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| Water Unit regulator planMarch 2018–June 2019 |
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# Introduction

## Purpose of document

The Department of Health and Human Services (the department) administers numerous Acts and regulations aimed at promoting health and wellbeing, and protecting the population of Victoria including vulnerable clients. It has 11 internal business units and three statutory bodies that are recognised by the Department of Treasury and Finance as regulators of business and not-for-profit organisations.

An individual regulatory plan has been developed for each of the 11 internal business unit regulators. These documents are developed in line with the conceptual framework outlined in the department’s [*Better regulatory practice framework*](https://www.dhhs.vic.gov.au/better-regulatory-practice-framework) <<https://www.dhhs.vic.gov.au/better-regulatory-practice-framework>>.

This is the first consolidated Regulator Plan that the Water Unit has developed and published. If you have any feedback on the plan, please email the Water Unit <water@dhhs.vic.gov.au>.

This plan will be updated:

* every two years – in line with the requirement for Ministers to develop and re-issue Ministerial Statement of Expectations every two years; or
* where key legislative changes are made that will impact on regulatory functions and the currency of the Regulator Plans.

## Document content

This regulator plan relates to the Water Unit. The structure of the regulator plan includes:

* outcomes
* demonstrating impacts
* risk assessment and risk management strategy
* stakeholder engagement
* overview of approach
* key stakeholders including co-regulators
	+ key activities.

## Principles

In order to achieve the regulatory outcomes, regulators undertake their regulatory roles informed by better regulatory practice principles. Consistent with better regulatory practice approaches interstate and internationally, the Water Unit seeks to apply the following principles:

Table 1: Regulatory practice principles

| Principle | Commitment |
| --- | --- |
| **Collaborative** | Where the various departmental regulatory regimes, and those of other agencies, intersect, the regulator will work together to maximise effectiveness and minimise regulatory burden. The regulator will also cooperate and engage with internal and external stakeholders, including our interstate counterparts and those representing various client groups in the community. |
| **Consistent** | The regulator will work to provide a consistent experience for key stakeholders and the community. Regulatory responses will be predictable and where possible standardised, following clear processes and delivering consistent results. This will ensure that individuals/organisations are treated fairly, and that the regulators are objective in their decision-making. |
| **Efficient** | The regulator will work in a way that aims to most efficiently achieve outcomes, considering the direct and indirect effects across society. This includes minimising the administrative burden and any adverse impact of regulatory actions to a level that is justifiable to achieve the community’s outcomes. |
| **Intelligence-led** | The regulator will analyse incoming intelligence and data in order to allow them to be responsive and accurate when assessing risk and undertaking compliance activities. |
| **Outcomes-focussed** | Processes and decision-making will be driven by outcomes, and the regulator will be effective in achieving their regulatory objectives. Progress against outcomes will be measured to ensure continuous improvement. |
| **Proportionate** | The work undertaken by regulators should be proportionate to the risk being addressed. The principle of proportionality should guide regulators decisions in relation to the level of resources assigned to manage a particular risk, the regulatory tools used and enforcement activities. |
| **Risk-based** | The regulator will be proactive and responsive in identifying, assessing and responding to risk, prioritising and targeting resources toward specific groups or behaviours that pose the greatest risk to the regulatory outcomes. |
| **Transparent** | The regulator will be open in their decision-making and processes, recording decisions appropriately, including the justification for decisions. The regulator will aim to assist regulated parties understand the decision-making processes, areas of focus and performance. The regulator will follow standard reporting requirements, enabling the department to monitor and oversee the performance of its regulators. |

# Regulator’s context

This section outlines the context that the regulator operates within, including its regulatory framework and a brief overview of its activities.

## Regulatory frameworks

The Water Unit is responsible for the administration of two regulatory frameworks. These are:

* the safe drinking water regulatory framework, and
	+ the aquatic facilities regulatory framework.

The commonality of these frameworks is the adoption of preventive risk management principles with the aim to protect Victorians from water-borne illnesses caused by chemical, microbial and radiological hazards in water.

