

# Operational Procedure: Water: Pollution Incident Response Management Plan:

Imperial Lake

Stephens Creek Reservoir

Umberumberka Reservoir

---

CEOP8201

## Before you begin ...

- 1 CHECK that this printed document is the most recent version before you use it
  - The online version of this document is the current version.
- 2 DO NOT unlawfully disclose any restricted information in this document
  - To see how the law applies to you:
    - [Employee](#): Read your contract of employment with Essential Energy
    - [Contractor](#): Read your contract of engagement with Essential Energy
      - Sub-contractor: Read your contract with the contractor engaged by us
      - Accredited Service Providers: comply with Essential Energy policies, state acts and regulations.

**COMMERCIAL-IN-CONFIDENCE**

**PREPARED BY:** Trainee Environmental Technical Officer  
**AUTHORISED BY:** Manager Water Operations  
**ASSISTANCE:** Manager Business (Water), Manager Water Supply & Quality,  
 Manager Operations (Water), Manager Water Operations.

**DOCUMENT NUMBER:** CEOP8201

**Positions and Responsibilities**

Key positions	Responsibilities
All employees	Section 4 – <a href="#">The procedures</a>

**Contacts**

Name /Position:	Contact number:
John Coffey <b>Manager Water Quality &amp; Supply</b>	Ph: 8082 5848 Mob: 0419 495 831
Brad Colley <b>Water Quality &amp; Supply Co-ordinator</b>	Ph: 8082 5892 Mob: 0428 879 064
Randy Pryor <b>Acting Manager Business (Water)</b>	Ph: 8082 5316 Mob: 0448 630 568
John Coffey <b>Acting Manager Water Operations</b>	Ph: 8082 5307 Mob: 0419 495 831
Kym Maddern <b>Manager Operations (Water)</b>	Ph: 8082 5850 Mob: 0409 711 326
Aron Molloy <b>Manager Planning &amp; Design Water</b>	Ph: 8082 5873 Mob: 0428 823 042
Mark Preiss <b>Headworks Operator</b>	Ph: 8088 2962 Mob: 0428 882 962
Rodney Grenfell <b>Water Treatment Operator</b>	Ph: 8087 7031 Mob: 0428 287 997

This plan is copyright. No part may be reproduced by any process without written permission, except as permitted under the copyright act.

**DISCLAIMER**

- Essential Energy may change the information in this document without notice. All changes take effect on the date made by Essential Energy. A print version is always an uncontrolled copy. Before using this document, please ensure that it is still current.
- This document may contain confidential information. Restrictions on the use and disclosure of confidential information by employees are set out in your contract of employment. Restrictions on the use and disclosure of confidential information by contractors are set out in your contract of engagement with Essential Energy. Sub-contractors are bound by the confidentiality provisions set out in their contract with the contractor engaged by Essential Energy.

2011 ESSENTIAL ENERGY

**COMMERCIAL-IN-CONFIDENCE**

**CONTENTS PAGE**

<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
<b>2</b>	<b>WHY THESE INSTRUCTIONS ARE IMPORTANT .....</b>	<b>4</b>
<b>3</b>	<b>FACILITIES COVERED BY THIS PLAN.....</b>	<b>5</b>
3.1	Stephens Creek Reservoir – EPL No. 11274 .....	5
3.2	Umberumberka Reservoir – EPL No. 11276.....	5
3.3	Imperial Lake Dam – EPL No. 11275 .....	5
<b>4</b>	<b>THE PROCEDURES .....</b>	<b>6</b>
4.1	Description and likelihood of hazards .....	6
4.1.1	Potential pollution sources.....	7
4.2	Mitigation measures .....	8
4.3	Inventory of pollutants .....	8
4.3.1	Accessing an SDS sheet on the ChemAlert database .....	9
4.4	Safety equipment .....	9
4.5	Notification of pollution incidents.....	9
4.6	Minimising harm to persons on the premises .....	11
4.7	Actions to be taken during or immediately after a pollution incident.....	11
4.8	Staff training and education .....	12
4.9	Testing the plan .....	12
4.10	Record keeping .....	12
4.10.1	Following an incident:.....	12
4.10.2	Drills, desktop scenarios & staff training.....	12
4.10.3	Emergency Contacts Directory .....	13
4.10.4	Internal staff emergency contacts .....	13
4.10.5	External agencies emergency contacts .....	14
<b>5</b>	<b>KEY TERMS AND DEFINITIONS .....</b>	<b>18</b>
<b>6</b>	<b>REFERENCES.....</b>	<b>19</b>
<b>7</b>	<b>REVISIONS.....</b>	<b>20</b>
<b>8</b>	<b>ATTACHMENTS .....</b>	<b>20</b>

## COMMERCIAL-IN-CONFIDENCE

### 1 INTRODUCTION

Amendments to the *Protection of the Environment Operations Act, 1997* require holders of Environmental Protection Licences to prepare and implement a 'Pollution incident response management plan'.

The following pollution incident response plan covers the following Essential Water Environmental Protection Licensed facilities:

Facility:	Environmental Protection Licence Number:
Imperial Lake Dam	11275
Stephen's Creek Reservoir	11274
Umberumberka Reservoir	11276

Essential Water's key objectives for the implementation of the pollution incident response management plans are to:

- Identify potential sources of pollution at our facilities and with work procedures.
- Minimise and control the risk of a pollution incident.
- Provide clear instructions for the proactive response to pollution incidents.
- Ensure comprehensive and timely notification of pollution incidents to the EPA, emergency response agencies and the affected community.
- Ensure pollution incident records are comprehensively maintained.
- Educate all employees to ensure the plan is properly implemented via a programme of routine education and training.

### 2 WHY THESE INSTRUCTIONS ARE IMPORTANT

The *Protection of the Environment Legislation Amendment Act, 2011* introduced several changes designed to improve the way pollution incidents are reported and managed.

Key changes mean all holders of an environmental protection licence have a duty to notify of a pollution incident immediately. Significant penalties now apply for non-compliance with the Act, including a \$2 million penalty for failure to notify and \$1 million for not preparing an incident response management plan.

This plan is in line with Essential Energy's commitment to being an environmentally responsible regional utility provider. Essential Energy is committed to:

- Preventing pollution
- Preserving and conserving habitat and species
- Preserving unique features and heritage
- Demonstrating best practice via example
- Complying with statutory and regulatory compliance

(Source: *CECM1000.90 -Operational Manual: Health Safety, & Environment (HSE): Handbook*)

**COMMERCIAL-IN-CONFIDENCE**

**3 FACILITIES COVERED BY THIS PLAN**

This pollution incident response management plan covers the following Essential Water Environmental Protection Licensed facilities:

**3.1 Stephens Creek Reservoir – EPL No. 11274**

Stephens Creek Reservoir is a 19,000 ML reservoir with a large surface area and a shallow depth, meaning evaporative losses from the storage have historically been high and the reservoir's efficiency low. A levy was placed in the reservoir in 2003, which has significantly reduced the evaporative losses when inflow occurs.

Stephens Creek Reservoir receives water from a 570 km<sup>2</sup> catchment area as well as water pumped from the Darling River. Stephens Creek Reservoir also acts as a terminal storage for water from the Menindee Lakes Scheme before it is pumped to the Mica Street Water Treatment Plant. The quality of water in this reservoir tends to be controlled by the quality of water transferred to it from the Darling River or by other local factors including Cyanobacteria.

<b>Catchment Area:</b>	570 km <sup>2</sup>
<b>Storage Capacity:</b>	19,000 ML

**3.2 Umberumberka Reservoir – EPL No. 11276**

Umberumberka Reservoir is a 7,800 ML reservoir located 28 kilometres north-west of Broken Hill on Umberumberka Creek. Water is pumped via the Blue Anchor tank bypass using diesel pumps, and then gravity fed to Broken Hill, supplying Silverton as it passes by.

The quality of water from this source is generally very good and tends to be the best of all available sources. Umberumberka Dam is a deep, efficient storage, but its catchment is unreliable as a sustainable water source – filling only once in every 15 years.

