



Ahjumawi Lava Springs State Park



Lava Flows and Springs

Ahjumawi Lava Springs, along with numerous other springs, discharge along the edges of a lava plateau composed of dark lava that flowed southward from the Medicine Lake Highland, a shield volcano. Lava flow after flow eventually built the plateau.

The plateau can store enormous amounts of groundwater within abundant fractures, lava tubes, seams between layers, and thick (30 to 500 feet) masses of cinders. In fact, these rocks can absorb rainfall and snowmelt into the subsurface so quickly that surface water flow is virtually nil. The total flow of springs issuing from the lavas at the north end of Fall River Valley has been estimated to range from about 600 million gallons per day to as much as 1.3 billion gallons per day.

The basaltic flows along the north side of Ahjumawi can be accessed by several trails past volcanic features such as spatter cones, lava tubes, basalt outcroppings and collapse depressions. The public access for the park is exclusively over water, from Big Lake, Horr Pond, Ja She Creek and the Tule River.

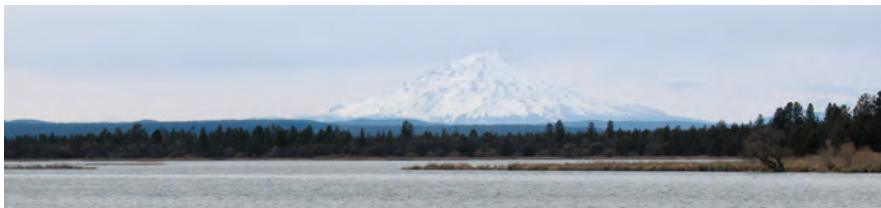
Process / Feature:

Volcanic hydrogeology of massive springs, and lava flows

Why it's important: "Ahjumawi"

means "where the waters come together" in the Ajumawi language.

This is a particularly appropriate description, since the waters of Big Lake, Tule River, Ja She Creek, and



Fall River all come together at this location. The springs at Ahjumawi Lava Springs State Park comprise one of the largest fresh water spring systems in the country. They discharge into Big Lake, Horr Pond, and Ja She Creek, which together form the headwaters of the East Fork of the Tule River (a major tributary to Fall River).

What you can see: Volcanic deposits and features from Holocene eruptions from the Medicine Lake Volcanic Highland to the north, and one of the country's largest freshwater spring systems, which feeds the headwaters of Fall River and Tule River.

Rugged basaltic lava flows, spatter cones, lava tubes, craters, evidence of faulting, majestic views of distant volcanoes (Mount Shasta and Mount Lassen).

Water Chemistry and Origin

Many have wondered where the huge amount of water originates. Tule Lake, Klamath Lake, Little Valley Hot Spring, and Medicine Lake seem like likely suspects based on circumstantial evidence. But chemical differences seem to have ruled out each of these. The springs may derive from precipitation falling on the flanks Medicine Lake Volcano, but this theory awaits proof.

A Hybrid Geomorphic Province

The region has the pattern of closely spaced faults typical of the Basin and Range province to the east, blanketed beneath volcanic rocks similar to the Cascade Range Province with towering Mount Shasta to the west. Linear northwest-trending uplands, such as the Whitehorse Mountains, and broad fault-controlled basins, such as Fall River Valley, express Basin and Range structure. This region is part of the multi-component boundary between the North American and Pacific tectonic plates.

Final Thoughts

The rocks and landforms created by molten lava spewing from the depths of the earth now collect the cold precipitation that falls from the sky. Processes from the inner earth and of the atmosphere unite in Ahjumawi Lava Springs State Park.

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