Paradise is located on the foothills of California's Sierra Nevada Mountains. It rests on a ridge with elevations ranging from 1,500 to 2,800 feet above sea level. The average altitude is 1,778 feet.

The town is located within the Yuba-Butte-Setter watershed and includes several minor streams. One of the town's greatest resources is the groundwater beneath it. Private and public wells are common within the city, and groundwater management is provided through local government. Both Magnolia Reservoir and Paradise Lake is located north of the town's borders. Feather River is east of Paradise. Butte creek flows just west of the town's limits. It is a significant resource for the region. Thousands of salmon make their annual upstream movement in this creek. This attracts many large animals to the region, such as bears, coyotes, mountain lions, and deer.

Furthermore, due to riparian corridors that line many of the area's creeks and streams, the area has great biodiversity and exhibits thousands of flora types. Oaks and pines are common as they are grown and harvested as a part of the logging industry in Butte county.

The town was formerly organized around Skyway Road and Clark Road. A majority of this land was dedicated to planning and zoning.