



**Pollution Incident Response Management Plan  
Jugiong Water Treatment Plant  
EPA Licence No. 1723**

**November 2012**

GOLDENFIELDS WATER COUNTY COUNCIL  
84 PARKES STREET (P.O BOX 220)  
TEMORA NSW 2666

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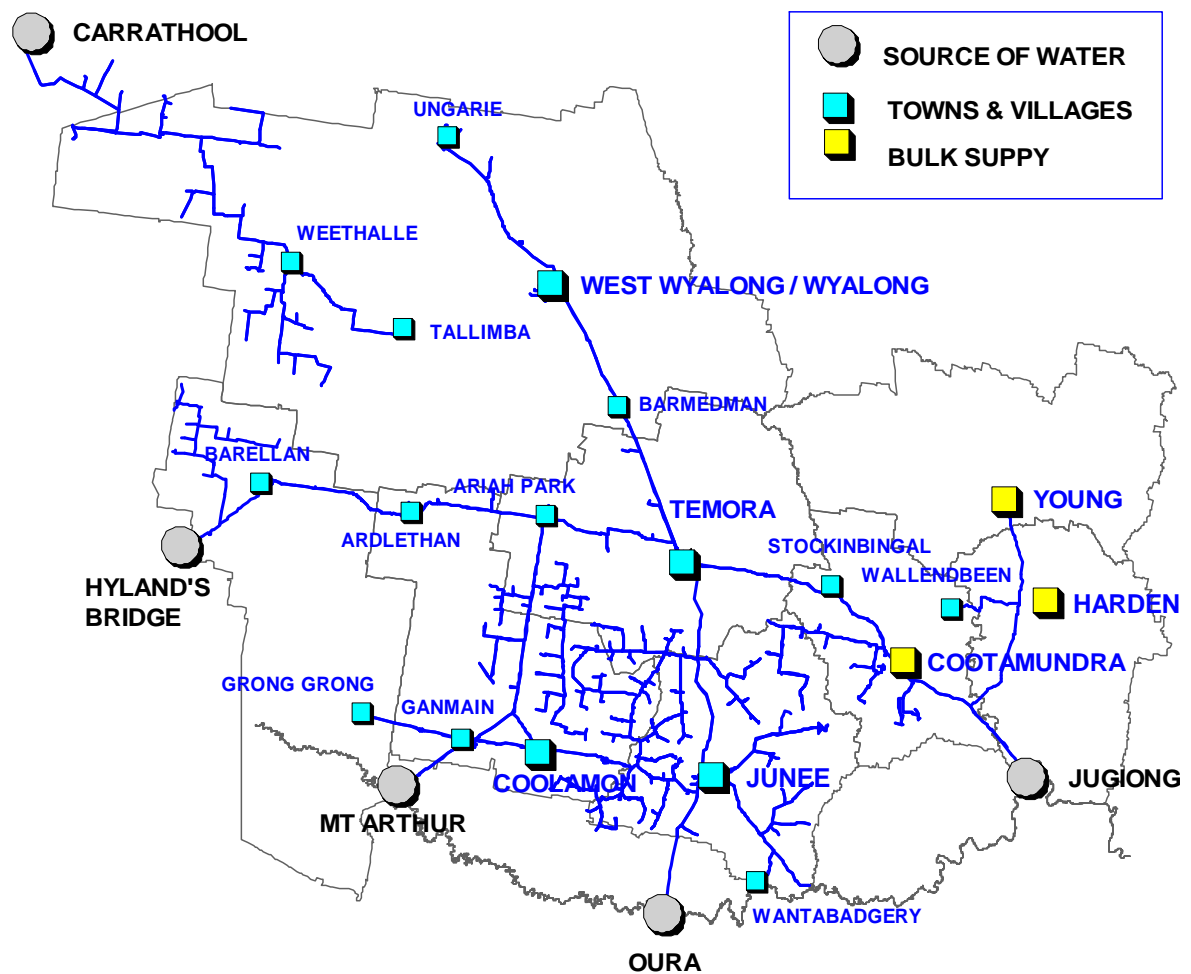
## 1. Goldenfields Water County Council

Goldenfields Water County Council (GWCC) provides the essential water requirements of about 40,000 people spread over an area in excess of 20,000 sq. km. between the Lachlan & Murrumbidgee Rivers in the South West of NSW.

