



Pollution Incident Response Management Plan

Goulburn Water Treatment Plant

Licence 1649

| | |
|-------------------|--|
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Annual Review of PIRMP

| Date of Review | Changes Made | Name |
|----------------|--|------|
| 01/05/2017 | Incident reporting contact details updated | |
| 01/05/2018 | No changes required | |
| 15/05/2019 | Minor spelling changes | |
| 21/05/2020 | Reviewed | |
| 09/12/2020 | Reviewed and Updated | |
| 16/12/2021 | Flowchart added, Reviewed and Updated | |
| 21/12/2021 | Change filtration to treatment, minor structural changes | |
| 02/11/2022 | Annual Review of document | TS |
| 13/12/2022 | Update contact details for EPA | TS |
| 30/07/2024 | Updated figures 3.1 & 3.2, updated incident reporting section 4.3, updated chart 5, updated types of hazards section 6.2, deleted other reportable incidents section 6.3 updated pollution incident reporting form section 7 | JA |

1 Introduction

This pollution management response has been written for the Goulburn Water Treatment Plant to fulfil the requirement of preparing and implementing a pollution incident response management plan.

Under Part 5.7A of the *Protection of the Environment Operations Act 1997 (POEO Act)*, there is a requirement to prepare, keep, test and implement a pollution incident response management plan.

The objectives of the plan are to:

- Ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), the Water NSW, NSW Health, Goulburn Mulwaree Council and Fire and Rescue. Also, other people located near the facility who may be affected by the impacts of the pollution incident will be contacted.
- minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability

2 Purpose

The purpose of the plan is to:

- Outline how the risk of a pollution incident will be minimised and controlled through the identification of risks and the development of planned actions to minimise and manage those risks.
- Document the notification protocol to ensure comprehensive and timely communication about a pollution incident is provided to all relevant stakeholders.
- Ensure the risks associated with the activity are mitigated, to ensure the protection of workers, community and the environment.
- Ensure compliance with all legislative requirements.

3 Scope

The Goulburn Water treatment Plant is located at 233-235 Wheeo Road on the Western side of town on the edge of the City area. In close proximity to the plant is a retirement village, Trinity Secondary College and a number of rural residential properties.

The main entrance to the plant is located directly opposite River Street. There is another entrance to the plant approximately 120 metres past the first entrance, on Wheeo Road. The EPA Licence for this facility is 1649. The site is shown below in Figure 3.1. Figure 3.2 shows the location of the site

