



## Drinking Water Quality Summary - April 2014

Hunter Water provides safe and reliable drinking water to over half a million customers in the lower Hunter. The drinking water we supply is routinely tested throughout our water supply systems. Results are based on samples representative of water supplied to customers' taps. Results for microbiological and key physical/chemical parameters are summarised below:

### Microbiological Water Quality 12 Months to April 2014 Inclusive

| Parameter     | Health / Aesthetic | Measure of Compliance                      | Regulatory Target | Whole of Hunter Water | Chichester Zone | Grahamstown Zone | Lemon Tree Passage Zone | Nelson/Anna Bay Zone | Gresford Zone |
|---------------|--------------------|--|-------------------|-----------------------|-----------------|------------------|-------------------------|----------------------|---------------|
| <i>E.coli</i> | Health             | % of samples containing < 1 MPN per 100 ml | >98%              | 99.9%                 | 100.0%          | 100.0%           | 99.4%                   | 100.0%               | 100.0%        |

### Key Physical / Chemical Analytes April 2014

#### Whole of Hunter Water

| Analyte   | Health / Aesthetic | Units | ADWG Guideline <sup>2</sup> | Monthly Mean | 12 Mths Mean | Licence Perf <sup>1</sup> |
|-----------|--------------------|-------|-----------------------------|--------------|--------------|---------------------------|
| pH        | Aesthetic          |       | 6.5 - 9.2                   | 7.6          | 7.6          | 7.6                       |
| Colour    | Aesthetic          | HU    | 15                          | 5.0          | 5.0          | 5.1                       |
| Turbidity | Aesthetic          | NTU   | 5                           | 0.2          | 0.3          | 0.3                       |
| Chlorine  | Health             | mg/L  | 5                           | 0.3          | 0.4          | 0.9                       |
| Aluminium | Aesthetic          | mg/L  | 0.2                         | 0.048        | 0.046        | 0.047                     |
| Copper    | Health             | mg/L  | 2                           | 0.006        | 0.005        | 0.015                     |
| Fluoride  | Health             | mg/L  | 1.5                         | 0.90         | 0.98         | 1.18                      |
| Iron      | Aesthetic          | mg/L  | 0.3                         | 0.015        | 0.022        | 0.022                     |
| Lead      | Health             | µg/L  | 10                          | 1.00         | 1.04         | 1.74                      |
| Manganese | Health             | mg/L  | 0.5                         | 0.002        | 0.004        | 0.02                      |
| Zinc      | Aesthetic          | mg/L  | 3                           | 0.005        | 0.004        | 0.004                     |
| THMs      | Health             | µg/L  | 250                         | 93.1         | 81.9         | 139.7                     |

#### Water Quality Zones

| Analyte   | Health / Aesthetic | Units | ADWG Guideline <sup>2</sup> | Chichester Zone |              |                           | Grahamstown Zone |              |                           |
|-----------|--------------------|-------|-----------------------------|-----------------|--------------|---------------------------|------------------|--------------|---------------------------|
|           |                    |       |                             | Monthly Mean    | 12 Mths Mean | Licence Perf <sup>1</sup> | Monthly Mean     | 12 Mths Mean | Licence Perf <sup>1</sup> |
| pH        | Aesthetic          |       | 6.5 - 9.2                   | 7.9             | 7.8          | 7.8                       | 7.5              | 7.5          | 7.5                       |
| Colour    | Aesthetic          | HU    | 15                          | 5.0             | 5.0          | 5.1                       | 5.0              | 5.0          | 5.1                       |
| Turbidity | Aesthetic          | NTU   | 5                           | 0.2             | 0.3          | 0.3                       | 0.3              | 0.2          | 0.3                       |
| Chlorine  | Health             | mg/L  | 5                           | 0.4             | 0.5          | 1.1                       | 0.2              | 0.3          | 0.7                       |
| Aluminium | Aesthetic          | mg/L  | 0.2                         | 0.035           | 0.043        | 0.046                     | 0.078            | 0.060        | 0.061                     |
| Copper    | Health             | mg/L  | 2                           | 0.005           | 0.004        | 0.007                     | 0.006            | 0.005        | 0.013                     |
| Fluoride  | Health             | mg/L  | 1.5                         | 0.70            | 0.96         | 1.13                      | 0.94             | 0.98         | 1.19                      |
| Iron      | Aesthetic          | mg/L  | 0.3                         | 0.01            | 0.02         | 0.02                      | 0.02             | 0.02         | 0.02                      |
| Lead      | Health             | µg/L  | 10                          | 1.00            | 1.00         | 1.79                      | 1.00             | 1.02         | 1.74                      |
| Manganese | Health             | mg/L  | 0.5                         | 0.003           | 0.005        | 0.030                     | 0.002            | 0.003        | 0.011                     |
| Zinc      | Aesthetic          | mg/L  | 3                           | 0.005           | 0.004        | 0.004                     | 0.005            | 0.004        | 0.004                     |
| THMs      | Health             | µg/L  | 250                         | 110.5           | 90.8         | 139.8                     | 96.8             | 92.3         | 143.8                     |

