



Warrumbungle Shire Council

**Pollution Incident Response Management Plan for the
Baradine Water Treatment Plant**

EPA LICENCE NO. 11824

April 2014

(Revised May 2020)



For policy and technical information regarding this plan please contact:

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VERSION	ISSUE DATE	DESCRIPTION
1.0	April 2014	Final version
2.0	February 2015	Amendments
3.0	March 2020	Major review, updates and amendments (Jacinta Green)
3.1	May 2020	Minor amendments

Approval record

Version Number	Approved By (Signature)	Name and Title	Date
3.0			

PIRMP update details

Please note that the following updates have been made to this document.						
Date updated	Version Number	Page/s	Reason for update	Description	Date updates loaded to website	Updated by
February 2015	2.0	19		Attachment 5: Operational Procedure checklist		
February 2015	2.0	21		Attachment 6: Emergency Procedure – Soda Ash		
February 2015	2.0	22		Attachment 6: Emergency Procedure - PACL		
March 2020	3.0		Major plan review	Updated format to follow latest guidelines. Inserted the following new sections as indicated by the latest guidelines. Updated contact details.		Jacinta Green Jacintagreen.com.au

				Updated chemical and safety equipment inventories.		
May 2020	3.1			Phone numbers and flowchart updated		

Testing record

It is a legal requirement to test the plan every 12 months and within 1 month of any pollution incident.

Date Tested	Test type (Yearly/Post Incident)	Tested by	Details of Test	Findings of test
20 April 2018	Yearly	Cornelia Wiebels, Scott Stanley, Ben Smith and Phil Hensby	Desktop and Scenario	Updates to plan required
16 March 2020	Yearly	Yearly	Cornelia Wiebels, Scott Stanley, Ben Smith and Phil Hensby	Staff Training to be undertaken for all staff by end May
				Latest PIRMPs to be loaded to Website
				Updated PIRMP to be placed in site office
				Need for onsite induction process and register for visitors have been discussed with WHS Officer.
				Letters have been set to neighbours without phone numbers. These will need to be updated once received.

Next test due

March 2021

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1 Purpose of this plan.

Warrumbungle Shire Council holds an Environment Protection Licence with the NSW Environment Protection Authority (EPA) for Baradine Water Treatment Plant. As per the Protection of the Environment Operations Act 1997 (the POEO Act), the holder of an Environment Protection Licence must prepare, keep, test and implement a pollution incident response management plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

If a pollution incident occurs in the course of an activity causing or threatening material harm to the environment (within the meaning of section 147 of the POEO Act), the person carrying on the activity must immediately implement this plan in relation to the activity required by Part 5.7A of the POEO Act.

A written copy of this plan must be kept at Baradine Water Treatment Plant and be made available on request by an authorised NSW EPA Officer and to any person who is responsible for implementing this plan.

The plan is also available for download from www.warrumbungle.nsw.gov.au

This plan has been developed in accordance with the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (General) Regulation 2009.

This plan is intended to inform field staff and provides a concise summary of the requirements for responding to and reporting potential and actual pollution incidents in the Baradine Water Treatment Plant.

Council will provide regular training to ensure staff are familiar with how to respond to pollution incidents. Management staff are to refer to the Pollution Incident Response Management Plan Supporting Statement for further detail in relation to Pollution Incidents.

2 Environment Protection Licence (EPL) Details

Name of licensee	Warrumbungle Shire Council
ABN	63 348 671 239
EPL number	11824
Premises name and address	Baradine Water Treatment Plant Corner Walker St and Baradine Road, Baradine NSW 2396
Contact	Cornelia Wiebels Manager, Warrumbungle Water Business Hours 02 6378 5000 After Hours 02 6378 2000 Cornelia.Wiebels@warrumbungle.nsw.gov.au www.warrumbungle.nsw.gov.au
Scheduled activity/activities on EPL:	N/A
Fee based activity/activities on EPL:	Miscellaneous licensed discharge to waters (at any time) > 0 - 20 ML discharged

3 Pollution incident – Person/s responsible

Identify the person/s through whom all communications are to be made:

PIRMP activation	Site Supervisor Baradine Water Treatment Plant Business Hours 02 6378 5000 After Hours 02 6378 2000
Notifying relevant authorities	Technical Officer - Warrumbungle Water Business Hours 02 6378 5000 After Hours 02 6378 2000 Scott.Stanley@warrumbungle.nsw.gov.au
Managing response to pollution incident	Site Supervisor, Supervisor Reticulation, Supervisor Treatment Plants Business Hours 02 6378 5000 After Hours 02 6378 2000

4 Notification of relevant authorities

Operational Staff should call 000 if the incident presents an immediate threat to human health and/or property and a combat agency is required (i.e. NSW Fire and Rescue, NSW Ambulance Service, NSW Police Force). Operational staff are to follow the escalation/on-call process, whereby the respondee (Appropriate Site-Supervisor, Manager Warrumbungle Water, or Director of Environment and Development Services), will then notify all other parties below including NSW Fire and Rescue via a local telephone number.

