Hunter Water is implementing a network-wide program to improve the consistency of the taste of its drinking water. This includes increasing disinfection of the water supply system.

This Fact Sheet answers common questions about the project. If you would like more information please call Hunter Water on 1300 657 657.

**WHY IS DISINFECTION NEEDED?**
Disinfection protects your health by preventing the growth of bacteria and other organisms in the water supply. The Australian Drinking Water Guidelines (ADWG) advocate the disinfection of water to protect health.

**WHAT ARE THE ADWG?**
The 2011 Australian Drinking Water Guidelines (ADWG) were developed by the National Health and Medical Research Council. They define the standard for safe, good quality drinking water. Hunter Water must ensure its drinking water meets the Guidelines.

**HOW IS THE WATER DISINFECTED?**
Hunter Water, like many water providers in Australia, uses chlorine for disinfection. It is recommended that a certain level of chlorine (the chlorine residual) remains in the water supply as it travels through the distribution system to customers.

**HOW IS THE LEVEL OF DISINFECTION MEASURED?**
Following chlorine dosing, some chlorine residual remains in the water. Measuring the level of the chlorine residual is an indicator of the effectiveness of the disinfection system.

**WHAT HAPPENS TO THE CHLORINE?**
The chlorine naturally breaks down. There will be less chlorine residual:
- the longer the water stays in the system
- the further the water travels from the disinfection point
- the warmer the outside temperature.

**WHAT CAN HAPPEN IF THE LEVEL OF CHLORINE RESIDUAL IS TOO LOW?**
If large areas of the distribution system (pipes) do not contain a chlorine residual the risk of disease-causing organisms like *E.Coli* entering and remaining in the water supply increases.

**WHERE IS THE WATER DISINFECTED?**
Chlorine is added to the water at the:
- Grahamstown, Gresford, Lemon Tree Passage, Tomago, Dungog, Anna Bay and Nelson Bay water treatment plants.
- North Lambton, Cardiff, South Wallsend, Toronto and Buttai reservoirs.

**WHY IS THIS PROJECT NEEDED?**
Regular monitoring has found that some Hunter Water customers, especially those located furthest from where the disinfection occurs, receive water with chlorine residual at low levels, particularly during summer. A gradual increase in chlorine dosing during the warmer summer temperatures, and gradual decrease as the
weather cools will assist in combating seasonal fluctuations in the taste of the water.

WHAT CHLORINE LEVEL IS NEEDED?
According to the ADWG a minimum chlorine residual of 0.2 mg/L (milligrams per litre) is recommended.

WHAT IS THE PROJECT PURPOSE?
The project will help ensure the required level of chlorine residual remains in the water as it travels through the water distribution system.

WHAT DOES THE PROJECT INVOLVE?
The project will:
- increase disinfection at the water treatment plants at Grahamstown, Gresford, Lemon Tree Passage, Tomago and Nelson Bay during summer
- improve process controls
- investigate how to reduce the time water is retained in the supply system.

WHEN WILL THE LEVELS OF DISINFECTION BE INCREASED?
From mid-December 2014 Hunter Water will begin increasing disinfection levels at the water treatment plants. This will be done in small increments to maintain water quality consistency for customers. As the weather temperature drops again in the cooler month’s disinfection will be reduced.

WILL I NOTICE A CHANGE?
Some customers may notice a change in how their water tastes and smells.

IS THERE A MAXIMUM CHLORINE LEVEL?
The ADWG states that the maximum guideline for total chlorine is 5.0 mg/L. This project will provide chlorine levels of between 1.5 and 3 mg/L in water leaving the water treatment plants, depending upon the location. As water travels through the distribution system, before it reaches customers, the chlorine level falls.

HOW DO I KNOW THAT CHLORINE LEVELS WON’T BE TOO HIGH?
Water quality at the water treatment plants is continually monitored. There are also an existing 68 analysis points in the water distribution system for regular and extensive water quality monitoring, ensuring that chlorine levels are optimal and not excessive.

ARE HIGHER CHLORINE LEVELS DANGEROUS?
Most water utilities in Australia use chlorine to disinfect the drinking water supply. Chlorine is also used in swimming pools. Monitoring will ensure chlorine levels are safe and do not exceed the ADWG values. What is dangerous is not having chlorine in the water supply, thus risking disease-causing organisms like *E.Coli*.

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