# Purpose

The purpose of this standard is to provide a Wannon Water framework and guidance for the management of fluoridated drinking water supplies to reduce the risks to human health, the environment and the community, as far as reasonably practicable, and to ensure compliance with legislative obligations.

Fluoride can cause severe burns, eye irritation and serious health problems including fluorosis of the bones. Utilising Fluoride in its various forms presents different levels of risks, that we must manage effectively to prevent an adverse impact on our Strategic Direction and support our Zero Harm aspiration.

# Scope

This standard applies to any employee or contractor engaged in the design, construction, commissioning, approval, and operation of Wannon Water fluoride plants and all associated activities.

Fluoride is a subset of our Chemicals and Hazardous Materials, and this Standard should be considered in conjunction with the [**Chemicals and Hazardous Materials - Standard**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Chemicals%20and%20Hazardous%20Materials%20-%20Standard.docx?d=wfad67f316abd471babd13e9433d24d43&csf=1&web=1&e=9zUesP).

**Out of Scope:**

* Management of other chemicals.
* When a principal contractor has been granted formal possession of a site whilst carrying out contracted work, it is the responsibility of the principal contractor to comply with the relevant regulations and consult with our Engaging Officer to determine if their activities pose a risk to us (e.g. our employees working near contracting working on a fluoridation plant).
* Naturally fluoridated systems

