

LEETON SHIRE COUNCIL



POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN



LEETON SEWERAGE TREATMENT PLANT

Document Name	Pollution Incident Response Management Plan – Leeton Sewerage Treatment Plant
Prepared by	Greg Richards
Approved by	Barry Heins
Created	September 2012
Activated & Revised	17 January 2017

Table of Contents

1. Purpose & Scope	1
2. Definition of Pollution Incident	1
3. Description and Likelihood of Hazards.....	2
4. Pre-emptive actions to be taken	2
5. Inventory of Pollutants.....	4
6. Safety Equipment	4
7. Duty to report Pollution Incident	5
8. Regulatory Authorities and Project Personnel to be notified	5
9. Communicating with Neighbours and the Local Community	6
10. Minimising Harm to Persons on the Premises	7
11. Actions to be taken During or Immediately after a Pollution Incident	7
12. Staff Training	8
13. Follow Up Actions.....	9
14. References.....	9
15. Site Plans	10

1. Purpose & Scope

This Pollution Incident Response Management Plan (PIRMP) has been developed to satisfy pollution reporting obligations under the Protection of the Environment Operations Act 1997 (POEO Act 1997). The objectives of this plan is to ensure an environmental pollution incident is communicated to all relevant groups and individuals, to prevent, minimise and control the risk of an environmental pollution incident, and also, appropriately establish and maintain the plan. The plan covers description of potential hazards, actions to be taken to prevent additional environmental harm and details of communication required in the event of an incident.

This plan is developed for Leeton Sewage Treatment System that processes domestic and industrial wastewater from Leeton Township. The township is serviced by approximately 85km of sewer mains and 34 pump stations with 2 major pump stations that transfer raw sewage to the Leeton Sewerage Treatment Plant (STP). Leeton STP treats approximately 2ML of raw sewage daily. The treatment processes in Leeton STP covers primary treatment (sedimentation tanks), secondary treatment (trickling filters and intermittent decant extended aeration tank with alum dosing) and tertiary treatment (maturation ponds).

2. Definition of Pollution Incident

The definition of a pollution incident is:

pollution incident means an incident or set of circumstances during or as a consequence of which there is or likely is 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.

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.

3. Description and Likelihood of Hazards

Potential hazards identified on the site include:

- Sewage overflow (raw or partially treated), potentially caused by:
 - Storm events (lightning/heavy rainfall/wind) causing power failure or infrastructure damage;
 - Reticulation blockages;
 - Damage to reticulation (contractors or other damage during excavations, etc);
 - Infrastructure failure due to age;
 - SCADA/Communications (Radtel) failure;
 - Excessive flows;
 - Mechanical break down;
 - Power failure;
 - Treatment Plant blockage.

- Chemical Spill, potentially caused by:
 - Tank/storage failure;
 - Delivery incident;
 - Damage to chemical reticulation;
 - Vandalism;
 - Inappropriate chemical use;
 - Bund failure.

4. Pre-emptive actions to be taken

Risk/Hazard	Controls/Actions
RETICULATION	
Sewage overflow due to heavy rainfall	<ul style="list-style-type: none"> ▪ Reticulation maintenance and rehabilitation to reduce infiltration ▪ Spare capacity in pump wells, reticulation and manholes ▪ Monitoring and maintenance
Sewage overflow due to power failure	<ul style="list-style-type: none"> ▪ Lightning protection ▪ Surge protection ▪ During emergency, back up generators are available from local suppliers
Sewage overflow due to storm damaging infrastructure	<ul style="list-style-type: none"> ▪ Lightning protection ▪ Surge protection ▪ During emergency, back up portable pumps are readily available
Sewage overflow due to reticulation blockages or damages	<ul style="list-style-type: none"> ▪ Spare capacity in pump wells, reticulation and manholes ▪ Sewer Jetting machine is readily available (high pressure cleaning of mains for sewer chokes) ▪ Monitoring and maintenance
Sewage overflow due to a contractor's excavation hitting the sewers	<ul style="list-style-type: none"> ▪ Provide underground service locations to external persons ▪ Telemetry designed to pick up a change in inflows ▪ Portable pumps are readily available (for clean up) ▪ Vacuum truck is available to locate underground assets
Sewage overflow due to SCADA/Communications (Radtel) failure	<ul style="list-style-type: none"> ▪ SCADA testing and alarming ▪ Back-up batteries will be activated automatically ▪ SCADA monitoring and maintenance