<b>Catchment Area:</b>	390 km <sup>2</sup>
<b>Storage Capacity:</b>	13,000 ML (original) 7,800 ML (reduced by siltation)

**3.3 Imperial Lake Dam – EPL No. 11275**

Imperial Lake is a small, 670 ML that collects water from its own small catchment which includes part of the Broken Hill urban area. Water can be transferred to Imperial Lake from Stephens Creek and Umberumberka via the Mica Street Water Treatment Plant.

The lake is used as emergency storage only. The quality of water from this source is highly variable, not only because of its urban catchment, but also the fact that as it is only used in emergency situations. The water can be of poor quality.

<b>Catchment Area:</b>	19 km <sup>2</sup>
<b>Storage Capacity:</b>	670 ML

The reservoirs supply between 30% to 90% of annual water needs, however this is highly variable dependent on the amount of rainfall received over the local catchment area, and are of high importance operationally, particularly during times of drought.

**COMMERCIAL-IN-CONFIDENCE**

**4 THE PROCEDURES**

**4.1 Description and likelihood of hazards**

Essential Water has utilised the following risk matrix for the identification and classification of potential sources of pollution that pose a risk of material harm to the environment at the facilities covered by this plan:

**Table 1: Measures of environmental consequence or impact**

Measures of Consequence :	Impact on the Environment:	Impact on Water Quality:
Insignificant	<ul style="list-style-type: none"> <li>Impact on site only within limits of the control system.</li> <li>No environmental harm with little need for remediation</li> </ul>	<ul style="list-style-type: none"> <li>Very minor event.</li> <li>No effect on water quality.</li> <li>Reservoir water still available.</li> </ul>
Minor	<ul style="list-style-type: none"> <li>A minor matter with no ecological damage evident.</li> <li>A spill / emission incident exceeding control system limits.</li> <li>May be reportable under POEO Act.</li> </ul>	<ul style="list-style-type: none"> <li>Minor effect on water quality.</li> <li>Reservoir water supply off line until inspection deems supply available.</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>Material harm to the environment including actual or potential harm or loss or property damage of an amount \$10,000 - \$49,000.</li> <li>Remediation required</li> <li>Actual or foreseeable contamination of soil, ground water, surface water or atmosphere &gt;\$10,000 and &lt;\$50,000.</li> <li>Reportable under POEO Act</li> </ul>	<ul style="list-style-type: none"> <li>Reservoir water supply off line for less than 1 week.</li> </ul>
Major	<ul style="list-style-type: none"> <li>Material harm to the environment that is significant (including actual or potential harm or loss or property damage of an amount between \$50,000 and \$99,000</li> <li>Significant remediation required &gt;\$50,000 and &lt;\$99,000.</li> <li>Actual or foreseeable contamination of soil, ground water, surface water or atmosphere and remediation required &gt;\$100,000.</li> <li>Reportable under POEO Act and CLM Act</li> </ul>	<ul style="list-style-type: none"> <li>Reservoir water supply off line for more than one week but less than 4 weeks.</li> <li>Contamination can be treated on site.</li> </ul>
Catastrophic	<ul style="list-style-type: none"> <li>Material harm to the environment that is major (including actual or potential harm or loss or property damage of an amount &gt;\$100,000).</li> <li>Significant remediation required &gt;\$100,000</li> <li>Actual or foreseeable contamination of soil, groundwater, surface water or atmosphere and remediation &gt;\$100,000.</li> <li>Reportable under POEO Act and CLM Act.</li> </ul>	<ul style="list-style-type: none"> <li>Reservoir water supply is off line for more than 4 weeks.</li> <li>Reservoir contaminated.</li> </ul>

(Adapted from SSHE Manual: Risk Management – **CECM1000.02**)

## COMMERCIAL-IN-CONFIDENCE

### 4.1.1 Potential pollution sources

Potential sources and risk of pollution incidents have been identified as follows:

- Fuel leak or spill.
- Chemical leak from storage or during handling or transport.
- Herbicide/pesticide application by surrounding landholders resulting in contamination of a water supply.
- A chemical leak or spill occurring upstream within a catchment area, resulting in contamination of the water body.
- Act of terrorism – intentional contamination of a water body via pollution.
- Contamination as a result of development or maintenance activities within a catchment area.
- Vehicle or aircraft deposited within a reservoir causing resultant pollution
- High nutrient loads or Coliforms as the result of over grazing or septic tanks washed from the catchment into the reservoir.

### 4.1.2 Risk classifications

In accordance with the measures of consequence from a pollution incident (**Table 1**) and the likelihood of the event occurring, Essential Water has classified the potential impact of pollution incidents via the following risk matrix:

**Table 2: Pollution incident risk matrix – Reservoirs**

<b>Pollution source:</b>	<b>*Likelihood of occurrence:</b>	<b># Potential Consequence:</b>
Fuel leak or spill	Rare	Major
Chemical leak from storage or during transport of handling	Rare	Major
Herbicide / pesticide application by surrounding landholders resulting in contamination of a water supply	Unlikely	Major
A chemical leak or spill occurring upstream within a catchment area, resulting in contamination of the water body	Rare	Catastrophic
Act of terrorism – intentional contamination of a water body via pollution	Rare	Catastrophic
Contamination as a result of development or maintenance activities within a catchment area.	Rare	Major
Vehicle or aircraft deposited within a reservoir	Possible	Major
Coliforms from contamination in the catchment	Likely	Moderate
High nutrient loads from over grazing in the catchment	Possible	Major

\*Refer to likelihood descriptor table

# Refer to Table 1: Measures of environmental consequence or impact

## COMMERCIAL-IN-CONFIDENCE

### 4.2 Mitigation measures

The following procedures and measures can be taken to prevent or reduce the impact of a pollution event and to ensure water quality to customers is maintained:

- Daily, weekly, three and six monthly visual inspections of the reservoirs are conducted by the Field Operations staff for any signs of pollution or threat to water quality. (Refer reservoir operations and maintenance manuals).
- Essential Water has stringent water sampling programmes at each water source, service reservoirs, various local test points and the Mica Street Water Treatment Plant. A range of parameters are analysed to ensure the Australian Drinking Water Guideline 2013 guidelines are met to ensure safe drinking water is supplied to customers.
- Essential Water receives notification from the Water Infrastructure Assurance Advisory Group if there is a suspected threat of terrorism to Broken Hill's water supply.
- Notification to Roads and Maritime Services in the event of unsafe road conditions within potential high risk locations along highways. Includes potholes, washaways beside road verges, missing / damaged flood depth gauges, etc. Controls are traffic warning signs erected until road restoration is completed.
- In the event of an upstream pollution incident, measures can be implemented to isolate and contain the contaminant before it reaches the reservoirs.
- All employees are required to complete HASRIG assessments before completing work in order to identify and mitigate any potential risks to human health or the environment.
- Staff training in the safe handling and storage of chemicals and hazardous materials (refer – **CECM1000.10** – SSHE: Hazardous materials).
- Spills kits are available in each Essential Water field vehicle.
- ChemAlert system for recording location, quantities and SDS sheets of chemicals available at each facility via computer. Hard copies of SDS are available where there no computer access is available.
- Maintain machinery, equipment and infrastructure at acceptable standards to reduce their potential to cause water pollution.
- Routine training and drills for Water Treatment Plant staff in the response to chlorine gas leaks (refer **CEOP8253** – Mica WTP Emergency Response Chlorine Gas and **CEOF8162** – Chlorine training and drill log).
- Utilises a maintenance and management software system (MainPac) to record all system data. The program helps to prioritise replacement / refurbishment programmes.
- Essential Water provides a fault and emergency contact number (**13 20 80**) whereby the public can report a pollution incidents at all times.
- Bunding of bulk chemicals

### 4.3 Inventory of pollutants

Essential Water maintains a 'ChemAlert' database to comprehensively record chemicals stored at each facility. The database records the location and quantities of chemicals stored at each site, and provides employees with access to SDS sheets for each recorded chemical.

Refer to attachments for a list of chemicals currently stored at each facility.

