capitol Avenue
Jefferson City, MO 65101

January 23, 2007
Honorable Charlie Schlottach
Missouri House of Representatives
District 111
State Capitol, Room 233
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Trent Skaggs
Missouri House of Representatives
District 31
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

January 22, 2007
Honorable Rob Schaaf
Missouri House of Representatives
District 28
State Capitol, Room 111
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Tom Loehner
Missouri House of Representatives
District 112
State Capitol, Room 403B
201 West Capitol Avenue
Jefferson City, MO 65101

January 17, 2007
Honorable Bill Deeken
Missouri House of Representatives
District 114
State Capitol, Room 400
201 West Capitol Avenue
Jefferson City, MO 65101

January 17, 2007
Honorable Kevin Threlkeld
Missouri House of Representatives
District 109
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Bob Nance
Missouri House of Representatives
District 36
State Capitol, Room 405A
201 West Capitol Avenue
Jefferson City, MO 65101

January 16, 2007
Honorable Ed Robb
Missouri House of Representatives
District 24
State Capitol, Room 407B
201 West Capitol Avenue
Jefferson City, MO 65101

January 18, 2007
Honorable Mark J. Bruns
Missouri House of Representatives
District 113
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

January 10, 2007
Honorable Paul Quinn
Missouri House of Representatives
District 9
State Capitol, Room 101J
201 West Capitol Avenue
Jefferson City, MO 65101

January 10, 2007
Honorable Royal Turner
Presiding Commissioner
Buchanan County Commission
411 Jules Street, Room 122
St. Joseph, MO 64501-1786

January 22, 2007
President Charles E. Kruse
Missouri Farm Bureau Federation
P.O. Box 658
Jefferson City, MO 65102

January 17, 2007
Honorable Chuck Graham
Assistant Minority Floor Leader
Missouri Senate
District 19
State Capitol, Room 329
201 West Capitol Avenue
Jefferson City, MO 65101

January 23, 2007
Honorable Carl M. Vogel
Missouri Senate
District 6
State Capitol, Room 321
201 West Capitol Avenue
Jefferson City, MO 65101

January 25, 2007
Honorable Tim Flook
Missouri House of Representatives
District 34
State Capitol
201 West Capitol Avenue
Jefferson City, MO 65101

Enclosure 12.80 March 2, 2007 Email from David Shorr Clarifying Capital Sand and Con-Agg's working arrangement

Wheeler, Cody S NWK

From: Shorr, David [DShorr@LathropGage.com]
Sent: Friday, March 02, 2007 3:20 PM
To: Wheeler, Cody S NWK
Subject: RE: MO River Dredging report (UNCLASSIFIED)

Sorry for the delay. PLT 2 Jefferson City Operated by Capital Sand
PLT 3 Glascow Operated by Capitol Sand
PLT 5 Booneville Operated by Capitol Sand
PLT 6 Rocheport Dredging and off loading by Capitol Sand, owned by Conn-Agg, Operated jointly
PLT 7 Carrollton Operated by Capitol Sand
PLT 8 Lexington Operated by Capitol Sand
PLT 10 JC - Gravel Operated by Capitol Sand
PLT 12 Washington Dredged, off loaded and operated by Capitol Sand, Owned by Washington Sand

Hope this helps. Let me know. DAS

-----Original Message-----
From: Wheeler, Cody S NWK [mailto:Cody.S.Wheeler@nwk02.usace.army.mil]
Sent: Wednesday, February 28, 2007 2:12 PM
To: Shorr, David
Subject: MO River Dredging report (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

David,

Our telephone conversation earlier today was very informative and helpful but after I hung up and started making some notes I reallized that I still have a few questions. On Capital Sand's 2006 report you sent me on their behalf on January 18, 2007, they listed the tonnage total for each of the 5 dredges and then the tonnage dredged and delivered to each of 8 locations labelled PLT 2, PLT 3, PLT 5, PLT 6, PLT 7, PLT 8, PLT 10, and PLT 12. I assume PLT is short for plant meaning a sand plant or offloading facility. I see that all the sand they extracted under contract St. Charles Sand delivered to PLT 12. Is that the Washington Sand Plant? Also, which plant is the Con-Agg plant in Rocheport? In other words where are the plants (what river mile), who do they belong to, and who operates them?