Figure 3.1 – Goulburn Water Treatment Plant Layout

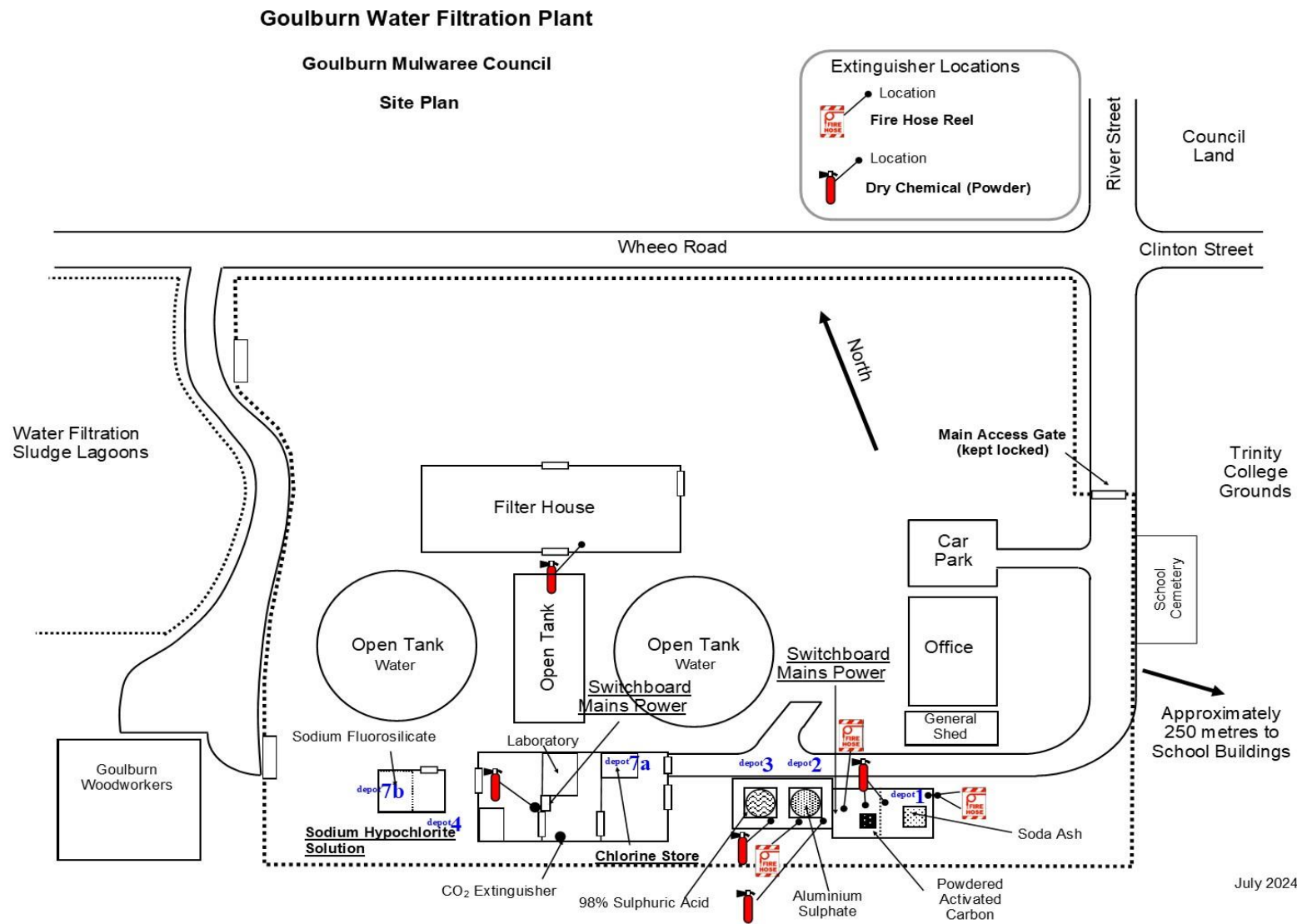


Figure 3.2 –



4 Incident Reporting

4.1 Incident Definition

A pollution incident is required to be notified if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act as:

- a) harm to the environment is material if:
 - (i) *it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
 - (ii) *it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and*
- b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

WHS Notifiable Incident

Some pollution incidents may also be classified as 'notifiable incidents' under WHS Law requiring Safe Work NSW to be notified. An incident can still be classified as a 'notifiable incident' even if the pollution is contained within the site without causing harm to the environment.

Under WHS Law a 'notifiable incident' is:

- a) The death of a person;
- b) A 'serious injury or illness'; or
- c) A 'dangerous incident';

arising out of the conduct of a business or undertaking at a workplace.

'Notifiable incidents' may relate to any person – whether an employee, contractor or member of the public.

Only the most serious health or safety incidents are notifiable, and only if they are work related. They trigger requirements to preserve the incident site pending further direction from the regulator.

The WHS Law requires:

- a) A 'notifiable incident' to be reported to Safe Work Australia immediately after becoming aware it has happened
- b) If the regulator asks – written notification within 48 hours of the request, and
- c) The incident site to be preserved until an inspector arrives or directs otherwise (subject to some exceptions)

Failing to report a 'notifiable incident' is an offence and penalties apply.

Dangerous incidents including 'near misses'

Some types of work related pollution incidents are classified as dangerous incidents and must be notified even if no-one is injured. Safe Work NSW must be notified of any pollution incident in relation to a workplace that exposes any person to a serious risk resulting from an immediate or imminent exposure to an uncontrolled escape, spillage or leakage of a substance.

The GMC work health and safety manager will assess the information provided regarding the spill and decide if the incident is notifiable and inform Safe Work NSW where required.

4.2 Legal Duty to Notify

It is the responsibility of all employees and contractors of Goulburn Mulwaree Council, who are engaged in any work activity at the Goulburn Water Treatment Plant, to notify the Site Supervisor (or their delegate) of all environmental incidents and hazards that may result in an environmental incident, regardless of the nature or scale of the incident.

