

Drinking Water Regulatory Section Newsletter

Volume 7, April 2007

Drought Issue

Introduction

2007 has been a challenging year with the impact of the bush-fire damaged water catchments on water quality, the extreme shortage of water as a result of the on-going drought and associated public health risks such as blue-green algal blooms, increasing organics in source water and *E. coli* detections.

This newsletter will cover some of the issues arising from the bush-fires and the drought and some of the potential public health risks that have become apparent through the process of monthly water quality data collection and Section 22/18 reporting to the Department.

This newsletter will be distributed widely to Regional DHS staff and Local Government and the information provided can be used to inform your local communities.

The Drinking Water Regulatory Section webpage includes a comprehensive amount of information on the water industries, and their obligations on the *Safe Drinking Water Act 2003*. A series of guidance notes detail the actions that water authorities are required to take in response to incidents that may contribute to an increased public health risk. The webpage can be found at <http://www.health.vic.gov.au/environment/water/drinking.htm>. Questions in relation to any matters relating to the Legislation and water authority obligations can be directed to the Drinking Water Regulatory Section as detailed in the table at the end of the newsletter.

News From the Section

On Thursday March 15, The Minister for Health tabled the 2005-2006 "Annual report on drinking water quality" in Parliament. The report is available on the Section website at <http://www.health.vic.gov.au/environment/water/drinking.htm>. If you would like to receive a hard copy please e-mail your name and address to dwru@dhs.vic.gov.au.

The Drinking Water Quality database has been commissioned, and the task of loading all data from the period commencing July 2004 is now underway.

Impact of the drought and bushfires

Water authorities across Victoria are increasingly faced with the challenge of not only providing water to all their customers, but also providing safe drinking water. This section of the newsletter has been prepared to provide information on:

- water supply;
- identifying and managing public health issues associated with decreasing and variable raw water quality;
- identifying legislative options where non-compliances cannot be managed and
- communication strategies.

Alternative Water Supply

An increasing number of towns are facing depleted water supplies as a consequence of drought or bush-fire impact. Options available to water authorities include negotiating additional allocations, identifying and developing new water source(s) or carting water to the residents.

Potential public health issues associated with each option, and any associated regulatory requirements are detailed in the Table 1.

Table 1 Risks and obligations associated with new and alternative water sources

Option	Potential health risks	Safe Drinking Water Act Obligations
Additional allocation from regular source	Unchanged	Unchanged
Water carting – potable water through the reticulation system	<ul style="list-style-type: none"> • Appropriate transport and handling to prevent contamination • Contamination due to loss of residual disinfection 	Monitoring to continue as usual to verify water quality
Water carting – non-potable water through the reticulation system	Water quality unknown – require adequate knowledge of source water to ensure effective treatment and disinfection	<ul style="list-style-type: none"> • Undertake hazard identification/risk analysis • Identify appropriate actions to address risk • Amend risk management plan • Ensure water meets regulated drinking water standards • Ensure monitoring regime is amended to validate any changes to treatment/disinfection processes • Monitoring to continue as usual to verify water quality
Water carting – potable water for collection by customers	<ul style="list-style-type: none"> • Appropriate transport and handling to prevent contamination • Contamination due to loss of residual disinfection • Adequate distribution • Potential for injury 	<ul style="list-style-type: none"> • Normal monitoring not possible • Ensure water carted and stored at collection sites is compliant with the legislated water standards
New water supply	Water quality unknown – require adequate knowledge of source water to ensure implementation of effective treatment and disinfection options	<ul style="list-style-type: none"> • Undertake hazard identification/risk analysis • Identify appropriate actions to address risk • Amend risk management plan • Ensure water meets regulated drinking water standards • Ensure monitoring regime is amended to validate any changes to treatment/disinfection processes • Monitoring to continue as usual to verify water quality

Variable water sources

Diminishing (and therefore variable) water quality can impact on the effectiveness of water treatment plants and treatment and disinfection processes. Higher levels of organic material, (NOMs), colour and raised turbidity levels require greater intervention and higher doses of disinfectants and chemicals. As a result, water authorities are reporting greater numbers of *E. coli* detections and exceedences of a range of disinfection by-products (DBPs).

