

Basin Plan Water Resource Plan Requirements

Position Statement 7A

Requirements for water quality management plans in groundwater WRPs

POLICY ISSUE	What are the requirements for a water quality management plan (Chapter 10, Part 7) in a groundwater WRP and what is the link to 10.21?
REFERENCES	<i>Basin Plan 2012 (Cth)</i> (s10.29 – 10.35 and Chapter 9)

MDBA POSITION STATEMENT
<p>This position statement only applies to water resource plans for groundwater, and to the groundwater elements of water resource plans that cover both surface and groundwater (in this position statement both are referred to as groundwater WRPs).</p> <p>Chapter 10 Part 7 deals with the requirement that each water resource plan include a water quality management plan (WQM Plan). A flow chart describing the elements of WQM Plans for groundwater WRPs is provided at Attachment A.</p> <p>For the purposes of Chapter 10 Part 7:</p> <ul style="list-style-type: none"> • Water quality objectives for aspects of Basin water resources are specified in Part 3 of Chapter 9 of the Basin Plan. Water quality objectives are a statement of the desired longer-term outcome — achieving sustainable use of the Basin’s water resources by protecting and enhancing their quality while also meeting economic and social objectives. • Water quality targets for water resource plans (including WQM Plans) are specified in Part 4 of Chapter 9 of the Basin Plan. Water quality targets are numerical concentration levels (or sometimes descriptive statements) used by water resource managers to measure and report on performance. They are based on water quality guidelines but may be modified by other factors, including social, cultural and economic considerations. <ol style="list-style-type: none"> 1. Every groundwater WRP must include an identifiable WQM Plan (s10.29). 2. The WQM Plan must identify the causes, or likely causes, of water quality degradation (s10.30). If no causes or likely causes of water quality degradation are present, the WQM Plan should make a statement to this effect. 3. If a risk arising from elevated levels of salinity or other types of water quality degradation is identified (s 10.41(2)(d)) (see position statement 9A Risk Assessment Method), it would be appropriate for the water resource plan to include the following measures if the risk is assessed as: <ol style="list-style-type: none"> a. low: a state may include a statement in the WQMP on how any potential low risk will be monitored

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- b. medium or high: the WQMP should include measures to manage the identified risk(s).
4. The WQM Plan is required to explain why measures addressing such risks have or have not been included in the water resource plan. The measures identified under s10.31 relate to the risks associated with WQ degradation. The measures for s10.33 will be those that will contribute to achieving the WQ objectives in Chapter 9. There may be overlap; however the MDBA notes that some measures identified under s10.31 may not be the same as those identified under s10.33.

Identifying water quality target values (s10.32)

5. A WQM Plan for a groundwater WRP must identify water quality target values for:
 - a. fresh water-dependent ecosystems reliant on groundwater, and
 - b. irrigation water at sites where water is extracted by an irrigation infrastructure operator (see *Water Act 2007* s7) for irrigation.
6. The water quality target for recreational purposes does not apply to a WQM Plan for a groundwater WRP.
7. Where fresh water-dependent ecosystems reliant on groundwater are present in a groundwater WRP area, the WQM Plan must either use the surface water target values set out in Schedule 11 of the Basin Plan, or specify an alternative target value (see below).
8. The irrigation water quality target values specified in s9.17 of the Basin Plan apply at sites where an irrigation infrastructure operator (*Water Act 2007* s7) extracts groundwater for the purposes of irrigation. The WQM Plan must identify these sites (s10.34).

Specifying alternative water quality targets (10.32(4))

9. If a WQM Plan for a groundwater WRP specifies an alternative target value, the MDBA will assess the following (s10.32(4))(a) and (b)):
 - a. Whether the alternative target value is consistent with the relevant water quality objectives in Part 3 of Chapter 9, (these include that if the actual value of a water quality characteristic is better than the target value, then the objective is to maintain that better level).
 - b. Whether the alternative target value was determined in accordance with procedures set out in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (see Position Statement 7B for further information in relation to applying these Guidelines). This can include reference to the *National Water Quality Management Strategy, Guidelines for Groundwater Quality Protection in Australia 2013*.
10. If a WQM Plan for a groundwater WRP specifies an alternative target value, the MDBA will also assess whether one of the following criteria is met (s10.32(4)(c)):
 - a. the alternative target value provides a better level of protection than the target value that would otherwise apply; or
 - b. the WQM Plan sets out reasons why the alternative target value will be as effective in achieving the water quality objectives in Part 3 of Chapter 9; or
 - c. the WQM Plan sets out reasons why the target value specified in s10.32(2) or (3) is inappropriate for the WRP area.
11. The MDBA will require a Basin State to provide supporting evidence to enable the MDBA to make the above assessments, e.g. links to reports.

