



MIDCOAST
council

Pollution Incident Response Management Plan - Summary



Midcoast Council Water Services

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1. Introduction

Despite application of best industry practice and latest technology into the operation of the sewerage system by MidCoast Council, sewer overflows can occur anywhere in the system. They are the most common causes of pollution incidents experienced during the operation of the sewerage system. In addition, chemicals used in sewage treatment may pose a threat and are stored on site at the treatment plants. This Management Plan confirms and formalises the way MCC is responding to the pollution incidents.

The *Protection of the Environment Legislation Amendment Act 2011* introduced several changes to improve the way pollution incidents are reported, managed and communicated to the general community. The Act includes a new requirement under Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act) to prepare, keep, test and implement a pollution incident response management plan for each premises holding the EPA licence.

2. Definition of a Pollution Incident

The definition of a pollution incident by the POEO Act is:

*“**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”.*

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 ecosystem 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.

Council is now required to report pollution incident *immediately* meaning **promptly and without delay** instead of as soon as practicable.

The determination if the incident is reportable is challenging, as there is only enough time to undertake an initial assessment before the notification is made. In addition the event can escalate and MCW would become liable for not conducting proper notification.

3. Objectives of the Plan

The plan has been developed to:

- Ensure comprehensive and timely communication about a pollution incident both internally within MCW and to external agencies
- Clarify responsibilities for response to incidents, notification and follow up communication
- Minimise and control risk of a pollution incidents at the treatment plant and within the reticulation system
- Ensure the plan is properly implemented and tested by trained staff

4. Pollution Incident Risk Assessment

The MidCoast Council Water Services Risk Assessment Report for pollution incident risk assessment is presented in full in Appendix 1 of this plan. The report assesses and describes hazards/tasks, their likelihood, identifies controls and provides risk assessment. A summary of hazards with allocated residual (Post-Controls) risk assessed as “High” is presented in the Table 1 below together with MCWS Risk Assessment matrix. There were no “Extreme” residual risks allocated.

Table 1- High risks summary

Hazard / Task	Controls	Risk Assessment (Post-Controls)		
		L	C	R/R
Security Breaches				
Vandalism	Where reasonably practical site security fencing to be installed and maintained. Security cameras to be considered. All external ladders to be fitted with anti-climb covers or ladders to be side collapsible type. External plant and equipment to be kept locked when not in use (plant to be fitted with protective covers). Where reasonably practicable remote plant sites to be constructed from vandal proof materials.	C	4	12
Chemical storage failure				
Infrastructure failure	Chemical storage facilities to be regularly inspected and serviced (inspections to be recorded in AIS System). Chemical storage facilities to be "fit for purpose". Only essential chemicals necessary for operation of plant to be kept on site. SCADA system to alarm should plants settings go out of range. Emergency shut off valves to be easily operated / activated.	B	4	6
Overflow of effluent filled pond / plant				
Severe weather event	Site Controller to be aware of weather forecasts. Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably practicable. Ponds to be fitted with high level warning alarms	D	2	6
Power outage / loss of operation				
Loss of power supply reliability	SCADA system to alarm should plants settings go out of range. Essential plant / operating systems to have emergency power back up (generators, Uninterrupted Power Supplies).	C	3	6
Severe weather event	Site Controller to be aware of weather forecasts. Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably practicable. Contingency plans developed to cope with severe weather event.	D	2	6
Infrastructure failure	Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably practicable. Contingency plans developed to cope with severe weather event.	D	2	6
Flooding of effluent storage dams				
Severe weather event	Site Controller to be aware of weather forecasts. Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably	D	2	6

Sewer pump station overflow				
Severe weather event	Site Controller to be aware of weather forecasts. Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably practicable. Contingency plans developed to cope with severe weather event.	D	2	6
Plant failure	SCADA system to alarm should plants settings go out of range. Essential plant / operating systems to have emergency power back up (generators, Uninterrupted Power Supplies).	C	3	6
	practicable. Contingency plans developed to cope with severe weather event.			