These incidents are all reportable to the Department under Sections 18 and/or 22 of the *Safe Drinking Water Act 2003*. The Department works collaboratively with each authority on each reported incident, to assess the health risk, to take corrective action where possible and to ensure that consumer information is disseminated where required to reduce the risk. Water quality monitoring data can be made available, either on the water authority website or on request, to customers and interested persons.

New water sources

The quality of a new water source - surface water, groundwater or other water such as from a disused mine - is unknown. The quality of new water sources must be established to determine if the new source can be treated to meet water quality standards. There is currently no requirement for water authorities to notify the Department if they are changing source water. However if a water authority identifies potential water quality issues (including not meeting a legislated standard) early notification allows the Section to respond more effectively.

It is important that for each new water source brought into service, the water authority must:

- know the quality of the water;
- undertake hazard identification and risk management planning;
- amend the water quality risk management plan;
- verify that the treatment plant can remove/reduce the risk and
- meet the legislated water quality standards.

When a single water-sampling locality receives water from different sources, and the samples collected for monitoring are not representative of water across the locality, the water authority should immediately contact the Drinking Water Regulatory Section to discuss options to ensure that water quality is being appropriately monitored.

Managing Legislative Compliance

A number of options are available should water authorities be unable to meet legislated water standards. Approval of these options is granted where consideration is given to the public health risk and if adequate measures are proposed by the water authority to mitigate this risk. The options available under the Legislation include:

Section 6	A declaration of regulated water
Section 20	Exemption from water quality standard
Section 30	An undertaking may be accepted

Other Public Health Issues

There are a number of potential health risks being faced by individuals across Victoria as they are required to preserve existing, and find alternate sources of water for drinking, domestic, outdoor and for stock and domestic purposes.

Water Carting

Water authorities and individuals are both increasingly using water carting to supplement or replace supply. Water carters have a legal obligation under the *Food Act 1984*, and Local Government has responsibility for administering those obligations. Substantial penalties apply to the sale of unsafe water, and consumers may also take civil action. In summary, the legal obligations detailed in the guidelines are:

- potable water is defined as a food under the *Food Act 1984*, and as such all the obligations of that Act apply;
- potable water purchased by water carters must be obtained from a supply or supply point approved by a Victorian water authority. Water intended for drinking must NEVER be drawn from any other source;
- the transport tank/vehicle must be fitted so as to prevent contamination of the water and cross contamination of the supply point;
- cleaning protocols must be regular and appropriate for potable water;

- the tanker/container and associated fittings must not be used to transport other material and
- prescribed logbooks must be maintained and retained for a period of 12 months.

The guidelines can be found at

http://www.health.vic.gov.au/foodsafety/downloads/water_transport_guidelines01.pdf

It is important that all customers employ reputable water carters, who adhere to the water carting guidelines. There is no requirement for Local Council to register water carters, so the use of reputable businesses by consumers in particular relies on consumer awareness and reputation. Local councils in particular should provide the community with information such as the guidelines and maintain vigilance in their community to detect and prevent water-carting practices that are non-compliant with the Legislation.

Individuals who choose to cart water for personal use should be aware of the risk management requirements on commercial water carters to protect the health of their families and visitors who consume that water.

Groundwater

The use of groundwater is extensive in Victoria, with an estimated 1 in 10 Victorians deriving their daily water supply from groundwater sources such as private bores, springs or water authority supplies. The Department of Sustainability and Environment are the regulatory body overseeing the licensing and extraction of groundwater in Victoria, and have produced a series of notes relating to matters including establishing, managing and caring for bores. The series can be found at

<http://www.dse.vic.gov.au/DSE/wcmn202.nsf/LinkView/FB987C34AF44D676CA25702E0028D8E14DAAE1F97A359C5BCA257030000DFBF0>. Titles include:

- How to Become a Groundwater User
- Testing Groundwater Quality
- What Can You Do to Prevent Groundwater Pollution
- Where to get Groundwater Advice

DSE have also established a Groundwater Enquiry Line 136 186 to provide advice to landholders seeking information about accessing groundwater.