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12. When preparing a WRP for water resources in more than one Basin State, refer to position statements 1J and 2B for advice on consultation.

Identifying measures (s10.33)

13. Unless there are no such measures that can be undertaken cost-effectively, the WQM Plan must include measures (such as strategies, plans or programs) to be undertaken to contribute to achievement of the water quality objectives in s10.33.

14. If a WQM Plan does not specify measures on the grounds that the measures cannot be undertaken cost-effectively, the MDBA will seek supporting evidence about why this position has been reached.

15. The measures must be prepared having regard to:

- a. the causes or likely causes of water quality degradation identified in the WQM Plan for the purposes of s10.30,
- b. the target values identified in the WQM Plan for the purposes of s10.32, and
- c. the salinity targets specified in s9.19.

16. When preparing measures for a WQM Plan, regard must be had to any impacts that measures may have on the ability of another Basin State to meet water quality targets, or adverse impacts that those measures may have on Basin water resources in another State (s10.35). In developing the WRP, regard must also be had to the management and use of water resources which have a significant hydrological connection to the water resources of the WRP area. Further information on the requirement to 'have regard to' can be found in Position Statement 1B. Position Statements 1J and 2B cover the cross border management of water resources and significant hydrological connections.

17. Where appropriate, a WQM Plan may nominate as a measure for s10.33, rules that have been included in the WRP to meet the requirements of s10.21. To ensure that this is clear, the WQM Plan should specify that for s10.33, a measure is the application of the identified rules that have been developed for s10.21, and should also identify the water quality objective or objectives to which the rules contribute.

Rationale

1. Part 7 of Chapter 10 ('Water quality objectives') specifies the requirements for a WQM Plan. However, not all WQM Plan requirements may apply to groundwater WRPs. Where the requirements do not apply, the WQM Plan should state so and provide supporting evidence to demonstrate why they do not apply. Further information on determining alternative water quality targets can be found in Position Statement 7B and the Water Resource Plan Handbook for Practitioners.
2. The provisions of Part 7 address a wider range of issues relating to groundwater quality than does s10.21 (Part 4 of Chapter 10).
3. The key points to be noted in regards to groundwater quality management include the following:
 - In the majority of WRPs diffuse rather than point source groundwater quality issues need to be addressed under the WQMP. Generally these will be issues that are a result of changes in groundwater levels or pressures, e.g. the leakage of higher salinity groundwater into a fresher aquifer due to groundwater level changes. This would reflect consideration:
 - of the large scale of SDL resource units/ WRP areas, and

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- that groundwater level and pressures are managed under water resource management regulation/processes.
 - If there is a point source groundwater pollution event that has a significant impact on a groundwater SDL resource unit then the WRP should address this. The significance of the impact will be determined by the scale and severity of the event. Referencing a management plan or similar strategy should meet the requirements under s10.33.
4. In identifying measures to address water quality issues in groundwater resources with significant hydrological connection to surface water resources, the WQM Plan should consider including measures to manage groundwater issues that contribute to the objectives of the connected resources, e.g. salt interception schemes that intercept saline groundwater before it enters surface water resources.
 5. Unless there are significant hydrological connections to surface water resources, there are three objectives/targets that generally do not apply to a groundwater WQM Plan:
 - a. The water quality objectives for raw water being treated for human consumption (s9.05) do not apply to groundwater resources as any identified risks fall under the objectives for maintaining good levels of water quality.
 - b. The water quality objectives for irrigation water (s9.06) do not apply as the objective is specifically aimed at surface water quality.
 - c. The water quality target values and objective for recreational purposes (s9.18 and s9.07) do not apply to groundwater resources as they are aimed at managing blue-green algae issues.
 6. However, where there is an identified risk to a groundwater quality characteristic, the objective for maintaining good levels of water quality (s9.08) applies and the MDBA takes the view that measures should be included in the WQM Plan to contribute to achieving that objective. The WQM Plan must also explain why measures to address the risk have or have not been included in the plan (s10.31).
 7. Potential measures that may be specified in the WQM Plan are outlined in the MDBA report *Approaches to Achieve Sustainable Use and Management of Groundwater Resources*. Potential measures are not limited to those included in the report.

