



UNITED STATES ARMY CORPS OF ENGINEERS

# Missouri River Commercial Dredging Draft EIS

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JULY 2010

## Appendix B Related Action – Development of New Sand Plants

PREPARED BY



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## Abbreviations & Acronyms

CWA	Clean Water Act
EIS	environmental impact statement
LOMR	lower Missouri River
Master's	The Master's Dredging Company
MDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
Rau	Edward N. Rau Contractor Company
RHA	Rivers and Harbors Act of 1899
RM	river mile
USACE	U.S. Army Corps of Engineers

A P P E N D I X B

# Related Action – Development of New Sand Plants

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## B.1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE) has received permit applications from eight companies to dredge sand and gravel from selected locations between river mile (RM) 0.0 and RM 447.7 on the lower Missouri River (LOMR) for commercial uses. As part of its review of the permit applications, the USACE is preparing a Draft Environmental Impact Statement (EIS). The Draft EIS examines the potential environmental impacts of the proposed dredging activities and any related actions. In addition to dredging, facilities for unloading, sorting, and temporarily storing dredged sand and gravel are required. These facilities, located on the shore at various locations along the LOMR are called sand plants.

Two of the applicants—The Master’s Dredging Company (Master’s) and Edward N. Rau Contractor Company (Rau)—do not presently own or operate sand plants that could serve their proposed dredging operations. If a permit is authorized for either of these applicants, they propose to build sand plants on sites that they presently own or control. While these facilities are not part of the proposed dredging activity, they are a related action as a means of offloading, processing, storing, and distributing commercial sand and gravel produced by the dredging operation as required. Sites have been secured and some preliminary steps have been taken to initiate development of these facilities. The locations of the existing and proposed sand plants are shown in Figure B-1 (Sheets 1–5).

The following sections include descriptions of the preliminary plans for development of sand plants to support dredging operations for Master’s and Rau.

## B.2 THE MASTER'S DREDGING COMPANY, INC.

Master's proposes to dredge in river reaches from approximately RM 383.1 to RM 390. Master's has control of a property near Waldron, Missouri. Master's plans to develop a sand plant at one of two sites on the Waldron property to support approved dredging operations.

The Master's dredging operation differs from that of all the other applicants in that the dredge slurry is not screened on the dredge and the selected material is not loaded onto a barge. Instead, Master's plans to string a pipeline from the dredge to its sand plant and pipe the dredged slurry to shore, where it would be separated, screened, and dewatered. The processed material then would be stacked for distribution. The site plan shows each of these components (Figure B-2). After the dredged material has been sorted and stacked, the remainder of the operation would be similar to operations at the sand plants of the other Dredgers.

The Master's property at Waldron is located on Morris Ferry Road, as described below. Two separate sites are being considered for the proposed sand plant on the Morris Road property. These sites are shown as Plant Site 1 and Plant Site 2 in Figure B-2. The configuration and permitting requirements for the sites are described below.

**Location:** 39 deg. 14.25' north, 94 deg. 49.366' west, approximately RM 388.

**Size:** 20 – 60 acres would be developed depending on the amount of dredging approved.

**Site Plan:** The site would be developed to include a sand plant configured as shown in Figure B-3. The sand plant would be connected to the dredging operation via a slurry pipeline that carries the dredged material. The slurry pipeline would require an easement over the shoreline and to the sand plant site. At the sand plant, the slurry would be delignified (coal would be removed from the sand and gravel) and dewatered, and then the material would be classified by size and transported via a conveyor/stacker to a storage pile. Depending on the dredging amounts allowed in any approved dredging permit, one of two storage piles would be established with a storage volume of 500,000 tons per pile. The pile could be up to 100 feet high. Although not shown, the site plan would likely include an office/maintenance building and truck scale. Access to the sand plant would be from Morris Road.

