

CLEAR AS, AK UTILITY SYSTEM DESCRIPTIONS

General: Clear Air Station is approximately 80 miles SW of Fairbanks, AK.

System Descriptions: The following information provided is only an estimate and is subject to change.

Electrical: Power for Clear Air Station is generated >on< by >with< the government owned Central and Heating Plant (CH/PP). The CH/PP has three coal fired boilers. Each boiler was designed to operate at 625psig and 825°F, with three 7.5 megawatt General Electric (G.E) steam turbine generators and one 1.0 megawatt diesel engine generator. The CH/PP produces power at 4160 volts wye, with an ungrounded neutral. Primary power is distributed throughout the site through overhead three phase circuits consisting of approximately 29,000 feet of 1950's vintage #1/0 ACSR. In addition, there exists roughly 136,000 circuit feet of insulated conductor and 96 single and three phase transformers ranging in size from 5 to 1000 kVA. The annual electric energy usage for this facility is roughly 75,480,000 kWh with a peak demand of approximately 10,993 kW occurring during the fall months. These numbers include the CH/PP station loads.

Potable Water: The potable water system consists of on-base groundwater supply wells, chlorination system, water supply pumps, and the piping distribution system. The main potable water supply well pump has a 250 gpm capacity. Fire protection water supply pumps include two wells with 1,000 gpm diesel powered well pumps. Well water is chlorinated and then pressurized by two 260 gpm water supply pumps and a 1,500 gallons hydropneumatic tank. The water distribution piping system includes approximately 25,000 feet of 4-inch to 8-inch water main piping. Water production flow averages approximately 150,000 gallons per day.

Sanitary Wastewater: Wastewater is collected on Base, treated for primary solids removal, and discharged to an on-base leach field system. The collection piping includes approximately 14,000 feet of 6-inch to 10-inch mains and one lift station. The primary treatment facilities include a commutator, Imhoff clarifier, and sewage sludge drying bed. Clarified effluent flows to a 26,136 square feet leach field. The collection system was mostly constructed in the 1960s. The treatment system was refurbished in 1992. The leach field was constructed in 1997. Wastewater flow averages approximately 150,000 gallons per day.

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