



KENNEBEC WATER DISTRICT
Public Water System ID ME0090750

INTRODUCTION

The Kennebec Water District (KWD) has been in existence since 1899. KWD presently serves the municipalities of Waterville, Winslow, Fairfield, Vassalboro, and Benton and supplies water for the town of Oakland. KWD has a regular testing and reporting program, and this Consumer Confidence Report (CCR) is one way of communicating those test results. The CCR is intended to provide you, the KWD customer, with important information about your drinking water. KWD's trustees and employees want you to know that you can count on us for a safe and reliable supply of water every day, and we are dedicated to providing the highest quality service to you.

WATER QUALITY

KWD ensures that your water is safe through regular monitoring of both its source and treated water. Testing is conducted in KWD's own laboratory as well as in independent, state-certified laboratories. This CCR is a comprehensive summary of the laboratory test results. KWD employs a professional staff of water treatment operators, licensed by the State of Maine Department of Health and Human Services, to maintain water quality within required parameters.

The Safe Drinking Water Act directs the United States Environmental Protection Agency (EPA) to establish and enforce minimum drinking water standards. These standards set limits on certain biological, organic, inorganic, and radioactive substances potentially found in water supplies. Two levels of standards have been established. Primary drinking water standards set achievable levels and goals for drinking water quality to protect your health. Secondary drinking water standards provide guidelines regarding the taste, odor, color, and other aesthetic aspects of your drinking water which do not present a health risk. The 2014 testing results indicate that the Kennebec Water District's water continuously meets or exceeds all state and federal requirements.

The presence of contaminants does not necessarily indicate that water poses a health risk. However, some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons 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 infection. These people should seek advice about drinking water from their health care providers.

EPA and 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 (1-800-426-4791) or from the Kennebec Water District office.

Fluoride in Drinking Water: KWD adds fluoride to its water in an amount to meet the EPA's recommended dosage level of 1.2 ppm. In the spring of 2011, KWD reduced its fluoride dose to 0.7 ppm in response to a newly revised recommendation from EPA. The Center for Disease Control (CDC) states that a proper amount of fluoride from infancy through old age helps prevent and control tooth decay. Parents, however, should be aware that a recent study raised the possibility that fluoride exposure during the first year of life may play a role in the development

of enamel fluorosis, cosmetic changes to the outer surface of the tooth. When fluoridated water is used consistently as a mixer for formula as the primary source of nutrition over long periods of the first year, a child may receive enough fluoride to increase his/her chances of developing very mild to mild fluorosis. This potential can be lessened by using low fluoride water for formula all or most of the time. For more advice: http://www.cdc.gov/fluoridation/safety/infant_formula.htm .

Lead in Drinking Water: 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. KWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 and 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>.

Pharmaceuticals in Drinking Water: Recent media attention has focused on the presence of trace amounts of pharmaceutical and personal care products that have been detected in some water sources. Some minute amounts of these products may pass through animals and humans or disposal systems and eventually enter groundwater or surface waters. Even in locations showing some presence, the levels found are extremely low concentrations – millions of times lower than a therapeutic dose. Testing for the products is not yet required by EPA. KWD will continue to proactively test China Lake water and its finished water for such products. For more information: <http://www.epa.gov/ppcp> .

WATER SUPPLY / SOURCE INFORMATION

Sources of drinking water include rivers, lakes, ponds, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments included geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance to see how likely our drinking water source is to being contaminated by human activities in the future. The KWD Source Water Assessment is available for public viewing at the Kennebec Water District office. For more information about the SWAP, please contact the DWP at telephone 287-2070.

China Lake has served as KWD's primary source of water since 1905. China Lake has 6.1 square miles of surface area within 32 square miles of watershed. The estimated capacity of the lake is 31 billion gallons. KWD demand averages approximately 1.09 billion gallons annually. As a surface water body, China Lake is susceptible to pollution and contamination from both human and natural sources. Early in its existence, to help protect the water quality within China Lake, the Kennebec Water District acquired nearly all of the shoreline around the West Basin of the lake, planting thousands of trees to protect against the impacts of runoff. The East Basin shoreline is mostly privately owned. Protection of the watershed presently is a combined effort of the towns of China and Vassalboro, the China Region Lakes Alliance, the China Lake Association and the Kennebec Water District. The common goal of these organizations is to improve China Lake water quality.