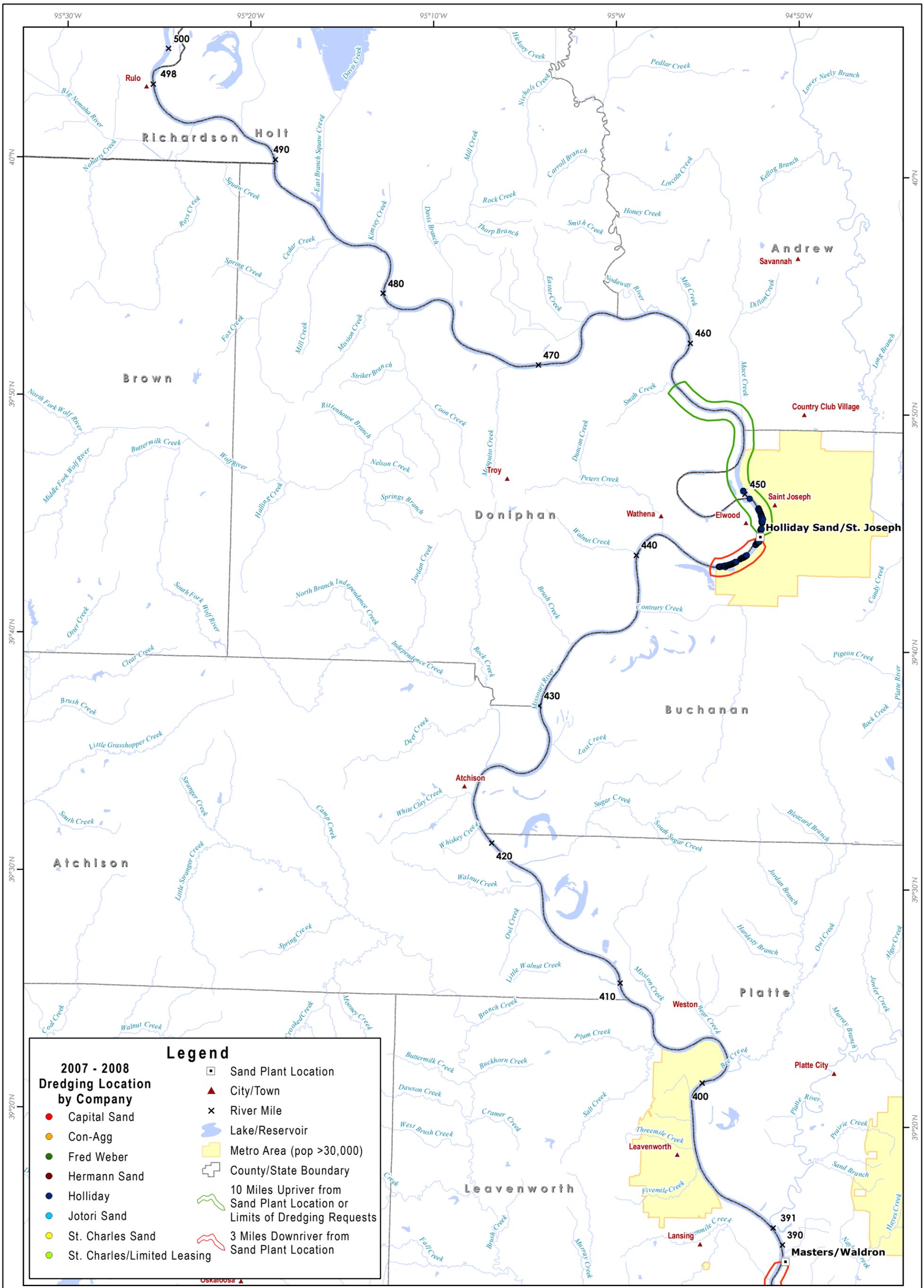
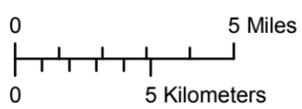


Figure B-1  
 Dredging Sand Plant Locations  
 Sheet 1 - St. Joseph Segment  
 Missouri River Commercial Dredging EIS



