

# **POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN**

**FORBES WATER FILTRATION PLANT – FORBES SHIRE COUNCIL**



**OCTOBER 2015**

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# **POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN.**

## **WATER FILTRATION PLANT – FORBES SHIRE COUNCIL**

### **INTRODUCTION**

#### **1.1 PURPOSE**

This Pollution Incident Response Management Plan (PIRMP) has been prepared in accordance with the *Protection of the Environment Legislation Amendment Act 2011 (POELA Act)* and reflects the requirements specified in the Environment Protection Authority (EPA's) *Guidelines: Preparation of Pollution Incident Response Management Plans, March 2012*.

The PIRMP details:

- Procedures for notifying a pollution incident to relevant persons.
- Actions to be taken to reduce and/or control pollution, and
- Procedures for co-ordinating those notified and any action taken in combating the pollution.

#### **1.2 DEFINITION OF POLLUTION INCIDENT**

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 Protection of the Environment Operations Act 1997 (POEO Act);

- (a) Harm to the environment is material if;
  - I. It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
  - II. It 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), and
- (b) 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.

#### **1.3 IDENTIFIED POLLUTION INCIDENT RISKS**

The primary potential hazards to human health or the environment associated with the activity undertaken at this site –i.e. 'Pollution Incidents'- include the following;

- Chemical Spill

Chemical / Pollutant	Average Quantity	Location –Refer Sec 8 , Appendix A (PIRMP)
Dense Soda Ash	30,000kg Bulk	WFP- Shed next to Workshop

Liquefied Chlorine (Gas)	3x920kg Drums	WFP- Chlorine storage Shed
Hydrated Calcium Hypochlorite	2x20 kg Buckets	WFP- Chlorine storage Shed
Sodium Fluorosilicate	2000kg Bagged	WFP- Treatment Plant Building
Poly-Aluminium Chloride	44,000L Bulk Liquid	WFP- Tanks in front of Treatment Plant Building
Powdered Activated Carbon	3500kg Bagged	WFP- Workshop

- Noises which are generated by operational processes.
- Any other incident or observation that could potentially pose an immediate environmental /human hazard outside normal operating conditions.

## SITE OVERVIEW

### 2.1 SITE OVERVIEW

The Forbes Water Filtration Plant is a conventional type treatment plant which was built in 1966, having a capacity of 26ML/d. The water treatment process includes flocculation, sedimentation, filtration, chlorination and fluoridisation.

The Forbes Water Filtration Plant is located at 126-132 Flint Street, Forbes, approximately 3km South East of Forbes CBD. Filtration plant treats water extracts from Lachlan river and two bore wells constructed along the New Grenfell Road approximately 10 km South East of Forbes, and is reticulated to the town area via four service reservoirs (capacity - 30ml) and 130 km of water mains.

The Environment Protection Authority (EPA) has issued **Environment Protection Licence 435 for the Forbes Water Filtration Plant**. Under this licence, reportable incidents are causing or threatening, material environmental harm to the environment which is set out in accordance with Section 5.7 of the POEO Act 1997. The licence requires that the total discharge quantity of liquid and /or solid through the drain from Filtration Plant to the Lachlan River must not exceed 1000 kL /d.

## 2.2 SITE CHARACTERISTICS

The Water Filtration Plant is located at 126-132 Flint Street, approximately 3km South East of Forbes (Site Locality Plan is attached in **Appendix A (PIRMP)** ). It comprises DP 750158 within the parish of Forbes, County of Ashburnham.

The site is located in a residential area, just adjacent to Forbes River. The nearest residential/industrial property to the facility is located approximately 5m to the north boundary.

The Site has main access via Flint Street and another access through Ferry Street.

## 2.3 SITE SAFETY EQUIPMENTS

Mainly the Filtration Plant is protected from fire using fire hose reels and fire extinguishers. Further, Personal Protective Equipment (PPE) is provided for onsite staff, which consists of;

- Self Contained Breathing Apparatus
- Ear/hearing protection
- Sun screen
- Rubber Gloves
- Safety Glasses
- Gumboots
- Steel capped Boots
- Clothing
- Broad Brimmed Hats

## RISK MANAGEMENT AND PRE-EMPTIVE ACTIONS

### 3.1 LIKELIHOOD, IMPACT AND CONTRIBUTING FACTORS TO POLLUTION INCIDENTS OCCURRING

Incidents can be classified as being of low, medium or high risk of occurring (likelihood) based on the past history of the facility, an assessment of management procedures, staff training and site layout.

The impact of an incident can be classed as low, medium or high based on the potential extent of off-site harm to humans and/or the environment.

The following table summarises the assessment of the identified potential pollution incidents at Filtration Plant.

