



OTR Water and Sewerage Infrastructure Incident Notification and Communication Protocol

Minor and Intermediate Water Industry Entities



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Introduction

This Water and Sewerage Infrastructure Incident Notification and Communication Protocol (Protocol) has been developed to provide minor and intermediate *water industry entities* (WIEs) a clear framework for reporting incidents related to safety and reliability of infrastructure to the Office of the Technical Regulator (OTR).

This Protocol is applicable to all water and sewerage infrastructure as defined in the *Water Industry Act 2012*, including but not limited to:

- Drinking water treatment facilities, storage facilities and distribution systems.
- Sewage collection, treatment and storage facilities.
- Non-drinking water treatment facilities, storage facilities and distribution systems.

Incident Reporting

Incidents reportable to the OTR are classified as Level 1 or Level 2. The classification of an incident relates to its impact on safety and reliability and dictates timelines for notification to the OTR. Incidents reportable to the OTR will generally involve a significant event that may include infrastructure failure, personal injury or harm, or loss of an essential water or sewerage service for an extended period or on a significant scale. An additional reporting category designated "notifiable event" has been established. This category includes incidents or events which may not fit into the standard incident criteria but are required to be notified to the OTR to mitigate operational risk of the fulfillment of OTR's regulatory functions. In cases where there is media interest, OTR needs to be aware of incidents to be prepared to provide advice to the Minister, executive and other stakeholders as required. These events are not considered incidents for reporting purposes.



Table 1 Incident Classification and notification requirements to the OTR

LEVEL 1 INCIDENTS	Must be reported verbally by phone notification as soon as practicable and in writing by email notification within 24 hrs.
LEVEL 2 INCIDENTS	Must be reported in writing by email notification within 24 hrs.
NOTIFIABLE EVENTS	Must be reported in writing by email as soon as practicable and within 24hrs.

Table 3 outlines specific incident criteria and notification requirements for WIEs. If a WIE is unsure if an incident is reportable, the WIE should contact the OTR, referring to the contact list in Table 2.

In addition to the notification requirements outlined in Table 3 all incidents are to be detailed in an Incident Register¹ by the WIE and provided to the OTR on an annual basis with the annual reporting checklist or as agreed with the OTR. Performance reporting data required to be reported annually in Section 11 of the OTR internal audit checklist is also summarised in Table 3. WIEs who undertake the Bureau of Meteorology National Performance Reporting are **not** required to complete Section 11 of the internal audit checklist.

Due to the size variation of WIEs in South Australia, where applicable, the number of customers impacted by an incident has been expressed as a percentage. The WIE should define the number of customers relative to the percentage in their Incident Register.

Note 1: *This Protocol does not absolve the WIEs' responsibilities to any other agency such as those that are included in the Water/Wastewater Incident Notification and Communication Protocol (administered by DHW) or other similar documents.*

Note 2: *This Protocol does not replace any formal reporting and notification requirements to a third party (i.e. other essential services provider, local Council, emergency services etc).*



Table 2 Emergency Contacts

OFFICE OF THE TECHNICAL REGULATOR INCIDENT REPORTING CONTACTS			
Email notifications to: otr.wsinfrastructure@sa.gov.au		Telephone	Mobile
Emergency contacts are listed in order of communication (Primary contact – 1 st point of contact):			
Naomi Struve – Primary contact	Manager Water and Sewerage Infrastructure	(08) 8429 3622	0475 826 663
Natalie Bolton	Senior Water Infrastructure Officer	(08) 8429 2139	0434 825 075
Emily Lohmann	Senior Water Infrastructure Officer	(08) 8429 3966	0466 239 724
Rob Faunt	Technical Regulator	(08) 8429 3182	0419 763 546



Table 3 Incident reporting criteria for small and intermediate water industry entities

Category	LEVEL 1 INCIDENT	LEVEL 2 INCIDENT	NOTIFIABLE EVENT	Annual Reporting <i>through the SRMTMP annual internal audit reporting checklist</i>
Failure/damage of water/wastewater/non-drinking water treatment plant or within network infrastructure (e.g. pump stations)		Infrastructure failure/damage where service to customers is affected for >4 hrs or >20% of customers.		<ul style="list-style-type: none">• Total number of unplanned interruptions.• Average duration of unplanned interruption.
		Infrastructure failure/damage where service to customers is unaffected, but significant repairs or extensive corrective work is required. ²		
Network failure (pipe bursts) – drinking and non-drinking water		Pipe break where supply is affected for more than 20% of customers.		<ul style="list-style-type: none">• Number of water main breaks.• Average duration of unplanned interruptions.



