

Water Fluoridation Regulation 2020

Explanatory notes for SL 2020 No. 17

made under the

Water Fluoridation Act 2008

General Outline

Short title

Water Fluoridation Regulation 2020

Authorising law

Sections 12, 73(b) and 100 of the *Water Fluoridation Act 2008*.

Policy objectives and the reasons for them

The objective of the *Water Fluoridation Act 2008* is to promote good oral health in Queensland by the safe fluoridation of public potable water supplies. The Act establishes the framework to:

- set standards for the safe fluoridation of public potable water supplies;
- monitor public potable water suppliers that add fluoride to water supplies;
- establish powers to enforce the standards for fluoridation; and
- provide requirements for the analysis of fluoride compounds and fluoridated water supplies.

The *Water Fluoridation Regulation 2008* (existing Regulation) prescribes various matters to support the safe fluoridation of public potable water supplies across Queensland, including:

- the types of fluoride that may be used;
- the concentrations at which fluoride must be dosed;
- testing requirements;
- necessary safeguards for fluoride dosing equipment;
- record keeping and reporting requirements; and
- qualification requirements for persons that operate fluoridation equipment.

As the existing regulation will expire on 31 August 2020, in accordance with section 56A of the *Statutory Instruments Act 1992*, the *Water Fluoridation Regulation 2020* (Regulation) has been prepared to replace the existing Regulation.

Achievement of policy objectives

The Regulation is largely consistent with the existing Regulation, with minor changes to improve the operational effect of the Regulation. In addition, some minor amendments to reword and restructure some provisions has occurred to reflect contemporary drafting practices and improve clarity and readability.

As the matters prescribed in the Regulation are designed to support the operation of the Water Fluoridation Act, the existing Regulation must be replaced to ensure that the legislative scheme can continue to operate and not be impacted by the expiry of the existing Regulation.

Consistency with policy objectives of authorising law

The Regulation is consistent with the objective of the Water Fluoridation Act to promote good oral health by the safe addition of fluoride to public potable water supplies in Queensland. The Regulation prescribes a range of matters and requirements to support the safety and appropriate fluoridation of public potable water supplies and the operation of the Water Fluoridation Act.

Inconsistency with policy objectives of other legislation

No inconsistencies with the policy objectives of other legislation have been identified.

Alternative ways of achieving policy objectives

There are no alternative ways of achieving the policy objectives.

Benefits and costs of implementation

In addition to continuing the requirements contained in the existing Regulation, the Regulation imposes an obligation on public potable water suppliers, that add forms of fluoride to public potable water supplies, to obtain a batch analysis certificate or an analysis certificate only from an Australian laboratory accredited by the National Association of Testing Authorities (NATA) to undertake analyses for the purposes of the Regulation.

Batch analysis certificates are to be obtained by public potable water suppliers before they add fluoride compounds to a public potable water supply. Currently, some batch analysis certificates are generated overseas by the manufacturers of fluoride compounds. In the past, Queensland Health has identified discrepancies between the results reported in batch analysis certificates generated overseas when compared with those, generated for the same batch, issued by an Australian laboratory accredited by NATA for fluoride analysis. This change in requirements will ensure consistency in the reporting of the concentration of any impurities in a fluoride compound prior to it being added to water supplies. This is an important safeguard in ensuring fluoride is safe to add to water supplies.

The obligation to obtain a batch analysis certificate will not impose significant costs on the public potable water suppliers to which they apply. All impacted stakeholders have been consulted in relation to the new requirement for batch analysis certificates. No stakeholders advised that they would be adversely impacted as a result of the new requirement.

The existing Regulation requires public potable water suppliers to notify the chief executive when automatic fluoride dosing equipment has been inoperative for two weeks. An additional obligation has been inserted into the Regulation to require public potable water suppliers to notify the chief executive, within five business days, when non-operational automatic fluoride dosing equipment and water blending equipment resumes operation. This will allow Queensland Health to ensure up-to-date information is maintained on the operational status of fluoride equipment being used by public potable water suppliers. The new notification requirement will not impose significant costs on public potable water suppliers that add fluoride to the water supply.

