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Postal Customer

## CITY OF ABERDEEN CONSUMER CONFIDENCE REPORT FOR 2005

In accordance with EPA and State of South Dakota regulations, we annually monitor your drinking water for more than 80 possible contaminants. This annual water quality report will provide you, the consumer, a summary of the results of those quality tests. Items listed are those which were detected, no matter how tiny the concentration, while dozens of other substances were monitored but not detected. Monitoring for some substances is not required annually; if they were detected in previous years' testing, this date is listed in the table. These water quality tests are frequently performed on water samples taken from locations throughout the community to ensure the citizens of Aberdeen are receiving safe, quality water.

The 1996 amendments to the Safe Drinking Water Act contain extensive provisions for consumer involvement and right-to-know that herald a new era of public participation in drinking water protection. These provisions are founded on the principle that consumers have the right to know what is in their drinking water and where it comes from before they drink it, use it for cooking, or give it to their children.

If you have questions regarding your drinking water or the Aberdeen water system not answered by this report, please contact the Aberdeen Public Works Department at 626-7011.

LARGE COPIES OF THIS REPORT ARE AVAILABLE AT THE MUNICIPAL BUILDING AT 123 S. LINCOLN

### The Water Source

Aberdeen's surface water supply begins at the headwaters of the Elm and Maple Rivers and is now blended with water from eight (8) wells in the Elm Aquifer. Water from these sources is treated to serve over 24,658 customers with an average of 3 million gallons of water a day. In 2002 the South Dakota Department of Environment and Natural Resources (SD DENR) prepared a Source Water Assessment of the Aberdeen Public Water Supply system and determined that the relative susceptibility rating for the City of Aberdeen public water supply system is moderate. This means

the surface water prior to treatment is minimally influenced by agricultural practices within the watershed area. Copies of this report are available upon request from the City of Aberdeen Public Works Department by calling 626-7011.

### The Water Treatment Plant

Historically referred to as the filtration plant, the Aberdeen Water Works was built in 1934 on the banks of the Elm River. When it was completed, the state-of-the-art lime softening plant produced water that was a marvelous improvement to a town used to drinking the bad tasting, mineral laden water from deep artesian wells. In January of 2006 construction of the current upgrade to the process plant was completed. This upgrade ensures water quality, for the citizens of Aberdeen, will continue to meet and exceed water standards.

### DRINKING WATER

Sources of drinking water (both tap water and bottle water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Water traveling over the surface of the land or through the ground dissolves naturally occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

### Testing

State and independent laboratory tests look for substances other than water which could be found in our drinking water (called contaminants) and could include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture, and wildlife.

**Inorganic contaminants**, such as salts and metals, which can occur naturally or come 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 occur naturally or result from oil and gas production and mining.

## Water Conservation Ideas

**Following are some good water conservation practices that will save you the most on your water bill and help the community meet its water stewardship goals:**

- Water your lawn only when it needs it. Step on your grass. If it springs back, when you lift your foot, it doesn't need water. **Saves 750-1,500 gallons per month.** Better yet, especially in times of drought, water with a hose.
  - Don't run the hose while washing your car. Use a bucket of water and a quick hose rinse at the end. **Saves 150 gallons each time.** For a two-car family that's **up to 1,200 gallons a month.**
  - Run only full loads in the washing machine and dishwasher. **Saves 300 to 800 gallons per month.**
  - Use a broom instead of a hose to clean driveways and sidewalks. **Saves 150 gallons or more each time.** At once a week, that's **more than 600 gallons a month.**
  - Don't water the sidewalks, driveway or gutter. Adjust your sprinklers so that water lands on your lawn or garden where it belongs--and only there. **Saves 500 gallons per month.**
  - Set lawn mower blades one notch higher. Longer grass means less evaporation. **Saves 500 to 1,500 gallons each month.**
- Put mulch around trees and plants to slow evaporation. **Saves 750 to 1,500 gallons per month.**
- Don't water on windy days – **Wastes 300 gallons in one watering.**

The EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDS) 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 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.

**Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and 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 infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.**

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

### Violations incurred in 2005

**Turbidity:** In 2005 the City of Aberdeen exceeded the turbidity requirements of the Surface Water Treatment Rule (SWTR) during the month of October resulting in a Treatment Technique violation for that month. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

The high turbidity readings occurred predominantly following the start-up of the old treatment facility immediately following construction shutdowns. We made some modifications of the start-up procedure and tried to limit the number of shutdowns.

**VOCs:** In 2005 the City of Aberdeen public water system failed to monitor for VOCs at each entry point to the system as required. This resulted in a failure to monitor for the 12 months of 2005. Monitoring and reporting violations do not necessarily indicate a health risk. However, since levels of this parameter was not monitored the potential health risk posed by this contaminant may not be known.

Samples for VOC's testing were collected February 6th, 2006, all chemicals tested for found to be in quantities well below the MCL limit for each chemical. Test results are available or if you need other information please contact

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## 2005 Water Quality Data

### 2005 Table of Detected Contaminants for City of Aberdeen

Below is a table listing all the drinking water contaminants that were detected during the 2005 calendar year. The presence for 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, 2005. 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.

Definitions of Terms Used:

- **MCLG** - Maximum Contaminant Level Goal: 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.
- **MCL** - Maximum Contaminant Level: 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.
- **AL** - Action Level: the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **TT** - Treatment Technique: 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 Used:

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

**ppb:** parts per billion, or micrograms per liter ( $\mu\text{g/l}$ )

**pspm:** positive samples per month

**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)

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

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

Substance	Highest Level Detected	Range	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Date	Major Source of Contaminant
Barium	0.011		2	2	Ppm	11/08/05	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Combined Radium	0.40		5	0	pCi/L	04/08/02	Erosion of natural deposits.
Copper	0.1	30 sites <1.3 AL - 0	AL = 1.3	0	Ppm	09/07/05	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Haloacetic Acids	24.2		60	0	Ppb	6/13/05	Byproduct of drinking water chlorination.
Lead	3.5	29 sites <15 AL - 0	AL = 15	0	Ppb	06/16/05	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (as Nitrogen)	0.1		10	10	Ppm	05/11/05	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural
Selenium	1.2		50	50	Ppb	11/08/05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total Coliform Bacteria	1	Positive samples	1	0	Pspm		Naturally present in the environment
Total trihalo-methanes	24.6	9.31 - 24.6	80	0	Pbp	09/12/05	By-product of drinking water chlorination.
Turbidity	0.91	92% samples below 0.3	TT	NA	NTU	10/05	Soil runoff. Turbidity is a measurement of the clarity of the water.