Murrumbidgee Irrigation

Chemical Contingency Plan

August 2025

Revision History

Version	Date	Author	Revision Details
1	01/02/2016	Lindsay Golsby-Smith	Plan development
2	08/06/2017	Lindsay Golsby-Smith	Review and update 07/06/2017
3	05/06/2018	Lindsay Golsby-Smith	Amend actions for chemical detections
4	18/01/2021	Fern Dorricott	Update following EIP completion, EPL condition review and align with MI template. Removal of environmental guideline levels (removed from EPL) and update diuron limits in Table 1. Added Section 5 Public awareness. Included flowchart for processes.
5	20/08/2021	Cindy McGrath	Update Metolachlor limits in accordance with EPL licence variation approved 18/8/21 by EPA
6	6/12/2021	Cindy McGrath	Added condition 6 of MI Combined Approval under section 1, 2.2, 3.2 & 7 & 8.2
7	23/11/2022	Brooke Amaro Cindy McDonald	Reviewed and updated formatting. Updated NRAR contact process under s 3.2 & s7. Removed reference to Appendix A and updated reference to notification form.
8	14/04/2023	Brooke Amaro	Update notification information relating to Condition 6 of the Combined Approval.
9	30/06/2023	Brooke Amaro	Updated EPA contact details following Licence Variation.
10	8/08/2024	Brooke Amaro	Reviewed and updated formatting.
11	21/08/2025	Gavin Alchin Brooke Amaro	Updated Table 2 Simazine limits, Sections 3.1 and 7 to reflect changes to EPL notification requirements. Updated Table 3 to reflect changes to EPL effective June 2025.

Note: EPL Condition O3.3 states: The licensee must update and submit the updated chemical contingency plan to the EPA for approval if any significant changes are made to the plan by the licensee.

Document Authorisation

	Name	Position	Date
Approved by:	Cindy McDonald	Environmental Planning Manager	31/10/2025

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1 Introduction

This Chemical Contingency Plan has been prepared in accordance with Murrumbidgee Irrigation's (MI) Environmental Protection Licence 4651 (EPL). This EPL requires MI to monitor and report on the volume and quality of water discharged outside MI's area of operation. EPL 4651 discharge points are outlined in Table 1 below.

Table 1 – Discharge monitoring points (Condition P1.2)

EPA Id	Site Name (ID)	Type of monitoring point	Description
4	LAG (41010940)	• Discharge to waters • Environmental monitoring • Volume monitoring	Gooragool Lagoon Escape; Murrumbidgee floodplain
5	GMSRR (41010921)		Gogeldrie Main Southern Escape; Murrumbidgee floodplain
6	YMS (410083)		Yanco Main Southern Escape; Murrumbidgee floodplain
7	ROCUDG (41010005)		Cudgel Creek Escape; Murrumbidgee floodplain
15	MIRFLD (41010163)		Mirrool Creek Floodway @ Wyvern Station monitoring site; lower Mirrool Creek

Each discharge point outlined in Table 1 is required to be monitored for blue green algae as required under condition 6 of MI Combined Approval 40CA403245.

MI's Environment Improvement Program commenced April 2018 and was completed in 2020. An objective of this program was to identify controls to reduce chemical detections in drainage water. This Chemical Contingency Plan has been amended to reflect the outcomes of this program.

2 Monitoring

2.1 Scheduled chemicals

Section E3 of EPL 4651 specifies chemicals to be monitored at each discharge point as soon as reasonably practicable during discharge. The concentration of each chemical listed in Table 2 must be monitored by collecting a representative sample during discharge, where reasonably practicable, and obtaining results by analysis from a NATA accredited laboratory provider.

Table 2 - EPL 4651: Schedule 1 Chemicals to be monitored, including notification and action levels

Chemical	Notification level (µg/L)	Action level (µg/L)
Atrazine	13	45
Chlorpyrifos	0.01	0.11
Diazinon	0.01	0.2
Diuron	0.2	1.0
Malathion	0.05	0.2
Metolachlor	0.46	2.6
Molinate	3.4	14
Simazine	12	18
Thiobencarb	2.8	4.6
Trifluralin	2.6	4.4

2.2 Blue green algae

Condition 6 of Combined Approval 40CA403245 requires MI to monitor supply and drainage channels that provide water outside MI area of operations for the presence of blue green algae at a red level alert.