Because the variable water quality from China Lake includes frequent algae blooms during the summer and fall, the KWD water treatment facility uses many modern processes to effectively improve the quality of the water before we deliver it to your tap. These processes include coagulation, filtration, disinfection, pH adjustment and corrosion control. Coagulation is used to remove particles from the raw water in three Microfloc upflow clarifiers. The water is then filtered and polished in six granular activated carbon filters. Chlorine is added

as a disinfectant. Chlorine levels are continuously monitored to ensure adequate and appropriate disinfection has occurred prior to delivery to consumers. As a dental health aid, fluoride is also combined with the finished water. The addition of a corrosion inhibitor and raising the pH of the water provides corrosion protection for KWD's distribution piping system and your household plumbing. This treatment practice has been so effective in reducing lead and copper levels in the water that our required annual monitoring program has been extended to a three year cycle.

WATER SYSTEM DATA

KWD's water transmission and distribution systems include over 171 miles of water mains. The system serves almost 8800 customers in six communities and provides fire protection service through 634 hydrants. In the last twelve months, KWD produced and delivered 1.09 billion gallons of water. That's a daily average of 2.99 million gallons. KWD can store 14.9 million gallons in its 5 active water tanks. This storage permits KWD to meet normal and peak system demands and to maintain an adequate supply for firefighting needs.

HIGHLIGHTS OF THE PAST YEAR

A total of 5442 feet of water main was replaced or added to the KWD system in 2014. In addition, 25 leak repairs were completed on water mains, services, and hydrants. 1629 new meters were installed in place of mechanical meters, the program to install endpoint transmitters was completed, and over 35,000 meter readings were recorded and billed. More than 600 samples were collected and analyzed in the KWD state certified laboratory.

In 2014, KWD continued the program to upgrade its metering system as it continued to install non-metallic, lead free meters with no moving parts. The emergence of natural gas in our area required a significant amount of our O&M crew time and effort in locating and, in some cases, moving our facilities to protect them from current damage from gas installations and to ensure our ability to safely access our underground pipes in the future. We also continued the process to upgrade many of our monitoring, control and operations systems in our water treatment facility.

In 2014, we completed a project to replace the underground booster pump station serving the Fairfield Center area with an above ground station. The new station should provide much greater pressure and flow stability for the customers it serves.

OTHER IMPORTANT INFORMATION

This CCR is only a summary report. If you have any questions about this report, your water quality or your water service, please call the Kennebec Water District's business office at (207) 872-2763 during normal business hours (Monday through Friday between 8:30 a.m. and 4:30 p.m.). Questions may also be directed to the Maine Department of Health and Human Services Drinking Water Program at (207) 287-2070 or <http://www.maine.gov/dhhs/eng/water> or to the EPA Safe Drinking Water Hotline at 1-800-426-4791 or online at: <http://www.epa.gov/safewater/dwhealth.html>

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Board of Trustee meetings are scheduled on the first and third Thursday of each month at 7:30 a.m. at our 6 Cool Street office. These meetings offer an opportunity for public participation in decisions that may affect water quality.