Cody Wheeler
Regulatory Project Manager
Regulatory Branch
Kansas City District Corps of Engineers
816-389-3739

Enclosure 12.81 March 12, 2007 Proposal for a No Cap Mine-and-Relax Strategy

LATHROP & GAGE LAW OFFICES

DAVID A. SHORR
(573) 761-5005
EMAIL: DSHORR@LATHROPGAGE.COM
WWW.LATHROPGAGE.COM

314 EAST HIGH STREET
JEFFERSON CITY, MISSOURI 65101
(573) 893-4336, FAX (573) 893-5398

March 12, 2007

Mr. Cody Wheeler
U.S. Army Corps of Engineers
Kansas City District
700 Federal Building
601 East 12th Street
Kansas City, MO 64106

Re: 404 Permit, Missouri River Sand Dredging
Proposal for a No Cap Mine-and-Relax Strategy

Dear Cody:

I greatly appreciated our phone call this past week. In that phone call, we discussed various economic attributes regarding Missouri River sand dredging. You were gracious enough to offer the opportunity to submit any counterproposal we might have which might "relax" pressure on reaches which the Corps believes might be experiencing bed degradation. This letter is intended to provide that alternative.

In our telephone conversation, we discussed the ramifications of a cap and the economics that a cap places on sand as a commodity. As I indicated to you, a cap poses a significant economic burden on sand as a commodity, resulting in dramatic price increases to assure supply throughout the year. Other economic forces will also increase the cost of sand, but in our opinion, none will have such a dramatic effect on commodity pricing as a cap on supply. We believe it more appropriate, if in fact your presumptions regarding bed degradation are true, to focus on a strategy that limits the time in which a mile is dredged and its subsequent time to be relaxed and allowed to recover.

EXTENSION OF REACHES

You have indicated the Corps is willing to consider expanding reaches to be mined. We concur wholeheartedly with this decision. By increasing mining opportunity along a greater stretch of river, the direct impact on an individual location has the potential to be reduced. For purposes of this discussion, we presume that reaches will be extended, especially in those areas in which bed degradation is presumed to have the greatest impact.

In deciding where extensions of reaches will best manifest itself, please be advised that granting additional privileges **upstream** of the current reach has considerably greater

transportation efficiencies than downstream of offloading locations. We suggest, therefore, that any reach extensions be skewed in favor of upstream of offloading locations as downstream is less efficient, but welcome. In the event that you do ultimately determine to open reaches, Capital Sand will request extensions of any area in which it currently has operating privileges.

TIME ON MILE MINED

With some caveats presented following, greatest efficiencies can be garnered by concentrating mining in one mile sectors. We believe that one week per mile of mining is sufficient to garner product with reduced impact to the bed.

REST AND RELAX

The reach mined above should be permitted to recover and relax. With extensions of the mining zone, it is likely that adequate product can be garnered with a strategy allowing a relaxation of each mile mined for a recovery period of four weeks. Based on current mining experience, we believe on average this is adequate time for each mile to recover. Our experience indicates that bed load recovery is a direct relationship to volume of water in the river. Recovery time at high water and the need to rest can be reduced. In the alternative, at low water provision periods of the Corps, the need may be slightly higher. We emphasize that four weeks appears to be a reasonable time frame for both water cycles.

CURRENT PRACTICES

Currently, mine reaches are permitted to rest. It is in a company's interest to have recovery to limit other expenses such as transportation. But with limited reaches, relaxation periods as long as four weeks are difficult to maintain. In addition, the concentration of mining is restricted with reaches being limited, forcing a greater concentration of mining in the same area. With the new regime in place since 1996, it has been difficult to pilot alternative strategies and we recognize that alternative strategies must be investigated in order to achieve the needs of all parties.

ENDANGERED SPECIES

Our negotiation on endangered species was negotiated with presumptions that the Corps' position on limited reaches would remain in effect. We believe the mine-and-relax strategy with no caps has the potential to positively impact the alleged bed degradation problem. However, we have not run any analyses or models to determine extended reach overlay with the endangered species restriction to determine the actual number of river miles available in an extended reach format. We continue to support our negotiated position with the Fish and Wildlife Service on endangered species, but this proposal has not taken into account a complete analysis of mile restrictions outside current permitted reaches. The benefit of the reach extensions may be much more limited than we anticipate in making this proposal.

