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Canyon Creek grant sought

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Canyon Creek, as it runs 16 miles from Buffalo Trail Road to the Yellowstone River between Laurel and Billings, is showing the wear and tear of development over the past 20 years.

Growth and subdivisions are changing the historically agricultural landscape between the two communities into an urban setting. According to the 2000 census, an estimated 5,600 people live within two miles of the stream along the 16-mile reach.

Increased demands on the waterway are causing severe erosion along its banks. And the erosion is leading to a large amount of sediment being carried into the Yellowstone. Bank erosion also threatens bridges over the creek, like the 80th Street West crossing near King Avenue.

There, the creek has eroded the north bank into a steep, 25-foot cliff next to the bridge. The creek continues to eat away the lower portion of the bank, which causes the bank to slough off into the water.

In addition to stream bank erosion, noxious weeds like knapweed and saltcedar are beginning to infest the drainage.

Technically, the creek is classified by the Montana Department of Environmental Quality as impaired from streamflow alterations. The primary flow alteration is caused by the return to the creek of irrigation water taken from the Yellowstone River through ditches, said Dan Nebel, an engineering geologist with Terracon, which has been studying the drainage for the Yellowstone Conservation District.

The district, with Terracon's help, has developed a proposal to help the troubled creek. The plan is a major stream restoration project to provide long-term stability at a few high-priority locations.

The district is seeking a \$100,000 renewable resource grant from the 2005 Legislature to pay for a portion of the estimated \$242,000 project. The rest of the money would come from other sources and grants.

"It's a rather monstrous project," said Harold Zeiler, chairman of the district's board. The restoration effort could take 20 years, he said. "It's a matter of looking at the most urgent area first."

What makes the Canyon Creek project different from others is that it involves both rural and urban areas, Zeiler said. The goal is to reduce the amount of sediment flowing into the Yellowstone and diminishing water quality, he said.

The project is a team effort with the conservation district, Montana Department of Fish, Wildlife and Parks, the U.S. Army Corps of Engineers, the Yellowstone County Weed Department and others, Zeiler said.

Several years ago, the district used small grants to hire Terracon, an engineering and geoscience consulting firm, to conduct a baseline study of the Canyon Creek drainage.

Terracon then identified potential restoration and weed control projects along with education and best management programs for the public and agencies.

"We were looking for things that would affect a lot of people," Nebel said. The projects would protect public resources as well as show the public and residents how they could be done.

The grant application identifies three

Canyon Creek restoration



stream restoration projects:

n Downstream of the King Avenue crossing, where eroding and exposed banks have the potential to affect King Avenue.

n 80th Street crossing near King Avenue - where eroding and exposed banks have the potential to affect King Avenue and the bridge.

n ZooMontana - where eroded and exposed banks have the potential to overflow during relatively minor floods and affect structures.

Nebel said the streambank work could include installing small rock barbs in the stream to divert water flow away from the banks, but not to the opposite bank, and grading banks to reduce the slope angles. The lower portion of banks also would be revegetated.

The application also includes two noxious-weed demonstration projects on private property to limit the spread of saltcedar and Russian and spotted knapweed through herbicide treatments. One area is 127.5 acres and the other is 77 acres.

Scott Bockness, supervisor of Yellowstone County Weed Control, said the Canyon Creek area generally has poor quality, high-alkaline soils that are not very supportive of native plants. And between drought, limited water resources and the residential development, noxious weeds, particularly Russian knapweed, have begun to develop, he said.

If funded, the project would allow the county to hire a contractor to apply herbicides to knock down as much of the weeds as possible the first year and then follow up in the second year to create a better environment for native species, Bockness said.

"We thought it was a good opportunity for us to do the right thing and kick-start the plant community in the right direction," Bockness said.

The third and fourth component of the grant is education and land management practices.

The district would educate landowners through public meetings and pamphlets to potential problems associated with erosion, flooding and water use. Diversion structures placed in the creek can cause significant alterations of the streambed and banks, the grant application said.

The development of best land management practices would provide guidelines for future stream restoration and streambank stabilization, maintenance of riparian areas and weed control. The guidelines would be for agencies involved in permitting projects, like the district, FWP, Yellowstone County Planning, and by local owners.

District Administrator LaVerne Ivie said the district's application is recommended for funding by the DNRC and was ranked 35th out of more than 100 applications. If funded, the money would become available July 1 and work could proceed after that. The grant request is set to be heard by a subcommittee of the Joint Long-range Planning Committee at the Legislature on Jan. 19.

Click here to return.

Exhibit Number: 8

[Harold Zeiler distributed 8 colored 5-15/16 inches X 4 - 15/16 inches photographs]

The following exhibit is colored photographs that cannot be scanned. The exhibit is on file at the Montana Historical Society and can be viewed there.