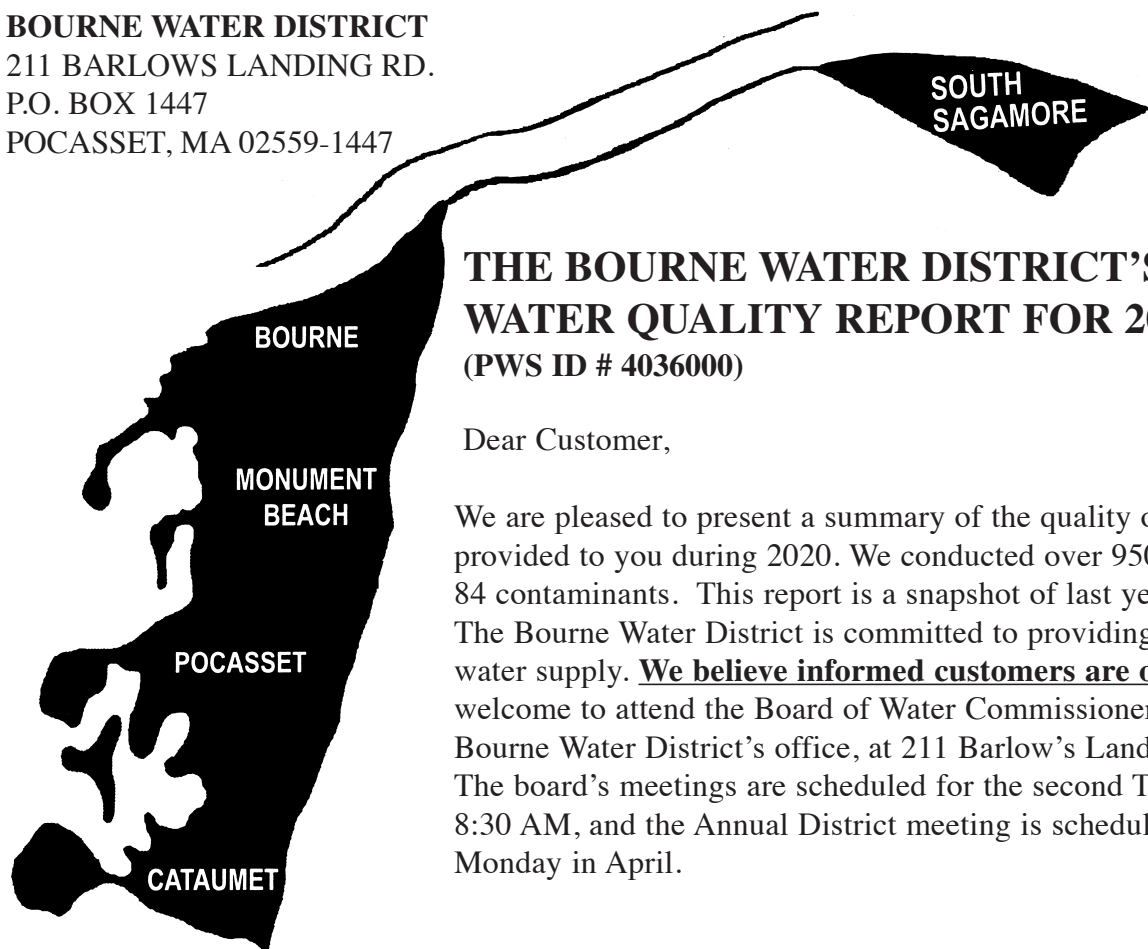
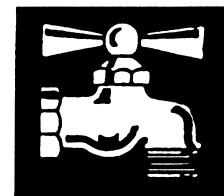


BOURNE WATER DISTRICT  
211 BARLOWS LANDING RD.  
P.O. BOX 1447  
POCASSET, MA 02559-1447



## THE BOURNE WATER DISTRICT'S WATER QUALITY REPORT FOR 2020 (PWS ID # 4036000)

Dear Customer,

We are pleased to present a summary of the quality of the drinking water provided to you during 2020. We conducted over 950 tests for more than 84 contaminants. This report is a snapshot of last year's water quality. The Bourne Water District is committed to providing you with a reliable water supply. **We believe informed customers are our best allies.** You are welcome to attend the Board of Water Commissioners meetings held at the Bourne Water District's office, at 211 Barlow's Landing Road in Pocasset. The board's meetings are scheduled for the second Tuesday of the month at 8:30 AM, and the Annual District meeting is scheduled on the fourth Monday in April.

