# Padthaway Water Allocation Plan Adaptive Management

4

Limestone Coast Landscape Board

The Padthaway water allocation plan consultation draft defines groundwater levels that if reached, will trigger management actions to prevent adverse long-term impacts on water resources, water users and the environment. By responding when these trigger values are reached, further deterioration of the resource can be avoided.

## What is a resource condition trigger?

To maintain the water resource's condition above the resource condition limit (RCL), the Padthaway water allocation plan (the Plan) introduces resource condition triggers (RCT) directly associated to the RCL.

The RCT's are set above the RCL and if reached they trigger a specific management response set out in the Plan. A greater level of management action is applied as each RCT level is triggered to prevent further deterioration and to restore the resource condition.

### What is a resource condition limit?

A resource condition limit (RCL) is the threshold value which poses unacceptable risks to water users, groundwater dependent ecosystems and the sustainable condition of the resource.

For example, if groundwater levels reduce significantly, wells may not be deep enough for licensees to access groundwater which may impact their operations and productivity.

The RCL's defined in the Plan have been identified in consultation with the Stakeholder Advisory Group and informed by the best available science.

The aim of the the Plan is to maintain the condition of the water resources above all RCL's.

### What is a resource management threshold?

A resource management threshold (RMT) is the threshold value that indicates that the groundwater resource is at significant risk that is not recoverable with the provisions within the water allocation plan.

# What happens if a resource condition trigger is reached?

The types and levels of management actions and when they will be applied is described in Table 1 of this document. Example management actions include:

- Notification of licensees regarding trigger exceedance (allowing the community an opportunity to self-manage)
- Trigger action from the Limestone Coast Landscape Board to investigate underlying causes of groundwater decline and spatial extent
- Suspension of carryover as a preventative measure against reaching an RCL

These management actions will apply to the entire prescribed wells area when they are exceeded.

When groundwater levels recover above the resource condition trigger level, management actions for that level will be removed.

## What happens if a resource condition limit is reached?

If the RCL is reached, a restriction to all allocations across the Padthaway Prescribed Wells Area (PWA) will apply (11.12% reduction in allocation) to reduce extraction to the Acceptable Level of Extraction (ALE) and will be reviewed in 12 months to see if the resource has recovered.

# What happens if the resource management threshold is reached?

If the RMT is reached, it indicates that the groundwater resource is not recoverable with the provisions within the water allocation plan and therefore prompts the Limestone Coast Landscape Board to begin an early review and amendment of the plan.

## Could my water allocation be reduced?

Yes. Water allocations, which determine the actual volume of water a licensee may use may be reduced as a result of a resource condition limit being reached.

However, water access entitlements, the percentage share of water licensees are entitled to, will remain the same.

Once the resource condition recovers above the RCL, allocations will be returned following the relevant principles in the Plan.

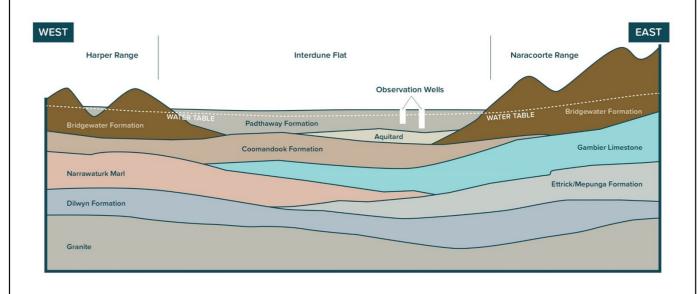
# How much notice will be given for any changes in water allocations?

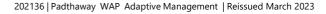
The groundwater level RCL must be triggered for 3 continuous years with licensees being notified of the RCL status every 12 months. If the RCL is triggered for 3 continuous years the licensees will be notified in December that they have triggered the RCL for the third continuous year and that restrictions to allocations will be applied July 1 the following year.

#### Box 1

The groundwater level is monitored through a network of observation wells and is used as a marker for the groundwater resource condition. Maintaining the groundwater level in the unconfined aquifer above the RCL will ensure licensees will not need to deepen wells to access groundwater, reduces risk to the groundwater dependent ecosystems (GDE's), maintains the throughflow of fresh groundwater from east to west and sustains the condition of the resource for future generations.

Figure 1. Padthaway Prescribed Wells Area (PWA) geological units





#### How will my resource condition be monitored?

Section 7.13 of the consultation draft describes an extensive monitoring program to monitor the groundwater resource against the resource condition triggers, resource condition limits and resource management threshold and allow for the timely implementation of management actions when required to protect the resource.