Category	LEVEL 1 INCIDENT	LEVEL 2 INCIDENT	NOTIFIABLE EVENT	Annual Reporting <i>through the SRMTMP annual internal audit reporting checklist</i>
Overflows (wastewater)		Wastewater overflow where there is actual or potential environmental or public harm (as per EPA/DHW definitions and reporting requirements).		Number of sewerage main breaks, leaks and chokes.
Security Breach including unauthorised access, tampering or cyber security ³ incident involving water or sewerage infrastructure		Security breach of any kind which has an actual or potential effect on operations and/or service provision.		
Cross-connection	Detection of any cross-connection or mis-connection ⁴ of non-drinking water and drinking water.			



Category	LEVEL 1 INCIDENT	LEVEL 2 INCIDENT	NOTIFIABLE EVENT	Annual Reporting <i>through the SRMTMP annual internal audit reporting checklist</i>
Health and safety	Occurrence of any notifiable incident as per Safe Work SA definition ⁵ which occurs because of infrastructure operations or works.			Summary of water/sewerage infrastructure which was found to be unsafe, and the remedial action taken.
Media Interest / Presence of Emergency Services			Any incident that occurs during water or sewerage infrastructure operations or works ⁶ , where disruption to customers or the community has occurred AND media and/or emergency services are on site.	
Other incidents ⁷		Any other incident where there is serious concern about the safety or reliability of the infrastructure or service.		



Explanatory Notes

¹WIEs must maintain an incident register which captures key information including but not limited to date, location, service affected, incident type, and response/corrective actions taken. A template is available [here](#).

²Significant repairs or extensive corrective work refers to circumstances where repairing/replacing or reinstating the infrastructure will take an extended period to complete (i.e. greater than 3 days). This may occur due to task complexity, unavailability of required parts or components in the spares inventory or the need for specialised resources.

³Cyber security incidents are those that disrupt critical wastewater and water operations, e.g. an attack on process control systems such as SCADA which may compromise treatment processes and/or operation of network infrastructure, including pumps and valves.

⁴Cross-connection – an actual or potential connection between a water supply and a source of contamination (e.g. connection between a drinking water supply and a non-drinking water supply).

Mis-connection – incorrect installation of non-drinking and drinking water plumbing or infrastructure which results in the wrong water being supplied as intended (i.e., non-drinking water flows through the drinking water plumbing to drinking water outlets and drinking water flows through the non-drinking water plumbing to non-drinking water outlets).

⁵Work Health and Safety Act 2012 (SA) Part 3 (Incident notification)

35—What is a notifiable incident
notifiable incident means—

(a) the death of a person; or (b) a serious injury or illness of a person; or (c) a dangerous incident.

36—What is a serious injury or illness

In this Part— serious injury or illness of a person means an injury or illness requiring the person to have— (a) immediate treatment as an in-patient in a hospital; or (b) immediate treatment for— (i) the amputation of any part of his or her body; or (ii) a serious head injury; or (iii) a serious eye injury; or (iv) a serious burn; or (v) the separation of his or her skin from an underlying tissue (such as degloving or scalping); or (vi) a spinal injury; or (vii) the loss of a bodily function; or (viii) serious lacerations; or (c) medical treatment within 48 hours of exposure to a substance, and includes any other injury or illness prescribed by the regulations but does not include an illness or injury of a prescribed kind.

37—What is a dangerous incident

In this Part— dangerous incident means an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to— (a) an uncontrolled escape, spillage or leakage of a



substance; or (b) an uncontrolled implosion, explosion or fire; or (c) an uncontrolled escape of gas or steam; or (d) an uncontrolled escape of a pressurised substance; or (e) electric shock; or (f) the fall or release from a height of any plant, substance or thing; or (g) the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations; or (h) the collapse or partial collapse of a structure; or (i) the collapse or failure of an excavation or of any shoring supporting an excavation; or (j) the inrush of water, mud or gas in workings, in an underground excavation or tunnel; or (k) the interruption of the main system of ventilation in an underground excavation or tunnel; or (l) any other event prescribed by the regulations, but does not include an incident of a prescribed kind.

