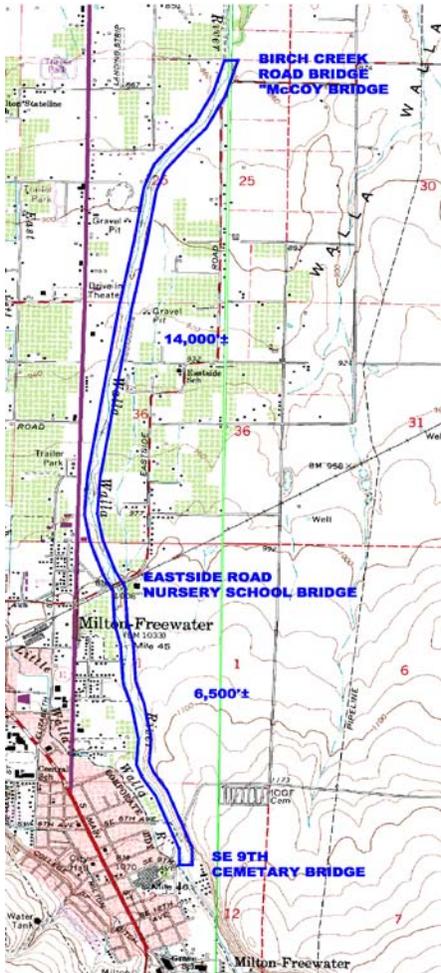




## Nursery Bridge Fish Facility, Walla Walla River, Milton Freewater, OR; Tetra Tech EC for the US Army Corps of Engineers Walla Walla District



In 2005, White Shield supported Tetra Tech EC and the USACE Walla Walla District in collecting 25 river cross-sections spanning a  $\pm 21,000$  feet reach of the Walla Walla River near Milton-Freewater, Oregon. The cross-sections were used for hydraulic modeling by Tetra Tech EC for study of the Nursery School Bridge (Eastside Road) fish structure sediment problem. The survey provided current topographic information needed to assess fluvial geomorphologic changes along this reach of the river since it was last surveyed in 2003. Cross-sections were typically 250 – 300 feet long between flood control levees, and were all located approximately perpendicular to the centerline of the Walla Walla River. Project highlights included layout and monumentation of 17 existing cross-sections by coordinates and 8 new cross-sections from aerial photography, using RTK GPS and manual ground data collection methods.

In 2007, White Shield was assigned another task order to perform a topographic survey of the first 2000 feet downstream of the Nursery Bridge drop structure's end sill between landward edges of the top of each levee. The survey included important features such as the centerline of wetted channel, edge of water, top of bank, toe of bank, breaks in grade, top of levee, toe of levee, bank protection, and areas of vegetation. A topographic map was developed with one-foot contour intervals. In addition to the topographic survey, nine cross-sections established in 2005 between McCoy Bridge and the end sill were resurveyed. RTK GPS was used to layout these previously surveyed cross-sections. Cross-section data was collected using the "stake to line" feature. Monuments were found as previously noted and photographed in 2005. In obstructed canopy areas, manual data collection used a Geodimeter Total Station.