

Australian Capital Territory

# Public Health (Drinking Water) Code of Practice 2007 (No 1)

Disallowable instrument DI2007–62

made under the

Public Health Act 1997, s 133 (Codes of practice)

---

## 1 Name of instrument

This instrument is the *Public Health (Drinking Water) Code of Practice 2007 (No 1)*.

## 2 Commencement

This instrument commences on the day after notification.

## 3 Determination

I determine the document entitled *Drinking Water Code of Practice 2007* at Schedule 1 as a code of practice.

## 4 Revocation

DI2000-86, *Public Health (Drinking Water Quality) Code of Practice 2000* notified on the Legislation Register on 9 March 2000 is revoked.

Katy Gallagher MLA  
Minister for Health

28 February 2007



# ***Public Health Act 1997***

## **Drinking Water**

### **Code of Practice 2007**

**AUSTRALIAN CAPITAL TERRITORY**

© Australian Capital Territory, Canberra January 2007

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without written permission from Publishing Services, Department of Treasury, ACT Government, GPO Box158, Canberra ACT 2601. Produced for Health Protection Service, ACT Health.

For enquires related to this Code of Practice, please contact:

**Environmental Health, Health Protection Service (02) 6205 1700**

Publication No

<http://www.act.gov.au>

Whilst considerable care has been taken in compiling this document, the ACT Health accepts no responsibility for errors or omissions, or for decisions or actions taken or not taken as a result of any information, statement or advice, express or implied, in this document.

## Contents

1. Introduction .....	5
2. Scope .....	5
3. Definitions .....	5
4. Drinking Water Quality .....	8
5. Notification Requirements.....	8
6. Notice to cease extraction of water from specific raw water sources.....	9
7. Water Quality Testing Requirements .....	9
8. Annual Report.....	9
9. Public Access to Information.....	10
10. Quality Assurance and Quality Control .....	10
11. Incident Management Procedures .....	10
12. Emerging Public Health Issues .....	11
13. Strategic Water Quality Improvement Plans .....	11
14. Catchment Management .....	11
15. Liaison and Communication.....	11
16. Exemptions from the Code .....	12
Appendix 1. Notifiable Events or Incidents .....	13

## 1. Introduction

- 1.1 The ACT Drinking Water Code of Practice 2007 (DWCoP) provides a framework for reporting and water quality management relating to the supply of drinking water under a Drinking Water Utility Licence in the Australian Capital Territory.

## 2. Scope

- 2.1 The DWCoP specifies the technical requirements for the supply, quality, monitoring of, and reporting on drinking water in the ACT. It documents the notification procedures the Water Utility is required to follow in the event of an incident that poses an imminent serious risk to public health.
- 2.2 The supply of drinking water in the ACT is declared 'A Licensable Public Health Risk Activity' under the *Public Health Act 1997* (Public Health Act).
- 2.3 Operators of drinking water systems (water utilities) are required to obtain a Drinking Water Utility licence under the Public Health Act and the licence could contain specific conditions. A licence is also be required to provide water utility services under the *Utilities Act 2000* (Utilities Act) unless specifically exempt.
- 2.4 The licence holder is required to comply with the DWCoP and other relevant Codes of Practice under the Utilities Act.
- 2.5 The DW CoP has been determined by the Minister under section 133 of the Public Health Act and is enforceable under that Act.

## 3. Definitions

**ACT Drinking Water Code of Practice 2007 (DWCoP)** – means the Code of Practice, which provides a framework for reporting and water quality management relating to the supply of drinking water under a Drinking Water Utility Licence in the ACT.

**Australian Drinking Water Guidelines (ADWG)** – means the most current drinking water guidelines published by the National Health and Medical Research Council (NHMRC) and the Natural Resource Management Ministerial Council (NRMMC) and any updates to this document.

**Chief Health Officer (CHO)** – means the Chief Health Officer as defined in the *Public Health Act 1997*.

**Customer** – for this code, means each of the following:

- (a) a person for whom a **Utility Service** is supplied by a **Utility**,
- (b) a person who consumes water supplied by a **Utility**, or
- (c) a person who has contact with water supplied by a **Utility**.