KENNEBEC WATER DISTRICT

PO Box 356 | 6 Cool St., Waterville, Maine 04901 | 207.872.2763

WATER TREATMENT FACILITY

462 Main St., (Route 32), Vassalboro, ME 04989 | 207.923.3358

Email: kennebecwater@kennebecwater.org

Website: <http://www.kennebecwater.org>

Primary Drinking Water Standards

Regulated Standards for Finished Water

Parameter	Maximum Contaminant Level Goal	Maximum Contaminant Level	Actual KWD Test Results
CLARITY (a) (e) 2014 Finished Water			
Turbidity (NTU)	0.10	5.0	0.12 (Max. = 0.28)
MICROBIOLOGICAL (b) 2014 Finished Water			
Total Coliform Bacteria (%)	0	5	0 (478 tests conducted)
Cryptosporidium / Giardia Lamblia cysts (%)	0	TT	0
DISINFECTION BYPRODUCTS 2014 Finished Water			
Total Trihalomethanes (ppb) (d)	0	80	27 (Range 19 – 44)
Haloacetic Acids (ppb) (d)	0	60	17 (Range <5 – 40)
INORGANIC CHEMICALS (c) TE6- 2014			
Antimony (ppb)	6.0	6.0	< 0.50
Arsenic (ppb)	0.0	10.0	< 0.50
Asbestos (MFL - million fibers > 10 micron per liter)	7.0	7.0	KWD Exempt
Barium (ppm)	2.0	2.0	0.0015
Beryllium (ppb)	4.0	4.0	< 0.50
Cadmium (ppb)	5.0	5.0	< 0.50
Chromium (ppb)	100	100	< 0.50
Copper (ppm)	1.3	Action Level = 1.3	90 th percentile = 0.16 (2012)
Fluoride (ppm) (a)	4.0	4.0	0.8
Lead (ppb)	0	Action Level = 15	90 th percentile = 2.5 (2012)
Mercury (ppb)	2.0	2.0	< 0.05
Nitrate as nitrogen (ppm)	10.0	10.0	0.19
Nitrite as nitrogen (ppm)	1.0	1.0	< 0.01
Selenium (ppb)	50.0	50.0	< 0.002
Thallium (ppb)	0.5	2.0	< 0.5
Uranium (ppb)	0	30	< 0.5
RADIONUCLIDES (c)(f) 2011			
Radium 228 (pCi/L)	0.0	15	0.609

Secondary Standards

Non-regulated Aesthetic Standards for Finished Water

Parameter	Secondary Maximum Contaminant Level	Actual KWD Test Result Average	Actual KWD Test Result Range
CHEMICAL PARAMETERS (e) 2014 TE6			
Chloride (ppm)	250	11	-
Color (color units - cu)	15	< 5	-
Copper (ppm)	1.0	< 0.0005	-
Fluoride (ppm) (h)	2.0	0.8	-
Iron (ppm)	0.30	< 0.05	-
Magnesium (ppm)	No Standard	1.2	-
Manganese (ppm)	0.05	0.0030	-
pH	6.5 to 8.5	6.7	-
Silver (ppm)	0.1	< 0.0005	-
Sodium (ppm)	No Standard	7.1	-
Sulfate (ppm)	250	10	-
Total Dissolved Solids (ppm)	500	No test	-
Zinc (ppm)	5	< 0.002	-
ADDITIONAL PARAMETERS (e) (g) 2014			
Alkalinity as CaCO ₃ (ppm)	No Standard	24.6	24 to 25
Calcium (ppm)	No Standard	8.1	-
Hardness as CaCO ₃ (ppm)	No Standard	25.1	-
Free Chlorine Residual (ppm)	No Standard	1.21	0.77 to 1.85
Total Chlorine Residual (ppm)	No Standard	1.43	0.91 to 2.10
Orthophosphate (ppm)	No Standard	0.5	-
Temperature (°C)	No Standard	11.6	3 to 25

ALL OTHER REGULATED DRINKING WATER CONTAMINANTS WERE BELOW DETECTABLE LEVELS

Definitions

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Secondary Maximum Contaminant Levels (SMCL): Target for aesthetic quality without posing risk to human health.

ppm: Parts per million **ppb:** Parts per billion

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in water in order to meet a standard.

Nephelometric Turbidity Units (NTU): A measurement of cloudiness or suspended colloidal matter (silt) in the water. Excessive turbidity levels can cause problems with water disinfection. The KWD water filtration system renders the finished drinking water clear and closely matches the EPA MCLG standard for turbidity quality for potable water systems.

Action Level: The concentration of a contaminant that, if exceeded, triggers treatment requirements which a water provider must follow

Notes

- (a) Turbidity and Fluoride are reported as monthly averages from daily samples at the entry to the distribution system.
- (b) Coliform presence reported as a monthly average. No more than 5% of samples in a month shall be coliform positive.
- (c) Samples collected at the water source as required by state monitoring regulations
- (d) TTHM & HAA5 are calculated as a running annual average of quarterly samples taken at the extremities of the distribution system
- (e) Data collected at the entry of the distribution system.
- (f) Results for radionuclides are from the 2011 samples. Regulations require radionuclide monitoring once every five years.
- (g) KWD annual average test results
- (h) Fluoride has both an MCL and SMCL. The SMCL is based on monthly averages.

HEALTH INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least minute amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses, (4) 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 runoff, and septic systems. The KWD treatment processes reduce contaminant levels to within accepted standards.

VIOLATIONS

KWD had no reportable violations for water quality in 2014.

WAIVER INFORMATION

KWD had a waiver from synthetic organic carbons (SOC) in 2014. This waiver is valid for three years and exempts the district from testing for pesticides, herbicides, and other synthetic industrial compounds.

CHANGES FROM PRIOR REQUIREMENTS

None.