# Standard requirements

| **Requirements** | **Responsibility[[1]](#footnote-2)** | **Accountability[[2]](#footnote-3)** |
| --- | --- | --- |
| **Process to Fluoridate** | | |
| When directed to fluoridate or electing to fluoridate a drinking water supply, a feasibility study must be conducted and the Department of Health (DoH) must be notified and approvals granted at all required stages from design to addition of fluoride to any water supply, as per the **Fluoride Management of Change (MoC) Checklist[[3]](#footnote-4)**. | BM Asset Creation  BM Operations | GM Assets & Service Delivery |
| The community must be informed of the decision to fluoridate the water supply following approval of the feasibility study as per the **Fluoride Management of Change (MoC) Checklist3 in consultation with or on behalf of the DoH**. | **BM Communications & Engagement** | GM Community & Corporate Services |
| The purchase, design, construction, commissioning and operation of fluoridation facilities and plant must consider and control all possible risks and comply with the Fluoride Code of Practice (CoP) for the fluoridation of drinking water supplies, supporting legislation; and where practicable Australian Standards or equivalent[[4]](#footnote-5) and industry best practice. | **Executive People & Resilience**  BM Asset Creation  BM Operations | GM Assets & Service Delivery |
| Fluoride dosing systems must be designed, operated and controlled to meet specifications and operating targets as specified by or agreed with the DoH | BM Asset Creation | GM Assets & Service Delivery |
| Any deviations to adherence to the Code of Practice must be declared to the DoH. | BM Asset Creation | GM Assets & Service Delivery |
| Documentation and information must be provided to DoH at all required stages from design through to decommissioning as required as per the **Fluoride Management of Change (MoC) Checklist3** (e.g. construction periodic progress reports, commissioning plans, notification of intent to commence fluoridation of the water supply). | BM Asset Creation | GM Assets & Service Delivery |
| Pre-commissioning and commissioning activities must be completed in accordance with required approvals and agreed documentation as per the **Fluoride Management of Change (MoC) Checklist3**. | **BM Asset Creation**  BM Operations  BM Maintenance  Operations Digital Platform Manager | GM Assets & Service Delivery |
| The newly constructed fluoridation plant must be made available to the DoH to conduct an audit within 12 months of operation to ensure any outstanding recommendations from the technical appraisal have been completed.  All issues identified in the 12-month audit must be actioned and reported back to the DoH. | BM Asset Creation | GM Assets & Service Delivery |
| **Operation and Maintenance** |  |  |
| Each fluoridation plant must operate as per individual site operating manuals, as designed, without major modification to equipment, fluoride chemical and/or dosing control. Any deviations outside of the parameters approved and set by the DoH or any maintenance and modification requiring significant plant shut down requires notification to the DoH as per the **Fluoride Management of Change (MoC) Checklist3**.  Any changes to plant or processes must be managed as per the **Management of Change Standard[[5]](#footnote-6)**. | BM Operations | GM Assets & Service Delivery |
| **General** |  |  |
| Fluoride plant management must form a part of the WW drinking water quality risk management plan. | BM Operations | GM Assets and Service Delivery |
| Only fluoride chemicals approved in the ADWG must be used to fluoridate a water supply. | BM Operations | GM Assets and Service Delivery |
| The supply, delivery, transfer and storage of the fluoride chemical must be managed as per the **Chemicals and Hazardous Materials Procedure,** the [**Fluoride Delivery Procedure**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Fluoride%20Delivery%20Procedure.DOCX?d=wbb23f19677fa4dbbb34e0bb174ae1406&csf=1&web=1&e=p57MlQ)  and supporting documents(e.g.,  Safe Work Instructions, Operation Manuals,  Emergency Information Books (EIBs)). | BM Operations | GM Assets and Service Delivery |
| Risks associated with using Fluoride must be identified before purchase or when making changes to stock levels or processes to use them. All possible exposure routes must be considered (e.g., Dust, fumes, ingestion, skin contact,  inhalation).  The hierarchy of control must be used to control the risks associated with the use of fluoride as per the **Hazard and Risk Management Standard**. | **Executive People & Resilience**  BM Operations | GM People & Business Services Department |
| Fluoride and the Fluoridation Plant must only be handled and used/worked on by persons who are suitably trained and competent. | **Executive People & Resilience**  BM Operations | GM Assets & Service Delivery |
| PPE suitable for work being performed when using fluoride must be identified and provided. It must be used correctly (e.g., fitted), and maintained (e.g., cleaned and stored) – according to the standards described in Wannon Water procedures or equivalent systems. | BM Operations | GM Assets & Service Delivery |
| As per the [**Plant and Equipment - Standard**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Plant%20and%20Equipment%20-%20Standard.docx?d=w83ee667cacd94de2bee30e89e8a21fe9&csf=1&web=1&e=c97axN): Plant, equipment and/or fleet purchased, hired/leased, built, installed, or modified must:   * Be assessed for any risks associated with all areas of its use (e.g., operation, maintenance, cleaning, transport, disposal and emergency or breakdown scenarios). * Comply with Australian Standards**4** or be assessed by a qualified[[6]](#footnote-7) person to ensure regulatory and the Code of Practice   requirements are met, it’s fit for use and its risks are controlled to our accepted levels.  **Note:** Risks must be reviewed when making changes to it/how it will be used/when it is involved in an incident. | **Executive People & Resilience**  All BM | GM People & Business Services |
| Plant replacement/decommissioning and recommissioning must be conducted as per the [**Plant and Equipment - Standard**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Plant%20and%20Equipment%20-%20Standard.docx?d=w83ee667cacd94de2bee30e89e8a21fe9&csf=1&web=1&e=c97axN)and CoP in consultation with the DoH.  Where the addition of Fluoride has ceased for more than 30 consecutive days the Fluoride Plant must be recommissioned. | **BM Operations**  BM Asset Creation | GM Assets and Service Delivery |
| Spillage prevention/containment, leak protection devices and fire protection systems required by legislation or to manage risks to Wannon Water accepted levels must be installed/present where chemicals are stored and used (e.g., Bulk chemical bunding, process control/shutdown, fire hose reels, spill kits, ventilation of buildings and fluoride chemical storages). | **Executive People and Resilience**  BM Asset Creation | GM People & Business Services |
| Chemical infrastructure and equipment must be inspected/maintained in accordance with the manufacturer’s requirements/specifications and by a suitably qualified**5** person (e.g., service, repair, calibration), with records kept. Fluoride infrastructure must be identifiable/distinguished as such e.g. Pipework is labelled and colour coded purple.  Variations to prescribed activities must be assessed/approved by a suitably qualified5 person to ensure they meet regulatory requirements and do not increase risks above Wannon Water accepted levels. | **Executive People & Resilience**  All BM | GM Assets and Service Delivery |
| Fluoride contaminated waste must be managed and disposed of as per the [**Chemicals and Hazardous Waste Management Procedure**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Chemicals%20and%20Hazardous%20Waste%20Management%20Procedure.docx?d=w98685ba51d11478f92666b8f71cd7926&csf=1&web=1&e=UDljaj). | BM Operations | GM Assets & Service Delivery |
| Spills, Incidents and emergency events involving Fluoride must be managed as per individual site Emergency Information Books (EIB’s) as per individual site Emergency Information Books (EIB’s), Operating manuals, the [**Chemicals and Hazardous Waste Management Procedure**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Chemicals%20and%20Hazardous%20Waste%20Management%20Procedure.docx?d=w98685ba51d11478f92666b8f71cd7926&csf=1&web=1&e=UDljaj)  and SDS’s. | BM Operations | GM Assets & Service Delivery |
| Raise a **Hazard Report** where you have a concern that we are not effectively controlling the use (e.g. receival, transfer/transport, disposal) and storage of fluoride which could result in potential harm to health or may impact the surrounding environment or community. | **Executive People and Resilience**  BM Operations  BM Maintenance | GM People & Business Services |
| Raise an **Incident Report** for any event involving Fluoride. | **Executive People and Resilience**  BM Operations  BM Maintenance | GM People & Business Services |
| Confirmed or suspected notifiable incidents involving fluoride must be investigated, reported and managed in accordance with the [**Incident Reporting and Response Procedure**](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Incident%20Reporting%20and%20Response%20Procedure.DOCX?d=w1d356679cafd4fecab53c8d7284efca8&csf=1&web=1&e=FvYlFi) to ensure legislative requirements are met (e.g., deviations to the Code of Practice, WorkSafe notifiable event). | **Executive People and Resilience**  BM Operations  BM Maintenance | GM People & Business Services |