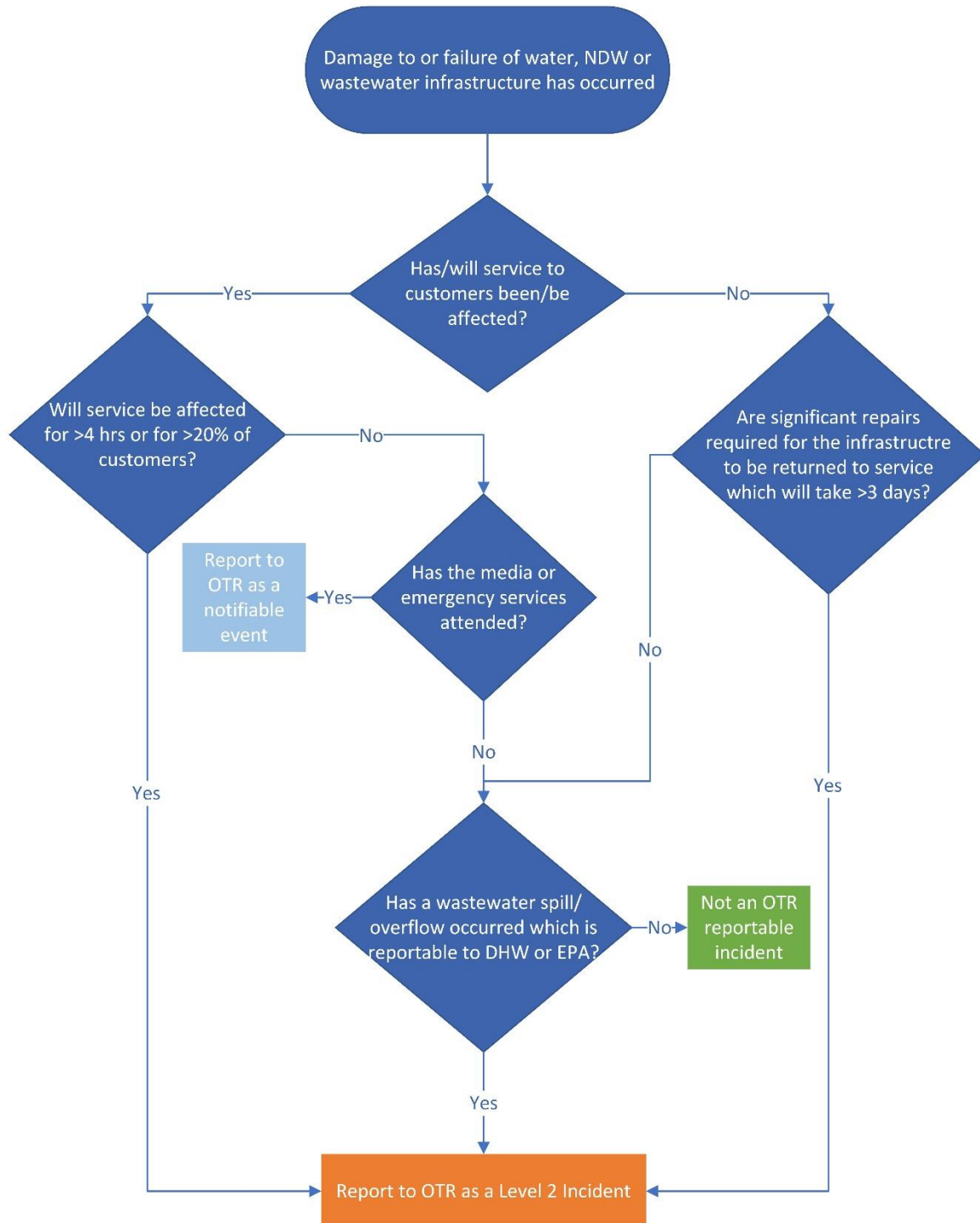
Note – Incident notification to and communication with SafeWork SA and emergency services (as required) should always take priority. Notification to OTR is to be as soon as practicable.

⁶These events include those which impact other utilities infrastructure (i.e., gas, electrical, communications). An example is damage to underground Telstra cabling causing an internet service outage for 2000 customers. Due to the scale of the incident the media arrive on site. This becomes a notifiable event.

⁷This includes any other incident within the scope and intent of this protocol that does not fit within the defined incident criteria in Table 3. These incidents, situations and events are those that have the potential to lead to serious injury or death, widespread damage to property and/or infrastructure, or widespread and extended service outages if immediate corrective action is not taken.

Incident examples / case studies

Flowchart example - is an incident involving damage or failure to infrastructure reportable to the OTR?





Incident Case Studies

Infrastructure failure/damage where service to customers is unaffected, but significant repairs or extensive corrective work is required.

Background

Koala Council operates a Community Wastewater Management Scheme with 2,500 residential connections. The scheme consists of household septic tanks and a series of lagoons. The final lagoon effluent is chlorinated and reused for restricted municipal irrigation.

Incident Details

The liner of the first lagoon was recently replaced after reaching the end of its service life. The new liner has failed with multiple holes/tears appearing in the liner around the water line and requires replacement.

Root Cause

Unknown and under investigation. The failure has been reported to the installation company and we have been advised a rep will be on site to investigate tomorrow.

How was the Incident Detected?

Routine weekly inspection of the lagoons by Council Staff.

Response Taken/Corrective Actions

The lagoon with the failed liner will be drained and effluent pumped to an unused lagoon starting later today. Due to the redundancy within the system (unused lagoon) the system will be reconfigured with lagoon one remaining out of service until the liner can be replaced/repared. This will allow required retention times within the lagoons to be maintained to meet Councils DHW approval. There should be no disruption to customers and municipal irrigation with the treated effluent will be maintained. It is unknown at this stage how long repair works will take.

Commentary

This incident describes an infrastructure failure (lagoon liner) where the lagoon will likely be out of service for an extended period of time and the repair work will be significant. As such this is a Level 2 Incident *“Infrastructure failure/damage where service to customers is unaffected, but significant repairs or extensive corrective work is required”*.



Any incident that occurs during water or sewerage infrastructure operations or works, where disruption to customers or the community has occurred AND media and/or emergency services are on site.

Background

The City of Sundury provide a sewerage service to 7,000 customers. It is the middle of summer and Sundury is hosting its annual regatta at a local private dam. Water quality testing completed in preparation for the event has confirmed the water quality is fit for purpose for the event.

Incident Details

A contractor for NBN reported this morning they had ruptured a sewer pipe running along an easement in the property where the dam is located. The spill was significant enough that sewage has run down a slight slope and into the dam. Local media have been alerted by the property owner and are on site.

Root Cause

A contractor for NBN has ruptured a major sewer pipe while operating a directional drill. The root cause is under investigation. No request from BYD for infrastructure plans has been received by the city and this may be a case of the contractor not taking due care.

How was the Incident Detected?

Notification by an NBN contractor.

Response Taken/Corrective Actions

The flow from the pipe was stopped and communication with the property owner is ongoing. An alternative location for the Regatta is being investigated by organisers. Investigations are continuing.

Commentary

This event has affected private property. The spill is not reportable to EPA or DHW due to its nature. It has however attracted media attention and caused disruption to community due to the planned regatta needing to be relocated. As such this event is classified as a notifiable event *“Any incident that occurs during water or sewerage infrastructure operations or works, where disruption to customers or the community has occurred AND media and/or emergency services are on site”*.



Security breach of any kind which has an actual or potential effect on service provision.

Background

Terra Water is a small water industry entity providing potable water services to 2,500 connections. Within the network two 100KL treated water storage tanks provide water to all customers.

Incident Details

This morning a resident neighbouring the treated water storage tank reported they had seen 3 people acting strangely around treated water storage tank 1 the previous night. Upon receiving the report a staff member immediately performed an inspection of the tank and found evidence the tank had been climbed and the inspection hatch had been breached. There is no evidence of entry to the second treated water storage tank.

Root Cause

We are currently reviewing our security measures which have been adequate to date (fenced tank with locked access hatch). It appears a hole has been cut in the security fence some time ago. Investigations are ongoing.