(\*Note: ChemAlert listing current at time of publication. For current list of chemicals, refer to ChemAlert database).

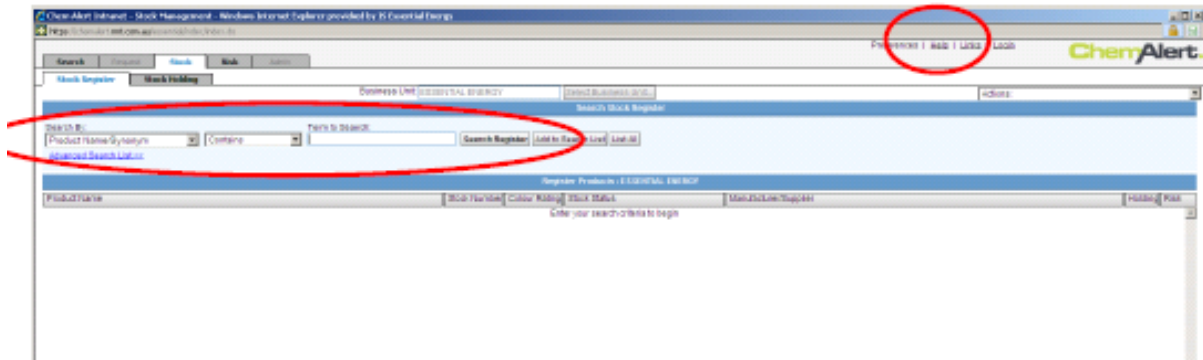


## COMMERCIAL-IN-CONFIDENCE

### 4.3.1 Accessing an SDS sheet on the ChemAlert database

Any employee, contractor or labour hire contractor who requires a SDS and has access to CHEMWATCH should take the following steps:

- 1 Go to Essentialnet – Work Safely – Click on Chemwatch/ChemAlert.
- 2 From here you can access Cheat Sheets and an E-learning package on how to use ChemAlert.
- 3 Click on ChemAlert under Launch and you will be taken to the homepage for ChemAlert.
- 4 You can start your search or if you require further assistance you can click on the help link (as shown below).



(Source: HSE Manual: Hazardous Materials - Responsibilities **CECM1000.10**)

## 4.4 Safety equipment

Emergency supplies and resources are available from the Essential Water Block 10 Field Service Centre, Mica Street Water Treatment Plant or the Wolfram Street Field Service Centre for Essential Energy.

- Half face respirators & spare dust & fume filters
- Full face respirators & spare dust & fume filters
- Dust Masks
- Disposable coveralls
- Goggles
- Goggles with face mask
- Face shield
- Safety glasses (clear or shaded)
- Wide brim hats
- Knee pads
- Safety Helmets
- Ear muffs and plugs
- Chemical suits
- Respirators
- Boots
- Self-contained breathing apparatus
- Toxic gas monitors
- Fall arrest devices
- Rescue tripods and winches
- Barricades
- Gloves (PVC, Rubber, Leather, cotton, Kevlar, Nitrile)
- Gaiters
- PVC trousers and jackets

## 4.5 Notification of pollution incidents

### 4.5.1 When is notification required?

Notification of a pollution incident is required if there is a risk of 'material harm to the environment' or human health. Risk of 'material harm to the environment' is defined in section 147 of the POEO Act as:

"(a)...Harm to the environment is material if:

- (i) It involved actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
  - (ii) It involves actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as 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."

(Section 147, POEO Act, 1997)

## COMMERCIAL-IN-CONFIDENCE

### 4.5.2 Information that must be provided to authorities when notifying:

When reporting and notifying authorities, employees must provide the following details:

- the time, date, nature and duration of the incident
- the location of the place where pollution is occurring or is likely to occur
- the nature, 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 action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution.

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

(Reference: Section 150, POEO Act, 1997 as amended)

### 4.5.3 Mandatory notifications:

In the event of a pollution incident that poses a risk of material harm, it is mandatory that employees contact the following agencies:

- NSW Environment Protection Authority
- WorkCover NSW
- NSW Fire & Rescue
- Workcover NSW
- NSW Department of Health
- Broken Hill City Council

(Refer to section 4.11 for contact numbers for the above agencies)

It is important that employees notify ALL of the above agencies in the event of a pollution incident, even if it is believed that an agency may not need to attend the incident. Employees have a responsibility to provide information to each of the five agencies; and it is the responsibility of each respective agency to determine whether they need to attend the incident.

### 4.5.4 Public notifications where there is a risk to drinking water quality:

In the event of a pollution incident, Essential Water's priority is to ensure that the quality of drinking water supplied to customers is not compromised. In the event of an incident that poses a real or perceived risk to customers and consumers, Essential Water ensure that the public are notified and informed of the level of risk and appropriate precautions.

Public notifications are to be conducted in accordance with policy **CEOP8400** – Monitoring and performance against ADWG.

Notification of exceedences is to be conducted in accordance with Manager Community Relations protocols. Generally the notification can be via; radio, newspaper advertisement, television advertisement, and may also include letter drop of the affected area depending on the nature of the incident and the escalation requirement under the **Essential Water Emergency Response Plan CEOM7611**.

The public notification action will be coordinated by Far West Local Health District with consultation from the Group Manager Water and the Manager Community Relations and relevant stakeholders.

Situations requiring public notification include:

- Supply interruptions;
- Water treatment does not meet relevant guidelines and there is a possible risk;
- Treatment fails or a reticulation system is compromised;

## COMMERCIAL-IN-CONFIDENCE

- Monitoring is not carried out at the recommended frequency, hence there is no assurance that the supply is safe;
- Monitoring is not carried out using recommended testing procedures;
- Adopted levels of service cannot be met (eg because of floods, cyclone, drought etc).

Means of public notification may include one or a combination of the following methods:

- Door knocks
- Issuing of media releases or warnings via local media
- Letter drops
- Warning signage erected at the reservoirs
- Updates and warnings issued via Essential Water's website ([www.essentialwater.com.au](http://www.essentialwater.com.au))

### 4.6 Minimising harm to persons on the premises

Ensuring the safety of Essential Water staff, contractors and visitors to our sites and containing a pollution incident to the minimum extent possible is critical.

To minimise risk of harm to persons at the sites covered by the plan, Essential Water has the following procedures:

- Evacuation and muster points
- HIRAC form to be completed by employees, contractors and visitors to the site
- Contractor / Visitor inductions
- Personal Protective Equipment available to all
- Fire safety equipment
- Back-up generators and alternative power sources
- Telecommunications equipment
- Personal Locator Beacons

### 4.7 Actions to be taken during or immediately after a pollution incident

Employees should follow the procedure itemised below during and after a pollution incident:

1. Identify pollution source.
2. Make an assessment of the level of risk to human health or the environment.  
(If there is an **immediate** life threatening risk or fire, call **000**)
3. Following initiation of any emergency services as required, immediately notify primary contacts; Works Co-ordinator Water Supply & Quality or Manager Water Supply & Quality or alternative contacts (Refer Notification Protocol).  
Provide full details of the incident and complete TotalSAFE incident form.
4. Primary contact or delegate immediately assesses if the incident is a mandatory immediate notification event and as required, notifications to the five emergency reporting agencies and commences business continuity plan escalation procedures.
5. The employee:
  - Takes measures to contain the leak, spill or emission (do not proceed if there is a risk to yourself, fellow employees or members of the public).
  - Cleans up the site, ensuring to dispose of any contaminated soil or equipment as applicable (in accordance with HSE Manual: Hazardous Materials – Responsibilities **CECM1000.10**).
  - Keeps the Incident Controller advised of any increased risks or events relating to the incident.
  - Records the particulars of the incident in TotalSAFE within 24 hours.
6. The Incident Controller records all actions and notifications. Management later conducts a review and evaluation of the pollution response.

## COMMERCIAL-IN-CONFIDENCE

### 4.8 Staff training and education

All Essential Water employees are to be made aware of the implications of the pollution incident response management plans.

