

= Little Applegate River =

The Little Applegate River is a 21 @-@ mile @-@ long (34 km) tributary of the Applegate River located in the U.S. state of Oregon . It is part of the Rogue River watershed , draining approximately 113 square miles (293 km²) of Jackson County . Rising in the Siskiyou Mountains , the river flows generally northwest to meet the Applegate about 3 miles (4 @.@ 8 km) northwest of Buncom and 2 miles (3 @.@ 2 km) south of Ruch .

The Little Applegate River 's watershed was originally settled about 11 @, @ 000 years ago by the Latgawa , Shasta , and Dakubetede Native American tribes . The first non @-@ indigenous settlers arrived in the early 19th century . Two boomtowns ? Sterlingville and Buncom ? were founded in the 1850s and grew rapidly as gold and other precious metals were discovered . They slowly declined in population as the supply of gold was exhausted ; only three buildings remain in Buncom , while Sterlingville was abandoned and later destroyed .

Despite low water quality , the Little Applegate watershed supports populations of coho and Chinook salmon , along with 138 known and 134 suspected species of other vertebrates . Sixty @-@ four percent of the watershed is forested , although its health is slowly declining due to fire suppression .

= = Course = =

The Little Applegate River arises at several springs near Siskiyou Peak , in the Siskiyou Mountains . It flows north , receiving McDonald Creek on the right , and Glade Creek on the left . Water is diverted into Sterling Ditch near the Little Applegate 's confluence with Glade Creek . Sterling Ditch is an approximately 23 @-@ mile @-@ long (37 km) aqueduct , built in 1877 to provide water for hydraulic mining in the now destroyed town of Sterlingville .

About one mile past Sterling Ditch , the river turns west . It receives another major tributary , Yale Creek , on the left . Yale Creek drains nearly 24 square miles (62 km²) , making it the largest of the Little Applegate 's tributaries by watershed area . From Yale Creek , the Little Applegate flows northwest , receiving water from Sterling Creek on the right . The town of Buncom is located at the mouth of Sterling Creek .

The stream empties into the Applegate River about 2 miles (3 @.@ 2 km) northwest of Buncom and 2 miles (3 @.@ 2 km) south of Ruch , 34 miles (55 km) above the Applegate 's confluence with the Rogue River . For fish swimming upstream , the Little Applegate is the last major tributary of the Applegate before the unpassable Applegate Dam . The Little Applegate River 's average discharge is 226 cubic feet per second (6 @.@ 40 m³ / s) , but can range anywhere from 25 to 424 cubic feet per second (0 @.@ 708 to 12 @.@ 0 m³ / s) depending on the season and the amount of precipitation .

= = Watershed = =

The Little Applegate drains approximately 113 square miles (293 km²) of southern Oregon . It makes up just under 15 percent of the Applegate River 's watershed , and just over 2 percent of the Rogue River basin . The Bureau of Land Management controls 40 percent of the watershed , and another 32 percent is owned by the United States Forest Service . Twenty @-@ seven percent is privately owned , and the state of Oregon controls less than one percent . Approximately 96 percent of the land is either forested or woodlots , while farmland and rural areas make up the remaining 4 percent .

The Little Applegate watershed experiences a Mediterranean climate ; the average annual precipitation in the watershed is 38 inches (970 mm) , however as much as 55 inches (1 @, @ 400 mm) and as little as 20 inches (510 mm) have been recorded . Precipitation in the area consists of mostly rain , and occasionally snow in the higher elevations .

The primary rock types in the watershed are early Mesozoic metamorphosed sediments and volcanics , ultramafic deposits , and granitoid intrusions , like much of the Siskiyou Mountains .

Elevations range from 1 @, @ 440 feet (438 @. @ 9 m) at the river 's mouth to 7 @, @ 418 feet (2 @, @ 261 m) at Dutchman Peak . Streams above about 5 @, @ 500 feet (1 @, @ 700 m) have lower gradients because those areas were heavily eroded by glaciers ; they then drop quickly until they reach the Little Applegate Valley at about 2 @, @ 500 feet (760 m) , which is fairly flat due to a high amount of alluvial deposits .

= = Flora and fauna = =

The watershed is covered predominantly by temperate coniferous forest , which makes up approximately 64 percent of the total area . The primary species in these areas are Douglas @-@ fir , ponderosa pine , madrone , and incense @-@ cedar . Buckbrush and manzanita grow in the drier chaparral regions . Several rare plants including Gentner 's fritillary , oblongleaf stonecrop , Siskiyou lewisia , clustered lady 's slipper , and splithair Indian paintbrush also grow in the watershed . Seven species of noxious weeds have been identified : three species of thistles , medusahead rye , Scotch broom , St. Johns wort , and tansy ragwort .