MODOT SAND SPECIFICATIONS

In addition, as you are aware, MoDOT continues to greatly restrict the sand specification in its contracts. The river acts as a self-classifier. Specific product quality can be garnered from specific segments of river based on the river's curvature and characteristics. The more specific MoDOT's specification becomes, the more specific the mining activity must be in order to meet that product criteria. Specification specificity may also impact bed degradation strategies. Since MoDOT's new specification for sand continues to be tighter, this too will impact this proposal.

COMPETITION IN SPECIFIC REACHES

The mine-and-relax strategy can only be successful where dredge operations by reach are coordinated where there is competition in that reach. In order for the no cap mine-and-relax strategy to be properly tested, the Corps will be required to assist where multiple miners have been permitted and are active.

Capital Sand believes this strategy is worthy of piloting to determine the benefit and impact to both the Corps and Capital Sand's operations. We believe it makes common sense and has a great prospect for our mutual success. There are many unknowns, but we are willing to work with the Corps to evaluate a no cap mine-and-relax strategy. This will give the parties time to learn the effects of (a) the Corps current flow regime, (b) the endangered species negotiated terms, (c) MoDOT's specification impacts, and (d) quantity and quality of material garnered.

We appreciate the opportunity to discuss an alternative with the Corps and are optimistic that our continued dialogue will result in maintaining a strong sand industry while addressing the Corps' concern on river management.

Very truly yours,

LATHROP & GAGE L.C.

By: David A. Shorr

DAS/jf
Enclosure
cc: Colonel Michael Rossi
U.S. Army Corp of Engineers
Kansas City District
601 East 12th Street
Kansas City, MO 64106

bcc: Congressman Ike Skelton
Ray Bohlken
Mike Farmer
Larry Moore

Enclosure 12.82 March 13, 2007 CENWK-EC-H Recommended Monitoring Requirements

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF

March 13, 2007

CENWK-EC-H (1110-2-1150a)

MEMORANDUM FOR OD-R/Cody Wheeler

SUBJECT: Monitoring Requirements for Renewed Sand Dredging Permits on the Missouri River

EC-H has been working closely with OD-R on the technical aspects of renewed commercial sand dredging permits on the Missouri River.

Enclosed are EC-H's recommendations for monitoring requirements for the renewed permits.

Sincerely,

Michael Chapman

MICHAEL D. CHAPMAN
Chief, River Engineering & Restoration Section

1.1 PURPOSE AND SCOPE

This Standard Operating Procedure (SOP) describes the procedures applicable to the collection of hydrographic survey data and dredge position/extraction data.

This SOP is directed towards survey data collection and is meant to identify scientifically sound methods and procedures for utilization by field personnel that promotes consistent data collection in a standard manner. ***It is imperative that proper and consistent procedures are followed during data collection of all survey data***. Following the procedures described in this SOP will help ensure that survey data collected is of a known and consistent quality that meets the data quality objectives for which it is collected.

2 EQUIPMENT AND SUPPLIES

The following lists the equipment needed to perform hydrographic surveys. An 18' – 24' boat will be needed for the hydrographic surveys and to move survey crews to the work sites. Electronic positioning (range-range, range-azimuth, Global Positioning System (RTK-GPS)), or total station is required for horizontal positioning and ground elevations. A sonic depth sounder (RAYTHEON DE-719, INNERSPACE 448, or ODOM Echotrac or similar) is required to obtain underwater elevations.

3 DATA COLLECTION STANDARDS

Consistent data collection requires following data collection standards presented in the appropriate COE Engineering Manuals (EM's) and listed under References. Consistent data collection is required for surveying of the different typical dredged areas.

Data collection standards reflect the analysis that will be performed with the data. Analysis will most often require forming an accurate topographic map of the area for use with tracking river bottom changes relative to dredging locations.

3.1 DATA COORDINATE SYSTEM

Horizontal Control. All survey data shall be tied into the UTM Zone 15 NAD 83 (feet) coordinate system. Coordinates should be accurate to the nearest 5-foot.

Vertical Control. Mean Sea Level (MSL) elevations in NGVD29 (feet) are required. Control elevations shall be obtained from monuments convenient to each Missouri River reach. Ground elevations shall be accurate to the nearest 0.1 feet, while underwater elevations shall be accurate to the nearest 0.5 feet.