EPA **131 555** should be contacted as soon as possible, as depending on the severity of the pollution event may want to be on-site, or will issue directions about notification to neighbours.

Health NSW (Public Health Officer on Call (24 hours) **0418 866 397**) should also be contacted immediately if there is a risk to human health.

Emergency Hotline Number - Fire, Police, Ambulance (24 hours) 000

Fire and Rescue NSW

- Fire and Rescue NSW Baradine Brigade **1800 679 737**

Environment Protection Authority (EPA)

- Emergency Hotline Number (24 hour) **131 555**
- Dubbo Regional Office **02 6883 533**

Health NSW

- Public Health Officer on Call (24 hours) **0418 866 397**
- Dubbo Regional Office **02 6809 8979**

Safe Work NSW

- Hotline Number **13 10 50**

Warrumbungle Shire Council

- Warrumbungle Shire Council Environmental Services
(24 hour Emergency Hotline Number) **02 6849 2000**
- The Manager Warrumbungle Water will notify the Director of Environment and Development Services who will determine the need for further reporting to the General Manager and Council. Depending on the severity of the pollution event Council Management will determine if press releases and/or radio announcements are required.

5 Notification of neighbours and the local community

Develop any specific information that could be provided to the community, so it can minimise the risk of harm where the pollution incident causes or threatens material harm to the environment or human health, the EPA is notified in accordance with Section 3.2.2.

Once the EPA is notified, it is then for the EPA to determine whether commercial, industrial and residential neighbours of the site need to be contacted by Council and informed of the circumstances of the incident and what action is being taken in response to it. If deemed necessary, the EPA then has powers to formally direct Council to notify the neighbours of the site.

Irrespective of whether the EPA directs Council to notify neighbours and depending on the circumstances of the particular pollution incident, Council may at their own discretion voluntarily choose to notify neighbours.

Council would notify neighbours by making a telephone call to every neighbouring property of the STP as detailed in Attachment 2. If neighbours are unable to be contacted by telephone a door knock will be carried out.

If appropriate a media release will be issued for publication via radio and social media channels.

In the particular case of discharge into the Baradine Creek, especially in times of low flow in the river, it may be decided to contact landowners and other parties that may be impacted. See Attached Maps.

6 Description and likelihood of hazards

DESCRIPTION OF INCIDENT	LIKELIHOOD	IMPACT	CONTRIBUTING FACTORS
Failure of Chlorine Equipment	Low	High	Lack of maintenance, mechanical failure, human error, out of control vehicle, vandalism, terrorism
Failure of Chemical Storage Facilities	Low	Medium	Lack of maintenance, human error
Failure of Back Wash Pond	Low	Medium	Lack of maintenance, mechanical damage to liner
Mechanical failure resulting in discharge of backwash water into the environment	Low	Medium	Lack of maintenance, or fire damage, vandalism
Failure of Fluoride system causing overdosing of clear water	Low	High	Lack of maintenance, vandalism
Disturbance of asbestos sheeting in building	Medium	High	Impact on building, storm damage, vandalism
Acts of vandalism or target of terrorist activity	Low	High	Increased risk when plant not attended. Increased risk of fire in hot dry weather

7 Pre-emptive actions to be taken and minimising harm to persons on the premises

It is a requirement of the legislation that all steps be taken to minimise the risk of pollution incidents. All staff must ensure that work is carried out in a safe manner in accordance with the WHS legislation and Council's safe work procedures.

All on site chemicals will be safely stored, and where necessary, in a bonded area.

All safety equipment including personnel protective equipment, fire extinguishers, hazmat kits etc are to be kept up to date and ready for any emergency.

All staff are, to ensure that any observed maintenance issues are reported to their supervisor for action.

It is management's responsibility to ensure all staff are fully trained in safety procedures and emergency responses including this Pollution Incident Response Management Plan. Training in relation to this Plan will be registered in the Training Register-Attachment 2.

Any persons entering the site must be wearing the appropriate PPE and inducted by a trained staff member.

Signage should be installed where appropriate.

8 Actions to be taken during or immediately after a pollution incident

Develop a detailed description of the actions to be taken immediately after a pollution incident to reduce or control any pollution. These should include as a minimum, early warnings, updates and actions to be taken during and after an incident

Identify any actions to be taken in combating the pollution caused by the incident and how any clean-up and associated funding resulting from an incident will be undertaken:

9 Staff training

An online training course has been developed to test relevant staff knowledge of the Pollution Incident Response Management Plan (PIRMP).

Relevant staff are required to complete the training course at least once a year. Completion of the training course by relevant staff is checked annually as part of the PIRMP testing procedures.