GWCC's water supply system consists of five separate water schemes, Jugiong, Oura, Mt Arthur, Mt Daylight and Hylands Bridge (see figure 1). GWCC carries out water supply functions within the Local Government areas of Bland, Coolamon, Cootamundra, Harden, Junee, Temora, Young and part of Narrandera.

Harden and Young Councils are retailers who purchase bulk water from GWCC and supply the water to retail customers in their respective local government areas. Cootamundra Shire Council receives bulk supply from GWCC and retails water to customers in Cootamundra town, with GWCC supplying water to retail customers in Cootamundra Shire outside the town. GWCC also supplies small quantities of bulk water to Riverina Water County Council.

Figure 1 - GWCC Water Source and Supply area



## 2. Jugiong Water Treatment Plant

The GWCC Jugiong Water Treatment Plant is located on Water Works Rd/Prudence St Jugiong (refer map appendix 1) and operates under Environment Protection License Number: 1723 allowing discharge to the Murrumbidgee River. The facility extracts water from the Murrumbidgee River and provides fit for consumption potable water to the towns of Cootamundra, Harden, Young, Stockinbingal, and Springdale. There is also an interconnection to the Oura supply system at Temora which has the ability to supply water on an emergency basis to Temora and towns to the north and west.

## 3. Legislative Requirements

This Pollution Incident Response Management Plan (PIRMP) has been prepared to comply with the new requirements introduced by the Protection of the Environment Legislation Amendment Act 2011.

It has been compiled in accordance with the specific requirements of Part 5.7A of the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (General) Regulation 2009

In summary this provision requires the following:

- All holders of environment protection licences must prepare a pollution incident response management plan (section 153A, POEO ACT).
- The plan must include the information detailed in the POEO Act (section 153C) and be in the form required by the POEO(G) Regulation (clause 98B)
- Licensees must keep the plan at the premises to which the environment protection licence relates or, in the case of trackable waste transporters and mobile plant, where the relevant activity takes place (section 153D, POEO Act).
- Licensees must test the plan in accordance with the POEO(G) Regulation (clause 98E).
- If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan (section 153F, POEO Act).

## 4. Pollution Incident

A pollution incident is defined for the purpose of this plan as:

*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.*

## 5. Potential Hazards

The treatment plant at Jugiong is a facility that extracts water from the Murrumbidgee River and treats it for human consumption. The site contains all chemicals required for the treatment process. There are also small amounts of herbicide, fuels, and oils on site. Potential hazards include but are not limited to:

- Chemical spill
- Discharge of reduced quality effluent to the river
- Septic tank overflow
- Poor quality drinking water
- Chlorine gas leak
- Fuel spill
- Oil spill/leak from mechanical components
- Oil spill/leak from electrical transformers HV sub yard

## 6. Pre-emptive Measures

GWCC has a number of pre-emptive measures in place to reduce the likelihood of an environmental incident occurring. These measures include:

- Bunding around chemical storage areas
- Water quality monitoring systems i.e. chlorine and turbidity
- Preventative maintenance program which reduces the likelihood of mechanical breakdown causing overflows etc
- High/low level alarms
- Daily Visual Checks
- Oil leakage containment at electrical sub yard

## 7. Safety Equipment

Site safety equipment includes:

- MSDS for all chemicals
- Gas detector
- Fire extinguishers
- SWMS for routine jobs
- Warning alarms
- PPE
- Spill kits

An inventory of site safety equipment is included in Appendix 3

## 8. Authority Notification

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 as:

(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.

In the event of an extreme incident the onsite 'employee in charge' is required to immediately implement the emergency evacuation plan, request assistance from emergency services and notify the Manager Technology.

The Manager of Technology is required to notify the EPA Environmental Line and WorkCover Authority if/when required.

Contact details are:

Person/Authority	Position	Contact Number
Andrew Grant	General Manager	Office (02) 6977 3200 Mobile 0407 928 546
TBA	Manager Technology	TBA
Tony Corby	Water Quality Officer	0437 308 060
Police/Fire/Ambulance		000
EPA Environmental Line		131 555
WorkCover Authority		13 10 50
Public Health Unit Goulburn Office		02 4824 1840
Young Shire Council		02 6382 1688
Cootamundra Shire Council		02 6940 2100
Harden Shire Council		02 6386 2305

## 9. Community Notification

Pollution incidents deemed to require community notification include but are not limited to:

- Chlorine gas leak
- E-coli/faecal coliform detection
- Water treatment chemical overdose
- Blue green algae alert
- Any other issue deemed by GWCC as threatening to the health and safety of the community

Community notification will be in accordance with the GWCC Emergency Response Management Plan

## 10. Minimising Harm to Persons on Premises

GWCC is committed to the safety and welfare of their employees, onsite contractors, and visitors during the normal course of their duties, and in the event of an emergency situation.

