

Pollution Incident Response Management Plan

Young Sewerage Scheme



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1. Introduction

On the 29th February 2012 an amendment to the Protection of the Environment Operations Act 1997 introduced a requirement for all licensees to prepare and implement a Pollution Incident Response Management Plan (PIRMP) for each of its licensed activities in accordance with the requirements set out in Part 5.7A of the PEOA Act 1997.

This plan has been developed to document the processes required to prepare for and respond to pollution incidents for the Young Sewage Treatment Plant (YSTP) and associated reticulation (EPA Licence No. 1624) and ensure that hazards to the environment, human health and safety are reduced, if not eliminated.

1.1 Scope

This PIRMP applies to the Young Sewage Treatment Plant and Reticulation (EPA Licence No. 1624). For site plans, refer to Section 1.1 Appendix 1 – Site plans.

2. Glossary

Pollution incident: means 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 (see the POEO Act 1997).

Harm to the environment: 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

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. Pollution Incident Response Management Plan

The township of Young is serviced by approximately 80km of sewer mains and 5 pump stations which transfer sewage to the Young STP. The Young STP treats approximately 2ML of sewage daily in dry weather, potentially reaching 8 times this flow during heavy rain periods. The Young STP and reticulation system commenced in the late 1930s and is currently overloaded which can lead to sewage spills in the reticulation system or at the treatment plant during high rainfall periods. Construction has commenced on the STP upgrade with a scheduled finish date of September 2013.

The current process does not include the addition of any chemicals however lime is utilised from time to time. It is only stored on site when required however still needs to be included in the register of chemicals. The upgrade will introduce alum, caustic and chlorine dosing and therefore a revision of the chemical register will need to occur once the upgrade is complete.

3.1 Potential Incidents

The potential hazards to the environment include:

- § Sewage overflow (raw or partially treated) – potentially caused by:
 - Storms (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 failure
 - Excessive flows
 - Mechanical break down
 - Power outage
 - Treatment plant blockage

- § Chemical spill – potentially caused by:
 - Delivery incident
 - Inappropriate chemical use

A detailed assessment of risks is provided in Section 7.4 Appendix 4 - Risk assessments and actions. For detail on actions to reduce risks see Section 3.5 Pre-emptive Measures and Section 7.5 Appendix 5 - Action plans to minimise harm.

3.2 Incident Response

This section details the response requirements in the event of an incident. In all situations:

The 24 hour emergency number for Young Shire Council Utility Services is 0419 275 991

3.2.1 Human health or Safety Incident

If there is immediate threat to Human health or Safety, call triple zero "000" ("112" if using a mobile) and implement the following process:

1. Implement the **Accident and Incident reporting and Investigation Procedure (FCR-00094- WHS-PROC-01)**
2. If required, evacuate the site
3. Contact Utility Services Works Supervisor (**0408 487 233**) and/or Manager Utility Services (**0409 276 323**) or Director Utility Services (**0418 676 310**)
4. Report the incident to Human Resources (**6380 1234**)

3.2.2 Pollution incident

During a pollution incident which involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, the Supervisor and Manager must be notified immediately through the chain of command. The following agencies must be notified immediately through either the **Manager Utility Services** or **Director of Utility Services**:

- | | | |
|----|---|--|
| 1. | EPA Environment Line (written report to be provided within 7 days) | 131 555 |
| 2. | NSW Health | 02 4824 1840 BH
02 6080 8900 AH |
| | (diverts to Albury Base Hospital - ask for Public Health Officer on call) | |
| 3. | Work Cover | 131050 |
| 4. | YSC Environmental Health Officer | (02) 6380 1223
0488 495 772 |
| 5. | Fire & Rescue | 1300 729 579 |

Young Shire Council should also consider contacting the following as soon as practical:

- | | | |
|----|-------------------------|--------------------------|
| 1. | Affected neighbours | |
| 2. | Chemical supplier | Refer to the MSDS |
| 3. | Aboriginal Land Council | |
| 4. | Police | |

