

# Appendix E — Draft water resource plan accreditation tests

The *Water Act 2007* (Cwlth) provides for the Basin Plan to set out the accreditation requirements for water resource plans (s. 22(1) item 11) and lists 11 matters that must be included in the requirements. In addition, the Murray–Darling Basin Authority (MDBA) has identified a further four requirements. MDBA is required to recommend to the Commonwealth Water Minister whether a proposed water resource plan should be accredited (s. 63(3)). Assessment of the extent to which draft water resource plans are consistent with the relevant Basin Plan will be done against the 11 mandatory requirements of the Water Act and the four additional requirements.

Draft accreditation tests are presented in this appendix, in the form of clear test questions. The wording is indicative of the final legal wording and may not reflect the coverage of the requirements in the same way as they will appear in the proposed Basin Plan.

Not all questions or tests will apply to every water resource plan. For example, many are specific to surface-water or groundwater resources. Further, only some of the tests represent objectively assessable criteria. Most subjective tests simply flag the need for planning in relation to a specific issue, rather than being prescriptive about the approach to be taken.

Discussion with state agencies and other stakeholders will influence the content and phrasing of the accreditation tests under consideration. It is anticipated that additions, deletions and modifications will occur before the draft Basin Plan is released.

## Draft accreditation tests for Requirement A — plan areas

Does the water resource plan:

1. identify:
  - a. the water resource plan area
  - b. the water resources to which it applies
2. identify the water resource plan area as one of the water resource plan areas in the Basin Plan using the same description of that area as set out in the Basin Plan
3. describe those water resources defined in the Basin Plan as the water resources for the water resource plan area
4. identify each SDL area in the water resource plan area using the same description of that area as that set out in the Basin Plan
5. identify:
  - a. each environmental asset in the water resource plan area
  - b. the site-specific ecological objectives and site-specific ecological targets for each environmental asset
  - c. the water requirements needed to achieve those objectives and targets using the specified method
6. identify:
  - a. each ecosystem function in the water resource plan area
  - b. the site-specific ecological objectives and site-specific ecological targets for each ecosystem function

- c. the water requirements needed to achieve those objectives and targets using the method specified in the Basin Plan
7. define the productive base of the water resource plan area?

If a water resource plan is constituted by two or more instruments, does the water resource plan:

1. identify the instruments that constitute the water resource plan
2. explain how the instruments address, in an integrated manner, all the applicable water resource plan requirements set out in the Basin Plan?

If an instrument applies to only some of the water resources of the water resource plan area, does the water resource plan:

1. identify the water resources or parts of the water resources to which it applies
2. include an indicative map of the area identified?

### **Draft accreditation tests for Requirement B — including SDLs**

Does the water resource plan:

1. incorporate and apply the long-term annual diversion limit for each SDL area in the water resource plan area in accordance with the following paragraphs
2. contain water management rules that give effect to the SDL components (an SDL component is the proportion of the SDL for an SDL area allocated to a form of take) that are either those specified in the Basin Plan or those specified by the state in accordance with SDL offsetting arrangements
3. include water management rules which specify:
  - a. who is required to implement the water management rules
  - b. that water access rights holders must comply with the conditions of those rights?

If a water resource plan includes a surface-water SDL area that specifies SDL components for that SDL area that are different from those specified in the Basin Plan (applying the offsetting option), then does the water resource plan specify different SDL components that meet the following requirements:

1. the sum of all the SDL components for the SDL area is less than or equal to the long-term average sustainable diversion limit for that SDL area
2. the quantity of water taken by the form of take to which the SDL component applies is accurately known
3. the different SDL components that are specified do not compromise the matters identified in Requirement C
4. the different SDL components that are specified do not have third-party impacts?

Does the water resource plan identify, for each form of take for which an SDL component is specified, the categories of water access rights that authorise take by that form of take?