4.3 Incident Reporting

Firstly, call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, the WFP supervisor must assess the incident, report the incident in vault and further communicate details of the spill to the state agencies listed in section 4.3.1 where required as well as the operations engineer water, business manager water operations, director of utilities, GMC work health and safety manager and GMC environmental services team.

Should the WFP Supervisor not be available the responsibility to assess the incident, report the incident in vault and further communicate the details of the spill to the required state agencies in section 4.3.1 as well as the business manager, engineer, director, GMC work health and safety manager and GMC environmental services will fall to the acting WFP supervisor and or on-call WFP operator.

The GMC work health and safety manager will assess the information provided regarding the spill and decide if the incident is notifiable and inform Safe Work NSW where required.

The following information must be recorded and reported to the relevant call centres:

1. The time and date of the incident
2. EPA Licence number of the facility, for Goulburn WFP the licence number is 1649
3. The nature of the incident and the expected duration of the event (chemical spill, sludge lagoon overflow etc)
4. The location of the incident and the place where the pollution is occurring or likely to occur;
5. The estimated quantity or volume of any discharge and the concentration of any pollutants involved;
6. The circumstances in which the incident occurred (flood, power failure, human error etc);

7. The action(s) taken or proposed to deal with the incident and any resulting pollution or threatened pollution;
8. Details of any samples collected from the incident (all discharges to the environment will require collection and testing of samples);
9. Name and contact details of the person reporting the incident; and
10. Any other information requested.

Following initial calls to the required agencies a call back will usually be received within the following day from the EPA, Water NSW and NSW Health requesting an email with further details of the incident.

For NSW Health – the contact person is Tabitha Holliday.

For GMC Environmental Services, Sarah Ainsworth (Business Manager Environment and Health) is the primary contact.

4.3.1. Environmental Incident

Any incident that may cause or threaten material harm to the environment shall be communicated to the following agencies immediately by the Water Treatment Plant Supervisor or the water treatment plant on-call staff member in the Water Treatment Plant Supervisors absence.

- | | |
|---|------------------------------|
| 1. Fire and Rescue (for large chemical spills) | 000 |
| 2. EPA Environment Line | 131 555 |
| 3. Water NSW Incident Line | 1800 061 069 |
| 4. NSW Health | 1300 066 055 or 0407 060 237 |

For calls to Water NSW please ensure the operator is advised that the incident is within the Warragamba catchment where appropriate.