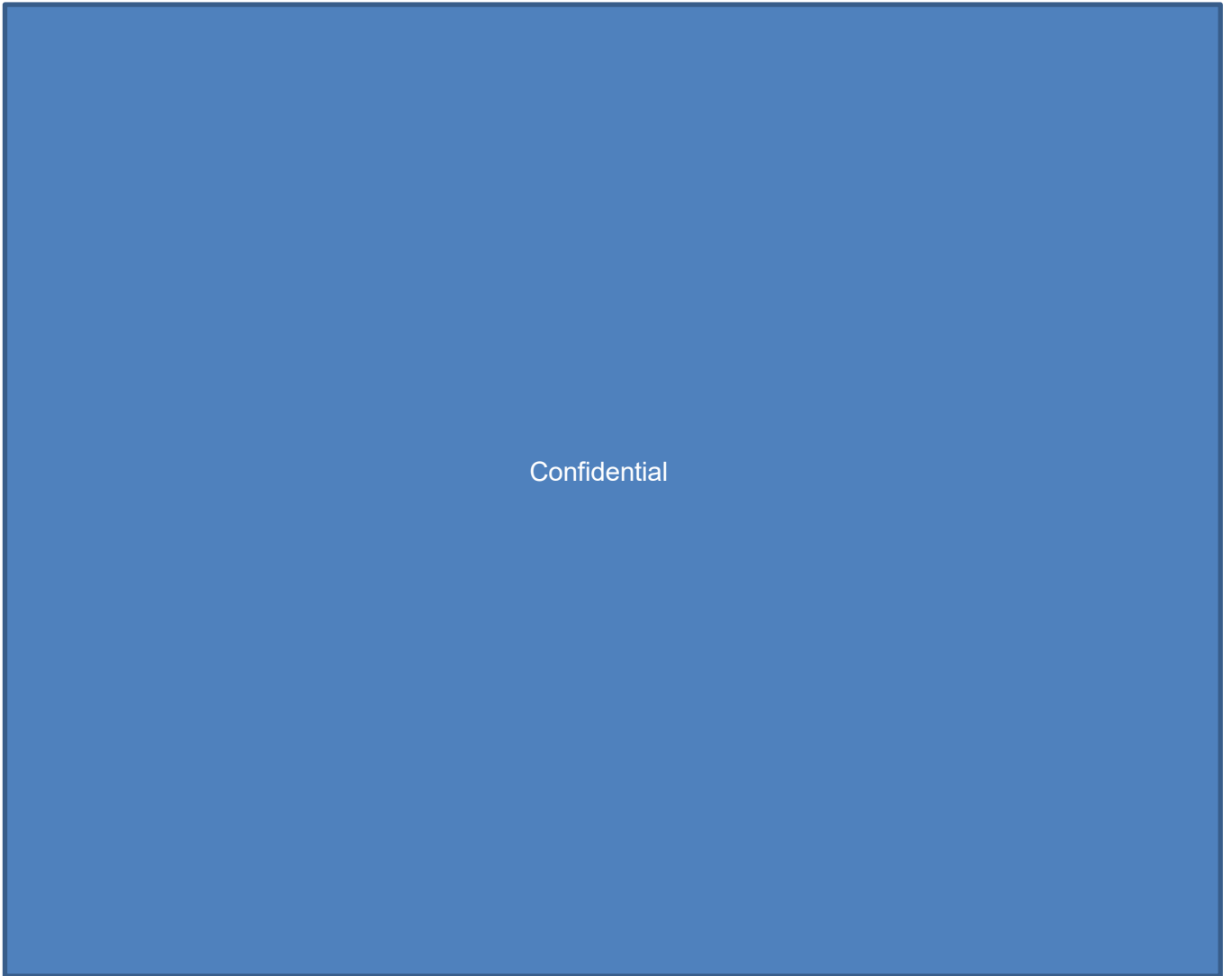
Access to the training course is through the council's on-line training program managed by the Human Resources Department of Warrumbungle Shire Council.

The objectives of the training program are to:



- Ensure staff are aware of whether a pollution event is considered minor or major.
- Ensure that staff knows who to call when a pollution event occurs.
- Ensure Warrumbungle Shire Council meets its regulatory obligations.
- Ensure chances of pollution events impacting human health or the environment are minimised.

