



KENNEBEC WATER DISTRICT

First Water District in the United States

2017 Annual Water Quality Report

SUMMARY

In 2017 the Kennebec Water District (KWD) produced more than **1 billion gallons** of clean, safe drinking water for more than 8,600 customers in the greater Waterville area. Water quality testing demonstrated that the water supplied by the KWD **meets or exceeds all applicable water quality standards**.

INTRODUCTION

The KWD, first water district in the United State, was chartered by the State of Maine Legislature in 1899. KWD serves customers in Waterville, Winslow, Fairfield, Vassalboro, and Benton and is a wholesale supplier of water to the Town of Oakland. KWD's water transmission and distribution systems include over 171 miles of water mains and provides fire protection service through 637 public hydrants. The KWD is governed by a 10-member Board of Trustees. The trustees and employees are dedicated to reliably supplying safe drinking water to more than 8,600 customers every day.

WATER QUALITY

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 storage capacity of the lake is 31 billion gallons. KWD withdraws approximately one billion gallons annually.

To ensure customer receive high-quality water, the KWD routinely tests the quality of water in China Lake, at the water treatment plant, and at numerous locations within the water delivery system. Testing is conducted in KWD's state certified laboratory as well as in independent, state-certified laboratories.

The 2017 testing results indicate that the KWD's water continuously meets or exceeds all state and federal water quality requirements.

Fluoride in Drinking Water: As requested by the voters in the municipalities served by the KWD, fluoride is added to the water. The federal Center for Disease Control (CDC) states that a proper amount of fluoride from infancy through old age helps prevent or reduce tooth decay.

Parents with infant children should be aware that most infant formula contains low levels of fluoride. Regularly mixing powdered or liquid infant formula concentrate with fluoridated water may increase the chance of a child developing the faint white markings of mild fluorosis on their teeth. The risk is reduced by using low fluoride water for formula all or most of the time. For more information visit the CDC's website at: <https://www.cdc.gov/fluoridation/faqs/infant-formula.html>.

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 lead service lines and household plumbing. While KWD provides high quality drinking water, plumbing components in your home likely contain material with lead, such as solder and fittings and fixtures with brass. These materials can leach lead into your water. This occurs most frequently when the water has been stagnant in the household plumbing for several hours.

You can reduce the risk of lead exposure by flushing your faucet for 30 seconds 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 at 1-800-426-4791 or online at: <http://www.epa.gov/safewater/lead>.

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 the evaluation of geology, hydrology, land uses, water testing, land ownership, and local ordinances to determine the likelihood of the source being contaminated by human activities in the future. The KWD Source Water Assessment is available for public viewing at the KWD office at 6 Cool Street. For more information about the SWAP, please contact the DWP at (207)287-2070 or www.medwp.com.

As a surface water body, China Lake is susceptible to pollution and contamination from human activities and natural sources within the watershed. In the early 1900's, the KWD purchased nearly all of the shoreline around the West Basin (visible as you pass through the village area of East Vassalboro) to protect the water quality in China Lake. The KWD also planted thousands of trees to reduce the risk of soil erosion entering the lake.

The East Basin shoreline (from China Village area south to the South China Village area) is mostly privately owned. Consequently, hundreds of homes and camps, along with miles of roadways, have been developed within close proximity of the shoreline. Land development is a significant source of nutrient pollution, which leads to algal blooms and other water quality issues. The KWD partners with the towns of China and Vassalboro, the China Region Lakes Alliance, the China Lake Association to improve China Lake water quality.

OTHER IMPORTANT INFORMATION

The KWD is governed by a 10-member elected board. Each member is elected for a three-year term from one of the five municipalities served by the KWD.

Kennebec Water District Board of Trustees (2018)

Name (Position)	Municipality
Albert Hodsdon (President)	Fairfield
Karl Dornish (Vice President)	Winslow
J. Michael Talbot (Treasurer)	Waterville
Jeff Earickson (Assistant Treasurer)	Waterville
Allen Fuller (Clerk)	Benton
William Boucher	Winslow

Alex Wild	Waterville
Mark McCluskey	Fairfield
Frank Richards	Vassalboro
Denise Bruesewitz	Waterville

Board of Trustee meetings are generally held on the first and third Thursday of each month at 7:30 a.m. at 6 Cool Street in Waterville. These meetings are open to the public.

Water Test Results

DEFINITIONS

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

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.

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.

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

ppb: Parts per billion or micrograms per liter (ug/L)

ppm: Parts per million or milligrams per liter (mg/L)

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

Positive: positive samples.

