

Putnam Water Pollution Control Authority

2024 ANNUAL WATER QUALITY REPORT

PWS #CT1160011

Continuing Our Commitment

The Town of Putnam is pleased to present the Annual Water Quality Report for 2024. Federal and State regulations require that public water systems publish a yearly water quality report. We feel it is important that you know where your water comes from as well as how it is treated and what substances may be in it.

What's New with Our Water System

2024 was a poor year for rainfall. Unlike the previous year, we hit trigger levels multiple times and had to issue a water ban. Our annual rainfall total saw a decrease of roughly 16 inches versus the previous year. This caused us to drop below the compliance levels outlined in our water diversion permits, forcing us to rely on our well field for most of the summer and fall seasons. 2025 has started out strong regarding rainfall and we hope that this trend continues to avoid any drought conditions for the rest of the year.

In 2024, we continued the Lead Service-Line Replacement project we began in 2022. This project was started to comply with the Revised Federal EPA Rule for the Lead Service Line Replacement Program, which aims to eliminate all lead service lines country-wide to improve water quality and reduce contaminants. To reach all our customers, the WPCA sent out info cards via mail, made several PSAs on WINY Radio and posted information in the local paper and on our town website. Our goal is to identify all lead service lines in the system so that they can be replaced in the future.

Engineering firm CDM Smith continued to aid us in gathering data and creating a hydrological model of the water system. They compiled their findings and submitted the LSL Inventory and Replacement Plan to the EPA in October 2024. We thank those of you who have participated and encourage those of you who haven't to submit your information via mail or on our website. In 2024, our drinking water division completed two major upgrades to our filtration plant technologies. This included a complete upgrade to our laboratory and process technology in our drinking water facilities. The scope of the upgrades included new turbidity, chlorine and ph. analyzers as well as new portable and benchtop technologies. New technology provides us with more accurate data which we can use to produce better quality drinking water. Our second major upgrade was an all-new chemical feed system in our Peak Brook Plant. This included a new SCADA control panel and chemical feed pumps. Both provide operators with more precise control over chemical applications.

For more information about this annual report, or for any questions relating to your drinking water, please call:

Brian Lynch, Superintendent of the Putnam WPCA @ 860-963-6819 or the Putnam Water Treatment Plant @ 860-963-6823.

Or visit: www.putnamct.us/departments/water-and-sewer

Community Participation

If you have concerns about your drinking water or water supply, you are invited to attend the WPCA monthly meetings. For dates and times of committee meetings please call our main office at, 860-963-6819 or visit the Town of Putnam website @ www.putnamct.us

Where Does My Water Come From?

We currently have three (3) stable sources of water. Our first source of supply comes from Roseland Lake (Little River Watershed), which converges into the Little River. Our second source of supply is from our Park Street Well Field Facility which consists of ten production wells, six (6) which are shallow sand and gravel packed wells and four (4) deep bedrock wells. Our third source is via an interconnection with the CT Water Company, located in Killingly.

How is My Water Treated?

The water treatment process from the surface water supply (the Little River) consists of a series of five key steps. Initially the water is drawn from the river and pre-disinfected with chlorine dioxide and chlorine. This step allows for the oxidation of iron, manganese and total organic carbon that are present in the raw water. This pretreated water enters a mixing tank where poly aluminum chloride is added allowing small particles to adhere to one another (called "floc") making them heavy enough to settle out of the water. The water is then processed through a filtering unit where any remaining smaller floc particles are removed, turbidity disappears, and clean water emerges. Chlorine is added in the final disinfection step as a precaution against any bacteria that may still be present. We closely monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste. The final chemical injection steps are taken by adding Potassium Hydroxide to adjust the pH of the water and an Ortho Polyphosphate (corrosion inhibitor) to protect the pipes. The water is then pumped into our two, one-million-gallon water storage tanks from which it is distributed into your home.

The well water is treated at the Well Field by a new process beginning in 2018. The old process was simple chemical treatment with the addition of Ortho Polyphosphate (corrosion inhibitor), Potassium Hydroxide for pH adjustment and Sodium Hypochlorite for disinfection before being pumped directly to the Water System. We now treat the water with a new Biological Filtration process, which is a little more involved, we start by blending and mixing the well water, using two or more of the ten wells, in the existing treatment building. The blended water is then diverted into the New Filtration Building where Potassium Hydroxide and Dissolved Oxygen is injected into the water before entering into the filter vessels. Next the water then passes through the Iron Filters then through the Manganese Filters where the biological microbes do their job. The water then enters a storage tank before being pumped to the water system. The final treatment chemicals, Sodium Hypochlorite for disinfection and Phosphate for corrosion control, are added at this point. The treatment process at both the Surface Water Treatment Plant and the Well Field are continuously monitored by instrumentation and State Certified Water Treatment Operators to ensure safe clean water is being produced and distributed to your homes.