Consistency with fundamental legislative principles

The Regulation is consistent with fundamental legislative principles in section 4 of the *Legislative Standards Act 1992*.

Consultation

A sunset review of the Regulation was undertaken in accordance with *The Queensland Government Guide to Better Regulation*. The Office of Best Practice Regulation, Queensland Productivity Commission was consulted on the sunset review and advised that Queensland Health satisfactorily met the objectives for sunset reviews as set out in the Guidelines.

Key stakeholder bodies were consulted on the remake of the existing Regulation, including Seqwater, NATA, Queensland Water Directorate, Australian Dental Association, Australian Medical Association Queensland, public potable water suppliers currently fluoridating water supplies, and businesses that supply fluoride compounds.

All stakeholders consulted support the Regulation and the amendments to the existing Regulation to improve the operation and readability of the legislation. Some stakeholders provided feedback on drafting matters, which have been incorporated in the Regulation, where appropriate. The changes include:

- clarifying the equipment and reporting requirements for public potable water suppliers who add naturally occurring fluoride to their public potable water supplies; and
- extending the new notification period for when non-operational dosing equipment resumes operation from within one day to within five business days.

Queensland Health consulted with the public potable water suppliers who have previously added or currently add naturally occurring fluoride to their water supplies. The public potable water suppliers raised no concerns with the provisions inserted into the Regulation to clarify the equipment requirements for naturally occurring fluoride.

Notes on provisions

Part 1 Preliminary

Short Title

Clause 1 states that the short title of the Regulation is the *Water Fluoridation Regulation 2020*.

Definitions

Clause 2 states that the dictionary in schedule 3 of this Regulation defines particular words used in the Regulation.

Part 2 Fluoride forms and concentrations

Forms of fluoride—Act, s12

Clause 3 prescribes the forms of fluoride, for section 12(a) of the Act, that a public potable water supplier may use in a public potable water supply. These forms of fluoride are consistent with those listed in the existing Regulation. The clause categorises the forms of fluoride to clarify the different requirements for adding fluoride compounds or naturally occurring fluoride to a public potable water supply under Parts 3 and 4 of the Regulation.

Fluoride concentrations—Act, s12

Clause 4 prescribes the fluoride concentrations for section 12(b) of the Act. The clause also requires that public potable water suppliers, who add fluoride to the public potable water supplies, must maintain the fluoride concentration prescribed for their local government area. The public potable water supplier must ensure that the measured fluoride concentration is within 0.1 mg/L of the prescribed fluoride concentration when averaged over a quarter.

The listing of a local government area in a particular category in Schedule 1 of the Regulation does not mandate that the local government area or public potable water suppliers must add fluoride to their water supplies. However, public potable water suppliers that elect to add fluoride to their water supplies must fluoridate at the concentration prescribed for their local government area in Schedule 1 of the Regulation.

Part 3 Adding fluoride compounds

Division 1 Preliminary

Application of part

Clause 5 states that Part 3 applies to a public water supplier who elects to add a fluoride compound to a public potable water supply.

This Part does not impact on public water suppliers who elect to blend naturally occurring fluoride to their water supplies as requirements relating to this form of fluoride are contained in Part 4 of the Regulation.

Division 2 Quality of fluoride compounds

Analysis certificates for supplied fluoride compounds

Clause 6 prescribes the certificate and testing requirements for public potable water suppliers who obtain a batch of fluoride compound. The clause requires that each batch of fluoride be accompanied by a batch analysis certificate. Where fluoride is supplied without an accompanying batch analysis certificate from an accredited laboratory, the water supplier must request a copy of the batch analysis certificate from the manufacturer, importer or supplier that provided the fluoride. If that request is not complied with, then a public potable water supplier must submit a sample of the fluoride to an accredited laboratory for analysis and obtain the batch analysis certificate.