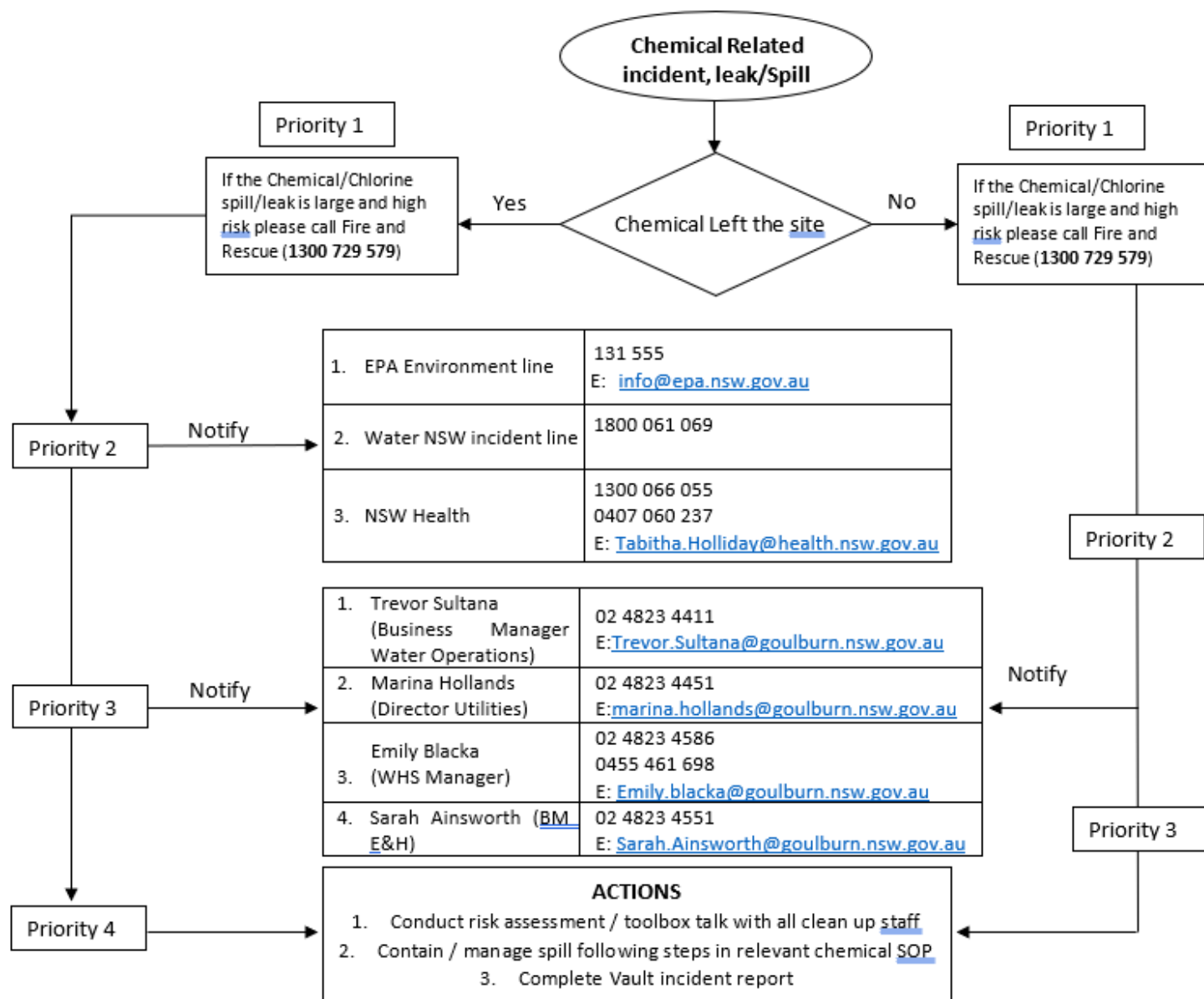
If unable to contact NSW Health through the above provided number an email should be sent as soon as possible by the Council officer calling in the incident to tabitha.holliday@health.nsw.gov.au advising of the incident.

4.3.2. WHS Notifiable Incident

Any incident that may result in a WHS notifiable incident must also be communicated to Safework NSW. The Water Treatment Plant Supervisor or the Water Treatment Plant on-call operator must contact the GMC work health and safety manager and provide details of the incident. The GMC work health and safety manager will assess the information provided and decide if the incident is notifiable and inform Safe Work NSW where required.

- | | |
|---|-----------|
| 1. GMC Work Health and Safety Manager | 4823 4586 |
| 2. SafeWork NSW (for a WHS notifiable incident) | 131 050 |

5 Chart – 1 Chemical Related Incidents Flow Chart



6 Description and Likelihood of Hazards

6.1 Chemicals Stored at the Site

The following dangerous goods are stored at the site in the following quantities

| Chemical | Class | UN | Storage Capacity | Typical Quantity Stored |
|--|-------|---------|------------------|-------------------------|
| Hypochlorite Solution (liquid chlorine) | 8 | UN 1791 | 2,000 litres | 1,500 litres |
| Chlorine (Gas chlorine) | 2.3 | UN 1017 | 2,760 kg | 2,760 litres |
| Sodium fluorosilicate (Fluoride) | 6.1 | UN 2674 | 2,000 kg | 1,500 kg |

The following additional chemicals are stored at the site:

| Chemical | UN | Storage Capacity | Typical Quantity Stored |
|---------------------------------|------|------------------|-------------------------|
| Aluminium Sulphate (Alum) | 1760 | 50,000 litres | Up to 45,000 litres |
| Soda Ash | None | 50 tonne | 35 - 40 tonne |
| Powdered Activated Carbon (PAC) | None | 3 tonne | 2 tonne |
| Potassium permanganate | 1490 | 300 kg | 50 - 300 kg |
| Polymer - Flopam | None | 300 kg | 200 kg |

6.2 Types of Hazards

6.2.1. Chlorine

The chlorine gas is stored in 920 kg drums and used within a specifically built chlorination unit. This unit is located within the chemical building (the main colourbond building). The unit allows two chlorine cylinders to be connected with one online and the other in standby mode. The dosing equipment is fitted with a vacuum regulator on the changeover unit that is mounted on each cylinder. The chlorine delivery lines work under negative pressure and include automatic shutoff valves on each drum. This means that if the line breaks, the cylinder shuts off preventing the release of chlorine gas.