Substances That Might Be in Drinking Water

In order to ensure that tap water is safe to drink, the Department of Public Health and the U.S. Environmental Protection Agency (USEPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Connecticut Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All 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 the water poses a health risk. The sources of drinking water (both tap 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 can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or human activity. Substances that may be present in water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations, or wildlife.

Inorganic Contaminants, such as road salt and metals, which can be naturally occurring or may 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 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 may also come from gas stations, urban stormwater runoff, and septic systems.

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

Table Definitions

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

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG as feasible using the best available technology. Secondary MCL's (SMCL) are set to protect the odor, taste and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known risk to health. MCLG's allow for a margin of safety.

NA: Not applicable **ND:** Not detected **NS:** No standard

NTU (Nephelometric Turbidity Unit): Measurement of the clarity, or turbidity, of water

PCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter)

ppm (parts per million): One part substance per million parts water (or milligrams per liter)

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

Turbidity: A measurement of how cloudy the water is. We monitor this because it is a good indicator of the effectiveness of our filtration system.

90th Percentile: Out of every 10 homes sampled, 9 were at or below this level

Is My Water Safe?

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table at the end of this report shows only those contaminants that were detected in the water. Although all the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The state requires us to monitor for certain substances less than once per year because the concentration of these substances do not change frequently. In these cases, the most recent sample data are included; along with the year in which the samples were taken.

Please see the table at the end of this report for the substances that were detected in your drinking water.

Monitoring and Reporting of Compliance - Violation Notes:

During the 2024 sampling period we had zero MCL compliance violations.

Frequently Asked Questions.

Why is my water brown sometimes?

Typical causes of discolored water include fire in the area, a water-main break, hydrant maintenance, or water main flushing and road construction.

Why does my water look cloudy or milky?

Air becomes trapped in the lines. This trapped air becomes suspended in the water, giving it a milky appearance.

When I run the water, it smells.

Most of the time it is not the water, but rather, food particles that are left in the drain overnight. When the water is run, the odor is forced out. Putting a small amount of bleach in the drain overnight, periodically, will remove the odors.

Is Tap Water Safe for Everyone?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline. (800-426-4791)

In 2024 Putnam Water produced 343,043,200 gallons of water from the following sources. 45,948,900 gallons from the Little River, 248,408,100 from the Park Street Well Field and 48,686,200 from the CT Water Co. Interconnection on Tracy Rd. This represents 13% from the River, 73% from the Wells and 14% from the Interconnection which is also well water.

The Source Water Assessment Program (SWAP), established under the Federal Safe Drinking Water Act, requires every state to: inventory land uses within the recharge areas of all public water supply sources; assess the susceptibility of drinking water sources to contamination from these land uses; and publicize the results to provide support for improved protection. **Below is an overview of the Putnam source water assessment.**

Little River Diversion Source Water Assessment

The Overall Susceptibility Rating: **HIGH**

This rating indicated susceptibility to potential sources of contamination that may be in the source water area and does not necessarily imply poor water quality.

Strengths: There are no point source pollution discharge points present in the watershed area.

Potential Risk Factors:

ENVIRONMENTALLY SENSITIVE This source carries a high-risk factor specifically for environmental sensitivity. The reservoir is able to support excessive growth of algae and plankton. Potential contaminant sources are present in the watershed and homeowners are encouraged to adopt residential best management practices that minimize the use of hazardous wastes or generation of waste in the watershed.

Potential Risk Factors This source carries a moderate risk factor as major state and interstate roadways are present in the watershed and there are known contaminant release points present in the watershed. There should be monitoring for road salt and herbicides as well as addressing the potential for hazardous spills from vehicular accidents. More than 50% of land for this source water is underdeveloped, which could present a risk if inappropriately developed.

Source Protection Needs This source carries a high rating as less than 1% of the land is owned by the public water system and less than 5% exists as open space. It is advisable to increase ownership or control of watershed area whenever land becomes available for purchase. It is also recommended to establish local watershed protection regulations to protect public drinking water sources.