The clause requires that a batch analysis certificate must be issued by an *accredited laboratory*. Schedule 2 of the Regulation defines an *accredited laboratory* as an Australian laboratory accredited by the National Association of Testing Authorities (NATA) as competent to perform analyses for the purpose of the Regulation.

This clause replaces subsections 14(3) and 14(4) of the existing Regulation. The clause has been restructured from that contained in the existing Regulation to separate the requirements for obtaining batch analysis certificates for sources of fluoride compounds.

Impurities affecting public health

Clause 7 states that where a public potable water supplier receives a batch analysis certificate that indicates a concentration of a particular impurity, which exceeds the maximum concentration prescribed in the table in Schedule 2 of the Regulation, the public potable water supplier must not add the fluoride compound to the public potable water supply.

Like all water treatment compounds, it is important to ensure fluoride compounds are of an appropriate quality. The calculation method of the figures for the maximum impurity content values contained in Schedule 2 of the Regulation, assumes a fluoride dose of 1mg/L and assumes the purity percentage values for each fluoride compound are for:

- fluorosilicic acid – 20% purity percentage;
- sodium fluoride – 97% purity percentage; and
- sodium fluorosilicate – 98% purity percentage.

Further advice in relation to the concentration of impurities that may adversely affect public health, if the concentration were exceeded, are contained in the Water Fluoridation Code of Practice, which is published on Queensland Health's website, and the Australian Drinking Water Guidelines.

Division 3 Automatic fluoride dosing equipment and operators

Using automatic fluoride dosing equipment for fluoride compounds

Clause 8 prescribes the requirements for the automatic dosing equipment used by public potable water suppliers who add fluoride compounds to their water supplies. These requirements are that the equipment:

- has the rate of feed of fluoride compounds paced to the flow of the water; and

- has at least 2 devices that independently monitor the flow of the water, at least 1 of which measures the rate of flow of the water; and
- is designed in a way that ensures if part of the automatic fluoride dosing equipment fails, the entire fluoride dosing system is shut down.

The combination of devices that monitor the flow of water may include a flow meter and a flow-sensing device, known as a flow switch. However, it is mandatory that one of the devices is a flow meter. A flow meter should measure both the rate of flow and total volume of flow of water.

This clause replaces subsection 7(2) in the existing Regulation. The clause has been restructured to separate the requirements for automatic fluoride dosing equipment from the storage requirements for fluoride compounds and equipment, which are contained in clause 11 of the Regulation, and the requirements for water blending equipment used for naturally occurring fluoride, which are contained in clause 14 of the Regulation.

Notice if automatic fluoride dosing equipment not in operation

Clause 9 requires a public potable water supplier to notify the chief executive, within one business day and in the approved form, if its automatic fluoride dosing equipment for adding a fluoride compound to their water supply has been non-operational for a continuous period of 14 days.

This clause replaces subsection 7(3) in the existing Regulation. The clause has been amended to clarify the reporting requirements for when automatic fluoride dosing equipment for fluoride compounds has become non-operational for a period of time.

Notice if automatic fluoride dosing equipment resumes operation

Clause 10 requires a public potable water supplier to provide a notice to the chief executive, within five business days and in the approved form, if the water supplier's automatic fluoride dosing equipment resumes operation, after it has not been in operation for a continuous period of 14 days or more.

Clause 10 provides support to the notification requirements under clause 9 of the Regulation. The clause has been inserted to clarify the reporting requirements for when automatic fluoride dosing equipment for fluoride compounds resumes operation after it has been non-operational for a period of time.

Keeping fluoride compounds and equipment

Clause 11 requires public potable water suppliers to ensure that the automatic fluoride dosing equipment for fluoride compounds is kept in a building or room separated from other water treatment equipment. The public potable water supplier must also keep fluoride in a weatherproof building and in a building or room separated from other substances for water treatment.

This clause replaces subsection 7(1) in the existing Regulation. The clause has been amended to clarify the types of fluoride to which these requirements apply.

