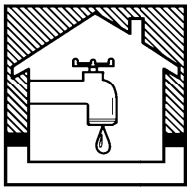


# GROUNDWATER: A Source of Alaska's Drinking Water

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Groundwater provides the water source for many Alaskans. Public drinking water systems, which often rely on groundwater supplies, provide people with their drinking water; consequently the quality of groundwater affects the quality of drinking water.



## Why do Alaskans use groundwater to supply drinking water?

Groundwater provides the water used in 80 percent of Alaskan public drinking water systems. Groundwater is generally available for both private and municipal water supplies and is available during winter months when rivers, lakes and streams are frozen. In many cases, the natural quality is so high that it does not need any treatment or only minor treatment prior to drinking.

## What is a public drinking water system?

Any source of water, collection system, treatment works, storage facility, or distribution system — including the container used to distribute the water — that provides people with water is considered a public drinking water system. Public water systems do not include systems serving only one single-family residence, but they do include systems that provide water to more than one dwelling unit, a factory, office, or other similar facility.

## What kinds of public drinking water systems exist?

In Alaska, public drinking water systems are divided into three classes.

*Class A* systems serve at least 25 residents. Usually these systems serve single-family homes on a central water system, large apartment

buildings, or mobile home parks. A *Class A* system may also be one that serves the same 25 or more people for at least six months of the year.

*Class B* systems serve at least 25 individuals per day, or 10 service connections used by residents for at least 60 days of the year. Examples of *Class B* systems are restaurants, summer or work camps, or campgrounds.

*Class C* systems are those systems which are not *Class A* or *Class B* systems. *Class C* systems usually supply water to small restaurants, trailer parks, or multi-family housing.

Seventy four percent of *Class A* systems use groundwater for their water source. Eighty four percent of *Class B* and ninety percent of *Class C* systems rely on groundwater for their water source.

## Where is the greatest use of groundwater in Alaska?

The greatest use of groundwater in Alaska is in the Southcentral and Interior regions of the state. This is because it is potable, and generally available in sufficient amounts. Rainwater and surface water are used more often in the Southeast and Arctic regions of Alaska.



## What is the quality of groundwater in Alaska?

In Alaska, the groundwater quality varies by location; many places in Alaska have very good water quality, while other locations have poor water quality. Groundwater naturally contains organic substances, and dissolved minerals, which affect its quality. The acceptability of groundwater for specific uses is largely determined by its natural quality. When levels of these natural substances and materials surpass what is acceptable for the desired use, it is said to be contaminated. Natural contaminants which are undesirable in groundwater exist in various parts of Alaska. Groundwater contamination resulting from human activities is increasing. Contamination sources such as petroleum product storage and transportation facilities, oil spills, waste water disposal practices, hazardous waste, landfills and dumps, saltwater intrusion, and many others, can affect Alaska's groundwater quality.



The many ways that groundwater is used and its important role in many public drinking water systems, makes it easy to see how valuable groundwater is to Alaskans. Groundwater use and quality are important factors to consider, especially when so many people rely on it. Protecting this hidden resource should be everyone's concern. For more information on drinking water systems contact the Department of Environmental Conservation Drinking Water Program or your District Cooperative Extension Service Office. For more information on water use contact the Department of Natural Resources.



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