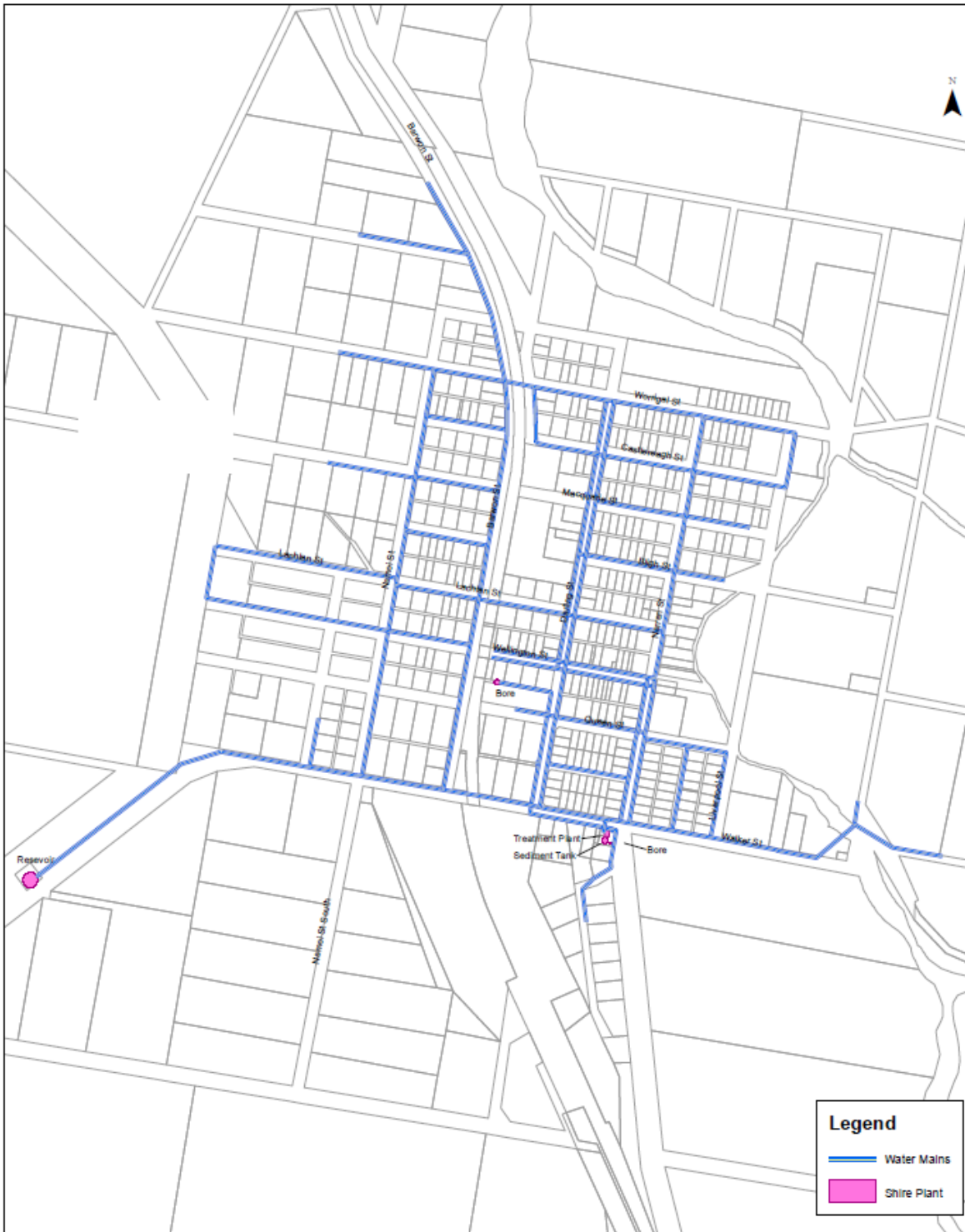
ATTACHMENTS

Attachment 1 - Map of the Baradine Water Treatment Plant





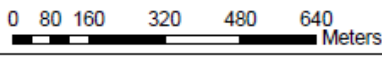
<p>DISCLAIMER The Warrumbungle Shire Council makes every effort to ensure the accuracy and quality of information available on this map. The Warrumbungle Shire Council cannot guarantee and assumes no legal liability or responsibility for any changes or loss incurred as a result of the use of this map.</p>	<p>WARRUMBUNGLE SHIRE COUNCIL Baradine Water Treatment Plant</p>	
<p>0 1.75 3.5 7 10.5 14 Meters</p> 		



DISCLAIMER
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WARRUMBUNGLE SHIRE COUNCIL

Baradine Water



Attachment 2 – List of Neighbours to be Notified

Confidential

Attachment 3 – Information to be notified

The Site Supervisor is to immediately provide the information initially by phone and later by filling out the “Pollution Incident Reporting Form” in Attachment 1 of this plan.

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

Pollution Incident Reporting form

Incident No:	Time:
--------------	-------

Date:	Duration of Incident:
-------	-----------------------

Nature of Incident:

Weather Conditions:

The Location of the Place Where Pollution is Occurring or is Likely to Occur:

The nature, the estimated quantity or volume and the concentration of any pollutants involved (if known):

The Circumstances in which the Incident Occurred, Including the Cause of the Incident (if known):

The Corrective Action Taken or Proposed to be Taken to Deal with the Incident and Any Resulting Pollution or Threatened Pollution (if known):

Has EPA Directed Council to Notify Neighbours?	Yes	No
If not, has Council Voluntarily Notified Neighbours?	Yes	No

Signature: **Date:**

Site Supervisor, Warrumbungle Shire Council

Signature: **Date:**

Manager, Warrumbungle Water
 Warrumbungle Shire Council

Has Council Been Notified? Yes No

Has Environment Protection Authority (EPA) Been Notified? Yes No

Has NSW Ministry of Health (via Public Health Units) Been Notified? Yes No

Has WorkCover NSW Been Notified? Yes No

Has Local Fire and Rescue NSW Been Notified? Yes No

Attachment 4 - Staff Training Register

Staff Training Register		
Date	Staff Member	Brief Description of Training Task
27/11/13	Cornelia Weibels	Tool box explanation of Plan with suggestions from staff incorporated into plan
	Andrew Milford	Tool box explanation of Plan with suggestions from staff incorporated into plan
	Kim Meyers	Tool box explanation of Plan with suggestions from staff incorporated into plan
	Phil Hensby	Tool box explanation of Plan with suggestions from staff incorporated into plan
	Steve Walton-contractor	Tool box explanation of Plan with suggestions from staff incorporated into plan