Private users can extract water for stock and domestic use free of charge, and without license. Water extracted for other purposes must be paid for, and an extraction license must be obtained. A license should be obtained for drilling operations where the drill is deeper than three metres. This process assists in the management of the groundwater resource and adjacent water sources such as rivers or other bores.

Private bore owners are responsible for the management of water quality they may be using for drinking. They need to know the nature and quality of the water, take steps to maintain that quality and also care for the bore. Bore water can naturally contain substances of concern such as arsenic, lead and other heavy metals. Unlike mineral salts, many of these compounds do not impart any taste, and may be present in quantities that are detrimental to health. Other contaminants may enter the bore, and users should be aware of potential risks and hazards that their bore may be susceptible to. Adequate testing at the time of drilling, and at regular intervals are an essential management strategy to ensure that water is safe for drinking and household use.

Authorities with responsibility for issuing extraction and drilling licenses in Victoria are Goulburn-Murray Water Authority, Southern Rural Water Authority, Grampians Wimmera Mallee Water Authority and Lower Murray Urban and Rural Water Authority. The contact details for these authorities are on the Section web page.

As the demand for water from groundwater increases, it is important that the regulatory requirements and obligations on individuals are widely disseminated to communities to prevent harm and illness related to the consumption of hazardous groundwater.

Collection of water by individuals

Many Victorians are reliant on rainwater tanks, and are currently collecting and utilising water from a variety of sources such as private bores, rivers and stand pipes that have been made available through drought relief strategy funding. In many cases the quality of the water they collect is unknown, and may not be fit for drinking and household use. In addition, individuals may be collecting and carting water in a manner that has a high risk attached such as the use of containers that are contaminated.

Risk of physical injury is also high as people attempt to carry and move large quantities of water. "Bucket Back" has been widely reported in metropolitan Melbourne, and the injuries that could potentially arise from moving much larger quantities of water could be much worse.

Water quality for these Victorians is a personal responsibility. It is important that people can easily access reliable information in relation to water quality and understand the health risks associated with drinking water of unknown quality. Several publications may be of use for water authorities, community agencies and Local Councils wishing to support residents who are not connected to a reticulated water supply.

Water – Make it Safe to Drink

http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Water_make_it_safe_to_drink?open

Advice for people with water tanks living in bush-fire affected areas

http://www.health.vic.gov.au/environment/downloads/water_tanks_and_bushfires.pdf

Your Private Drinking Water Supply

<http://www.health.vic.gov.au/environment/water/tanks.htm>

Guidelines for the use of non-potable water in food businesses

<http://www.health.vic.gov.au/environment/water/d-water-guide.htm#potable>

Stakeholders and Communication Strategies

The reduction of public health risk associated with the use of water, both within and outside the Victorian regulatory framework, can be facilitated by consumer awareness and education. A range of stakeholders with differing roles can most effectively facilitate education and awareness of water quality issues. Stakeholders, and their communication roles are listed below.

Local Government

Local Government are not water suppliers under the *Safe Drinking Water Act 2003*. Their single obligation under that Act is the requirement under Section 22 for officers to report known or suspected contamination of a water supply.

Local Government does play a significant role in the delivery of drinking water in Victoria outside the Legislative framework. These roles include:

- management of the water supply in the many municipal caravan parks;
- management of a number of mineral spas and the associated facilities;
- management of the *Food Act 1984* (water carting, food premises);
- management of the of the *Health Act 1958* (prescribed accommodation);
- provision of water under the Victorian Drought Strategy and
- emergency management role.

There is also a strong community perception that local government and municipal councils have a role in the provision of many services, in some cases including the supply of drinking water.

Local Government is best placed of the relevant stakeholders to broadly promote community awareness and knowledge of drinking water quality and the health risks associated with the consumption of water that is not safe. While water authorities can provide this role to their customers, Local Councils encompass all those residents who are not on a reticulated supply.

Water suppliers

Water authorities have the responsibility of providing, and managing the water quality of the majority of drinking water in Victoria.