**Customer Point of Supply** – means the first tap after the customer’s water meter or a sampling point on the customer’s connection.

**Exceedance** – means an incident where a characteristic value, defined in the ADWG, is exceeded.

**Geographical Supply Area** – means a water network distribution area containing approximately 50,000 people and agreed, in writing, by the Chief Health Officer.

**Health Related Chemicals** – means any chemicals identified in the ADWG as having a public health impact and given a health guideline value.

**Incident Management Procedures** – means the protocols or planned action, activity or process to prevent or manage a public health risk.

**Licence** – means a licence issued under the Public Health Act to a Utility.

**NATA Laboratory** – means a National Association of Testing Authorities (NATA) accredited laboratory.

**Nominated Person** – means the Director Environmental Health, Health Protection Service, ACT Health, or other persons as advised in writing.

**Notifiable Incident** – means an incident specified in Appendix 1 of the DWCoP, which requires notification to the Chief Health Officer.

**Notification** – for the purposes of this code means a telephone call to one of the nominated persons as applicable within the time specified in Appendix 1, followed by an email or fax to the relevant person to confirm the incident within 2 hours.

**Public Health Risk Activity** – means an activity declared by the Minister to be a public health risk activity under section 18 of the Public Health Act. A public health risk activity can either be licensable, non-licensable or registrable.

**Public Health Risk** – means an incident or event that could cause risks to human health and require notification to the Chief Health Officer or a nominated person.

**Raw Water** – means untreated water held in the catchment area, dam and pipes up to the inlet to the water treatment plant.

**Strategic Water Quality Improvement Plan (SWQIP)** – means a plan developed by the Utility and approved by the Chief Health Officer annually. The SWQIP will identify strategic risks to the water supply and develop appropriate strategies to mitigate the risks.

**Utility** – means a person providing a **Utility Service** within the Territory.

**Utility Service** – for the purposes of the DWCoP, each of the following is a Utility service:

- (a) the collection or treatment of water, or both, for distribution through a water network;
- (b) the distribution of water through a water network;
- (c) a water connection service; or
- (d) the supply of water from a water network to premises licensed and operated under the Utilities Act.

**UV Dose** – means the energy per unit area incident on a surface, in units of  $\text{mJ}/\text{cm}^2$  or  $\text{J}/\text{m}^2$ .

**UV Reactor** – means the vessel or chamber where exposure to UV light takes place, consisting of UV lamps, quartz sleeves, UV intensity sensors, quartz sleeve cleaning systems, and baffles or other hydraulic controls.

**UV Water Treatment** – for the purposes of the DWCoP, means using Ultra Violet (UV) irradiation to inactivate protozoa and their oocysts in the drinking water supply.

**Water Network** – for the purposes of the DWCoP, a water network consists of the infrastructure mentioned below used, or for use, in relation to any of the following purposes:

- (a) the collection and treatment of water for distribution by a person to the premises of another person; or
- (b) the distribution of water by a person to premises of another person.

Infrastructure consists of the following:

- (a) water storages, mains and treatment plants;
- (b) pumps, facilities and equipment for distributing water, or monitoring or controlling the distribution of water; or
- (c) pipes, equipment or other thing ancillary to any other part of the infrastructure.

## **4. Drinking Water Quality**

- 4.1 The Utility must take all reasonable steps to supply drinking water to customers, which meets the aesthetic and health related guideline values of the ADWG.
- 4.2 The Utility must take all reasonable steps to supply water to customers, which does not contain any element, organism or substance at a concentration, which would be detrimental to public health.
- 4.3 The Utility must take all reasonable steps to supply water to customers which does not contain any element, organism or substance at a concentration value which in conjunction with any other element, organism or substance it contains would be detrimental to public health.
- 4.4 The Utility must take all reasonable steps to meet the requirements of the “Framework for the Management of Drinking Water Quality” as detailed in the ADWG.