### WATER SOURCES AND TREATMENT

The Bourne Water District is supplied by 10 different sources, 7 of our own gravel packed well sites and 3 gravel packed well sites from the Upper Cape Regional Water Supply Cooperative. Four of our well sites are in the Monument Beach area of the Town Forest. The other two wells are in the Cataumet area of the Town of Bourne. One well is on Joint Base Cape Cod and we have one transfer station on Connery Ave. The Bourne Water District treats all supplies with lime slurry for corrosion control. The lime slurry is used to raise the pH of the water. This makes the water less aggressive to the copper pipe and lead joints in your homes to prevent exposure to lead and copper.

### WHAT DOES THE FOLLOWING TABLE MEAN?

**Action Level (AL)** The concentration of a contaminant which if exceeded triggers treatment or other requirements.

**Maximum Contaminant Level (MCL)** The highest level of a contaminant that is allowed in the drinking water. The MCL is set as close to the MCLG as feasible using the best available treatment technology.

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

**90th Percentile** Out of every 10 houses sampled, 9 were below this level.

## KEY TO TABLE

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

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 measurement of radioactivity)

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

ppb = parts per billion, or micrograms per liter (ug/l)

ppt = parts per trillion, or nanograms per liter

ppq = parts per quadrillion, or picograms per liter

TT = Treatment Technique

DISTRIBUTION SYSTEM WATER QUALITY This report summarizes only those items detected during Sampling-not all contaminants that are monitored								
Microbial Results	Highest Detected	Range Detected	MCL	MCLG	Violation	Possible Source of Contamination		
Total Coliform Bacteria**	1	0-1	0	0	yes	Naturally present in the environment		
Fecal Coliform or E. Coli	0	0	0	0	No	Human and Animal Fecal Waste		
*Compliance with the Fecal Coliform/E.Coli MCL is determined upon additional repeat testing								
**Total Coliform:Coliform are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present								
Lead and Copper	Dates collected	90th Percentile	Action Level	MCGL	# of sites sampled	# Sites above Action Level	Violation	Possible Source of Contamination
Lead (ppb)	9/1/2020 thru 12/31/2020	0.0057	15	0	30	0	No	Corrosion of household plumbing systems: Erosio of natural deposits
Copper (ppm)	9/1/2020 thru 12/31/2020	0.311	1.3	1.3	30	0	No	Corrosion of household plumbing systems: Erosio of natural deposits
TESTING FOR LEAD - If present, elevated levels of lead can cause serious health problems,especially for pregnant women and young childern. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing .Bourne Water District is responsible for providing high quality drinking water,but cannot control the variety of materials used in plumbing components.When you water has been sitting for several hours,you can minimize the potential for lead exposure by flushing you 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 about lead in drinking water,testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a> .								
SUMMARY OF FINISHED WATER CHARACTERISTICS								
Regulated Contaminants	Date(s) collected	Highest Detect Value	Range Detected	MCL	MCGL	Violation		
Inorganic Contaminants:								
Barium (ppm)	2020	0.009	0.002-0.009	2	2	No	Discharge of drilling waste; discharge from metal refineries;erosion of natural deposits	
Nitrate * (ppm)	2020	0.7	0.06-0.70	10	10	No	Runoff from fertilizer use;leaching from septic tanks;sewage;erosion of natural deposits	
Perchlorate ** (ppb)	2020	0	0	2	-	No	Rocket propellants,fireworks,munitions ,flares,blasting agents* (see note below)	
*Nitrate	Nitrate in drinking water at levels above 10ppm is a health risk for infants of less than six months of age.High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advise from your health care provider.							
**Perchlorate (Various Chemical Abstract Service RegistryNumbers (CASRN)for different chemical species	Perchlorate interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development, causing braiun damage and other adverse effects, particularly in fetuses and infants. Pregnant women, the fetus, infants and children up to the age of 12, and people with hypothyroid condition are particularly suseptable to perchlorate toxicity. **J**values are required when the results are above the MDL(0.012) and below the MRL(0.05)							
Organic Contaminants								
Tetrachloroethylene(PCE)(ppb)	2020	1.64	0 -1.64	5	-	No	Discharge from factories and dry cleaners	
Chloroform (ppb)	2020	1.75	0-1.75	ORSG 70	NA	No	By-product of drinking water chlorination	
CIS-3,2 Dichloroethylene (ppb)	2020	2.08	0-2.08	70	NA	No	Runoff from fertilizer use;leaching from septic tanks;sewage;erosion of natural deposits	
Secondary Contaminants	Date(s) collected	Highest Detect Value	Range Detected	SMCL	OSRG	Possible Source of Contamination		
Magnesium (ppm)	2020	3.6	1.1-3.6	-	-	Natural Mineral and Organis Matter		
Chloride (ppm)	2020	40	7.2-40	250	NA	Natural Mineral, Road Salt		
Calcium (ppm)	2020	6	2.5-6.0	-	-	Natural Mineral and Organis Matter		
Iron (ppb)	2020	0.96	0-0.96	300	NA	Erosion of Natural Deposits and oxidation of iron components		
Manganese (ppb)*	2020	0.034	0-0.034	50	NA	Erosion of Natural Deposits		
Sodium(ppm)**	2020	28**	5.7-28	-	20	Road Salting;erosion of natural deposits		
Potassium (ppm)	2020	1.3	0.7-1.3	-	-	Natural Mineral and Organis Matter		
Sulfate (ppm)	2020	7.2	5.1-7.2	250	250	Natural Sources		
Zinc (ppm)	2020	0.014	0-0.014	5	NA	Erosion of Natural Deposits,and industrial discharge		
*EPA has established a lifetime health advisory (HA) for Manganese at 300ppb and an acute at 1000ppb								
**Sodium is a naturally-occurring element found in soil and water. It is necessary for the normal functioning of regulating fluids in human systems.Some people,however, have difficulty regulating fluid volumeas a result of several diseases , including congestive heart failure and hypoertension. The guideline of 20mg/L for sodium represents a level in water tthat physicians and sodium sensitive individuals should be aware of in cases where sodium exposures are being carefully controlled.For additional information,contact your health care provoder, your local Board of Health or the Massachusetts Dept. of Public Health,Bureau of Environmental Health Assessment at 617-624-5757.								