They have obligatory communication requirements with Government Departments including DHS, DSE and EPA. These include many facets of water quality, particularly those where there is an adverse public health risk, to both their consumers and the Department. Reporting on drinking water quality includes:

- Section 18 Notification to DHS if non-complying water supplied
- Section 22 Report known or suspected contamination to DHS
- Blue-Green Algae – Coordination Arrangements 2006-07
Report to DHS and DSE based on protocols for drinking and recreational water

The reporting to the DHS, and the subsequent collaborative management of each issue, ensures that the protection of public health is an integral part of water authority risk management and responses.

Although there is no Legislative obligation to report changed water supply and alternative water supply (such as water carting into towns) issues to the DHS, it would assist the Department in identifying hot spots, and allow us to manage press enquiries if we have prior knowledge of where these two significant operations are taking place across the state. DSE is communicating with the Department with respect to drought management strategies.

Government Departments

The Departments of Sustainability and Environment and Human Services are the principal Government departments responsible for the delivery of potable drinking water in Victoria. The DHS role includes:

- administration of Legislation;
- emergency management role and
- support and advisory role.

Emergency management networks

In the event that an emergency situation arises as a result of the drought, the usual emergency management protocols for drinking water will be implemented. These are:

- Department of Sustainability and Environment is the Control Agency for disruption to the water supply, with Water Authorities and DHS as Support Agencies and
- Department of Human Services is the Control Agency for drinking water contamination.

The water authorities are adept at delivering water to residents when an alternate supply is required. The shortage of water does not automatically constitute an emergency situation, and a number of towns are currently having water carted to supplement or replace their reduced supply. There are some circumstances that need to be considered by stakeholders including, but not confined to, the following:

- Total loss of supply
- Loss of potable supply
- Traffic management of tankers carting alternate supply
- Inability to provide an adequate volume of alternate water

Factors that might influence a decision to call an emergency could be the size of the town or the proximity to the alternate supply.

Individuals

Persons on reticulated supply have their water quality managed by the water authority. They can be in receipt of water quality information and participate in community consultation groups, but have no personal responsibility for the quality of the water they and their families drink.

Many other Victorians must find their own water and are dependent rainwater tanks, private bores or purchasing water. This part of the community has a high level of responsibility for the quality of the water consumed and the quantity they use and would benefit from awareness raising programs and good information resources.

Individuals eligible for a Victorian Concessions Card are able to apply for a "Carted and Non-mains Water Rebate" Application forms are available on the webpage, or can be obtained by contacting the DHS Concessions Line on 1800 658 521.

http://www.dhs.vic.gov.au/concessions/docs/2006/2006_carted_water_form.pdf

http://www.dhs.vic.gov.au/concessions/docs/2006/carted_water_poster.pdf

Contacting the Drinking Water Regulatory Section

Contact or Correspondence Type	Name/Position	Address/Telephone	E-mail
Formal correspondence	Jan Bowman Assistant Director, Environmental Health	Public Health Group GPO Box 4057 Melbourne 3001	
General queries	Unit e-mail		dwr@dhhs.vic.gov.au
Monthly water quality results	Unit e-mail		dwr@dhhs.vic.gov.au
Incident reports - Section 22 (Business hours)	Telephone - you will be directed to your Business Liaison Officer or available EHU staff member E-mail DHS Form	1300 761 874	water@dhhs.vic.gov.au
Incident reports - Section 22 (Out of hours or no response during working hours)	EHU Emergency Pager Please inform operators that you have an incident with your drinking water under the Safe Drinking Water Act, give your name and organisation and you will be connected to a Senior EHU Officer E-mail DHS form	1300 790 733	water@dhhs.vic.gov.au
Section 18 Notifications	E-mail		water@dhhs.vic.gov.au
Queries relating to your business, the Legislation and the Regulations	Contact Business Liaison Officer David Sheehan Julie Hoy Brian Labza Janine Ryan	9096 5647 9096 5105 9096 5088 9096 5720	david.sheehan@dhhs.vic.gov.au julie.hoy@dhhs.vic.gov.au brian.labza@dhhs.vic.gov.au janine.ryan@dhhs.vic.gov.au

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