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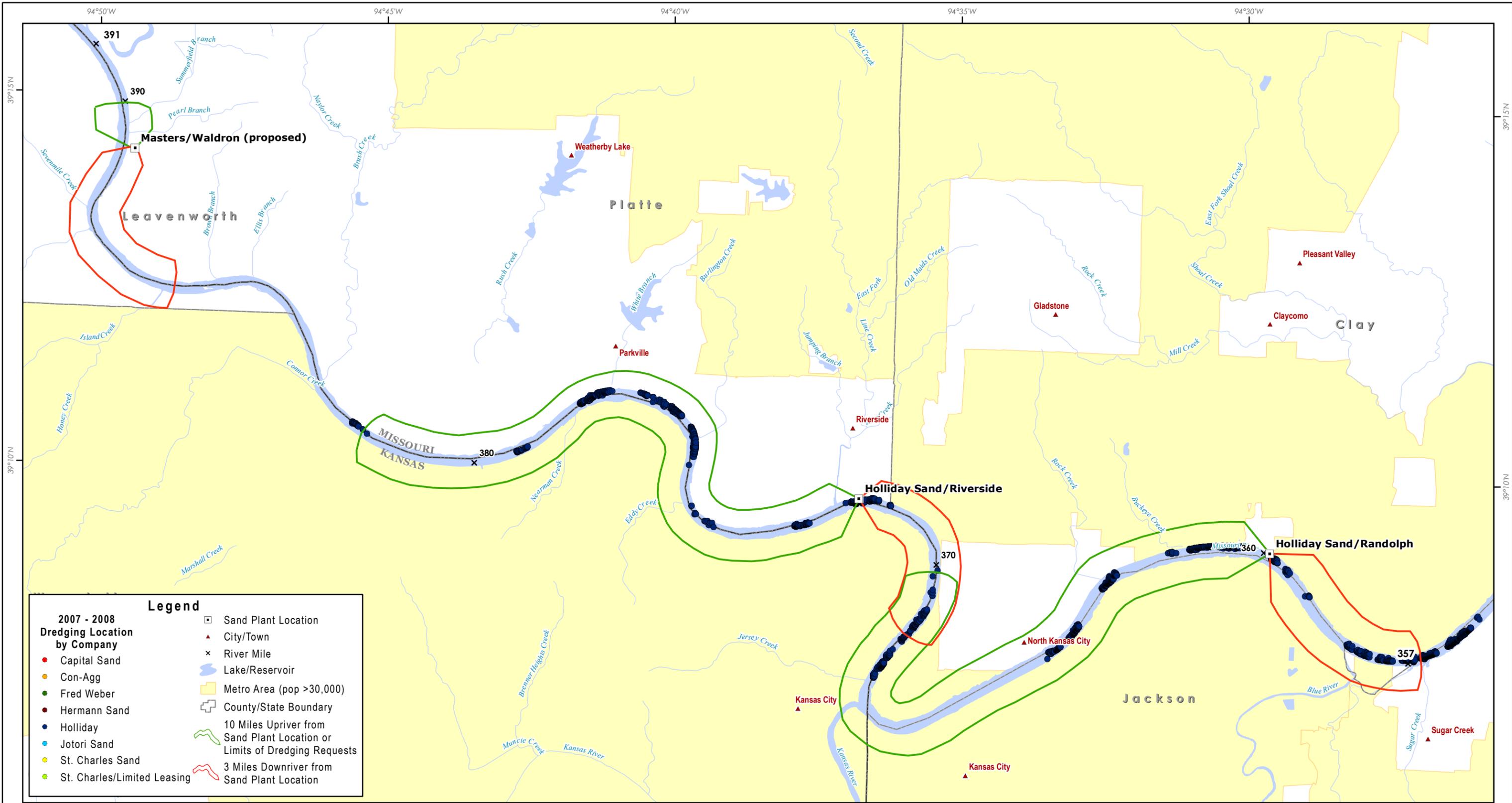
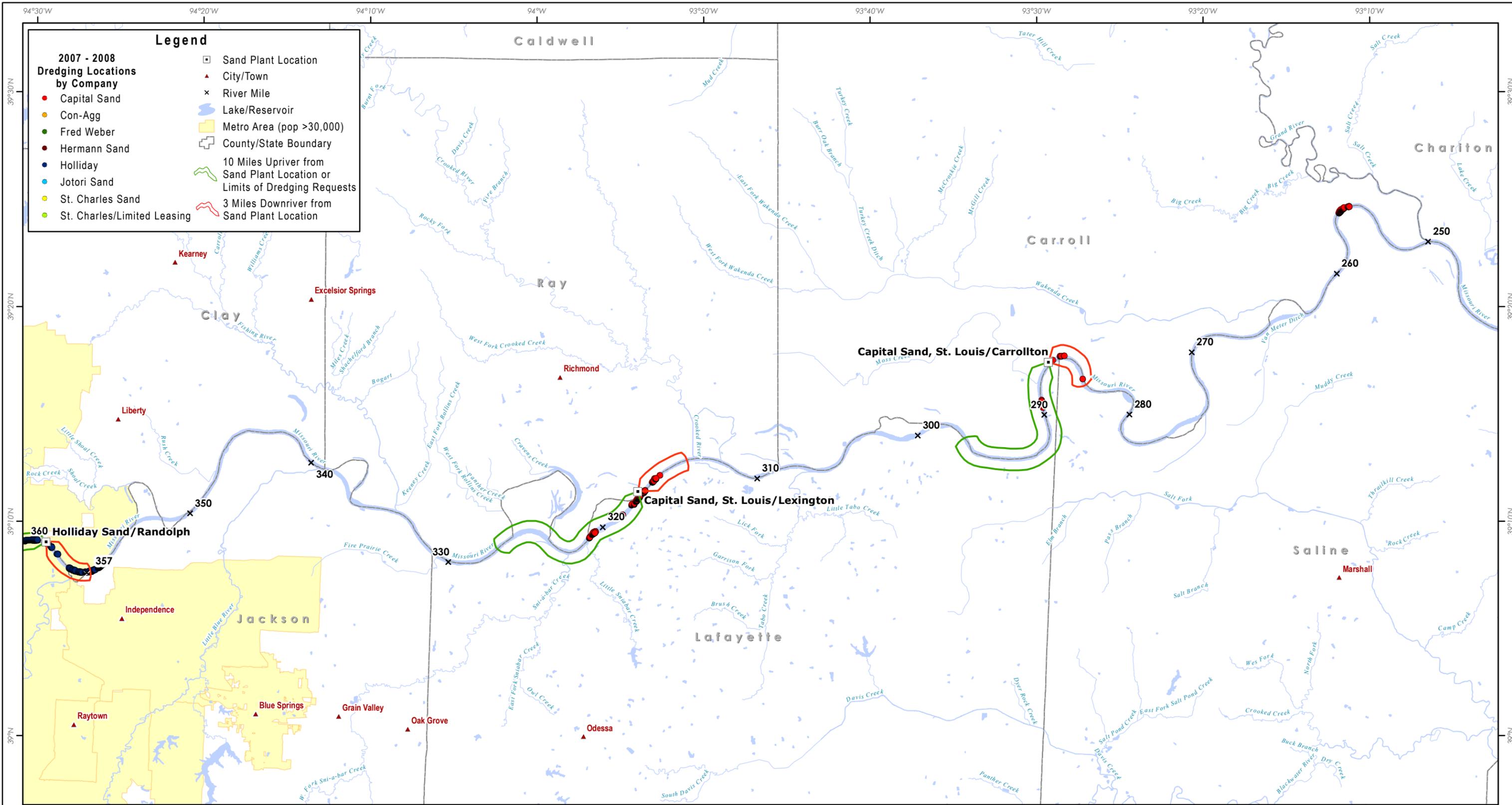