HEALTH INFORMATION

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. 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 runoff, and septic systems.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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 (1-800-426-4791) or at the following link: <https://www.epa.gov/ccr/forms/contact-us-about-consumer-confidence-reports>

VIOLATIONS

KWD had no reportable violations for water quality in 2017

WAIVER INFORMATION

KWD had no water testing waivers in 2017

PRIMARY STANDARDS

Regulated Standards for Drinking Water

Parameter (units)	MCLG Goal	MCL Highest Allowed	Results	Source
MICROBIOLOGICAL				
Coliform Bacteria (%) ¹	0	5	0 positive	Naturally present in the environment
ORGANIC COMPOUNDS				
Total Trihalomethanes (ppb) ²	0	80	43 (10.1 – 49.1)	By-product of drinking water chlorination
Haloacetic Acids (ppb) ²	0	60	22 (8.5 – 26)	By-product of drinking water chlorination
INORGANIC CHEMICALS				
Barium (ppm)	2	2	0.0018	Erosion of natural deposits
Fluoride (ppm) ³	4	4	0.77	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Copper (ppm) ⁴	1.3	AL = 1.3	0.43	Corrosion of household plumbing systems
Lead (ppb) ⁴	0	AL = 15	3.4	Corrosion of household plumbing systems
Chlorine Residual (ppm) ⁵	4	4	1.30 (0.78 – 1.80)	Water additive used to control microbes
Turbidity (NTU) ⁶	None	5	0.08 (0.04 – 1.00)	Soil runoff
RADIONUCLIDES				
Radium (pCi/L) ⁷	0	5	0.609	Erosion of natural deposits

ALL OTHER REGULATED DRINKING WATER CONTAMINANTS WERE BELOW DETECTABLE LEVELS

1. Coliform: Presence reported as a monthly average. No more than 5% of samples in a month shall be coliform positive.
2. Values are the highest locational average of four different locations in the distribution system and the range of individual values at all four locations.
3. Fluoride: Value is the highest reported compliance sample for the year. The optimum dosage is 0.7 ppm.
4. Lead and Copper: Samples taken every three years. The last set of samples was taken in 2015. Values are a 90th percentile value of samples taken from 30 sites across the distribution system.
5. Chlorine: Values are the average and the range of all values taken entering the distribution system.
6. Turbidity: Values are the average and the range of all values taken after filtration.
7. Radium: Results for radionuclides are from the 2011 samples. Regulations require radionuclide monitoring once every nine years.

SECONDARY STANDARDS

Non-regulated Aesthetic Standards for Finished Water

Parameter	Secondary Maximum Contaminant Level	KWD Test Results	Noticeable Effects Above the Secondary Maximum Contaminant Level
Chloride (ppm)	250	12	Salty taste
Color (color units)	15	<5	Visible tint
Iron (ppm)	0.3	<0.05	Rusty color; sediment; metallic taste; reddish or orange staining
Manganese (ppm)	0.05	0.002 – 0.069	Black to brown color; black staining; bitter metallic taste
Silver (ppm)	0.1	<0.0005	Skin discoloration; graying of the white part of the eye
Sodium (ppm)	No Standard	9.8	Salty taste
Sulfate (ppm)	250	10	Salty taste
Zinc (ppm)	5	<0.001	Metallic taste

Detected Unregulated Contaminants*

Ongoing Research for New Regulations

Parameter	Reference Concentration	KWD Test Results	Source
Chlorate (ppb)	210	96 - 510	Agricultural defoliant or desiccant
Chromium, Total (ppb)	100	<0.2 – 0.25	Erosion of natural deposits

Chromium, Hexavalent (ppb)	N/A	<0.03 – 0.087	Erosion of natural deposits
Strontium (ppb)	1,500	32.9 – 39.5	Tooth discoloration

*Samples taken in 2015 and 2016. Additional unregulated contaminants were tested as part of the Unregulated Contaminant Monitoring Rule 3 and were undetected. All results are available upon request.

If you have any questions about this report, your water quality or your water service, please call the KWD’s office at (207) 872-2763 during normal business hours (Monday through Friday 8:30 a.m. until 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 www.medwp.com or to the EPA Safe Drinking Water Hotline at 1-800-426-4791 or online at: <http://www.epa.gov/safewater/dwhealth.html>



KENNEBEC WATER DISTRICT

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WATER TREATMENT PLANT

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

Email: kennebecwater@kennebecwater.org **Website:** <http://www.kennebecwater.org>