



Four rivers and streams used to flow onto the Snake River Plain and then sink into that plain's basaltic bedrock, rather than flow to the Snake and ultimately to the sea. From west to east, and from left to right in this view, these four were the Big Lost River, the Little Lost River, Birch Creek, and Medicine Lodge Creek.

These four rivers and streams emerged southward from their respective valleys, and their paths onto and across the Snake River Plain are shown schematically above.

The flow of the Big Lost River, which has the largest and highest drainage basin of the four, was so great that the river wandered eastward across the Snake River Plain to near the mouth of Birch Creek Valley before the last of its water sank into the subsurface.

The water of these four rivers and streams then flowed as groundwater through fractures in the basalt of the Snake River Plain and emerged decades later in the Thousand Springs area near Hagerman, Idaho, more than 100 miles to the southwest and 1800 feet lower.

In their respective valleys, the four rivers and streams flowed freely, supporting diverse wildlife and vegetation, so that the river banks were lined with trees. In the early 1900s, hotels in Arco advertised fishing opportunities to fishermen from around the nation.

Today, the water that would flow in these rivers and streams is consumed by irrigation up each of the four valleys, so that surface flow almost never comes onto the Snake River Plain today. Wells for irrigation lower the water table, leaving the riverbeds dry, and in the Big Lost River Valley a dam above Mackay holds back flow, both to lessen spring flooding and to reserve water for summer irrigation.

Irrigation in these valleys of lost rivers and streams supports growth of hay and barley. The hay is mostly trucked to feedlots for beef cattle, and the barley largely goes to production of beer. Irrigation also supports the raising of some cattle in each of the valleys.

As the result of these diversions, dead trees and dry gullies mark the downstream portions of the channels through which the four rivers and streams flowed for millennia. One example is at the rest area on U.S. Highways 20 and 26 east of Arco, where a single dead tree stands beside a channel that is commonly dry.

Today, these are "lost rivers" in two senses: they were always "lost" in the hydrological sense that their water disappeared into the Snake River Plain, and now they are "lost" in the historical sense that they no longer flow and support wildlife in the lower reaches of their respective valleys.

Very generalized cross-sections (vertical profiles) through time:

