Pollution Incident Response Management Plan

Water and wastewater services

June 2018
1 Area of Operations

1.1 Water

Sydney Water supplies over 1.5 billion litres of drinking water to homes and businesses throughout Sydney, the Blue Mountains and the Illawarra every day. Water is treated at one of nine water filtration plants. It is then supplied through a network of pipes, reservoirs and pumping stations:

- 21,951 km of water pipes
- 243 reservoirs
- 151 water pumping stations

1.2 Wastewater

Wastewater is treated at any of 16 wastewater treatment plants or 14 water recycling plants. The wastewater network to get to those plants consists of:

- 25,597 km of pipes
- 684 wastewater pumping stations
- the Northside storage tunnel.
Sydney Water has **24 separate systems** that are licenced by the NSW Environment Protection Authority (EPA).

### 1.3 Stormwater

Sydney Water’s stormwater network provides services to around 570,000 properties through 73 catchments and consists of:

- 447 km of channels and pipes
- over 60 stormwater quality improvement devices
- flood-prone land and trunk drainage in the Rouse Hill area.

### 1.4 How do pollution events happen?


Despite having high standards of product quality and asset management, there are many natural and operational factors that can result in pollution events. The most common pollution incidents affecting Sydney Water are in relation to wastewater overflows.

Wastewater overflows occur when pipes become blocked and cause wastewater to back up and overflow from a designed relief point. In dry weather, these blockages are most commonly caused by tree roots, material such as wet wipes, silt, oil and grease or a combination of these. In wet weather, stormwater can enter the wastewater system from illegal connections or ingress through cracked pipes, and cause diluted wastewater to overflow to the environment.

Occasionally an asset failure or adverse weather conditions can cause a bypass of some treatment process units. Extended power failures from the electricity networks can also result in pollution events.

Sydney Water reports all incidents according to the conditions set out in their environment protection licences.

### 1.5 Contact details

Although the water supply is available at least 99.7% of the time, customers can have their service affected. Customers can see if there is a problem or planned maintenance work in their area by going to [Water supply and service updates](#) on the [Sydney Water website](#).

The Sydney Water Contact Centre is the primary mechanism for identification of pipe failures, including leaks, breaks, odours or sewage overflows. To report an incident, customers can call the 24-hour emergency services line on 13 20 90.

Sydney Water also has a general enquiries line, 13 20 92, which is monitored during business hours.
# 2 Pollution incident response management

Incident Management is the process of limiting the actual and potential disruption caused by an event. Sydney Water has adopted the comprehensive approach to Incident Management commonly referred to as PPRR, which includes:

- Prevention
- Preparedness
- Response
- Recovery

To effectively manage incidents, all areas of Sydney Water, including our suppliers and business partners, take an integrated perspective in preventing, preparing, responding to and recovering from events.

To do this effectively we have aligned our Business Resilience Framework with international standards *ISO 22301: Societal security – Business Continuity* and *ISO 22320: Societal security – Emergency Management*. Our framework also implements the *Australasian Interservice Incident Management System (AIIMS)* which is a cornerstone of the *NSW State Government Emergency Management arrangements*.

## 2.1 Risk management

Before a disruptive event there are opportunities to implement proactive contingencies and controls that can reduce the frequency and impact of disruptive events. Effective risk management relies on a thorough understanding of criticalities, vulnerabilities, dependencies, and threats. Suitable controls and contingencies can only then be developed to reduce risk to an acceptable level.

Sydney Water has implemented a Risk Management Framework compliant with *ISO 31000: Risk Management, Principles and Guidelines*. All criticalities are assessed to ensure an appropriate level of risk management is applied and effective mitigation is in place.
2.2 Incident plans

Sydney Water develops incident plans to help manage the disruption caused by an event; it does not prevent or eliminate the threat. In doing so Sydney Water takes an ‘All Hazards’ approach to managing those impacts. These plans detail the actions to be taken to minimize or prevent any risk of harm to human health or the environment.

Plans are developed for all identified criticalities to ensure continuity of supply to customers and generally fall into one of the following categories as described below:

Testing of plans is done on a risk basis, the higher the risk the more frequent the testing and assurance. Plans may also be tested during planned maintenance activities such as shutdowns and when significant change occurs. The Water and Wastewater Services PIRMP is tested annually.

2.3 Incident notifications

Sydney Water has developed mechanisms to communicate both internally and externally with all stakeholders who could be potentially impacted by an event. As each event is different, the Incident Controller ensures that communication mechanisms, protocols and messaging are established to effectively notify and communicate with staff, customers and key stakeholders.

External agencies will make decisions and initiate notifications and communications to their stakeholders based on the information that we provide.

Social media has become an essential part of our communications strategy, particularly during an event. Sydney Water currently has a presence on the following platforms:

- Twitter: twitter.com/SydneyWaterNews
- Facebook: facebook.com.au/SydneyWater
- LinkedIn: linkedin.com/company/sydney-water
- YouTube: youtube.com/SydneyWaterTV
- Instagram: instagram.com/sydneywater
The diagram below illustrates the external notifications required by our licences and agreed Memoranda of Understanding.

### 2.4 Incident response

The Sydney Water emergency response process is illustrated below and described overleaf.

For every incident, a Controller is appointed who is accountable for all activities necessary for the resolution of the event, including:

- establishing an Incident Management Team
- identification and application of tasks required to resolve the event
- acquisition, provision and management of resources, services, materials etc
- collection and analysis of information, including forecasts
- provision of warnings, notifications and information to staff, customers and stakeholders
- escalation and de-escalation of resourcing.
<table>
<thead>
<tr>
<th>Step</th>
<th>Key tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assess and declare incident&lt;br&gt;Actions to determine initial incident level</td>
</tr>
<tr>
<td>2</td>
<td>Notify&lt;br&gt;Actions to notify affected stakeholders following predefined business rules and other direction</td>
</tr>
<tr>
<td>3</td>
<td>Establish control&lt;br&gt;Actions to determine incident leadership and to exercise control over the event</td>
</tr>
<tr>
<td>4</td>
<td>Manage the incident&lt;br&gt;Actions to contain the event and restore services</td>
</tr>
<tr>
<td>5</td>
<td>Record the incident&lt;br&gt;Actions to record event details, investigations and debrief reports</td>
</tr>
</tbody>
</table>
2.5 Incident Management Team (IMT) structure

The structure of Sydney Water’s Incident Management Teams (IMTs) are based on AIIMS. The structure can be adapted to the circumstances being dealt with and are flexible enough to change as the event unfolds. A typical IMT is illustrated below.

For larger and more complex events, groups of tasks are delegated to functional teams within an Emergency Management Team. Each functional team is led by a Team Coordinator to allow for a manageable span of control. A typical EMT is illustrated below.