

ABSTRACT

**TMDL IMPLEMENTATION ON AGRICULTURAL LANDS:
PARADISE CREEK WATERSHED**

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The Paradise Creek Watershed is located in Latah County, Idaho and Whitman County, Washington. Paradise Creek flows through the twin cities of Moscow, Idaho and Pullman, Washington. It empties into the Palouse River just outside Pullman.

Paradise Creek was identified in 1994 as water quality-limited for ammonia, nutrients, sediment, temperature, and pathogens. Beneficial uses are cold-water biota, secondary contact recreation, and agricultural water supply. The Paradise Creek total maximum daily load (TMDL) was approved by the US Environmental Protection Agency (EPA) at the beginning of 1998 and the associated Implementation Plan was completed in December of 1999.

The watershed is 23,038 acres with 13,888 acres located in Idaho. Land use within Idaho consists of non-irrigated cropland, pasture, forest, and urban land. Agricultural lands make up almost seventy percent of the watershed.

Eight-five percent of cropland is classified as highly erodible. Approximately 10% of cropland within the watershed is enrolled in the Conservation Reserve Program (CRP). An additional 24% of cropland acres are under state Water Quality Program for Agriculture (WQPA)/319 contracts.

Implementation of Agricultural Best Management Practices (BMPs) began during the fall of 2000. BMPs installed include crop rotation and tillage changes, vegetative buffers, water and sediment control structures, rock chutes, diversions and runoff management systems.

Reductions in sediment delivery from agricultural lands were determined. In-stream water quality monitoring was conducted within the agricultural portion of the watershed. Data collected during the past two years indicates that water quality of Paradise Creek has improved and that TMDL targets for sediment, temperature, and nutrients relative to agricultural land uses are largely being met.