4 HYDROGRAPHIC SURVEYS

The collected data will usually be used to generate a digital terrain model (dtm) of the survey area. Cross section intervals, longitudinal profiles, and break line data must be of sufficient density to provide the detail required to generate an accurate topographic surface of the study area.

Each permitted dredged reach will be surveyed on an annual basis beginning in 2008. Surveys shall extend 2 miles upstream and 2 miles downstream of each permitted dredged reach. Surveys shall be completed during the summer months and should be completed as close to a 12 month interval as possible.

4.1.1 Water Surface Elevation.

Conversion of sounding depth to elevation will be accomplished using benchmarks at the upstream and downstream end of each bend and intermediate points established during the survey. The benchmarks may utilize existing Corps monuments if available or may require establishment of new benchmarks. Temporary tape down points may be established at each end of the bend using the benchmarks. Additional tapedown or temporary benchmarks shall be established within each bend such that the maximum distance between points does not exceed 5 miles. Conversion of sounding depth to elevation shall use all the tapedown points. The temporary tapedown points will improve sounding accuracy by reducing the interpolation distance and constant slope length. All tape down points and water surface elevations will be provided in a separate spreadsheet as discussed in section 6. Water surface elevations should be recorded at a minimum frequency of twice per day.

4.1.2 Cross Section Data Collection Guidelines.

Cross section intervals should be an average of 100 feet (30.4 meters). Each section requires hydrographic soundings (position and elevation). The sections shall extend from water's edge to water's edge. Under these conditions, data should be collected at sufficient high flow depths to allow boat access. These requirements may be adjusted based on individual scope requirements.

4.2 HYDROGRAPHIC SURVEY DATA LOCATION GUIDE

Refer to the preceding sections for collection details regarding the hydrographic surveys. Additional guidance is summarized for the layout of survey data as follows:

1. Cross sections at 100 foot spacing shall be perpendicular or nearly so to the centerline of the Missouri River.
2. The interval at which hydrographic positions and elevation shall be collected is approximately every 2-feet.
3. The survey boat may deviate ***no more that 30 feet*** either side of the survey line.
4. A bar check and/or sound velocity profiler is required to calibrate the depth sounder for boat draft and average speed of sound at the start of each day's work.
5. The cross-section data collection may be collected in either direction and additional points may be collected as is seen fit.
6. Longitudinal profiles will be required in addition to cross sections. A minimum of four profiles should be collected for the length of the area covered by the cross-sections. Profiles are required to accurately detail bed topography in the vicinity of structures and the bank with the approximate profile location as:

1) The first profile on the dike side is located as close to the bank and around the dike as possible.

2) A second parallel profile located off the riverward end of the dikes.

3) A third profile along the sailing line of the river.

4) Along the opposite bank, the fourth profile is located as near the bank as possible.

7. Break line data, such as waters edge around sandbars and bank toe, is also required. The need to acquire these data will be dependent on the river stage at the time of the survey, and the interval of the cross sections and longitudinal profiles.

4.3 GOVERNMENT FURNISHED ITEMS

Prior to undertaking field data collection, the COE shall furnish the following items to another Government agency or contractor:

1) Electronic PDF file or 3-Ring notebook with the TBM description notes listing coordinate data and elevation of Corps of Engineers monuments for the hydrographic survey area.
2) X-Y-Z coordinate data file formats defined later.
3)

5 DREDGE POSITION/EXTRACTION DATA

The collected data will be overlayed on the dtm's developed from the hydrographic surveys. Each dredging day will be represented by a data point with an x,y and an extraction amount.

5.1 DREDGE POSITION DATA

A position data point shall be collected at the beginning of each day the dredge is operational. Additional position data points shall be collected each day if the dredge moves more than 100' in any one day. The position data point shall be taken from the same location on the dredge each day and shall be located as close to the cutter-head as possible.

5.2 DREDGE EXTRACTION DATA

For each day the dredge is operational, the amount of material, in tons, removed from the river shall be recorded. If the dredge moves more than 100' in any one day then the amount of material removed from each location must be recorded.

Amount of material removed shall be calculated by one of the following methods:

1) Material can be weighed on a commercial scale as the material is off loaded from the barge.