### Safe drinking water regulatory framework

Victoria’s drinking water is managed under a comprehensive regulatory framework. This safe drinking water regulatory framework is concerned principally with water quality and aims to ensure a consistent, reliable supply of safe, good-quality drinking water to Victorians. This framework commenced on 1 July 2004 and consists of:

* the *Safe Drinking Water Act 2003*, and
	+ the Safe Drinking Water Regulations 2015.

Safe drinking water legislation requires water agencies to:

* apply a catchment-to-tap risk management approach
* ensure drinking water quality standards are to be met
	+ disclose certain information to the department and the public.

Safe drinking water legislation requires the department to:

* monitor and enforce compliance
* report on the performance of water agencies
* investigate and report on any aspect of drinking water quality in Victoria, and
	+ promote industry and public awareness and understanding of drinking water quality issues.

The safe drinking water regulatory framework is consistent with the risk management approach in the Australian drinking water guidelines and supports the *Health (Fluoridation) Act 1973*.

The Safe Drinking Water Act identifies water suppliers and water storage managers, all of which are state-owned entities referred to collectively as water agencies, who supply water to approximately 95% of Victoria. Water agency customers include residential, commercial and industrial premises, depending on land uses in the areas served. The availability of safe, good quality drinking water is important for all Victorian communities, including businesses where the quality of water has direct commercial benefits.

As a preventive measure to assure the safety of drinking water supplies, water agencies must prepare, implement and review risk management plans; these are subjected to independent audit by auditors at periods declared by the department. Water agencies are required under safe drinking water legislation to notify the Water Unit when drinking water has not met specified quality standards and when water may pose a risk to health or when water has caused widespread complaints.

Through administration of the Safe Drinking Water Act, the Water Unit ensures that Victorian water agencies comply with their legislative obligations. Ensuring compliance is paramount in maintaining community confidence in drinking water supplies and protecting the public from hazards in water.

Public drinking water supplies are a cheaper, healthier option than many alternative beverages (such as sugary drinks) and, where available, the delivery of fluoridated drinking water provides associated health benefits, helping to reduce rates of preventable oral disease. The Health (Fluoridation) Act provides for the Secretary to direct and approve water agencies to add fluoride to drinking water supplies at safe and optimal concentrations. The ongoing operation of water fluoridation plants is managed through the provisions of the Safe Drinking Water Act.

#### Groups we rely on to undertake our regulatory function

The Water Unit works with several co-regulators who have complementary objectives or functions, or regulate the same entities. This cooperative activity can involve sharing information, undertaking joint investigations, and delivering education programs to regulated entities.

Independent auditors are approved by the Water Unit to undertake audits of water agencies’ risk management plans. The audit is a systematic and independent examination of a risk management plan to determine whether the water agency has complied with the obligations imposed by the Safe Drinking Water Act to prepare, implement and review risk management plans.

The Essential Services Commission reviews water pricing tariffs as proposed by applicable water agencies. The Water Unit provides guidance to the Essential Services Commission and water agencies in relation to regulatory requirements which may impact upon proposed water pricing.

The Department of Environment, Land, Water and Planning administers the *Water Act 1989* and the *Water Industry Act 1994*, regulating the management of water in Victoria, and providing for reform of the water industry respectively. The Water Unit meets regularly with the Department of Environment, Land, Water and Planning as many incidents and issues relating to the supply of water can impact upon the safety and quality of drinking water.

### Aquatic facilities regulatory framework

Aquatic facilities can be contaminated with harmful microorganisms, including bacteria, viruses and parasites, which can cause serious illness in people. Aquatic facilities are not addressed specifically in Victoria’s *Public Health and Wellbeing Act 2008*. However, the Act provides for regulations to be made in relation to preventing or limiting the spread of infectious disease. The Public Health and Wellbeing Regulations 2009 contain a framework that places specific maintenance, testing and record-keeping obligations on the responsible person for an aquatic facility that is open for use. These provisions aim to reduce the public health risks associated with the use of public aquatic facilities, primarily by mitigating the risk that microorganisms introduced in the water will survive or grow.

#### Groups we rely on to undertake our regulatory function

The Water Unit relies on Local Government Environmental Health Officers to administer the legislation and undertake inspections of aquatic facilities in accordance with the regulations. Local government officers liaise directly with aquatic facility managers to identify and oversee corrective actions including control measures (e.g. super-chlorination of pools) when outbreaks of illness are linked to aquatic facilities.

