5 BLOCK FAULTING & RARE PLANT

This stop highlights two features; the step-like block faulting of the canyon, and a rare species of native plant.

Prior to the canyon filling with deposits of basalt lava from Gooding Butte, this area was inundated by the ancient lake bed that left soft sedimentary rock under the canyon walls. As the Malad Gorge was being cut, the waters were also undercutting the soft sediment layers under the basalt rock walls of the canyon. As these softer sediments erode, large sections of the heavier basalt canyon wall slowly "slump" towards the canyon floor over time.

Just beyond where you now stand is the beginning of a block slump. Some of the crevasses formed by this geological process are over 100 feet deep.

The moss-like plant growing along the canyon rim at this site is called Cow-Pie Buckwheat. It is a listed rare plant in the state of Idaho. This plant is found in only four sites in our state, and flourishes in the poor soils found here along the canyon edge.

The plant has adapted quite well to living in such a barren place. It is called a succulent because the small leaves are able to retain moisture year-round. The leaves contain a gel-like flesh much like cacti do. The outer part of the leaves are covered with fine silvery hairs which protect the plan from the ultraviolet radiation of the sun. The Cow-Pie Buckwheat produces small yellowish-white flowers in mid to late June.

It is still unknown if Cow-Pie Buckwheat is wind-pollinated or if a species of insect accomplishes the task of pollination.

6 WOODY'S COVE & HAGERMAN VALLEY

Woody's Cove was created by the same forces that created the Malad Gorge. In the past, waters from alpine glacial melt flowed violently over this area and began to wash out this cove. There was once a waterfall here similar to the Devil's Washbowl. The waters were diverted over time and left the cove as it appears today.

The whitish coloring on the walls is caused by calcium and phosphate deposits leaching out from water and whitening the porous volcanic rock. This cove is also more susceptible to erosion due to its aspect and positioning relative to the sun.

The canyon walls of Woody's Cove provide nesting cavities for many bird species. The wooded canyon floor provides necessary habitat for coyote, mule deer and red fox. Natural springs flowing from the base of the canyon provide enough water to maintain the trout hatchery at the mouth of the cove.

To the west lies the Snake River and the Hagerman Valley. The course of the River itself has changed direction over time as a result of the many volcanic episodes. The Snake River in this area was once much farther to the north.

We hope you enjoyed your visit!

Thousand Springs State Park
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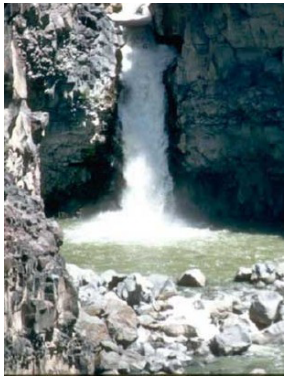
THOUSAND SPRINGS STATE PARK

MALAD GORGE UNIT

SELF -GUIDED TOUR

Welcome to Thousand Springs State Park—Malad Gorge Unit! With this self-guided tour you can conveniently enjoy the park at your own pace while discovering the natural wonders within. Please take time to explore and appreciate the beauty that took many years to create. Points of interest are designated with numbered roadside markers. You may begin your tour at any point along the way. We hope that our self-guided tour will greatly enhance your understanding and enjoyment of Thousand Springs State Park.

