



## SOUTH DEERFIELD WATER SUPPLY DISTRICT

PWSID# 1074001

January 1, 2020 through December 31, 2020

### Water Quality Report

The South Deerfield Water Supply District has one source of water. The source is the Roaring Brook. There are two dams located on the Roaring Brook. The Whately Glen Reservoir is located in the town of Whately. The reservoir holds 6.7 million gallons of water. The water is taken from this reservoir and is treated at the filtration plant. The water is disinfected when it enters the clear well and flows into the Roaring Brook storage tank. The water then continues through the distribution system to your home or business.

The Roaring Brook Reservoir is located upstream from the Whately Glen Reservoir and is located in the town of Conway. The function of this reservoir is to store water. The water is used when the volume of the flow in the brook will no longer meet the needs of the users. The reservoir holds 164 million gallons of water. The safe yield of the system is 1.42 million gallons of water per day.

The watershed is located in three towns. Conway which has the largest area, Whately next and Deerfield next with a very small portion of the watershed. The District owns 989 acres of watershed. In 2003 Mass DEP did a surface water assessment and protect report (SWAP). Mass DEP found the South Deerfield Water Supply District to be at a moderate risk level for contamination. The SWAP report plan for the reservoirs is available at the District Office or online at <https://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program>. We are strongly committed to a Water Resource Protection Plan.

We are pleased to report that our drinking water meets Federal and State requirements. If you have any questions about this report or concerns about your water utility, please contact Dan Dion Water Superintendent, at 665-3540. We want our customers to be informed about their water utility. Additional information can be obtained by attending District scheduled monthly meetings. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline at 1-800-426-4791. Questions concerning water billing can be answered at 665-3540. The source has sampling waivers for synthetic and inorganic contaminants. Due to no detection of these contaminants in previous monitoring the water has been found by the Department of Environmental Protection to be protected from these contaminants. Monitoring frequency has been reduced.

The South Deerfield Water Supply routinely monitors for contaminants in your drinking water according to Federal and State laws. On an annual basis, over 1000 individual tests are performed on South Deerfield drinking water.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that maybe 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 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 agricultural, urban storm water runoff, and residential uses.

Organic chemical contaminants- including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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

Unregulated Contaminants- is those for which the EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) 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 that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA 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 South Deerfield Water Supply District 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>.

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 some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from Safe Drinking Water Hotline at 800-426-4791.

#### WHAT IS A CROSS CONNECTION AND WHAT CAN I DO ABOUT IT?

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem. The South Water Supply District recommends the installation of backflow prevention devices, such as a low-cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town! For additional information on cross connections and on the status of your water system cross connection program, please contact The District.

WATER QUALITY TESTING RESULTS						
Regulated Inorganic Contaminants (Units)	Date	AL	MCLG	90 <sup>th</sup> percentile level	Number of sites found above the AL	Possible source of contaminant
Lead (ppb)	3/20/20	15	0	12.8	2	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	3/20/20	1.3	1.3	0.666	1	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)	11/24/20	15	0	6	1	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	11/24/20	1.3	1.3	0.525	0	Corrosion of household plumbing systems; Erosion of natural deposits.

Unregulated and Secondary Contaminants	Date (s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
Manganese* (ppb)	4/09/20	7.8	7.8	50	300	Erosion of natural deposits
Iron (ppb)	4/09/20	Not Detectable	Not Detectable	300	N/A	Naturally occurring, corrosion of cast iron pipes
Sodium (ppm)	4/06/20	3.73	3.73	N/A	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process

Unregulated contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulations is warranted.

Radioactive Contaminants	Date	MCL	MCLG	Range of Detections	Result	Violation	Source of Contaminant
Combined Radium (pCi/l)	8/25/15	5 pCi/1	0	N/A	1.65 pCi/1	No	Erosion of natural deposits

Regulated Contaminant	Date(s) Collected	Local Running Annual Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation	Possible Source(s) of Contamination
Total Trihalomethanes (TTHMs)	Quarterly in 2020	64	49-91	80	N/A	No	Byproduct of drinking water disinfection
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.							
Haloacetic Acids (HAAs) (ppb)	Quarterly in 2020	54	36-73	60	N/A	No	Byproduct of drinking water disinfection
Chlorine free (ppm)	Monthly in 2020	0.38 system average	0.26-0.58	4	4	No	Water additive used to control microbes

Turbidity	TT	Lowest monthly% of samples	Highest Detected Daily Value	Violation	Possible Source of Contamination
Daily Compliance (NTU)	5	100%	0.32 on 11/01/20	No	Soil runoff
Monthly Compliance*	At least 95%	99.44%	0.32	No	

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.

\*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

## IMPORTANT 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.

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

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

**Secondary Maximum Contaminant Level (SMCL)** — These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

**Massachusetts Office of Research and Standards Guideline (ORSG)** — This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

**Secondary Maximum Contaminant Level (SMCL)** — These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

**Turbidity-** Turbidity is a measure of the cloudiness of the water. **NTU-** nephelometric turbidity units.

**Ppb-Parts** per billion or micrograms per liter. One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000

**Ppm-** Parts per million or milligrams per liter. One part per million corresponds to one minute in 2 years or a single penny in \$10,000

**pCi/l** — picocuries per liter (a measure of radioactivity) 90<sup>th</sup> percentile. — Out of every 10 homes, 9 were at or below this level.

**PWSID#** - Public Water Supply Identification Number

### Violations

In 2020 South Deerfield Water Supply District received one notice of noncompliance from MassDEP. A copy of this notice is available upon request

Violation	Date Violation Received	Actions Taken	Completed / Ongoing	(Health Effects / Language if Needed)
1. Failure to implement source water treatment requirements for system exceeding the lead and copper action level				
Corrosion control treatment strategy and permit application not submitted by 12/31/19	1/11/21	Submitted corrosion control treatment strategy permit application 5/7/20  Submitted permit application for treatment modification 4/30/21	Ongoing	None