Pollution Incident Response Management Plan

GUNNEDAH SEWAGE SYSTEM

Reviewed February 2024

INTRODUCTION

This plan is to be followed in the event of a pollution incident as the result of a sewer overflow or bypass, that has or has potential to cause material harm to the environment.

Material harm is

1. it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
2. aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and
3. reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

It is a requirement that in the event of a pollution incident described above that it be reported immediately to the EPA, NSW Health, Fire and Rescue NSW, WorkCover NSW and the local council.

The plan is to improve the management of pollution incidents and facilitate better coordination with the relevant response agencies. A written copy of this plan must be available to all responsible personnel implementing this plan, as well as to an authorised EPA Officer.

DESCRIPTION & LIKELIHOOD OF HAZARDS

Description	Likelihood	Hazard
Wet weather sewage overflow from the reticulation network	**<u>Medium</u> in extreme wet weather events**	**Overflow into residential and non residential yards with the risk of contamination to the public.** **Overflow into environmentally sensitive areas such as waterways.**
Dry weather sewage overflow from the reticulation network	**<u>Low</u> Due to blockages or breaks. Small volumes envisaged only**	**Overflow into residential and non residential yards with the risk of contamination to the public.** **Overflow into environmentally sensitive areas such as waterways.**
Floodwater from the Namoi River into the reticulation network at Maitland St and Bloomfield Street.	**Likelihood of flood event is <u>low</u>,** **however when it occurs it's a <u>high</u> likelihood of contamination.**	**Flood water contaminated with raw sewage on low lying properties and streets.** **Bloomfield St Sewage Pump Station will be overloaded and sewage will back up and overflow through manholes and yard sinks on low lying properties.**
Overflow of Sewage Treatment Plant to Namoi River.	**<u>Low</u> Potentially caused by major Namoi River flood. Caused by water pumped from Bloomfield St Pump Station over a period of more than 3 days.** **<u>Low</u> Catastrophic breakdown of pump station feeding effluent to the reuse farm**	**Partially treated sewage released into the Namoi River. Likely that any pollutants would be extremely diluted due to flood or stormwater.**

Bloomfield St Pump Station Failure	**<u>Low</u>**	**Backup of raw sewage to low lying properties if left unattended for more than 3 days under normal flows.**

INCIDENT RESPONSE

The following procedure is to be followed immediately.

A: First Council Officer on the Scene

Assess situation to determine if there is harm or potential harm to the environment.

In case of fire, medical, or police emergency immediately phone **000**

Immediately contact The Water Services Manager **6740 2167** or **0428477173**.

If absent,

Contact Keshan Dharmasena:	**67402139** or **0467421850**
Director of Infrastructure Services:	**6740 2145** or **0413512943**
or the General Manager:	**6740 2150** or **0459238806**

Record the

1. Location of the incident and area and or properties affected.
2. Description of the incident.
3. Time of incident.
4. Time of arrival.
5. Estimate volume of overflow.
6. Damage to environment or potential.
7. Risk to public health.

B: Water Services Manager

Determine immediate steps to minimise the effects of the incident and mobilise resources in consultation with the Water Overseer if available.

Arrange staff to contact residences and businesses in the affected area.

If there is potential harm to the environment then the Water Services Engineer to immediately notify;

1. The **EPA Pollution Line** of the incident. **Phone 131555.**
    a. The EPA will provide a reference number. An incident notification is required to be faxed to the EPA providing details listed below.
2. NSW Health **1300 555 555.**
3. WorkCover **131050.**
4. Fire Brigade **000.**
5. SES if applicable **132500** or Gunnedah SES on **6740 2380** or **0429 420 872.**
6. Director Infrastructure Services **674 02 145** or **0413512943.**
7. General Manager **67402 150** or **0459238806.**
8. Notify public in the immediate area (if not done so already) by door knocking, signage, and other methods as the situation requires. The public are to be notified of the risks and what they need to do to minimise the risk of harm. The public are to be updated and notified when the crisis is over.