2) Weight of material can be calculated by barge displacement. If this method is chosen, each barge must be furnished with a barge displacement table which calculates the amount of material on the barge based on the displacement of the barge. The draft of the four corners of the barge will then be measured each time a load is taken to the plant. The draft of the four corners will then be entered into the barge displacement table to calculate the tonnage on the barge.

3) Volume of material can be used to calculate the tonnage. After each barge is loaded, the volume of material on the barge will be calculated and then converted into tonnage based on an appropriate unit weight factor. If this method is chosen, each barge must be furnished with a barge volume table. The four corners of the hopper on top of the barge will then be measured after the barge is fully loaded and the measurements entered into a barge volume table to calculate the tonnage on the barge.

6 HYDROGRAPHIC SURVEY DATA DELIVERY

The survey data shall be delivered in the required format. Survey data shall be delivered in an electronic format in an acceptable delivery method including email and CD. Collected data shall be furnished in the following file formats.

6.1.1 Coordinate File Format.

The coordinates file shall be entered in their entirety in ASCII files in an X-Y-Z format (easting, northing, and elevation). Easting and northing coordinates shall be entered to the nearest 0.1-foot and elevations entered to the nearest 0.01-foot. A cross-section identifier column should be added to be able to separate each data string collected.

COORDINATE FILE EXAMPLE

Point #	Easting	Northing	Elev.	Comments
1002	501588.6	3011809.2	948.876	LT TOE OF BANK
1003	501575.1	3011797.0	943.940	RIPRAP
1004	501567.5	3011793.5	940.790	LT WATER EDGE
1005	501560.4	3011782.2	935.056	LT SOUNDING
1006	501019.8	3011340.9	938.757	RT SOUNDING
1007	501010.5	3011331.0	940.850	RT WATER EDGE
1008	501005.4	3011327.5	942.517	RT TOE OF BANK
1009	501010.2	3011331.0	940.813	RT WATER EDGE
1010	500996.8	3011320.7	948.634	GROUND SHOT
1011	500993.7	3011317.9	954.190	RT TOP OF BANK
1012	500980.5	3011307.9	954.705	GROUND SHOT

6.1.2 Water Surface Data.

The water surface elevation data used to determine tape down elevations shall be recorded in an excel spreadsheet with tabulated data. During the data collection, water surface elevations will be tabulated at a minimum frequency of twice per day. The file format with example data is as follows:

Col. 1	Col. 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
Bend	Point	Date/Time	Northing (Y)	Easting (X)	RP Elev.	Tape Down	Sur. Water Elev.
Peterson	RP 1	7/26/2005 1400	15154337.47	788222.997	1003.556	-2.4	1001.156

6.1.3 Data Collection Information Table.

An EXCEL table shall be made listing the starting and ending coordinates for each cross section.

Data Collection Information Table.

Project Name:					Job or Contract Number
Discrepancy/Errors/New Monuments Table					Date
River Mile	River Bank	UTM Zone 15 NAD 83 Combined Factor o.xxxx Easting	Northing	NGVD 29 Elev.	Changes or New Monuments Set

7 DREDGE POSITION/EXTRACTION DATA DELIVERY

Collected data shall be furnished in the following file format:

Col. 1	Col. 2	Column 3	Column 4	Column 5	Column 6	Col 7	Column 8	Column 9
Dredge Name	Point	Date	Time of Day	Northing (Y)	Easting (X)	Tonnage Of First Barge	Tonnage Of Second Barge	Total Tonnage For Dredge For Date
Peterson	RP 1	7/26/2005	1400	15154337.47	788222.997	5,000	5,000	10,000

Number of columns will need to be adjusted based on the number of barges loaded from a particular dredge in any day.

8 DELIVERABLES

At the end of every calendar year, each dredging company shall include the acceptable performance of the work items described above and the delivery of the following items:

Table 2. Deliverable Items After Each Calendar year	
	Separate EXCEL and/or ASCII files (CD's or email) of the hydrographic survey data in the appropriate formats.
	An EXCEL file listing any discrepancies for control monuments used and any new control monuments set during the survey.
	All project data files created during the setup and collection of Hydrographic data as well as a summary sheet indicating what collection parameters were used (speed of sound, etc.) These files include tgt, .ini, .tid, etc. in HYPACK. All data necessary to accurately reproduce the survey project should be provided.
	A paper/digital copy of the barcheck from the depth sounder and the .vel file from HYPACK to document the calibration procedure.
	A **"Trackline"** plot that will be used to determine the quality of the hydrographic survey line.
	The paper/digital sounding charts from the survey depth sounder used during the hydrographic surveys.
	Separate EXCEL (CD's or email) of the dredge position/extraction data for each dredge.