Staff will be trained to ensure:

- All staff members can locate a copy of the pollution incident response management plan.
- All staff members know how to identify a pollution incident that poses or threatens risk of material harm to the environment or human health.
- All staff members know who they must notify in the event of a pollution incident.
- All staff members are aware of key information that must be reported when notifying external agencies.
- All staff members can respond to a pollution incident in a safe, timely and effective manner.
- All staff members adequately report and record all pollution incidents.

Methods of staff training may incorporate the following methods:

- Toolbox meetings.
- New staff and contractor inductions.
- E-Talk updates.
- Desktop scenarios.
- Training sessions.
- Essential Knowledge and Skills (EKAS). Internal training system.

Training records are to be maintained for all staff members attending training and participating in desktop scenarios in relation to the plan.

### 4.9 Testing the plan

The pollution incident response management plan is to be routinely tested **once every 12 months**.

It is important that testing is carried out that covers all components of the plan to ensure that it is capable of being implemented in a workable and effective manner.

Essential Water aims to test the plans by undertaking desktop scenarios, practical exercises and drills involving both internal staff members and external emergency agencies.

Following an exercise or scenario to test the plan, a full review is to be undertaken to examine the effectiveness of the response to the drill / scenario. The review shall include all involved staff members and participants from external agencies.

Details of documentation that must be recorded following any testing of the plan is included in section 4.10 – Record keeping.

### 4.10 Record keeping

#### 4.10.1 Following an incident:

Details of all incidents (including near misses) must be recorded in Essential Energy's TotalSAFE system within 24 hours following an incident. (Refer to TotalSAFE SSHE manual – **CECM1000.09**).

Details of all incidents must be recorded and kept in accordance with Essential Energy's Incident Management SSHE manual – **CECM1000.10**.

#### 4.10.2 Drills, desktop scenarios & staff training

Records are to be maintained of dates on which the plan has been tested, including the names of all staff members involved.

---

29 June 2017-Issue 3

Approved By: Manager Water Operations

Page 12 of 30

COMMERCIAL-IN-CONFIDENCE

UNCONTROLLED COPY IF PRINTED

## COMMERCIAL-IN-CONFIDENCE

Details of any amendments, updates or revisions to the plan as a result of a drill, scenario or staff training are to be maintained, including the date on which the relevant section/s were updated.

The date and name of staff attendance at any training, educational session or toolbox meeting in relation to the plan is to be recorded via CEOF6041 Training Attendance & Competency Assessment Result Sheet.

### 4.10.3 Emergency Contacts Directory

**NOTE TO ALL EMPLOYEES:**

Contact details listed below are for the use of internal staff only during the event of a pollution incident or emergency.

Contact details are not to be released to members of the public.

### 4.10.4 Internal staff emergency contacts

Name / Position:	Contact details:	After Hours:
John Coffey <b>Manager Water Quality &amp; Supply</b>	Ph: 8082 5307	Mob: 0419 495 831
Brad Colley <b>Water Quality &amp; Supply Co-ordinator</b>	Ph: 8082 5892	Mob: 0428 879 064
Randy Pryor <b>Acting Manager Business (Water)</b>	Ph: 8082 5416	Mob: 0448 630 568
John Coffey <b>Acting Manager Water Operations</b>	Ph: 8082 5307	Mob: 041 9 495 831
Aron Molloy <b>Manager Engineering and Technical</b>	Ph: 8082 5873	Mob: 0409 352 854
Kym Maddern <b>Manager Operations (Water)</b>	Ph: 8082 5850	Mob: 0409 711 326
Mark Preiss <b>Headworks Operator</b>	Ph: 8088 2962	Mob: 0428 882 962
Rodney Grenfell <b>Water Treatment Operator</b>	Ph: 8087 7031	Mob: 0428 287 997

**COMMERCIAL-IN-CONFIDENCE**

**4.10.5 External agencies emergency contacts**

\* Denotes MANDATORY agencies that must be notified in the event of a pollution incident.  
 Contact details to be reviewed annually.

Name / Organisation:	Contact details:	After Hours:	
<b>*MANDATORY</b> notification of the these agencies in the event of a pollution incident:	*NSW Environmental Protection Authority (EPA)	<b>Environment Line:</b> <b>Ph: 131 555</b>	<b>Environment Line:</b> <b>Ph: 131 555</b> <b>(24 Hours)</b>
	*Broken Hill City Council	<b>Administration Centre:</b> Ph: 08 8080 3300  <b>Alternative contact:</b> Andrew Bruggy Operations Manager Ph: 0407 235 037 Email: <a href="mailto:andrew.bruggy@brokenhill.nsw.gov.au">andrew.bruggy@brokenhill.nsw.gov.au</a>	On-call number Ph: 0408 858 493
	*NSW Department of Health	<b>Primary Contact:</b> David Ferrall Senior Environmental Health Officer Population Health Unit Far West Local Health District Ph: 08 8080 1504 E-mail: <a href="mailto:david.ferrall@health.nsw.gov.au">david.ferrall@health.nsw.gov.au</a>	Ph: 0409 462137
		<b>Alternate contact:</b> Jason Harwood Environmental Health Officer Population Health Unit Far West Local Health District Ph: 08 8080 1486	Ph: 0409 746311
	*WorkCover NSW	<b>Ph: 13 10 50</b>	<b>Ph: 13 10 50</b>
	*NSW Fire & Rescue (Local fire station)	Broken Hill Fire Station Ph: 08 8087 2233 (24 hours)  Alternate contact: Ph: 08 8087 2234 (24 hours)	Broken Hill Fire Station Ph: 08 8087 2233 (24 hours)  Alternate contact: Ph: 08 8087 2234 (24 hours) <b>In emergency: 000</b>

**COMMERCIAL-IN-CONFIDENCE**

<b>Other external agency contacts (as applicable to nature of pollution incident)</b>		
<b>Name / Organisation:</b>	<b>Contact Details:</b>	<b>After Hours:</b>
Broken Hill Police Station	<b>In emergency: 000</b>  Broken Hill Station: 08 8087 0299	<b>In emergency: 000</b>  Broken Hill Station: 08 8087 0299
State Emergency Service (SES)	Ph:13 25 00 Broken Hill Command Centre: Ph: 08 8082 5560	Ph: 13 25 00
Greg McMahon District Emergency Management Officer  Far West Local Emergency Management District	Ph: 8082 7210 Mobile: 0427 662 493 <a href="mailto:mcma1gre@police.nsw.gov.au">mcma1gre@police.nsw.gov.au</a>  Far West Local Emergency Management District Broken Hill,	Ph: 0427 662 493
NSW Department Primary Industries	Ph: 08 8088 9300 1300 886 235	
Ambulance Service	<b>In emergency: 000</b> Ph: 13 12 33	<b>In emergency: 000</b>
National Parks & Wildlife	Ph: 08 8080 3200 Far West Regional Officer: 183 Argent Street, Broken Hill	
Pastoralists Association of West Darling	Ph: 08 8087 3322 E-mail: <a href="mailto:pawd01@bigpond.net.au">pawd01@bigpond.net.au</a> 1 Adelaide Road, Broken Hill	
Western Livestock Health & Pest Authority	Kevin Smith Ph: 08 8087 3378	
NSW Fisheries & Aquaculture	Head Office Ph: 02 6391 3100 Fisheries inquiry line: Ph: 1300 550 474 161 Kite Street, Orange NSW 2800	
NSW Department of Public Works & Services	Water Solutions Terry Schubach Ph: 02 9372 9189	
NSW Department of Primary Industries - Water	General Enquiries: 1800 353 104 Algal Alert Information: 1800 999 457 <a href="mailto:water.enquiries@dpi.nsw.gov.au">water.enquiries@dpi.nsw.gov.au</a>	
NSW Department of Primary Industries	Dubbo District Office Ph: 02 6881 1270 Dubbo DPI Water Ph: 02 6884 2560	
Department of Industry Lands & Forest	Jody Chinner Rangelands Management Officer – Broken Hill / Unincorporated Area Ph: (08) 8082 5203 E-mail: <a href="mailto:jody.chinner@crowland.nsw.gov.au">jody.chinner@crowland.nsw.gov.au</a>	Ph: 0417 811 033