## Regulatory activities

### Safe drinking water

The Water Unit undertakes the following key regulatory activities.

#### Monitoring compliance

Compliance is monitored through a number of means. The legislation places significant requirements on water agencies to self-report compliance with the drinking water quality standards and where water supplied may pose a risk to health or cause widespread public complaint. The Water Unit meets regularly on an individual basis with all water agencies to discuss regulatory obligations, notifications made to the department, and areas of opportunity for continuous improvement. Liaison visits regularly include site inspections, and investigation in response to notifications. Compliance with the requirements for risk management plans are monitored biennially through audits undertaken by approved auditors under the Safe Drinking Water Act.

#### Enforcement and assisting compliance

Understanding legislative requirements is key to compliance and this is supported in a number of ways. Legislative requirements are interpreted and translated into written guidance, assisting understanding and improving compliance. The Water Unit hosts regular forums, bringing together all water agencies, to discuss regulatory issues, interpretation and feedback on observations from monitoring activities. Guidance and support are provided to water agency staff at all levels to maximise compliance, resulting in effective preventive risk management practices. Support is provided via written guidance, site visits, regulatory forums, written and verbal communication and development of professional relationships.

Non-compliance with legislation is addressed through a range of regulatory tools by departmental officers authorised under legislation, with the goal of increasing compliance. Enforcement action is undertaken in a graduated and proportionate manner, commensurate to the (actual or potential) risk.

#### Re**s**ponse

Water that may pose a risk to health or cause widespread public complaint is required to be reported immediately to the department. The Water Unit operates an on-call emergency response service, both during and outside of business hours, to respond to these events. The Water Unit responds to protect public health through oversight and, where necessary, direction of the activities being undertaken by the water agency in response to the event. Following these events, the Water Unit attends incident debriefs with the water agency, to ensure that any opportunities for improvement are identified and implemented to improve preparedness, infrastructure, risk management practices and plans.

Reporting: The Water Unit is required to report on the performance of water agencies in relation to requirements of the Safe Drinking Water Act. An annual report from the Secretary to the Department of Health and Human Services to the Minister for Health provides a statewide perspective of drinking water quality and the activities of the department under the Safe Drinking Water Act. This annual report is tabled in Parliament by the Minister.

#### Promotion

The Safe Drinking Water Act requires that the Water Unit promotes industry and public awareness and understanding of drinking water quality issues. This is done through verbal and written advice and guidance, along with presentations to stakeholders regarding best-practice drinking water risk management practices. The Water Unit supports research to inform this advice and develops guidance to make the findings accessible and practical for water agencies to implement, where relevant.

### Aquatic facilities

#### Supporting compliance

The Water Unit provides guidance to aquatic facility managers, including pool and spa operators, on maintaining water quality standards to minimise the occurrence of water-borne illness associated with public pools. This guidance includes protocols for managing faecal incidents. The Water Unit also provides guidance to local government in the form of checklists to enable local government environmental health officers to work closely with aquatic facilities to facilitate compliance with the Public Health and Wellbeing Regulations 2009.

#### Education

The Water Unit has developed a ‘Healthy Swimming’ education campaign and works with aquatic facilities and local government to promote hygienic practices at public pools and spas.

## Complementary and non-regulatory activities

On a daily basis, the Water Unit provides advice, information and resources to the water industry, other departments and regulators, local government, consultants and the public who seek technical advice about water quality risk and management. This includes providing advice on: reticulated drinking water supplies; private drinking water supplies; aquatic facilities and recreational waters; harmful algal blooms; water fluoridation; and recycled water..

Other legislation that influences the work of the Water Unit includes the following Acts:

* the *Emergency Management Act 2010*
	+ the *Environment Protection Act 1970*.

The *Emergency Management Manual Victoria*[[1]](#footnote-1) states that the department is the control agency for drinking water contamination. The department is the support agency to the Department of Environment, Land, Water and Planning for blue-green algae issues.

