

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 regulated contaminant sampling please refer to the public water systems' Source Water Assessment or visit Drinking Water on the web: <http://map.dec.state.ak.us/eh/dww/index.jsp>

Public water systems located in the basin are identified by their Public Water System Identification Number (PWSID) and are listed below.

PWSID

380078	380638	381210	381480	380028	380094
380125	380133	380387	380599	380620	380947
380963	380997	381082	381090	381105	381121
381147	381171	381244	381260	381545	381668
381765	380531				

LAND USE ACTIVITIES

ADEC has identified the following land use activities in the area that have a potential to impact water quality: Landfills, wastewater treatment plants, sewer lines, airports, boatyards/marinas, cemeteries, seafood processing, electric power generation, firehouses, gasoline stations, Class V Injection Wells, laundromats, medical facilities, motor vehicle repair shops, petroleum storage, firehouses, 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: 6
- Inactive: 4
- Closed/No Further Action: 5

LUST: 10
UST: 18

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

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 in developing a wellhead protection plan. Applications for the CD are available at:
http://www.dec.state.ak.us/eh/dw/DWP/source_water.html



Alaska's Drinking Water Protection Program

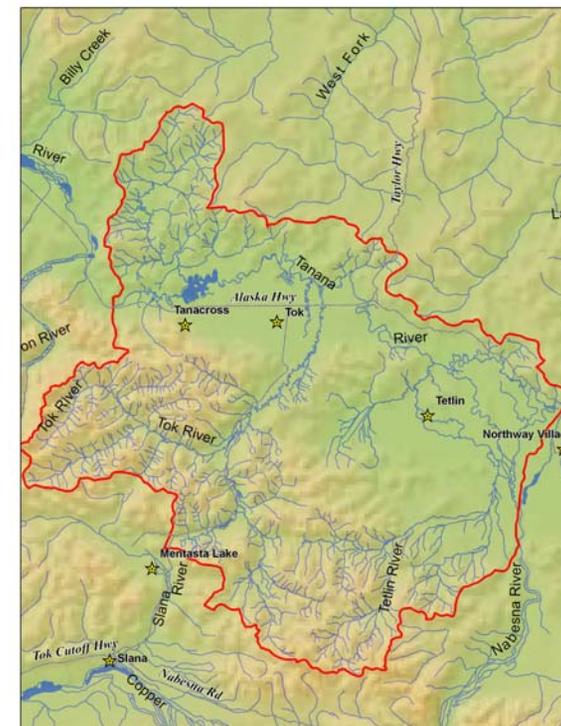
555 Cordova Street
Anchorage, Alaska 99501
Phone (907) 269-7521
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BASIN FACT SHEET FOR TOK

USGS HUC: 19040502

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DRINKING WATER PROTECTION



BASIN OVERVIEW

AREA DESCRIPTION

The Tok Basin is located near the eastern border of Alaska, approximately 90 miles on the road system west of the Canadian Border. The area is bordered by the Tanana River to the north, the Alaska Mountain Range to the southwest, the Mentasta Mountains to the south, and the Cheslina River to the east.

AREA GEOLOGY

Tok and the surrounding areas are in the eastern reaches of the Tanana-Kuskokwim Lowland, a broad depression bordering the Alaska Range on the north. Coalescing alluvial fans composed of moderately well-sorted silt, sand and gravel are the principal surficial deposits in the Tok Basin. The thickness of the unconsolidated material is estimated to be as much as 760 meters. However, not all of this thickness is alluvium because alluvial deposits are typically not deposited below sea level.

It is likely that deep sediments in the area are poorly sorted lacustrine, glacial, or marine sediments of low permeability. The area was glaciated in at least three episodes, which is evidenced by the presence of terminal moraines in the Delta and Gerstly River valleys and in the valleys of several small creeks draining the north face of the

Alaska Range. Five major soil types exist in the Big Delta area: Salchaket, Jarvis, Nenana, Chena, and Tanana. These soils range in drainage from the somewhat poorly drained Salchaket to well drained Chena. The area lies in the discontinuous permafrost zone.

PUBLIC DRINKING WATER USAGE

The basin has 26 public drinking water systems consisting of 27 separate sources. These sources serve a total population of 3,325. The estimated annual usage of water from these systems is estimated to be 107,757,125 gallons per year (295,225 gallons per day).

All 27 sources are ground water. Of the public water systems, 2 are community water systems, 3 are non-transient/non-community and 20 are classified as transient/non-community.

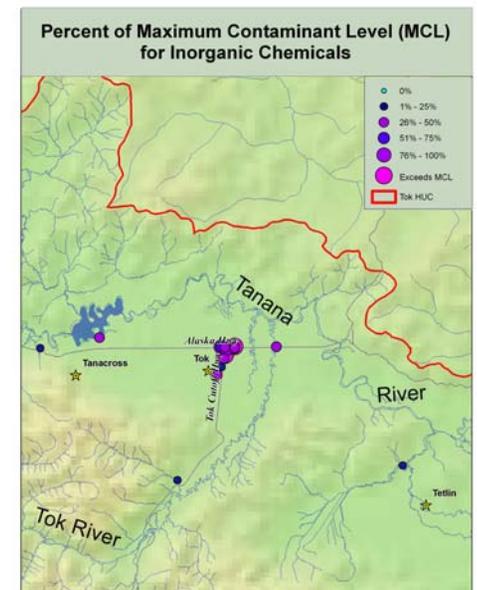
WATER QUALITY

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. Concentrations of the following inorganic chemicals have been detected in public drinking water systems in the Basin: antimony, arsenic, nitrates/nitrites, barium, chromium and fluoride

Drinking water within the Basin meets the Maximum Contaminant Levels (MCL) for all regulated inorganic contaminants except for Nitrates. The MCL is the maximum level of contaminant allowed to exist in drinking water and still be consumed without harmful effects. Two public water systems have an average nitrate level above the MCL of 10 mg/l.



* Inorganic Chemicals reviewed: antimony, arsenic, nitrates/nitrites, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium and thallium.