**COMMERCIAL-IN-CONFIDENCE**

**Pipeline customer contacts:**

<b>Umberumberka Pipeline Customers:</b>		
<b>Name / Organisation:</b>	<b>Property:</b>	<b>Contact details</b>
Barry Keith & Debbie Lee Olds	1130318 / Old Picton Sale Yards	08 8087 4573 Debbie – Work (RSPCA) 08 8087 7753
Clint & Natasha Trengrove	1130319 / Picton Piggery	0409 287 870
Stirling Vale Committee	1130320 / Stock trough Air 38 3.2 Kms	02 8091 2579
COLTREV Pty Ltd	1130322 / 1130321 / Limestone Station	08 8087 6731
P P Blore	1130323 / Belmont Station	08 8088 5310 08 8088 4790
Silverton Common Trust	1130335 / Air Valve 19 – Stock trough on Daydream Mine road	C/- M Taplin Silverton NSW 2880 08 8088 5326

<b>Stephens Creek Pipeline Customers:</b>		
<b>Name / Organisation:</b>	<b>Property:</b>	<b>Contact details</b>
Travis J & Linda P Nadge	1130324 / Stephens Creek Pipeline	08 8087 7770
JP Staker	1130325 / Slabalong	08 8088 4417 / 0429 690 438
Lorraine I Robertson	1130328 / Stephens Creek Pipeline	08 8087 5620
NBN CO Limited	1130330 / Stephens Creek Pipeline	
C G & G A Cresswell	1130331 / Stephens Creek Pipeline (House and B&B)	08 8088 1422 / 0413 011 004
Panitya Investments Trust (S & L Molesworth)	1130332 / Rupee Station	08 8087 6675 Lindy Mob: 0412 346 432
Curtain Raiser PTY LTD	1130333 / Stephens Creek Pipeline	02 9002 1412
G D Marini	1130334 / Stephens Creek Pipeline	08 8088 1527
Broken Hill RLPB	1793920 / Round Hill SWP Stephens Creek Road	0427 506 524 / Mandy McKay
Estate of JP Staker	1130326 / Lot 62 Stephens Creek Pipeline	08 8088 4417

<b>Silverton Customers:</b>		
<b>Name / Organisation:</b>	<b>Property:</b>	<b>Contact details:</b>
Penrose Park Trust	1108858 / Penrose Park	08 8088 5307 / 0451 095 245
JD & MA Lemmich	1130113 / Silverton	08 8088 5329
Mr R Holmes	1130114 / Silverton	08 8088 2709 / 0439 567 327
TW & JN Scaife	1130115 / Layard Street, Silverton	0434 796 522
Paul Walton	1130116 / Lot 225 Silverton	No Contact Number
Robert Wilson	1130117 / Lot 2268 Silverton	08 8087 6632
Stephen R D Hoare	1130118 / Burke Street, Silverton	0427 891 053
Vicki Lee Adams	1130119 / Loftus Street, Silverton	0409 829 598 / 0411 538 429
Ms J A Anderson	1130120 / Silverton Camel Farm	0418 129 446



**COMMERCIAL-IN-CONFIDENCE**

<b>Silverton Customers:</b>		
<b>Name / Organisation:</b>	<b>Property:</b>	<b>Contact details:</b>
Innes McLeod	1130121 / Sec 14 Lot 5 Burke Street, Silverton	08 8087 6263
D & DK Adams	1130122 / Lot 1 Sec 3 - 31 Burke Street, Silverton	08 8088 5312 / 0427 885 312
Grant P Greasley & Sandra J Ludwig	1130123 / 8 Burke Street, Silverton (Silverton Tea Rooms)	0455 237 595
Adrian & Linda Bennett	1130124 / 9 Adelaide Street, Silverton	08 8341 9131
Duncan L Pickering & Petah N Devine	1130125 / 26 Silverton Road, Silverton	No Contact Number
Stephen Radford & Margaret McBride	1130126 / S 24 L19 Stirling Street, Silverton	No Contact Numbers
R E Singleton	1130128 / Sturt Street, Silverton	08 8088 5330
Bradley J McLennan	1130129 / Gipps Street, Silverton	0409 379 074
Silverton Village Committee	1130130 / 1130131 / 1130132 / Layard Street, Silverton	08 8088 5469 or J Taplin – Chair: 08 8088 5326 / 0427 885 326
Silverton Youth Camp	1130133 / Silverton	08 8087 3962
Broken Hill Historical Society (Silverton Gaol)	1130134 / Silverton	08 8088 5317
J T Hodgson	S15 L6 Burke St Silverton	08 8520 2562 / 0414 370 177
Albert Woodroffe PTY LTD	1130137 / Silverton	08 8088 5220 / 0428 858 569
Gillian Mary Nelson	1130138 / Burke Street, Silverton	08 8088 5318
The Original Silverton Hotel	1130140 / Silverton	08 8088 5313
Mr G J Neilson & Ms L J Fabian	1130141 / L1 Sec 12 Burke Street, Silverton	08 8088 7566
J & M Taplin	1130142 / Stirling Street, Silverton	08 8088 5326
Peter C Smith	1130143 / Burke Street, Silverton	08 8088 2446
John P Dynon	1130144 / S 20 L2 / 21 Sturt Street, Silverton	No Contact Number
R J Watson	1130145 / Lot 15 Umberumberka Creek	08 8087 7826
Ms Debra M Jones	1130146 / 7 Umberumberka Creek	No Contact Number
B & H Murray	1130147 / Silverton	08 8087 3962
Broken Hill Historical Society	1590903 / Old Silverton School	08 8088 1321
P & P Price	1762026 / Lot 12 Old Church Silverton	0417 807 875
Albert Woodroffe PTY LTD	1130139 / Adelaide Street, Silverton	08 8088 6025 / 0428 858 602
Albert Woodroffe PTY LTD	1130136 / Silverton	No Contact Number

## COMMERCIAL-IN-CONFIDENCE

# 5 KEY TERMS AND DEFINITIONS

**ACT:** Refers to the *Protection of the Environment Operations Act, 1997* (as amended).

**ADWG:** Refer to the Australian Drinking Water Guidelines, 2013. Provides water utilities across Australia with a set of aesthetic and health standards to ensure the health and safety of drinking water supplied to customers.

**COMMERCIAL-IN-CONFIDENCE:** This is a general sensitivity label to be applied to information assets that are not to be released outside of the organisation, but are freely available to all employees and other personnel working directly for Essential Energy. An example of the use of this sensitivity label would be its application to the corporate policies, forms, procedures, standards, manuals and guidelines to be applied across the organisation. For more information refer to Information Security Sensitivity Labelling and Handling CECP1096.

**EPA:** NSW Environment Protection Authority

**EPL:** Environmental Protection Licence

**MATERIAL HARM TO THE ENVIRONMENT:** Risk of 'material harm to the environment' 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 involves actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amounts as 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

**POLLUTION:** Under the *Protection of the Environment Operations Act, 1997*, defines pollution as:

- (a) Water pollution
- (b) Air pollution
- (c) Noise pollution
- (d) Land pollution

**POLLUTION INCIDENT:** The *Protection of the Environment Operations Act, 1997* defines a pollution incident 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 the premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

**REGULATION:** Refer to the *Protection of the Environment Operations (General) Amendment (Preparation of Pollution Incident Response Management Plans) Regulation 2012*.

**SENSITIVE ENVIRONMENT:** A sensitive environment includes a drinking water catchment or domestic groundwater source, shell-fish growing areas, protected water bodies, ecological communities or conservation areas defined by legal and non-legal instruments, such as local environmental plans (LEP's), State environmental planning policies (SEPPs), national parks, work heritage parks, and Class P or Class S waters, waterways used for primary contact recreation, a recreation area of other area with high public exposure or associated health risk.