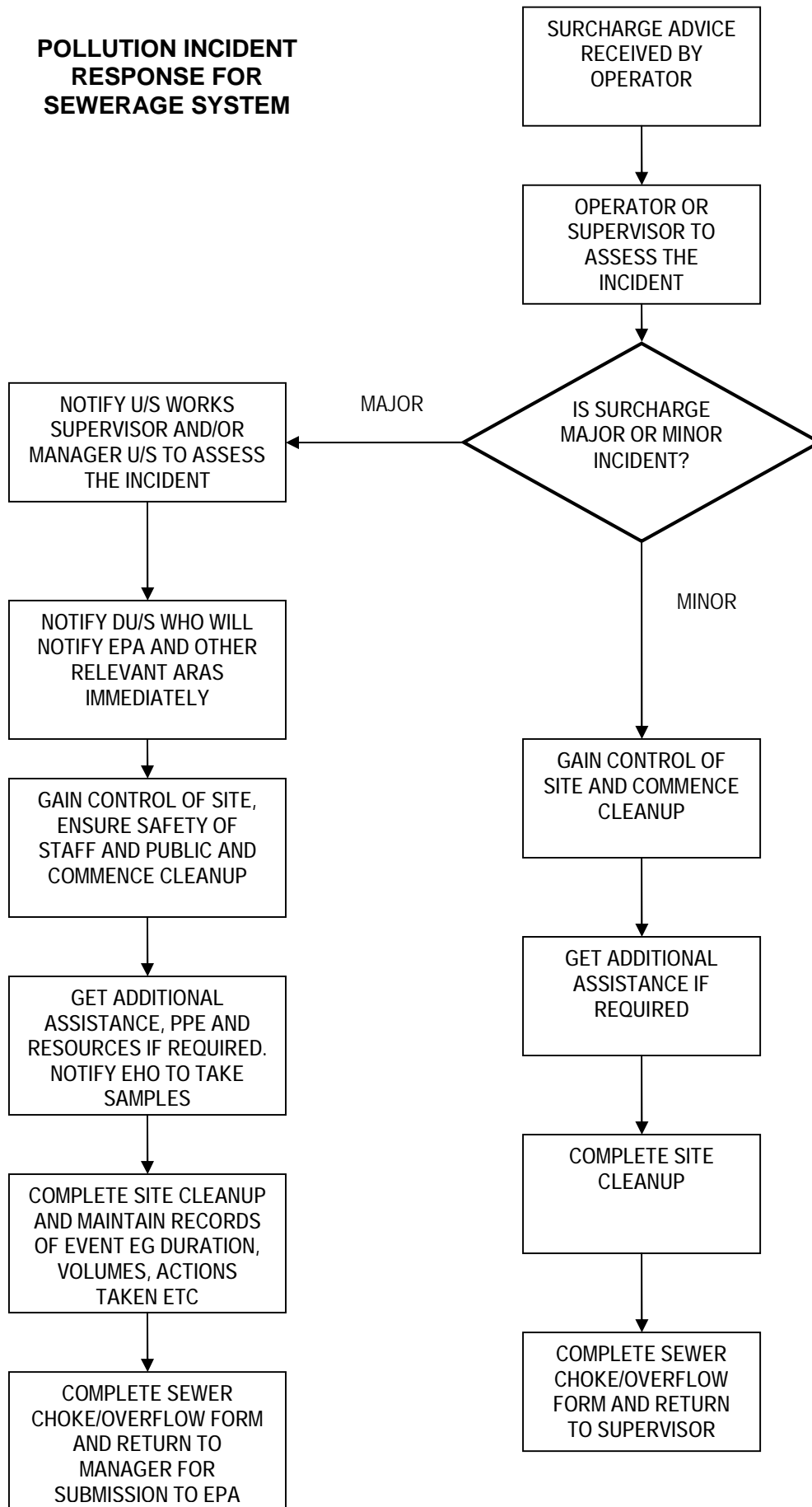
For details of other contacts that might be required see Section 7.6 Appendix 6 - Additional Emergency Contacts.