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# Training, Competence, and Awareness

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| **Standards** | **Responsibility1** | **Accountability2** |
| All managers with Responsibilities & Accountabilities within this document must be made aware of this standard. | Executive People & Resilience | GM People & Business Services |

# Monitoring

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| --- | --- | --- |
| **Standards** | **Responsibility1** | **Accountability2** |
| Compliance with and effectiveness of this standard  must be verified at least every four years by including periodic audits in the **Audit Program**. | Executive People & Resilience | GM People & Business Services |
| All monitoring and reporting requirements must be complied with in accordance with the Fluoride Code of Practice (CoP) for the fluoridation of drinking water supplies, all relevant legislation, the ADWG and the DoH as per the **Fluoride Management o**f **Change (MoC) Checklist3**. | Executive People & Resilience | GM People & Business Services |
| All records required by this standard must be maintained in our records management systems –(e.g., Maximo, CM,  RiskWare, etc.). | Information Services Manager | Chief Information Officer |

# Definitions

| **Term** | **Means** |
| --- | --- |
| ADWG | Australian Drinking Water Guidelines |
| BM/GM | Branch Manager/General Manager |
| CM | Content Manager |
| CoP | Code of Practice (Fluoride) |
| DoH | Department of Health |
| EIB | Emergency Information Book |
| FSA | Hydrofluorosilicic Acid |
| HAZOP | Hazard and Operability Study |
| Maximo | Maximo is enterprise asset management software for asset monitoring, management, predictive maintenance and reliability planning. |
| NaF | Sodium Fluoride |
| RiskWare | Riskware is enterprise risk management software for the management of risks, hazards, incidents, audits and actions. |
| SDS | Safety Data Sheet |

