

WATER-RESOURCES RECONNAISSANCE OF
ST. GEORGE ISLAND, PRIBILOF ISLANDS,
ALASKA

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FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL SYSTEM (SI) UNITS

<u>Multiply English units</u>	<u>By</u>	<u>To obtain SI units</u>
inches (in)	25.40	millimetres (mm)
feet (ft)	0.3048	metres (m)
cubic feet per second (ft ³ /s)	28.32	litres per second (l/s)
gallons per minute (gal/min)	.06309	litres per second (l/s)
gallons per day (gal/d)	4.381x10 ⁻⁸	cubic metres per second (m ³ /s)

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SUMMARY

A hydrologic reconnaissance of St. George Island, Pribilof Islands, Alaska, was made in May 1974 to determine the feasibility of locating a source of water containing less sodium chloride than the present supply. The existing wells are apparently either too deep relative to sea level or too close to the ocean; they may be pumping from a transition zone between the freshwater and saltwater bodies. Other than a few lakes on the island, surface-water availability is limited. However, the presence of several freshwater springs suggests that ground water of good quality does exist on the island. The island is relatively narrow, the rate of recharge is low, and the rocks are permeable; it is therefore concluded that the freshwater lens is thin. Fresh ground water should be obtainable near the center of the island. However, production wells should be designed so as to skim freshwater from near the top of the lens.

INTRODUCTION

The village of St. George is on the north shore of St. George Island, one of several islands within the group of Pribilof Islands (figs. 1 and 2) in the Bering Sea. Maritime weather conditions prevail at the islands, with predominantly cloudy, foggy weather. At St. George Island, total precipitation for the year is about 30 in (inches) or 762 mm (millimetres), and mean annual air temperature is about 36°F or 2°C (Celsius).

A hydrologic reconnaissance of St. George Island was made on May 24-27, 1974, by the U.S. Geological Survey at the request of the National Marine Fisheries Pribilof Islands Program. Subsequent to the trip, records on file with the Geological Survey were reviewed. The purpose of the study and field reconnaissance was to evaluate the existing village water supply and to determine the feasibility of developing a source of water that contains fewer dissolved solids, mainly sodium and chloride, than the present system.