INCIDENT RESPONSE

As part of an investigation the following have to be determined and documented;

1. The location of the overflow (include map).
2. The date, estimated start time and estimated duration of the overflow.
3. The estimated volume of the overflow.
4. A description of the receiving environment of the overflow.
5. Classification as a dry or wet weather overflow.
6. Date remedied.
7. The probable cause of the overflow.
8. Any actions taken to stop the overflow happening.
9. Any actions to clean up the overflow.
10. Any actions taken to prevent the overflow happening again.

Information is to be recorded on excel file EPA Notification program.xls, A hardcopy is attached in Appendix 3.

Procedure for flooding from the Namoi River into the sewerage system

This event only occurs in a flood event when the river reaches a certain height and water reaches the streets at the lower end of town.

Should this situation occur –

1. Check sewer well before being blocked by flood water.
2. Monitor well height from telemetry.
3. Notify EPA of event on pollution hot line 131555. Record details.
4. When pumps cannot keep up with inflow of flood water isolate SPS using telemetry.

Procedure for Overflows at the STP

Overflows at the STP can occur in extreme wet weather events but are normally contained with the confines of the STP complex.
Should this situation occur overflow will normally commence at the inlet pump station the overflow will flow over the weir through a bar screen over a second weir that has a level transducer this waste water then flows directly to the sedimentation tanks then via the trickle filter process, extreme events the process is repeated and if inlet volume is high all excess water will flow directly to the Maturation Ponds.
Steps to be taken in this situation include-

1. Notify supervisor of the event.
2. Monitor SPS 1 Flow rates.
3. SPS 1 flows to be restricted so waste water can remain in the pump station and not by-pass.
4. Water from the overflow will normally find it way to the retention dams and obtain treatment.

Procedures for Pumping of treated effluent from the STP into the Namoi River due to flooding from extreme wet weather flows.

This situation can occur following prolonged wet weather events where the flow into the treatment plant far exceeds the capacity of the effluent pumps and water in the dams will begin the engulf the effluent pumping station.
Steps to be taken in this situation include-

1. Check stop valve located on the bank is closed.

2. Notify EPA of event on pollution hot line 131555. Record details.

3. Activate procedures to stop water entering pump room if possible.

4. Should more than 100mm in depth of water enter the pump room install lay flat to pump 2 and reconfigure pipe work-adjust VSD on pump 2 to 38-40Hz and discharge treated water into flooded Namoi River.

5. Pumps will require continual monitoring to insure there operation is maintained.

Procedures for large volumes of raw sewage from the network overflowing in residential and non residential areas, for example from extreme wet weather events

This situation can occur during event of significant flash flooding when high rainfall events occur over a short period. These events can cause significant overflows throughout the sewerage network with major health implications.

Steps to be taken in this situation include-

1. Isolate the area and make safe.

2. The problem may be caused by a blocked main downstream so attempt to clear if necessary.

3. Report the incident to Supervisor 0427 936 717 or Water Services Engineer 67402139 or water Services Manager 67402167.

4. If the overflow occurs in a public place or area where public health is in.

5. Jeopardy then Engineer or manager to notify the EPA Pollution hot line 131555 and report the event as per the incident notification protocol.

6. Remove any debris from the area and disinfect the area and spread lime if necessary.

7. Notify residents to keep and children clear of the area. Keep residents updated and notify when any danger is over.

Bloomfield St Pump Station Failure

This situation can occur as a result power failure, switchboard failure, pump overloads or Namoi River flooding inundating low lying properties and water entering yard sinks and boundary shafts s over loading the capacity of the pump station.

1. Power failure- During dry weather the pump station can normally be off line for approximately 4 hours before filling up and causing sewage to back up into residents. The sewer manhole located at 16 Little Conadilly St is the lowest lying manhole and sewage will normally build up and overflow there first. Should a prolonged power outage be expected then alternate measures need to be taken to maintain the wastewater service. This may involve obtaining a high capacity trash pump from Coates Hire 131552 (24 hr Service of Gunnedah 0428 963 862 or 67420057).

2. Switchboard and Pump overloads- Contact Electrician, Thomson Electrical 0412633338 to check fault. Install spare pump if available. Activate alternate pump arrangements as per item 1 if necessary.