**WTP:** Water Treatment Plant

## COMMERCIAL-IN-CONFIDENCE

## 6 REFERENCES

### **Stephen's Creek Reservoir:**

CEOP8404 – Water: Stephens Creek Reservoir Dam Safety Emergency Management Plan  
Water: Stephens Creek Dam Operation and Maintenance Manual  
NSW EPA Environmental Protection Licence No. 11274  
Available: <http://www.environment.nsw.gov.au/prpoeoapp/>

### **Imperial Lake Dam:**

CEPG8402 - Water: Imperial Lake Dam Safety Emergency Management Plan  
NSW EPA Environmental Protection Licence No. 11275  
Available: <http://www.environment.nsw.gov.au/prpoeoapp/>

### **Umberumberka Reservoir:**

CEOP8258- Water: Umberumberka Dam Safety Emergency Plan  
Water: Umberumberka Dam Operation and Maintenance Manual  
NSW EPA Environmental Protection Licence No. 11276  
Available: <http://www.environment.nsw.gov.au/prpoeoapp/>

### **Risk management & safety:**

CECM1000.02 – HSE Manual: Risk Management  
CECM1000.09 – HSE Manual: TotalSAFE  
CECM1000.21 – HSE Manual: Personal safety  
CEOH1070.02a – Environmental Impact Assessment: Worksheet  
CECM1000.70 – HSE Manual: Environmental Impact Assessment – NSW  
CECM1000.73 – HSE Manual: Water

### **Water Quality:**

CEOP8325 – Water Supply and Quality – Water Quality  
CEOP8317 – Water Supply and Quality – Water samples  
CECP1001 – Corporate Policy – Drinking Water  
CEOP8262 – Mica WTP chemical dosing  
CEOP8249 – Water: Treatment chemicals  
CEOP8322 – Water sampling – Reservoirs  
CEOP8321 – Water sampling – Chemical analysis  
CEOP8323 – Water sampling – field measurements

### **Incident Management:**

CECP8253 – Mica WTP Emergency Response Chlorine Gas  
CEOF8163 – Major chlorine leak – Chlorine Gas concentration chart  
CEOF8162 – Chlorine training and drill log  
CEOP8252.01 – Sulphuric Acid Emergency  
CEOF8374 – Water: Customer incident Investigation  
CECM1000.03 – HSE Manual: Incident Management  
CECM1000.75 – Waste  
CECM1000.03 – HSE: Manual: Waste  
CEOM7611 – Essential Water Emergency Response Plan

### **Customer & Community Notifications:**

CEOP224 – Media: Incident guidelines  
CEOP8329 – Operational Procedure: Water operations: Notify customers

### **Records Management:**

CEOP1060 – Records Management

### **Legislation:**

*Protection of the Environment Operations Act, 1997 (as amended)*  
*Protection of the Environment Legislation Amendment Act, 2011*

## COMMERCIAL-IN-CONFIDENCE

*Protection of the Environment Operations (General) Amendment (Preparation of Pollution Incident Response Management Plans) Regulation 2012*

### External guidelines:

NSW Environmental Protection Authority, 2012. *Environmental guidelines: Preparation of pollution incident response management plans.*

## 7 REVISIONS

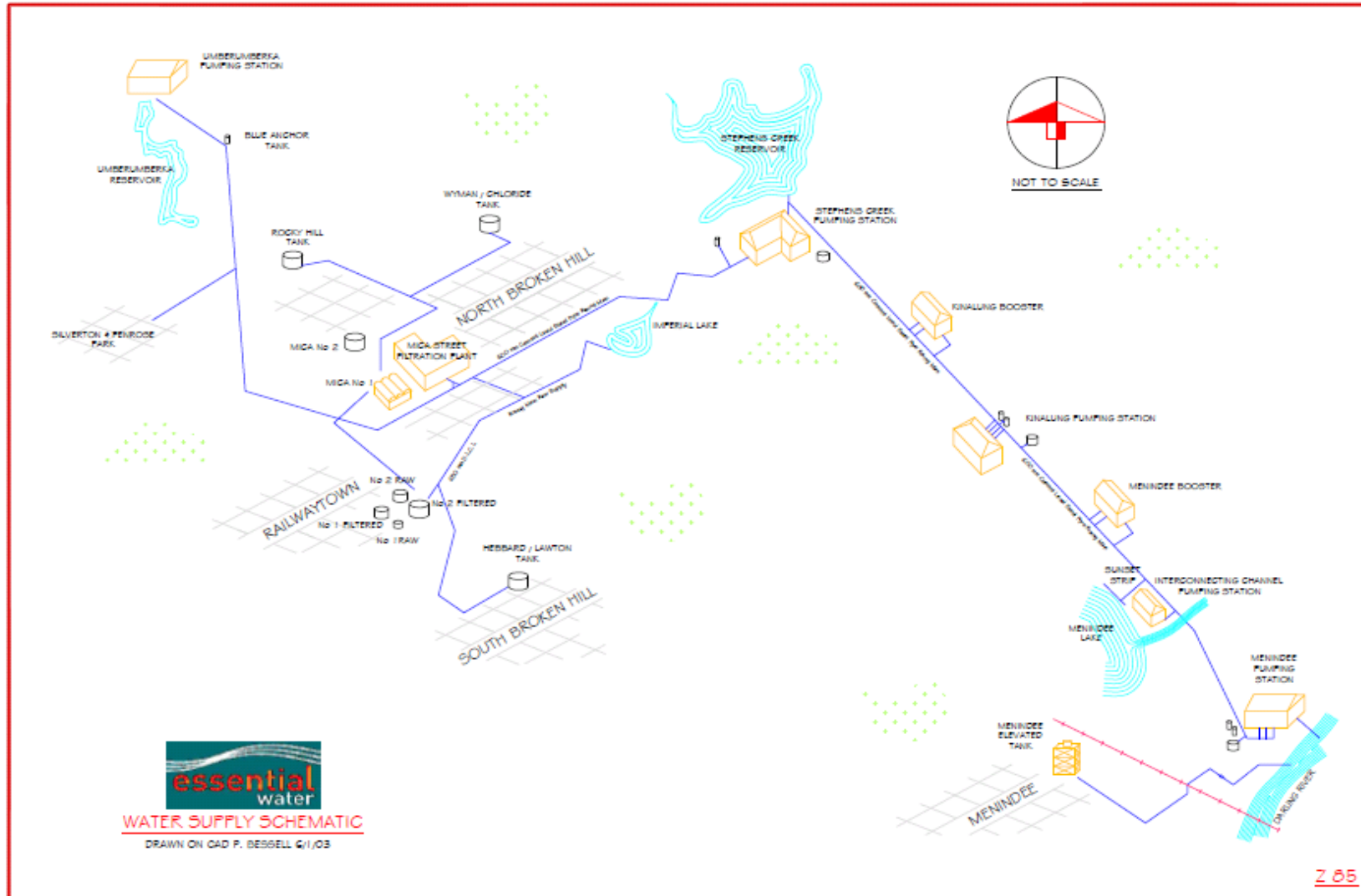
Issue Number	Section	Details of Changes in this Revision
3	All	Contacts and documents details updated

## 8 ATTACHMENTS

1. Broken Hill Water Reticulation Schematic
2. Locality Map: Stephens Creek Reservoir
3. Catchment Map: Stephens Creek Catchment
4. Locality Map: Imperial Lake Dam
5. Catchment Map: Imperial Lake Dam
6. Locality Map: Umberumberka Reservoir
7. Catchment Map: Umberumberka Reservoir
8. ChemAlert Chemical holdings – Reservoirs
9. Pollution incident notification protocol - Reservoirs

