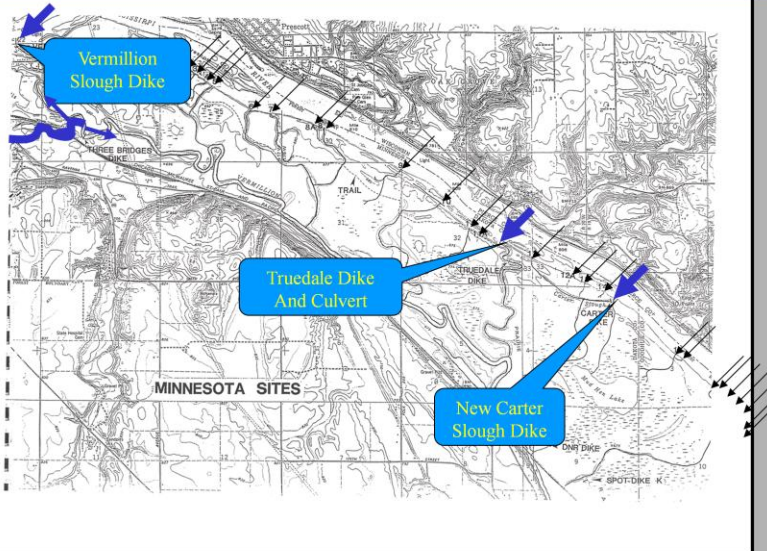


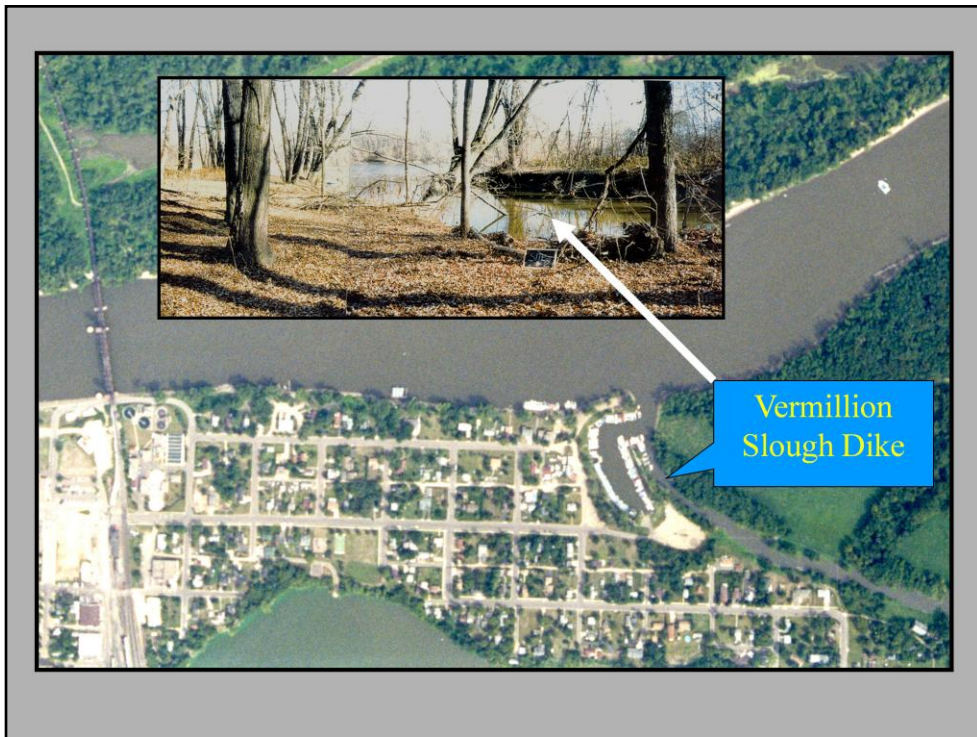
Lower Vermillion River Location Map

1987 Corps Inspection of Minnesota Embankment

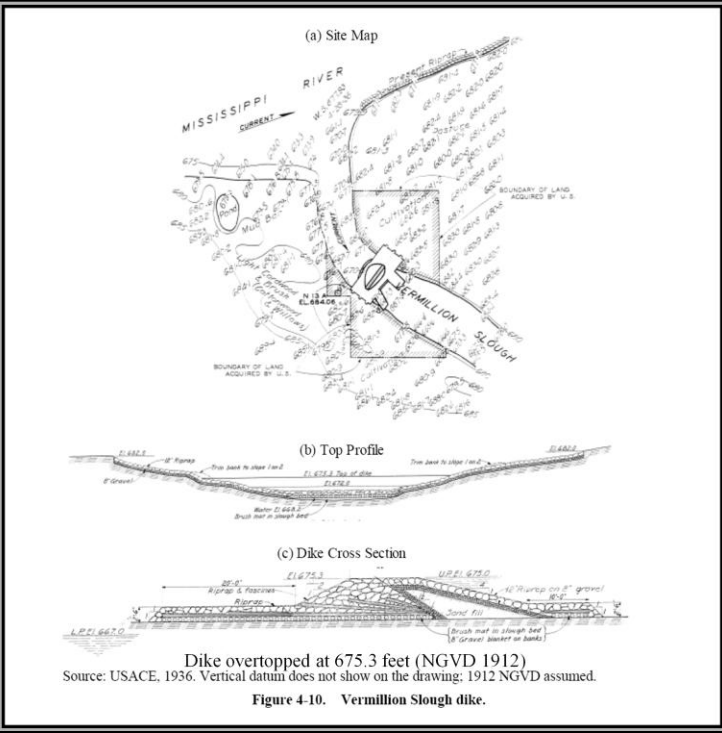