	<ul style="list-style-type: none"> ▪ Radtel testing and alarming ▪ Radtel monitoring and maintenance
Sewage overflow due to infrastructure failure (e.g. due to age)	<ul style="list-style-type: none"> ▪ Maintenance and renewal programs ▪ During emergency, back up portable pumps are readily available
Sewage overflow due to mechanical break down/pump failure	<ul style="list-style-type: none"> ▪ Telemetry monitoring ▪ Maintenance program ▪ Spare capacity in pump wells, reticulation and manholes ▪ Activate the stand-by pump ▪ Portable pumps are readily available to bypass site ▪ Backflow prevention ▪ Monitoring and maintenance
Sewage overflow from manholes due to blockage/damage/rainfall	<ul style="list-style-type: none"> ▪ Reticulation maintenance and rehabilitation to reduce infiltration ▪ Spare capacity in pump wells, reticulation and manholes ▪ Portable pumps are readily available to bypass site ▪ Monitoring and maintenance
Sewage overflow from pump stations due to blockage/damage/rainfall	<ul style="list-style-type: none"> ▪ Reticulation maintenance and rehabilitation to reduce infiltration ▪ Spare capacity in pump wells, reticulation and manholes ▪ Activate the stand-by pump ▪ Portable pumps are readily available to bypass site ▪ Pump station monitoring and maintenance ▪ Backflow prevention
SEWERAGE TREATMENT PLANT	
Sewage overflow (raw) due to heavy rainfall	<ul style="list-style-type: none"> ▪ Reticulation maintenance and rehabilitation to reduce infiltration ▪ Spare capacity in pump wells, reticulation and manholes ▪ Overflow storage at the STP (containment/evaporation ponds) ▪ Stormwater bypass system which allows excess flow to be diverted into containment/evaporation ponds ▪ Monitoring and maintenance
Sewage overflow (raw) due to storm (lightning/wind) causing power failure	<ul style="list-style-type: none"> ▪ Lightning protection ▪ Surge protection ▪ Back up generators are available from local suppliers
Sewage overflow (raw) due to storm (lightning/wind) causing infrastructure damage	<ul style="list-style-type: none"> ▪ Lightning protection ▪ Surge protection ▪ Overflow bypass at the STP
Sewage overflow (raw) due to reticulation blockages	<ul style="list-style-type: none"> ▪ Reticulation maintenance ▪ Spare capacity in pump wells, reticulation and manholes ▪ Overflow storage at the STP (containment/evaporation ponds) ▪ Bypass systems to overflow containment/evaporation ponds ▪ Monitoring and maintenance
Sewage overflow (raw) due to damage to onsite reticulation (e.g. during excavations, etc)	<ul style="list-style-type: none"> ▪ Locate services prior excavations ▪ Appropriate supervision of contractors ▪ Bypass systems to overflow containment/evaporation ponds
Sewage overflow (raw) due to SCADA/Communications (Radtel) failure	<ul style="list-style-type: none"> ▪ SCADA testing and alarming ▪ SCADA monitoring and maintenance ▪ Radtel testing and alarming ▪ Radtel monitoring and maintenance ▪ Manually operate the Sewerage Treatment Plant
Sewage overflow (raw) due to infrastructure failure (e.g. due to age)	<ul style="list-style-type: none"> ▪ Maintenance and renewal programs
Sewage overflow (raw) due to excessive flows	<ul style="list-style-type: none"> ▪ Reticulation maintenance to reduce infiltration ▪ Spare capacity in pump wells, reticulation and manholes ▪ Overflow storage at the STP (containment/evaporation ponds) ▪ Stormwater bypass system which allows excess flow to be diverted into