Attachment 5 - Operational Procedures

BARADINE WATER TREATMENT PLANT OPERATIONAL PROCEDURES	
A DAILY PROCEDURE	
Prior to any work have a current risk assessment completed and check controls for hazards, PPE, procedures etc.	
	<i>Details</i>
i) Basic Processes and Cleaning	<ul style="list-style-type: none"> • Check for Security breaches • Read Raw Water reading, calculate daily requirements • Read Clear Water flow (in fluoride room) • Check the compressor is fully functional, and drain water from pressure cylinder and condenser • Read Fluoride dosage, calculate daily requirements and cross check calculations to check on dosing percentage • Drain off Clarifier, (iron, manganese, suspended particles) • Backwash Sand Filter, monitor progress of each stage of the backwash process • Clean Soda Ash screen • Batch up Soda Ash tank • Observe for any leaks or possible faults
ii) Testing	<ul style="list-style-type: none"> • Test pH samples of : Clear Water, Aerated Water (from introduction point on top of clarifier), Raw Water (from bore) • Observe that the flocking process is taking place • Drop test Soda Ash, calculate to mg/l • Drop test Poly Aluminium chloride, calculate to mg/l • Drop test Polymer T20, calculate to mg/l • Drop test Fluoride (3 times and average of the 3), calculate to mg/l • Calibrate fluoride meter and probe • Test fluoride %, Clearwater and Raw water • Test for Chlorine content • Test the Turbidity (suspended solids) present in the water
iii) Recording	<ul style="list-style-type: none"> • Record results and note any changes • Record Fluoride results on forms 2 & 4 (NSW Health)
iv) Monitor	<ul style="list-style-type: none"> • Monitor flow of water through the plant and make adjustments to air operated gate valves when necessary
v) Clean and Dry	<ul style="list-style-type: none"> • Dry all equipment – no residue left from samples
NOTE:	<ul style="list-style-type: none"> • Adjustments to be made when required in dosing rates so as to obtain desired standards and tolerances for potable water if water test results display changes have to be made and too then monitor each day • Contact Electrician when required

B WEEKLY PROCEDURE	
	Details
i) Batch up	<ul style="list-style-type: none"> • Polymer T20 • Fluoride
ii) Calibrate	<ul style="list-style-type: none"> • pH meter
iii) Monitor	<ul style="list-style-type: none"> • Volume of chlorine gas in cylinder and amount of PACL in tank, order when required
iv) Test & Sample	<ul style="list-style-type: none"> • Test for Iron content • Test for Manganese content • Test Water Softener unit is operating correctly • Take 4 x water samples from designated sampling points in town (couple of different points each week) and test for Fluoride and Chlorine content.
v) Record	<ul style="list-style-type: none"> • Record results from above sampling
vi) Clean	<ul style="list-style-type: none"> • Clean and wash down plant • Clean, wash and mop lab and Fluoride room
vii) Weekends	<ul style="list-style-type: none"> • On weekends monitor reservoir level so as to perform tests at correct stage (eg plant to be running for at least 1 hour)
C MONTHLY PROCEDURE	
	Details
	<ul style="list-style-type: none"> • Clean Clarifier (induction point and siphon holes to filter) • Add salt when required to water softener unit • Fax Fluoride test results to NSW Health • Take 1 water sample (from a designated sampling point within the reticulation system) and send to NSW Health for Fluoride testing. • Pick up Soda Ash – Coonabarabran • Grease pumps • Mow plant area • Spray edges and pond edges when required
D YEARLY PROCEDURE	
	Details
	<ul style="list-style-type: none"> • Clean down interior of filter • Pressure clean Poly and Chlorine rooms • Wash out Soda Ash tank • Swap Settling Ponds, one is to dry out and to be silted.