Across the Padthaway Prescribed Wells Area (PWA), there are 45 observation wells used to monitor groundwater level and 27 observation wells to monitor salinity.

Figure 2. Padthaway PWA observation well monitoring network

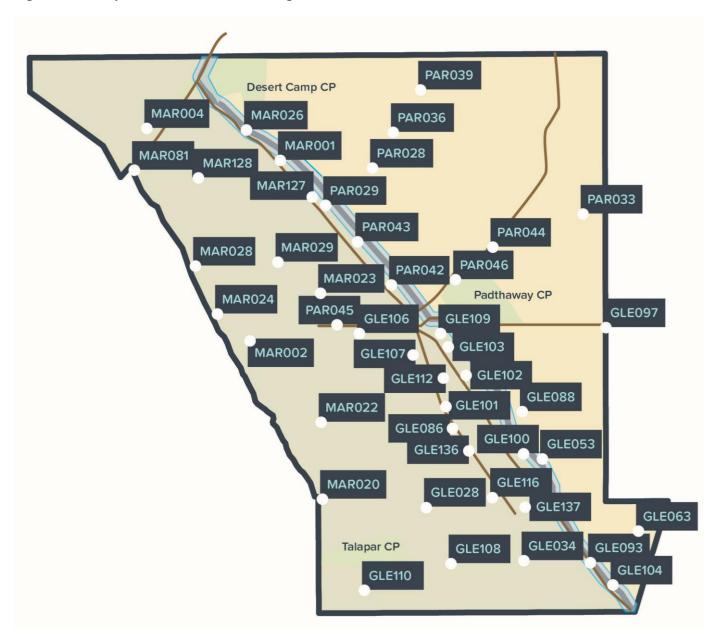


Table 1. Adaptive Management Framework for the Padthaway Water Allocation Plan

Resource condition indicator	Resource condition trigger	Resource condition limit	Resource management threshold	Response conditions	Management responses to conditions			
Column A	Column B	Column C	Column D	Column E	Column F			
Padthaway Unconfined Aquifer Consumptive Pool								
Underground water level	(a) 0.6m above July 2009 groundwater level.			(a) 20 observation wells have a spring groundwater level below resource condition trigger (a).	(a) Notify all licensees in the Padthaway PWA.			
	(b) 0.3m above July 2009 groundwater level.			(b) 20 observation wells have a spring groundwater level below resource condition trigger (b).	<ul><li>(b) Notify all licensees in the Padthaway PWA.</li><li>Investigate spatial extent and causes of decline.</li><li>Carry-over suspended until exceedance condition (b) is no longer met.</li></ul>			
		Below July 2009 groundwater level.		(c) 10 observation wells have a spring groundwater level below resource condition limit.	(c) Notify all licensees in the Padthaway PWA.			
				(d) 10 observation wells have a spring groundwater level below the resource condition limit for 3 consecutive years.	(d) Notify all licensees in the Padthaway PWA.  Allocations are to be restricted to the Acceptable Level of Extraction, to be implemented from 1 July the following water use year.			

202136 | Padthaway WAP Adaptive Management | Reissued March 2023



Table 1. Adaptive Management Framework for the Padthaway Water Allocation Plan. continued

Resource condition indicator	Resource condition trigger	Resource condition limit	Resource management threshold	Response conditions	Management responses to conditions
Column A	Column B	Column C	Column D	Column E	Column F
			Below July 2009 groundwater level.	(e) All observation wells have a spring groundwater level below resource condition for 3 consecutive years	(e) Prompts an early review of the plan Notify all licensees in the Padthaway PWA. Allocations are to be restricted to the Acceptable Level of Extraction, to be implemented from 1 July the following water use year.
				(f) Less than 10 observation wells have a spring groundwater level below the resource condition limit level for two consecutive years.	(f) Full allocations will be returned, implemented 1 July the following water use year.
				(g) Following return of full allocations, if 10 observation wells have a spring groundwater level below the resource condition limit for two consecutive years,	(g) Notify all licensees in the Padthaway PWA.  Allocations are to be restricted to the Acceptable Level of Extraction, to be implemented from 1 July the following water use year.

#### Disclaimer

Although reasonable care has been taken in preparing the information presented in this publication, neither the Limestone Coast Landscape Board nor the other contributing authors accept any responsibility or liability for any losses of whatever kind arising from the interpretation or use of the information set out in this document. Where products and/or their trade names are mentioned, no endorsement of these products is intended, nor is any criticism implied of similar products not mentioned.