Fixing the Gros Ventre River's plumbing

Groups eye stream restoration after a century of diversion for agricultural purposes.

By Mike Koshmrl

When the Gros Ventre River valley was being homesteaded in the opening years of the 20th century, its settlers scraped away thousands of pounds of earth to create an impressively large channel to water their pastureland.

The agricultural diversion, named the "Common Sense Ditch," served an important purpose, and for decades was maintained to grow hay and provide sustenance for cattle and, in turn, people.

The earthen structure is no longer in use a century later. It's in disrepair and about to become the property of the American public, thanks to a generous 990-acre donation by former U.S. Sen. Herb Kohl of Wisconsin. The 4-mile-plus ditch also interrupts the flow of four tributaries of the Gros Ventre River, messing with the hydrology and fishery in untold ways along its rigid path.

RYAN DORGAN / NEWS&GUIDE PHOTOS

Pat Calhoun, a hydrologist and geomorphologist with Biota Research and Consulting, prepares to survey Lloyd Creek using a GPS surveying system on the former Upper Gros Ventre River Ranch. The 990-acre parcel was donated by retired U.S. Sen. Herb Kohl, and is in the early stages of transitioning to U.S. Forest Service land.

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— Pat Calhoun

BIOTA RESEARCH AND CONSULTING HYDROLOGIST

Biota Wetlands ecologist Kent Werlin points out some of the creeks he had surveyed to his colleague Pat Calhoun and Trout Unlimited Snake River Headwaters Project Manager Leslie Steen in the Gros Ventre River drainage. The organizations are surveying for tributary restoration in the drainage.

Steen checks out a concrete culvert used to divert Lafferty Creek for agricultural purposes.

It's an artificial impact on the land and watershed that the Trust for Public Land, which owns the land for now, is hoping to diminish when it hands over the deed to the Bridger-Teton National Forest.

A first step in the process is trying to figure out what streams flowed where under the natural regime. In the absence of solid record keeping or historic photos, it's not a straightforward task, Biota Research and Consulting hydrologist Pat Calhoun explained.

"It's like forensic geomorphology," Calhoun said from a pasture on the Kohl property. "We're trying to figure out what people were doing, why and what effect it had on the system."

Calhoun and colleagues Ryan Colyer and Kent Werlin are working on the restoration project, now in the early surveying stages, at the direction of Trout Unlimited.

The four streams they're investigating — Jones, Lafferty and Lloyd creeks and another unnamed tributary — have all been impaired to varying degrees by the Common Sense Ditch and smaller diversions.

Upstream of the forest boundary on Lafferty Creek, Trout Unlimited's Leslie Steen stood over a still-functional jointed cement contraption that sent the small stream in two directions.

"I don't know where it would have naturally gone," said Steen, the nonprofit's Snake River Headwaters project manager. "But usually streams come together."

Minutes later she tried to follow the creek's forks to where they crossed the Common Sense Ditch. One of the forks maintained a channel and passed by the structure, but the other seemed to peter out and dissipate into a wetland that might not otherwise have existed.

A hope of Trout Unlimited is that restoring the Kohl property's hydrology could bolster the health of the Snake River fine-spotted cutthroat fishery in the Upper Gros Ventre. Although small, the severed tributaries contain habitat that can nurture juvenile fish.

In the late 1990s the Wyoming Game and Fish Department found 6-inch cutthroat in Lafferty Creek, Steen said, but similar surveys this spring found no trout in the same haunts.

Biota's task in the Upper Gros Ventre, for now, is to figure out where Trout Unlimited will get the best bang for its buck. Steen and the nonprofit are still trying to raise funds for the project.

The job is fieldwork-intensive and entailed two weeks of surveying the exact elevations, slopes and locations of the Gros Ventre River's mainstem, its tributaries, nearby wetlands and the man-made diversions that carve up the property.

Once it's all mapped out Biota will be able to piece together how all the hydrological features influence each other, and from there propose fixes.

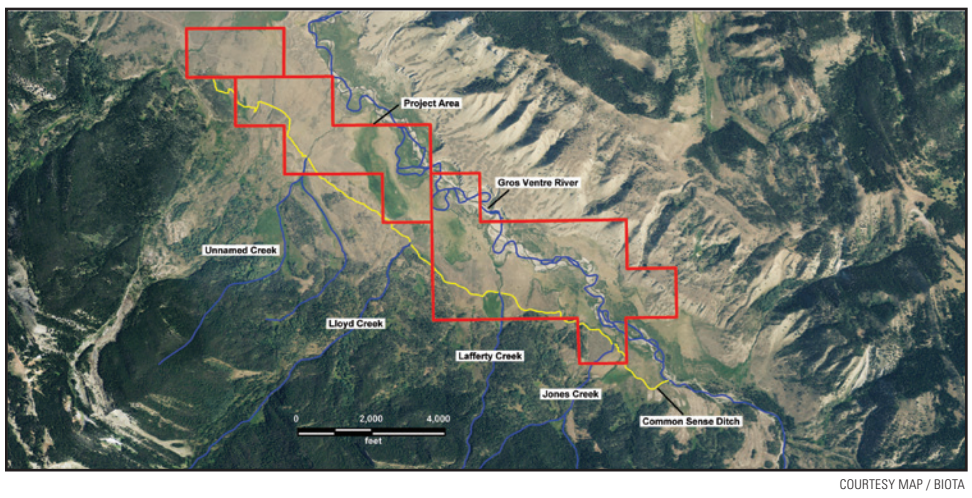
Filling in the main ditch in its entirety isn't in the cards. Many feet deep in places, blown out in others and stretching for miles, much of the structure is now heavily vegetated.

"It's probably cost prohibitive to completely restore it to the natural condition," Biota's Ryan Colyer said from a shrubby hill overlooking the depression of Lloyd Creek. "The approach we've discussed is we'll identify a couple dozen impairments that were the result of land manipulations over 100 years.

"Collectively," Colyer said, "those impairments degrade the whole ecosystem."

Trout Unlimited is aiming to complete the restoration work by the time the 990 acres is conveyed to the Bridger-Teton, and the hope is that will happen next fall, the Trust for Public Land's Chris Deming said.

The $3 million for the land acquisition is coming from the federal offshore oil royalty-funded Land and Water Conservation Fund. Only half the funds, Deming said, have been secured with certainty.



COURTESY MAP / BIOTA

Trout Unlimited has hired Biota Research and Consulting to figure out how to erase effects of the century-old Common Sense Ditch on the Gros Ventre River.

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