Attachment 6 – Emergency procedure – Soda Ash

BARADINE WATER TREATMENT PLANT EMERGENCY PROCEDURES	
A EMERGENCY PROCEDURE FOR CHEMICAL SPILLS	
Refer to the following steps in the case of an emergency chemical spill at the plant.	
Note: Soda Ash is a hazardous substance Avoid accidents, clean up immediately	
	<i>Details</i>
EMERGENCY PROCEDURE FOR SPILLAGE OF SODA ASH	<ul style="list-style-type: none"> • Restrict access to the area. Clear area of all unprotected personnel. • If contamination of sewers or waterways has occurred advise local emergency services • Wear protective equipment to prevent skin and eye contact. • Avoid skin and eye contact and breathing in vapour, mists and aerosols. • Contain – prevent runoff into drains and waterways. • Use an absorbent (soil, sand or other inert material). • Water jets or water fog – in the absence of fog a fine spray must be used or Foam or Dry Agent – water must not be allowed to come into contact. • Collect and seal in properly labelled containers or drums for disposal
	FIRST AID PROCEDURE
SODA ASH CONTAMINATION BY SWALLOWING	<ol style="list-style-type: none"> 1. Obtain medical attention immediately 2. Rinse mouth with water 3. Immediately contact Poisons Information Centre on 131126 4. Give water to drink 5. DO NOT induce vomiting 6. If vomiting occurs give further water to achieve effective dilution
EYE CONTACT	<ol style="list-style-type: none"> 1. Eyelids to be held open 2. Wash continuously with water for at least 15 minutes 3. In all cases of eye contamination it is sensible to obtain medical advice.
SKIN CONTACT	<ol style="list-style-type: none"> 1. Wash affected areas with plenty of water 2. Remove contaminated clothing and wash before reuse 3. Seek medical advice if irritation occurs
INHALATION	<ol style="list-style-type: none"> 1. Remove victim to fresh air 2. Avoid becoming a casualty 3. Allow patient to assume most comfortable position to keep warm 4. Seek medical advice
PHYSICIANS	Treat symptomatically and as for exposure to corrosive, alkaline substances

Attachment 7 – Emergency procedure – PACL

BARADINE WATER TREATMENT PLANT EMERGENCY PROCEDURES	
A EMERGENCY PROCEDURE FOR CHEMICAL SPILLS	
Refer to the following steps in the case of an emergency chemical spill at the plant.	
Note: Polyaluminium Chloride (PACL) is classified as a hazardous substance Avoid accidents, clean up immediately	
	Details
EMERGENCY PROCEDURE FOR SPILLAGE OF POLYALUMINIUM CHLORIDE (PACL)	<ul style="list-style-type: none"> • Restrict access to the area. Clear area of all unprotected personnel. • If contamination of sewers or waterways has occurred advise local emergency services • Wear protective equipment to prevent skin and eye contact. • Avoid skin and eye contact and breathing in vapour, mists and aerosols. • Contain – prevent runoff into drains and waterways. • Use an absorbent (soil, sand or other inert material). • Neutralise with lime or soda ash. • Collect and seal in properly labelled containers or drums for disposal
	FIRST AID PROCEDURE
POLYALUMINIUM M CHLORIDE CONTAMINATION - INHALATION	<ol style="list-style-type: none"> 7. Remove victim from area of exposure and avoid becoming a casualty. 8. Remove contaminated clothing and loosen remaining clothing. 9. Allow patient to assume most comfortable position and keep warm. 10. Keep at rest until fully recovered. 11. Seek medical advice if effects persist.
INGESTION	<ol style="list-style-type: none"> 4. Rinse mouth with water. 5. If swallowed, give a glass of water to drink. 6. If vomiting occurs give further water. 7. Seek immediate medical assistance.
EYE CONTACT	<ol style="list-style-type: none"> 4. Hold eyelids apart and flush the eye continuously with running water. 5. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.
SKIN CONTACT	<ol style="list-style-type: none"> 8. Immediately remove any contaminated clothing 9. Wash skin and hair thoroughly with running water. 10. If swelling, redness, blistering or irritation occurs, seek medical assistance
GENERAL/OTHER INFORMATION	<ol style="list-style-type: none"> 1. Provide general supportive measures (comfort, warmth, rest). 2. Consult a physician and/or Poison Control Centre for all exposures except minor instances of inhalation or contact.

Attachment 8 – Definition of pollution incidents

A pollution incident is required to be notified if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act 1997:

Harm to the environment is material if:

It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

It results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, and

Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good, harm to the environment.

POLLUTION INCIDENT CLASSIFICATIONS, REQUIRED RESPONSES AND NOTIFICATIONS PROTOCOL

Pollution incidents that may occur within the Baradine Water Treatment Plant can be categorised into two major areas in determining the type of response and notification requirements. If there is any doubt as to the level of notification required it is always best to err on the side of caution and immediately notify all authorities as well as any affected residents.

It is the responsibility of the person on site to first call 000 in dangerous situations requiring immediate emergency services assistance, advise other staff and members of the public in immediate danger (by carrying out a door knock and/or telephoning) and if safe to do so take immediate steps to reduce the impact of the incident. When able, the person on site is to notify the Manager Warrumbungle Water as soon as possible who will immediately notify the relevant authorities and relevant Council managers.

When attending to pollution incidents it is important to assess the tasks required and ensure that work is carried out in a safe manner in accordance with the WHS legislation and Council's safe work procedures. The Pollution Incident Decision Flow Chart in Section 4 of this document summarises the response to an actual or potential pollution incident.

3.1 Minor – No Notification Required

The type of incident requiring no notification to external authorities is one that is of no danger to human health and no significant impact on the environment.

Typical examples include:-

- Small, local spill of chemical within the Water Treatment Plant that is easily cleaned up by Council Staff.

