



## Connecting the Drops

Transcript: Citizen Initiative Seeks to Restore Crystal River Habitat

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**Citizens concerned with restoring habitat along one of Colorado's wildest rivers are pooling resources to make it happen but some worry that further intervention could cause more harm. For Connecting the Drops, KDNK's Raleigh Burleigh reports.**

The Crystal River, winding from the mountains above Marble, Colorado to its confluence with the Roaring Fork River, north of Carbondale, is naturally confined by a narrow valley corridor. In the past century, however, this river has been further constricted by a railroad on one side and later Highway 133 on the other.

Glancing along the banks of the Crystal River, one notices some of the most exotic rip-rap in the world. Rip-rapping is the piling of stone along the shores of a body of water to prevent erosion. This technique was used heavily to protect the Crystal River Railroad, transporting large blocks of pristine white marble from the Elk Mountains. Because marble was so abundant, flawed pieces were dumped alongside the tracks to keep the railroad grade from being eaten away by the river.

A consequence of this action has been the loss of riparian habitat.

"The Crystal has for much of its length the highway on one side and the old railroad grade on the other side. And so what that's done is in many cases confined the Crystal and of course, rivers like to meander across the flood-plain. Their meanders are one way that the river has to dissipate energy and when the river can't do that then it has dissipated energy in other ways and so it down-cuts."

Dr. John Emerick, a retired professor of environmental science and engineering from the Colorado School of Mines is a member of the Crystal River Restoration Steering Committee. At a workshop in October, Emerick joined government workers, private consultants, intrigued citizens and funding partners to look at what could be done to enhance riparian habitat along the river.

"When we talk about restoration of the Crystal River, we're not necessarily talking about putting the Crystal back to a way it might have been, you know a hundred or two hundred years ago. What my concept of 'restoration' is really enhancing existing wildlife habitat or enhancing existing stream habitat so that it's better than what we have now."

A coordinating entity of this initiative is the Roaring Fork Conservancy, a watershed education and advocacy organization that published a Crystal River Management Plan in 2016. Rick Lafaro, executive director for the Roaring Fork Conservancy, describes riparian habitat as such.

“Riparian habitat is the green ribbon of life that runs along all stream and rivers everywhere. Here in the West and in the Roaring Fork Valley, it's pretty easy to see that difference between the arid hillsides that you might have on either side of the valley and the very vibrant green ribbon of life, so it's all that habitat that's associated with rivers and streams and wetlands.”

In addition to improving wildlife habitat, Dr. Emerick says that restoring the historic floodplains of the Crystal River could also improve year-round streamflows during periods of drought.

“When a river has the opportunity to migrate back and forth across its entire floodplain, there are a lot of soils that get wetted back there. What that wetting of these floodplain soils does is it actually stores water. That serves to relieve some of the low flow problems that we see in years such as we've had this year.”

2018 was a dismal year for the Crystal, with flows so low that a complete voluntary fishing closure was enacted by Colorado Parks and Wildlife from mid-July through mid-October. However, not everyone is on board with restoration efforts and question the value of further intervention.

“I speak on behalf of a large old Crystal River family. A family of life in kinship with source water, American dipper, and all the elements, plants and creatures of this watershed. Is it time to hit the pause button on human intervention in the Crystal River? Is water within us and around us a continuous life-sustaining circle? Are there any concerns about how the life-sustaining qualities of our river have changed? Are indicator species decreasing in numbers? Are the processes and consequences of intervention asking to be clarified and understood for their impact on future generations before further river activity is undertaken?”

The author of this statement asked to remain anonymous. For his part, Dr. Emerick recognizes that the Crystal River Restoration Steering Committee will need to review all available data about habitat quality and choose carefully the area where initial restoration could set an example.

“We have to know the most effective use of what's probably going to be a lot of money required to do this thing on a watershed-wide basis. So we have to know what areas will give us the biggest bang for the buck. And also things that would serve as examples to people and get some that may not be initially very excited about doing restoration, on their property for example, to become excited about what the possibilities might be.”

Although the process could take decades, Dr. Emerick is optimistic.

“The more we can allow the river to naturally meander across its historical flood-plain, the better it's going to be for everyone that's involved.”