Manhole Surge				
Gravity main blockage	SCADA system to alarm should plants settings go out of range.	C	3	6
Severe weather event	Site Controller to be aware of weather forecasts. Use sucker trucks to remove excess effluent to other plant. Overflow to be diverted to second storage area / facility where reasonably practicable. Contingency plans developed to cope with severe weather event.	D	2	6

			Consequences				
			A	B	C	D	E
			Noticeable	Important	Serious	Major	Catastrophic
Likelihood	E	Almost certain	High 6	High 12	Extreme 24	Extreme 36	Extreme 64
	D	Likely	Moderate 4	High 6	High 12	Extreme 24	Extreme 48
	C	Possible	Low 2	Moderate 4	High 6	High 12	Extreme 24
	B	Unlikely	Low 1	Low 2	Moderate 4	High 6	High 12
	A	Rare	Low 0	Low 1	Low 2	Moderate 4	High 6

Severe weather events combined with plant and infrastructure failures are the main risks experienced. The security breaches and vandalism are also rated as high risk despite controls implemented.


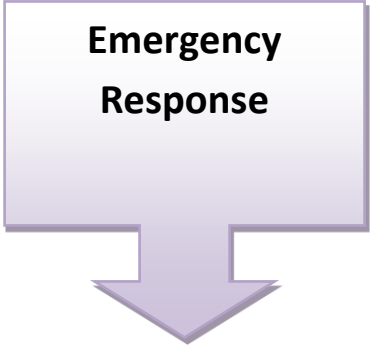
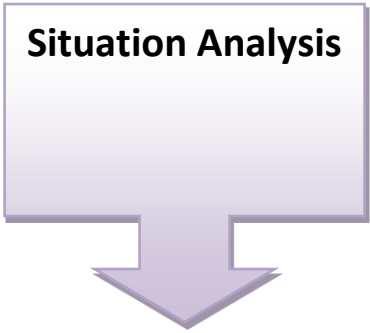
Location maps and associated reticulated sewerage system are contained in Appendix 2 of each specific treatment plant and associated Incident Response Management Plan.


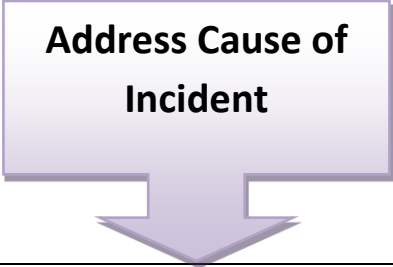
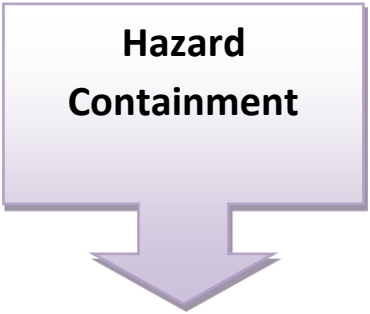

5. *Emergency Response*



In the event of a “Pollution Incident”, MCC will follow the steps presented in the diagram contained in Table 3 below. While the protocol is presented as a sequence of steps, in reality some of these procedures may need to take place simultaneously.

They may take place in a different order due to information collection problems, or other site specific complications. Some of the steps may not be required if the event has been downgraded and reclassified as a small overflow that do not present any significant risk to the environment or human health.

Table 2 - Emergency Response Diagram

Emergency Response Steps	Summary Description
 <p style="text-align: center;">Pollution Event Detection</p>	<p>Incident can be detected by:</p> <ul style="list-style-type: none"> - SCADA using alarms or monitoring the system by the operator, for example: low flow, high water level, pump or other equipment failure, power failure, low flow at the sewage treatment etc. - Operator during routine operation or preventative inspections, or by asset conditions crews. - A customer calling 24 hours <i>Faults and Emergencies</i> number to report problems in the reticulation system.
 <p style="text-align: center;">Emergency Response</p>	<p>During normal working hours, in case of suspected incident at the Wastewater Treatment Plant site, the plant operator is the first to respond. In case of incident occurring within the reticulation system the relevant Customer Response crew is the response crew. For after hours the on-call crew responds to the detected problem.</p>
 <p style="text-align: center;">Situation Analysis</p>	<p>Preliminary investigation is conducted by gathering information in order to assess the level of risk presented by the event. The volume of overflow is usually the most important piece of information. Location of the incident and potential risk to community, customers and environment has to be assessed. Any exposure pathways to the public, environmental values of the receiving waters are essential information.</p>