3 Notification

3.1 Schedule chemicals

The EPA is notified of all exceedances of the Notification or Action trigger levels in MI's Annual Return during the reporting period in which the exceedance occurs. If the concentration of a scheduled chemical exceeds the Notification or Action levels in the samples collected from sites listed in Table 1, details will be recorded and the response actions outlined in Section 7 will be carried out [Condition R5.1].

This monitoring data is also required to be published on MI's website (www.mirrigation.com.au/Water/Water-Quality) within 14 days of receiving results in accordance with Section 66(6) of the *Protection of Environment Operations Act 1997*.

3.2 Blue green algae

On becoming aware of an imminent or actual discharge of blue green algae red level alert water outside our area of operations, MI must immediately notify the Minister's nominated contact officer via email to DPIE's Irrigation Corporations mailbox, irrigation.corporations@dpie.nsw.gov.au {6}. MI must also contact the RACC coordinator to report these incidents. The RACC coordinator for the Southwest region is Asha Kelly, Asha.Kelly@waternsw.com.au. If required, the RACC can also be contacted via their generic email, RACC@waternsw.com.au.

4 Remedial action

Under Section E2 of MI's EPL 4651, in the event that a customer fails to comply with any condition of the supply of water that has caused, is causing or is likely to cause harm to the environment, whether on or off the premises, MI must take appropriate action within seven days to prevent the continuation of the non-compliance. This may include one or more of the following:

1. Contact the customer and request such works to be conducted to prevent the continuance of the non-compliance by the customer.
2. Notify the customer in writing that MI no longer consents to the discharge of any substances into works owned by MI.
3. Refusal to or discontinuation of the supply water to relevant customer.

Chemical use awareness information is included in MI's customer newsletter throughout the irrigation season to remind all customers of their requirements under the drainage rules, including 28 day holding time for rice water and best management practices for chemical use.

5 Public awareness

MI has prepared a customer fact sheet – Chemical Use in the MIA, which is available for customers and the community on their website: MI Fact-Sheet Chemical Use in MIA (mirrigation.com.au).

This sheet outlines MI's EPL obligations for monitoring discharges of the listed chemicals as well as outlining Customer obligations, how they can help to achieve compliance, and where they can obtain more information on chemical use for their business.

When exceedances of notification and action levels occur, MI may communicate results through an external Customer Newsletter, to help raise awareness of the issues.

In addition, the following information is published on MI's website:

- Discharge site water quality results: Licence Site Monitoring - Water Quality Results | Murrumbidgee Irrigation (mirrigation.com.au)
- Notification and Action exceedances: Water quality | Murrumbidgee Irrigation (mirrigation.com.au) for the current financial year.
- Water quality results and exceedances for prior financial years: Annual Compliance Report | Murrumbidgee Irrigation (mirrigation.com.au)

6 Control measures

Works have been installed that allow drainage flows to be captured for reuse and reduce the volume of water discharged from MI's Area of Operation. Work completed at each site include:

- GMSRR – pumps upstream of this site pump water for reuse which has reduced the volume of water discharged from this site
- YMS – water is diverted away from this discharge point (via gates and when required an earth bund) to allow for reuse downstream which has reduced the volume of water discharged from this site. Discharge occurs from this site only after large rainfall events above the system's carrying capacity.
- LAG – modernisation works in the area have reduced escape flows and reduced the volumes discharged from this site. In addition, an increasing number of properties up stream are recycling their irrigation water.
- ROCUDG – modernisation works in the area have reduced escape flows and reduced the volumes discharged from this site.
- MIRFLD - this site is generally operated for flood mitigation only.