In all situations where there is damage and/or loss to private property or a member of the public due to an incident related to this plan contact:

- | | | |
|---|--------------------------------|-----------------------|
| § | Council's Risk Coordinator, or | (02) 6380 1211 |
|---|--------------------------------|-----------------------|

The incident response required depends on the type and severity of the incident that has occurred. The following flow chart describes the process to follow in the event of a sewage overflow/bypass for both minor and major incidents.

**POLLUTION INCIDENT
RESPONSE FOR
SEWERAGE SYSTEM**



3.3 Community notification

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 Young Shire Council staff will attempt to provide early warning to directly affected premises 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 areas.

Where early warning is not possible Young 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/television/newspaper/internet/social media as required)
- § Site visits/door knocking
- § Letter drops
- § Warning signs
- § Other methods as the situation requires

In the event of a major chemical or sewage spill into stormwater or waterway, Young Shire Council staff are to go to areas of the affected waterway that may be used for recreation and erect signage. The signs are to warn water users of the contamination and advise them to avoid activities such as swimming until contamination has cleared.

Contaminated land is to be disinfected, ponded sewage pumped out and faecal coliforms are to be monitored until background levels are reached. Regular communication and notification is to be provided until the incident and clean up of the impacted site and affected areas have been completed.

3.4 Incident Investigation

All emergencies must be investigated. For all other incidents, the Manager (with guidance from review personnel) will decide whether an incident investigation will be conducted. All pollution incidents must be recorded and reported to the Manager Utility Services using the **Record of Sewer Chokes and Overflows** form.

3.5 Pre-emptive Measures

3.5.1 Physical and preventative measures

First priority for pre-emptive measures is to eliminate substances that can become potential pollutants. If this is not possible, physical barriers should be installed to prevent pollutants from entering the environment such as bunding and spill drainage containment.

Currently no major chemicals are stored at the Young STP. Future storages to be installed will all be bunded to ensure that if the storage fails the pollutant is contained. A storm surge tank has been installed at the head of the STP to try and prevent bypasses of untreated sewage however this does overflow to the maturation ponds in major storm events. The maturation ponds provide dilution and some settling before discharges occur to the creek

The reticulation pump stations have alarm systems to alert operators of conditions that may result in incidents. In the event that these systems fail Young Shire Council has a portable bypass pump and other containment options available.

3.5.2 Preventative monitoring and maintenance

Young Shire Council uses monitoring and preventative maintenance to reduce the potential for incidents at both the STP and for the reticulation and pump stations. This includes daily, weekly, monthly and longer term inspections, maintenance and renewals. Young Shire

Council currently lacks documented procedures for maintenance however these will be developed as part of the upgrade works for both the STP and the reticulation system.

Other checks include manhole inspection, maintenance, repair and resealing (as required), CCTV and jetting of problem areas within the reticulation and other general maintenance.

3.5.3 Pre-emptive documentation

Reticulation blockages, breaks or distribution issues can result in spills if not acted upon. Therefore the following SWMS and procedures are to be used to address issues before overflows occur:

- FCR-00427-WHS-PROC-51 STP Operations Procedure
- FCR-00265-WHS-SWMS-06 Clear sewage choke
- FCR-00270-WHS-SWMS-66 Preliminary Stage Sewage treatment works
- FCR-00271-WHS-SWMS-67 Primary Imhoff tanks and sediment tanks
- FCR-00272-WHS-SWMS-68 Secondary Stage – filters, humus tanks, Sludge Lagoons
- FCR-00273-WHS-SWMS-69 Tertiary Stage – ponds
- FCR-00345-WHS-SWMS-73313 Clearing of sewage chokes with a high pressure water jetter
- FCR-00346-WHS-SWMS-73204A Sludge Lagoon operations
- FCR-00347-WHS-SWMS-13201B Cleaning rotary arms on filter beds
- FCR-00348-WHS-SWMS-73204 Emptying Drying beds
- FCR-00349-WHS-SWMS-3201A Cleaning of screens throughout plant
- FCR-00350-WHS-SWMS-73302 Sewer pump station maintenance

3.6 Training

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.