In guidelines produced under the Environment Protection Act, the Water Unit is responsible for endorsing Class A recycled water schemes to ensure that they reliably meet specified microbial water quality standards.

The Water Unit works with other government agencies and regulators to strengthen state policy and practices to minimise water-borne illness. Through Victoria’s Chief Health Officer as a member of the Council of National Health and Medical Research Council, the Water Unit contributes to proposed changes to the *Australian drinking water guidelines*. The Water Unit is also a member of the Environmental Health Standing Committee’s Water Quality Working Group, providing technical advice and direction relating to national water safety and quality issues. The contribution of the Water Unit to these governance bodies ensure that national standards and guidelines are based upon the best available evidence at the time, reflective of current science.

The Water Unit responds to enquiries from members of the public and other stakeholders regarding water and health-related issues on a regular basis, providing advice and other forms of risk communication.

# Defining outcomes

This section includes a summary of the outcomes to which the Water Unit contributes.

Table 2: Defining outcomes

| Regulatory regime | Outcomes |
| --- | --- |
| **Safe drinking water framework** | 1. Continued provision of safe drinking water by water agencies through effective risk management. This aims to prevent the likelihood of illness occurring that is associated with the quality of Victoria’s reticulated drinking water supply.
2. Improved oral health outcomes amongst consumers of Victoria’s drinking water supplies through providing fluoridated water to Victorian communities.
3. Improved health and wellbeing of Victorians through promoting awareness and understanding of issues affecting the safety and aesthetics of drinking water.
 |
| **Public aquatic facilities** | 1. Improved water quality at aquatic facilities (swimming pools and spas) to reduce the incidence of illness amongst patrons. This is achieved through the provision of advice to local government, aquatic facility operators and patrons.
 |

# Risk overview

This section includes a risk assessment and risk management strategy which identifies and prioritises a small number of key risks to the achievement of stated regulatory outcomes. The Water Unit recognises that this is not an exhaustive list of risks.

## Identified risks

### Safe drinking water framework

1. Inadequate identification, assessment and management by a water agency of current and emerging risks, including pathogenic microorganisms, chemicals and radiological substances (cause), which results in the consumption of contaminated drinking water (event), leading to the increased likelihood of water-borne illness (harm).
2. Inadequate fluoridation of drinking water supplies (cause), resulting in the reduced consumption of fluoridated drinking water (event), leading to an increased likelihood of oral health disease in the community (harm).
3. Lack of public confidence in reticulated drinking water supplies (cause), resulting in either the consumption of unsafe water from an alternative source or preferential consumption of sugar-sweetened beverages (event), resulting in:
	* + - * the increased likelihood of water-borne illness and non-communicable disease; or
				* increased likelihood of oral health disease in the community (harm).

### Aquatic facilities

1. Inadequate response by an aquatic facility to faecal incidents (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).
2. Inadequate controls or controls that are ineffective in managing pathogenic microorganisms at aquatic facilities (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).
3. Inadequate guidance provided by the department and local government to aquatic facilities on how to maintain water quality standards and manage pathogenic microorganisms (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).

## Assessing and managing key risks – safe drinking water

The Water Unit assesses and responds to risk.

When events occur where a potential risk may be realised, the Water Unit assesses the risk in accordance with the National Health and Medical Research Council’s *Australian drinking water guidelines*. A copy of this risk matrix is at Appendix 1. These guidelines are the authoritative reference on managing risks to drinking water, and include a risk matrix which has been adapted from AS/NZS 4360:2004 Risk Management.

### Safe drinking water – risk 1

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| **Possible** | **Major** | **Very high** |

**Inadequate identification, assessment and management by a water agency of current and emerging risks including pathogenic microorganisms, chemicals and radiological substances which results in the consumption of contaminated drinking water, leading to the increased likelihood of water-borne illness**.

#### Extent of the risk

The safe drinking water regulatory framework is in place to require water agencies to manage risks to water. Management of risk requires an ongoing commitment by water agencies with oversight from the Water Unit. Issues relating to drinking water quality vary in scale from minor through to potentially severe. Although rare, water-borne illness arising from unsafe drinking water has the potential to cause serious illness and death.