**COMMERCIAL-IN-CONFIDENCE**

**ATTACHMENT 1: BROKEN HILL WATER RETICULATION SCHEMATIC**





**COMMERCIAL-IN-CONFIDENCE**

**ATTACHMENT 2 – LOCALITY MAP: STEPHENS CREEK RESERVOIR**



**COMMERCIAL-IN-CONFIDENCE**

**ATTACHMENT 3 – CATCHMENT MAP: STEPHENS CREEK RESERVOIR**





**COMMERCIAL-IN-CONFIDENCE**

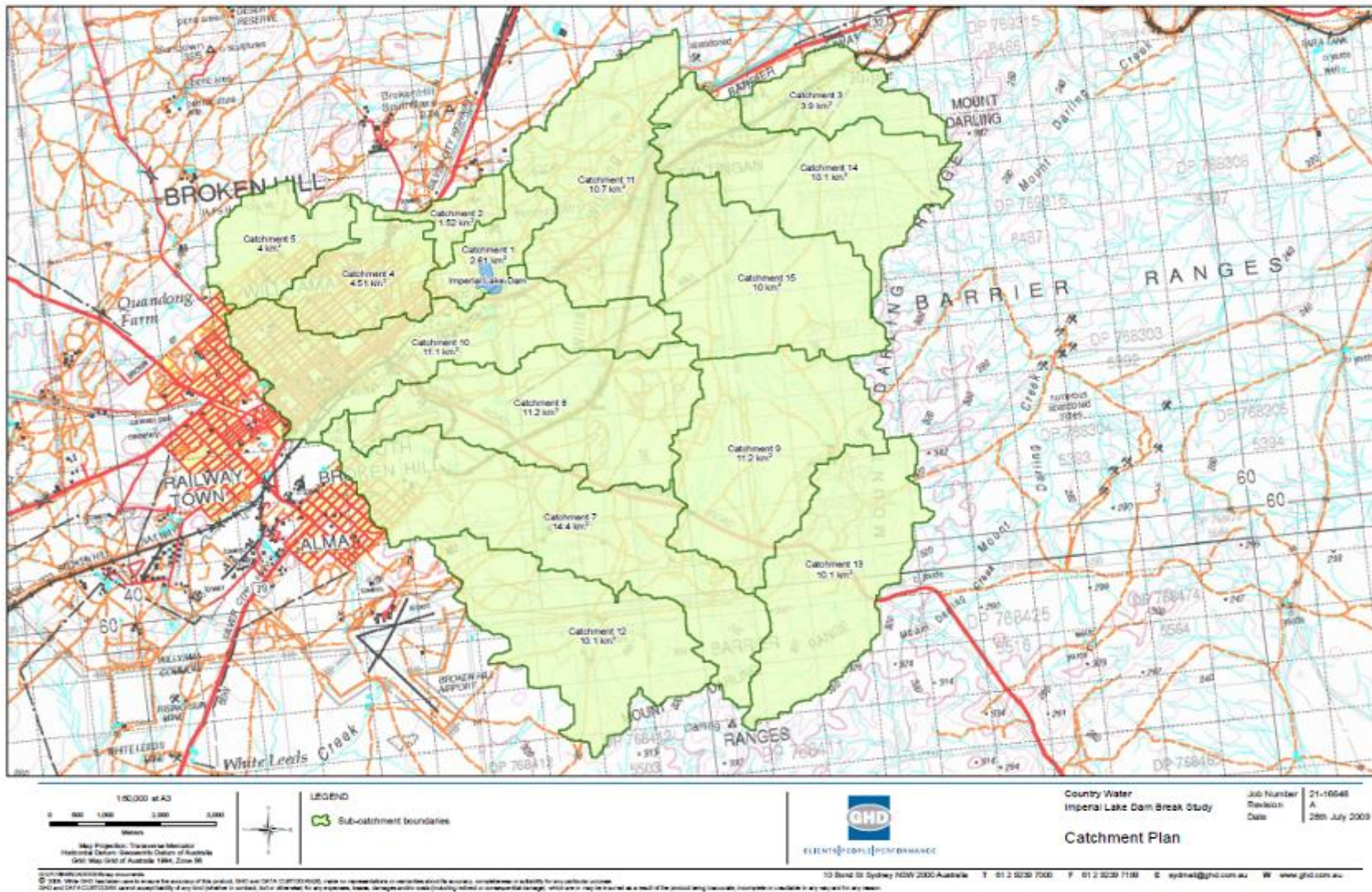
**ATTACHMENT 4 – LOCALITY MAP: IMPERIAL LAKE DAM**