6.1 Contingency measures

In the event EPA directs MI to further restrict the discharge at EPL discharge points in the short term, MI, subject to appropriate risk assessments, can consider:

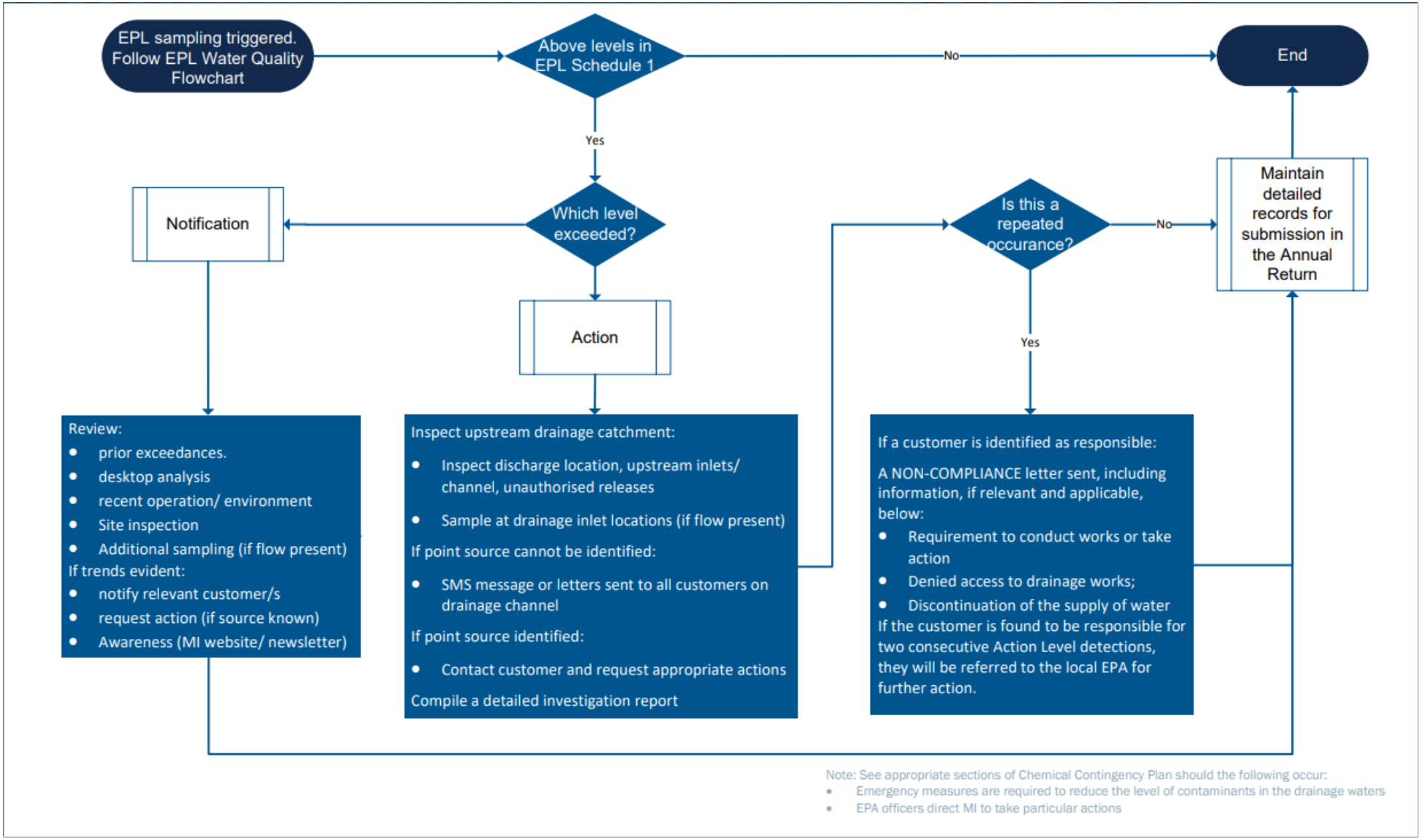
- Installing an earth bund upstream of the discharge point to hold or divert water.
- Contacting all customers and request that they hold all farm drainage onsite where possible

7 Response to an exceedance

This section and Figure 1 detail the approach MI will take once an exceedance is recorded under EPL 4651 [Condition O3.1] and Combined Approval 40CA403245 [Condition 6].

