Annual Drinking Water Quality Report for 2006

North Haven Water Department

North Haven, Maine
PWSID ME0091130

We're pleased to present to you our Annual Drinking Water Quality Report. This report, a requirement of the 1996 amendments to the Safe Drinking Water Act, is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

WATER SOURCE

Our water source is Fresh Pond. The construction of a new water filtration plant was completed in June of 2003. The Town began distribution of water treated by that plant in the spring of 2003. Raw water is drawn from the Fresh Pond through three centrifugal pumps. From there, the water is treated with ozone and passes through a contact chamber. The water is then evenly distributed into four slow sand filters. The first stage is a roughing filter, the second a slow sand bed and finally the limestone contact chamber. After filtration, the water is first injected with soda ash for pH adjustment, followed by sodium hypochlorite and ammonia to form chloramines for disinfection. Then the water proceeds to the 50,000-gallon clear water storage. The finished water is pumped into the distribution system by one of two 150 GPM vertical turbine pumps.

SOURCE WATER ASSESSMENT

The 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. Assessment results are available at public water suppliers, town offices, and the DWP. For more information about the SWAP, please contact the DWP at telephone 287-2070.

If you have any questions about this report or concerning your water utility, please contact Glen Marquis, at telephone number 207-867-4837**,** or mailing address PO Box 400, North Haven, ME 04853. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled selectmen's meetings. The meetings are held every Tuesday at 4:00 p.m.

WATER QUALITY

North Haven Water Department routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows any detection resulting from our monitoring for the period of January 1st to December 31st, 2006. *

In 2005, due to efforts to protect the water supply, we applied for and were granted a three-year waiver for synthetic organics (Phase II/V) testing. This is an exemption from the testing/monitoring requirements for pesticides, herbicides, fungicides, and other industrial chemicals; the state of Maine Drinking Water Program grants a waiver only upon a finding that "it will not result in an unreasonable risk to health."

We have learned through our monitoring and testing that some constituents have been detected.

*If no tests were required for a given contaminant in 2006, the law requires that the most recent test results be included here. No test results over 5 years old are allowed, however.

Some or all of the following contaminants were tested for as regulated by law. Other elements are also tested for which do not require reporting, as they do not pose a potential health risk.

Microbiological Contaminants

1. Total Coliform Bacteria
2. Fecal coliform and *E.coli*
3. Turbidity

Radioactive Contaminants

4. Beta/photon emitters
5. GrossAlpha
6. Combined radium
6.a. Uranium
6.b. Radon

Inorganic Contaminants

7. Antimony
8. Arsenic
9. Asbestos
10. Barium
11. Beryllium
12. Cadmium
13. Chromium
14. Copper
15. Cyanide
16. Fluoride
17. Lead
18. Mercury (inorganic)
19. Nitrate (as Nitrogen)
20. Nitrite (as Nitrogen)
21. Selenium
22. Thallium

Synthetic Organic Contaminants including Pesticides and Herbicides

23. 2,4-D
24. 2,4,5-TP (Silvex)
25. Acrylamide
26. Alachlor
27. Atrazine
28. Benzo(a)pyrene (PAH)
29. Carbofuran
30. Chlordane
31. Dalapon
32. Di(2-ethylhexyl) adipate
33. Di(2-ethylhexyl) phthalate
34. Dibromochloropropane
35. Dinoseb
36. Diquat
37. Dioxin [2,3,7,8-TCDD]
38. Endothall
39. Endrin
40. Epichlorohydrin
41. Ethylene dibromide
42. Glyphosate
43. Heptachlor
44. Heptachlor epoxide
45. Hexachlorobenzene
46. Hexachlorocyclo-pentadiene
47. Lindane
48. Methoxychlor
49. Oxamyl [Vydate]
50. PCBs [Polychlorinated biphenyls]
51. Pentachlorophenol
52. Picloram
53. Simazine
54. Toxaphene