### **Surface water**

Does the water resource plan:

1. specify water management rules that determine the quantity of water permitted to be taken by a form of take to which an SDL component

applies in any water accounting period as a result of the conditions that occur in that period

2. include water management rules that, in determining the quantity of water permitted to be taken by a form of take:
  - a. account for any water allocation that is carried over from one water accounting period to the next
  - b. account for any trade of a water access right in the water accounting period
  - c. account for any temporary diversion provision
  - d. ensure that any changes in held environmental water after the commencement of the water resource plan are accounted for
3. include water management rules that are sufficiently certain to allow the quantity of water permitted to be taken by a form of take to which an SDL component relates to be objectively determined from the water management rules
4. set out the method (including modelling, if applicable) to be used to determine the quantity of water permitted to be taken by a form of take to which a surface-water SDL component relates
5. set out a permitted take determination method that:
  - a. is the best available method (including modelling, if applicable) at the time the water resource plan is submitted to MDBA for accreditation
  - b. is suitable for use for the duration of the accreditation of the water resource plan

(Note: a review of the water resource plan may result in an amendment to the method (including modelling, if applicable) water management rules may provide for technical errors in the method to be corrected and minor or non-substantive amendments to be made to the method (including modelling, if applicable))

6. include water management rules that operate such that the sum of the water permitted to be taken by a form of take for all of the years of the historical climate scenario, when divided by all of the years in that scenario, would be less than or equal to the SDL component for that form of take
7. include water management rules that operate such that for the 10-year period of the historical climate scenario with the lowest water availability, the sum of the water permitted to be taken by a form of take for all of those years, when divided by 10, would be less than or equal to the 10-year low water availability SDL component for that form of take

(Note: the 10-year low water availability SDL component is equal to the 10-year low water availability factor multiplied by the SDL component for that form of take

the 10-year low water availability factor for a water resource plan area is equal to  $10\text{-year low AWA} \div \text{AWA}$  where:

- the 10-year low AWA means the average water availability over the 10-year period in the historical climate scenario with the lowest average water availability
- AWA means the average water availability over all the years of the historical climate scenario)

8. include water management rules that operate such that for the 10-year period of the historical climate scenario with the highest water availability, the sum of the water permitted to be taken by a form of take for all of those years, when divided by 10, would be less than or equal to the 10-year high water availability SDL component for that form of take

(Note: the 10-year high water availability SDL component is equal to the 10-year high water availability factor multiplied by the SDL component for that form of take

the 10-year high water availability factor for a water resource plan area is equal to  $10\text{-year high AWA} \div \text{AWA}$  where:

- the 10-year high AWA means the average water availability over the 10-year period in the historical climate scenario with the highest average water availability
- AWA means the average water availability over all the years of the historical climate scenario)

9. include water management rules that operate such that the sum of the water permitted to be taken by a form of take for all of the years of the 2030 median climate scenario, when divided by all of the years in that scenario, would be less than or equal to the 2030 SDL component for that form of take

(Note: the 2030 SDL component for a form of take is equal to the 2030 change in water availability for the water resource plan area multiplied by the SDL component for that form of take  
the 2030 change in water availability for a water resource plan area is equal to  $\text{AWA } 2030 \div \text{AWA historical}$  where:

- AWA 2030 means the average surface-water availability under the median 2030 climate scenario
- AWA historical means the average surface-water availability over all the years of the historical climate scenario)

10. include water management rules that operate such that for the 10-year period of the 2030 median climate scenario with the lowest water availability, the sum of the water permitted to be taken by a form of take for all of those years, when divided by 10, would be less than or equal to the 10-year 2030 low water availability SDL component for that form of take

(Note: the 10-year 2030 low water availability SDL component is equal to the 10-year 2030 low water availability factor multiplied by the SDL component for that form of take  
the 10-year 2030 low water availability factor for a water resource plan area is equal to  $10\text{-year low AWA } 2030 \div \text{AWA } 2030$  where:

- the 10-year low AWA 2030 means the average water availability over the 10-year period in the median 2030 climate scenario with the lowest average water availability
- AWA 2030 means the average surface-water availability over all the years of the median 2030 climate scenario)