Park St Well Field Assessment

The Overall Susceptibility Rating: **MODERATE**

This source carries the same recommendations as that of the Little River Diversion Assessment for Potential Risk Factors.

For the complete report on the Internet please go to: State of Connecticut Department of Public Health-Drinking Water Division- Source Water Assessment Report- Town of Putnam, CT PWS # CT116001

Lead and Copper Testing

Our annual lead and copper sample testing results in 2024 were below the required action levels (90th Percentile). Although our test results indicated we were well below the action levels for Lead and Copper throughout the system, we did have a single exceedance for lead at one residence. However, a repeat sample was taken and shown to be compliant with action levels. This is a reminder to all customers that it is recommended to run your faucets for at least 10 seconds before consumption if that faucet has not been used that day. It is also recommended to periodically flush any faucet does not see frequent use in the home.

Special Warning about the Health Effects of Lead & Copper:

Although all our test results indicated we were well below the action levels for Lead and Copper throughout the system, we did have a single exceedance for lead at one residence. However, a repeat sample was taken and shown to be compliant with action levels. Regardless of any action level exceedance, we are required to inform our customer of the possible health effects of these contaminants.

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 Putnam WPCA – Drinking Water Division is Responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from lead in your home plumbing. You can take responsibility by identifying and removing lead material within your home plumbing and taking steps to reduce your family’s risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in your drinking water. If you are concerned about lead in your water and wish to have it tested, contact the Town of Putnam WPCA – Drinking Water Division at 860-963-6819. Information on lead in drinking water, test methods, and step you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead> .

Lead – Major Sources in Drinking Water from corrosion of household plumbing systems including piping and fixtures and from erosion of natural deposits in the environment.

Health Effects Statement: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper – Major Sources in Drinking Water from corrosion of household plumbing systems, erosion of natural deposits or from leaching from wood preservatives.

Health Effects Statement: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

Additional information on Lead and Copper is available from the Safe Drinking Water Hotline (800-426-4791).

PFAS Testing:

Over the last few years, the EPA has begun the process of combatting PFAS contamination, production and disposal in drinking water as well as other public health areas. Perfluoroalkyl and polyfluoroalkyl substances, or (PFAS), are a group of chemicals made by humans. Since the 1950s, PFAS have been used in many consumer products and industrial processes. They have properties that resist heat, grease, and water. They are believed to be toxic, however, not enough is known about them to determine all potential health effects. There are thousands of types of PFAS. The most common types are PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanoic sulfonic acid). While PFOA and PFOS have been phased out from their use in commercial products, they are still found in the environment from historical uses and in some firefighting foams. In addition, products are often made with other PFAS as replacements for PFOA and PFOS. These PFAS can be found in everyday products, such as:

- Cleaning products.
- Water-resistant fabrics, such as rain jackets, umbrellas, and tents.
- Grease-resistant paper.
- Nonstick cookware, microwaveable products such as popcorn
- Personal care products, like shampoo, dental floss, nail polish, and eye makeup.
- Stain-resistant coatings used on carpets, upholstery, and other fabrics and clothing
- Plumbing materials, such as plumber tapes, putty and glue.

In 2025 the EPA ordered all public water systems to begin preliminary testing for PFAS in their water systems. Compliance testing for PFAS is planned to begin in 2029. In our first preliminary tests, sample results showed an exceedance for PFOS and PFOA chemicals. 7.5 and 6.4 ppt (parts per trillion) respectively from the wellfield plant. The MCL for the chemicals is set to 4.0 ppt. This exceedance could simply be from old Teflon tape or pipe glue at the sample tap. Repeat samples will be taken once the old plumbing is replaced. As of now, these results are no cause of concern to customers.

The following Information is taken from the EPA website (<https://www.epa.gov/pfas/pfas-explained>) :

What EPA Has Learned So Far

- PFAS are widely used, long lasting chemicals, components of which break down very slowly over time.
- Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment.
- PFAS are found in water, air, fish, and soil at locations across the nation and the globe.
- Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.
- There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products. This makes it challenging to study and assess the potential human health and environmental risks.