 <p style="text-align: center;">Notification</p>	<p>Notification is made to:</p> <ul style="list-style-type: none"> -The relevant Managers in order to confirm preliminary classification of the event, determine action, confirm who is the person responsible for incident management and resources needed. -Customers or public directly affected. - Quality and Environmental Impact (Q&EI) staff. <p>The Q&EI staff then makes notification to relevant external authorities as detailed in Chapter 7 of this plan.</p>
 <p style="text-align: center;">Address Cause of Incident</p>	<p>Cause of the incident has to be addressed as soon as practical. It may be a two-stage process, involving temporarily stopping the cause of incident at a source and then undertaking more permanent repairs.</p>
 <p style="text-align: center;">Hazard Containment</p>	<p>Containment of the overflow or spill should be undertaken as soon as practical to capture the spill while it is occurring. Use of temporary weirs and bands, use of tankers, bypass pumping and staggered pump station operation can be employed. Public access has to be restricted using temporary emergency fencing if appropriate.</p>
 <p style="text-align: center;">Harm Remediation and Clean-up</p>	<p>Any environmental harm, property damage or other problems caused by an incident are managed at this step. Clean up is undertaken as soon as practical. Q&EI staff attends the site and conduct investigation of the potential environmental or public health harm of the incident. This is followed by water quality assessment in the affected waterway and further monitoring until the water way has returned to pre-incident conditions. Warning signs are erected after consultation with NSW Health to restrict access to affected downstream areas or contact with water. The same procedure is followed for after hours with Q&EI and MCC Laboratory staff on stand-by.</p>

<p style="text-align: center;">Confirm and Investigate Cause of Incident</p> 	<p>The cause is investigated and confirmed. More information about actual harm to environment may be available. The details of the incident and response are reported to the EPA by Q&EI staff and to the Management of MCC. De-briefing of the cause of incident and appropriateness of the response action is undertaken by all involved in the incident management and operation of the part of system where the incident took place.</p>
<p style="text-align: center;">Make Improvements</p> 	<p>Actions are implemented to prevent a re-occurrence of the event. This may include SCADA re-programming, changes in the design or operation of this section of infrastructure or preventative maintenance schedule adjustment to minimise risk in other sections of the system. Information is also fed into the capital works program if appropriate.</p>

To help with classification of Incidents during “Situation Analysis” and “Notification” steps, *MCC Incidents Management Matrix* presented in table 3 on the next page will be used. In reality some of the criteria may not fit exactly the incident occurring. The actual classification has to be done using professional knowledge and experience. The incidents may be also re-classified up or down based on more information available and on the level of complexity while addressing the cause of incidents.

Table 3 - Incident Management Matrix- Types of Incident

	RESOURCES (STAFF)	TIME TO RESTORE NORMAL SERVICE	POTENTIAL CUSTOMERS AFFECTED	POTENTIAL COST TO FIX	RISK TO HEALTH SAFETY/ LIFE	RISK TO ENVIRONMENT	MEDIA REPUTATION
ROUTINE (INSIGNIFICANT)	<4	<4 hours	<10	<\$5K	Outside internal Guidelines	Contained. No risk to waterway	Customer expectation met
MINOR (IMPORTANT)	<8	<1 day	<50	<\$25K	External notification. Outside guidelines	External notification. Short term local affect	Local customer informed
MODERATE (SERIOUS)	<20	<3 days	<300	<\$250K	Persistent high pathogen outside guideline	Large volume or sensitive local waterway	Public notification, media liaison.
MAJOR	<60 (External assistance)	<7days	<1000	<\$2.5M	Illness	Potential medium term. Local/regional significance	Regional media
CATASTROPHIC (CRITICAL)	>60	>7 days	>1000 or town	>\$2.5M	High level illness/hospitalis ation. Potential fatalities.	Potential long term. Regional significance	High profile national media

6. Key Personnel Involved

MCC Water Services Key Personnel responsible for activating the plan and coordinating emergency response depending on category of an incident and its location are presented in Table 4 below.

Table 4 - Key Personnel Responsible for Pollution Incident Management. *(note contact names and phone number have not being published for privacy reasons).

Name and Position	Responsibility	Contact Number
Process Coordinator	Incidents within Treatment Plants	***** (M)
Manager Treatment & Storage	Higher category incidents within the Treatment Plant	***** (M)
Customer Response Manager	Incidents in the reticulation system	***** (M)
Executive Manager Service Delivery	Major and Catastrophic category incidents	***** (M)

MCCWS Quality & Environmental Impact personnel are responsible for notification to the relevant authorities (Table 5).