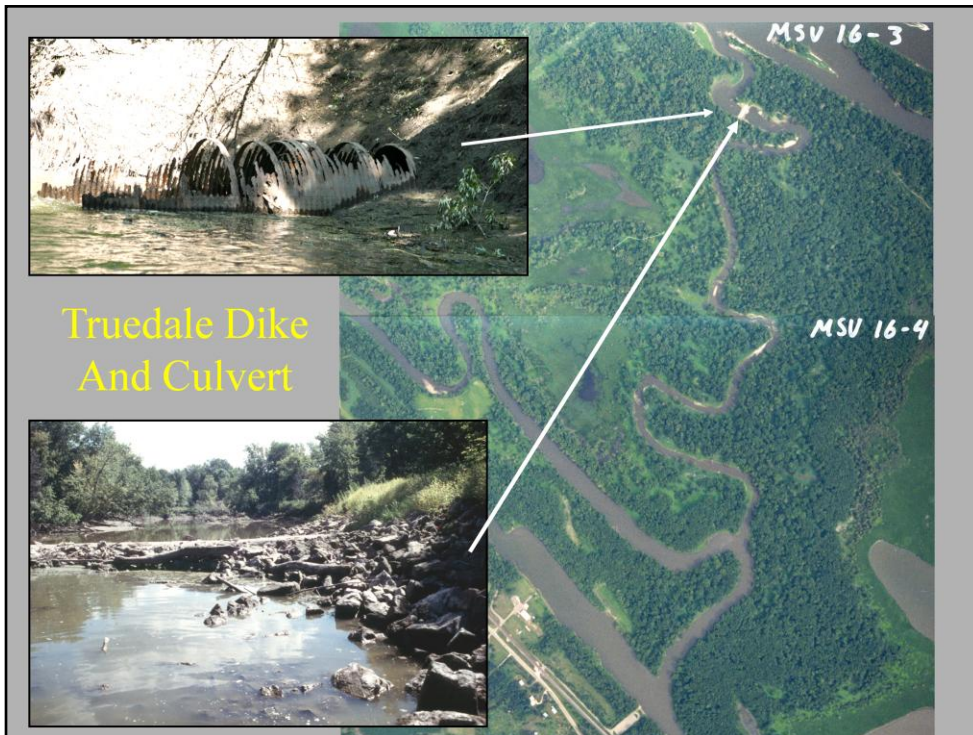
28 Sag Points in River Levee above Prairie Island

Sag points are low spots in the natural river levee that convey water only when water levels are elevated in Pool 3 because of high volumes.