Qualified persons to operate automatic fluoride dosing equipment

Clause 12 requires that all employees engaged by a public potable water supplier must be appropriately qualified to operate the equipment that adds fluoride to the water supply. Schedule 1 of the *Acts Interpretation Act 1954* defines the term ‘appropriately qualified’ to mean having the qualifications, experience or standing appropriate to perform the function of operating automatic fluoride dosing equipment.

This clause replicates section 12 in the existing Regulation with minor edits being made to align with modern drafting conventions.

Part 4 Adding naturally occurring fluoride

Division 1 Preliminary

Application of Part

Clause 13 states that Part 4 of the Regulation applies to public potable water suppliers who add naturally occurring fluoride to a public potable water supply.

This Part does not impact on public water suppliers who elect to add fluoride compounds, being those forms of fluoride listed in subclauses 3(a) to 3(c) of the Regulation, as requirements relating to those forms of fluoride are contained in Part 3 of the Regulation.

Division 2 Water blending equipment and operators

Using water blending equipment for naturally occurring fluoride

Clause 14 requires public potable water suppliers who elect to add naturally occurring fluoride to use dosing equipment that:

- has the rate of feed of naturally occurring fluoride paced to the flow of the water; and
- has a device designed to measure the rate of flow of the water supply; and
- is designed in a way that ensures if other parts of the equipment used to blend two sources of water fail, no naturally occurring fluoride is added to the public potable water supply.

This clause inserts a new section to clarify the requirements for the dosing equipment used by public potable water suppliers who add naturally occurring fluoride to their potable water supplies compared to the automatic dosing equipment used for fluoride compounds.

Notice if water blending equipment not in operation

Clause 15 requires a public potable water supplier to notify the chief executive, within one business day and in the approved form, if its water blending equipment for adding naturally occurring fluoride to their water supplies has been non-operational for a continuous period of 14 days.

This clause replaces subsection 7(3) in the existing Regulation. The clause has been amended to clarify the reporting requirements for when water blending equipment for naturally occurring fluoride has become non-operational for a period of time.

Notice if water blending equipment resumes operation

Clause 16 requires a public potable water supplier to provide a notice to the chief executive, within five business days and in the approved form, if the water supplier's water blending equipment resumes operation, after it has not been in operation for a continuous period of 14 days or more.

This clause provides support to the notification requirements under clause 15 of the Regulation. The clause has been inserted to clarify the reporting requirements for when water blending equipment for naturally occurring fluoride resumes operation after being non-operational for a period of time.

Qualified persons to operate water blending equipment

Clause 17 requires that all employees engaged by a public potable water supplier must be appropriately qualified to operate the equipment that adds fluoride to the water supply. Schedule 1 of the *Acts Interpretation Act 1954* defines the term 'appropriately qualified' to mean having the qualifications, experience or standing appropriate to perform the function or exercise the power.

This clause replicates section 12 in the existing Regulation with minor edits being made to align with modern drafting conventions.

Part 5 Water analyses, record-keeping and reporting

Purpose of part

Clause 18 states that Part 5 relates to requirements in relation to the analysing of a public potable water supply to which fluoride has been added, and recording and reporting the results of the analysis.

Prescribed testing by water suppliers

Clause 19 requires public potable water suppliers that add fluoride to a public potable water supply to take at least one sample each day of the fluoridated water and measure the concentration of fluoride using an approved method (a prescribed test). The results from the prescribed tests must be kept for a period of 5 years.

This clause replaces subsection 13(2) in the existing Regulation. The clause has been restructured to separate the provisions relating to the requirements for daily testing from the provisions about monthly laboratory tests and the chief executive conducting additional tests, which are now contained in clauses 20 and 21 of the Regulation.

Monthly laboratory testing

Clause 20 requires public potable water suppliers that add fluoride to a public potable water supply to take at least one sample each month of the fluoridated water and divide the sample into two parts.

The public potable water supplier must test the first part of the sample using the approved method and provide the second part of the sample to an Australian laboratory accredited by

NATA as competent to perform analyses for the purpose of the Regulation. The public potable water supplier must obtain the test results and keep them for a minimum of 5 years.

