

WATER CORPORATION — POTABLE WATER SUPPLY AND TESTING

375. Hon Robin Chapple to the minister representing the Minister for Water:
- (1) I refer to water supplied to towns and remote communities in Western Australia (WA), and ask:
- (a) how is water supplied;
  - (b) does the department have a water source monitoring program;
  - (c) if yes to (b), what is the water level data used for;
  - (d) if no to (b), why not;
  - (e) does the department have a ‘multiple barrier’ approach to drinking water delivery, whereby multiple barriers are in place so that if one fails, other systems still prevent or reduce potentially harmful contaminants from reaching consumers;
  - (f) if no to (e), why not;
  - (g) are water supplies continuously disinfected, which is essential to reducing consumers’ exposure to disease-causing micro-organisms;
  - (h) if yes to (g), how and when;
  - (i) if no to (g), why not;
  - (j) are the physical and chemical characteristics of the water analysed to ensure safe levels as recommended in the Australian Drinking Water Guidelines (ADWG);
  - (k) if yes to (j), how and when;
  - (l) if no to (j), why not;
  - (m) does the department have online monitoring at critical water supply points, allowing signals to be sent to operators immediately when problems occur;
  - (n) if no to (m), does the department intend installing this online system; and
  - (o) if yes to (n), to where and when?
- (2) I refer to testing of water supplied to towns and remote communities in WA, and ask:
- (a) how are water samples collected;
  - (b) where are the water samples collected from;
  - (c) are samples collected for each town and remote community;
  - (d) how are samples delivered to testing laboratories;
  - (e) where are the testing laboratories located;
  - (f) how many analyses are carried out for each town and remote community each year to determine microbiological, physio-chemical, trace metal and radiological characteristics of the water to confirm it is safe to drink; and
  - (g) will the Minister please identify which towns and remote communities are at risk for:
    - (i) microbiological indicators that pose an immediate risk; and
    - (ii) physical and chemical water quality characteristics that may present a risk if the consumer was exposed to concentrations above ADWG levels over a lifetime?
- (3) For all towns and remote communities in WA, will the Minister please table a list of the following in the water and the levels or range (not the averages) for all years available: Aluminium, Alkalinity, Antimony, Arsenic, Boron, Barium, Beryllium, Bromide, Carbonate, Calcium, Cadmium, Chloride, Cobalt, Chromium, Copper, Conductivity, Fluoride, Iron, Bicarbonate, Hardness, Mercury, Potassium, Magnesium, Manganese, Molybdenum, Nitrate, Sodium, Nickel, Lead, Silver, Sulphate, Selenium, Silica, Total Soluble salts, Vanadium, Zinc, pH, Nitrates, and Uranium?

**Hon Alannah MacTiernan replied:**

This response refers only to potable water supply services and does not include non-potable water supply services and irrigation. The Economic Regulation Authority has issued water service licences to the following entities

supplying potable water services: Water Corporation, Bunbury Water Corporation (trading as Aqwest), Busselton Water Corporation, Hamersley Iron Pty Ltd, Lancelin South Pty Ltd, Peel Water Pty Ltd, Robe River Mining Co Pty Ltd, and Rottnest Island Authority. Additionally, the Remote Area Essential Service Program provides potable water supply services in Aboriginal communities in remote areas of the Kimberley, Pilbara, Murchison, Goldfields and Central Desert. Of these entities, the Minister for Water is responsible for the Water Corporation, Aqwest and Busselton Water. The information in the response relates only to Water Corporation given the extent of its services statewide. Information can be provided for Aqwest and Busselton Water if required.

- (1) (a) The Water Corporation supplies drinking water to over 250 localities in Western Australia. Outside of the Perth metropolitan area, drinking water is delivered through regional schemes such as the Goldfields and Agricultural Water Supply System, the Great and Lower Great Southern Towns Water Supply Systems or the West Pilbara Water Supply System. Other localities have local sources that the Water Corporation use to supply direct to that town or community and some small communities have water carted by the Water Corporation as their supply.
- (b) The Water Corporation has an extensive water quality monitoring program that assesses water quality across all parts of the water supply system covering the water source, treatment, storage and reticulation.
- (c) Water quality performance information is used to provide assurance of the safety of water supplied to customers.
- (d) Not applicable.
- (e) The Water Corporation implements a multiple-barrier system across all drinking water systems. This preventative approach to protect drinking water quality is recommended by the Australian Drinking Water Guidelines (ADWG). It represents world's best practice in managing safe drinking water by utilising barriers across the water supply system including source protection, water treatment, disinfection management, water storage and reticulation management that continuously operate in a preventative manner to protect water quality. The performance of these barriers is assessed to verify they are operating correctly, and collectively they ensure the continuous supply of safe drinking water.
- (f) Not applicable.
- (g) Yes, the Water Corporation utilises continuous disinfection as a key barrier in the multiple barrier approach.
- (h) Disinfection is utilised in the form of chlorination for all water supply schemes, besides the Goldfields & Agricultural Water Supply System which utilises chloramination to maintain disinfection residual across such an extensive pipe network. Additional disinfection barriers such as ultraviolet radiation (UV) are also used for some supplies which require more complex treatment.
- (i) Not applicable.
- (j) The Water Corporation has a comprehensive water quality sampling program that takes over 66,000 water samples every year to ensure the water supplied to customers is safe. This program meets the ADWG, as agreed to by the Department of Health.
- (k) The Water Corporation's standards define the required sampling frequency, location and sampling technique for water quality parameters across different parts of the water supply system.
- (l) Not applicable.
- (m) The Water Corporation utilises remote operations technology to monitor critical control points across the water supply system. This technology oversees performance and triggers responses to the central Operations Centre whereby immediate action can occur to rectify an issue.
- (n) Not applicable.
- (o) Not applicable.
- (2) (a) Water samples are taken across the State by trained Water Corporation operators in accordance with corporate sampling standards that meet the requirements of the Department of Health.
- (b) Water samples are collected from dedicated sample points across the water supply system from the source, pre and post treatment and disinfection, within water storage and reticulation.
- (c) The Water Corporation samples all of the localities it services.

**Extract from *Hansard***  
[COUNCIL — Tuesday, 7 November 2017]  
p5470b-5472a  
Hon Robin Chapple; Hon Alannah MacTiernan

---

- (d) Water samples are delivered to contracted analytical laboratories by vehicle or commercial flight depending on location or sampling parameter.
  - (e) The analytical laboratories that provide contracted services to the Corporation's drinking water process are based in Perth.
  - (f) Water quality sampling programs for a water supply scheme meet the requirements of the ADWG as agreed by the Department of Health. Customised programs cater for scheme-specific components such as water sources and treatment.
  - (g) (i)–(ii) The Water Corporation meets all health-related requirements of the ADWG as agreed by DoH.
- (3) The effort required to provide water quality data for all towns and remote communities in WA for all years available is unreasonably large.

For the last 14 years, the Water Corporation has published annually a detailed overview of its water quality performance, specifically designed to provide the Western Australian public with information on the quality of their drinking water (online at [www.watercorporation.com.au/about-us/our-performance/drinking-water-quality](http://www.watercorporation.com.au/about-us/our-performance/drinking-water-quality)). These reports provide the data that has been requested, excluding vanadium sampling which is not required under the ADWG, for over 220 towns and communities.

If the Member has a specific parameter or town that further information is required for please could he outline this in more detail.

---