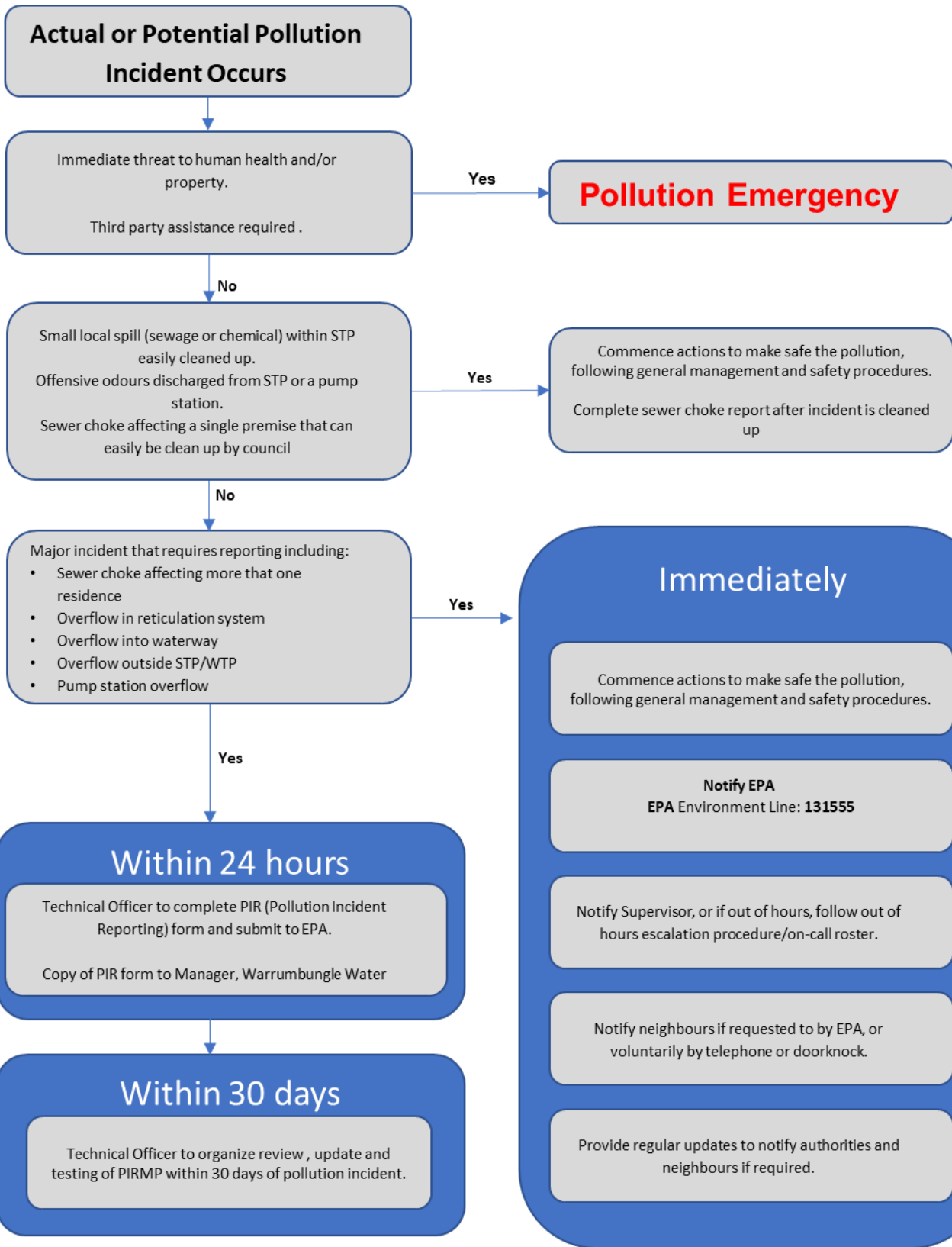
3.2 Major – Notify EPA, Dubbo Public Health Unit, Workcover, Baradine Fire Brigade and Council Management

The type of incident classified as Major typically has the potential or causes actual harm to humans and/or the environment.