Pollution Incident	Contributing Factors	Impact	Risk Rating (LxC=)	Controls
Chemical Spill -Dense Soda Ash	Lack of maintenance	Land contamination, possibly enter a waterway. Effect the people on site and the surrounding neighbourhood	B2 = L	Proper site maintenance. All Chemicals at the Water Filtration Plant are detailed in the Emergency Information Folder located at the main entrance to the premises. This folder contains the information about all the locations of chemicals, a chemical risk assessment and MSDS sheets as required by Dangerous Goods Legislation and Work Cover Regulations.
Chemical Spill –Liquefied Chlorine (Gas)			B2 = L	
Chemical Spill – Hydrated Calcium Hypochlorite			B2 = L	
Chemical Spill - Sodium Fluorosilicate			B2 = L	
Chemical Spill – Poly-Aluminium Chloride			B2 = L	
Chemical Spill - Powdered Activated Carbon			B1 = L	
Noises which are generated by operational processes			Lack of Maintenance	

Any other incident or observation that could potentially pose an immediate environmental /human hazard outside normal operating conditions	N/A	Effect the people and /or environment	A2 = L	The site has significant and advanced environmental protection measures and monitoring schedules which are likely to contain and prevent the immediate spread of environmental hazards outside the premises
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Likelihood	Consequences	Rating	Likelihood				
			A	B	C	D	E
<b>A - IMPROBABLE</b> - May occur only in exceptional circumstances	<b>1. INSIGNIFICANT</b> - No injuries, minimal level of pollution, Employee grievances dealt with on site, Loss <5% of job cost. Services, business failure resulting in delay < 1 week and costs plant/equipment loss < \$ 1,000	L - Low					
<b>B - REMOTE</b> - Could occur at some time	<b>2. MINOR</b> - First Aid treatment, limited / localised impact, Employee grievances dealt with senior management, Loss 5 - 10% of job cost. business failure resulting in delay < 1 month and costs plant/equipment loss < \$ 10,000	M - Medium	L	L	L	M	H
<b>C - OCCASIONAL</b> - Might occur at some time	<b>3. MODERATE</b> - Medical treatment & several days off work, significant pollution requiring outside assistance, Employee grievances taken to the union, Loss 10 - 20% of job cost. Non compliance with legislations/Licence conditions, business failure resulting in delay < 3 months and costs plant/equipment loss < \$ 50,000	H - High	L	L	M	H	V
<b>D - FREQUENT</b> - Will probably occur in most circumstances	<b>4. MAJOR</b> - Long term illness/serious injury, significant pollution requiring outside assistance and long term environmental damage, Threatened industrial action, Loss 20 - 70% of job cost. Loss of production capability, Order placed on Council by Authorities, business failure resulting in delay < 6 months and costs plant/equipment loss < \$ 100,000	V - Very High	M	M	H	V	X
<b>E - CONTINUOUS</b> - Is expected to occur in most circumstances	<b>5. CATASTROPHIC</b> - Death or permanent disability illness, serious permanent environmental damage, Actual industrial action, Loss > 70% of job cost. Potential prosecution by Authorities, business failure resulting in delay >6 months and costs plant/equipment loss > \$ 100,000	- Extreme	H	H	V	X	X
<i>Refer also to Council's Hazards, Risk and Controls Guidelines</i>			V	V	X	X	X



## NOTIFICATION OF POLLUTION INCIDENTS

### 4.1 NOTIFICATION SPEED OF RESPONSE

The requirement for notification of a pollution incident has changed from 'as soon as practicable' to 'immediately' (section 148 of the POEO Act 1997). In short, 'immediately' means 'promptly without delay', but it does not mean undertaking notification ahead of doing what is necessary to make safe.

### 4.2 RESPONSIBLE KEY PERSON(S) FOR NOTIFICATION

	Name(s)	Position(s)	Contact Detail(s)
Person who is responsible for and authorised to activate plan	James Lavers	Water Filtration Plant Supervisor	02 6852 2073
Person who is authorised to liaise with the relevant authority	Tom Baldwin	Water Sewer & Stormwater Engineer	02 6850 2876
	James Lavers	Water Filtration Plant Supervisor	02 6852 2073
Person who is responsible for managing the response to a pollution incident  5	Tom Baldwin	Water & Sewer Engr	02 6850 2876
	David Tinlin	Mngr Technical Services	0419 486 933
	John Zannes	Dir. Engineering & Technical Services	447 133

### 4.3 NOTIFICATION OF RELEVANT AUTHORITIES

Where the pollution incident causes or threatens material harm to the environment or human health, all the following authorities must be notified by the Water Filtration Plant Supervisor/ Water , Sewer & Stormwater Engineer /Manager Technical Services;

