



**City of Kodiak  
Public Works**

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Photo courtesy: Best Western Kodiak Inn  
www.kodiakinn.com

The City of Kodiak has been providing clean water to the community for many years, helping to keep you and your family healthy. We take this mission very seriously. As shown in this annual report covering the year 2010, the water we delivered meets or exceeds the strict regulations of the State of Alaska and the U.S. Environmental Protection Agency.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

Ang ulat na ito ay ngsaad ng mahalagang information tungol na iyon iniinon. Tailangam mo ng taong magsasalin nito sa wikang Pilipino.

In 2010, our water department distributed 1.66 billion gallons of water to our customers. Water is pumped from the Monashka Reservoir and the Pillar Creek Reservoirs, which are on Monashka Road northwest of Kodiak, to the Upper Reservoir, located on Pillar Mountain Road. The water flows from Upper Reservoir directly into the water treatment facility.

These reservoirs are fed by protected watersheds. The Kodiak water system has developed watershed management plans for all of the city's water sources. Copies of the plan are available for review at the Public Works offices at 2410 Mill Bay Road. One of the main activities performed to protect the quality of Kodiak's water is to restrict access into the watershed areas. All entrances are gated, signed and checked daily. In addition, the entire perimeter of the Upper Reservoir is fenced because it is the final holding basin prior to treatment and distribution.

**FOR MORE INFORMATION** about your drinking water and for opportunities to get more involved, please contact Mark Kozak, Public Works Director, by calling (907) 486-8060 or by writing to the City of Kodiak Public Works Dept, 2410 Mill Bay Road, Kodiak AK 99615. Also, you are welcome and encouraged to attend public meetings on the second and fourth Thursday of every month at 7:30 p.m. at the Assembly Chambers, 710 Upper Mill Bay Road.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural live stock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The City of Kodiak adds chlorine to the drinking water as a disinfectant to control microbial contaminants. The chlorine residual entering the distribution system must be above 0.2 ppm to insure adequate disinfection and below 4.0 ppm. The City met this requirement 100% of the time for 2010.

The City of Kodiak water distribution system contains some cement asbestos piping. The City is required to sample for asbestos in the drinking water periodically. In the 2010 sampling, no asbestos fibers were detected in the drinking water.

**Notes:**

<sup>1</sup> The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

<sup>2</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

<sup>3</sup>The City of Kodiak received a violation for lead in the year 2001. High lead levels are primarily due to corrosion of lead containing solder pipes and/or plumbing fixtures inside a house or building. We have completed a corrosion control study. Additional sampling will be performed to determine if our corrosion control program is sufficient.

**Lead:** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about the elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune compromised persons such as person with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infections by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

**Definitions**

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety. Treatment Technique or TT, a required process intended to reduce the level of a contaminant in drinking water.

**Action Level or AL:** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

**Nephelometric Turbidity Units or NTU:** A measure of clarity.

**N/A<sup>1</sup>:** Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants.

**N/A:** Not applicable

**ppb or parts per billion:** micrograms per liter (ug/l).

**ppm or parts per million:** milligrams per liter (mg/l).

**pCi/L or picocuries per liter:** a measure of radioactivity.

**ND** - not detected

Stage 2 Disinfectants and Disinfection Byproducts Rule (DBP) requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP in their distribution systems and identify locations to monitor DBP's for Stage 2 DBP Rule Compliance. The following table summarizes the individual sample results for the IDSE monitoring for 2010:

Contaminant	Number of Analyses	Minimum Level Detected	Highest Level Detected
Haloacetic Acids (HAA5) (ppb)	4	19.0	20.4
Total Trihalomethanes (TTHM) (ppb)	4	18.9	45.6