What We Don't Fully Understand Yet

- EPA's researchers and partners across the country are working hard to answer critical questions about PFAS:
 - How to better and more efficiently detect and measure PFAS in our air, water, soil, and fish and wildlife
 - How often are people exposed to PFAS
 - How harmful PFAS are to people and the environment
 - How to remove PFAS from drinking water

- How to manage and dispose of PFAS
- This information will help EPA and state, local, and tribal partners make more informed decisions on how best to protect human health and the environment

Water Conservation:

The Putnam Water Department and the Town of Putnam continue to be proactive on water conservation projects. The new “smart” water meters continuously notify us of any high water consumption and in turn we notify the customers of potential interior leaks to help prevent high bills and wasted water. The Town of Putnam also requests that any new building construction or major renovation projects be completed using water saving devices and fixtures such as the new Town Hall and Community Complex.

Source Water Protection Plan:

The Town of Putnam has adopted a Source Water Protection Plan that includes a number of action items to protect our Aquifer Protection Area containing the Park Road Well Field. The Putnam Zoning Commission is the responsible town agency for implementation of the Plan. This includes installation and monitoring of sentinel wells, public education for the various users in the Aquifer Protection Area, including the Providence & Worcester Railroad, industries, Algonquin Pipeline Co., residences and emergency response personnel; an inspection and maintenance program for storm water sewers, and elimination, as much as practicable, of roadway storm water discharges. This Plan will be continually reviewed and updated as required by changing circumstances within the Aquifer Protection Area. The Putnam WPCA is committed to protect and preserve this vital source of water.

Substances that were Detected in Your Drinking Water

Regulated Substances	Unit of Measure	Year Sampled	MCL	MCLG	Amount Detected	Range Low – High	Violation	Typical Source
Barium	ppm	2024	2.00	0	0.010	0.010 - 0.010	No	Erosion of natural deposits. Discharge from metal refineries. Discharge of drilling wells
Fluoride	ppm	2024	4.00	n/a	0.01	0.01 – 0.01	No	Naturally occurring. We do not Fluoridate.
Chloride	ppm	2024	250	0	25.5	25.5 – 25.5	No	Naturally occurring, Road Salt
Chlorine	ppm	2024	4.00	4.00	1.10	0.37 – 1.43	No	Water additive used to control microbes
Chlorine Dioxide	ppm	2024	0.80	0	0.07	0.0 - 0.14	No	Water additive used to control microbes
Chlorites (Entry Point)	ppm	2024	1.00	0.8	0.59	0.34 - 0.81	No	By - products of drinking water disinfection
Chlorites (Distribution)	ppm	2024	1.00	0.8	<0.10	0.01 - 0.01	No	By - products of drinking water disinfection
Nickel	ppm	2024	0.10	0	0.000	0.0 – 0.000	No	Erosion of natural deposits, Metal refineries
Pesticides	ppb	2024	0	0	ND	n/a	No	Chemicals used to control or kill insects.
Herbicides	ppb	2024	0	0	ND	n/a	No	Chemicals used to control or kill weeds.
Total Haloacetic Acids	ppb	2024	60.0	n/a	11.3 *	1.0 – 38.0*	No	By - product of drinking water chlorination
Total Trihalomethanes	ppb	2024	80.0	n/a	17.3 *	1.0 – 42.6*	No	By - product of drinking water chlorination
Nitrate	ppm	2024	10.0	0	0.415	0.34 - 0.49	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Lead	ppb	2024	15.0	0	1.2 (90 th %-tile)	0 – 30.7	No	Corrosion of household plumbing systems. Erosion of natural deposits
Copper	ppm	2024	1.30	0	0.718 (90 th %-tile)	0.041 - 0.754	No	Corrosion of household plumbing systems, Erosion-
Sulfate	ppm	2024	250	0	14.1	14.1 – 14.1	No	Naturally occurring in the environment
Turbidity	NTU	2024	TT = 1.0 NTU	n/a	0.120	0.061 - 0.180	No	Soil run – off
Turbidity (Lowest monthly % of samples meeting limit)	NTU	2024	TT = % of sample <.3 NTU	100 %	100%	n/a	No	Soil run – off
Total Organic Carbon (TOC)	ppm	2024	TT	n/a	56% Removal (45% is required)	44% - 70% Removal	No	Naturally present in the environment
Sodium	ppm	2024	28	0	12.1	12.1 – 12.1	No	Naturally occurring, Road Salt

Total Coliforms	Colonies	2024	0	0	ND	n/a	No	Naturally present in the environment
E-Coli	Colonies	2024	0	0	ND	n/a	No	Fecal waste from warm blooded animals and / or humans

* The range of Results represents the lowest and highest individual detection during the monitoring year.

+ Amount detected equates to the highest running annual average

** Triggered a Level I Assessment which was completed and accepted by the CT-DHP