	Relevant Authority	Contact

		Number
1	<b>Emergency Call Services</b> <ul style="list-style-type: none"> <li>Emergency Hotline Number (24 Hours)</li> </ul> <p><i>(*The site supervisor 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) and then notify all other parties below including NSW Fire Rescue via a local telephone number)</i></p>	000* ('112' if using a mobile)
2	<b>Forbes Shire Council</b> <ul style="list-style-type: none"> <li>Engineering Department – Forbes Shire Council</li> <li>Director Engineering and Technical Services – FSC</li> <li>Council Emergency contact number (After Hours)</li> </ul>	02 6850 2874 0428 634 893 1 300 978 633
3	<b>The Environmental Authority (EPA)</b> <ul style="list-style-type: none"> <li>Bathurst Regional Office</li> <li>Emergency Hotline Number (24 Hours)</li> </ul>	02 6332 1838 131 555
4	<b>NSW Ministry of Health (via Public Health Units)</b> <ul style="list-style-type: none"> <li>Bathurst Regional Office</li> <li>Public Health Office on Call (24 Hours)</li> </ul>	02 6339 5601 0428 400 526
5	<b>WorkCover NSW</b> <ul style="list-style-type: none"> <li>Hotline Number</li> </ul>	13 10 50
6	<b>Fire &amp; Rescue NSW</b> <ul style="list-style-type: none"> <li>Forbes Fire Station</li> </ul>	02 6851 1843**
<p>(**If there is no immediate threat to human health and/or property i.e. a combat agency is not required, then the Water Filtration Plant Supervisor is still required to follow that outlined above except for dialling 000)</p>		

#### 4.4 INFORMATION TO BE NOTIFIED

Under Section 150 of the POEO Act 1997, the information about a pollution incident that must be notified is;

- The time, date, nature duration and location of the incident

- 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 pollutant involved (if known)
- The circumstances in which the incident occurred, including the cause of the incident (if known)
- The actions taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution (if known), and
- Other information prescribed by the regulations

Notification is required by the Water Filtration Plant Supervisor 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.

A Pollution Incident Reporting Form is attached in **Appendix A (PIRMP)**

#### 4.5 ACTIONS TO BE TAKEN DURING OR IMMEDIATELY AFTER A POLLUTION INCIDENT

All site personnel with relevant training must make every effort to contain the pollution incident on site without putting themselves at risk of harm. In the event of a pollution incident occurring, all members of the public and other contractor's staff will be mustered to the Emergency Assembly point, after which they will be safely evacuated from site where appropriate. It is a condition of entry that in the event of an emergency, both the public and staff must adhere to directions given by the Water Filtration Plant Supervisor.

Where the pollution incident causes or threatens material harm to the environment or human health, the EPA is notified in accordance with **Section 4.3**. 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 to respond 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 the Council to notify the neighbours and depending on the circumstances of the particular pollution incident, the Council may at their own discretion voluntarily choose to notify neighbours. Notification and communication methods will be determined on a case by case basis and the following methods can be used;

- Phone Calls
- Media Releases ( Radio/Newspaper/Internet , etc)
- Site visits/Door knocking
- Letter drops
- Warning Signs
- Other methods as the situation requires

#### 4.6 INCIDENT INVESTIGATION

All emergencies must be investigated. For all other incidents, the Director Engineering & Technical Service (with guidance of Water Team) will decide whether an incident investigation will be conducted. When an incident investigation is required, the Director is responsible for, forming the investigation team and Co-ordinating the investigation.

## **IMPLEMENTATION**

### **5.**

#### **5.1 INFORMATION TO BE NOTIFIED**

The Director Engineering and Technical Services is responsible for the implementation of this plan.

#### **5.2 STAFF TRAINING**

All the staff members at the facility should be inducted and the induction must cover the purpose, requirements and responsibilities details in the PIRMP.

All staff should receive sufficient training to enable them to carry out their assigned duties in a compete and safe manner,

- Staff must be capable of identifying potential pollution incidents
- Staff must be familiar with the requirements and procedures contained within this PIRMP

At least once every year staff should undertake a simulated pollution incident response exercise, including with emergency services, to familiarise site personnel with the requirements of this management plan. A register of staff training is included in **Appendix A (PIRMP)** and must be kept on site and updated regularly.

#### **5.3 REVIEW AND UPDATE PIRMP**

The PIRMP is a living document required to be reviewed and updated at least once every 12 months to ensure accuracy and effectiveness. A review must also be undertaken within one month of any pollution incident occurring.

For these reasons, document control is an important part of the environmental management system. It is critical that PIRMP storage locations are made known to all relevant staff members and that only the latest version is in use. Revised and updated versions of the PIRMP will always be issued with a summary of the changes. A register for updating and testing the PIRMP is included in **Appendix A (PIRMP)** and must be kept on site and updated regularly.