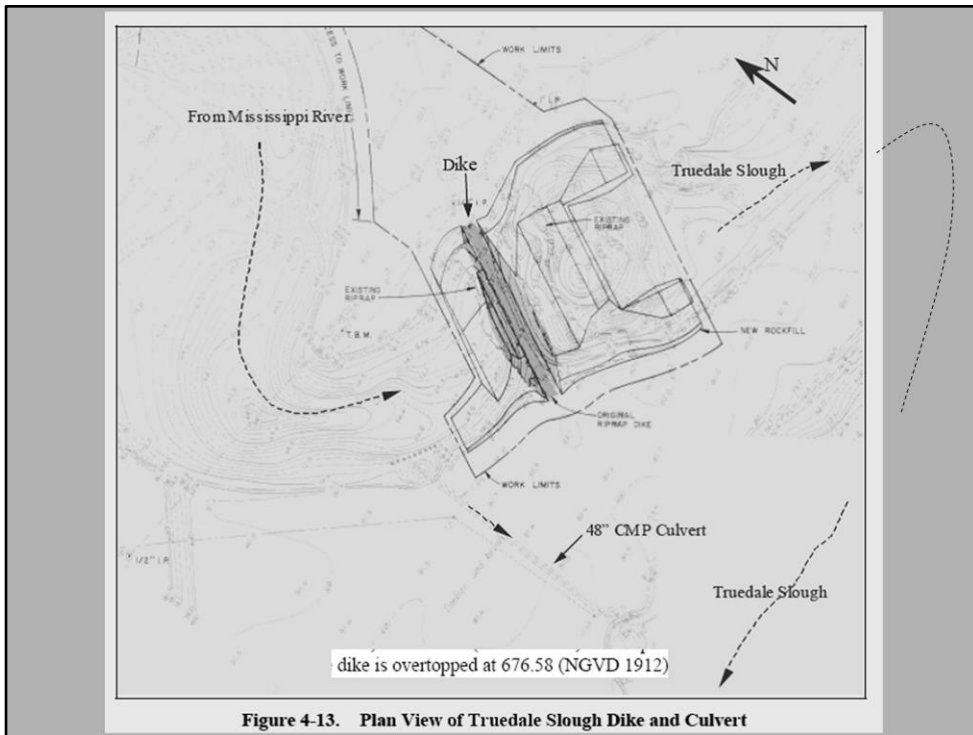
The Vermillion Slough, southeast of Hastings, is the first major connection between the Mississippi River and the Lower Vermillion River. The channel is about 1.8 miles long and meanders significantly. The channel is controlled by a rock-fill dike near its entrance on the Mississippi River, which is maintained by the U.S. Army Corps of Engineers. The dike top elevation is 675.3 feet. Water can flow through the slough in either direction depending on the relative stages of the Mississippi and Vermillion Rivers.