Management of risks to drinking water relies on water agencies ensuring risks are identified and appropriately managed; including that they have sufficient capability, knowledge and trained and skilled staff, and that a preventive risk management approach is adopted in decision making at all levels.

#### Ongoing controls

The Water Unit implements the following controls to reduce risk:

* requiring audits of water agency risk management plans in accordance with the Safe Drinking Water Act
* liaison meetings and regular engagement with the water agencies
* responding to notifications made to the department in accordance with the Safe Drinking Water Act
* providing guidance to water agencies regarding their legal obligations and operational activities.

### Safe drinking water – risk 2

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| **Possible** | **Moderate** | **High** |

**Inadequate fluoridation of drinking water supplies (cause), resulting in the reduced consumption of fluoridated drinking water (event), leading to an increased likelihood of oral health disease in the community (harm).**

#### Extent of the risk

Poor oral health is the single largest cause of preventable admissions to hospital for children under 10 years of age and the third largest cause for all ages.

Water fluoridation significantly reduces tooth decay in people of all ages. It reduces tooth decay by 26–44 per cent in children.

90 per cent of Victoria’s tap water contains fluoride, which benefits the Victorian communities’ dental health. It is expected that the fluoride plants operate effectively to deliver the optimal fluoride concentration which helps reduce tooth decay.

Management of water fluoridation relies on water agencies to effectively operate and maintain plant and equipment to minimise disruptions of the dosing equipment and ensure the fluoride dose is effective to achieve the oral health benefit.

#### Ongoing controls

The Water Unit implements the following controls to reduce risk:

* requiring audits of water agency risk management plans in accordance with the Safe Drinking Water Act
* water Agency reporting fluoride plant outages to the Water Unit
* water agency published annual reports on drinking water quality associated with fluoride dosing as per the Safe Drinking Water Act
* revision of the *Code of practice for fluoridation of drinking water supplies*, applying to water agencies to include focus on achieving reliable and optimal fluoride dosing.

### Safe drinking water – risk 3

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| Unlikely | Major | High |

**Lack of public confidence in reticulated drinking water supplies (cause), resulting in either the consumption of unsafe water from an alternative source or preferential consumption of sugar-sweetened beverages (event), resulting in the increased likelihood of:**

* **water-borne illness**
* **non-communicable disease,**
* **oral health disease in the community (harm).**

#### Extent of the risk

Consumer confidence in the safety of reticulated drinking water is essential to mitigate adverse health outcomes associated with consumers’ decisions to choose alternatives such as sugary drinks. The consumption of sugary drinks is associated with weight gain and increased risk of other adverse health effects such as tooth decay, high blood pressure, type 2 diabetes and cardiovascular disease. Frequent consumption of sugar is the main dietary cause of tooth decay. The *Victorian Population Health Survey 2014: Modifiable risk factors contributing to chronic disease in Victoria* reported that a total of 11.2 per cent of adult Victorians drank sugar-sweetened soft drinks daily. For children aged two to 18 years, over one-third (35 per cent) drank sugar-sweetened drinks in the 24 hours preceding the survey.

A variety of factors can affect confidence in reticulated water from the experience of recurrent aesthetic quality issues to marketing activities of alternative water source choices as of higher quality or providing benefits to the Victorian community.

#### Ongoing controls

The Water Unit implements the following controls to reduce risk:

* providing the Victorian community with appropriate information and advice when the department is contacted, and through the department’s annual report
* supporting water agencies to prioritise and deliver water quality improvements – for example through improved water treatment facilities
	+ the provisions of the Safe Drinking Water Act requiring water agencies to publish annual reports and make results in relation to monitoring water quality publicly available

### Aquatic facilities – risk 1

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| **Likely** | **Moderate** | **High** |

**Inadequate response by an aquatic facility to faecal incidents (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).**

#### Extent of the risk

Multiple studies in Australia and overseas have identified unaddressed faecal incidents in swimming pools as a major cause of aquatic-facility related outbreaks of cryptosporidiosis.

Actions to reduce risk focus on:

* young children (especially those not yet toilet trained) and incontinent patrons
* parents of young children who have not been educated on appropriate pool hygiene behaviours
* aquatic facility staff who have not received adequate training in faecal incident response
* aquatic facilities that do not have adequate hygiene facilities or faecal incident response policies in place.