When a red level alert for blue green alert is recorded MI will follow the steps outlined in section 3.2, by notifying DPIE via email to DPIE's Irrigation Corporations mailbox, irrigation.corporations@dpie.nsw.gov.au, along with the RACC coordinator, Asha Kelly, Asha.Kelly@waternsw.com.au.

Figure 1 - Exceedance response flowchart



7.1 Notification level exceedance

Response	Action taken by MI
Step 1	
- Record details of the exceedance for inclusion in the Annual Return - Upload results to MI website within 14 days of receiving results http://www.mirrigation.com.au/Environment/Water-Quality/Water-Quality-Test-Results	*Exceedance raised in Beakon* Complete EPL Chemical detection record form
Step 2	
Review previous chemical notifications at the monitoring point to determine if further investigation is required. This may include: • Desktop analysis considering land uses, chemical use and drainage flows • Drainage inlet inspection and/or; • Sample collection at or near drainage inlet locations *Investigation may be limited by duration of drainage flow events and/or environmental conditions*	If chemical detection trends are evident, the following may be done: • include information on chemical use awareness in customer newsletter, and/or • notify (letter/SMS) customers in catchment area of chemical detections and request action be taken to limit the release of chemicals into MI works

7.2 Action level exceedance

Response	Action taken by MI
Step 1	
- Record details of the exceedance for inclusion in the Annual Return - Upload results to MI website within 14 days of receiving results http://www.mirrigation.com.au/Environment/Water-Quality/Water-Quality-Test-Results	*Exceedance raised in Beakon* Complete EPL Chemical detection record form *All actions are to be outlined in a detailed chemical detection report which may be provided to EPA upon request. The report is to include:* • *Location, Time and Date of exceedance;* • *License Action Level Trigger values and what the recorded detected exceedance is;* • *Investigations taken by the licensee to ascertain the cause of the exceedance;* • *Follow up sampling actions.*
Step 2	
Inspect drainage catchment to determine source, which can include: • Desktop analysis considering land uses and drainage flows • Drainage catchment inspection and/or; • Sample collection at drainage inlet locations	If point source identified: 1. Contact the customer and request appropriate measures be put in place to prevent further chemical detections (e.g. ensure holding time requirements are met, complete on farm works). If point source cannot be identified:

Response	Action taken by MI
Investigation may be limited by duration of drainage flow events and/or environmental conditions.	1. SMS message or letters sent to all customers on drainage channel *Note: Customers who do not have a drainage point from their holdings and are unlikely to be the source of any discharge (inadvertent or otherwise) may be excluded from communications.*
Step 3	
If consecutive Action Level detections of the same chemical are identified at any one site, further investigation is required to identify causative factors, which may include: • Monitoring program for individual drainage inlets (may be charged back to customer) • Audit of on-farm recycling systems and chemical use records	If further investigation identifies a customer is responsible for continued Action Level detections: • A NON-COMPLIANCE letter is sent to the customer requesting remedial action be completed to prevent further Action level detections at this site. *This letter will outline the appropriate action that will be taken in response to continued Action Level detections, which may include:* ○ Requirement for customer to conduct works or implement other control measures ○ Denied access to drainage works; ○ Discontinuation of the supply of water *Note:* If the customer is found to be responsible for consecutive Action Level detections, they will be referred to the local EPA for further action.

8 Compliance requirements

8.1 EPL requirements

Table 3 details the relevant sections where the EPL conditions are covered in this plan.

Table 3 - EPL conditions and coverage under chemical contingency plan

EPL conditions	Plan section
EPL O3 Process and Management Conditions	
O3.1 The licensee must maintain a chemical contingency plan, which includes the following information:	This plan
(a) Details of the notification and action levels for the chemicals listed as schedule 1 of this licence.	Table 2
(b) A Description of how the licensee will comply with condition R5.1 of the licence.	Sections 3 and 7
(c) Details of the proposed public notification process to increase irrigator awareness of this existence of any exceedance of a notification and/or action level;	Section 5 and 7
(d) Details of the proposed emergency measures to be used to immediately bring about a reduction in the level of any Scheduled Chemical in irrigation wastewater whenever an exceedance of a notification and/ or action level occurs; and	Pollution Incident Response Management Plan and Section 6