9 METADATA

a. The dredgers will provide complete Geospatial data to include a spatial component, attribute information and FGDC compliant metadata.

i. All deliverables shall comply with applicable international, national, and Federal information technology and geographic information standards, particularly those determined by the Federal Geographic Data Committee as supporting the National Spatial Data Infrastructure.

ii. The dredgers shall evaluate and report the positional accuracy for the geospatial data produced through this procurement. The Contractor shall ensure that positional accuracy is evaluated and reported according to guidelines in the Federal Geographic Data Committee Standard Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1999. The National Standard for Spatial Data Accuracy is downloadable from http://www.fgdc.gov/standards/documents/standards/accuracy/chapter3.wpd (WordPerfect format) or http://www.fgdc.gov/standards/documents/standards/accuracy/chapter3.pdf (Portable Document Format, or PDF), at no cost to the dredger.

iii. Accuracy statements reported by the dredgers shall be completely and thoroughly substantiated by Metadata. The National Standard for Spatial Data Accuracy provides guidelines in Section 3.2.3, Accuracy Reporting, for reporting positional accuracy in Metadata. The dredgers shall ensure that the metadata is compliant with the Federal Geographic Data Committee Standard *Content Standard for Digital Geospatial Metadata, FGDC-STD-001-1998*, which is downloadable from http://www.fgdc.gov/metadata/contstan.html

Enclosure 12.83 March 13, 2007 CENWK-EC-H Summary of Recommendations

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF

March 13, 2007

CENWK-EC-H (1110-2-1150a)

MEMORANDUM FOR OD-R/Cody Wheeler

SUBJECT: Summary of EC-H's Technical Recommendations for Renewed Commercial Sand Dredging Permits on the Missouri River

1. On June 27, 2003, OD-R issued a Public Notice for renewal of and/or new Department of the Army authorizations for all commercial sand dredging between river miles 456 and 49.

2. In response to the Public Notice, EC-HH convened a panel of regional experts to review available data and determine the contribution of sand dredging to the degradation problem. The panel met on 18 November 2003. Based on the information available at the time, the panel determined the exact cause or combination of causes of degradation could not be identified. However, the panel determined that a negative mass balance will result if extraction rates exceed total bed material load available. Further, the panel made recommendations to restrict the amount of extraction in the Kansas City reach during low flow periods. The recommendations were forwarded to OD-R in early 2004.

3. The Missouri River has been in mild to extreme drought during the past three years. Had the Panel's recommendations been implemented immediately, extraction within the Kansas City reach would have been reduced approximately 600,000 tons each year during 2004, 2005, 2006, and the upcoming 2007 season.

4. During early 2006, EC-HH was notified by OD-R that Hermann Sand and Gravel was requesting an increase in their annual permitted extraction rate. EC-HH provided OD technical data and recommended that the increase not be granted.

5. Funding has not been available to conduct a comprehensive detailed analysis of the degradation problem nor has funding been available to determine the exact contribution of sand dredging to the degradation problem. However, some limited studies have been undertaken to determine the magnitude of the degradation problem and to attempt to determine the extent of culpability of the various possible contributing factors. The following is a summary of studies undertaken to date:

a. Stage and Flow Analysis- Kansas City Area, draft study was completed in 2005. The study looked at stage and flow duration data for the Kansas City area. The study looked at data from six gages starting at St. Joe and extending down to Waverly. The study indicates that flows have increased over time between the 90^{th} to 10^{th} exceedance. However, stages have decrease over this same time period at Atchison and at the Hannibal Bridge.

b. A draft report entitled 'Velocity Analysis for the Rated Gages Below Rulo' was issued in 2005. The study looked at the evolution of velocity at each gage over time.

c. A draft report 'CRP Water Surface and Commercial Dredging Volume Comparisons' was issued in December 2006. The report compared water surface profiles over a recent 15 year period to determine the profile trend along the entire river. The report then compared the profiles against areas and magnitude of dredging. The report also compared water surface volume changes over the period against dredging volumes. The report states that water surface profile changes and volumetric changes appear to be greatest at locations were commercial dredging is the most intensive. The report also shows a correlation between volumetric changes and dredging volumes.