COMMERCIAL-IN-CONFIDENCE

ATTACHMENT 5 – CATCHMENT MAP IMPERIAL LAKE

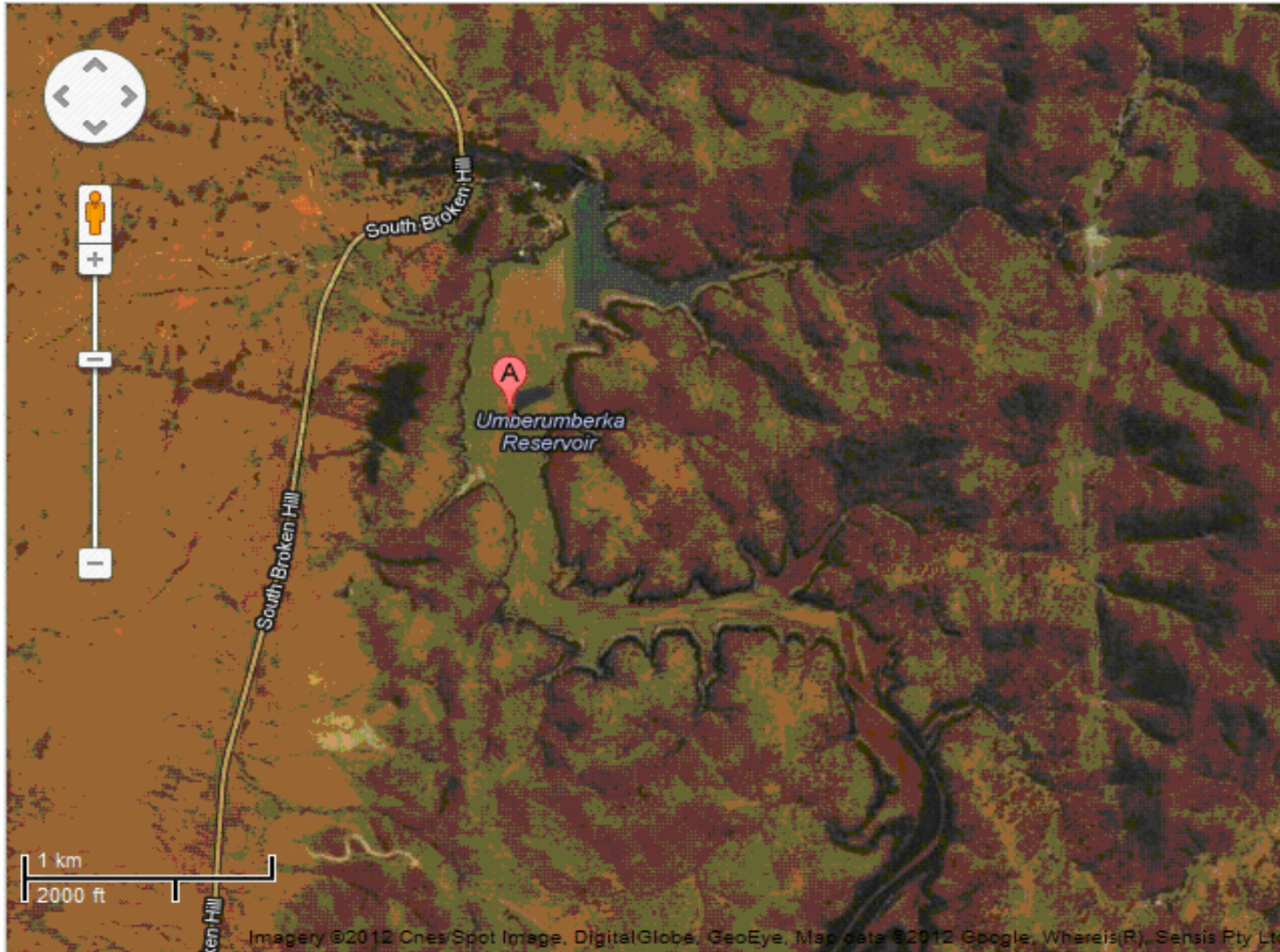


COMMERCIAL-IN-CONFIDENCE

UNCONTROLLED COPY IF PRINTED

**COMMERCIAL-IN-CONFIDENCE**

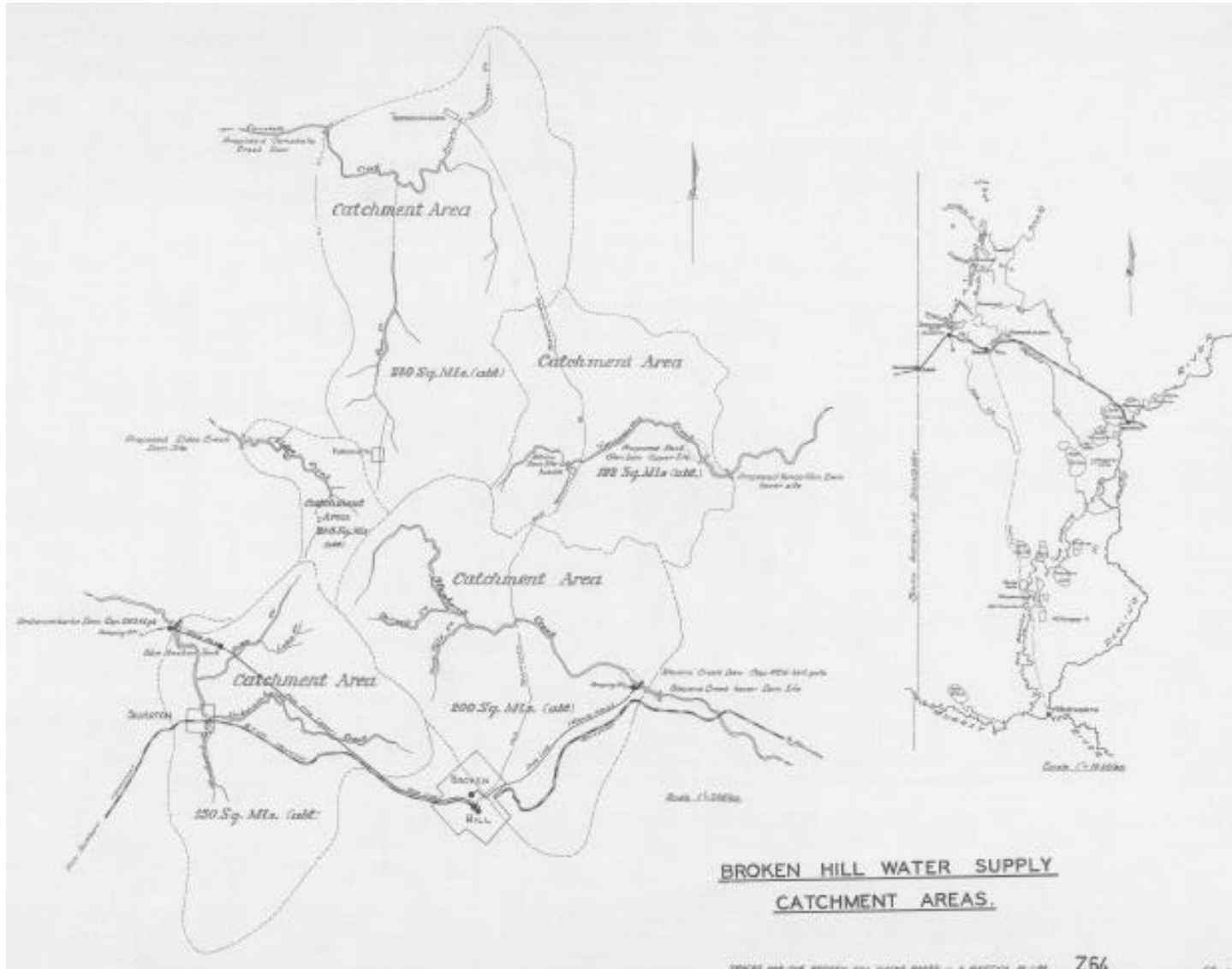
**ATTACHMENT 6 – LOCALITY MAP: UMBERUMBERKA RESERVOIR**





**COMMERCIAL-IN-CONFIDENCE**

**ATTACHMENT 7 – CATCHMENT MAP: UMBERUMBERKA RESERVOIR**



**COMMERCIAL-IN-CONFIDENCE**

**ATTACHMENT 8 – CHEMALERT CHEMICAL HOLDINGS: RESERVOIRS**

ChemAlert listings current at time of publication. For current listing, view the ChemAlert database, accessible via EssentialNet  
**Stephens Creek Pumping Station – ChemAlert Stock List June 2017**

**FUEL STORE** X  
4

Product^	Manufacturer/Supplier	Colour	SDS Date	Stock No.	Status	Quantity	Risk
CASTROL ACTIV 2T	CASTROL AUSTRALIA PTY LIMITED	Green	<a href="#">29-Feb-2016</a>	#266	Approved	1 Litre	
METHYLATED SPIRITS	RECOCHEM INC	Amber	<a href="#">20-Feb-2017</a>	#CHE 0030	Approved	1 Litre	
STIHL 2 STROKE (PRODUCT OBSOLETE)	BP AUSTRALIA PTY LTD	Green	<a href="#">14-Aug-2013</a>	#379	Approved	2 Litre	
UNLEADED PETROL	CALTEX AUSTRALIA (CALTEX & AM...)	Amber	<a href="#">06-May-2014</a>	#322	Approved	60 Litre	

**STORE ROOM** X  
3

Product^	Manufacturer/Supplier	Colour	SDS Date	Stock No.	Status	Quantity	Risk
ACCESS HERBICIDE	DOW AGROSCIENCES AUSTRALIA...	Amber	<a href="#">20-Jun-2016</a>	#1293	Approved	10 Litre	
ROUNDUP BIACTIVE HERBICIDE	SINOCHEM INTERNATIONAL AUST...	Amber	<a href="#">14-Oct-2016</a>	#EE 811790	Approved	58 Litre	
TOMCAT II BLOX	AMGROW AUSTRALIA PTY LTD	Amber	<a href="#">30-Nov-2016</a>	#1218	Approved	2 Kilogram	

**WORK SHOP AREA** X  
1

Product^	Manufacturer/Supplier	Colour	SDS Date	Stock No.	Status	Quantity	Risk
AGB CUPRICIDE ALGICIDE	AGMIN CHELATES PTY LTD	Green	<a href="#">01-Jun-2016</a>	#212	Approved	800 Litre	

**COMMERCIAL-IN-CONFIDENCE**

CARBON PLANT							
Product^	Manufacturer/Supplier	Colour	SDS Date	Stock No.	Status	Quantity	Risk
ACTIVATED CARBON - MINING	REDOX PTY LTD	Green	<a href="#">16-Jan-2015</a>	#418	Approved	1000 Kilogram	

**Umberumberka Pumping Station – ChemAlert Stock List – June 2017**

UMBERUMBERKA PUMPING STATION							
Product^	Manufacturer/Supplier	Colour	SDS Date	Stock No.	Status	Quantity	Risk
CASTROL ACTIV 2T	CASTROL AUSTRALIA PTY LIMITED	Green	<a href="#">29-Feb-2016</a>	#266	Approved	1 Litre	
CAT DEO ENGINE OIL SAE 15W-40	CATERPILLAR OF AUSTRALIA PTY...	Green	<a href="#">31-Mar-2016</a>	#414	Approved	400 Litre	
ROUNDUP BIACTIVE HERBICIDE	SINOCHEM INTERNATIONAL AUST...	Amber	<a href="#">14-Oct-2016</a>	#EE 811790	Approved	20 Litre	
STIHL 2 STROKE (PRODUCT OBSOLETE)	BP AUSTRALIA PTY LTD	Green	<a href="#">14-Aug-2013</a>	#379	Approved	2 Litre	
UNLEADED PETROL	CALTEX AUSTRALIA (CALTEX & AM...	Amber	<a href="#">06-May-2014</a>	#322	Approved	40 Litre	

ATTACHMENT 9 – NOTIFICATION OF POLLUTION INCIDENT PROTOCOL – RESERVOIRS

**Notification Protocol for Pollution Incidents: Reservoirs**

