

Duck Creek Riparian Habitat Restoration Project, Henry's Lake, Idaho

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Background

Henry's Lake is located in eastern Idaho near Yellowstone Park and is nationally renowned for its trophy trout fishery. The lake's fertile waters and submerged springs nurture a rich aquatic environment highly conducive to growing large cutthroat, brook, and the famous Henry's Lake hybrid trout. The fishery has been threatened, however, by habitat degradation, irrigation water withdrawal, improper land use practices and water quality problems. In 1982, the nonprofit Henry's Lake Foundation was formed to organize sportsmen support, dollars, and labor for the protection and enhancement of the fishery. Since its formation, the Foundation has worked in partnership with state and Federal agencies and private landowners to implement fish habitat and water quality improvement projects. The Duck Creek riparian habitat restoration project represents a good example of the Foundation's approach.

Project Description

Duck Creek is a small tributary entering Henry's Lake that historically supported about 20 percent of the cutthroat trout spawning run. Like many other streams in the area, repeated season-long livestock grazing had trampled streambanks and drastically reduced riparian vegetation. The stream was too wide and shallow and spawning gravels were embedded with eroded silts. As a result, Duck Creek's capability to produce, rear, and recruit young wild trout back to the Henry's Lake fishery was severely diminished. The Henry's Lake Foundation desperately wanted to fence degraded riparian areas around the lake, but private ranchers were reluctant to cooperate and become involved.

In 1985, the Foundation finally reached agreement with a rancher to allow a small pilot demonstration fencing project to be constructed along 1/4 mile of Duck Creek. Rancher incentives were incorporated to bring the project to fruition and included the following features:

- A formal agreement and statement of understanding outlining project conditions was signed between the rancher and the Foundation. The fencing project was designed to be compatible with the rancher's livestock operation while fully protecting streambanks from grazing.
- Solar powered electric fencing was selected. This represented a new fencing technology not previously used in the area and allowed the rancher to evaluate the system at no risk to him.
- The project would be in place for 5 years, after which time it would be evaluated for continuance. This was deemed sufficient time, both for judging riparian recovery and application of the new fencing technology.
- The rancher reserved the right to remove the fence during the 5 year agreement period. All project costs were paid by the

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Henrys Lake Foundation. The Foundation provided volunteer labor and hired the rancher and his heavy equipment to assist in construction. An annual stipend was paid to the rancher to maintain the fence.

Project Results

The Duck Creek fence was constructed in September 1985. Within the first year, riparian vegetation recovery was dramatic, and during the second season, willow cuttings were planted to accelerate healing of degraded streambanks. Creek banks were soon anchored by rooted vegetation, the stream channel narrowed, sediments were flushed from spawning gravels, and young trout thrived in the fenced section. Solar electric fencing proved to be a useful application for the rancher, saving both cost and maintenance time over conventional barb wire fencing. People began to visit the project site. The rancher took pride in his participation, he began to enjoy working with Foundation representatives, and trust and friendship developed. The project showed that livestock and fishery advocates could work together to mutual benefit; and, the Foundation now had a successful riparian restoration project to point to.

As a direct result of the initial Duck Creek fencing work, the Foundation and Idaho Department of Fish and Game negotiated to fence the remaining 1.5 miles of stream on the rancher's land. The second project included cross fencing, subdividing pastures into smaller units so that an intensive grazing system could be instituted. Except for cattle water gaps, the entire reach of Duck Creek on the ranch was corridor fenced. Based on fishery and water quality benefits that would eventually accrue, the Foundation and Department were willing to pay all costs associated with the second project.

In effect, the first Duck Creek fencing project "broke the ice" with other livestock operators. Ranch owners viewed the results and came to understand the economic and ecological sense in improving stream habitat on their holdings. Within 2 years, fencing projects were started on other tributaries.

The Foundation and agencies were willing to continue to fund these projects, but consciousness grew and a few landowners voluntarily fenced and removed cattle from riparian areas on their own.

Since the Foundation's first venture on Duck Creek, an estimated 10 miles of streams and 4 miles of Henrys Lake shoreline has been fenced on a mix of 15 private and public properties. Additionally, 9 fish screen structures have been constructed at irrigation diversion locations on several spawning tributaries. Nearly \$100,000 has been invested in these worthy projects, with costs shared among the Henrys Lake Foundation, Federal and state agencies, and private landowners.

Ingredients for Success

The first Duck Creek riparian restoration project showed that ranchers and fishery interests could overcome traditional barriers and work together for common gain. Its success proved contagious and directly led to instituting similar projects with other property owners. Why was the Duck Creek riparian habitat restoration project successful?

- The project embodied the notion that improving the lake fishery and riparian conditions was also in the interest of landowners. In time the local economy would benefit from improved fishing, property values would rise accordingly, and less soil/land erosion would occur on streamside properties.

- There was a willingness to invest outside private and agency capital for fishery/riparian improvement projects on ranch lands.

- A modest project was initially undertaken. Nonetheless, this small project demonstrated the riparian recovery that could be expected on a much larger scale. In time, the success of the first fencing project engendered other riparian restoration projects.

- A win/win approach was emphasized and rancher incentives brought the project to fruition.