# Governance

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| **Parent policy/standard** | [Zero Harm Policy](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Zero%20Harm%20Policy.DOCX?d=w28a88858bc424da988df5d4ce744b530&csf=1&web=1&e=wf8HJM) |
| Associated procedures/standards | * [Chemicals and Hazardous Materials - Standard](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Chemicals%20and%20Hazardous%20Materials%20-%20Standard.docx?d=wfad67f316abd471babd13e9433d24d43&csf=1&web=1&e=pT0dOP) * [Chemicals and Hazardous Waste Management Procedure](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Chemicals%20and%20Hazardous%20Waste%20Management%20Procedure.docx?d=w98685ba51d11478f92666b8f71cd7926&csf=1&web=1&e=XYdni5) * [Fluoride Delivery Procedure](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Fluoride%20Delivery%20Procedure.DOCX?d=wbb23f19677fa4dbbb34e0bb174ae1406&csf=1&web=1&e=3yxxZ2) * Fluoride Management of Change (MoC) Checklist3 * [Contractor Management - Standard](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Contractor%20Management%20-%20Standard.docx?d=wed5c05dff7a542baa9ae1fc891e99a72&csf=1&web=1&e=8BuTBm) * Management of Change Standard5 * [Plant and Equipment - Standard](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Plant%20and%20Equipment%20-%20Standard.docx?d=w83ee667cacd94de2bee30e89e8a21fe9&csf=1&web=1&e=fiTUFr) * Project Management Framework * [Waste Management - Standard](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Waste%20Management%20-%20Standard.docx?d=wc7be9bd2c864453ba4de37a9da8f30ea&csf=1&web=1&e=jZdV6n) * Site Operations Manuals * Emergency Information Books (EIB’s) * [Incident Reporting and Response Procedure](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Incident%20Reporting%20and%20Response%20Procedure.DOCX?d=w1d356679cafd4fecab53c8d7284efca8&csf=1&web=1&e=WxAykw) * [Hazard Reporting Procedure](https://wannonwater.sharepoint.com/:w:/r/sites/cdms/Published%20Documents/Hazard%20Reporting%20Procedure.DOCX?d=w904e88d68b3b409ab8920915600f1c91&csf=1&web=1&e=JCbPM4) |
| **Legislation mandating compliance** | * Health (Fluoridation) Act 1973 * Code of Practice for the fluoridation of drinking water supplies (second edition, 2018) (Code of practice) * Safe Drinking Water Act 2003 and Regulations 2015 * Environmental Protection Act 2017 and Regulations 2021 * Occupational Health and Safety Act 2004 and Regulations 2017 * Dangerous Goods Act 1985 * Dangerous Goods (Storage and Handling) Regulations 2022 * Building Act 1993 * Planning and Environment Act 1987 * Public Health and Wellbeing Act 2008 * Australian Drinking Water Guidelines 6 2011, Version 3.8 Updated September 2022 |
| **Approval** | Executive Committee |
| **Owner** | GM People & Business Services |
| **Content enquiries** | Manager Operational Monitoring & Reporting  Safety Field Officer  Environmental Risk Compliance Officer |

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# Document version history

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| Version | Changes made to document |
| 1 | New document created as part of the new IMS Standard Framework |

1. The nominated person who is responsible for ensuring there is the system in place to meet a requirement or delivering a task to an acceptable level of performance. [↑](#footnote-ref-2)
2. The Executive are collectively accountable for the standard. The individual GM is the nominated person who will approve any capital/operating expense requests (within the Instrument of Delegation) and any material changes to current work practices to meet requirements of the standard. [↑](#footnote-ref-3)
3. The **Fluoride Management of Change (MoC) Checklist** is still under development. Please liaise with the Safety Field Officer or the Environmental Risk Compliance Officer in the interim. [↑](#footnote-ref-4)
4. Where equipment is manufactured internationally – the manufacturer or supplier must be consulted for assurance that the item complies with relevant Australian Standards. [↑](#footnote-ref-5)
5. The **Management of Change Standard** is still under development. Please liaise with the Manager Safety, Risk & Resilience in the interim. [↑](#footnote-ref-6)
6. Could be a Wannon Water employee with the required training/experience, manufacturer, supplier, qualified technical expert where Wannon Water doesn’t have the required knowledge to assess suitability or regulatory implications. [↑](#footnote-ref-7)