3. Inundation of network by Namoi River flooding. Usually by the time this situation occurs the STP is also at full capacity and there is no alternative but to turn pumps off. Sewerage will normally find it way out at the lowest point. Once this situation occurs the EPA Pollution hot line 131555 is to be contacted and notify the SES 132500 or 0429 420 872of the situation.

4. Residents in the properties marked in Appendix 1d are to be contacted and properties assessed for sewer overflows from the manholes and yard sinks. Lime is to be used around the affected areas.

COMMUNICATION WITH NEIGHBOURS AND THE LOCAL COMMUNITY

Communicating with neighbours and the local community is an important element in managing the response to any incident.

In the event of a sewer overflow affected residents and businesses are to be notified as soon as possible. Consideration must be given to notifying any sensitive premises in close proximity, such as schools, pre-schools, nursing homes and the hospital. The method of communication will depend on the circumstances, however ideally this will be done by doorknocking. If required appropriate signage should be used around the contaminated area.

Where sewage has entered a waterway, residents and holders of water irrigation licences downstream must be notified. In the event of floodwater from the Namoi River inundating the low lying areas of town and sewage infrastructure, the community is to be informed by announcements on the Council's website and radio 2MO (6742 2322) of the contamination and not to enter floodwaters highlighting the risks.

Affected residents are to be notified what has occurred, what is the risk of harm to them, and what they must do to avoid harm. Where a waterway is affected, residents are to be told not to use or enter the water.

Where the incident is prolonged, affected residents are to be updated and notified when any danger is over.

PRE EMPTIVE MEASURES

All pump stations are monitored by telemetry and an alarm is given to personnel when a high level is reached.

The pumps at the Bloomfield St pump station and at the Gunnedah Sewage treatment plant are checked daily.

A preventative maintenance schedule is carried out at the Sewage Treatment Plant in order to reduce the number of breakdowns.

Performance data of the sewage system is collected and monitored to pre-empt problems occurring.

A relining program for gravity mains is conducted annually which decreases the amount of blockages due to roots.

Trade Waste Inspections.

No new development is permitted in the low lying flood prone areas. Existing houses have been raised from the ground.

TRAINING

All staff required to implement this plan and associated documents must have training in its use and be inducted into it. This is to ensure they are aware of the content, processes and requirements of this plan and can competently implement it if necessary. Additionally, relevant staff will be involved in an annual exercise/drill to test the implementation of the plan. In the event of a significant incident, an investigation and debrief will be conducted, documentation updated (if required) and staff will be re-inducted.

All, desktop exercises, drills and incidents are to be registered into Council's Dataworks, and training records will be sent to Human Resources and Organisational Development for filing.

RESPONSIBILITY

The Water Services Engineer is responsible for the implementation, testing and update of this Plan.

TESTING & REVIEW

This plan is to be tested routinely at least once every 12 months by the Water Services Engineer. The testing is to be carried out in such a manner (exercises and drills) as to ensure that the information included in the plan is accurate and up to date, and that each plan is capable of being implemented in a workable and effective manner. Testing is to cover all components of the plan, including the effectiveness of training

This plan must also be tested within one month of any pollution incident occurring in the course of an activity to which a licence relates to assess, in the light of that incident, whether the information included in the plan is accurate and up to date, and the plan is still capable of being implemented in a workable and effective manner.

REFERENCES

- EPA NSW Environmental Guidelines: Preparation of pollution incident response plans
- Local Government Act 1993
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (General) Regulation 2009
- Public Health Act 1991
- Water Administration Act 1986

Table of Amendments

Amendment	Authorised by	Approval reference	Date
Electrician Details	Kevin Sheridan	12908	18/10/2016
Flooding from Namoi into Retic System	”	12908	18/10/2016