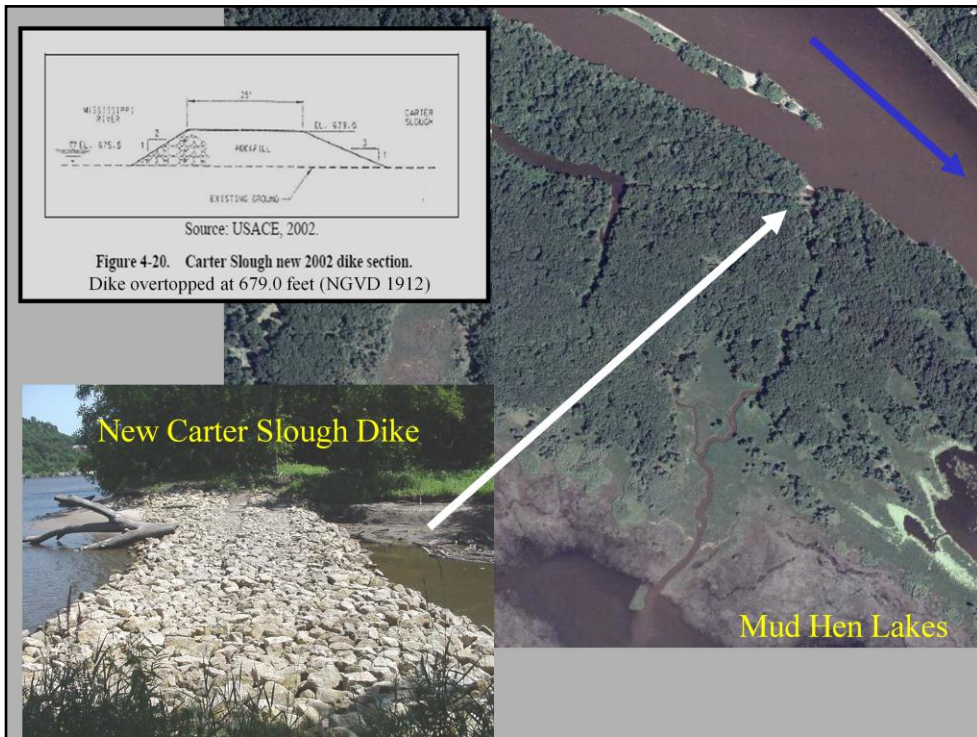




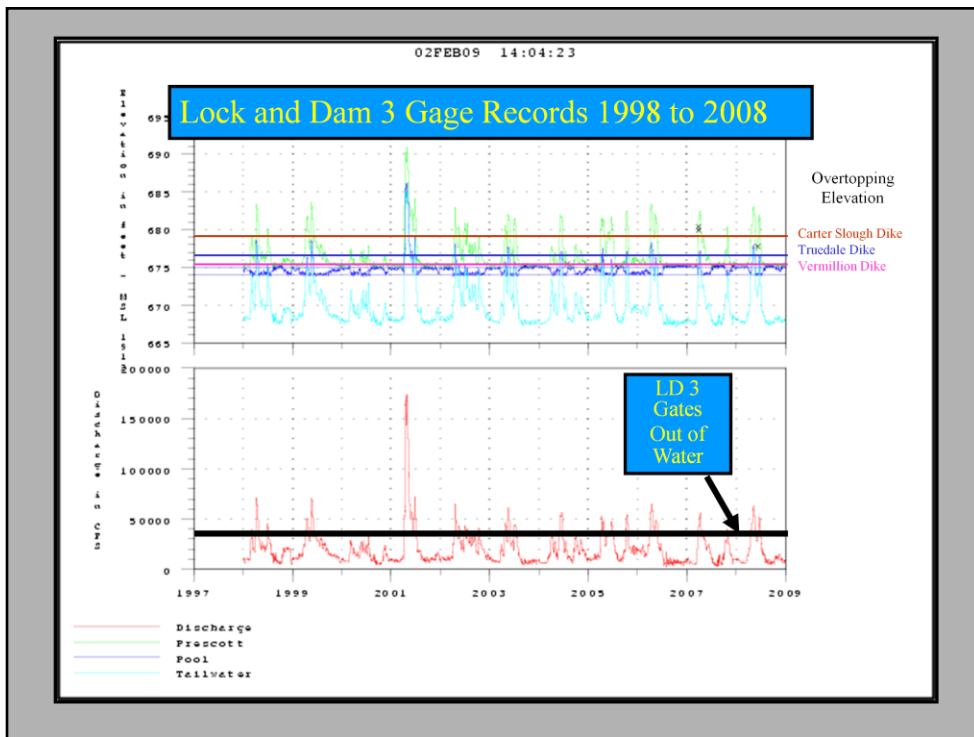
Truedale Dike And Culvert

The Truedale Slough is the second major connecting channel between the Mississippi and Lower Vermillion Rivers. A rock-fill closure dike and 48-inch culvert control the inflow from the Mississippi River Pool 3 to Truedale Slough. The U.S. Army Corps of Engineers rebuilt the Truedale Slough dike in 1986 as part of the ongoing project to maintain the integrity of Pool 3.





The Carter Slough, one mile south of the Truedale Slough, is the third major connection between the Mississippi and Lower Vermillion Rivers. It connects to Mud Hen Lake and then Round Lake before entering the Vermillion. Flow through the slough is controlled by the dike at the entrance to the Mississippi River. The Carter Slough was constructed by the U.S. Army Corps of Engineers in 1936 to prevent the Pool 3 from draining Mud Hen Lake. The dike at the entrance was replaced in 2002 by the Army Corps.



The frequency with which flows from the Mississippi intrude into the Lower Vermillion is largely controlled by the stage in Pool 3. When this stage overtops the dikes, Mississippi River water enters the Vermillion, except during those conditions when high flows in the Upper Vermillion produce an even higher stage in the Lower Vermillion River.

According to the Lower Vermillion River Draft TMDL document, during the 11 year modeling period, the Vermillion Slough contributed 14.6% of the total flow in the Lower Vermillion River, while the Truedale Slough and Carter Slough contributed 31.0% and 21.0%, respectively.