#### Ongoing controls

The following controls have been implemented to reduce risk:

* The Water Unit has developed a ‘Healthy Swimming’ education campaign, accessible in print, web and multimedia, targeting aquatic facility patrons (particularly children and parents). The information, which addresses hygienic behaviours before and during swimming, has been tailored to be more relevant to the target audience and translated into languages other than English.
* The Water Unit has published guidance for aquatic facility managers regarding their response to faecal incidents at their facilities.
* Local government undertake inspections of aquatic facilities, and follow up enforcement action such as improvement or prohibition notices where aquatic facilities are found to be non-compliant with regulatory requirements.

### Aquatic facilities – risk 2

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| Almost Certain | Moderate | Very High |

**Inadequate controls or malfunction controls to manage pathogenic microorganisms at aquatic facilities (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).**

#### Extent of the risk

The risk posed by most potentially waterborne pathogens (such as Campylobacter, Giardia and norovirus) in aquatic facilities can generally be managed by routine disinfection in combination with ongoing filtration, maintenance and effective faecal incident response (the multi-barrier approach). The failure of one or more of these controls can significantly increase the risk that patrons of aquatic facility are exposed to water-borne illness.

#### Ongoing controls

The following controls are pivotal to reducing risk:

* + local government undertake inspections of aquatic facilities, and follow up enforcement action such as improvement or prohibition notices where aquatic facilities are found to be non-compliant with regulatory requirements.

### Aquatic facilities – risk 3

| Likelihood | Consequence | Rating |
| --- | --- | --- |
| **Possible** | **Moderate** | **High** |

**Inadequate guidance provided to aquatic facilities on how to maintain water quality standards and manage pathogenic microorganisms (cause), resulting in patron exposure to contaminated water (event) leading to the increased likelihood of water-borne illness (harm).**

#### Extent of the risk

Many aquatic facilities rely on guidance provided by the department to inform their approach to managing water quality, microbial risk and their response to incidents. As treatment technologies and water quality management approaches evolve, it is critical for the department’s guidance to be evidence based and reflect current industry best practice.

#### Ongoing controls

The Water Unit implements the following to reduce this risk:

* Provision of written and verbal guidance to local government and aquatic facility operators, including the publication of a revised *Pool Operators’ Handbook* guidance document. This includes updated information regarding water quality risk management approach.

# Regulatory tools

Figure 1 illustrates the full suite of enforcement tools available to the Water Unit. The aim of all enforcement action undertaken is to increase compliance to achieve desired regulatory outcomes.

Figure 1: Enforcement tools available to the Water Unit to achieve their regulatory outcomes



# Measuring performance

This section sets out our understanding of how the activities that we undertake, as targeted by the identification and assessment of risks, contribute to achieving the desired outcomes for the Victorian community.

## Our contribution story

The Water Unit continually works to protect the Victorian community from water-borne illnesses and improve health outcomes. This involves working with the National Health Medical and Research Council, Environmental Health Standing Committee, water agencies, the Department of Environment, Land, Water and Planning, the Environment Protection Authority Victoria, local government, industry associations, the health sector, researchers, and the public. Specifically the Water Unit:

* Protects the public from water-borne illnesses through the effective oversight of the safe drinking water regulatory framework to provide safe drinking water supplies to Victorians. This outcome is reported in the department’s annual report on drinking water quality.
* Reduces tooth decay amongst Victorians having provided access to fluoridated drinking water supplies to 90 per cent of the Victorian population. Recent studies in Victoria have shown that young children living in areas without water fluoridation had rates of admission to hospital for dental treatment that are 59 per cent higher compared to children living in fluoridated areas after controlling for access to dental health professionals and socioeconomic status.
* Reduces water-borne illnesses associated with aquatic facilities. A recent study in Victoria showed a significant association between recent swimming in public swimming pools and illness with the water-borne parasite Cryptosporidium. Effective regulation of water quality and risk management in aquatic facilities is essential to reduce the incidence of water-borne illness linked to these facilities.

