

Chickahominy Reservoir

Harney County

Malheur River Basin

Location	
Area	491 acres (198.7 hect)
Type	reservoir
Location	32 miles west of Burns
Access	directly north of Ore Hwy 20
USGS Quad	Riley (24K), Burns (100K)
Coordinates	43° 32' 36" N, 119° 36' 47" W
USPLSS	township 23S, range 26E, section 28

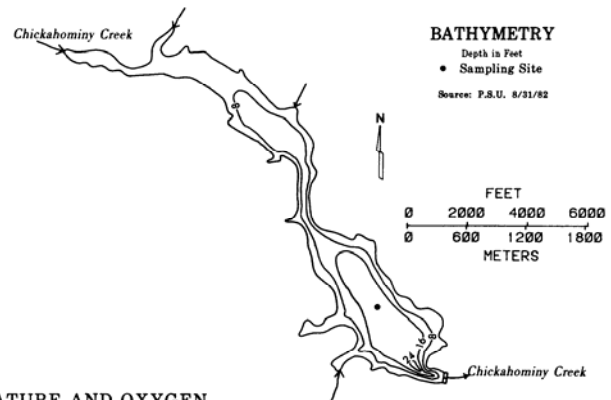
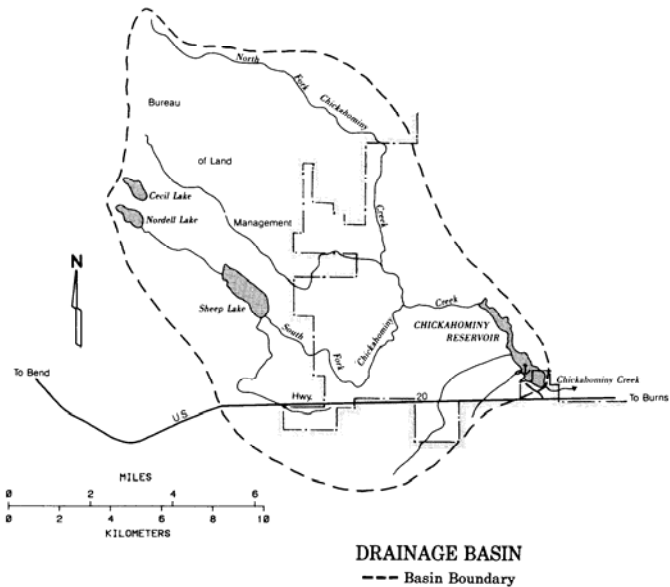
Chickahominy Reservoir (also known as Clusters Lake) was created during 1951 and 1952 by the construction of a dam on Chickahominy Creek. It was built with private funds to provide storage of irrigation water for the Silver Creek Ranch. However, as of 1970 the reservoir had never filled to capacity and it proved to be inadequate for its intended purpose. It has since been obtained by the Oregon Department of Fish and Wildlife for sport fishing, and has developed into one of the best fisheries in southeastern Oregon. The reservoir had received its first plant of fish in 1957, a load of Kamloops trout, which prospered in spite of competition for food with an abundant population of rough fish. Despite a series of treatments, the rough fish were not eliminated until the reservoir dried up completely in 1968, and no trash fish have been recorded since that time. In recent years stocking has been primarily fingerling rainbow trout, and fish as large as 32 inches have been caught. The reservoir is open all year and winter ice fishing has been good. In 1981 there were 73,175 visitor days, of which 24,880 were for fishing only. Land ownership around the reservoir is almost totally private, with the exception of about 40 acres near the dam which are administered by the Bureau of Land Management; recreational facilities and a boat launch are provided by the B.L.M. The drainage basin is a semi-arid rangeland covered by sagebrush, with sparse stands of junipers at higher elevations.

Morphometrically, the reservoir is shallow with a maximum depth of only 28 feet. Bottom material is composed primarily of silt, lava rock, and detritus from decaying vegetation. The concentrations of ions are above average for Oregon lakes, because of the arid climate of the area. During summer, surface water pH rises and sometimes exceeds 8.5. During mid to late summer surface water temperatures become quite warm. There is some growth of macrophytes in the shallow areas, and the reservoir contains some submerged and decaying sagebrush. Frequent blooms of planktonic algae occur during the summer, including species of blue-green algae, and there are reports of occasional winter fish kills owing to oxygen depletion after the die off of the planktonic algae and submerged macrophytes. The reservoir is in fact quite eutrophic, with high phosphorus concentration and limited water transparency.



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

Drainage Basin Characteristics							
Area	75.0 sq mi (194.3 sq km)		Relief	moderate		Precip	12 in (30 cm)
Land Use %	Forest	Range	Water	Agriculture		Irrig	Non Irrig
		99.0	1.0				
Notes	-						
Lake Morphometry				Maximum		Average	
Area	491.0 acres (198.7 hect)		Depth	28 ft (8.5 m)		10ft (2.9 m)	
Ave/Max Depth Ratio	0.340		Volume	4,720 acre ft (5.83 cu hm)			
Shoal area	55%		Volume factor	1.03		Shape factor 3.13	
Length of Shoreline	9.7 mi (15.6 km)		Retention time		4 mo		
Notes	Full pool estimated.						
Water Quality							
Trophic status	eutrophic, high phosphorous concentrations, algal blooms						
Sample date	06/21/82		Temp	67.1F (19.5C)		Diss. Oxygen (mg/l)	6.8
Transparency	3.3 ft (1.0 m)		Phosp (mg/l)	0.171		Cholorophylla (mg/l)	3.3
Alkalinity	46		Conductivity (umhos/cm)		112		pH 7.7
Major Ions	Na	K	Ca	Mg	Cl	SO4	
	8.8	6.2	8.1	4.2	1.4	3.8	
Notes	-						



TEMPERATURE AND OXYGEN

