

# Fluoridation of Public Water Supplies

## Purpose

To outline the main issues relating to fluoridation of public water supplies, taking account of legislation, water industry operations and other matters of concern to legislators, regulators, the public and other stakeholders, particularly in a UK context.

## CIWEM's Position on Fluoridation:

1. Although fluoridation of public water supplies to reduce dental caries has been practised since the 1960s, there has always been a strong element of customer antipathy towards this practice. There have also been conflicting medical and scientific views on the merits of fluoridation programmes, contributing to public scepticism. CIWEM believes that further work must be undertaken to demonstrate the value and/or disadvantages of fluoridation programmes. Such work should involve sound science, ethics, corporate social responsibility and legal considerations.
2. Through new legislation the Government will enable Local Health Authorities to revisit those areas of the country which have identified a health need and yet do not currently have a fluoridated water supply, subject to consultation with their communities. CIWEM believes that the consultation process must be transparent and objective, carried out independently of Local Health Authorities and provide local people with information that will enable informed decisions.
3. An extension of the fluoridation of public water supplies through new legislation has been well received by the proponents of fluoridation programmes and those who promote the benefits of reducing the level of dental caries in young children and the removal of the stress and discomfort dental surgery causes to young people. CIWEM believes that any benefits of fluoridation programmes must be considered in the context of wider public health provision and that people should have choice in the way they meet their dental care needs.
4. Opponents of fluoridation see it as unethical and in contravention of human rights. They regard fluoridation as "mass medication" and believe that it ignores the right of individuals to refuse medication (other than that required to treat a contagious disease). CIWEM believes that the legal position relating to fluoridation of public water supplies must not compromise the ethical position of professionals as they carry out their duties and meet their responsibilities to the communities they serve.
5. For the Water Utility Companies that already practice fluoridation, the process of adding fluoride to water supplies is well established and benefits from continuous on-line monitoring with fail-safe-cut-out on a 24/365 basis. CIWEM is concerned that there may

be operational limitations in preventing fluoridated water being supplied to those people who do not wish their water supplies to be fluoridated. A further issue is that the health authority boundaries and water distribution boundaries do not generally coincide.

6. The manufacture of chemicals for fluoridation, increased transportation costs and the disposal of chemical waste/byproducts may have a detrimental impact on the environment and Health and Safety implications. CIWEM believes that more research is required to investigate the environmental impacts of fluoridation as well as its Health and Safety implications.
7. Much water contains natural fluoride at varying levels. Fluoridation therefore requires the level of naturally occurring fluoride to be monitored closely and dose rates adjusted accordingly. This will be costly and may introduce risks associated with the accuracy of measurements and dosing controls, as well as the reaction and compatibility of natural fluoride compounds with dosed ones. CIWEM believes that the issue of the impact and monitoring of natural fluoride levels should be addressed.
8. CIWEM notes the evidence illustrating the benefits of fluoridation and also the concern of some of its Members who believe it is a breach of their human rights. CIWEM has a duty of care to its Members and will take all reasonable precautions to ensure that the ethical standing of their profession is not compromised.
9. CIWEM is aware of the likely impact on many of its Members who will have to deal with the unanswered, real and perceived concerns of customers, communities and professionals, whether they support fluoridation of public water supplies or not. CIWEM believes that there is a case for more and better public information on fluoridation and that the government and the health agencies have a key role to play in this regard.
10. CIWEM believes that the full cost of fluoridation, including any liabilities, should be borne by the Health Protection Agency.

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## Background

### Definition

Fluoride exists as a natural occurring element in many waters, or can be added to water artificially as a fluoro silicate solution, which is the by-product of another process. The prescribed concentration allowable in drinking water is 1.5 parts of fluoride per million of water.

### Existing Arrangements (UK)

Since the 1960s, over 5 million people (about 10% of the UK population) have received artificially fluoridated water, mainly in the Midlands, north-east and eastern parts of England.

The mechanism by which the fluoride is added is well established and benefits from continuous on-line monitoring with fail-safe-cut-out on a 24/365 basis to achieve a target level of one part per million.

1. About half a million people in the UK receive water which is naturally fluoridated at, or about, the optimum level of one part per million. A further one million people receive water which is naturally fluoridated at a lower level, but which still confers some dental benefit. These areas are generally found in a band running down the eastern side of the country, from Hartlepool in the north down to parts of Essex.

2. About 5 million people receive water where the fluoride content has been artificially increased to a level of one part per million. Major schemes are in operation in Birmingham and throughout the West Midlands, and also in Tyneside.

3. Water fluoridation is governed by the Water Industry Act 1991. This gave health authorities the responsibility of deciding the need locally for fluoridation, and the duty of informing the public and consulting local authorities about any proposals to fluoridate local water supplies.

4. In 1999/2000 the Centre for Reviews and Dissemination at the University of York carried out a systematic review of the evidence on fluoridation. Whilst the Review Team agreed that fluoridation reduced tooth decay and found no evidence of risks to overall health, they were critical of the quality of the research available "and could conclude nothing with confidence".

5. The Government then commissioned the Medical Research Council (MRC) to consider what further research was required to improve knowledge about fluoridation and health. Their report, published in September 2002, identifies areas of uncertainty regarding the balance of benefits and risks of water fluoridation, makes recommendations for research to address these uncertainties and identifies additional information needed by the public to make informed decisions. The full report is available on the MRC website at: [www.mrc.ac.uk](http://www.mrc.ac.uk).

6. An amendment to the Water Bill which became law in late 2003 empowers Local Health Authorities to embark on a consultation process with their communities and if agreement is reached will require the water companies concerned to fluoridate the water supply.

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*Note: CIWEM Policy Position Statements (PPS) represents the Institution's views on issues at a particular point in time. It is accepted that situations change as research provides new evidence. It should be understood, therefore, that CIWEM PPS's are under constant review, that previously held views may alter and lead to revised PPS's. PPSs are produced as a consensus report and do not represent the view of individual members of CIWEM.*