## Further evidence we plan to gather to strengthen our contribution story

### Direct indicators

In this section, we have outlined a small number of indicators that can be used to guide our activity and evaluate the effectiveness of our regulatory activities. To the extent possible, our indicators demonstrate our contributions to the outcomes that we are trying to achieve, rather than simply the activities that we are undertaking.

Table 3 on the following page sets out the measures that we use to gauge success in achieving our outcomes.

### Safe drinking water regulatory framework

Table 3: Measures used to indicate success against outcomes – safe drinking water

| Indicator | Current baseline | Target | 2015–16 actual | 2016–17 actual | 2017–18 actual | Source of information |
| --- | --- | --- | --- | --- | --- | --- |
| Per cent of risk management plans compliant with Safe Drinking Water Act and Safe Drinking Water Regulations  | 100% | 100% | 100% | Not applicable |  | Audit certificates |
| Proportion of the population with reticulated drinking water that complies with the *E. coli* water quality standard.  | 100% | 100% | 99% | 98% |  | Department annual report on drinking water quality |
| The proportion of water fluoridation plants meeting the annual average optimal dose rate. | To be determined | 100% | - | - |  | Water agency annual reports on drinking water quality |

### Aquatic facilities regulatory framework

Table 4: Measures used to indicate success against outcomes – aquatic facilities

| Indicator | Current baseline | Target | 2015–16 actual | 2016–17 actual | 2017–18 actual | Source of information |
| --- | --- | --- | --- | --- | --- | --- |
| Median response time (hours) from cryptosporidiosis outbreak notification (to local government) to the commencement of super-chlorination at the affected aquatic facility. | To be determined | 24 | N/A | N/A | N/A | Data collected by the Water Unit during outbreak response. |
| Percentage of surveyed aquatic facilities displaying the minimum recommended “Healthy Swimming” education materials.  | To be determined | 100 | N/A | N/A | N/A | Data collected by local government officers during outbreak response. |
| Percentage of surveyed aquatic facilities that have a faecal incident policy in place conforming to the department’s Faecal Incident Response - Recommendations for Aquatic Facilities. | To be determined | 100 | N/A | N/A | N/A | Data collected by local government officers during outbreak response. |

The Water Unit notes that current regulatory requirements relating to aquatic facilities in the Public Health and Wellbeing Regulations 2009 have limited influence on the control of outbreaks of cryptosporidiosis. The Water Unit will endeavour to bolster controls through the upcoming review of the Public Health and Wellbeing Regulations 2009.

# Stakeholder engagement

## Ongoing communications

The Water Unit undertakes day-to-day operational communication regarding regulatory activities. This includes:

### Supporting the compliance of water agencies

Ensuring water agencies are aware of regulatory obligations and encouraging them to comply with legislation. Ensuring clarity regarding the Water Unit’s expectations of water agencies, through daily email and telephone communication.

### Informing the public

Issuing public notifications where there are potential public health risks to ensure that Victorians can make informed decisions. Providing advice when requested. Promoting the health benefits of choosing tap water over less safe, less healthy options.

### Liaising with local government (weekly to monthly over summer)

With regards to public aquatic facilities, supporting local government in the interpretation and implementation of the legislation and notifying local government when corrective actions are required (e.g. following identification of an outbreak). Communication is either direct or through consultation with Divisional Public Health Officers. Communication methods include published guidance documents, web based information, telephone calls and emails.

## Planned communication activities

The Water Unit has a communications strategy to ensure that liaison with stakeholders remains effective and efficient.

Elements of the communications strategy include the objectives, the communication approach, the intended audience for specific communications, communication method, and planned timings relating to communication activities and events. The Water Unit’s communications strategy is reviewed regularly to ensure it remains current.

## Key stakeholders

Table 5: List of key stakeholders – drinking water

| Key stakeholders  | Type |
| --- | --- |
| **Water agencies**  | Regulated entities  |
| **Approved auditors**  | Source of intelligence  |
| **Industry associations** | Source of intelligence  |
| **Other government agencies** | Source of intelligence  |
| **General public** | Beneficiary of regulation |

Table 6: List of key stakeholders – aquatic facilities

| Key stakeholders  | Type |
| --- | --- |
| **Local government**  | Co-regulator  |
| **Aquatic facility operators** | Regulated entities  |
| **Industry associations** | Source of intelligence  |
| **General public** | Beneficiary of regulation |

# Appendix 1: Risk assessment

The following tables have been taken from the *Australian drinking water guidelines* and are used by the Water Unit to assess public health risk and assign risk ratings.