	containment/evaporation ponds <ul style="list-style-type: none"> ▪ Monitoring and maintenance
Sewage overflow (raw) due to mechanical break down	<ul style="list-style-type: none"> ▪ Maintenance and inspection programs ▪ Spare capacity in pump wells, reticulation and manholes ▪ Overflow storage at the STP (containment/evaporation ponds) ▪ Stormwater bypass system which allows excess flow to be diverted into containment/evaporation ponds ▪ Monitoring and maintenance
Sewage overflow (raw) due to Treatment Plant blockage	<ul style="list-style-type: none"> ▪ Bypass systems from the inlet works to containment/evaporation ponds ▪ Spare capacity in pump wells, reticulation and manholes ▪ Monitoring and maintenance ▪ Manually operate the Sewerage Treatment Plant
Chemical spill due to tank/storage failure	<ul style="list-style-type: none"> ▪ Bunding ▪ Alarms ▪ Inspection and maintenance of tanks
Chemical spill during delivery	<ul style="list-style-type: none"> ▪ Appropriate Safe Work Method Statement (SWMS) ▪ Appropriate PPE
Chemical spill due to damage to chemical reticulation	<ul style="list-style-type: none"> ▪ Locate services prior to excavations ▪ Appropriate supervision of contractors ▪ Shut off valves for chemical dosing plant
Chemical spill due to vandalism	<ul style="list-style-type: none"> ▪ Site security fences
Chemical spill due to bund failure	<ul style="list-style-type: none"> ▪ Bund inspections ▪ Maintenance and renewal
Chemical truck incident outside of bunded area	<ul style="list-style-type: none"> ▪ Operator onsite during deliveries

5. Inventory of Pollutants

Below are the identified pollutants located on site:

- Soda Ash → maximum quantities to be stored on site is 40 x 20kg bags
- Liquid Aluminium Sulphate → maximum quantities to be stored on site is 2 x 38,000L tank
- Liquid Magnesium Hydroxide → maximum quantities to be stored on site is 10,000L tank
- Small quantities of petrol less than 20L

6. Safety Equipment

Leeton Shire Council's Workplace Health and Safety Policies and Procedures apply to this site.

All equipment, controls, incident response plans and management plans will be maintained to prevent any possible harm to human health and the environment. Inspection, testing and review of equipment, controls, documents and systems currently in place on the site will depend on the issues raised for concern and results from previous checks.

Safety equipments located within the site are as follows:

- 2 x Fire Extinguishers in the main building, 1 x Fire Extinguisher in the electrical room and 1 x Fire Extinguisher in the computer control room
- Signage on gates, chemical containers, moving plant and confined spaces
- MSDSs for Soda Ash, Alumunium Sulphate, Magnesium Hydroxide, Petrol and chemicals for testing
- Hand rails on walkways on the treatment plants
- Life Buoy in the Sedimentation Tanks
- Site Office
- First Aid Kit
- Emergency phone numbers at the amenity block
- Eye wash station at the amenity block
- Bunded area around Chemical Dosing Plant
- 2 x Chemical Spill Showers at the Chemical Dosing Plant
- Induction for every employee and contractor
- PPE

7. Duty to report Pollution Incident

Under the POEO Act a duty to immediately report an incident applies where a pollution incident occurs in the course of the project so that material harm to the environment is caused or threatened. It does not matter that harm to the environment is caused only in the premise where the pollution incident occurs.

Leaks, spills, water discharges and other pollution incidents can harm the environment. The relevant regulatory authorities need to be informed of pollution incidents immediately, so that action can be coordinated to prevent or limit harm to the environment. Regulatory authorities and notification responsibilities are given below.

8. Regulatory Authorities and Project Personnel to be notified

Below is a list of the relevant regulatory authorities and project personnel to be notified of any pollution incident for the Leeton Sewerage Treatment Plant.

Contact	Phone Number
EPA Pollution Hotline	131 555
NSW Ministry of Health via Local Public Health Unit	1300 066 055 02 6080 8900 (After hours)
Environmental Health Officer (Kevin Prior)	0429 076 135
WorkCover	13 10 50 (Option 1)
Emergency Services (if dealing with an emergency)	000
Fire and Rescue	000
NSW Police	000
SES	132 500

Leeton Rescue Squad	02 6953 3943
Operator in charge	02 6953 0947
Council Main Line	02 6953 0911
Water & Sewerage After Hours	0428 268 679
Operations Coordinator Water & Wastewater	0419 296 455
Manager Water & Wastewater	0427 673 901
Director Engineering & Technical Services	0408 846 507

Pollution incidents posing material harm to the environment must be notified to the Environmental Protection Authority. The relevant information about a pollution incident required to be reported consists of the following:

- 1) The time, date, nature, duration and location of the incident
- 2) The location of the place where pollution is occurring or is likely to occur
- 3) The nature, the estimated quantity or volume and the concentration of any pollutants involved
- 4) The circumstances in which the incident occurred (including the cause of the incident, if known)
- 5) The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution

If the information required by items (3) to (5) becomes known after the initial notification is made, that information must be provided to the authorities immediately after it becomes known.

A person/project must notify even though the notification might incriminate the person/project. However the notification is not admissible in evidence against the person/project for an offence.