The onsite employee 'in charge' is to notify any contractors or visitors as soon as possible if there is a pollution incident unfolding and implement the GWCC 'Emergency Evacuation Procedures for the Jugiong Water Treatment Plant' as considered necessary. A map showing evacuation point is included in Appendix 1

## 11. Incident Management

In the event of a pollution incident the onsite employee in charge is to follow the following generic incident management procedures

1. Identify and assess incident severity, implement mitigation or control measures and notify per the following.

### **Extreme Incident**

Imminent/Serious danger to onsite personal and surrounding township. Immediate action required. Implement emergency evacuation procedure and notification procedure per clause 8

### **Medium Incident**

Moderate danger. Action as soon as possible. Implement controls i.e spill containment. Notify supervisor

### **Low Incident**

Minor to negligible danger. Assess if further action is required. Monitor controls so the hazard is maintained as 'low' if hazard cannot be eliminated completely. Notify supervisor.

2. Manage recovery - take necessary actions to resume normal operations.
3. De-brief – Implement actions to avoid recurrence

## **12. Staff Training and Testing**

All staff required to implement this plan will be trained in its use. This is to ensure they are aware of the procedures in the event of a pollution incident. The plan will be tested annually, documented, and required changes made.







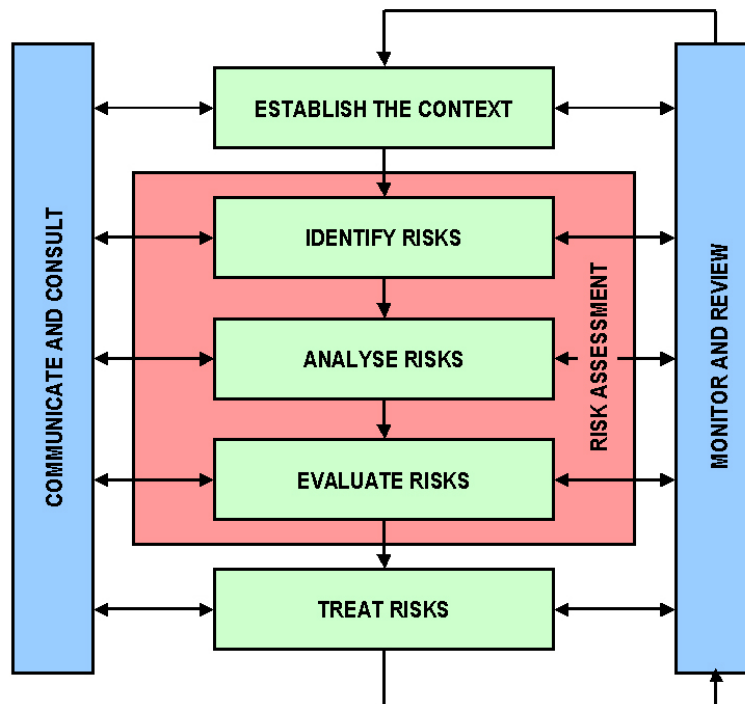
## Appendix 2 – Chemical Register

<b>Chemical Name</b>	<b>Amount Stored</b>	<b>Location</b>
Chlorine	1840 kg	Chlorine Room
Sodium Silico Fluoride Powder	2000 kg	Fluoride Room
Liquid Aluminium Sulphate Solution	72,000 L	Storage Tanks
Polyelectrolyte	250kg	Store Room
Soda Ash	35,000 kg	Soda Ash Tank
Glyphosate	5L	Garage
Fuel	20L	Garage

### Appendix 3 – PPE Register

<b>Qty</b>	<b>Equipment</b>	<b>Location</b>
1	Drager Self Contained Breathing Apparatus	Hallway outside chlorine Room
2	Full Face Respirator	
1	Half Face Respirator	
2	Disposable Overalls	
2	PVC Overalls	
4	PVC Aprons	
6	Heavy Duty Long Gloves	
2	Emergency Eye Wash	
	Fire Extinguishes	