Appendices

- Appendix 1 - Site Plans
- Appendix 2 - Site Chemical Register

APPENDIX 1: SITE PLANS

A: Gunnedah Sewage Treatment Plant and surrounds

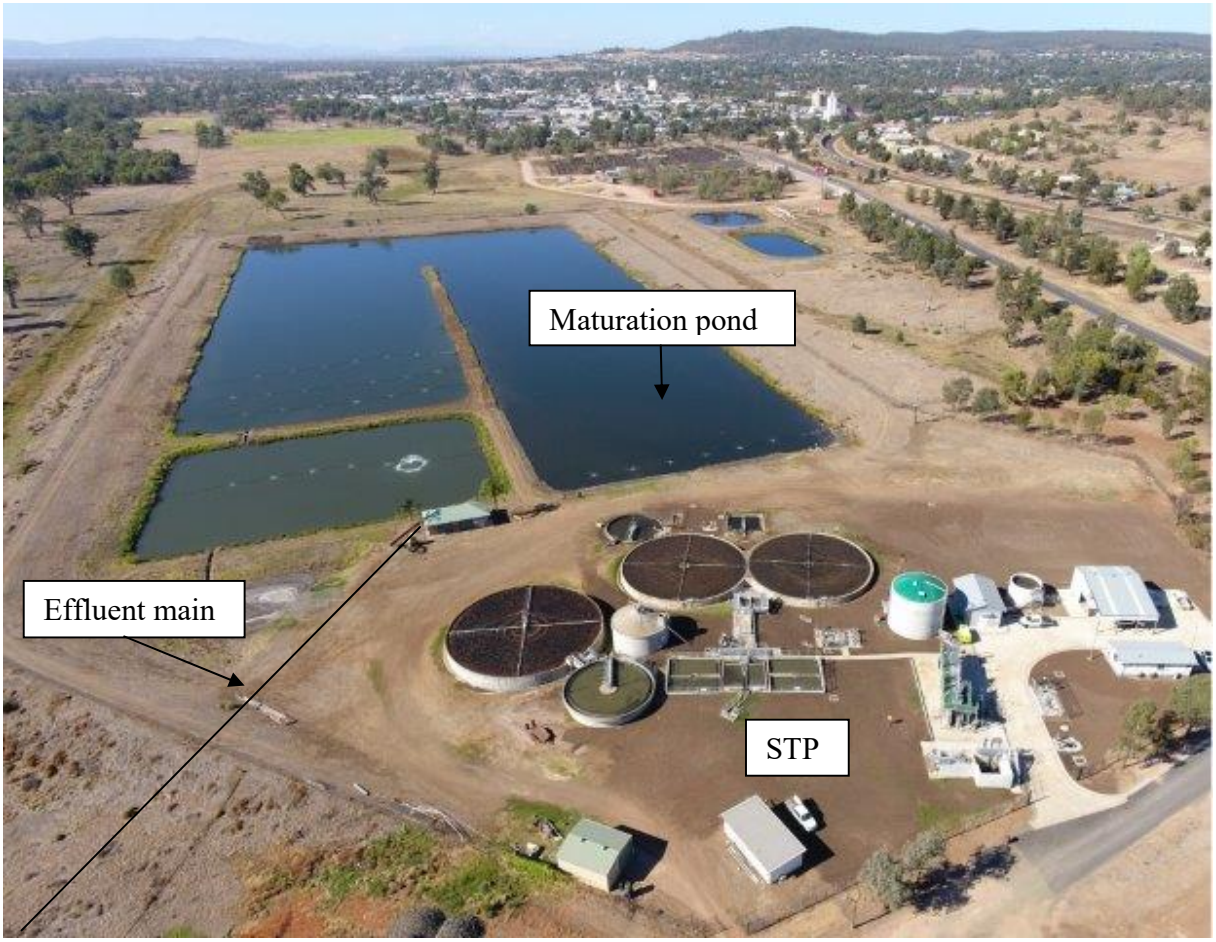
This map depicts the location of the Gunnedah Sewage Treatment Plant to the Namoi River. A natural stormwater channel on the northern side of the treatment plant feeds into the Namoi River. In the unlikely event treated wastewater needs to be pumped to the river, this is done into this stormwater channel.

The treatment Plant is surrounded by high banks ensuring wastewater is confined to the site.