Figure B-1  
 Dredging Sand Plant Locations  
 Sheet 2 - Kansas City Segment  
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**Legend**

**2007 - 2008 Dredging Locations by Company**

- Capital Sand
- Con-Agg
- Fred Weber
- Hermann Sand
- Holliday
- Jotori Sand
- St. Charles Sand
- St. Charles/Limited Leasing

- Sand Plant Location
- ▲ City/Town
- × River Mile
- Lake/Reservoir
- Metro Area (pop >30,000)
- County/State Boundary
- 10 Miles Upriver from Sand Plant Location or Limits of Dredging Requests
- 3 Miles Downriver from Sand Plant Location

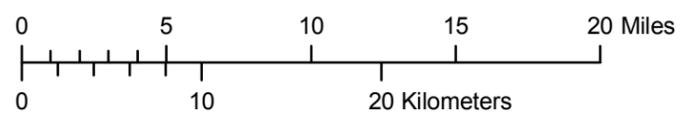


Figure B-1  
 Dredging Sand Plant Locations  
 Sheet 3 - Waverly Segment  
 Missouri River Commercial Dredging EIS

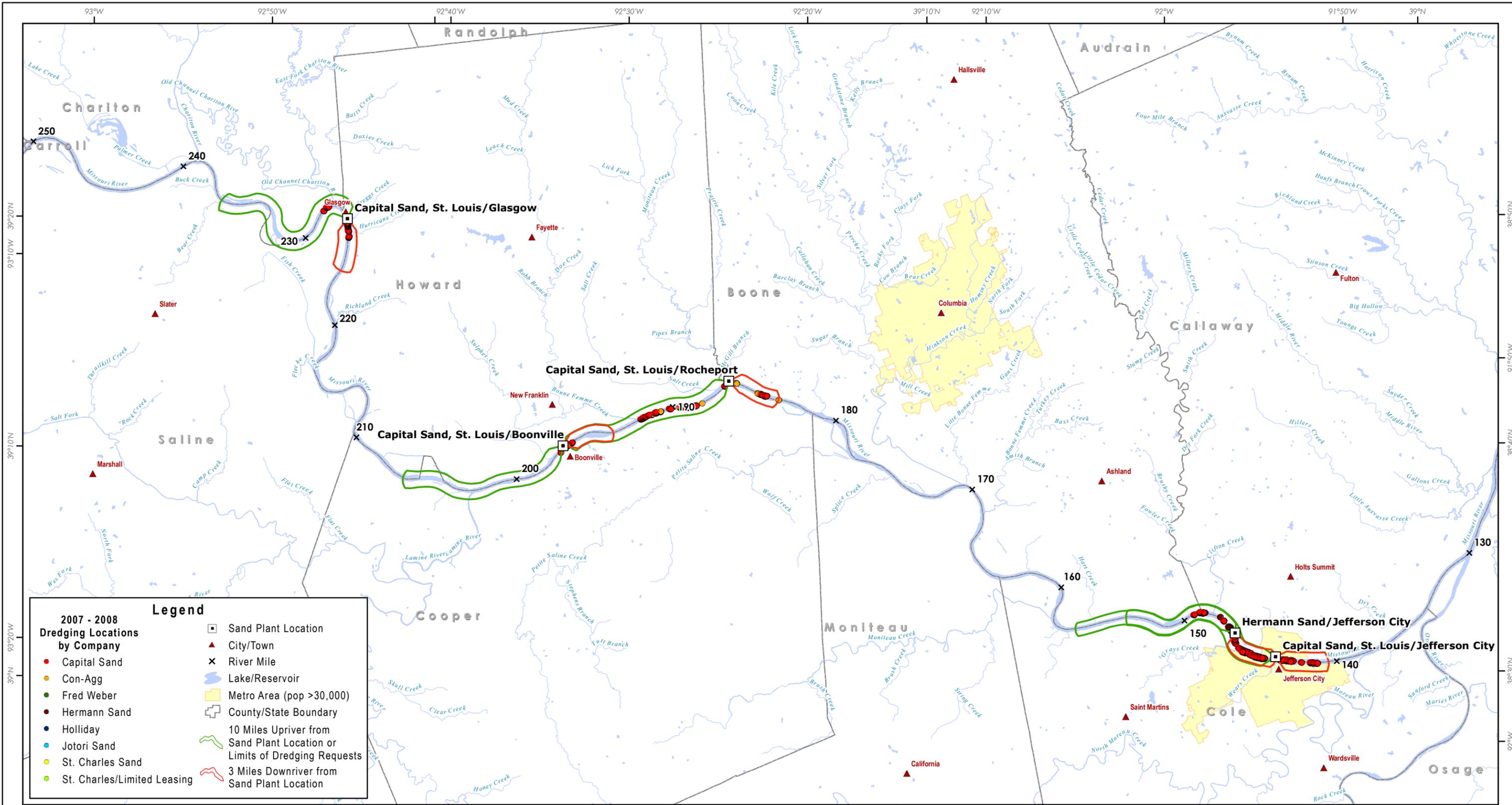


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**Legend**

<b>2007 - 2008 Dredging Locations by Company</b>	□ Sand Plant Location
● Capital Sand	▲ City/Town
● Con-Agg	× River Mile
● Fred Weber	🌊 Lake/Reservoir
● Hermann Sand	🏠 Metro Area (pop >30,000)