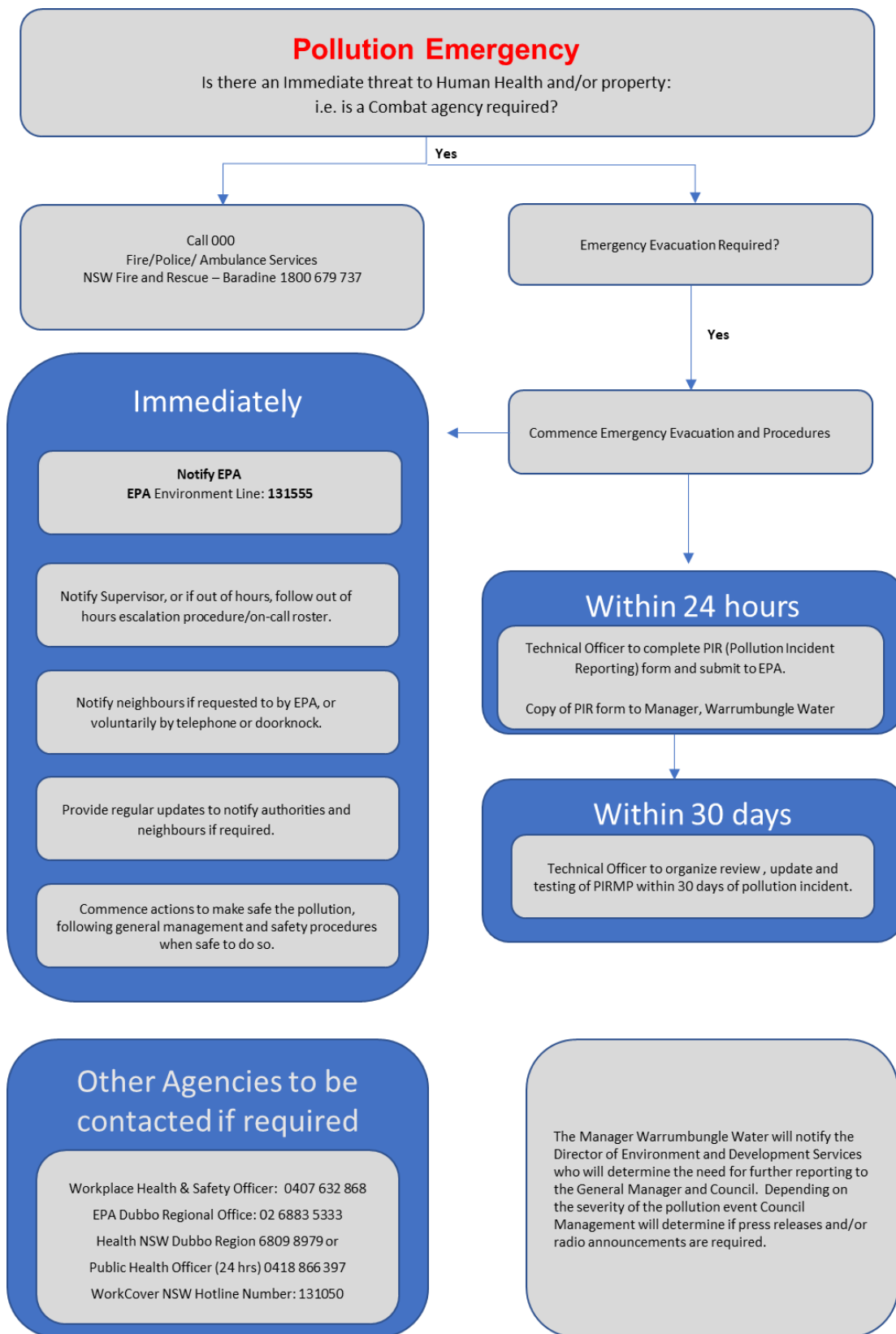
Typical examples include:

- Failure of Chlorine equipment resulting in chlorine gas entering the plant and/or surrounding environment.
- Water Treatment Plant mechanical failure event that results in discharge of backwash or sediment from the clarifier from the site.
- Fire or Chemical spill requiring Emergency Services Assistance.
- Failure of Fluoride system causing overdosing of clear water
- Breakage of Asbestos Cement sheeting in the building
- Vandalism that has or could have caused a pollution incident.

Attachment 9 – Pollution Incident decision Flow Chart



The Manager Warrumbungle Water will notify the Director of Environment and Development Services who will determine the need for further reporting to the General Manager and Council. Depending on the severity of the pollution event Council Management will determine if press releases and/or radio announcements are required.



Attachment 10 - Inventory of pollutants

To be updated as part of site audit

Chemicals	Present (?)	Quantity	Storage	Signag e	Other /Comments
.2, 1. 2 mg standards – Fluoride standards			Fridge		For calibration < 2 litres
TISAB 4			Fridge		
Magnafloc		50 kg	Chlorine room		
Chlorine Gas		2 Bottles 70 NET	Chlorine room	Yes	
Sodium Carbonate - Na ₂ CO ₃ (Soda Ash)	Yes	42x20 kg	Main Water Plant, stored above potential flood level.		New soda ash tank, internally bunded not yet installed.
Chlorine			Locked Chlorine room.	Yes	Not bunded but any spill will be captured by into on-site Waste Water Lagoon.
Poly Aluminium Chloride [Al ₂ (OH)nCl _{6-n}]m		2 bags @ 25kg			Locked room plus bunded external tank.
Sodium fluoroide		Between 1 and 20 x 5kg canisters.	Fluoride Room		Floor waste from Fluoride room takes 500 litres

Attachment 11 - Safety equipment

To be updated as part of site audit

Equipment	Present	QTY	Location	Condition/Comments
Long gloves			Fluoride room	
Fire extinguisher		1	Main water plant	Serviced
Breathing Apparatus	Yes	1	Main water plant	Serviced
Safety eye wear				
Gumboots			Fluoride room	
Masks			Fluoride room	
Safety showers	Yes			Working
Eye wash	Yes			Working
PIRMP on site	No			
Cartridge respirator			Fluoride room	