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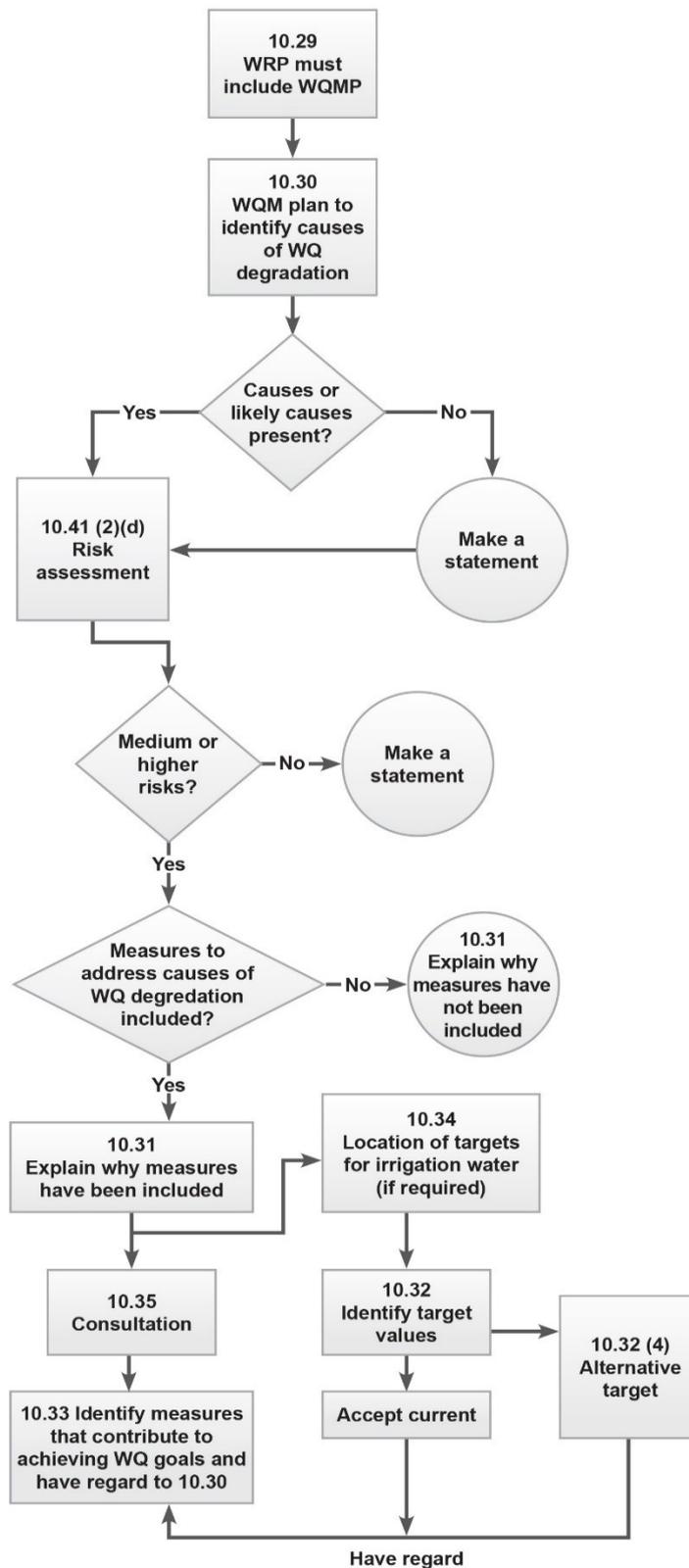


Figure 1: WQMP flow chart