11. include water management rules that operate such that for the 10-year period of the 2030 median climate scenario with the highest water availability, the sum of the water permitted to be taken by a form of take for all of those years, when divided by 10, would be less than or equal to the 10-year 2030 high water availability SDL component for that form of take

(Note: the 10-year 2030 high water availability SDL component is equal to the 10-year 2030 high water availability factor multiplied by the SDL component for that form of take  
the 10-year 2030 high water availability factor for a water resource plan area is equal to 10-year high AWA 2030 ÷ AWA 2030 where:

- the 10-year high AWA 2030 means average water availability over the 10-year period in the median 2030 climate scenario with the highest average water availability
- AWA 2030 means the average surface-water availability over all the years of the median 2030 climate scenario)

12. incorporate the temporary diversion provision for each surface-water SDL area into the water management rules of the water resource plan or indicate that they do not apply
13. include the water management rules that specify the volumetric proportion of that temporary diversion provision that will be applied to a SDL component of the SDL area where the provision is above zero
14. satisfy the tests for permitted take and equitable water sharing for each year in which a temporary diversion provision applies?

(Note: the water management rules must apply as if the reference to SDL component in permitted take and equitable water sharing tests is a reference to the SDL component plus the volumetric proportion of the temporary diversion provision that is applied to that SDL component for that water accounting period.)

## Groundwater

If a water resource plan for a water resource plan area contains a groundwater SDL area, then does the water resource plan:

1. specify water management rules that determine the quantity of water permitted to be taken from the SDL area unit in any water accounting period
2. include water management rules that operate to ensure that, in determining the quantity of water permitted to be taken from the groundwater SDL area, the water permitted to be taken in any water accounting period does not result in non-compliance as determined in the method to determine compliance with the diversion limit of the Basin Plan
3. include water management rules that are capable of dealing with growth in a form of take over the period of accreditation or adoption of the water resource plan
4. include water management rules that, in determining the quantity of water permitted to be taken from the groundwater SDL area:
  - a. account for any water allocation that is carried over from one water accounting period to the next
  - b. account for any trade of a tradeable water right in the water accounting period by:
    - i. decreasing the water permitted to be taken from that SDL area by the amount of water which may, as a result of trade, be taken from outside of that SDL area
    - ii. increasing the water permitted to be taken for that SDL area by the amount of water which may, as a result of trade, be taken from that SDL area

- c. accounts for any temporary diversion provision by increasing the water permitted to be taken from that SDL resource area by the volume of the temporary diversion provision for that water accounting period
  - d. ensure that any changes in held environmental water after the commencement of the water resource plan are accounted for
5. include water management rules that are sufficiently certain to allow the quantity of water permitted to be taken from the SDL resource area to be objectively determined from the rules
  6. include water management rules that incorporate the temporary diversion provision for a groundwater SDL resource area
  7. include water management rules that incorporate the temporary diversion provision by increasing the water permitted to be taken from the SDL resource area by the amount of the temporary diversion provision for that water accounting period?

### Surface water and groundwater

Does the water resource plan:

1. include a water management rule that requires the volume of water actually taken by each form of take from an SDL resource area to be determined using the best available method (including modelling, if applicable) that is available from time to time
2. establish and maintain record management in relation to how actual take for each form of take from the SDL resource area was determined for the water accounting period, including the method (including modelling, if applicable) used and the information relied upon
3. provide for accounting records to be given to MDBA no later than four months after the end of each water accounting period
4. set out water management rules that will be triggered in the event that an assessment of non-compliance is reported under s. 71 of the Water Act in accordance with the compliance section of the Basin Plan
5. demonstrate that the water management rules triggered by non-compliance will operate to effectively reinstate compliance with the long-term average sustainable diversion limit?

### Draft accreditation tests for Requirement C — sustainable use and management

Does the water resource plan:

1. identify hydrologic connections that exist between the water resources of the water resource plan area and a water resource in another resource plan area or water resources outside the Murray–Darling Basin
2. require an infrastructure operator or operating authority to manage water under its control in a way that is consistent with the principles for environmental watering set out in the Basin Plan so far as is possible without compromising the infrastructure operator or operating authority's obligations to deliver water for consumptive use
3. make provision for a register to be maintained of the volumes of planned environmental water
4. make provision for a register to be maintained of the volumes of held environmental water
5. make provision for the registers to be made publicly available?

