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ABERDEEN, SD  
PERMIT NO. 200

# Annual Water Quality Report

Water testing performed in 2013



Aberdeen Water Works utilizes a blend of surface and ground water in the production of water to serve more than 26,091 customers with an average daily usage of 3,250,000 gallons. The state has performed an assessment of the source water and has determined that the relative susceptibility rating for the Aberdeen public water supply is medium. More information about your water and information on opportunities to participate in public meetings can be obtained by calling 605-626-7023 and asking for Karl Alberts.

This edition of our annual water quality report is a snapshot of the water provided in 2013. The City of Aberdeen has been committed to providing safe drinking water to its citizens since before 1934. Today that dedication continues with the production of drinking water that meets all state and federal drinking water standards. The blending of old and new technologies in our process has equipped us to meet the challenges of today as well as the future.

## IRRIGATION OF GRASS & PLANTS

PROHIBITED FROM

11:00 am—5:00 pm

## WATER SUPPLY

### The Aberdeen Water Treatment Process

Treatment begins when potassium permanganate is added as the water is pumped to pretreatment. Utilizing a rapid settling system which blends sand and polymer that grabs particles contributing to taste and odor in the finished water and removes them allowing the potassium permanganate and carbon to work at improving the taste and odor. Lime, soda ash softening and clarification then takes place after which carbon dioxide must be added to return the pH to an acceptable level. A corrosion inhibitor and sometimes a polymer are added before the water travels to the filters where the remaining particles are removed. Disinfection and fluoridation finish out the treatment and the water is sent into to town for your consumption.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amount 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 call the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

For additional information regarding the results of tests conducted on our drinking water or clarification of the information contained within this report, please call Janel Ellingson at the Aberdeen Water Works at 605-626-7011

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 can pick up substances resulting from the presence of animal 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, livestock operations, and wildlife.

*Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater 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 stormwater 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 stormwater runoff, and septic systems.

*Radioactive contaminants*, which can be naturally — occurring or be the result of oil and gas production and mining activities.



## HEALTH INFORMATION

### HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised person such as a person with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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**.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Aberdeen public water supply system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

This table lists all the drinking water contaminants that we detected during the 2013 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1–December 31, 2013. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Please direct questions regarding this information to Ms. Janel Ellingson with the Aberdeen public water system at (605)626-7011

### 2013 Table of Detected Contaminants For Aberdeen (EPA ID 0020)

#### Terms and abbreviations used in this table:

- **Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Action Level (AL):** the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water. For turbidity, 95% of samples must be less than 0.3 NTU.

#### Units:

\*MFL: million fibers per liter

\*mrem/year: millirems per year (a measure of radiation absorbed by the body)

\*NTU: Nephelometric Turbidity Units

\*pCi/l: picocuries per liter (a measure of radioactivity)

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

\*ppb: parts per billion, or micrograms per liter (µg/l)

\*ppt: parts per trillion, or nanograms per liter

\*ppq: parts per quadrillion, or picograms per liter

\*ppm: positive samples per month

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Alpha emitters	2.0	ND—2	04/05/11	15	0	pCi/l	Erosion of natural deposits.
Antimony	0.2		11/14/11	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Arsenic	2		11/14/11	10	NA	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronic production wastes.
Barium	0.030		11/14/11	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	4.4		11/14/11	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	1.44	0.90—1.44	5/14/13	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids	29.5	8.7 — 29.5	6/10/13	60	0	ppb	By-product of drinking water chlorination.
Nitrite (as Nitrogen)	0.06		11/04/13	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	2.9		11/14/11	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total Coliform Bacteria	1	Positive samples		5%	0	ppm	Naturally present in the environment.
Total Trihalomethanes	18.9	3.7 — 18.9	3/11/13	80	0	ppb	By-product of drinking water chlorination.

#### LEAD AND COPPER

Substance	90% Level	Test Sites > Action Level Range	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
COPPER	0.2	0	7/19/11	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
LEAD	3	0	7/19/11	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.