All, desktop exercises, drills and incidents are to be registered into Council's CivicView system and training records will be sent to Human Resources for filing.

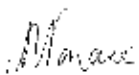
4. Responsibility

Director of Utility Services is responsible for the implementation and review of this Plan.

5. References

- § EPA NSW Environmental Guidelines: Preparation of pollution incident response plans
- § Local Government Act 1993
- § Protection of the Environment Operations Act 1997
- § Protection of the Environment Operations (General) Regulation 2009
- § Public Health Act 1991
- § Water Administration Act 1986

6. Table of Amendments

Amendment	Authorised by	Approval reference	Date
Page 5 – change contact number for Fire and Rescue		NA	1 May, 2013

7. Appendices

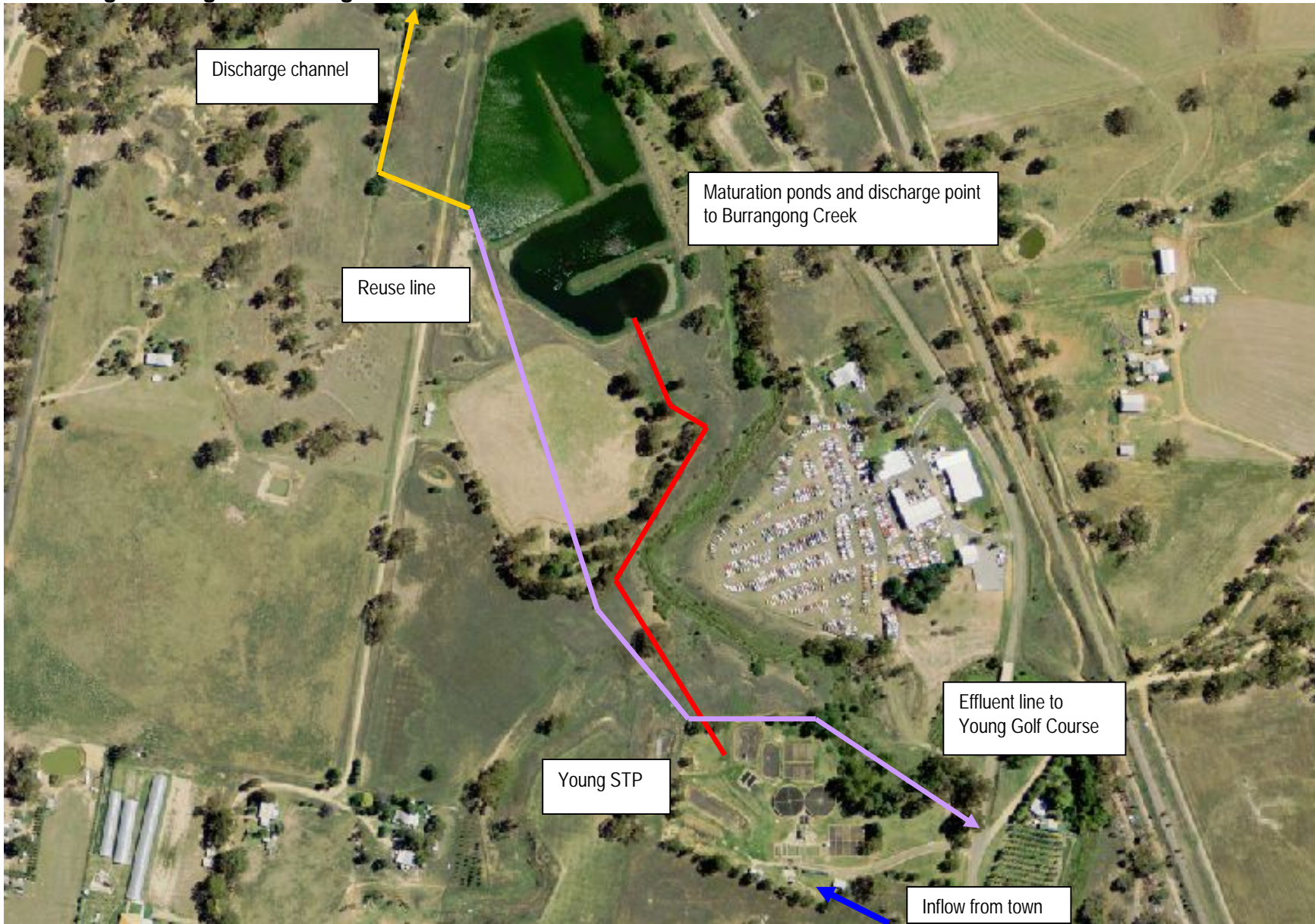
- § Appendix 1 - Site Plans
- § Appendix 2 - Site Chemical Register
- § Appendix 3 - Personal Protective Equipment
- § Appendix 4 - Risk assessments and actions
- § Appendix 5 - Action plans to minimise harm
- § Appendix 6 - Additional Emergency Contacts