## Surface water

If a water resource plan for a water resource plan area contains a surface-water SDL resource area, then does the water resource plan:

1. include water management rules that ensure that the water permitted to be taken from a surface-water resource occurs at times, places and rates so as not to compromise:
  - a. the environmental water requirements of the environmental assets
  - b. the environmental water requirements of the ecosystem functions
  - c. the productive base in the water resource plan area
  - d. key environmental outcomes

(Note: the environmental assets, ecosystem functions and environmental water requirements referred to above are those in the water resource plan area or adjacent water resource plan areas identified through the application of the method set out in the Basin Plan. Basin states are required to apply this method to identify environmental water requirements of particular environmental assets in long-term watering plans, and are required to update these plans immediately before submitting a water resource plan to MDBA under ss. 63 or 65 of the Water Act.)

2. include water management rules that ensure that the use and management of water resources in the water resource plan area do not compromise the identified water requirements, productive base or environmental outcomes?

## Groundwater

If a water resource plan for a water resource plan area contains a groundwater SDL resource area, then does the water resource plan:

1. include water management rules that ensure that the water permitted to be taken from an SDL resource area in any water accounting period may only be taken at times, places and rates so as not to compromise the environmental water requirements of the following environmental assets:
  - a. the environmental assets identified in the Basin Plan
  - b. any other environmental assets in the water resource plan area that are:
    - i. identified through the application of the method set out in the Basin Plan
    - ii. dependent on groundwater

(Note: Basin states are required to apply the methods set out in the Basin Plan to identify environmental water requirements of particular environmental assets in long-term watering plans, and are required to update these plans at certain times)

2. include water management rules that must:
  - a. identify resource condition limits that indicate when the taking of groundwater from the water resource plan area will compromise the watering requirements of the asset
  - b. specify restrictions on the water permitted to be taken (including restrictions on the volumes that may be taken, and times, places and the rates at which water may be taken) that will be triggered when the groundwater resource condition limit is approached or reached?

(Note: environmental assets to which this provision applies will be identified in a dataset held by, and published by, MDBA.)

If a water resource plan area includes an environmental asset identified in the Basin Plan as requiring a local management zone, does the water resource plan:

1. include water management rules for that area that:
  - a. identify the zone around the environmental asset for the local management of that asset
  - b. specify the restrictions on the volume of water to be taken (including restrictions on the timing, places and the rates of take) from within the zone
  - c. ensure groundwater take does not compromise the watering requirements of the environmental asset

(Note: environmental assets to which this provision applies will be identified in a dataset held by, and published by, MDBA)

2. include water management rules that ensure that water permitted to be taken from a groundwater SDL resource area identified in the Basin Plan may only be taken at times, places and rates so that the water taken does not compromise the environmental water requirements (including base flow) of a surface-water SDL area that has a hydrologic connection to that groundwater system?

(Note: the environmental water requirements referred to are the environmental water requirements for the ecosystem functions identified through application of the method set out in the Basin Plan.)

For those groundwater resource areas named in the Basin Plan, does the water resource plan contain water management rules that:

1. identify resource condition limits that indicate when the taking of groundwater from the water resource plan area will compromise the discharge of water from the groundwater resource into any surface-water resource
2. specify restrictions on the volume of water permitted to be taken (including restrictions on the timing, places and the rates of take) that will be triggered when the identified groundwater resource condition limit is approached or reached?