This clause replaces subsections 13(3) to 13(5) of the existing Regulation.

Chief executive may require additional test

Clause 21 provides that public potable water suppliers must comply with a request from the chief executive to perform an additional test of the concentration of fluoride in the fluoridated public potable water supply. The water supplier, within one day of conducting the additional test, must provide the results of the test to the chief executive.

This clause replaces subsections 13(6) to 13(7) in the existing Regulation.

Daily recording of fluoride compound information

Clause 22 prescribes that the public potable water supplier must each day record:

- the volume of water to which the supplier has added fluoride;
- the amount of fluoride the supplier has added, even if the amount is zero;
- the calculated fluoride concentration of the fluoridated water; and
- the fluoride concentration of the fluoridated water, measured by a prescribed test.

This clause replaces section 10 in the existing Regulation with minor amendments being made to improve the operational effect of the Regulation.

Reporting fluoridation information

Clause 23 requires public potable water suppliers that add fluoride to a public potable water supply to prepare a report each quarter. The report must include the number of samples taken over the quarter, the average measured fluoride concentration, the maximum fluoride concentration and the minimum fluoride concentration. The quarterly report must be in the approved form and provided to the chief executive within 30 business days after the end of each quarter.

If a local government decides not to add or ceases to add fluoride to the water supply during a quarter, a quarterly report is still required to be provided by the public potable water supplier to the chief executive for the relevant quarter.

This clause replaces section 11 in the existing Regulation with minor amendments being made to improve the operational effect of the Regulation.

Part 6 Miscellaneous

Supporting information for fluoridation notice

Section 13(4) of the Act requires that a fluoridation notice must state that a fluoridation decision has been made by the local government and the date that the public potable water supplier for the public potable water supply intends to add or cease adding fluoride to the water supply.

Clause 24 supports the fluoridation notice requirement under the Act by requiring a public potable water supplier to provide additional supporting information with the fluoridation notice, in the approved form. The supporting information ensures the chief executive can maintain accurate data of the water supplies fluoridated by water suppliers.

This clause replaces section 8 in the existing Regulation. The clause has been amended to clarify that it applies to a public potable water supplier that intends to provide a fluoridation notice to the chief executive about a public potable water supply under section 13(3) of the Act.

Prescribed entity—Act, s 73

Clause 25 prescribes that for the purposes of section 73 of the Act, NATA is an entity that may accredit, authorise or approve a laboratory to conduct analyses of samples, or samples of things, collected under section 40(3)(c) of the Act.

This clause replaces section 9 in the existing Regulation with minor amendments being made to improve the operational effect of the Regulation.

Forms

Clause 26 provides the chief executive with the power to approve forms under the Regulation. This clause replaces section 15 of the existing Regulation.

Part 7 Repeal

Repeal

Clause 27 repeals the *Water Fluoridation Regulation 2008*.

Schedule 1 Local government areas

Schedule 1 lists the relevant concentration of fluoride that should be maintained in the water supplies in each local government area. The listing of a local government area in a particular category in Schedule 1 of the Regulation does not mandate that the local government area or public potable water suppliers must add fluoride to their water supplies. However, public potable water suppliers that elect to add fluoride to their water supplies must fluoridate at the concentration prescribed for their local government area in Schedule 1 of the Regulation.

Schedule 2 Impurities affecting public health

Schedule 2 provides a table specifying the maximum impurity limits for the three prescribed fluoride compounds, which may be used under the Regulation. The figures in columns 2, 3 and 4 of the table assume a calculation rate based on a fluoride dose of 1mg/L and the assumed purity percentages for the fluoride compounds are for:

- fluorosilicic acid – 20% purity percentage;
- sodium fluoride – 97% purity percentage; and
- sodium fluorosilicate – 98% purity percentage.

Schedule 3 Dictionary

Schedule 3 defines relevant terms for the purposes of the Regulation.

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