

Suitability of Karr Farm for River Channel Restoration

Notes from Mark Nemeth following a site visit on June 23, 2010

Area 1

The river channel is very incised in this area. Consequently, relocating the channel and lowering the floodplain would likely be prohibitively expensive because of the extremely large volume of earth material that would have to be moved. Removal of bankline vegetation on the east side of the river—particularly on the outsides of the small curves to the east—could initiate eastward channel migration. Additionally, the area within this large oxbow contains many depressions which are probably remnants of previous river channels. If a topographic survey of this area is conducted, it may be possible to design a linkage of the low-elevation areas to create a wetland or secondary channel; depending on the results of the topographic survey, this might require only a moderate amount of earthwork.

Area 2

Removal of vegetation along the east bankline and lowering of the berm along the east side could allow eastward migration of the river channel. Before proceeding with this alternative, it is important to determine whether the berm is performing any necessary hydraulic functions and whether it could safely be removed or relocated. Relocation of the channel at the downstream end of this area may be undesirable because of the potential for damage to the existing concrete river crossing.

Area 3

This area is highly suitable for restoration. As a first step, it is important to determine whether habitat restoration goals would be better served by diverting the whole river into the old oxbow or by making the oxbow a secondary channel and intermittent wetland area. The upstream end of the oxbow could easily be connected to the existing river channel by removal of vegetation and sediment at each end of the oxbow. Care should be exercised during design to minimize the possibility of channel migration into agricultural fields west of the oxbow.

Area 4

Removal of vegetation along either bankline could induce migration of the river channel. On the west side of the channel, the belt of saltcedar is very thick—up to 100 feet wide. Because of this unusually large thickness of bankline vegetation, clearing would more expensive than is typical. There are a few areas where the belt of bankline vegetation is narrower; these should be surveyed and identified prior to design.

