



Trail Bridge Reservoir

Linn County

Willamette/Sandy Basin

Location	
Area	73 acres (29.5 hect) Elevation 2,092 ft (637.6 m)
Type	reservoir Use power, recreation
Location	55 miles ENE of Eugene in the Willamette National Forest
Access	adjacent to Ore Hwy 126, 7 miles north of Belknap Springs
USGS Quad	Tamolitch Falls (24K), McKenzie River (100K)
Coordinates	44° 16' 24" N, 122° 02' 47" W
USPLSS	township 15, range 06, section 13

Trail Bridge Reservoir, adjacent to U.S. Highway 126 along the Upper McKenzie River, was built in 1963 by the Eugene Water and Electric Board as one of three area reservoirs in the Carmen-Smith Hydroelectric Development. The entire system supplies 113,000 kilowatts of peak power to the Eugene area, 70 miles to the west. The unique feature of power production at Trail Bridge Reservoir is the diversion of part of the McKenzie River through a tunnel into Smith Reservoir, and then back into the McKenzie River at Trail Bridge through a power tunnel and penstock. A small power plant is also located at the 98-foot high rockfill dam that forms the reservoir.

The drainage basin of the reservoir straddles the geologic border between the older, deeply eroded western Cascades, and the younger High Cascades, which are characterized by relatively fresh volcanic terrain. The steep, forested slopes of the Smith River sub-basin contrast sharply with the relatively young, unvegetated lava block fields in the northwest region of the basin. Recreation was a planned feature of Trail Bridge Reservoir, and the Willamette National Forest operates a 33-unit campground on the north shore. Rainbow trout are stocked annually, and the Eugene Water and Electric Board has cooperated with state and federal agencies in developing an artificial spawning facility for chinook salmon immediately downstream. A 10 mph speed limit for boats is in effect on the reservoir.

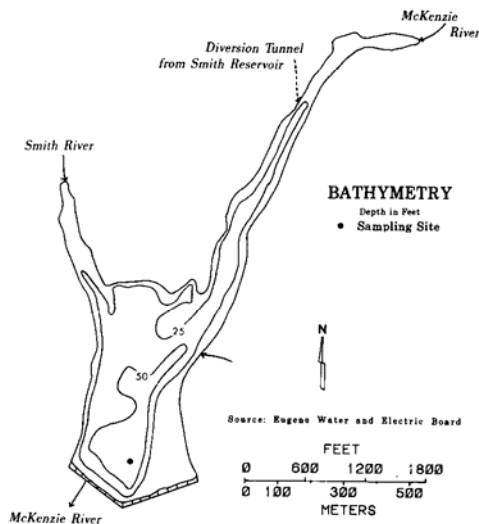
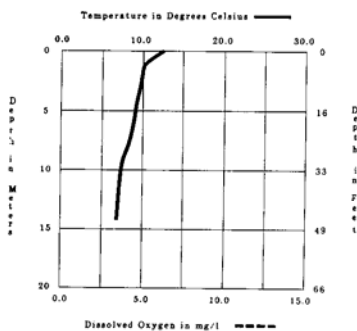
The major ion chemistry, alkalinity and conductivity of the water are typical of reservoirs in the Willamette drainage basins. Phosphorus concentrations are somewhat above average, but chlorophyll concentrations and water transparency indicate that the reservoir is oligotrophic.



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

Drainage Basin Characteristics							
Area	180.0 sq mi (466.2 sq km)	Relief	moderate	Precip	72-80 in (183-203 cm)		
				Agriculture			
Land Use %	Forest 79.0	Range -	Water 1.0	Irrig -	Non Irrig -	Urban -	Other 20.0
Notes Other - Lava fields							
Lake Morphometry				Maximum		Average	
Area	73.0 acres (29.5 hect)	Depth	65 ft (19.8 m)	27ft (8.3 M)			
Ave/Max Depth Ratio	0.420	Volume	1,975 acre ft (2.44 cu hm)				
Shoal area	18%	Volume factor	1.25	Shape factor	2.57		
Length of Shoreline	3.1 mi (5.0 km)	Retention time	<1 w k				
Notes Mapped at low water level							
Water Quality							
Trophic status oligotrophic							
Sample date	08/30/81	Temp	54.1F (12.3C)	Diss. Oxygen (mg/l)	-		
Transparency	49.2 ft (>15.0 m)	Phosp (mg/l)	0.046	Cholorophylla (mg/l)	0.3		
Alkalinity	20	Conductivity (umhos/cm)	52	pH	7.4		
Major Ions	Na 4.0	K 1.1	Ca 4.2	Mg 2.1	Cl 1.4	SO4 0.8	
Notes -							

TEMPERATURE AND OXYGEN



DRAINAGE BASIN