7.1 Appendix 1 - Site Plans

Young Trickling Filter Sewage Treatment Plant (close up)



Young Trickling Filter Sewage Treatment Plant



7.2 Appendix 2 - Site Chemical Register

Date of register: 28 September 2012

Chemical Name	Manufacturer	MSDS onsite	Maximum Volume of Chemicals Stored	Location Where Chemical is Stored
Diesel		Yes	2,000 Lts	Bunded area STP
Unleaded fuel		Yes	40 Lt	STP shed
Roundup		Yes	1 Lt	Depot
Hydrated Lime		Yes	1 Lt	STP shed
Calibration gas for gas detector		Yes	25 kg	STP shed

7.3 Appendix 3 - Personal Protective Equipment List

This section lists the standard PPE items required.

Sewage Treatment Plant

The following items are kept at the Young Sewage Treatment Plant:

- § Ear/hearing protection
- § Gas monitor
- § Gas calibration equipment
- § Fall arrest harness
- § Life rings (around the treatment system) and Life Jackets
- § Sun screen and repellent
- § Apron/disposal overalls
- § Rubber Gloves
- § Safety glasses
- § Gumboots
- § Steel capped Boots
- § Hearing protection
- § High-vis clothing
- § First aid kits

Sewerage reticulation response truck

The following items are to be kept on the sewerage reticulation response truck:

- § Asbestos kit
- § Goggles/eye protection
- § Hearing protection
- § Apron/disposable overalls
- § Rubber gloves
- § Gumboots

Young Shire Council depot

The following items are kept at the depot located at Glensloy St, Young:

- § Chemical spill kits
- § Portable generator
- § Breathing apparatus and other confined space entry equipment