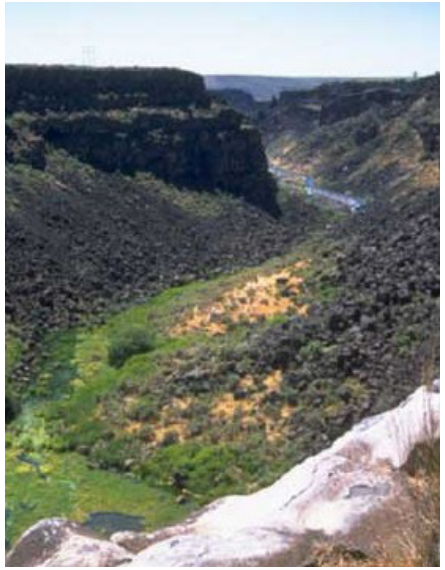
1 DEVIL'S WASHBOWL



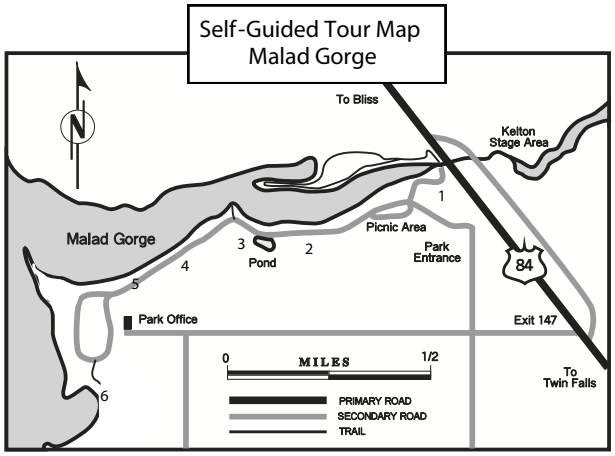
The washbowl and the Malad canyon that you see before you were created by a combination of volcanic activity and erosion. Over a period of time, periodic lava flows changed the landscape repeatedly. Gooding Butte, 9.5 miles to the northeast, near the town of Gooding, Idaho contributed the basalt lava that make up the walls of the Malad Canyon.

Following the volcanic episodes, alpine glacial snow melt from the north began flowing toward the Snake River. As the water reached this area, it began to widen weak joints in the basalt, eroding them to greater widths and depths. This widening began at the edge of the Snake River canyon as a raging waterfall. Over time, the waters retreated 2.5 miles to the present waterfall at Devil's Washbowl. The 60-foot waterfall at

the Devil's Washbowl is an active example of a retreating cataract. To the west and southeast of the Malad Canyon, similar examples of this canyon-forming erosion can be seen by walking Woody's Cove Overlook.



Today the Malad River originates near Gooding, Idaho where the Big and Little Wood Rivers combine. The Malad River is 12.5 miles long and the gorge is 2.5 miles in length. From the footbridge, as you look toward the interstate highway bridge, you can see that the waters of the Malad River are still active in creating a much narrower and shallower gorge above the Devil's Washbowl.



2

MALAD GORGE OVERLOOK

Here you can look back at the Malad River waterfall and the Devil's Washbowl to get another perspective of the forces that created the gorge. The Malad River traverses the 250 foot deep canyon for another 2.5 miles before it empties into the Snake River. During spring snowmelt, the canyon roars with large amounts of water from the swollen river. Wildlife finds abundant food and shelter within the Malad Canyon. Rock pigeons and numerous migratory birds, such as swallows, nest safely inside the canyon walls. Redtail hawks and golden eagles return annually to nest on the rocky outcrops and soar on warm air thermals rising up out of the canyon. Yellow-bellied marmots scurry about with ease in the canyon, eating grasses and tender vegetation. These large rodents live in rock piles and burrows, nesting and raising their young during the spring and early summer, and then hibernating the remainder of the year.

3

USES OF WATER OVERLOOK

Two interesting features which focus on water usage can be viewed here. Follow the gravel trail leading to our wildlife pond. Once a settling pond for irrigation water, this man-made pond is now used by many spe-species of wildlife. Migratory waterfowl take advantage of the protected water during their long journey to wintering areas. During the fall, if you are very quiet, you will often see hundreds of ducks on the water in the mornings and evenings. Docks allow for easier access for many purposes from picnicking to paddling canoes.

Across the road from the parking area is an overlook that will enable you to view the Malad Canyon. The structure that you see to the left diverts water from the upper Malad River to the first of two Idaho Power Co. generators on the river. Electricity has been generated by the Malad River since 1911. The concrete canal system on the canyon floor was completed in 1948. Except during spring high flow periods, most of the waters of the upper Malad River are diverted into the power canal.

Even with this diversion, the network of springs in Malad Gorge produce 600,000 gallons of water each minute and keep the river flowing throughout the year. These spring waters help maintain a native trout fishery as well as help support a diverse population of wildlife. You can see evidence of these springs as the Malad River recharges itself beyond the Idaho Power Co. diversion structure.

Across the canyon is another example of the canyon cutting powers of water. The pool of spring water just past the diversion structure is at the mouth of a canyon sometimes called Farmers' Cove.

4

NATIVE PLANT RESTORATION

This is one of several sites in Thousand Springs State Park undergoing native plant community restoration. Due to overgrazing in the past, the native grasses were destroyed. More aggressive non-native species such as cheat grass and mustard took over the range land.

After preparations in the latter part of 1996, this 5-acre site was seeded in April 1997 with four grass species once native throughout this area: Bluebunch Wheatgrass, Thickspike Wheatgrass, Great Basin Wildrye and Indian Ricegrass. As you can see, the native grasses have re-established themselves and will continue to seed and maintain a healthy grassland community. This grass planting is the first of four phases of habitat rehabilitation here in the park. The second phase will be to establish forbs and flowering plants, the third phase will be to establish shrubs such as sagebrush and antelope bitterbrush; and the final phase will be to establish berry producers and native trees in the wetland areas.