For those groundwater resource areas named in the Basin Plan as requiring local management zones, does the water resource plan:

1. identify zones in the SDL resource area for the local management of the water resources in the SDL resource area
2. describe restrictions on water permitted to be taken (including restrictions on volumes, timing, places and the rates of take) from within each management zone
3. describe how the identified zones and restrictions will prevent groundwater take from compromising the discharge of water from the groundwater resource into any surface-water resource
4. include water management rules that will ensure that the water permitted to be taken from a groundwater SDL resource area may only be taken at times, places and rates so as not to compromise the productive base of a groundwater resource, including ensuring that:
  - a. there is no structural damage to an aquifer

- b. hydraulic relationships between groundwater and surface-water systems and between groundwater systems are maintained
  - c. a confined aquifer remains confined
5. include water management rules that:
    - a. identify any zones in the water resource plan area where continued groundwater extraction will result in a long-term decline in groundwater levels
    - b. set out measures to prevent any long-term decline in groundwater levels in that zone
    - c. set out how monitoring will be undertaken to determine the effectiveness of the measures
  6. include water management rules that:
    - a. identify resource condition limits that indicate when the taking of groundwater will compromise the productive base of water resources
    - b. specify restrictions on take (including restrictions on the timing, places and the rates of take) that will be triggered when the identified groundwater resource condition limit is approached or reached
  7. identify the sites of bores used to monitor the pressure, depth and salinity of the groundwater resources of the water resource plan area and outline the methodology used to identify those monitoring sites
  8. include water management rules that ensure that the water permitted to be taken from the groundwater resource may be taken at times, places and rates so that the taking of that water:
    - a. does not contribute to a deterioration in water quality
    - b. does not result in a change of the salinity class of that groundwater resource from that which existed at the time the water resource plan was submitted for accreditation or adoption
    - c. does not result in the deterioration of water quality within an aquifer due to vertical leakage within the aquifer or between that aquifer and another aquifer
    - d. does not result in the deterioration of water quality within an aquifer due to lateral flows across an aquifer

(Note: a reference to a salinity class means the level of total dissolved solids in the groundwater resource, or part of a groundwater resource, divided into the following classes:

Class 1: 0–1,500 milligrams per litre of total dissolved solids

Class 2: 1,501–3,000 milligrams per litre of total dissolved solids

Class 3: 3,001–14,000 milligrams per litre of total dissolved solids

Class 4: greater than 14,000 milligrams per litre of total dissolved solids)

9. describe the specific conditions under which entitlements will be granted for the continuation or development of new groundwater salt interception schemes
10. describe the obligations that will be imposed on salt interception scheme operators?

## Draft accreditation tests for Requirement D — interception activities

Does the water resource plan:

1. identify the regulated interception activities occurring in the water resource plan area. Regulated interception activities are:
  - a. interception of surface water into a farm dam
  - b. interception of surface water by a forestry plantation
  - c. interception of groundwater by a forestry plantation
  - d. interception of groundwater by a mining activity
2. set out a process that:
  - a. determines the hydrologic impact of a regulated interception activity on the water resources of the relevant water resource plan area
  - b. determines the terms of a water access right that will accurately reflect the management of, and accounting for, take
3. establish provisions that require each new regulated interception activity in the water resource plan area to be continued only if:
  - a. the activity is conducted in accordance with a water access right
  - b. the process in the Basin Plan for determining and addressing hydrologic impacts of the interception activity has been followed in respect of the activity
  - c. the water access right meets the requirements identified by the process for the taking of water as part of the interception activity

(Note: the Basin Plan makes provision in the determination of SDLs for the ‘current level of approved use’ of interception activities to continue without change or a requirement for new licensing. The intent is that any new activity (constituting an increased hydrologic impact), in any of the regulated interception categories, be captured by a requirement for approval or disallowance of the activity under state law and that any approved changes be sanctioned through recognition of the estimated volumetric implications of change in SDL accounting. The need to formally issue an entitlement or licence associated with new interception activities will depend on existing state legal provisions for management of the class of interception involved and the circumstances under which changes to the activity occur.)
4. describe how the process involves other matters, including:
  - a. the assessment, by a Basin state, of each individual activity against a set of criteria
  - b. a specific method for calculating the amount of water taken by interception activities of a specified class
5. demonstrate that the process is based on the best scientific information available at the time the water resource plan is submitted for accreditation or adoption
6. in determining the hydrologic impact of a farm dam, take into account the following factors:
  - a. the location of the dam
  - b. the size of the dam
  - c. the impact of taking water at different flow thresholds