6. Based on the draft studies outlined above, projected minimal sediment movement over the next few years due to a continuing basin wide drought, the following restrictions/actions are recommended to avoid unacceptable impacts to the river from dredging activities:

a. The permits should only be renewed for a three year period instead of the customary five year period. The shorter timeframe will allow for more frequent review of data and the alteration of permit conditions.

b. A comprehensive study of the impacts of dredging should be prepared before new permits are issued in 3 years. To be comprehensive, the study should include all commercial dredging activities below Rulo. Therefore, commercial dredgers between river miles 0 and 50, who are regulated by the Corps' St. Louis District should be included.

c. The Ad-Hoc panel's recommended reduction in extraction within the Kansas City reach should be implemented as soon as possible. A phase in of reductions is acceptable as long as year 2009 of the new permit contains the full recommended reduction.

d. The Ad-Hoc panel recommended that extraction reductions in the Kansas City reach be tied to the previous two years flow volume at St. Joseph. EC-HH now recommends that for the upcoming three year permit cycle, the extraction reductions be decoupled from St. Joseph flow volumes. This revision of the recommendation is based on the 3 to 4 year delay in implementing the Ad-Hoc panel's recommendation. During this time period, extraction volumes have been in excess of the panel's recommendation. Decoupling for this permit cycle could allow for some rebound should flows increase.

e. The Ad-Hoc panel also recommended that mile 340 to 400 be considered as a Kansas City restricted extraction reach. EC-HH now recommends that the reach be extended down to river mile 329. This recommendation is based on water surface profile plots which show that above this river mile degradation is still occurring while the river is stable or slightly aggrading below this river mile. This additional mileage limit will help prevent the impacts from increased dredging in this area from propagating upstream and impacting the Kansas City reach.

f. In 2004 EC-HH indicated that reductions in extraction volumes in the Kansas City restricted reach could be off set by corresponding increases in extraction volumes

immediately upstream and downstream of the restricted reach. EC-HH does not recommend allowing offsetting extraction upstream of the restricted reach. This recommendation is based on the continued degradation in the Kansas City reach and the depletion of incoming sediment that this dredging would cause.

g. Permitted dredging volumes should be capped at 2006 levels. A comprehensive analysis of the impacts of dredging needs to be conducted before permitted dredging volumes are increased.

h. Dredgers should be required to collect and supply data necessary to track and monitor their activity. The data will then be used to assess the impacts of their activity. EC-HH will provide a recommendation of required data collection under separate cover.

7. The above recommendations are viewed as the minimum steps that should be taken to avoid unacceptable impacts to the river or infrastructure located in or adjacent to the river. To be effective, the recommendations must be implemented in a timely manner. Undue delay will in effect nullify the benefit of the recommendations. If you have any questions, please contact Michael Chapman at 389-3310.

Michael Chapman

MICHAEL D. CHAPMAN
Chief, River Engineering & Restoration

Enclosure 12.84 March 14, 2007 Con-Agg Report of Tons Dredged in 2006

Con - Agg of MO, L.L.C.

VIA FACSIMILE 816-389-2032

March 14, 2007

Mr. Cody Wheeler
U.S. Army Corps of Engineers
Kansas City District
700 Federal Building
601 East 12th Street
Kansas City, MO 64106

RE: 404 Permit, Missouri River Sand Dredging
Proposal for a No Cap Mine-and-Relax Strategy

Dear Mr. Wheeler:

In response to your telephone call this morning, the approximate number of tons dredged for us by Capital Sand at Rocheport is 175,000.

If you have further questions, please contact me.

Yours very truly,

Larry W. Moore

Larry W. Moore

LWM/ss

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
March 27, 2007

Colonel Michael Rossi
District Engineer
US Army Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

Dear Colonel Rossi:

The U.S. Army Corps of Engineers (Corps), Kansas City District, has been consulting with the U.S. Fish and Wildlife Service (Service) on the Corps' renewal of commercial sand dredging permits in the Missouri River since 2001. Over the last few years, the Corps and Service have corresponded and met to discuss general fish and wildlife concerns and potential effects to federally listed species. As recently as March 2005, the Regulatory Branch informed us that the Corps was in the "home stretch" regarding permit renewal.