Table 5 - Key Personnel Responsible for Notification

Manager- Water Management and Treatment	***** (M) After hours
Environmental Performance	***** (M)
Environmental Scientist, Quality & Source	***** (M)
Product Quality Systems	***** (M)

7. Notification to External Agencies

After initial “Situation Analysis” from the Emergency Response Diagram contained in Table 3 in chapter 5, the response team reports available details of the incident to one of the Quality & Environmental Impact Staff listed in the Table 5 above. The contacted person then notifies “promptly and without delay” the authorities listed below:

1. Environment Protection Authority by contacting the pollution line on 13 15 55 to lodge a self notification report. *Note: MCW contact number and contactable back up number has to be given*

2. Ministry of Health

Environmental Health Officer	***** (M)
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After hours on call:	(John Hunter Hospital – will trigger public health emergency response of on-call EHO) If neither can be reached, Public Health Physician should be contacted –
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3. Work Cover on 13 10 50 (for higher category incidents)

4. Fire and Rescue NSW on 000 (for higher category incidents)

5. Midcoast Council Environmental Health Personnel

Senior Environmental Health Officer	***** (M)
Backup: Manager Environmental Health	***** (W)
Senior Environmental Health Officer	***** (M)

6. NSW Food Authority in case oyster leases are located in the catchment downstream of the incident

Program Manager	XXXX XXX XXX (M) or nswsp@foodauthority.nsw.gov.au
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Local Food Authority Contact	XXXX XXX XXX (M)

9. Coordinator of NSW Local Shellfish Program in case oyster leases are located in the catchment downstream of the incident

Manning River: Coordinator	***** (M) Beal Ave, Mitchells Island NSW 2430
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Each organisation has to be provided with the following information:

- time and location of the incident
- what caused the incident
- if any pollution to the waterways occurred or is likely to occur
- if area has been accessible to the public during the incident
- proposed way of communication with affected community if applicable
- estimated volume of spill if known
- action being undertaken including:
 - action taken or considered to be taken to stop the spill or rectify the incident
 - action taken or considered to be taken to rectify adverse effect of the spill
 - details of sampling undertaken
 - details of further communication with notified organisation

During the emergency response the SRC personnel provide updates on the incident response and outcomes of impact investigation to the notified agencies.

8. Affected Community Notification

Community directly affected by the spill is notified as soon as possible during the initial stages of the response. In case where there is risk for the community to be affected downstream of the incident, the officer responsible for notification to external agencies has to notify MCC customer service staff and Public Relations Manager about the incident with relevant details. He/she also ensures that sufficient warning signs are erected.

The person managing the response is responsible to establish the most effective way of communication with the affected or potentially affected community. This is done after consultation with NSW Health, Local Council and MCC Public Relations Manager. The preferable means of communication is door knock of affected area and /or letter box drop. In case of bigger area affected, local radio and press releases need to be used. Table 4 in chapter 5 will be used as a guide to establish adequate communication.

9. Plan Testing & Maintenance

All staff involved in activities which may require knowledge of this plan will receive appropriate training and instruction.

This plan will be tested routinely at least once every 12 months. The testing will be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date, and that the plan is capable of being implemented in a workable and effective manner.

Methods of testing may include undertaking desktop simulations and practical exercises or drills. Testing will cover all components of the plan, including the effectiveness of training.

The plan must also be tested within one month of any pollution incident occurring in the course of an activity to which the licence relates, to assess, in the light of that incident, 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.

Table 6 - Key Personnel Responsible for Testing of the Plan

Plan Testing Date	Person Responsible	Contact Number
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Annual test associated with annual returns	Strategic & Regulatory Compliance Manager	(W)
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If a pollution incident occurs in the course of an activity at the premises so that material harm to the environment is caused or threatened, the person carrying out the activity must immediately implement this incident management plan that was developed to meet the requirements of the POEO Act.

This plan will be reviewed annually each year in association with annual return submission.

A copy of this plan is maintained at the premises to which the relevant licence relates. It is also available to those responsible for its implementation on the Objectives (corporate records system) and to an authorised officer on request.

A generic copy of this plan is also available on the MCC web page under the EPA requirements tab at <https://www.midcoast.nsw.gov.au/Water-Services/Sewerage-services>

Appendix 1

Refer to document: Objective # A387479

Appendix 1 MCW Risk Assessment Pollution incident response

Appendix 2

Appendix 3

Plan Testing Details