The public water system for the City of Kodiak is a Class A water system that obtains water primarily from the Monashka Reservoir, approximately 5-miles north of Kodiak. Water collected at the Monashka Reservoir is piped to the Upper Reservoir, where it is stored before treatment and distribution. The Monashka Reservoir drinking water protection area is approximately 4 square miles in size and the Upper Reservoir drinking water protection area is approximately 6 acres in size. The Pillar Creek Reservoir is located approximately 1.5 miles northwest of Kodiak and is used as an alternative water source for the system. The Pillar Creek Reservoir drinking water protection area is approximately 4 square miles in size. The susceptibility rating of all protection areas is **“very high.”** *A rating of high to very high is typical for all systems with surface water intakes.* Potential and existing sources of the following contaminants were evaluated for the Source Water Assessment: bacteria and viruses, nitrates and/or nitrites, heavy metals cyanide, and other inorganic chemicals, synthetic organic chemicals, volatile organic chemicals, and other organic chemicals. No potential contaminant sources were identified for the drinking water source. This evaluation included all available water sampling data submitted to ADEC by the system operator. The samples may have been collected from either raw water or post-treated water. Combining the susceptibility of the surface water source with the contaminant risks, this water system has received a vulnerability rating of **“medium”** for all six contaminant categories. This assessment can be used as a foundation for local voluntary protection efforts as well as a basis for the continuous efforts on the part of the City of Kodiak to protect public health.

**Freeze Precautions:**

- **Eliminate drafts** keep basement and garage doors and windows tightly closed, close off crawl space vents and doors, and seal cracks in basement walls or crawl spaces.
- **Insulate pipes** in an unheated part of the home (exterior walls, crawl spaces, basements, cabinets) or spaces where air cannot circulate. Check for damp insulations; water-soaked insulation can cause freeze-ups.
- **Protect water meter.** Be sure the meter box cover is not broken, missing, or out of place. Report broken or missing covers to the Public Works Department at 486-8060.
- **Protect outside faucets.** Drain outside faucets and sprinkler systems if a separate shut-off is available. Disconnect and drain garden hoses. Check with a plumber about frost-proof faucets. Caulk any space between the faucet and an outside wall.
- **Open cabinet doors below sink.** If a sink is located against an outside wall, open cabinet doors to allow warm air to reach water pipes.
- **Drain pipes before extended vacations.**

A primary requirement the City must meet is to demonstrate that it can control ALL HUMAN ACTIVITIES in the watershed. Hiking and hunting in the watershed can damage vegetation and induce erosion by exposing soil surfaces on the trails. Recreation in the watersheds also has the potential to increase fecal contamination through pet and human waste.

**Protecting Our Watersheds—**Kodiak gets its drinking water from the Monashka Reservoir Watershed and the Pillar Creek Watershed. These two watersheds remain natural and undisturbed, unlike a majority of U.S. community water sources. Kodiak's water sources are of such high quality that the City is currently not required to filter the water before it is disinfected and delivered to the community through its piped water distribution system.

Filtration is very expensive and avoiding filtration keeps your water rates down. For a drinking water system to qualify for filtration avoidance under U.S. EPA's Surface Water Treatment Rule (SWTR), the system must have an active watershed control program and meet numerous requirements.

Cooperation from the public is critical. **PLEASE** respect the restricted access areas that are gated and signed. Help us keep your water clean and safe.

Contaminants	Unit	MCLG Health Goal	MCL EPA's Limits	Level Detected	Range Detected	Violation? (Yes / No)	Year <sup>1</sup> Sampled	Potential Source of Contamination
<b>Microbiological Contaminants</b>								
Turbidity <sup>2</sup>	NTU	N/A	5.0	1.10 Highest Sample	100% of samples met limits	No	2010	Soil Runoff
<b>Inorganic Contaminants</b>								
Copper	ppm	1.3	1.3 = AL	0.449 (90th percentile)	All 20 sites below AL	No	2001	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	ppb	0	15 = AL	20.0 (90th percentile)	4 of 20 sites above AL	Yes	2001	Corrosion of household plumbing systems; Erosion of natural deposits.
Nitrate	ppm	10	10	0.220	N/A	No	2010	Erosion of natural deposits.
Arsenic	ppb	0	10	0.276	N/A	No	2009	Erosion of natural deposits
<b>Volatile Organic Contaminants</b>								
Total Trihalomethanes (TTHMs)	ppb	N/A <sup>1</sup>	Annual Average 80	47.4	40.1 - 51.3	No	2010	Byproduct of drinking water chlorination.
Haloacetic Acids (HAA5)	ppb	N/A <sup>1</sup>	Annual Average 60	5.8	3.4 - 10.2	No	2010	Byproduct of drinking water chlorination.
<b>Radionuclides</b>								
Gross Beta Particles	pCi/L	0	50	1.1	N/A	No	2006	Erosion of natural deposits.
Combined Radium	pCi/L	0	5	0.60	N/A	No	2006	Erosion of natural deposits.