## **5. Notification Requirements**

- 5.1 The Utility must notify the Chief Health Officer (CHO) or one of the nominated persons of any event or incident described in Appendix 1 of this Code of Practice within the specified time period.
- 5.2 The Utility must inform the CHO of any other incidents involving water quality not covered by Appendix 1 of this Code of Practice where:
  - (a) the ADWG level for a Health Related Chemical is exceeded, or
  - (b) the Utility would reasonably expect the incident to be an imminent serious public health risk.
- 5.3 The utility must maintain a 24-hour incident management contact list of persons for the coordination of responses to any incident.
- 5.4 The notification should initially be a telephone call to one of the nominated persons as applicable within the time specified in Appendix 1, followed by an email or fax to the relevant person to confirm the incident within 2 hours.
- 5.5 Where the Utility utilises UV water treatment, they must provide the CHO with details of the design output for the UV reactor prior to commissioning or design alteration of the UV reactor.



## **6. Notice to cease extraction of water from specific raw water sources**

- 6.1 If the CHO has reasonable grounds for believing that a - serious risk to public health is likely to arise from the use of a specific raw water source, CHO may, by written notice to the Utility, direct the Utility to cease the extraction of that raw water source.

## **7. Water Quality Testing Requirements**

- 7.1 The Utility must conduct a comprehensive system performance-monitoring program in accordance with the principles outlined in the ADWG.
- 7.2 The sampling program will be determined by the Utility and provided to the CHO before the beginning of each year's water quality monitoring program.
- 7.3 The Utility must undertake any special or additional testing as required by the CHO.
- 7.4 The laboratory that undertakes the water quality testing should be a NATA laboratory, registered for the particular water quality tests. Results from non-NATA accredited tests must be highlighted when presented.

## **8. Annual Report**

- 8.1 The Water Utility must produce and make public an annual report on its drinking water quality monitoring program.
- 8.2 The report must summarise the Utility's water quality test results and compare them with this Code of Practice, the ADWG and any Public Health Risk Activity Licence conditions.
- 8.3 The report must include sufficient information to enable the CHO to assess the Utility's general performance against the guidelines and the DWCoP and enable water customers to make informed judgments about the quality of water they consume. The report must identify emerging problems and trends in drinking water quality management within the Utility's water system and outline what priorities will be given to improving water quality.
- 8.4 The report must:
- (a) present results of the water quality monitoring program conducted by the Utility for each geographical supply area and include the number of samples taken;

- (b) state the laboratory test method used in obtaining the water quality results;
- (c) include details of UV performance;
- (d) include a summary of any notifications to the CHO and exceedances of specified parameters; and
- (e) the status of the Strategic Water Quality Improvement Plan must also be reported.

8.5 A copy of the report for the preceding financial year must be forwarded to the Chief Health Officer by 30th September each year.

## **9. Public Access to Information**

- 9.1 The Utility must provide a copy of its annual water quality report free of charge to any member of the public requesting a copy.
- 9.2 Any request by a member of the public for a copy of the report should be met as soon as practicable upon receipt of the request.
- 9.3 The Utility must ensure that copies of the report are available for members of the public by 14th October each year.
- 9.4 Reference must be made to the report's existence and availability in the Utility's Annual Report.

## **10. Quality Assurance and Quality Control**

- 10.1 The Utility must maintain an effective system of quality assurance and quality control for monitoring, sampling testing, reporting and other processes in relation to the water supply system.

## **11. Incident Management Procedures**

- 11.1 The Utility in consultation with the CHO, and other Government agencies where appropriate, must develop and deploy incident response procedures addressing the Utility's activities relating to the supply and management of the drinking water.
- 11.2 The incident response procedures must contain or incorporate by reference, procedures and protocols for the coordinated management of incidents including media and stakeholder liaison and any notification of public health advice from the Chief Health Officer.
- 11.3 The utility must, maintain and update incident response procedures.
- 11.4 The Utility must provide the Chief Health Officer with a copy of the current version of the incident response procedures.

## **12. Emerging Public Health Issues**

- 12.1 The Utility must participate in appropriate research and development on emerging public health issues related to drinking water.