B: Gunnedah Sewage Treatment Plant

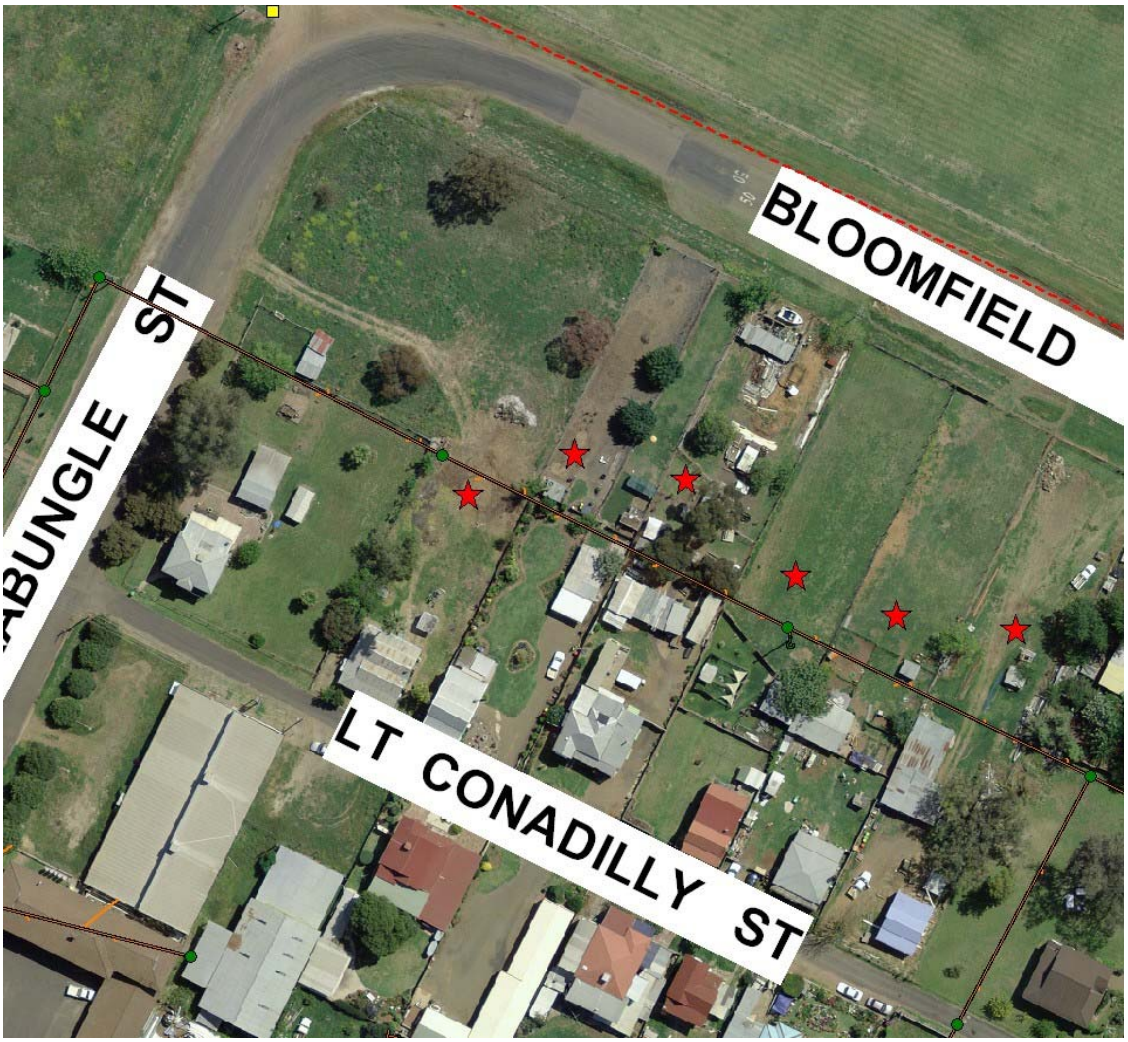
In extreme wet weather events, the inlet channel and primary sedimentation tanks can overflow onto the grounds. The slope of the site ensures this runs down towards the ponds.

Where the pump station cannot keep up with the inflow due to extreme weather events, the duty pond and overflow will continue to rise and threaten to inundate the pump station. A levee has been put into place to keep water out of this pump station.



C: Bloomfield St Pump Station

D: Likely Properties Affected during Bloomfield St Pump Station Failure



The properties marked with the red star may experience raw sewage backed up overflowing manholes marked in green and yard sinks.