Table 7: qualitative measures of likelihood

| Level | Descriptor | Example description |
| --- | --- | --- |
| A | Almost certain | Is expected to occur in most circumstances |
| B | Likely | Will probably occur in most circumstances |
| C | Possible | Might occur or should occur at some time |
| D | Unlikely | Could occur at some time |
| E | Rare | May occur only in exceptional circumstances |

Table 8: Qualitative measures of consequence or impact

| Level | Descriptor | Example description |
| --- | --- | --- |
| 1 | Insignificant | Insignificant impact, little disruption to normal operation, low increase in normal operation costs |
| 2 | Minor | Minor impact for small population, some manageable operation disruption, some increase in operation costs |
| 3 | Moderate | Minor impact for larger population, significant modification to normal operation but manageable, operation costs increased, increased monitoring |
| 4 | Major | Major impact for small population, systems significantly compromised and abnormal operation if at all, high level of monitoring required |
| 5 | Catastrophic | Major impact for large population, complete failure of systems |

Table 9: Qualitative risk analysis matrix: level of risk

| Likelihood | Consequence:1 insignificant | Consequence:2 minor | Consequence:3 moderate | Consequence:4 major | Consequence:5 catastrophic |
| --- | --- | --- | --- | --- | --- |
| A (almost certain) | Moderate | High | Very high | Very high | Very high |
| B (likely) | Moderate | High | High | Very high | Very high |
| C (possible) | Low | Moderate | High | Very high | Very high |
| D (unlikely) | Low | Low | Moderate | High | Very high |
| E (rare) | Low | Low | Moderate | High | High |

# Glossary

| Term | Definition |
| --- | --- |
| **Aquatic facility** | Public aquatic facilities including swimming and spa pools with public access. |
| **Co-regulator** | Any national, other State and Territory, or Victorian regulator that has complementary objectives or functions, and/or the same regulated entities. For example, the Australian Health Practitioner Regulation Agency, WorkSafe and the Federal or Victorian Police.  |
| **DHHS** | The Victorian Department of Health and Human Services. |
| **Drinking water** | Water that is intended for human consumption or for purposes connected with human consumption, such as the preparation of food or the making of ice for consumption or the preservation of unpackaged food, whether or not the water is used for other purposes |
| **Pathogen** | A bacterium, virus or other microorganism that can cause disease. |
| **Reticulated drinking water supply** | A piped water network conveying drinking water. |
| **Regulated water supply** | A declaration made by the Minister Water under the Safe Drinking Water Act 2003 regarding water supplied to the public which may be mistaken for drinking water but is not drinking water.  |
| **Sugar-sweetened beverages** | Any liquids that are sweetened with various forms of added sugars, also known as sugary drinks. |
| **Water agencies** | Water storage managers and water suppliers, as defined in the *Safe Drinking Water Act 2003*.Water agencies include state-owned rural and urban water businesses, alpine resort management boards and Parks Victoria.  |
| **Water-borne illness** | Illness transferred or originating from contaminated water |
| **Water fluoridation** | The adjustment of fluoride in drinking water to reach a level that can help to reduce tooth decay |

# Diagram text

Figure 1: Enforcement tools available to the Water Unit to achieve their regulatory outcomes

This figure is an enforcement pyramid. The figure seeks to demonstrate that the Water Unit will use the full range of tools available to it in line with the risks that they are seeking to manage. The enforcement pyramid illustrates a graduated and proportionate enforcement approach. The bottom of the pyramid outlines the lighter touch interventions such as education and advice to regulated parties, through to prosecution at the top of the pyramid, where regulated parties deliberately work against intended outcomes and intend to evade compliance obligations.

1. Available at: https://www.emv.vic.gov.au/policies/emmv [↑](#footnote-ref-1)