7. in determining the hydrologic impact of a forestry plantation take into account the following:
  - a. the location of the plantation
  - b. the size of the plantation
  - c. the type/species and density of woody perennial plants
  - d. the vegetation of the area where the plantation is located
8. ensure that the volume of a water access right issued for a forestry plantation reflects the difference between:
  - a. the volume of water intercepted by the land use before the commencement of the plantation or the native vegetation for the area
  - b. the volume of water estimated to be intercepted by the plantation
9. in determining the hydrologic impact of a mining activity take into account the following:
  - a. the location of the mining activity
  - b. the type of mining activity
10. if a mining activity is a subsidence mining operation (such as coal gas extraction) for which a licence is granted, then ensure that the determined impact on the water resources of the water resource plan area is consistent with the surface-water and groundwater flow impact identified in the study required to be taken under the Water Act (s. 255A)
11. include a list identifying any other class of interception activity (other than a regulated interception activity) that has, or has the potential to have, a significant impact, whether on an activity by activity basis, or cumulatively, on the water resources of:
  - a. the water resource plan area
  - b. another water resource plan area
12. include a list of other classes of interception activity prepared on the basis of an assessment that takes into account the following factors:
  - a. the geographic location of the interception activity in the water resource plan area
  - b. the impact of the interception activity in the water resource plan area on the availability of water in the water resources of:
    - i. the water resource plan area
    - ii. another water resource plan area
  - c. the projected growth of the interception activity in the water resource plan area over the period for which the water resource plan will have effect
  - d. other relevant factors
13. have regard to whether it is necessary to regulate the interception activities identified in the list or other classes of interception activity, in order to prevent the key environmental assets, key ecosystem functions, productive base and key environmental outcomes of the water resources of the water resource plan area or another water resource plan area from being compromised
14. shown consideration of the possible need to regulate an interception activity through quantitative restriction?

## Draft accreditation tests for Requirement E — environmental watering

Does the water resource plan:

1. contain water management rules that ensure that planned environmental water is managed:
  - a. so as to contribute to the achievement of the overall environmental objectives for the water-dependent ecosystems of the Murray–Darling Basin set out in the Basin Plan
  - b. so as to meet the environmental watering and flow regime requirements of environmental assets and ecosystem functions identified through application of the methods set out in the Basin Plan
  - c. in accordance with priorities developed through application of the principles and methods set out in the Basin Plan
  - d. in accordance with the principles to be applied in environmental watering set out in the Basin Plan

(Note: Basin states are required to identify the matters listed in paragraphs (a) to (d) above in long-term watering plans and to provide updated long-term watering plans to MDBA if a water resource plan is given to MDBA under s. 63 or amended under s. 65 of the Water Act)

2. clearly specify upon whom the obligations under the water management rules are imposed
3. include water management rules that are consistent with, and which will operate effectively within the context of, the environmental management framework set out in the Basin Plan
4. include water management rules prepared having regard to the most recent version of the long-term watering plan for the water resource plan area prepared in accordance with the requirements of the Basin Plan
5. contain water management rules that ensure that held environmental water is managed:
  - a. so as to meet the environmental water requirements of environmental assets and ecosystem functions identified through application of the methods set out in the Basin Plan
  - b. in accordance with priorities developed through application of the principles and methods set out in the Basin Plan
  - c. in accordance with the principles to be applied in environmental watering set out in the Basin Plan
  - d. so as to contribute to achievement of the overall environmental objectives for the water-dependent ecosystems of the Murray–Darling Basin as set out in the Basin Plan
6. clearly specify upon whom the obligations under the water management rules for the management of held environmental water are imposed
7. include water management rules relating to held environmental water that are consistent with, and operate in the context of, the environmental management framework set out in the Basin Plan
8. any water management rules for the management of held environmental water must be prepared having regard to the most recent version of the long-term watering plan for the water resource plan area
9. include water management rules that operate to ensure that environmental watering is coordinated between hydrologically connected

water resources, regardless of whether those water resources are in the same water resource plan area or Basin state