● Holliday	⬜ County/State Boundary
● Jotori Sand	📏 10 Miles Upriver from Sand Plant Location or Limits of Dredging Requests
● St. Charles Sand	📏 3 Miles Downriver from Sand Plant Location
● St. Charles/Limited Leasing	

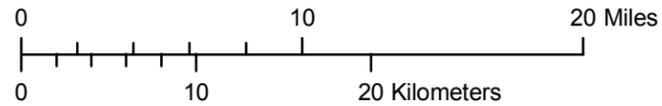


Figure B-1  
Dredging Sand Plant Locations  
Sheet 4 - Jefferson City Segment  
Missouri River Commercial Dredging EIS



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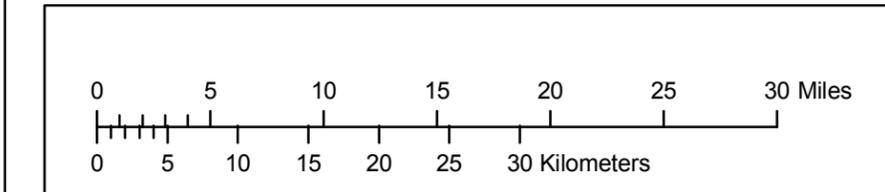
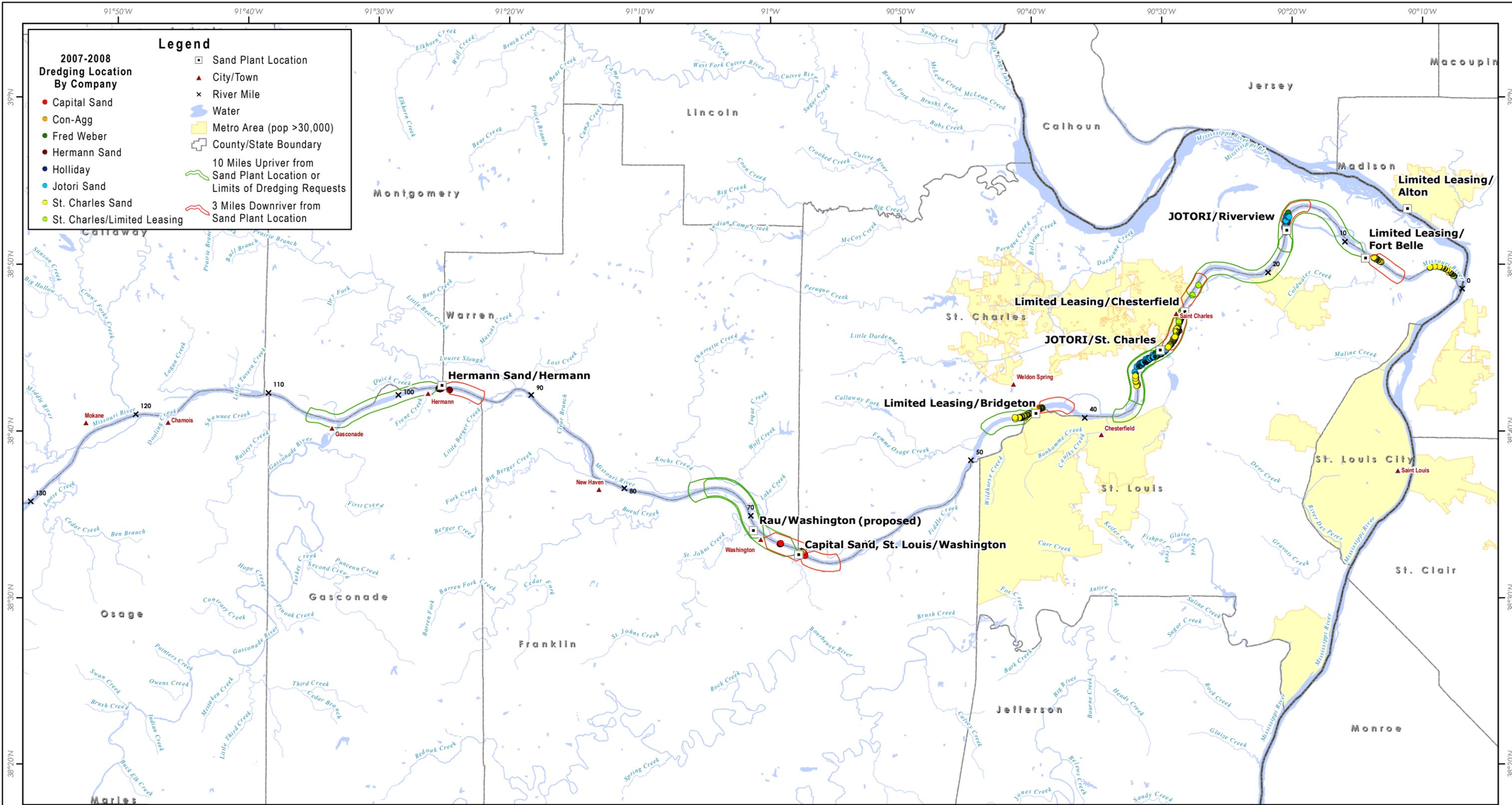