## Appendix 4 – Risk Assessments



### Qualitative Measure of Consequence

Risk	Consequence	Description
1	Insignificant	No injury or detriment to Flora, Fauna or Humans.
2	Minor	Minimal detriment and/or disruption to working systems – Minor habitat degradation
3	Moderate	Disruption to users - financial loss possible - Minor habitat degradation – possible litigation - systems review - environmental concerns.
4	Major	Permanent harm to persons on premises - major loss of service to users – major habitat degradation - financial loss - possible litigation and fines - public concern, ministerial & media attention
5	Catastrophic	Death - complete loss of service or output - major habitat degradation – major financial loss - possible fines and compensation - likely litigation - systems to be reviewed - loss of public support – ministerial & media attention

### 2. Qualitative Measure of Likelihood

Risk	Likelihood	Description
A	Almost Certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Might occur at some time
D	Unlikely	Could occur at some time
E	Rare	May occur only in exceptional circumstances

### Level of Risk Tolerance

E	Extreme Risk	Not tolerated IMMEDIATE action required to reduce risk
H	High Risk	If elimination is not possible the risk must be constantly monitored by staff
M	Medium Risk	If acceptable monitor using standard operating procedures
L	Low Risk	Manage by routine procedures

### Risk Matrix

Based on AS/NZS 4360:2004 and HB 436:2004

### Consequences

		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
		Likelihood	Almost Certain (A)	<b>LOW</b> (5)	<b>MEDIUM</b> (10)	<b>HIGH</b> (15)
Likely (B)	<b>LOW</b> (4)		<b>MEDIUM</b> (8)	<b>HIGH</b> (12)	<b>EXTREME</b> (16)	<b>EXTREME</b> (20)
Possible (C)	<b>LOW</b> (3)		<b>LOW</b> (6)	<b>MEDIUM</b> (9)	<b>HIGH</b> (12)	<b>HIGH</b> (15)
Unlikely (D)	<b>VERY LOW</b> (2)		<b>LOW</b> (4)	<b>LOW</b> (6)	<b>MEDIUM</b> (8)	<b>HIGH</b> (10)
Rare (E)	<b>VERY LOW</b> (1)		<b>VERY LOW</b> (2)	<b>LOW</b> (3)	<b>MEDIUM</b> (4)	<b>MEDIUM</b> (5)



REF	HAZARD	L	C	INITIAL RISK	MITIGATION MEASURES	L	C	RESIDUAL RISK / RISK TOLERANCE
1	Transformer Oil Spill	D	2	4 (M)	Regular maint. carried out to site equipment. Bunding and Oil traps / sumps under transformers.	D	1	2 / L
2	Transformer Oil Fire	D	3	6 (M)	Regular maint. and inspections carried out to site equipment. Fire extinguishers in area.	D	2	4 / M
3	Overflow Oil Sump compromised by rain water	D	2	4 (L)	Regular maint. carried to site equipment. Area drainage improved. High Level Alarm installed on sump	D	1	2 / L
4	Chemical Spill	C	4	12 (H)	Bunding and trays installed. Daily visual checks. All chemical deliveries supervised	D	4	8/M
5	Discharge of reduced quality effluent to the river	E	2	2 (VL)	Daily monitoring. Ability to shut off one lagoon if necessary.	E	2	2/VL
6	Septic Tank Overflow	D	4	8 (M)	Regular checks, maintenance and pump out	E	4	4/M
7	Poor quality drinking water	C	5	15 (H)	Alarms – plant auto shut down. Daily quality testing	E	5	5/M

REF	HAZARD	L	C	INITIAL RISK	MITIGATION MEASURES	L	C	RESIDUAL RISK / RISK TOLERANCE
8	Chlorine gas leak	C	5	15 (H)	Alarm in place. Safe Work Procedures for change over of chlorine gas bottles.	D	5	10 (H)
9	Fuel Spill	E	2	2 (VL)	Store in separate location. Onsite spill kits in place.	E	2	2 (VL)
10	Oil spill/leak from mechanical components	D	3	6 (L)	Maintenance schedule in place. Oil trays underneath components	E	2	2 (VL)