

Clear Lake

Douglas County
South Coast Basin

Location	
Area	317 acres (128.3 hect) Elevation 229 ft (69.8 m)
Type	natural lake Use municipal (private)
Location	4 miles south west of Reedsport, adjacent to US Hwy 101
Access	closed to the public
USGS Quad	Winchester Bay (24K), Reedsport (100K)
Coordinates	43° 38' 02" N, 124° 10' 52" W
USPLSS	tow nship 22S, range 13W, section 30

Clear Lake, a large and deep natural lake on the Oregon Coast near the mouth of the Umpqua River, serves as a municipal water supply for the city of Reedsport five miles to the north. For this reason it is closed to public access and use. However, the lake is well known because it lies adjacent to the heavily travelled Coast Highway. Clear Lake, Eel Lake and the Tenmile Lakes are all a part of an old stream system partly blocked by the encroachment of coastal sand dunes. The whole system now discharges to the Pacific Ocean through Tenmile Creel in northwestern Coos County. Clear Lake itself occupies the valley of the ancestral headwaters of Clear Creek and was impounded behind sand dunes as they moved inland across the Clear Creek valley. Thus, the lake was gradually shifted upstream farther into the headwater region. The water level is now at an elevation of 229 feet above sea level unusually high for a dune-dammed lake on the Oregon coast. Clear Lake receives inflow from several small, intermittent streams. Outflow is south through Edna Lake, into Clear Creek, and on into Eel Lake. The U. S. Geological Survey reports that seepage occurs into unconsolidated sediments along the south and southwest margins of the lake (Renewal et al 1980).

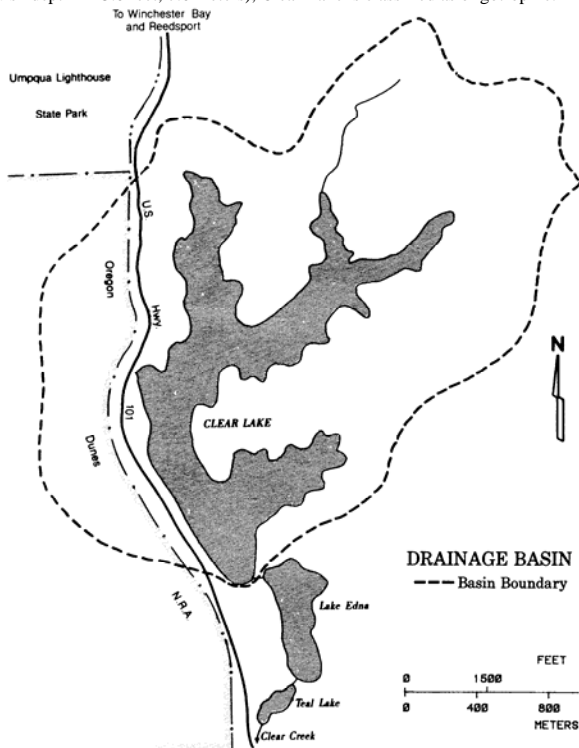
The drainage basin of Clear Lake was logged during the early 1940; and is now covered by brush and a second-growth forest that frames the shoreline. The steep topography continues into the lake basin which is steep-sided and very deep. The deepest portion of this dendritic shaped lake is located at the confluence of the northern and middle arms; there is a second deep basin in the southern arm. Because of the depth, there is little opportunity for the growth of macrophytes. However macrophytes do develop in the shallow ends of the arms.

A pronounced temperature stratification develops in the summer although the temperature difference between top and bottom is not great. The bottom water (hypolimnion) sometimes becomes partially depleted of oxygen after stratification has occurred, a feature attributed to the inflow of organic material from marshy areas in the drainage basin. Water throughout the lake has a low alkalinity. Phosphorus and chlorophyll concentrations suggest mesotrophic to oligotrophic conditions. Similarly, the species of planktonic algae (e.g. Cyclotella stelligera and Melosira sp.) are found in both mesotrophic and oligotrophic lakes. Given the extremely high water transparency (Secchi disk depth = 23.0 feet; 7.0 meters), Clear Lake is classified as oligotrophic.



Source: US Geological Survey, 1979. View looking northwest.

Drainage Basin Characteristics						
Area	2.0 sq mi (5.2 sq km)		Relief	moderate	Precip	65 in (165 cm)
Land Use %	Forest	Range	Water	Agriculture		
	65.0	-	25.0	Irrig	Non Irrig	Urban Other
Notes Other - Sand dunes.						
Lake Morphometry						
Area	317.0 acres (128.3 hect)	Depth	Maximum 119 ft (36.3 m)		Average 54ft (16.5 m)	
Ave/Max Depth Ratio	0.450	Volume	16,600 acre ft (20.51 cu hm)			
Shoal area	10%	Volume factor	1.42	Shape factor	3.38	
Length of Shoreline	8.7 mi (14.0 km)		Retention time	2.7 yr		
Notes -						
Water Quality						
Trophic status	oligotrophic					
Sample date	10/27/77	Temp	59.7F (15.4C)	Diss. Oxygen (mg/l)	12.1	
Transparency	23. ft (7.0 m)	Phosp (mg/l)	-	Chlorophyll a (mg/l)	-	
Alkalinity	15	Conductivity (umhos/cm)	83	pH	7.4	
Major Ions	Na 12.0, K 1.0	Ca 2.9, Mg 1.8	Cl 17.0, SO4 2.1			
Notes All data from USGS 10/27/77						



TEMPERATURE AND OXYGEN