7.4 Appendix 4 - Risk assessments and actions

Risk	Impact	Risk LxC = Rating	Controls
Sewerage Reticulation			
Sewage overflow due to heavy rainfall	Land contamination, possibly enter a waterway, possibly enter property	C2=M	<ul style="list-style-type: none"> § Reticulation maintenance and rehabilitation to reduce infiltration and inflows § Spare capacity in pump wells § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures § See also 7.5 Appendix 5 - Action plans to minimise harm
Sewage overflow due to power failure	Land contamination, possibly enter a waterway, possibly enter property	B1=L	<ul style="list-style-type: none"> § Lightning protection § Back up generators § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow due to storm damaging infrastructure	Land contamination, possibly enter a waterway, possibly enter property	B1=L	<ul style="list-style-type: none"> § Lightning protection § Sight vegetation management to prevent damage to infrastructure § Portable pumps § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow due to Reticulation blockages or damage	Land contamination, possibly enter a waterway, possibly enter property	C1=L	<ul style="list-style-type: none"> § Reticulation maintenance § Sewer Jetting program (high pressure cleaning of mains for repeat chokes) § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow due to an external persons excavation hitting the sewers	Land contamination, possibly enter a waterway, possibly enter property	A2=L	<ul style="list-style-type: none"> § Provide underground service locations to external persons § Vacuum trucks (for clean up) § Portable pumps (for clean up) § Depth of sewer mains
Sewage overflow due to SCADA/Communications failure	Land contamination, possibly enter a waterway, possibly enter property	A1=L	<ul style="list-style-type: none"> § SCADA testing and alarming § Monitoring of SCADA signal issues § Pre-emptive measures see Section 3.5 Pre-emptive Measures §
Sewage overflow due to Infrastructure failure (e.g. due to age)	Land contamination, possibly enter a waterway, possibly enter property	C1=L	<ul style="list-style-type: none"> § Maintenance and renewal programs § Pre-emptive measures see Section 3.5 Pre-emptive Measures

Risk	Impact	Risk LxC = Rating	Controls
Sewage overflow due to Mechanical break down/dual pump failure	Land contamination, possibly enter a waterway, possibly enter property	B1=L	<ul style="list-style-type: none"> § Telemetry monitoring § Maintenance and inspection programs § Portable pump to bypass site and vacuum truck to maintain flows § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage Treatment Plant			
Sewage overflow (raw) due to heavy rainfall	Land contamination, possibly enter a waterway	C2=M	<ul style="list-style-type: none"> § Reticulation maintenance to reduce infiltration and inflows § Inlet balance tank § Bypass systems to maturation ponds § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures § Plant upgrade commenced
Sewage overflow (raw) due to storm (lightning/wind) causing power failure	Land contamination, possibly enter a waterway	B2=L	<ul style="list-style-type: none"> § Lightning protection § Back up generators § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow (raw) due to storm (lightning/wind) causing infrastructure damage	Land contamination, possibly enter a waterway	B2=L	<ul style="list-style-type: none"> § Lightning protection § Sight vegetation management to prevent damage to infrastructure § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow (raw) due to damage to onsite reticulation (e.g. during excavations etc)	Land contamination, possibly enter a waterway	B2=L	<ul style="list-style-type: none"> § Locate services prior to excavations § Appropriate supervision of contractors § Bypass systems
Sewage overflow (raw) due to Infrastructure failure (e.g. due to age)	Land contamination, possibly enter a waterway	C2=M	<ul style="list-style-type: none"> § Maintenance and renewal programs § Plant upgrade commenced § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow (raw) due to excessive flows	Land contamination, possibly enter a waterway	C2=M	<ul style="list-style-type: none"> § Reticulation maintenance to reduce infiltration and inflows § Inlet balance tank § Bypass systems to maturation ponds § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures

Risk	Impact	Risk LxC = Rating	Controls
Sewage overflow (raw) due to Mechanical break down	Land contamination, possibly enter a waterway	B2=L	§ Maintenance and inspection programs § Inlet balance tank § Bypass systems to maturation ponds § Monitoring and maintenance § Pre-emptive measures see Section 3.5 Pre-emptive Measures
Sewage overflow (raw) due to Treatment plant blockage	Land contamination, possibly enter a waterway	C2=M	§ Bypass systems § Gross solid screening § Bunding
Chemical spill due to Tank/storage failure	Land contamination, possibly enter a waterway	B2=L	§ Inspection and maintenance of tanks § Minimal volumes kept on site
Chemical spill During delivery	Land contamination, possibly enter a waterway	B2=L	§ SWMS § PPE
Chemical spill due to Bund failure	Land contamination, possibly enter a waterway	B2=L	§ Bund inspections § Maintenance and renewal

