

ADEC recognized Contaminated Sites (CS), Leaking Underground Storage Tanks (LUST) and Underground Storage Tanks (UST).

ADEC regulated sites within the basin are:  
Contaminated Sites (CS):

Active: 17

Inactive: 8

Closed/No Further Action: 15

LUST: 13

UST: 16

Details on CS, LUST and UST sites identified in this basin can be obtained from:

[http://www.dec.state.ak.us/spar/csp/db\\_search.htm](http://www.dec.state.ak.us/spar/csp/db_search.htm)

## PROTECTION EFFORTS

Currently wellhead protection plans have not been established for public water systems in the basin. Protection efforts should include implementing a wellhead protection plan, and identifying and managing improperly abandoned wells or other features that may provide direct pathways for contamination to enter the aquifer. ADEC has created a CD ROM to assist communities develop a wellhead protection plan. Applications for the CD are available at:

[http://www.dec.state.ak.us/eh/dw/DWP/source\\_water.html](http://www.dec.state.ak.us/eh/dw/DWP/source_water.html)

This is the second in a series of fact sheets being developed for each Hydrologic Unit Code area in Alaska.

The third fact sheet is scheduled to be printed in June, 2005.

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## BASIN FACT SHEET FOR NOME

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USGS HUC: 19050104

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ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

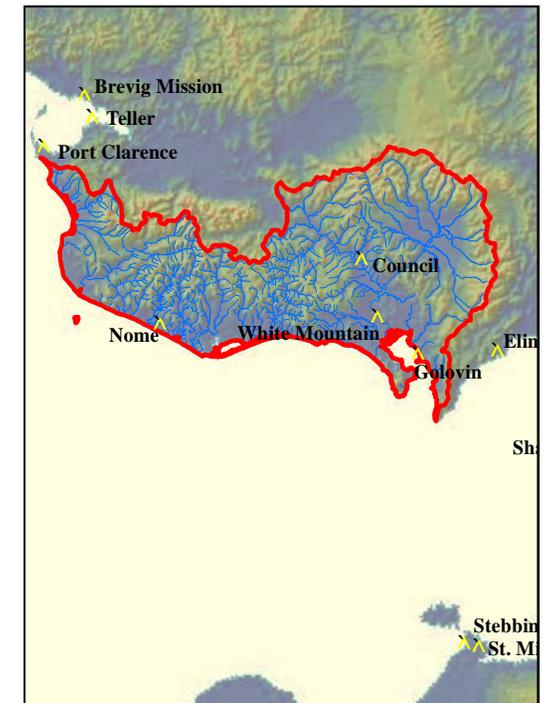
DRINKING WATER PROTECTION

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# BASIN OVERVIEW

## AREA DESCRIPTION

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The Nome Basin is located in the southern section of the Seward Peninsula in northwestern Alaska. The area is bordered by the Igluaiik and Bendelben Mountains to the north; the Darby Mountains to the east; the Norton Sound to the south; and the Bering Sea to the west.

## AREA GEOLOGY

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The geology of the region consists of Quaternary coastal and glacial sand, and gravel deposits. The sands are re-worked clastics derived from Paleozoic sedimentary and metasedimentary rocks that form the highlands of Anvil Mountain and North Newton Peak north of Nome. The surface geology of the surrounding area consists of glacial terminal and ground moraines, and scoured and kettled areas. These moraine deposits have been re-worked by coastal processes during a marine regression that left at least three identifiable coastal terraces.

Depth to groundwater, based on U.S. Geological Survey topographic maps, is estimated at 30 – 50 feet below the ground elevation. However discontinuous permafrost is likely to be present below the vegetative layer. At various undisturbed locations, surface water collects above the shallow permafrost and has contributed to the wet tundra and wet near-surface conditions.

## PUBLIC DRINKING WATER USAGE

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The basin has 3 public water systems consisting of 5 separate sources. These sources serve a total population of 4,358. The estimated annual usage of water from these systems is 214,740,450 gallons per year (588,330 gallons per day).

Four sources are classified as ground water and one source is classified as surface water. All three sources are considered community water systems.

## WATER QUALITY

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The Alaska Department of Environmental Conservation (ADEC) has prepared Source Water Assessments reports for all public drinking water systems in the basin. Source Water Assessments provide a detailed description of each public water system in the basin. The results of the assessments can be reviewed at: <http://www.dec.state.ak.us/eh/dw/DWP/complete.aspx>

Naturally occurring levels of contaminants exist in all drinking water sources. Inorganic chemicals are the most likely contaminants to occur naturally. Low concentrations of the following inorganic chemicals have been detected in public drinking water systems in the Basin: thallium, nitrate, fluoride and barium.

None of the regulated contaminants detected exceed the Maximum Contaminant Levels (MCL).

The MCL is the maximum level of a contaminant allowed to exist in drinking water and still be consumed without harmful effects.

Regulated contaminants are divided into six categories: Bacteria/Viruses, Nitrate/Nitrites, Inorganic and Heavy Metals, Volatile Organics, Synthetic Organics, and Other Organics. This fact sheet reviews only Inorganic, Heavy Metals and Nitrates/Nitrites. For complete results of recent sampling of regulated contaminants please refer to the public water systems' Source Water Assessment. Public water systems located in the basin are identified by their Public Water System Identification Number (PWSID) and are listed below.

### PWSID

340507  
340010  
340214

## LAND USE ACTIVITIES

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ADEC has identified the following land use activities in the area that have a potential to impact water quality: landfills, wastewater treatment plants, honey bucket disposal areas, airports, incinerators, electric power generation, firehouses, gasoline stations, class V injection wells, laundromats, medical facilities, motor vehicle repair shops, petroleum storage,