Volatile Organic Contaminants

55. Benzene
56. Carbon tetrachloride
57. Chlorobenzene
58. o-Dichlorobenzene
59. p-Dichlorobenzene
60. 1,2 - Dichloroethane
61. 1,1 - Dichloroethylene
62. cis-1,2-ichloroethylene
63. trans - 1,2 -Dichloroethylene
64. Dichloromethane
65. 1,2-Dichloropropane
66. Ethylbenzene
66a. Methyl-Tertiary-Butyl-Ether (MTBE) (Maine MCL)
67. Styrene
68. Tetrachloroethylene
69. 1,2,4 -Trichlorobenzene
70. 1,1,1 - Trichloroethane
71. 1,1,2 -Trichloroethane
72. Trichloroethylene
73. TTHM [Total trihalomethanes]
73. a. HAA5 [Total Haloacetic Acids]
74. Toluene
75. Vinyl Chloride
76. Xylenes

TEST RESULTS

Unless otherwise noted, testing was done in 2006.

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria	N	**0 positive**	N/A	0 positive	1 positive	Naturally present in the environment
Turbidity (7/2006)	N	**0.3**	ntu	n/a	TT	Soil runoff
Radioactive Contaminants						
Gross Alpha (6/13/06)	N	**0.461**	pCi/L	0	15	Naturally occurring radioactivity in bedrock.
Inorganic Contaminants						
Barium (6/13/06)	N	**0.002**	ppm	2	2	Erosion of natural deposits
Chromium (6/13/06)	N	**0.6**	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper (9/26/06)	N	**0.82**	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Lead (9/26/06)	**Y**	**32.0**	ppb	0	AL=15	Corrosion of household plumbing systems
Disinfection By-Products						
TTHM [Total Trihalomethanes]	**Y**	**RAA= 97.175**	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total Haloacetic Acids]	**Y**	**RAA= 125.5**	ppb	0	60	By-product of drinking water chlorination

Definitions:
Action Level – (AL) The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Maximum Contaminant Level - (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal – (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Variances, Exemptions, and Waivers - State or EPA permission not to meet an MCL, a treatment technique or test for a given contaminant under certain conditions.
Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water (e.g. treatment technique for turbidity).
Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Running Annual Average (RAA): The Average of all monthly or quarterly samples for the last year at all sample locations.
N/A - not applicable

Units:
Parts per million (ppm) or Milligrams per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter (µg/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter (pCi/L) - A measure of the radioactivity in water.

Notes:

Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take < 40 samples per month.
Gross Alpha: Action level over 5 pCi/L requires testing for Radium. Action level over 15 pCi/L requires testing for Radon and Uranium.
Lead/Copper: Action levels are measured at consumer's tap. 90% of the tests must be equal to or below the action level.

IMPORTANT INFORMATION

Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) MCL Violations: During the January 1, 2006 to December 31, 2006 compliance periods, our water system exceeded the MCL for TTHM and HAA5. TTHM and HAA5 are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water. Water tests were done on your drinking water this summer, when TTHM and HAA5 are thought to be at their highest. We are in the process of exploring the various options to reduce TTHM and HAA5 in your water supply. Some people who drink water containing TTHM 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. Some people who drink water containing HAA5 in excess of the MCL over many years could experience nervous system or liver damage.

Lead Violation: During the compliance period of January 1, 2006 to December 31, 2006, routine sampling detected Lead in excess of the maximum level allowed. Drinking water regulations require that samples are taken from homes with a high risk potential for Lead in the plumbing. Public education material was distributed to all residents, shortly thereafter. A corrosion control plan was submitted to the State Drinking Water Program. Lead sampling will resume in 2007. Results of subsequent future lead testing will be made available to all residents. Lead Health Effects: Infants and children who drink water containing Lead in excess of the action level could experience delays in their physical or mental 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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-ten thousand chance of having the described health effect.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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 the 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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 infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We, at North Haven Water Department, work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future. Please contact us with any questions.