Figure B-1  
 Dredging Sand Plant Locations  
 Sheet 5 - St. Charles Segment  
 Missouri River Commercial Dredging EIS



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Figure B-2 Master's Waldron Optional Sand Plant Sites

Source: GoogleEarth.

**Site 1** – Site 1 is located on the river side of federal flood control levee L-400, maintained by the Waldron Levee District. Master's has indicated that, if they constructed on this site, they would include a boat ramp for marshalling dredging equipment.

**Site 2** – Site 2 is located on the upland side of federal flood control levee L-400 and would require a pipeline crossing of the levee.

**Adjacent Land Use:** Agricultural

**Capacity:** Operating capacity would range from 1,000 to 3,000 tons/hour depending on the dredge used. Sand storage would range from 0.3 to 1.0 million tons depending on the size of development.

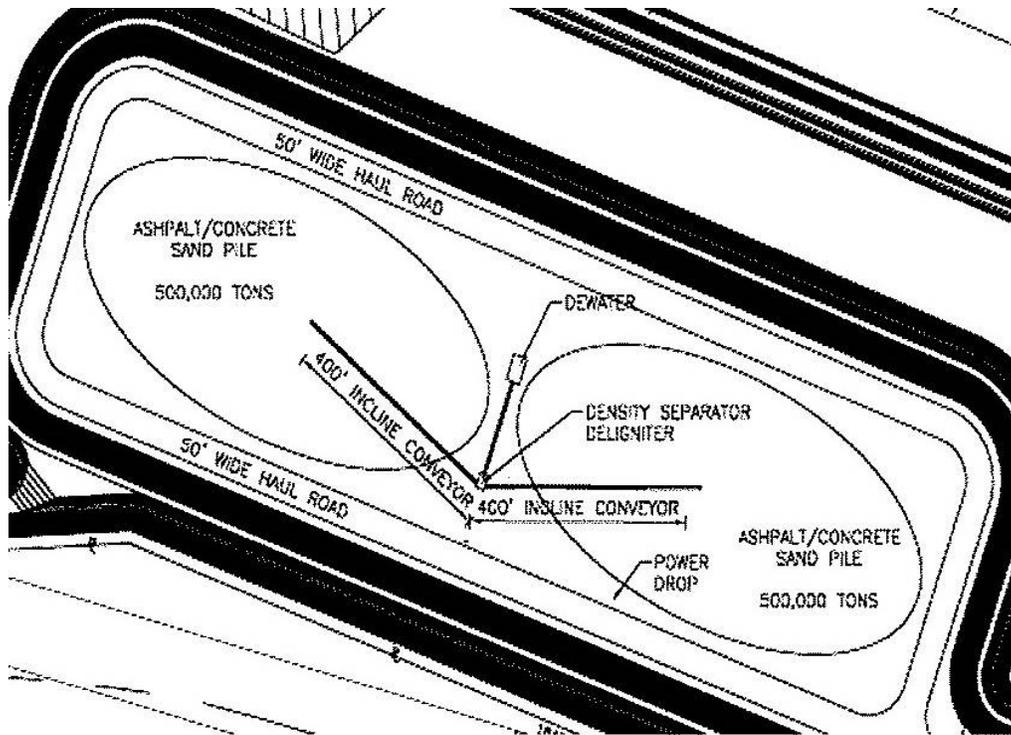


Figure B-3 Master's Waldron Sand Plant – General Site Plan

**Site Development Permits, Approvals and Consultations:** Federal, state, and local permits, approvals, and consultations that may be required for development of the Waldron facility include:

- County – Conditional Use Permit (zoning);
- Missouri Department of Transportation (MoDOT) – highway access;
- Missouri Department of Natural Resources (MDNR) – air permit, water quality (wastewater discharge) permit;
- USACE– consultation with levee district for construction adjacent to a levee;
- Section 10 of the Rivers and Harbors Act of 1899 (RHA) – permit for construction of facilities below the high water mark;
- Section 404 of the Clean Water Act (CWA) – permit for dredge and fill in the river or fill in wetlands;
- Land owner easements – for pipeline access from the river to the sand plant site; and
- Electric utility – installation of electrical distribution line.

### B.3 EDWARD N. RAU CONTRACTOR COMPANY

Rau plans to construct a sand plant on the shore of the Missouri River at Washington, Missouri. If the USACE issues a dredging permit, Rau would contract with an independent dredging contractor for extraction and delivery of commercial sand and gravel to a Rau-owned and -operated sand plant. The proposed site is shown in Figure B-4. The configuration and permitting requirements for the site are described below.

**Location:** 38 deg. 34.04' north, 91 deg. 1.273' west, approximately RM 67.

**Size:** 25.6 acres.

**Adjacent Land Use:** Commercial, industrial, institutional.

**Operation:** Rau would contract with a dredging company to dredge under Rau permits. The dredging contractor would be responsible for offloading material to conveyors that would handle material during sorting and stacking operations. Because offloaded sand and gravel would have been graded during dredging, minimal processing would occur. The primary activity would be stacking and then loading material onto trucks for distribution.

Onsite facilities are expected to include:

- Delineator/washer;
- Classifier;
- Stockpile storage area – 100,000 tons;
- Conveyors/stackers;
- Truck scale;
- Portable scale house/office;
- Generator;
- Rubber-tired front-end loader for truck loading; and
- Graveled roadways.



**Figure B-4 Rau Washington Sand Plant Site**

Source: GoogleEarth.

**Potential Site Development Permitting Requirements:** Federal, state, and local permits, approvals, and consultations that may be required for development of the Washington facility include:

- City of Washington zoning conformance permit (the site is zoned M-2 Industrial);
- MoDOT – highway access;
- MDNR – air permit, water quality (wastewater discharge) permit;
- USACE– Section 10 of the RHA – permit for construction of facilities below the high water mark;  
and
- Section 404 of the CWA – permit for dredge and fill in the river or fill of wetlands.