| Analyte   | Health / Aesthetic | Units | ADWG Guideline <sup>2</sup> | Lemon Tree Passage Zone |              |                           | Nelson/Anna Bay Zone |              |                           |
|-----------|--------------------|-------|-----------------------------|-------------------------|--------------|---------------------------|----------------------|--------------|---------------------------|
|           |                    |       |                             | Monthly Mean            | 12 Mths Mean | Licence Perf <sup>1</sup> | Monthly Mean         | 12 Mths Mean | Licence Perf <sup>1</sup> |
| pH        | Aesthetic          |       | 6.5 - 9.2                   | 7.4                     | 7.4          | 7.5                       | 7.3                  | 7.4          | 7.4                       |
| Colour    | Aesthetic          | HU    | 15                          | 5.0                     | 5.0          | 5.2                       | 5.0                  | 5.0          | 5.1                       |
| Turbidity | Aesthetic          | NTU   | 5                           | 0.1                     | 0.3          | 0.3                       | 0.2                  | 0.3          | 0.3                       |
| Chlorine  | Health             | mg/L  | 5                           | 0.2                     | 0.4          | 0.7                       | 0.2                  | 0.5          | 0.9                       |
| Aluminium | Aesthetic          | mg/L  | 0.2                         | 0.021                   | 0.030        | 0.032                     | 0.052                | 0.049        | 0.050                     |
| Copper    | Health             | mg/L  | 2                           | 0.006                   | 0.006        | 0.012                     | 0.006                | 0.005        | 0.022                     |
| Fluoride  | Health             | mg/L  | 1.5                         | 0.95                    | 0.98         | 1.14                      | 0.97                 | 1.00         | 1.20                      |
| Iron      | Aesthetic          | mg/L  | 0.3                         | 0.01                    | 0.03         | 0.03                      | 0.02                 | 0.03         | 0.04                      |
| Lead      | Health             | µg/L  | 10                          | 1.00                    | 1.00         | 1.58                      | 1.00                 | 1.15         | 1.87                      |
| Manganese | Health             | mg/L  | 0.5                         | 0.001                   | 0.006        | 0.034                     | 0.003                | 0.003        | 0.009                     |
| Zinc      | Aesthetic          | mg/L  | 3                           | 0.005                   | 0.005        | 0.006                     | 0.005                | 0.005        | 0.005                     |
| THMs      | Health             | µg/L  | 250                         | 86.0                    | 83.1         | 120.6                     | 72.0                 | 51.6         | 106.5                     |

| Analyte   | Health / Aesthetic | Units | ADWG Guideline <sup>2</sup> | Gresford     |              |                           |
|-----------|--------------------|-------|-----------------------------|--------------|--------------|---------------------------|
|           |                    |       |                             | Monthly Mean | 12 Mths Mean | Licence Perf <sup>1</sup> |
| pH        | Aesthetic          |       | 6.5 - 9.2                   | 8.1          | 8.1          | 8.2                       |
| Turbidity | Aesthetic          | NTU   | 5                           | 0.1          | 0.1          | 0.2                       |
| Chlorine  | Health             | mg/L  | 5                           | 0.1          | 0.3          | 0.7                       |

<sup>1</sup> Licence performance result for each Physical / Chemical Analyte is determined as follows:

For health related characteristics, the objective is to be confident that the 95th percentile of results over the preceding 12 months is less than the guideline value.

This means that the upper bound of the 95% confidence interval for the 95th percentile should be less than the guideline value.

For water quality characteristics which are not health related, (ie aesthetic) the objective is to be confident that the mean value (or average) of results over the preceding 12 months is less than the guideline value.

This means that the upper bound of the 95% confidence interval for the mean should be less than the guideline value.

<sup>2</sup> Note that the Australian Drinking Water Guidelines (ADWG) specifies water quality standards that are considered safe for people to drink over an entire lifetime. Therefore compliance is based on a statistical measure of results rather than absolute figures

**Brief Explanation of Key Parameters:**

[Key Physical, Chemical and Microbiological Parameters](#)

or for more detail see:

[Australian Drinking Water Guidelines 2011](#)

Map showing water quality zones:

[Water Quality Zones at Hunter Water](#)