EPL conditions	Plan section
(e) Details of the mechanisms proposed to be used to restrict the discharge of irrigation of wastewater should such direction be received from the EPA.	Section 4 and 6.1
(f) Describe in detail, procedures, and action, consistent with the State Emergency Management Plan (EMPLAN) requirements, that licensee will implement to deal with chemical spill or similar incident.	Pollution Incident Response Management Plan
03.2 The licensee must update and submit the updated chemical contingency plan to the EPA for approval if any significant changes are mode to the plan by the licensee.	Noted
O3.3 The licensee must comply with the terms of the updated chemical contingency plan once it had been approved by the EPA.	Noted
R5 Other reporting conditions	
R5.1 The licensee must notify the EPA when the trigger value of the notification or action level is exceeded. NOTIFICATION LEVEL Each time the notification level trigger value is exceeded for schedule chemicals, the licensee must record the details. The licensee must notify the EPA of all exceedances of the notification trigger level in the Annual Return during the reporting period in which the incident occurs. ACTION LEVELS Each time the action level trigger value is exceeded for schedule chemicals, the licensee must compile a detailed report including the following information: • Location, Time and Date of exceedance; • License Action Level Trigger values and what the recorded detected exceedance is; • Investigations taken by the licensee to ascertain the cause of the exceedance; • Follow up sampling and actions. The licensee must notify the EPA of all exceedances of the action trigger level in the Annual Return during the reporting period in which the incident occurs.	Sections 3 and 7
Special Conditions	
E1 Conditions of supply	
E1.1 The licensee must not supply water to a customer unless the supply is conditional upon the following: (a) that the customer must comply with any reasonable direction of the licensee for the purpose of reducing the impact of pollutants on receiving waters; (b) that the customer will grant the licensee all reasonable access to the customer's premises and provide the licensee with all reasonable assistance for the purposes of the licensee determining whether the customer is complying with (a) above; and (c) that if the customer fails to comply with the requirements set out in paragraphs (a) and (b) above, the licensee may deny the customer any services provided by the licensee.	Sections 4 and 7.2
E1.2 The licensee must monitor compliance by customers with the conditions of the supply of water to the customer by the licensee as required for the licensee to meet its obligations under this licence.	Section 2
E1.3 The licensee must produce to the EPA a copy of any contract or details of any arrangement it enters into with a customer in relation to any supply of drainage services within 7 days of receipt of a written request from the EPA that it do so.	Noted

EPL conditions	Plan section
E2 Discontinuation of the provision of services	
E2.1 In the event that a customer fails to comply with any condition of the supply of water to a customer required by this licence that has caused, is causing or is likely to cause harm to the environment, whether on or off the premises, the licensee must take appropriate action within (7) days to prevent the continuance of the non compliance.	
E2.2 In condition E2.1, "appropriate action" includes the licensee doing one or more of the following: (a) sending a letter to the relevant customer containing a warning that the licensee will discontinue the supply of water if the relevant non compliance with the condition of supply is not rectified by a specified date; (b) refusal to or discontinuance of the supply of water to a customer; (c) causing such works to be conducted such as to prevent the continuance of the non compliance by the customer; (d) notifying the customer in writing that the licensee no longer consents to the discharge of any substances into a work owned by the licensee.	Sections 4 and 7
Note: The purpose of conditions E2.1 and E2.2 is to ensure that the licensee requires customers to take such steps as are necessary to ensure that the licensee is able to meet its obligations under this licence.	

8.2 Combined approval 40CA403245

Table 4 details the relevant sections where the Combined Approval condition is covered in this plan.

Table 4 - Combined approval condition and coverage under chemical contingency plan

Combined Approval Discharge of Blue Green Algae Condition	Plan section
6. The Approval Holder, on becoming aware of an imminent or actual discharge of water containing blue green algae in a Red Level Action Mode from the Approval Holder's supply or drainage channels to waters outside the Area of Operations, must immediately report such condition to the Minister's nominated contact officer. Note: This requirement does not mitigate any responsibilities the Approval Holder may have under a Regional Algal Co-ordinating Committee's Contingency Plan.	Section 2.2, 3.2 and 7