## **13. Strategic Water Quality Improvement Plans**

- 13.1 The Utility must develop a Strategic Water Quality Improvement Plan (SWQIP) for the water supply system by 31 March each year (in the first year by 1 August 2007).
- 13.2 The SWQIP's objective will be to identify strategic risks to the water supply and develop appropriate strategies to mitigate the risks. The SWQIP must be developed by the Utility and approved by the CHO.
- 13.3 Specifically the SWQIP must:
- (a) define the particular water quality risks to be addressed and the outcomes to be achieved;
  - (b) define the key strategies to be taken by the Utility to address the water quality risks;
  - (c) provide timing and key milestones for the key stages of the development and implementation of the strategies; and
  - (d) include a post implementation monitoring program to report on the effectiveness of the strategies against the objectives.

## **14. Catchment Management**

- 14.1 The Utility must participate with the relevant water catchment management bodies for the purpose of information exchange in relation to activities in and around the catchments, which may impact on water quality (including pesticides and agricultural chemical use) in all catchments.
- 14.2 The Utility must undertake a survey of all the catchments every 3 years to determine the nature and extent of likely contaminants entering the catchment and:
- (a) provide a copy of the report to the Chief Health Officer; and
  - (b) include the results of the survey in the annual water quality report.

## **15. Liaison and Communication**

- 15.1 ACT Health will establish a liaison committee with the Utility and other relevant parties as required to consider current and emerging issues associated with the delivery of safe drinking water in the ACT.

## **16. Exemptions from the Code**

- 16.1 This code will apply to water supplied from a water network by a Utility for the purpose of human consumption. All water supplied by a Utility will be considered as supplied for the purpose of human consumption, unless otherwise approved in writing by the CHO.
- 16.2 The utility must apply every three years in writing to the Chief Health Officer for exemptions under subsection 16.1. The Utility must advise the CHO if it becomes aware of any changes relating to the information provided to the CHO when seeking an exemption.
- 16.3 The Utility must write each year to customers who are supplied with water according to an exemption under subsection 16.1, advising them that the water supplied may not be fit for human consumption.

## Appendix 1. Notifiable Events or Incidents

Source	Characteristic	Criteria <sup>1</sup>	Notification
Raw water at off take tower	Pesticides (all products known to be used in and around the catchment areas)	Any exceedance of the ADWG health guideline.	CHO or nominated person – within 24 hrs
Raw water in the storage reservoir	Cyanobacteria ( <i>Microcystis</i> , <i>Oscillatoria</i> , <i>Spirulina</i> , <i>Anabaena</i> , <i>Anabaenopsis</i> & <i>Nodularia Spp.</i> )	>2000 cells/mL or a total biovolume $\geq 0.5$ mm <sup>3</sup> /L.	CHO or nominated person – within 24 hrs
Raw water or treated water entering the distribution system.	<i>Cryptosporidium</i> & <i>Giardia</i>	Any detection of organisms.	CHO or nominated person – within 8 hrs
Treated water entering the distribution system	Inorganic and organic chemicals with a health guideline value	Any exceedance of the ADWG health guideline value.	CHO or nominated person – within 24 hrs
Treated water entering the distribution system.	Turbidity	> 2 NTU for a period of more than one hour and any exceedance of 5 NTU for a period of more than 15 minutes.	CHO or nominated person – within 24 hrs
Treated water entering the distribution system.	Fluoride	>1.5 mg/L for a period of more than one hour.	CHO or nominated person – within 24 hrs
Treated water entering the distribution system.	Free chlorine	Any chlorination system failure where there is no added chlorine for more than 1 hour.	CHO or nominated person – within 8 hrs
Water within the distribution system at customer point of supply or service reservoirs	Thermotolerant coliforms or <i>E. coli</i> .	Any detection of thermotolerant coliforms or <i>E. coli</i> .	CHO or nominated person – within 8 hrs
Water within the distribution system at customer point of supply	Trihalomethanes	>0.25 mg/L.	CHO or nominated person – within 24 hrs
Water leaving the UV reactor	UV system	Any failure for more than 1 hour in a 24 hour period. A failure is $\geq 50\%$ reduction of the designed UV dose or other parameter as specified in writing by the CHO.	CHO or nominated person – within 8 hrs

**Note** Assessment against criteria to be based on confirmed test results for all characteristics.