## NATIONAL PRIMARY DRINKING WATER REGULATION COMPLIANCE

The Total Coliform rule requires water systems to meet a stricter limit for Coliform bacteria. Coliform bacteria are harmless, but the presence in water can be an indication of disease-causing bacteria. When Coliform bacteria is found, special follow up tests are done to determine if harmful bacteria are present in the water supply. Over 500 Coliform samples were taken throughout the Bourne Water District in the year 2020. In August 2020 Bourne Water District had one detect of Total Coliform from a sample taken at the Bourne tank. Bourne Water District chlorinated the tank and rectified the issue. Bourne Water District completed the process with a Level 1 Assessment of the site and has not had any other Total Coliform hits anywhere in the system.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead and copper in drinking water is primarily from materials and components associated with service lines and home plumbing. The Bourne Water 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 and copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead and copper in your water, you may wish to have your water tested. Information on lead and copper 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>.

Sodium; ORSG = 20 Sodium sensitive individuals, such as those experiencing hypertension, kidney failure or congestive heart failure, should be aware of the levels of sodium in their drinking water where exposures are carefully being controlled.

Massachusetts Office of Research and Standard Guidelines (ORSG): This is the concentration of a chemical in drinking water, at or below which, adverse health effects are likely to occur after chronic (lifetime) exposure, with a margin of safety. If exceeded, it serves as an indicator of the potential need for further action.

If you are interested in a more detailed report, contact Robert Prohett at 508-563-2294.

### REQUIRED ADDITIONAL HEALTH INFORMATION:

To insure that tap water is safe to drink, Department of Environmental Protection (DEP) and Environmental Protection Agency (EPA) prescribes limits on the amounts of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water. 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 Environmental Protection Agency Safe Drinking Water Hotline (1-800-426-4791). The sources of drinking water (both tap and bottled) 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 radioactive material and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in the sources include:

- (A) Microbial contaminants such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- (B) Inorganic contaminants such as salts and metals which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or be the results of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 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 infections by Cryptosporidium are available from the Safe Drinking Water Hotline (1-800-426-4791).

