



# Charleton Lake

## Deschutes County

### Deschutes Basin

Location	
<b>Area</b>	156 acres (63.1 hect)
<b>Type</b>	natural lake
<b>Use</b>	recreation
<b>Location</b>	40 mi W of LaPine, 6 mi W of Cascades Lakes Hwy, in Deschutes N.F.
<b>Access</b>	a short hike off Forest Service Rd from Waldo Lake to Wickiup Reservoir
<b>USGS Quad</b>	The Twins (24K), La Pine (100K)
<b>Coordinates</b>	43° 44' 43" N, 121° 57' 51" W
<b>USPLSS</b>	tow nship 21S, range 06E, section 14

Charlton Lake is a fairly large, but little known lake lying near the crest of the Cascade Range in Central Oregon. It is located on the western edge of the Deschutes National Forest, but is most easily accessible from Waldo Lake in the Willamette River Basin and Willamette National Forest. At an elevation of 5692 feet, it is one of the highest lakes in Oregon. It is a beautiful and pristine lake lying in a deep, glacial scoured basin, and surrounded by a dense coniferous forest. There are no perennial surface streams flowing into the lake; water is supplied from snowmelt runoff and by intermittent streams. There is probably also some subsurface seepage into and out of the lake. Charlton Creek, an intermittent stream that runs to the east, is the surface outlet. The primitive character of this part of the Cascades is enhanced in part by the lack of good roads. A primitive dirt road passes within 100 yards of Charlton Lake, requiring visitors to hike in. Angling is reported to be good, with brook trout providing most of the catch. A Forest Service campground is on the shore; no other facilities are available nearby. No motorboats are permitted.

Charlton Lake is U-shaped and includes several small, shallow bays. It consists of two distinct deep basins connected by a somewhat shallower ridge which divides the lake down the middle. Characteristic of lakes in the area, concentrations of ions are very low and the conductivity value was one of the lowest observed in this survey. No macrophytes grow in the lake, although a few mosses grow attached to rocks. The concentrations of phosphorus and chlorophyll are very low, reflecting the ultraoligotrophic nature of the lake. Water transparency is excellent, and the bottom is visible at a depth of 36 feet (11 meters). The lake takes on a distinctive turquoise color characteristic of very pure water. Charlton Lake does not receive heavy use and there are no plans for more extensive development around the shoreline. Therefore, the quality of its water, and the quality of the outdoor recreation experience at the lake, will most likely be maintained.



Source: Oregon National Guard, 1981-82. View looking northwest.

Drainage Basin Characteristics							
<b>Area</b>	0.7 sq mi (1.8 sq km)		<b>Relief</b>	moderate		<b>Precip</b>	40 in (102 cm)
<b>Land Use %</b>	<b>Forest</b>	<b>Range</b>	<b>Water</b>	<b>Agriculture</b>			
	71.4	-	28.6	<b>Irrig</b>	<b>Non Irrig</b>	<b>Urban</b>	<b>Other</b>
<b>Notes</b>	-						
Lake Morphometry				Maximum		Average	
<b>Area</b>	156.0 acres (63.1 hect)		<b>Depth</b>	95 ft (29.0 m)		35ft (10.5 M)	
<b>Ave/Max Depth Ratio</b>	0.360		<b>Volume</b>	5,398 acre ft (6.67 cu hm)			
<b>Shoal area</b>	36%		<b>Volume factor</b>	1.09		<b>Shape factor</b>	1.74
<b>Length of Shoreline</b>	3. mi (4.8 km)		<b>Retention time</b>	indet.			
<b>Notes</b>	-						
Water Quality							
<b>Trophic status</b>	ultraoligotrophic						
<b>Sample date</b>	07/18/82		<b>Temp</b>	59.9F (15.5C)		<b>Diss. Oxygen (mg/l)</b>	8.1
<b>Transparency</b>	36.1 ft (>11.0 m)		<b>Phosp (mg/l)</b>	0.004		<b>Chlorophyll a (mg/l)</b>	0.1
<b>Alkalinity</b>	2		<b>Conductivity (umhos/cm)</b>	6			
<b>pH</b>	6.8						
<b>Major Ions</b>	<b>Na</b>	<b>K</b>	<b>Ca</b>	<b>Mg</b>	<b>Cl</b>	<b>SO4</b>	
	0.4	0.1	0.5	0.1	0.4	0.8	
<b>Notes</b>	Temp and D.O. at 1 meter						

### TEMPERATURE AND OXYGEN