APPENDIX 2: STP SITE CHEMICAL REGISTER

For Earth Bio (enzyme in solution used for treatment of solid waste in the digesters)
Maximum 200L stored at anyone time in 20L drums.

For Earth Bio Plus (enzyme in solution used for treatment of solid waste in the digesters)
Maximum 40L stored at any one time in 20L drums.

For Earth Algae Kill (Simazine).
Maximum 40L stored at anyone time.

Roundup 20L
Camba (herbicide) 20L
Diesel 50L
Petrol 30L
Oil multigrade, 20L

Polymer -EM840HIB-25
25Ltr Drums

GENERAL:

INTERNAL EMERGENCIES

An Internal Emergency is deemed to exist when an event occurs within the limits of the boundary which has caused, or may lead to, either serious injury or harm to persons or serious damage to plant, buildings, vehicles or the environment.

The following events can be described as emergencies:

- if Fire
- if Chemical Spill / Leak
- if Explosion
- if Personnel Injury
- if Bomb Threat

ASSEMBLY AREA

In the event of an evacuation being declared there is one assembly area. The assembly area must be well defined and all personnel are to be made aware of the assembly area they must normally proceed to. Personnel must be trained in their conduct of movement to an assembly area and what is expected of them upon reaching this area. This assembly area must take into account prevailing wind conditions and the proximity to the site exit. Notification of injuries and immediate first aid should be applied at the assembly area.

The assembly area is:

Double gate Western side of plant sign posted
.....

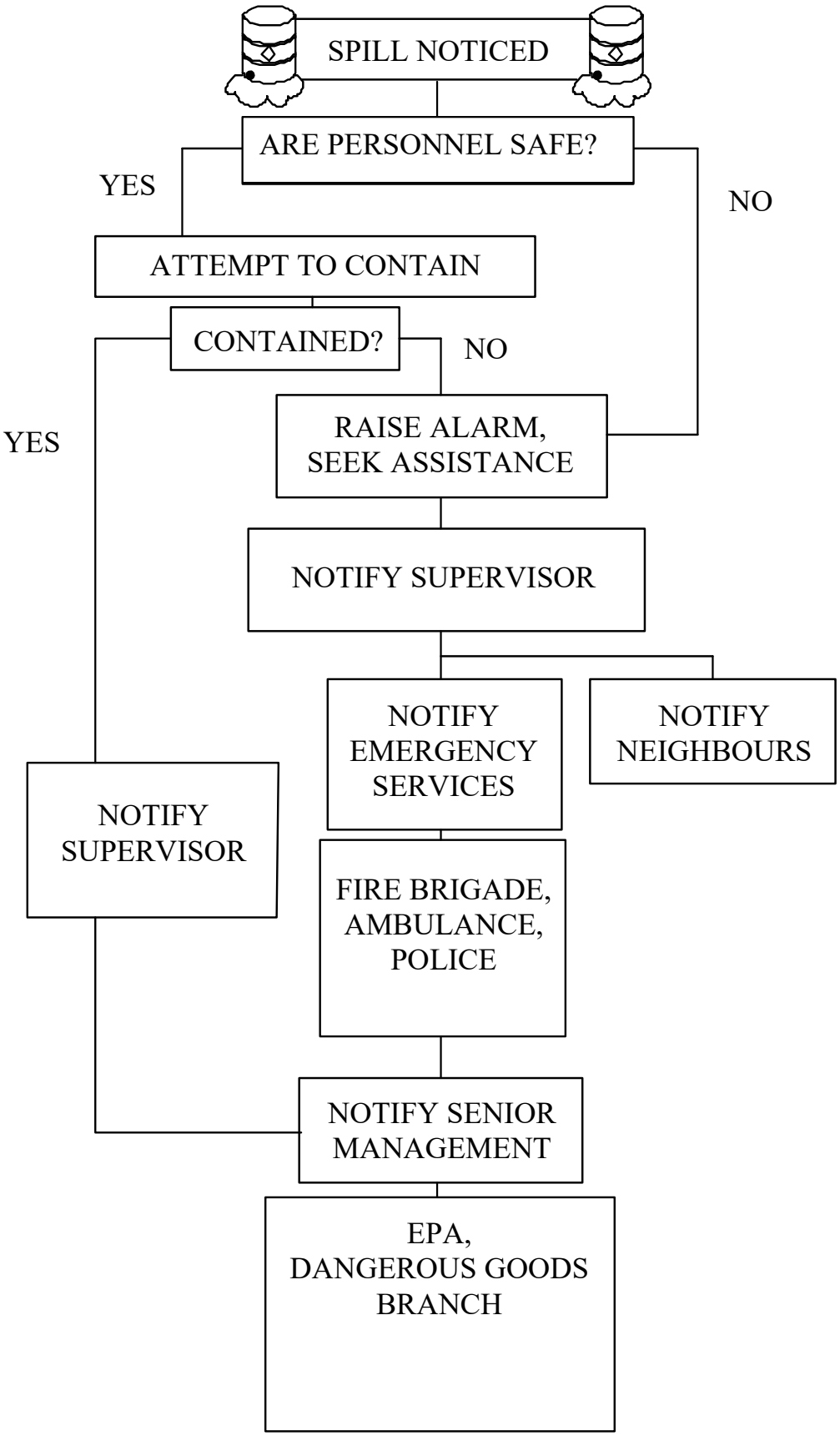
NOTE: if there is a possibility of fumes reaching the assembly area move to the alternative assembly area instead; which has been pre-determined and is listed below:

Main gate into STP Kamillaroi Hwy Southern end of plant
.....

EMERGENCY PROCEDURE FOR:

CHEMICAL SPILL OR LEAK

1. IF SAFE TO DO SO, assist any person in immediate danger.
2. IF SAFE TO DO SO, attempt to contain the spill.
3. If unable to contain the spill RAISE ALARM, SEEK ASSISTANCE and NOTIFY SUPERVISOR.
4. Restrict the danger area, block off access to storm water drains, effluent system and any other waterways.
5. Evacuate to designated assembly area as instructed.
6. Remain at assembly area until instructed otherwise.


SPILL NOTICED
ARE PERSONNEL SAFE?
YES
NO
ATTEMPT TO CONTAIN
CONTAINED?
NO
YES
RAISE ALARM, SEEK ASSISTANCE
NOTIFY SUPERVISOR
NOTIFY EMERGENCY SERVICES
NOTIFY NEIGHBOURS
NOTIFY SUPERVISOR
FIRE BRIGADE, AMBULANCE, POLICE
NOTIFY SENIOR MANAGEMENT
EPA, DANGEROUS GOODS BRANCH

APPENDIX 3

Bypass/Overflow Incident Notification Database

Bypass Event

Overflow Event

LINKS

NSW DEC/EPA

Department of Health NSW

Department of Infrastructure Planning and Natural resources

NSW Fire Brigade

SES call 132500 for help in time of Flood

Record of Bypasses at Gunnedah STP

Date	Time	Location	Cause	Authorities Notified				Date Remedied	Time Remedied
				Health	DIPNR	NSW Fire	EPA		

Record of Overflows from Sewerage Reticulation System

Date	Time Reported	Location	Cause	Authorities Notified					Date Remedied	Time Remedied
				Health	DEUS	NSW Fire	EPA	SES		
22/3/2018	10.30am	Woolsley Park Gunnedah NSW	Tree roots blocking sewer main	yes			yes		22/3/2018	10.55am

Incident Notification

To: Department of Public Health (Glen Pearce 67663003 or Ph. AH 67662288),

Phone: EPA Pollution Line 131555

From: Gunnedah Shire Council

CC: NSW DEC 67722336 (Steve O'Donahue)

Date: 22/3/2018

Re: Sewage Overflow Event

Significant Sewage Overflow Event

Council does hereby notify the above authorities of the following event. Sewage Overflow has occurred at Woolsley Park Gunnedah. Councils Staff are aware of this Incident and have contained the problem and ensured minimal effects to the surrounding environment.

The cause of this event was due to tree roots in the Council main within the park grounds

The incident has been self reported to the EPA Pollution Line. Ref No.00569165

Should you have any enquiries please contact me on 02 67402167 or 0428477173.

Regards,

Michael Ludlow

Water Services Manager
(02) 6740 2167