JEFFERSON RIVER WATERSHED COUNCIL



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Addressing the Impacts of Sediment Deposition on the Northern Portion of the Jefferson River Watershed

Problems. . .

The Big Pipestone Creek, Little Pipestone Creek, Whitetail Creek, and the Jefferson Slough have significant impacts on the local area. They provide several miles of riparian corridor in the valley, have provided popular fishing opportunities in the past, and are important sources of irrigation water to many ranches. There is also significant development within the flood plain of the lower portions of these streams, particularly along Big Pipestone Creek and the Jefferson Slough.

In the last several years, these streams have experienced significant dewatering, and very intermittent and short duration bank full events during spring runoff. As a result, the sediment load from these steams is not being handled efficiently, and sediment is building up in the stream channels, particularly in lower Big Pipestone Creek and the Jefferson Slough. In addition, the sediment problem is being aggravated by significant sheet erosion in the uplands of the watershed and severe erosion in the Pipestone Creek channels.

The consequences of dewatering, a lack of bank full events, and sediment build up are significant. The impacts include changes in floodplain size and health and a subsequent increase in potential flood risk to residents of Whitehall and along the Jefferson Slough; impairment of the health of the riparian corridor, wetlands areas, and wildlife populations along these streams; impacts on fisheries including loss of spawning habitat; and impacts on irrigators.

Approach . . .

- Long-term solutions will require an integrated approach that address the health of the upland timbered areas, foothills, and ephemeral gullies of the watershed;
- improvement and protection of the stream channels and their associated flood plain, wet-lands and riparian areas;
- efficient water usage; and
- long-term study and planning to understand and mitigate the impact from climatic variability.

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Project Area Overview . . .

The upper Jefferson River watershed downstream of the confluence of the Beaverhead and Big Hole Rivers feed surface water and associated sediment into the Jefferson River main stem predominately via a number of small streams that discharge directly into the river.

The northern portion of the watershed which drains into to Jefferson Slough is significantly different. Streams that drain the northern watershed, (including a portion of the Highlands, the Pipestone area, Homestake area, Whitetail area, and a significant portion of the Bull Mountains) feed their water and associated sediment into either Big Pipestone Creek or Whitetail Creek. These two creeks then feed their water and much of their sediment load into the Jefferson Slough which then drains into the Jefferson River. Subsequently, the sediment load must travel through many miles of the lower gradient valley floor.



Current Activities . . .

In order to find solutions for the project area, the JRWC has met with the USFS and BLM to pursue cooperative approaches on federal lands in the watershed. The JRWC is also meeting with the Natural Resources Conservation Service (NRCS) and other organizations and agencies to seek assistance for private landowners who wish to become engaged in the effort.

Some, but not all of the conservation practices being discussed include: noxious weed control; conifer encroachment reduction; grazing management; stream channel, riparian, and wetlands area restoration; upland and roadside erosion reduction; and management of forest lands.

In addition, the JRWC, the Jefferson Valley Conservation District, and the Town of Whitehall are seeking the assistance from the NRCS to revisit the flood plain mapping project completed in 1984.

Summary . . .

Like many conservation issues in the Jefferson River watershed there are no silver bullets, and the need to gain widespread cooperation from landowners is critical. The need to address the issues, however, outweighs the complex demands. The holistic approach addressing connections and interrelated conservation issues throughout the system (from the top of the watershed down through the Jefferson Slough) is an example of the type of approach the JRWC is implementing to restore and protect the watershed. If you would like to be involved in the work of the JRWC, contact us. Please visit our web page at www.jeffersonriverwc.org for additional information on this project or other JRWC projects.

Interested in participating or more information? Contact

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