
ENVIRONMENTAL Fact Sheet



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2011

Proposing To Add Fluoride To A Public Water System

The U.S. Centers for Disease Control and Prevention recommends that appropriate concentrations of fluoride be present in public water supplies. Fluoride has been demonstrated to be safe and cost-effective in reducing tooth decay through every stage of life and for all people.

Fluoride occurs naturally in the environment. Many bedrock wells in New Hampshire have sufficient natural fluoride. Well water should be tested to assess the presence of naturally-occurring fluoride before recommending supplements. Ten New Hampshire communities add optimal levels of fluoride (1.1 mg/L) to the public water system to facilitate the balance between tooth enamel build-up and breakdown in primary and permanent teeth, thus reducing the incidence of tooth decay in the population.

Legal Requirements When Proposing to Add Fluoride in a Public Water System

New Hampshire statutes specify procedures by which supplemental fluoridation of public water supplies can be accomplished. These procedures are spelled in the following statutes:

General Fluoridation	RSA 485:14
Fluoridation for city water systems	RSA 44:16
Fluoridation for town water systems	RSA 31:17-a
Fluoridation for district water systems	RSA 52:23

In summary, these statutes require that the proposal to fluoridate be subject to a vote and that majority approval is needed to begin fluoridation. The same procedure could also be used to discontinue fluoridation that is already occurring. Whatever the outcome of the vote, there is a three year moratorium before a fluoridation question can be brought up again.

Design Review and Operational Oversight

If local voter approval is given, the water system must submit the design for its chemical addition system to DES for approval. The proposal should identify the fluoride chemical to be used, the necessary chemical feed equipment, safety features to prevent an overfeed of the chemical, and the monitoring equipment to be used to ensure the proper fluoride concentration is achieved and maintained.

Once the fluoride addition begins, a monitoring schedule will be established by DES to ensure that the proper amount of fluoride is being added. The program also requires monthly submission of treatment record-keeping and periodic field inspection of the equipment by DES staff. In addition, DES requires that the system operator have the proper operator certification grade for that treatment process.

Capital and Operational Costs

The typical capital cost of fluoridation for a very small water system is approximately \$3,000-\$5,000 per source per pump house, assuming a system is using sodium fluoride and sufficient floor space exists in the pump building to accommodate equipment. The typical operational cost of water fluoridation ranges from \$0.60 to \$1.10 per person per year depending on system size. The equipment is simple to install and operate. Some larger water utilities may choose to invest more in chemical storage tanks, allowing the use of lower-cost bulk fluoride chemicals.

Public Water Systems That Add Fluoride

As of August 2010, ten New Hampshire municipalities (serving approximately 260,000 people) added fluoride to their public water systems. A list of these public water systems is available in the fact sheet [WD-DWGB-5-1, “New Hampshire Public Water Systems Adding Fluoride.”](#)

Naturally Occurring Fluoride in Water Systems

Fluoride occurs naturally at elevated levels in approximately 3 percent of bedrock wells in New Hampshire. Water systems with fluoride greater than 2 mg/L (secondary standard) are required to issue an annual public notice to users. Systems with fluoride greater than 4 mg/L (primary standard) are required to reduce levels with treatment or blending. Fluoride has no taste or odor. Only a laboratory test can identify the presence of elevated fluoride. A list of small public water systems with naturally occurring fluoride is also available at the above webpage in the fact sheet [WD-DWGB-5-2, “Small Public Water Systems in New Hampshire with Naturally Occurring Fluoride.”](#)

Controversy

Fluoridation of drinking water can be a controversial issue. Typical concerns include the concept of mass dietary supplementation when individual methods of fluoride supplementation are available, the safety of adding a chemical that at high concentrations is a poison, the relatively low percentage of water consumed versus that treated, and other contentions that fluoridation exposure is not safe.

A 1993 study by the National Research Council of the National Academy of Science confirmed that fluoridation of drinking water is safe and effective. The NH Division of Public Health Services, the New Hampshire Dental Society, and the US CDC all advocate fluoridation of drinking water. For more information on the health benefits of community water fluoridation, contact the Division of Public Health Services at (603) 271-4501.

Professional References for Fluoridation

NH Dental Society
23 South State St
Concord, NH 03301
(603) 225-5961
www.nhds.org

American Dental Association
211 East Chicago Ave
Chicago, IL 60611-2678
(312) 440-2500
www.ada.org

US Centers for Disease Control & Prevention
1600 Clifton Rd
Atlanta, GA 30333
(404) 639-3311
www.cdc.gov

FOR MORE INFORMATION

Please contact the DES Drinking Water and Groundwater Bureau and the New Hampshire Water Well Board at (603) 271-2513 or dwgbinfo@des.nh.gov or visit our website at www.des.nh.gov/organization/divisions/water/dwgb/index.htm. All of the bureau's fact sheets are online at www.des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm.