

# POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

19 September 2024

**FOR** 

## LITHGOW SEWAGE TREATMENT SYSTEM

## ENVIRONMENT PROTECTION LICENCE 236

**Version 2024-1.0** 

Please check if this is the latest version of PIRMP from Council's website(https://council.lithgow.com/environment/epa-monitoring/).

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## **Version Control**

Version No.	Date	Changes made by	Notes
1.0 to 8.0	Various	Lithgow City Council	Previous versions of PIRMP held in Council records.
2020-1.0 (Draft 1)	3 August 2020	JS Regulatory Services	Major restructuring of PIRMP document and development of response procedures for identified high risks.
2020-1.0	12 September	JS Regulatory Services	After Council feedback and preliminary
(Final Draft)	2020		testing.
2020-1.0	18 October	JS Regulatory Services	After Council feedback in September Final
(Final Draft)	2020		Draft.
2020-1.0	16 November 2020	JS Regulatory Services	Issued document.
2022-2.0	23/06/2022	Aadesh Baniya	Annual revision
2024-1.0	19/09/2024	Vineeth Modem	Annual Revision

## 1. Purpose

This Pollution Incident Response Management Plan (PIRMP) is a legislative requirement as set out in Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act) and the clause 98C of the *Protection of the Environment Operations (General) Regulation 2009* (General Regulation). The purpose of the PIRMP is to

- minimise the risk of a pollution incident occurring,
- establish clear and effective notification, action and communication procedures to ensure the
  right people are notified, warned and quickly provided with updates and information they may
  need to act appropriately, including people who may need to be involved in incident responses
- have properly trained staff and up-to-date incident management information available to ensure the potential impact of a pollution incident is minimised. All new licensees must prepare a PIRMP prior to commencing operations

#### This PIRMP:

- applies to the Lithgow Sewage Treatment System, including the reticulation system (the premises),
- is a functional document that will be updated from time to time,
- will be tested at least once every 12 months (and within one month of a pollution incident),
- has been prepared to comply with the requirements of the POEO Act and the General Regulation, and
- has been structured to maximise the assistance to Council personnel to quickly identify, assess, respond, and report incidents that do (or may) result in pollution.

### 2. Distribution

The distribution of this document is controlled to ensure that the correct and most current version is being used to respond to pollution incidents. The current version will always be the electronic version held on Lithgow City Council servers. Details of the version and date of issue are recorded on the footer of each page of the PIRMP and in the version control table on Page 1.

Printed versions may also be used at the premises and by staff with responsibilities in responding to incidents. It is critical to note that all paper copies of this PIRMP are uncontrolled and that it is the responsibility of users of paper copies of this PIRMP to ensure that it is the current version.

When a new version of this PIRMP is created, the old version will be replaced in its entirety. Notification of the revision of the PIRMP will be distributed to the following:

- Director Water and Wastewater, Lithgow City Council,
- Senior Engineer (Operations),
- Supervisor Plants and Pump Stations,
- Supervisor Reticulation; and,
- Council's Electronic Records Management System, Lithgow City Council.

These people will be responsible for informing staff under their supervision that there is a revised version of the PIRMP and to destroy any paper and digital copies of the previous version.

A copy of this PIRMP (electronic or paper) must be kept at the premises and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan.

## **IMPORTANT!**

## **Trigger for implementation of PIRMP**

This plan is to be implemented when there is (or likely to be) a leak, spill or other escape of a substance that has, will or likely to result in pollution<sup>1</sup> that causes (or is likely to cause):

- harm to the health or safety of human beings or to ecosystems that is significant,
   or
- actual or potential loss or property damage (including the costs to stop, contain and clean-up any pollution) exceeds \$10,000.<sup>2</sup>

It does not matter that the harm (or risk of harm) exists only within the site of the sewage treatment plant and/or the sewerage reticulation.

Examples of when the plan <u>must</u> be implemented:

- When a leak or spill of untreated / partially treated sewage or sewage sludge occurs that has, or is likely to reach, a gutter, drain or waterway, or
- When members of the public have been or are likely to be exposed to a leak or spill of untreated / partially treated sewage or sewage sludge, or
- When two (2) or more NSW Fire and Rescue trucks respond to an incident, or
- When an incident will require the removal of spilled sewage, sludge, or chemicals for disposal at another site.

If there is any doubt over whether this plan should be implemented, *implement the plan*.

It does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

<sup>&</sup>lt;sup>1</sup> From the Dictionary of the *Protection of the Environment Operations Act 1997*, a *pollution incident* means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

<sup>&</sup>lt;sup>2</sup> From section 147 of the Protection of the Environment Operations Act 1997 *material harm to the environment*:

<sup>(</sup>i) involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

<sup>(</sup>ii) 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), including 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.

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## **High Risk Chemical Spill Response**

Stop

- Stay calm. Assess risk to your personal safety.
- ONLY IF SAFE TO DO SO, stop, or at least slow, the source of the spill.

Isolate & Assess

- Remove people from possible harm. Prevent access to the area.
- ONLY IF SAFE TO DO SO, protect gutters, drains & waters from the spill.
- Assess how much of what has been spilled and where is is going.

Notify

- Call 000. Request Fire and Rescue response.
- Appoint one person to co-ordinate communications and a seperate person to coordinate clean-up actions.
- Commence notifications as listed over the page.

Act

- Find the applicable high risk chemical response sheet(s).
- Put on PPE as required by high risk chemical response sheet(s).
- Commence the spill procedures for applicable chemical response sheet(s).

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**Assist** 

- Offer assistance to the NSW Fire and Rescue Incident Controller.
- Arrange necessary assets and resources to assist in the incident response.
- Keep notified agencies / people updated as work progresses.
- Once the site is made safe, receive the handover from the Incident Controller.

Clean-up

- Recover any reusable chemicals / materials.
- Classify any remaining spilt materials and/or contaminated materials (wastes).
- Arrange for the appropriate treatment and/or disposal of all wastes.

Report & Review

- Prepare a written report of the incident for submission to the NSW EPA within seven days.
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

## **High Risk Chemical Spill Notifications**

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The Pollution Incident Reporting Form in Appendix A has been designed to assist person co-ordinating communications to recording the notifications made.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
Oakey Park WTP	0419 623 597
Lithgow Sewer Plumbers	0409 455 385
Supervisor Reticulation	0417 424 692
Supervisor Plants and Pump Stations	0400 981 667
Water and Wastewater Engineer (Operations)	0439 395 658
Director Water and Wastewater	0409 256 432

Lithgow City Council 24-hour call centre	02 6354 9999
Statutory Notifications	Phone Number
Environment Protection Authority	131 555
NSW Health (Nepean Blue Mountains)	02 4734 2022
SafeWork NSW	13 10 50
Fire & Rescue NSW	Already notified as part of procedure

Stakeholder notifications	Phone Number
WaterNSW	1800 061 069
Residents of 15 Chivers Close	0409 667 493
Residents of 16 Chivers Close	0418 112 274
Residents of 17 Chivers Close	0467 662 251
Other immediate neighbours	Contacted by door knock and/or. Notification on Council website and Facebook page.

Broader community (if required)

Media release and local radio announcement.

## **High Risk Chemical Response Sheets**

Sodium Hypochlorite Solution	8
Aluminium Sulfate Liquid	10
Caustic Soda Liquid	12
Sodium Bisulfate Solution	1/

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## **Sodium Hypochlorite Solution**



Maximum amount stored on site	25,000L
Overall risk	HIGH

#### **Description / properties**

UN Number	1791
Hazchem Code	2X
Colour	Pale yellow-green
Odour	Chlorine
Density	Denser than water (sinks in water)
рН	12.5 (strongly alkaline)
Composition	Water >60%
	Sodium hypochlorite <30%
	Sodium hydroxide <1%

#### Minimum PPE for spills

Long sleeved clothes / overalls, chemical resistant apron, chemical goggles, face shield, chemical resistant gloves, and chemical resistant boots.



#### Spill procedures

- Clear area of unprotected personnel for a minimum of 50 metres in all directions (consider 200 metres in all directions if spill is larger than 200L).
- 2. Eliminate all ignition sources for a minimum of 50 metres in all directions.
- ONLY IF SAFE TO DO SO, stop the leak / spill. Do not walk through or touch spilled material and keep upwind and to higher ground.
- ONLY IF SAFE TO DO SO, prevent entry to waterways and drains. An excavated pit, pond, trench or holding area can be used to contain spill. If time permits, line these areas with an impermeable membrane.
- If entry to drains or waterways has occurred, advise NSW Fire and Rescue immediately.
- Absorb bulk liquid with fly ash or cement powder. Sand can be used if neither is available.
- 7. If rain is likely or occurring, cover absorbed chemical with a plastic sheet.
- 8. Neutralise with agricultural lime or crushed limestone.

#### If involved with fire

Only attempt to extinguish if fire is small and it is safe to. A fine water spray or a dry powder or CO<sub>2</sub> extinguisher can be used.



Fire water **must** be contained for later disposal.

With large fires involving this chemical, call NSW Fire and Rescue immediately. Evacuation may be required 800m in all directions due to the generation of toxic gas.

#### Significant hazards

- Causes severe skin burns and eye damage.
- May cause respiratory irritation.
- Very toxic to aquatic life with long lasting effects.
- Creates toxic gas when heated.
- Creates heat and toxic gas when mixed with acids.
- Creates explosive substances when mixed with ammonia and ammonium compounds.
- Creates explosive substances when mixed with urea.
- Creates explosive substances when mixed with methanol.

#### Other incompatibilities

Metals, metal salts, peroxides, reducing agents, ethylene diamine tetraacetic acid, aziridine.

#### Disposal procedures

- Collect any non-recoverable liquid chemical, other contaminated water and any fire water in a vacuum tanker(s) or available appropriate storage container(s).
- Contain any contaminated soils and solid clean-up materials in a dry and secure location.
- 3. Classify all wastes in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste.
- 4. Depending on the waste classification(s), arrange appropriate treatment and/or disposal at a lawful waste facility.

NOTE: wastes containing this chemical residue may be considered as a Dangerous Good for transport. Ensure all necessary transport requirements are complied with.

#### Storage location on site





## **Aluminium Sulfate Liquid**



Maximum amount stored on site	100,000L
Overall risk	HIGH

#### **Description / properties**

UN Number	3264
Hazchem Code	2X
Colour	Off white to light grey
Odour	Negligible
Density	Denser than water (sinks in water)
pН	1.8-2.4 (strongly acidic)
Composition	Aluminium sulfate approx. 28%
	Non-hazardous components to 100%

#### Minimum PPE for spills

Long sleeved clothes / overalls, chemical goggles, chemical resistant gloves, and chemical resistant boots.



#### Spill procedures

- Clear area of unprotected personnel for a minimum of 50 metres in all directions (consider 250 metres in all directions if spill is larger than 200L).
- 2. Eliminate all ignition sources for a minimum of 50 metres in all directions.
- ONLY IF SAFE TO DO SO, stop the leak / spill. Do not walk through or touch spilled material and keep upwind and to higher ground.
- 4. ONLY IF SAFE TO DO SO, prevent entry to waterways and drains. An excavated pit, pond, trench or holding area can be used to contain spill. If time permits, line these areas with an impermeable membrane.
- If entry to drains or waterways has occurred, advise NSW Fire and Rescue immediately.
- Absorb bulk liquid with **DRY** soil, sand, or other inert material.
- 7. If rain is likely or occurring, cover absorbed chemical with a plastic sheet.
- 8. Neutralise with agricultural lime or soda ash.

#### If involved with fire

Non-combustible. If involved in fire, only attempt to extinguish if fire is small and it is safe to.

**DO NOT** use halogenated extinguishing agents on spilled material. A violent reaction may result. Use an extinguisher appropriate to the surrounding fire conditions.

Fire water **must** be contained for later disposal.

With large fires involving this chemical, call NSW Fire and Rescue immediately. Evacuation may be required 800m in all directions due to the generation of toxic gas.

#### Significant hazards

- · Causes skin irritation.
- Causes serious eye irritation.
- May produce irritating and toxic gasses upon decomposition.
- Toxic to aquatic life with long lasting effects.
- Harmful to terrestrial vertebrates.
- May be corrosive to, and react with, metals - including mild steel and aluminium.
- Will react violently with alkaline substances.

#### Other incompatibilities

None described.

#### Disposal procedures

- Collect any non-recoverable liquid chemical, other contaminated water and any fire water in a vacuum tanker(s) or available appropriate storage container(s).
- 2. Contain any contaminated soils and solid clean-up materials in a dry and secure location.
- 3. Classify all wastes in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste.
- 4. Depending on the waste classification(s), arrange appropriate treatment and/or disposal at a lawful waste facility.

NOTE: wastes containing this chemical residue may be considered as a Dangerous Good for transport. Ensure all necessary transport requirements are complied with.

#### Storage location on site





## **Caustic Soda Liquid**



Maximum amount stored on site	35,000L
Overall risk	HIGH

#### **Description / properties**

UN Number	1824
Hazchem Code	2R
Colour	Colourless
Odour	Odourless
Density	Denser than water (sinks in water)
рН	14 (strongly alkaline)
Composition	Sodium hydroxide 46-50% Water 50-54%

#### Minimum PPE for spills

Long sleeved clothes / overalls, chemical resistant apron, chemical goggles, face shield, chemical resistant gloves, and chemical resistant boots.



#### Spill procedures

- Clear area of unprotected personnel for a minimum of 50 metres in all directions (consider 250 metres in all directions if spill is larger than 200L).
- Eliminate all ignition sources for a minimum of 50 metres in all directions.
- ONLY IF SAFE TO DO SO, stop the leak / spill. Do not walk through or touch spilled material and keep upwind and to higher ground.
- 4. ONLY IF SAFE TO DO SO, prevent entry to waterways and drains. An excavated pit, pond, trench or holding area can be used to contain spill. If time permits, line these areas with an impermeable membrane.
- If entry to drains or waterways has occurred, advise NSW Fire and Rescue immediately.
- 6. Absorb bulk liquid with **DRY** soil, sand, or other inert material.
- 7. If rain is likely or occurring, cover absorbed chemical with a plastic sheet.

#### If involved with fire

Non-combustible. If involved in fire, only attempt to extinguish if fire is small and it is safe to. A fine water spray, dry chemical, CO<sub>2</sub>, or normal foam extinguisher can be used.



Fire water **must** be contained for later disposal.

With large fires involving this chemical, call NSW Fire and Rescue immediately. Evacuation may be required 800m in all directions due to the generation of toxic gas.

#### Significant hazards

- Causes severe skin burns and eye damage.
- May cause respiratory irritation.
- May be corrosive to metals.
- · Generates heat on contact with water.
- · Reacts violently with acids.
- If involved in a fire, may emit toxic fumes.
- Contact with metals may generate flammable hydrogen gas.

#### Other incompatibilities

Sugars, ammonium salts, aluminium, tin, zinc, and brass.

#### Disposal procedures

- Collect any non-recoverable liquid chemical, other contaminated water and any fire water in a vacuum tanker(s) or available appropriate storage container(s).
- Contain any contaminated soils and solid clean-up materials in a dry and secure location.
- 3. Classify all wastes in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste.
- 4. Depending on the waste classification(s), arrange appropriate treatment and/or disposal at a lawful waste facility.

NOTE: wastes containing this chemical residue may be considered as a Dangerous Good for transport. Ensure all necessary transport requirements are complied with.

#### Storage location on site





#### **Sodium Bisulfate Solution**



Maximum amount stored on site	2,000L
Overall risk	HIGH

#### **Description / properties**

UN Number	2693
Hazchem Code	2X
Colour	Pale yellow
Odour	Pungent sulfur
Density	Denser than water (sinks in water)
pН	4-5 (acidic)
Composition	Sodium bisulfate 15-40% Water to 100%

#### Minimum PPE for spills

Long sleeved clothes / overalls, chemical goggles, chemical resistant gloves, chemical resistant boots, and respirator.



#### Spill procedures

- Clear area of unprotected personnel for a minimum of 50 metres in all directions (consider 250 metres in all directions if spill is larger than 200L).
- Eliminate all ignition sources for a minimum of 50 metres in all directions.
- ONLY IF SAFE TO DO SO, stop the leak / spill. Do not walk through or touch spilled material and keep upwind and to higher ground.
- 4. ONLY IF SAFE TO DO SO, prevent entry to waterways and drains. An excavated pit, pond, trench or holding area can be used to contain spill. If time permits, line these areas with an impermeable membrane.
- If entry to drains or waterways has occurred, advise NSW Fire and Rescue immediately.
- 6. Absorb bulk liquid with **DRY** soil, sand, or other inert material.
- 7. If rain is likely or occurring, cover absorbed chemical with a plastic sheet.

#### If involved with fire

Non-combustible. If involved in fire, only attempt to extinguish if fire is small and it is safe to. A fine water spray, dry chemical, CO<sub>2</sub>, or normal foam extinguisher can be used.



Fire water **must** be contained for later disposal.

With large fires involving this chemical, call NSW Fire and Rescue immediately. Evacuation may be required 800m in all directions due to the generation of toxic gas.

#### Significant hazards

- · Causes skin irritation.
- Causes serious eye irritation.
- If involved in a fire, may emit toxic fumes.
- Contact with acids will generate toxic gasses.
- Corrosive to mild steel.

#### Other incompatibilities

Strong oxidising agents and materials that react violently with water.

#### Disposal procedures

- Collect any non-recoverable liquid chemical, other contaminated water and any fire water in a vacuum tanker(s) or available appropriate storage container(s).
- 2. Contain any contaminated soils and solid clean-up materials in a dry and secure location.
- 3. Classify all wastes in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste.
- Depending on the waste classification(s), arrange appropriate treatment and/or disposal at a lawful waste facility.

NOTE: wastes containing this chemical residue may be considered as a Dangerous Good for transport. Ensure all necessary transport requirements are complied with.

#### Storage location on site





## Other Chemical Spill Response

Stop

- Stay calm. Assess risk to your personal safety.
- ONLY IF SAFE TO DO SO, stop, or at least slow, the source of the spill.

Isolate & Assess

- Remove people from possible harm. Prevent access to the area.
- ONLY IF SAFE TO DO SO, protect gutters, drains & waters from the spill.
- Assess how much of what has been spilled and where is is going.

Notify

- If external assistance is required, call 000. Request Fire and Rescue response.
- Appoint one person to co-ordinate communications and a seperate person to coordinate clean-up actions.
- Commence notifications as listed over the page.

- Find the applicable safety data sheet(s).
- Put on PPE as required by the safety data sheet(s).
- Commence the spill procedures as detailed in the applicable safety data sheet(s).

Act

- If external assistance is being provided, arrange the necessary assets and resources as required or as requested by the NSW Fire and Rescue Incident Controller.
- Keep notified agencies / people updated as work progresses.
- If applicable, once the site is made safe, receive the handover from the Incident Controller.

Clean-up

- Recover any reusable chemicals / materials.
- Classify any remaining spilt materials and/or contaminated materials (wastes).
- Arrange for the appropriate treatment and/or disposal of all wastes.

Report & Review

- Prepare a written report of the incident for submission to the NSW EPA within seven days.
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

## **Other Chemical Spill Notifications**

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The Pollution Incident Reporting Form in Appendix A has been designed to assist person co-ordinating communications to recording the notifications made.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
Oakey Park WTP	0419 623 597
Lithgow Sewer Plumbers	0409 455 385
Supervisor Reticulation	0417 424 692
Supervisor Plants and Pump Stations	0400 981 667
Water and Wastewater Engineer (Operations)	0439 395 658
Director Water and Wastewater	0409 256 432

Lithgow City Council 24-hour call centre	02 6354 9999
Statutory Notifications	Phone Number
Environment Protection Authority	131 555
NSW Health (Nepean Blue Mountains)	02 4734 2022
SafeWork NSW	13 10 50
Fire & Rescue NSW (unless already notified as part of the procedure)	1300 729 579

Stakeholder notifications	Phone Number
WaterNSW (if waters are impacted)	1800 061 069
Immediate neighbours	Contacted by door knock.
Broader neighbours (if required)	Notification on Council website and Facebook page.
Broader community (if required)	Media release and local radio announcement.

## **Sewer Overflow Response**

Stop

- Stay clam. Assess risk to your personal safety.
- Locate the source of the overflow

Isolate & Assess

- Remove people from possible harm. Prevent access to the area.
- ONLY IF SAFE DO DO SO, reduce flows / contain the overflow as close as possible to the source. Protect gutters, drains & waters from the spill. Contain overflowing
- Assess the amount of the sewage overflow and where is is going.
- Determine if external assistance is required to contain / clean-up overflow.

Notify

- If external assistance is required, call 000 and request NSW Fire and Rescue.
- Appoint one person to co-ordinate communications and a seperate person to coordinate clean-up actions.
- Commence notifications as listed over the page.

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- Ensure appropriate PPE is being worn (long sleves / coveralls, chemical resistant boots and gloves as a minimum).
- Eliminate / reduce flow to damaged section of pipe (if possible).
- Determine the cause of the overflow and clear blockage / repair damaged pipe.
- Pump the bypassed / contained sewage back to sewer or to vacuum tanker.

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- If external assistance is being provided, arrange the necessary assets and resources as requested by the NSW Fire and Rescue Incident Controller.
- •Keep the notified agencies / people updated as work progresses.
- •Monitor impact to receiving waters (if required).

Clean-up

- Collect any deposited gross solids and remove for disposal.
- Spray or apply disinfectant/neutralising agent to contaminated surface areas.
- Repair any damage / erosion resutling from the overflow.
- Restrict access to the contaminated area for 24 hours.

Report & Review

- Prepare a written resport of the incident for submission to the NSW EPA within seven days.
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

#### **Sewer Overflow Notifications**

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The Pollution Incident Reporting Form in Appendix A has been designed to assist person co-ordinating communications to recording the notifications made.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
Oakey Park WTP	0419 623 597
Lithgow Sewer Plumbers	0409 455 385
Supervisor Reticulation	0417 424 692
Supervisor Plants and Pump Stations	0400 981 667
Water and Wastewater Engineer (Operations)	0439 395 658
Director Water and Wastewater	0409 256 432

Lithgow City Council 24-hour call centre	02 6354 9999
Statutory Notifications	Phone Number
Environment Protection Authority	131 555
NSW Health (Nepean Blue Mountains)	02 4734 2022
SafeWork NSW	13 10 50
Fire & Rescue NSW (unless already notified as part of the procedure)	1300 729 579

Stakeholder notifications	Phone Number
WaterNSW (if waters are impacted)	1800 061 069
Immediate neighbours	Contacted by door knock.
Broader neighbours (if required)	Notification on Council website and Facebook page.
Broader community (if areas regularly accessed by the public and/or waters impacted)	Media release and local radio announcement.

## **Sewer Pump Station Failure Response**

Stop

- Stay calm. Assess risk to your personal safety.
- ONLY IF SAFE TO DO SO, stop, or at least slow, any sewage leaking from the pump station.

Isolate & Assess

- Identify cause and extent of pump station failure.
- Assess how much sewage has been spilled and where is is going.

Notify

- Appoint one person to co-ordinate communications and a seperate person to coordinate clean-up actions.
- Commence notifications as listed over the page.

- Ensure appropriate PPE is being worn (long sleves / coveralls, chemical resistant) boots and gloves as a minimum).
- Eliminate / reduce flow to the pump station (if possible).
- Determine the cause of the failure and undertake the necessary repairs.
- Pump the bypassed / contained sewage back to sewer or to vacuum tanker.

Act

- If external assistance is being provided, arrange the necessary assets and resources as requested by the NSW Fire and Rescue Incident Controller.
- Keep the notified agencies / people updated as work progresses.
- Monitor impact to receiving waters (if required).

Clean-up

- Collect any deposited gross solids and remove for disposal.
- Spray or apply disinfectant/neutralising agent to contaminated surface areas.
- •Repair any damage / erosion resutling from the overflow.
- Restrict access to the contaminated area for 24 hours.

Report & Review

- Prepare a written report of the incident for submission to the NSW EPA within seven days.
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

## **Sewer Pump Station Failure Notifications**

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The Pollution Incident Reporting Form in Appendix A has been designed to assist person co-ordinating communications to recording the notifications made.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
Oakey Park WTP	0419 623 597
Lithgow Sewer Plumbers	0409 455 385
Supervisor Reticulation	0417 424 692
Supervisor Plants and Pump Stations	0400 981 667
Water and Wastewater Engineer (Operations)	0439 395 658
Director Water and Wastewater	0409 256 432

Lithgow City Council 24-hour call centre	02 6354 9999
Statutory Notifications	Phone Number
Environment Protection Authority	131 555
NSW Health (Nepean Blue Mountains)	02 4734 2022
SafeWork NSW	13 10 50
Fire & Rescue NSW (unless already notified as part of the procedure)	1300 729 579

Stakeholder notifications	Phone Number
WaterNSW (if waters are impacted)	1800 061 069
Immediate neighbours	Contacted by door knock.
Broader neighbours (if required)	Notification on Council website and Facebook page.
Broader community (if areas regularly accessed by the public and/or waters impacted)	Media release and local radio announcement.

## **Treatment System Failure / Bypass Response**

Stop

Stay calm. Assess risk to your personal safety.

Isolate & Assess

- Assess what part of the treatment process has not performed as expected and the estimated quantity of discharged effluent affected.
- Identify likely cause(s), if possible.

Notify

- Appoint one person to co-ordinate communications and a seperate person to co-ordinate rectification.
- Commence notifications as listed over the page.

- Undertake monitoring of receiving waters to determine significance of any potenital environmental impact.
- Identify potential causes for treatment system failure.
- Undertake investigations and testing to identify actual cause(s) for treatment system failure.

Act

- Undertake necessary action / works to return the threatment system to normal operating conditions.
- Undertake necessary monitoring to confirm that the treatment system has been returned to normal operating conditions.

Report & Review

- Prepare a written report of the incident for submission to the NSW EPA within seven days.
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

## **Treatment System Failure / Bypass Notifications**

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The relevant incident recording and notification forms are contained in Appendix A and B.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
Oakey Park WTP	0419 623 597
Lithgow Sewer Plumbers	0409 455 385
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Lithgow City Council 24-hour call centre	0407 928 742

Statutory Notifications	Phone Number
Environment Protection Authority	131 555
NSW Health (Nepean Blue Mountains)	02 4734 2022
SafeWork NSW	13 10 50
Fire & Rescue NSW (unless already notified as part of the procedure)	1300 729 579

Stakeholder notifications	Phone Number
WaterNSW	1800 061 069
Broader community (if areas regularly accessed by the public and/or waters impacted)	Media release and local radio announcement.

## Miscellaneous Notifiable Incident Response

Stop

- Stay calm. Assess risk to your personal safety.
- ONLY IF SAFE TO DO SO, stop, or at least slow, the process causing the incident.

Isolate & Assess

- Remove people from possible harm. Prevent access to the area.
- ONLY IF SAFE TO DO SO, contain the incident and prevent it from spreading.
- Assess the size, type and nature of the incident.

Notify

- If external assistance is required, call 000 and request NSW Fire and Rescue.
- Appoint one person to co-ordinate communications and a seperate person to coordinate clean-up actions.
- Commence notifications as listed over the page.

,

- Find any applicable safety data sheet(s)
- Put on PPE as required.
- Commence the spill procedures as detailed in the applicable safety data sheet(s).
- If external assistance is being provided, arrange the necessary assets and resources as required or as requested by the NSW Fire and Rescue Incident Controller.
- Keep notified agencies / people updated as work progresses.
- If applicable, once the site is made safe, receive the handover from the Incident Controller.
- · Monitor impact to receiving waters (if required).

Act

- Decontaminate any impacted land surfaces.
- Recover any reusable materials.
- Classify any remaining waste materials and/or contaminated materials.
- Arrange for the appropriate treatment and/or disposal of all wastes.

Report & Review

Clean-up

- Prepare a written report of the incident for submission to the NSW EPA within seven days..
- Review Council's incident response by conducting a debrief with all staff involved.
- Revise and update PIRMP as necessary.

Uncontrolled when printed –	Check printed	copies to ensure	this is the	current version

#### Miscellaneous Notifiable Incident Notifications

An effective response to any incident depends on providing early, clear, and accurate information of the situation to the relevant people and authorities. Pause, collect your thoughts, and provide the following information clearly:

- a) your name,
- b) your contact mobile number,
- c) the time, date, and location of the incident,
- d) the type of incident,
- e) details of any causalities,
- f) the estimated quantity or volume and the concentration of any pollutants involved, if known,
- g) the cause of the incident, if known, and
- h) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

Notification is required by the person appointed to co-ordinate communications for the incident. This must occur immediately after a pollution incident becomes known.

Any information required that is not known at the time the incident is notified must be provided when it becomes known.

The Pollution Incident Reporting Form in Appendix A has been designed to assist person co-ordinating communications to recording the notifications made.

Lithgow City Council Contacts	Phone Number
Lithgow STP	0407 928 742
Wallerawang STP	0407 455 476
Portland STP	0417 424 723
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Stakeholder notifications	Phone Number
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Immediate neighbours	Contacted by door knock.
Broader neighbours (if required)	Notification on Council website and Facebook page.
Broader community (if required)	Media release and local radio announcement.

## 4. Maps of premises

Figure 1 - Recent satellite imagery of the Lithgow Sewage Treatment Plant



SLUDGE LAGOON No.2 CONNECT ATLANTIS STRIP PLTER
DRAW TO 198 PVC DWV
OR COURL Ø. ATLANTIS STRIP FILTER DRAIN-VALVE No.2 3 WAY VALVE— Modified Sludge Lagoon No.1 (NIC) SLUDGE LAGOON No.3 SLUDGE LIQUIDS
PUMP STATION No.4
| SEWER VENT | 3% NA. PRECAST DRAIN PIT BY "BOP" OR EQUAL FOR DETAILS SEE DRG 0800013-19 PIT SU3 RECLAIMED -WATER STORAGE TANK 1 -INSET ELECTRICAL SWITCHROOM SUPERNATANT EXISTING SHELTER-TO BE ROMOVED LEGEND T.O.K. - TOP OF KERB RECLAIMED WATER STORAGE TANK 2-PROVIDE FLAP NOTE LOCATE EXISTING DRAINAGE PIPE AND EXTEND TO DRAINAGE PIT OUTSIDE CAUSTIC SOCA BUND ARE RECLAIMED WATER ESTORAGE TANK 3  $\odot$ IDEAT No.1 900 SQ x 1200 DEEP PRECAST DRAW PIT BY "BCP" OR EQUAL WITH HEAVY DUTY COVER IDEAT No.2 SWITCHROOM NO PROPOSED ELECTRICAL SUBSTATION LOCATION (REPER SPECIFICATION) SEE INSET

Figure 2 – Stormwater drainage of the Lithgow Sewage Treatment Plant

THE JAMES KIRWOOD BRIDGE 66kV <sup>10</sup>rubbish tip caravan historic works depo BOWENEELS COOERWULL (closed) depot rest area · 95 STEWART pumping station sports 0 COUNT TONY BOWENE CAROLINE AV 66 CHE**TT**I SPORT 230208 hall EMORA RARK ford museum DP 1230208 BAYONET NSW 200m

Figure 3 - Topographic map showing Farmers Creek

Note: Each grid equals 1 kilometre

Figure 4 - Lithgow pump stations

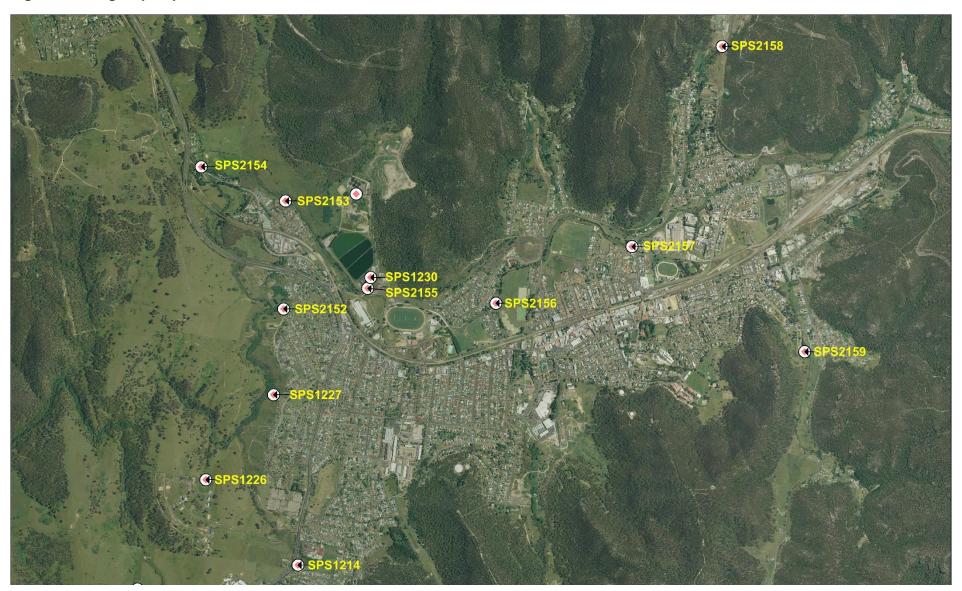


Figure 5 - Lithgow West reticulation



Figure 6 - Lithgow East reticulation



Figure 7 - Marrangaroo pump stations



Figure 8 - Marrangaroo reticulation

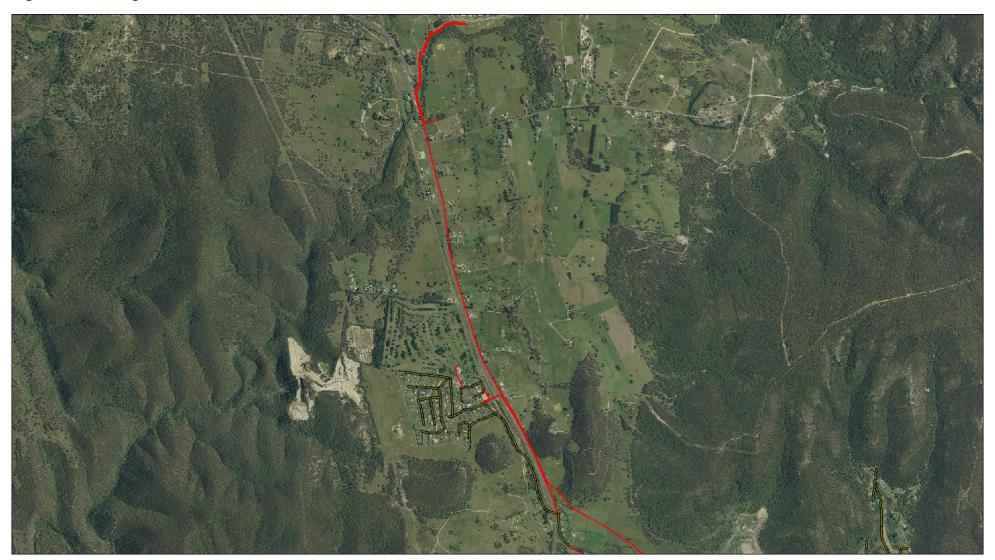


Figure 9 - South Littleton & Bowenfels pump stations

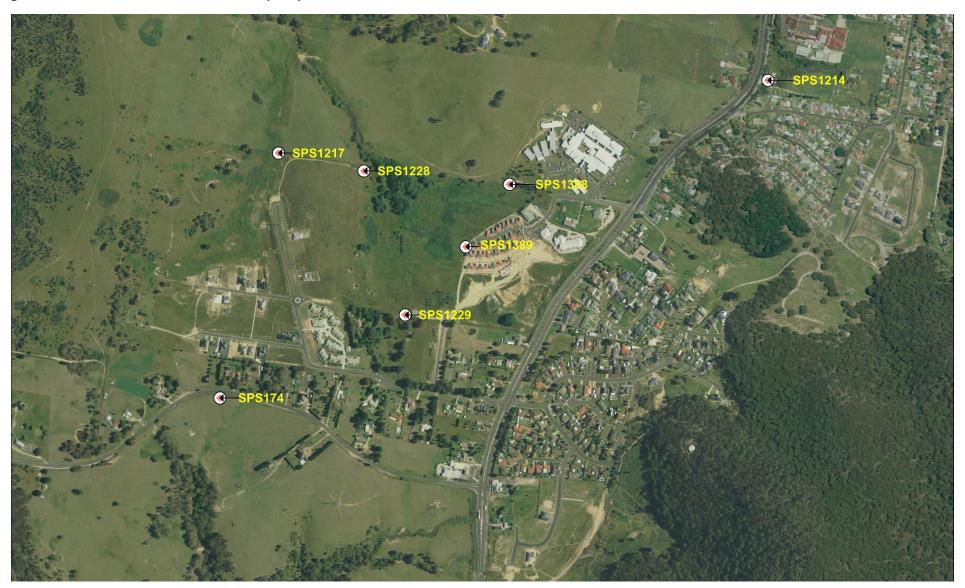


Figure 10 - South Littleton & Bowenfels reticulation



# 5. Risk assessment and mitigation

# 5.1. Assessment methodology

A process of assessing potential pollution incident risks, consistent with the principles of ISO 31000 for risk assessment methodology and HB 203-2012 for managing environmental risk, has been used to identify and assess potential risks for the premises.

Information was collected from the management and staff of the premises regarding the likelihood of potential incidents occurring based on previous experience. These responses were then averaged across the group to create an overall likelihood for the particular incident. Descriptions of the likelihood terms used are presented in Table 1.

Table 1 – Likelihood descriptors

Highly likely	More than once a month.
Likely	Around once a quarter.
Possible	Around once a year
Unlikely	Once every few years
Highly unlikely	Less than once every 5 years.

An assessment of the estimated impacts from a potential pollution incident was then undertaken based on the concentration, nature and volume of potential pollutants released, and the nature, use and sensitivity of the receiving environment (including potential human health impacts). Descriptions of the impact terms used are presented in Table 2.

Table 2 - Impact descriptors

Insignificant	Nuisance only.
In significant	Negligible clean-up costs.
Minor	Short term detrimental effect.
IVIII IOI	Clean-up able to be undertaken within existing budgets.
Moderate	Medium term detrimental effects.
Woderate	Clean-up requires specific budget approval.
Major	Long term impacts.
iviajoi	Clean-up causes significant impact to allocated budgets.
Critical	Extensive, long term impacts.
Citical	Clean up unable to be funded without external assistance.

The combination of the likelihood and the impact of the potential pollution incident was then assessed, using the matrix presented in Figure 10 below, and a risk rating applied.

Figure 11- Risk assessment matrix

	Impact				
Likelihood	Insignificant	Minor	Moderate	Major	Critical
Highly likely	High	High	Extreme	Extreme	Extreme
Likely	Medium	High	High	Extreme	Extreme
Possible	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Very unlikely	Low	Low	Medium	High	High

## 5.2. General risk control measures

Council employs a range of risk control measures that operate across the entire premises (including the reticulation system):

- Security of premises The Sewage Treatment Plant and Pump stations are secured and locked when not attended. The control room at the Sewage Treatment Plant is also locked.
- Community reporting Council has a single 24-hour phone service where members of the community can report pollution incidents, including sewer overflows.
- SCADA system Council uses a Citect SCADA (Supervisory Control and Data Acquisition) system at the premises. The SCADA system monitors and controls the Sewage Treatment Plant and pump stations and provides early warnings of potential issues. Warnings and alarms can be received by Council staff at all hours and certain functions can be controlled remotely. This system also has multiple backups and redundancies
- Staff training All staff working at the premises are required to:
  - Complete Council's general induction
  - Complete a site-specific induction for the premises.
  - Maintain relevant competencies and licences.
  - Informed and trained in the use of this PIRMP
- Council staff and contractors working on the premises being aware of evacuation procedures, use of fire extinguishers and the location of the Emergency Assembly Point.
- Regular inspections, audits, testing and reviews Equipment, controls, documents, and systems are regularly audited by Council, NSW government agencies and Council's insurers.
   All required corrective actions are recorded and appropriate corrective actions undertaken.
- Regular management and staff toolbox meetings to update management and staff on issues requiring correction and prioritising this work according to risk.

- Reporting systems Council has a system where hazards (including environmental hazards) and near misses are reported, investigated and, where required, action taken to rectify hazards.
- Emergency equipment Including, but not limited to spill kits, fire extinguishers, appropriate Personal Protective Equipment (PPE), and emergency signage.
- Monitoring Regular monitoring is undertaken of various points within the Sewage Treatment Plant to monitor and adjust the treatment process. Monitoring is also undertaken of the final discharge from the Sewage Treatment Plant and the surrounding environment.

# 5.3. Identified pollution risks

In the following sections, the rationale for the allocation of the occurrence and impact levels for each potential pollution incident, along with specific risk control measures (in addition to the general control measures described above). Risks have been ordered from highest risk to lowest risk.

# 5.3.1. Chemical spill / leak

Occurrence	Impact	Risk
Unlikely	Major	High

#### Rationale

Significant quantities of hazardous chemicals are stored on the premises. An escape of these chemicals to the environment would be likely to cause severe and long-lasting harm that would require significant expenditure to remedy. This situation is estimated to occur only once every few years unlikely and the general and specific control measures are designed to identify and contain any leaks or spills as soon as possible and as close to the source as possible.

#### Specific control measures

- All bulk chemical storage tanks are clearly labelled.
- Chemical supply contractors have contractual obligations to ensure the correct chemicals are delivered to the right location.
- Council has additional checks and balances in place to ensure the right chemicals are delivered to the right storage tanks.
- The bulk chemical storage area is surrounded by an impermeable bund in accordance with applicable Australian Standards.
- The SCADA system will notify operators if bund fills.
- The chemical unloading area is bunded with any stormwater from this area diverted to holding pond to prevent escape to the environment.

# 5.3.2. Sewer line blockage / surcharge / overflow

Occurrence	Impact	Risk
Likely	Minor	High

#### Rationale

Blockages and overflows from the sewerage system are not uncommon. However, the effects are usually highly localised due to quick reporting by the community and rapid response by Council to rectify the issue. There may be on occasion a minor impact to waters, but the most significant risk is exposure of people to potentially harmful pathogens.

# **Specific control measures**

- Programmed cleaning and maintenance of the reticulation system.
- Reducing sewer infiltration by stormwater by repairing and/or relining of leaking or broken sewer lines.
- Maintaining a supply of spare pipes and parts enabling rapid repair of any failures.
- The ability to use pump station well storage capacity to temporarily stop flow to damaged sections of pressurised sewer lines.
- Quick access to mobile pumps and standing contractual arrangements with vacuum tanker truck operators.
- Incorporating infrastructure analysis into planning for new extensions to the reticulation system to ensure that it is not overloaded.

# 5.3.3. Pump station failure

Occurrence	Impact	Risk
Likely	Medium	High

#### Rationale

This is related to a blockage, electronic or mechanical failure at a pump station in the reticulation network. This does not include a power failure (which is considered separately). Routine maintenance is undertaken on Council's sewage pump station to prevent predictable failures of pumps and associated equipment. Several alerts would be raised via the SCADA system in the event of a pump station failure.

### Specific control measures

The storage capacity of pump station wells are generally 8 hours at average dry weather flow.
 This provides sufficient time to employ temporary measures while the source of the failure is identified and corrected.

#### 5.3.4. Treatment failure

Due to their similar nature and risk levels, three potential pollution incidents below have been aggregated into the one description of "treatment failure".

### Dry weather bypass

Occurrence	Impact	Risk
Unlikely	Moderate	Medium

# Releasing higher pollutants than permitted

Occurrence	Impact	Risk
Possible	Moderate	High

#### Disinfection failure

Occurrence	Impact	Risk
Unlikely	Moderate	Medium

#### Rationale

The discharge from the Sewage Treatment Plant occurs in the Warragamba Catchment which forms part of the overall Sydney Drinking Water Catchment. Discharge quality in this catchment area is especially important to the overall quality of drinking water in the Sydney area. The latest upgrade to the Sewage Treatment Plant included improvements to satisfy the Neutral or Beneficial Effects test on water quality in this catchment, including UV treatment to eliminate potentially harmful pathogens. The operating and treatment systems at the Sewage Treatment Plant have also been modernised so that the process is tightly controlled and any deviations from ideal operating conditions are identified and rectified quickly.

### Specific control measures

- The treatment of sewage is undertaken by a modern Intermittent Decantation Extended Aeration (IDEA) plant.
- Treatment also includes alum dosing to remove suspended solids and chlorination / UV light exposure to eliminate pathogens.
- Any dry weather bypasses are captured on the premises and returned to the inlet of the plant once the cause for the bypass is rectified.
- The efficiency and effectiveness of the treatment process is monitored daily by the staff at the site.

# 5.3.5. Loss of power

Due to their similar nature and risk levels, two potential pollution incidents below have been aggregated into the one description of "loss of power".

# Power Outage - Sewage Treatment Plant

Occurrence	Impact	Risk
Possible	Minor	Medium

## Power outage pump station

Occurrence	Impact	Risk
Possible	Minor	Medium

#### Rationale

This hazard is generally outside Council's control as it relates to a failure of the electricity supply system due to lack of supply or damage to electricity transmission infrastructure. Typically, electricity supply interruptions are short duration, however, supply interruptions due to natural disasters (bushfires, severe storms, floods, etc) can last significantly longer. Council does have contingency plans in place to deal with electricity supply interruptions.

Essential Council infrastructure, including sewage treatment, is given priority status for reconnection in the event of a power failure.

# Specific control measures

- All pump stations in the reticulation network have the capability to connect to an external power supply
- A backup generator is present at Lithgow Sewage Treatment Plant and Council also has two portable generators.
- Several alerts would be raised via the SCADA system in the event of an interruption to the power supply.
- The storage capacity of pump station wells are generally 8 hours at average dry weather flow which greatly exceeds the length of time of the typical power interruption.
- Any overflow of untreated / partially treated sewage at the Sewage Treatment Plant are captured on the premises and can be returned to the inlet of the plant once the power supply is reconnected.

#### 5.3.6. Wet weather bypass

Occurrence	Impact	Risk
Possible	Minor	Medium

#### Rationale

This has been considered separate from treatment failure as it generally relates to situation where Council has little control, specifically, heavy rainfall events. It does not relate to a failure of the treatment process, but a situation where influent volumes exceed the capacity of the plant to process.

# **Specific control measures**

All incoming sewage receives screening and primary separation. The treatment cycle of the IDEA system is adjusted in high flows to balance the required treatment volumes against best possible effluent quality. In extreme circumstances, screened sewage can be diverted to the former tertiary treatment ponds on the premises for short term storage and returned to the treatment process after the wet weather peak has passed.

Council also has an ongoing program of identifying and repairing sources of infiltration into the sewage reticulation system with the goal of reducing the increase in sewage volumes during wet weather events.

# 5.3.7. Fire / explosion at Sewage Treatment Plant

Occurrence	Impact	Risk	
Highly unlikely	Moderate	Medium	

#### Rationale

As the treatment process at the Sewage Treatment Plant is an aerobic one, there is a negligible chance of methane accumulating in explosive concentrations. The most likely sources of a fire are the above ground electronics and the chemicals stored on the premises. If involved in a fire, the on-site staff and/or the SCADA system would identify this quickly. The main source of risk for a fire / explosion at the Sewage Treatment Plant is to the staff and any contractors working at that location.

## Specific control measures

- Fire extinguishers and fire hoses are located on the site of the sewage treatment plant.
- Storage vessels for bulk chemicals meet the relevant Australian Standards.
- The quantity of chemicals kept at the Sewage Treatment Plant are minimised to meet operational requirements.
- Various bushfire preparation precautions are taken prior to the commencement of the bushfire season.

# 5.3.8. Fire / explosion at pump station

Occurrence	Impact	Risk	
Highly unlikely	Moderate	Medium	

#### Rationale

There is a low chance of methane accumulating in explosive concentrations in a pump station as the organic material in the sewage is not in an anaerobic environment long enough to generate significant quantities of methane. The above ground electronics is the most likely source of a fire which, due to routine maintenance, has a low likelihood. Any fire that does start would most likely be contained in a limited area. If involved in a fire, several alerts would be raised via the SCADA system. If the pump station was inoperable, the storage capacity of pump station wells are generally 8 hours at average dry weather flow.

### Specific control measures

- Fire hoses are located at the sewage pump stations
- Various bushfire preparation precautions are taken prior to the commencement of the bushfire season.

# 5.3.9. Sludge leak / spill / overflow

ccurrence	Impact	Risk
Possible	Minor	Medium

#### Rationale

While produced in significantly lower volumes when compared to effluent, sludge contains significantly higher concentrations of solids, nutrients, and pathogens. There is more than sufficient capacity to store generated sludge on the premises, which is regularly dewatered and removed from the premises.

# Specific control measures

- The sludge lagoons are included in the routine inspections undertaken by the staff at the Sewage Treatment Plant.
- The on-site drainage system at the Sewage Treatment Plant would capture any leak / overflow of sludge to the holding lagoons.

## 5.3.10. Flooding of pump station

Occurrence	Impact	Risk	
Possible	Possible Minor Me		

#### Rationale

Some of the pump stations in the reticulation network are located below the 1:100 year flood level. Due to the historical configuration of the city and the geography, this was unavoidable. Any flood that inundates a pump station would result in significant inundation to parts of Lithgow itself, which

would be the primary focus of any emergency response. The dilution of any sewage from a localised inundated pump station would be significant.

# **Specific control measures**

No further measures employed.

# 5.3.11. Flooding of STP

Occurrence	Impact	Risk
Unlikely	Minor	Low

#### **Rationale**

The Sewage Treatment Plant is built 500mm above the 1:100 year flood level. Any flood that inundates the STP would result in significant inundation to Lithgow itself, which would be the primary focus of any emergency response. The dilution of any untreated or partially treated sewage in such an event would be significant.

# **Specific control measures**

No further measures employed.

# 6. Pollutant inventory

Table 3 - Bulk potential pollutants on the premises (>500 kg/L)

Potential Pollutant	Quantity (max) DG Group		Packing group
Untreated sewage	10 ML of sewage treated per day (in dry weather)	ed None Non	
Sewage sludge	51,670 Litres	None	None
Separated sewage solids	1,000 tonnes?	None	None
Aluminium sulfate liquid	100,000 Litres	8	III
Caustic soda liquid	35,000 Litres	8	II
Sodium hypochlorite 8% FAC	25,000 Litres	8	III
Sodium bisulfate solution	2,000 Litres	8	III

Table 4 - Potential pollutants on the premises in quantities of between 50 kg/L & 500 kg/L

Potential Pollutant	Quantity (max)	DG Group	Packing group
Chemsearch Citratech DM	360 Litres	3	III
Hodgsons Hydrated Lime	300 Kilograms	None	None

Table 5 - Other chemicals that may be on the premises in quantities of less than 50 kg/L

Chemical	DG Group	Packaging group
Monsanto Roundup Herbicide	9	III
Domestos Thick Bleach Original Blue	None	None
Acetone	3	II
Aerolex Plus	None	None
Biolab Buffer Solution pH 7	None	None
Bostik Plumb-Weld	None	None
PVC Pipe Cement Type N	3	II
Brighton Professional Degreaser Cleaner	None	None
Chemsearch Flash AR-19	2.1	None

Table 5 - Other chemicals that may be on the premises in quantities of less than 50 kg/L (cont)

Chemical	DG Group	Packaging group
Chemsearch ND-150	None	None
Chemsearch ND-66	8	II
Chemsearch Thread-Eze Brush Top	None	None
Chemsearch Trill	8	II
Cleaner(Aerosol)	2.2	None
Fisher Scientific Buffer Solution pH 4	None	None
Holt Lloyd Powerplus Spray Grease Lithium Base Aerosol	2.1	None
Integra Polyflox 251	None	None
Jamec-Pem Compressor Oil	None	None
Kong's Quickdrop Ammonia Test Kit-Reagent A	8	II
Lanolin Plus Lubricant & Protectant Heavy Duty Liquid Lanolin	None	None
Lime Dishwash Detergent	None	None
Lithplex Tac Grease	None	None
Lo-V.O.C. Purple Primer_ NSF Listed	None	None
Markaline Air Compressor Oil	None	None
Merck Extran MA05 Liquid, alkaline, phosphate-free concentrate	8	III
Momar C-Cide	3	III
Nitrate – Nitrogen Test N Tube reagent se	None	None
Noosa Ajax Spray and Wipe	None	None
Petrol, unleaded	3	II
Phosphate test kit	None	None
POLYFLOX 186	None	None
Power Team Hydraulic Fluid	None	None
Recochem Diggers Kerosene	3	III
Recochem Fibreglass Resin	3	III

Table 5 - Other chemicals that may be on the premises in quantities of less than 50 kg/L (cont)

Rough Touch Scrubs In-A- Bucket	None	None
Safety Strip	None	None
Shell Diesel	9	III
US Lubricants150 Hydraulic Oil	None	None
US Manufacturing Lubricating Grease 57	None	None
Wurth PTFE Dry Lube	2.1	None

# 7. Testing of PIRMP and staff training

# 7.1. Testing of PIRMP

It is a legislative requirement that this PIRMP be tested:

- At least once every 12 months and
- Within one month of any pollution incident occurring

The annual test will be undertaken by a simulated desktop pollution incident response exercise. An "incident" will be selected, and the relevant staff will be required to respond to this incident as per the PIRMP. Any issues or deficiencies identified during this simulated incident will be considered in the review and update of the PIRMP.

The test required within one month of the pollution incident occurring will be undertaken by a debrief with all staff involved in the incident and revisiting the actions required by the PIRMP and the actions taken. The adequacy of the response and any issues identified with the response and/or the PIRMP will be considered in the review and update of the PIRMP.

A PIRMP testing record is contained in Appendix C. Every test of the PIRMP will be recorded in this Appendix, along with the name of the person undertaking the test and accompanying notes (issues identified, and amendments made, etc.)

# 7.2. Staff training

Training in relation to the PIRMP will have three forms:

- for new members of staff at the premises, the specific induction for the premises will include details of the PIRMP.
- refresher training undertaken as part of the annual testing of PIRMP, and
- as deemed necessary, particularly after an incident that required implementation of the PIRMP.

Records of any training undertaken by staff will be kept with Council's records.

The objectives of any training undertaken in relation to the PIRMP will be to enable the participants to:

- Explain the purpose of the PIRMP,
- Demonstrate an understanding of when the PIRMP must be implemented,
- Outline the responsibilities of various personnel in relation to the implementation of the PIRMP,
- Apply the incident response procedures contained in the PIRMP, and
- Take part in the assessment of a response to pollution incidents.

# Appendix A – Environmental incident report

# PART B Report to Environmental Incident Hotline INVESTIGATION

PLACE YOUR COUNCIL LOGO HERE

he appropriate Section Supervisor/Manage	er is responsible for comple	tion of Part B of the	e incident report.		
MMEDIATE ACTION BY SUPERVISOR/	MANAGER				
Will the incident:  1. Require assistance from other agencie If "Yes" call 000 immediately.	es to contain, isolate or clea	nup?	YES	NO 🗌	NOT SURE
Pose any actual or potential harm to h     Is it located within 100m of a school, ch     Could it impact on users of public areas     Could the impact spread and potentially	ildcare centre, aged care he such as ovals, reserves, w	ome? aterways?	YES	NO _	NOT SURE
3. Pose any actual or potential harm to e Could the incident flow / impact on a wa Could the incident flow / impact on envi	ater body or drainage system	m?	YES	NO _	NOT SURE
4. Result in actual or potential loss or pro	operty damage of an amour	nt over \$10,000?	YES	NO _	NOT SURE
you answered <b>'YES' to any of the above</b> the otlfy the EPA, Ministry of Health, WorkCow where material harm is caused or threaten	er and Fire and Rescue NS	W immediately after	becoming awar	e of a pollut	ion incidents
AGENCY NOTIFICATIONS f the incident does not require an initial comba	at agency, or once the 000 cal	l has been made, not	ify the relevant au	thorities in th	ne following order
NSW EPA [EPA Environment Line: 131 558 Contacted: YES NO	5) Reason not contacted:				
NAME OF EPA REPRESENTATIVE	TIME AND DATE		EPA REFERENCE N	NUMBER	
ACTIONS REQUIRED BY EPA			-		
NSW Health - Local Public Health Unit (	See www.health.nsw.gov.au	/publichealth/infect	tious/phus.asp)		
Contacted: YES NO	Reason not contacted:				
NAME OF PHU REPRESENTATIVE	TIME AND DATE		PHU REFERENCE	NUMBER	
	THE PART OF THE				
ACTIONS REQUIRED BY LOCAL PHU					
ACTIONS REQUIRED BY EUCAL PHO					
WorkCover Authority (WorkCover: 13 10	50)				
Contacted: YES N0	Reason not contacted:				
NAME OF WORKCOVER REPRESENTATIVE	TIME AND DATE		WORKCOVER REF	ERENCE NUM	IBER
ACTIONS REQUIRED BY WORKCOVER					
POTOTO NEGOTIED DI TIONICOTEN					
Fire & Rescue NSW (Emergency Hotline:	000)				
Contacted: YES N0	Reason not contacted:				
NAME OF FIRE & RESCUE REPRESENTATIVE	TIME AND DATE		FIRE & RESCUE R	EFERENCE N	UMBER
ACTIONS REQUIRED BY FIRE & RESCUE			-		
				CONTINU	JES ON REVERSE

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	CONSIDER INCLUDE:
Internal contacts eg Env	ironmental Health Officer
Media	
NSW Food Authority	
Shellfish programs	
River users eg boat hirin	g companies
Marine education centre	5:
Other	
RELIMINARY INVESTIGA	TION
Notes from discussions wit	h relevant operational staff
Any further observations or	comments by Supervisor / Manager
ATEGORISATION BY AUT	HORISED OFFICER
Minor	Incident affects small area only [eg single property] AND
No notification required	Incident is easy to clean up without additional assistance, AND
	<ul> <li>There is no risk of material harm to humans or the environment.</li> </ul>
Moderate	Incident affects more than one property OR
Notify EPA and	There is a risk of pollution or material harm to the environment BUT
Local PHU only	Cleanup can be completed without assistance AND     There is no danger to humans.
Major Notification required - Noti	Potential or actual harm to humans and the environment AND/OR
EPA, Local PHU, Workcover and Fire & Rescue	
Council Responsible	Incident occurred as a direct result of Council activity or function.
Response by Council	Incident occurred on Council land, or land under Council care and control BUT Council did not cause the incident.
Technical Licence Brea	Relating to technical compliance such as exceedence of permissible discharge volume or environmental monitoring limits.
ETAILS OF APPROPRIAT	E SECTION SUPERVISOR/MANAGER REPORTING THE INCIDENT
NAME	DATE
and the second	
PHONE	MOBILE
DEPARTMENT SECTION	

# **Appendix B – Sewerage spill or overflow notification**

Incident Notification			PLACE YOUR COUNCIL LOGO HERE						
Tor	sewerage spill or overflow	D	ATE						
Dear									
Over	flow at	EPA Ref #	ŧ						
EPA	Licence # of			Sewerage Scheme.					
Follo	wing our initial telephone call, we are advising you in writing (Refer to R4 of	f Licence) of mo	re def	tails of a sewage spill					
or ov	erflow that Council experienced atam/pm on								
The o	werflow was caused by								
	Council staff became aware of the overflow, the EPA and notified immediately and corrective measures were put in place.								
	fer to Condition M9) of Licence: requires that Council record the following dorted overflow from the reticulation system and from the sewage treatment		n to ea	ach observed or					
a)	The location of the overflow:								
ы	The data she assigned about time and assigned described as a supplier								
b)	The date, the estimated start time and estimated duration of the overflow:								
c)	The estimated volume of the overflow (litres):								
d)	A description of the receiving environment of the overflow:								
e)	Classification as a dry or wet weather overflow:								
f)	The probable cause of the overflow:								
g)	Any actions taken to stop the overflow happening:								
h)	Any action taken to clean up the overflow:								
i)	Any actions taken to prevent the overflow happening again:								
	Additionally, sampling was undertaken at and the results of these samples are attached.								
Yours Name	s faithfully, SIGNATURE	n	)ATE						
I WAIVIE	SIGNATIONE		ATE.						
APF	PROVED BY GROUP	DOCUMENT ID		VERSION					
ISS	UED REVISED	STATUS		PAGE					
	Incident Notification Template provio	ded by the Water Direct	rtorato 6	Convright 2011 WATER					

# **Appendix C - PIRMP testing record**

Date tested	Who by	Notes
25 <sup>th</sup> August 2020	JS Regulatory Services	Earliest record of PIRMP testing
23 <sup>rd</sup> June 2022	In house testing led by Aadesh Baniya and Perrin Walsh	
25/09/2024	Dane Russel – Reticulation Supervisor Jason McGuinness – Plant & Pup Station Supervisor Vineeth Modem – Water & Wastewater Engineer Laurin Shirt – WHS & Environment Officer Brian Healey – Wastewater Operator Kynan Coombs – Trainee Water and Wastewater Operator	Section of PIRMP tested: Incident Response p3, High Risk Chemical Spill Response p4, High Risk Chemical Response Sheets p6, Caustic Soda Liquid p 12
Liller Common T	reatment System DIRMP	Page <b>52</b> of <b>52</b>

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