The room is fitted with black heaters, a ventilation fan (that extracts air and releases it immediately through the wall and out of the building) and a chlorine gas detector. The gas detectors fitted in the drum storage room and the rotometer room detect any chlorine fumes, triggering the automatic drum shutoff valves as well as a siren and light that is audible and visible throughout the plant with notification being made to operators by the telemetry system.

A wind sock is located immediately outside of the plant room to enable the determination of wind direction in the case of emergency.

6.2.1.1 Action for a Chlorine Leak

The chlorine leak should be managed as per the Emergency Management Plan for the WTP, as lodged with the NSW Fire Brigade and also stored in the emergency manifest cabinet at the Gate. This details the evacuation of the site, further investigation with breathing apparatus, how to slow the movement of the chlorine plume and the NSW Fire Brigade managing the incident.

6.2.2. Other Chlorine Emergencies that Could Occur

1. Fire – in the event of fire in the chemical building, the fire brigade should be called for specialist firefighting.
2. Explosions – the tanks can withstand certain pressure, however, a BA should be worn and if possible the chlorine tanks should be checked to determine any leaks.
3. Cylinder valve broken – Ixom should be called on 1800 033 111 for advice how to stop the chlorine from leaking.
4. Earthquake – may break the chlorine delivery line. Due to the negative pressure of the cylinder and the chlorine drum automatic shutoff valves, this would shut down the cylinder and stop the leak.
5. Cylinder Impact – this may happen during delivery or being hit in the building while being stored ready for use. In the event of the cylinder being hit, staff are to remove themselves from the area, get the BA out from either the chemical building or the filter building and examine the cylinder. Specialist advice should be sought if there is damage to the cylinder.
6. Tampering with the cylinder – the site is locked however in the event of tampering, the BA should be worn and the cylinder investigated to determine the problem with the cylinder and the cylinder turned off. The scenario for a leak should be following if a leak is detected.

6.2.3. Other Chemical Spills

Minor spills at the water treatment plant are unlikely to pose a serious threat to the environment. However, all spills, whether major or minor, must be managed so as to minimise the potential for environmental harm.

- **Minor Spill:** Follow minor spill clean up steps in related chemical SOP
- **Major Spills:** Follow major spill clean up steps in related chemical SOP

In the event that spillage migrates off the site, activate the environmental reporting procedures.

7 Pollution Incident Reporting Form

Goulburn Water Treatment Plant
EPA Licence Number 1649

| | |
|---|--|
| Time and date of incident | |
| Name and contact details of person reporting the incident. | |
| The nature of the incident (Sludge overflow, chemical spill etc) | |
| The location of the incident and the place where pollution is likely to occur (eg. Wheeo Road Potassium permanganate dosing point , KMnO4 leak, Creek nearby) | |
| The estimated volume of any discharge and the concentration of pollutants involved (If volume is unknown try and provide an estimate and advise of the pollutant type, Sludge, chemicals etc) | |
| Reason for the incident occurring (power /mechanical failure, flooding etc) | |
| Actions being taken or proposed to be taken to deal with the incident (restoration of power, containment of spill, wait for flood waters to recede etc) | |
| Details of samples collected for testing from the incident | |

Notification Record

| Agency / Officer Notified | Date and Time of Notification | Comments |
|---|-------------------------------|----------|
| NSW EPA 131555 info@epa.nsw.gov.au | | |
| Water NSW 1800 061 069 | | |
| NSW Health 1300 066 055 or 0407 060 237 Tabitha.Holliday@health.nsw.gov.au | | |
| GMC Environmental Services 4823 4551 sarah.ainsworth@goulburn.nsw.gov.au | | |
| GMC WHS Manager Emily Blacka 4823 4586 | | |
| Safework NSW (only for a WHS notifiable incident) 131050 | | |
| Fire and Rescue (for large chemical spills) 1300 729 579 | | |
| Business Manager Water Operations Trevor Sultana 0418 480 557 trevor.sultana@goulburn.nsw.gov.au | | |
| Director Utilities Marina Hollands 0417 140 204 marina.hollands@goulburn.nsw.gov.au | | |

Additional comments regarding the pollution incident:

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