Likelihood	Consequences	Rating	Likelihood					
			Consequence	A	B	C	D	E
A IMPROBABLE - May occur only in exceptional circumstances	1. INSIGNIFICANT - No injuries, minimal level of pollution, Employee grievances dealt with on site, Loss <5% of job cost, service, business failure resulting in delay < 1 week and costs, plant/equipment loss < \$1,000 2. MINOR - First aid treatment, limited/localised impact, Employee grievances dealt with by senior management, loss 5-10% of job cost, business failure resulting in delay < 1 month and costs, plant/equipment loss < \$10,000 3. MODERATE - 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 legislation/Licence conditions, business failure resulting in delay < 3 months and costs, plant/equipment loss < \$50,000 4. MAJOR - long term illness/serious injury, significant pollution requiring outside assistance & long term environ 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 5. CATASTROPHIC - 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	L = Low						
B REMOTE - Could occur at some time		M = Medium						
C OCCASIONAL - Might occur at some time		H = High	1	L	L	L	M	H
D FREQUENT - Will probably occur in most circumstances		V = Very High	2	L	L	M	H	V
E CONTINUOUS - Is expected to occur in most circumstances		X = Extreme	3	M	M	H	V	X
		4	H	H	V	X	X	
		5	V	V	X	X	X	

7.5 Appendix 5 - Action plans to minimise harm

To address the risk of sewer overflows, Young Shire Council has a number of management actions comprising of one or more of the following:

- § Further detailed Investigations of very high and extreme risks
- § Augmentation of sewage treatment plant
- § Upgrading the conveyance sewer
- § Planned maintenance of existing assets
- § Planned renewal of existing assets
- § Hydraulic modelling of sewerage network to better understand current capacity limitations
- § Inflow and infiltration studies
- § Improved Telemetry monitoring of sewage pumping stations
- § Emergency Response Procedure to Power Failures
- § Incident Response Protocol

7.6 Appendix 6 - Additional Emergency Contacts

YOUNG SHIRE COUNCIL

DIRECTOR UTILITY SERVICES – NICOLE VONARX	6382 6035 (Home) 0418 676 310
MANAGER UTILITY SERVICES – MANO MANOHARAN	0409 276 323
WORKS SUPERVISOR – GREG PREST	0408 487 233
UTILITY SERVICES ONCALL - VARIOUS	0419 275 991
ENVIRONMENTAL HEALTH OFFICER – MARTIN SLADE	0488 495 772
LAB CONTACTS – ALS LABORATORY	6202 5400

OTHER

LOCAL EMERGENCY MANAGER – Bill Maloney	0419 698 631
AMBULANCE - 000	131233
FIRE BRIGADE - 000	6382 7036
POLICE STATION	6382 8199
RURAL FIRE SERVICE	6386 3170
STATE EMERGENCY SERVICES (SES)	132500
HOSPITALS	6382 8888
ROADS & MARITIME SERVICE (RMS)	131700
PUBLIC WORKS	
WAGGA OFFICE	6938 2880
BATHURST OFFICE	6339 5900
NSW WATER SOLUTIONS (SYDNEY)	9372 8949
TELSTRA EMERGENCY	132 203
OPTUS EMERGENCY	1300 300 937
ELECTRICITY	
ESSENTIAL ENERGY	132080
GAS COMPANIES	
JEMENA	131909
AGL	135245
NSW OFFICE OF WATER	
WOLLONGONG	02 4224 9731
BERNIE BARNES – REGIONAL INSPECTOR	0429 604 409
LACHLAN CMA	
YOUNG OFFICE	6382 5833
ENVIRONMENTAL INCIDENTS (POLLUTION HOTLINE)	1315555
QUEANBEYAN OFFICE	6229 7002
WIRES	6341 3399
WORKCOVER	131050