How was the Incident Detected?

Notification by a resident and incident confirmed by inspection completed by a water industry entity staff member.

Response Taken/Corrective Actions

DHW were phoned immediately, and advice implemented. A water sample has been collected and has been couriered to a laboratory for testing. The tank has been taken offline until water testing results can be reviewed. The system is set up in a way which allows customers to be supplied by both tanks or either tank, so for the time being service has been maintained to all customers via tank 2. Hot weather in the next few days means that demand will likely increase and both tanks will be required at this time to meet demand.

Commentary

A security breach to a treated water storage tank and potential contamination event has occurred requiring an operational change. Customers may be impacted if the situation cannot be resolved within a couple of days due to the risk of demand outstripping supply. As such this is classified as a Level 2 incident *“Security breach of any kind which has an actual or potential effect on operation and/or service provision”*.



Any other incident where there is serious concern about the safety or reliability of the infrastructure or service.

Background

A commercial agreement is in place between a water industry entity (Eyre's Point Council) and a third party (O'Donnell's) for the supply of treated wastewater (recycled water). The supply of recycled water is a critical disposal path of treated wastewater from the water industry entities wastewater treatment plant.

Incident Details

O'Donnell's has notified Eyre's Point Council they are going into receivership and will cease operation in two weeks' time, thus no longer requiring recycled water from the Council. There is no contingency in place for the disposal of treated wastewater.

Root Cause

Absence of an alternative disposal pathway for treated wastewater caused in part by a lack of contingency planning within Council.

How was the Incident Detected?

Notification by the third party (O'Donnell's).

Response Taken/Corrective Actions

An emergency meeting has been arranged for tomorrow to identify options for ongoing sustainable wastewater disposal. DHW and EPA have been contacted to discuss option for emergency irrigation.

Commentary

The loss of the only disposal pathway for treated wastewater has major implications for the water entity in providing a reliable and safe service. In this case contingency planning is critical to ensure there are back up options for disposal. This is classified as a Level 2 Incident *"Any other incident where there is serious concern about the safety or reliability of the infrastructure or service."*



Detection of any cross-connection or mis-connection of non-drinking water and drinking water.

Background

Indigo Water operate a non-drinking water dual reticulation system which provides non-drinking water in the form of treated stormwater to 1,200 domestic connections and 45 commercial connections. The non-drinking water is provided for garden watering and toilet flushing and some additional commercial uses including fire protection. DHW have assessed the system against the Australian Guidelines for Recycled Water and have confirmed the non-drinking water is fit-for-purpose for these uses. The drinking water network is operated by a third party – Sunny Water.

Incident Details

A significant leak was detected in the non-drinking water network early this week and repair works were initiated the following day. This required the non-drinking water supply to be shut off for a period of 3 hours this morning between 0800 and 1100. The outage was communicated to customers via opt in phone text notification and on Indigo Water's website and social media. Sunny Water were also informed as per our MOU. A phone call was received by Sunny Water at 1030 alerting us they had received a no supply complaint from one of our shared residential customers and their technical team was on route to investigate. A member of our team met the Sunny Water techs on site and after some investigation it was identified the plumbing had at some point been swapped at the meter with the non-drinking water supply supplying the drinking water outlets in the house.

Root Cause

A root cause analysis will be undertaken as soon as possible. At this point the cause is unknown, but it appears the incorrect installation may have happened when the supplies were first connected after the house was built two years ago.

How was the Incident Detected?

Sunny Water notified council they had received a no-supply complaint from a shared customer. On site investigation identified the plumbing was incorrectly installed on the wrong meters.

Response Taken/Corrective Actions

Immediate action included the Sunny Water techs isolating the non-drinking water from the house and connecting the drinking water plumbing to the drinking water supply. The outlets are being flushed and communication with the residents and DHW is ongoing.



Commentary

Initial investigation has identified what appears to be a mis-connection on the non-drinking water supply and drinking water supply where the plumbing servicing the drinking water outlets within the home have been incorrectly connected to the non-drinking water meter and vice versa. This is a Level 1 incident and should be notified to the OTR by phone as soon as practicable *“Detection of any cross-connection or mis-connection of non-drinking water and drinking water”*.