### SOURCE WATER ASSESSMENT

The Bourne Water District had a source water assessment performed by the MA. Department of Environmental Protection in 2002. The Source Water Assessment and Protection (SWAP) program, 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.
- Publicize the results to provide support for improved protection.

A susceptibility ranking of high was assigned to the Bourne Water District using the information collected during the assessment by the DEP. The high ranking was due to the potential contamination from land uses such as auto repair shops, truck terminal, furniture refinishing, auto salvage operation, an industrial park and activities in the recharge area (Zone II's) of some of the wells. The complete SWAP report is available at the Bourne Water District's office. For more information contact Robert Prohett at 508-563-2294.

## CROSS CONNECTION

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, and you hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of a fire hydrant being used or water main break) when the hose is connected to the fertilizer sprayer, the fertilizer may be sucked back into the drinking water pipes through your hose. Using an anti-siphon backflow-prevention device on your sprayer or hose bib can prevent this problem. The Bourne Water District recommends using devices with an anti-siphon feature or equipping hose bibs with hose bib vacuum breakers to prevent against back flow. For additional information on cross connections and on the status of your water system's cross connection program, please contact Robert Prophett at 508-563-2294.

## UPPER CAPE REGIONAL WATER SUPPLY COOPERATIVE 2020 Consumer Confidence Report (PWS ID # 4261024)

The Upper Cape Regional Drinking Water Supply Cooperative consists of three groundwater supply wells located in Sandwich, MA on Joint Base Cape Cod (JBCC). A Board of Managers representing four-member public water supply systems manages the Cooperative. The Cooperative has the capacity to provide a supplemental supply of water to its member public water systems, which include the Town of Falmouth, the Bourne Water District, the Mashpee Water District and the Sandwich Water District. The Cooperative also supplies water to the Otis Air National Guard public water system on JBCC and the Barnstable County Jail.

Wells #1, #2 and #3 are located in a forested area of the northeastern portion of the JBCC. In July 2004, the Department of Environmental Protection completed a source water assessment (SWAP) report for the Cooperative water supply wells. A SWAP report is a planning tool to support local and state efforts to improve water supply protection by identifying land uses within water supply protection areas that may be potential sources of contamination. The report identifies potential sources of contamination including a gas station, a medical facility and a military facility, and helps focus protection efforts on appropriate Best Management Practices. A susceptibility ranking of high was assigned to the Cooperative using information that was collected during the assessment. A copy of the report is available, upon request, from the Cooperative. JBCC has adopted a Groundwater Protection Plan to prohibit inappropriate activities on JBCC property within the Zone II areas of community public water supply wells. In addition, the Environmental Management Commission provides oversight over activities on the northern portion of the JBCC. For questions regarding SWAP or other information contained within this document call Marisa Picone-Devine at 508-888-7262.

Our system, out of an abundance of caution and concerns about PFAS, sampled for PFAS compounds (PFBS, PFHpA, PFHxS, PFNA, PFOA, and PFOS) at all three wells in 2019 and 2020; there were no detections of any of the analytes in any of the samples.

## 2020 WATER QUALITY DATA

Listed below are the substances detected in water samples collected during the most recent sampling period from the three (3) wells that comprise the Upper Cape Drinking Water Supply Cooperative.

Inorganic Contaminants	Year Sampled	Highest Result	Range of Detections	MCL	MCLG	Violation (Y / N)	Possible Sources
Barium	2020	0.002 ppm	0.002 ppm	2 ppm	2 ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate	2020	0.13 ppm	0.13 ppm	10 ppm	10 ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Unregulated and Secondary Contaminants	Year Sampled	Amount Detected	Range of Detections	SMCL	ORSG	Violation	Possible Sources
Chloroform	2020	2.19 ppb	1.46 -2.19 ppb	NA	70 ppb	No	Trihalomethane: by-product of drinking water chlorination. In non-chlorinated sources, chloroform may be naturally occurring
Chloride	2020	8.6 ppm	8.6 ppm	250 ppm	--	NO	Runoff and leaching from natural deposits; seawater influence
Copper	2020	0.014 ppm	0.014 ppm	1 ppm	--	No	Internal corrosion of household plumbing; erosion of natural deposits
Sodium	2020	5.4 ppm	5.4 ppm	--	20 ppm	No	Natural erosion, road salt
Sulfate	2020	5.0 ppm	5.0 ppm	250 ppm	--	No	Runoff and leaching from natural deposits; industrial wastes