



**US Army Corps  
of Engineers** ®  
Kansas City District

# Missouri River Recovery Program FACT SHEET

Last Updated September 2007

## Missouri River Sediment

---

- The Missouri River carried over 320 million tons of suspended sediment per year prior to dam construction era of 1952 to 1967 (MRD Sediment Series 22, Nov 1980).
- The Missouri River now carries only 20 to 25 percent of the pre-dam sediment load. Even with the large decrease in Missouri River sediment load, the Missouri River still contributes nearly half of the sediment delivered to the Gulf of Mexico (Mead 1995).
- Dams function to trap sediment already in transport in the river, as well as to reduce natural floods that carry large amounts of sediment (Kessel 1988, Mead 1995). Construction of the BSNP and artificial levees in the floodplain has fixed the Missouri River in its present day location since 1960, essentially locking over bank sediments in place.
- In 1981, the U.S. Army Corps of Engineers estimated that the lower Missouri River in its' natural state eroded an estimated 9,100 acres of land per year in a meander belt over a mile wide prior to construction of the Bank Stabilization and Navigation Project (BSNP).
- The natural rate of erosion, prior to the BSNP, was sufficient to erode the entire meander belt (605,900 acres) in about 70 years. By 1949, the BSNP had the net effect of eliminating about 22 years of natural erosion from Kansas City to the mouth near St. Louis; (Soundings, 100 Years of the Missouri River Navigation Project, John Ferrell, 1995).
- During BSNP construction in the 1930's to 1980, 160,000 acres of aquatic habitat were filled in using the river's high sediment load thus creating new, stable, farmable land. The U.S. Fish and Wildlife (USFWS) Biological Opinion (BiOp) requires the Corps to restore 20,000 acres of shallow water habitat by 2020 to help recover the endangered pallid sturgeon.
- Current habitat chute construction projects in Missouri include the Jameson Island, Rush Bottoms, Tarkio River, and Baltimore Bottom.
- Sediment added to the Missouri River from current construction projects over a 1 to 2 year period would be approximately 4.6 million tons and 8.9 million tons over a 5 to 10 year period.
- Assuming a peak annual load of 3.5 million tons of sediment, the projects would contribute 4% to the post-dam Missouri River sediment load, and 1.8% to the post-dam Mississippi River sediment load. The total sediment load would still be less than 30% of pre-dam levels.
- Suspended sediment concentration and turbidity are both a measurement of the "cloudiness" of water.
- Turbidity measurements in the discharge plume of the dredge at Rush Bottom show an increase well under the 25 Nephelometric Turbidity Units (NTU) allowed in other states (such as Iowa) with turbidity standards. Missouri does not have standards for turbidity increase.
- Rate and timing of dredge discharge from habitat projects will not increase suspended sediment concentration above levels measured in the 1980's.