Prior to the 1940s , wildfires burned through the Little Applegate River watershed frequently . The United States Forest Service began fire suppression efforts in the 1920s , and a smokejumper station was built about 20 years later . Species that depend on fire to reproduce ? such as ponderosa pine ? declined in population , while Douglas @-@ fir and white fir spread . Buckbrush and manzanita , normally chaparral plants , encroached on the oak savanna regions . The vegetation in the watershed continues to grow denser , making it more susceptible to insect infestations and disease .

One hundred thirty @-@ eight species of vertebrates are known to live in the Little Applegate 's watershed , while another 134 are suspected . Some 37 square miles (96 km2) of the watershed have been designated as Critical Habitat Units for the northern spotted owl , a critically endangered species . Two other species known to live in the watershed are included in the IUCN Red List : the endangered Siskiyou Mountains salamander , and the vulnerable western pond turtle . Bighorn sheep , gray wolves , grizzly bears , and pronghorns once inhabited the region , but are now considered extirpated .

The most common fish inhabiting the river include Chinook salmon , threatened coho salmon , and rainbow trout . Fish populations are declining , however , due to low water quality and barriers such as dams and culverts .

= = History = =

Humans have lived in the Little Applegate River watershed for approximately 11 @, @ 000 years , based on Clovis points discovered in the area . The first inhabitants were most likely the Latgawa , Shasta , and Dakubetede tribes of Native Americans , descendants of the first humans who traveled across the Bering land bridge from Siberia . They fished for salmon , trout , and lamprey , and hunted for deer and elk . They also often set fires to clear brush from prairies and oak savannas , and to promote the growth of certain crops . The fires were limited by the Native Americans , creating a patchwork of burned and unburned land , thus increasing the biodiversity of the watershed .

The first European Americans to visit the area were a group of fur trappers led by Peter Skene Ogden in 1827 . The community of Buncom was founded by Chinese miners in 1851 when gold , silver , cinnabar , and chromite were discovered in nearby Jacksonville . In the spring of 1854 , James Sterling and Aaron Davis discovered gold in the Sterling Creek area , and hundreds of miners soon arrived . The town of Sterlingville was founded , and by October its population had risen to over 1 @, @ 500 . Mining lasted through the 1850s and 1860s , and much of the riverbeds of Sterling Creek and the lower Little Applegate River were excavated . The Sterling Ditch and several other ditches were constructed in the 1870s , providing water to large hydraulic mining operations in Sterlingville and surrounding regions . The Sterlingville mine quickly became the largest hydraulic mine in Oregon , and possibly the entire western United States .

The mining washed hundreds of thousands of tons of earth and sediment into the Little Applegate and its tributaries , devastated the landscape . The Sterlingville post office opened in 1879 , but was closed four years later as the town 's population declined . Buncom 's post office opened in 1896 . By 1910 , however , most mining operations had ended , and it was closed in 1918 . Hydraulic mines were reopened from 1933 to 1957 during the Great Depression . Three buildings remain in Buncom , but Sterlingville was abandoned and destroyed .

In the late 1990s , 41 irrigators in the lower watershed agreed to transfer their water rights to the nearby Applegate River (supplemented by Applegate Lake) , allowing for the removal of two large fish barriers on the Little Applegate River . The first , the Buck and Jones irrigation dam near Buncom , was removed in 2006 . The second , the Farmers Ditch irrigation dam , was removed in 2012 . Altogether , the removal of the two dams returned 15 cubic feet per second (0 @. @ 42 m³ / s) of water back to the Little Applegate River and opened up 35 miles (56 km) of streams to migrating fish .

= = Pollution = =

The water quality of the Little Applegate River watershed is generally poor due to high temperatures , sedimentation , and oxygen saturation levels which occur throughout the region . Most of these problems are created by human activity ; forests and riparian zones have been cleared to make way for agriculture , and high road densities cause slope failures . Hydraulic mining near Sterlingville devastated the surrounding landscape , leaving the slopes bare and sending rocks and gravel downstream . Cattle and sheep were introduced to the area in the late 19th century ; they have since overgrazed some areas of the watershed , reducing native grasses and allowing noxious weeds to spread . Overgrazing also contributes to soil erosion . Large amounts of water is diverted from the river and its tributaries , sometimes to such an extent that the mouth is left nearly dry .

A major contributor to the sedimentation of the Little Applegate River is McDonald Ditch , an irrigation ditch near McDonald Creek . Built in 1920 to provide water to residents of nearby Wagner Creek , the ditch has failed numerous times , sending several tons of dirt and mud downstream . The Talent Irrigation District approved purchasing a \$ 10 @, @ 000 monitoring system for the ditch in September 2010 , and applied for a \$ 100 @, @ 000 United States Bureau of Reclamation grant to replace the ditch with pipes .