Last month, the Corps requested Service comments regarding various additional dredging reaches to accommodate the needs of the applicants. To date the Service has responded to the Corps in a timely manner and in good faith. However, it is now almost six years beyond the original permit renewal date and the Corps has yet to issue those dredging permits which included special conditions to protect important aquatic habitats agreed to by the Service, the Corps, and the applicants. The lag in implementing those conditions is disturbing and raises concerns regarding the adequacy of the existing permits in meeting the Corps responsibilities under the Endangered Species Act of 1973 (as amended).

Since we began our discussions, there has been increased information about and awareness of the continuing trend of bed degradation in the Lower Missouri River. According to information presented at the recent Missouri River meeting by Mike Chapman of your staff, bed degradation in the lower river is continuing, and in some places may pose potential future threats to public infrastructure. Based on the information, it appears commercial dredging may be a significant factor in that trend. Impacts to aquatic habitats and fish and wildlife resources may occur long before cumulative effects are apparent on landward structures and utilities. Therefore, we urge the Corps to expedite issuance of the new commercial dredging permits to avoid potential for current and future adverse impacts to federal trust resources, including the federally endangered pallid sturgeon. In addition, we recommend that before the next permit renewal (which we understand will be in three years), that there be a comprehensive analysis of bed degradation in the lower river, including the role of commercial sand and gravel removal from the system. Such

an evaluation is overdue, and would help address factors contributing to bed degradation, and would facilitate a comprehensive approach to addressing the potential threats to fish and wildlife resources, as well as public infrastructure.

We understand this is an important issue, and the Corps is trying to address it in the most appropriate way. At the same time, the renewal process has been longer than the previous 5-year life of a permit, had one been issued on the original timeframe. The Service believes this delay poses potential adverse effects to aquatic habitats and native river fishes. If the Corps is unable to issue the revised permits in a timely manner, we recommend that the Corp contact this office to determine the next steps to address our shared responsibilities to protect the federally endangered pallid sturgeon.

We look forward to continued coordination with the Corps. Please contact Jane Ledwin of this office at (573) 234-2132, extension 109, if you have any questions or if we can be of further assistance.

Sincerely,

Rick L. Hansen

for Charles M. Scott
Field Supervisor

cc: FWS, MO River Coordinator, Bismarck, ND (Olson)
MDC, Jefferson City, MO (Epperson)
MDNR, Jefferson City, MO (Boos)

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Enclosure 12. 86 June 6, 2007 Lathrop & Gage Letter Requesting Additional Dredging Reaches for Capital Sand.

LATHROP & GAGE L.C. LAW OFFICES

DAVID A. SHORR
(573) 761-5005
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WWW.LATHROPGAGE.COM

314 EAST HIGH STREET
JEFFERSON CITY, MISSOURI 65101
(573) 893-4336, FAX (573) 893-5398

June 6, 2007

VIA FAX TRANSMISSION
(816) 389-2032
AND U.S. MAIL

Mr. Cody Wheeler
U.S. Army Corps of Engineers
Kansas City District
700 Federal Building
601 East 12th Street
Kansas City, MO 64106

Re: Additional River Reaches
Capital Sand Company, Inc.

Dear Mr. Wheeler:

Consistent with our telephone conversation of May 29, 2007, we are requesting additional reach mileage in which to extract sand under both our current and future permits. We request expansion into the following areas:

1. Mile Marker 106 – 115
   Offload point, Jefferson City River Terminal, Jefferson City, Missouri

2. Mile Marker 116 – 118
   Offload point, Jefferson City River Terminal, Jefferson City, Missouri

3. Mile Marker 140 – 150
   Offload point, Jefferson City River Terminal, Jefferson City, Missouri

4. Mile Marker 158 – 164
   Offload point, Jefferson City River Terminal, Jefferson City, Missouri

5. Mile Marker 301 – 328
   Offload point, Capital Sand, Lexington, Missouri Plant

We appreciate your efforts on this difficult permit. Please advise if there is any additional information required for these five requests. On behalf of Capital Sand, I am

Very truly yours,

LATHROP & GAGE L.C.

By: David A. Shorr

DAS/jf
cc: Ray Bohlken

JCDOCS 25737v1