9. Communicating with Neighbours and the Local Community

Impacts on the community due to sewage distribution and treatment incidents are variable and depend on location, volumes of spills or other factors. Communication methods will be used on a case by case basis and in all situations Leeton Shire Council will attempt to provide early warning to directly affected premises (either upstream or downstream depending on tidal impacts where relevant) by phone call or site visit. Early warning is to include details of what the imminent incident is, how those affected can prepare and respond, and provide important advice such as avoiding contact and use of affected waterways.

Where early warning is not possible, Leeton Shire Council will provide notification and communication during and after an incident to advise those affected with information, advice and updates. Notification and communication methods will be determined on a case by case basis and the following methods may be used:

- Phone calls
- Media releases (radio/newspaper/internet/social media as required)

- Site visits/door knocking
- Letter drops
- Warning signs
- Other methods as the situation requires

10. Minimising Harm to Persons on the Premises

One of the goals of the pollution incidents response management plan is to develop and implement an emergency response protocol.

Leeton Shire Council receives, records and initiates response to customer inquiries/complains through 02 6953 0911 and get directed to the appropriate personnel. After hours calls will be directed through the appropriate personnel via a voicemail in the main phone number (02 6953 0911).

Other pre-emptive actions taken to minimise the risk of harm to persons on the premises include:

- Pre-commencement health screening and assistance
- Site inductions
- Regular inspections and recording and close out of corrective actions
- Regular management meetings
- Hazard and near miss reporting
- Staff training
- Environmental and occupational monitoring

Leeton Shire Council emergency response action includes but is not limited to the following:

- Adequate staff training
- Provision of appropriate equipments (pumps, hoses, generators and industry approved PPE)
- Back up/stand-by sewerage pumps
- Vacuum trucks to be sourced locally to remove sewage and sludge
- Public warning signs and emergency tapes to mark the effected area
- Sampling equipments
- Reporting and record keeping
- Formal procedures for maintenance activities
- Training of operations and maintenance staff

11. Actions to be taken During or Immediately after a Pollution Incident

Actions to be undertaken in the event of a pollution incident are as follows:

- If a pollution incident has occurred involving Leeton Shire Council Water & Sewerage asset and / or activity and the situation is potentially life threatening, call 000 in the first instance
- Any persons wishing to report an incident involving Leeton Shire Council Water & Sewerage asset and / or activity must call 02 6953 0911, to be directed to the Superintendent Water & Wastewater
- The Superintendent Water & Wastewater will:
 - a. Assess the situation and potential consequences
 - b. Prioritise the response based on intelligence gathered
 - c. Contact / dispatch designated operational staff to attend the incident or advise of a course of action based on the prioritisation assessment
 - d. Advise of any specific hazards which may be present at the location of the incident
- Leeton Shire Council will escalate the incident accordingly and notify relevant authorities (detailed in Section 8) based on information received from its field resources
- Leeton Shire Council follows the NSW State Emergency Management Arrangements meaning that key emergency service organisations such as NSW Police, Fire and Rescue NSW and the SES may be the controlling authority depending on the nature of the incident

12. Staff Training

All staff must complete Council's General Induction and Site Specific Induction. All staff must maintain competency in relevant licences, policies and procedures. All operators must attain competency in sewage treatment plant operation. All staff training programs to be updated annually.

New members of staff at the facility should be inducted. This induction must cover the purpose, requirements and responsibilities detailed in this plan.

Staff competency will be monitored through audits, public complaints and pollution incident reports.

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

Regular site briefings and toolbox meetings should be held when considered appropriate to draw attention to potential pollution incidents and identify improvements to on-site safety procedures.

All, desktop exercises, drills and incidents are to be registered into Council's TRIM, and training records will be sent to WH&S Officer and Human Resources for filing.

13. Follow Up Actions

Actions to be taken after the incident are as follows:

- Submit the necessary reports to the relevant authorities (e.g. EPA, Ministry of Health, etc)
- Plan must be tested within one month of any pollution incident to assess whether the information included in the plan is accurate and up to date, and the plan is still capable of being implemented in a workable and effective manner

14. References

- EPA NSW Environmental Guidelines: Preparation of pollution incident response plans
- Leeton Shire Council Business Continuity Plan 2011
- Local Government Act 1993
- Protection of the Environment Legislation Amendment Act 2011
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (General) Regulation 2009
- Public Health Act 2010

15. Site Plans