10. include water management rules requiring water resource managers for the water resource plan area to consult and coordinate with water resource managers for hydrologically connected, adjacent, upstream and downstream water resource plan areas
11. include water management rules that operate such that the sum of all surface water that passes from the water resource plan area to a downstream water resource plan area for all of the years of the historical climate scenario, when divided by all of the years in that scenario, would meet the flow requirements of a downstream water resource plan area
12. meet the flow requirements of the downstream water resource plan area for the 10-year period of the historical climate scenario with the lowest water availability; that is, the water management rules must operate such that the sum of all surface water that passes from the water resource plan area to a downstream water resource plan area for all of those years, when divided by 10, would meet the flow requirement of a downstream water resource plan area
13. meet the flow requirements of the downstream water resource plan area for the 10-year period of the historical climate scenario with the highest water availability; that is, the water management rules must operate such that the sum of all surface water that passes from the water resource plan area to a downstream water resource plan area for all of those years, when divided by 10, would meet the flow requirement of a downstream water resource plan area?

#### **Draft accreditation tests for Requirement F — water quality and salinity**

Does the water resource plan:

1. include a water quality management plan for the water resources of that water resource plan area for the purposes of meeting the water quality objectives for the water resource plan area
2. identify the water quality condition of the water quality characteristics set out in the Basin Plan over the five-year period immediately before the plan is given to MDBA
3. identify the locations in the water resource plan area at which drinking water targets set out in the Basin Plan will apply
4. identify which of the key causes of water quality degradation identified in the Basin Plan are significant in the water resource plan area
5. set out measures to:
  - a. achieve the water quality objectives and targets specified in the Basin Plan
  - b. address the identified key causes of water quality degradation, as identified in point 4
6. if the water quality condition of the water resources (as identified in point 2) is better than the target set out in the Basin Plan, set out measures to ensure that the water quality condition is maintained at that better value
7. identify the water quality risks to the condition, or continued availability, of the water resources of the water resource plan area:
  - a. having regard to the risks to the condition, or continued availability, of Basin water resources as identified in the Basin Plan

- b. using the methodology specified in the Basin Plan (see draft accreditation tests for Requirement H)
8. include measures that will be taken to mitigate the identified risks consistently with the strategies identified in the Basin Plan
  9. identify and oblige a responsible organisation to maintain a record of salinity credits and debits for all accountable actions as defined in the Water Act (Schedule B of Schedule 1) for the water resource plan area
  10. oblige the responsible organisation to make records of salinity credits and debits publicly available on a website
  11. set out processes for maintaining those records consistent with the process established under the Water Act (Schedule B of Schedule 1)
  12. set out how the effectiveness of identified water quality management measures and progress towards meeting water quality targets will be assessed, including:
    - a. the tools (including models and methods) that will be used
    - b. information that will be collected
    - c. how this monitoring will be made consistent with the Basin Plan monitoring and evaluation program
    - d. how this monitoring will be made consistent with modelling provisions in water resource plan Requirement K?

#### Draft accreditation tests for Requirement G — trade

1. If the trade of a water access right in a water resource plan area is restricted by general water trading rules, then does the water resource plan:
  - a. identify the restriction
  - b. identify the purpose of the restriction
  - c. set out evidence that establishes the existence of the purpose
2. Does the water resource plan set out a process for identifying the emergence of a physical constraint in the water resource plan area that restricts the trade of a water access right
3. If the trade of a water access right is between two locations in a groundwater SDL area, and is permitted under the Basin Plan, then does the water resource plan set out information that demonstrates that all the trading conditions are met

(Note: for the condition that the level of connectivity between the two locations is well understood it is sufficient to demonstrate that trading zones exist between the two locations)

4. If a conversion rate is to be used to protect third-party interests, then does the water resource plan specify the conversion rate
5. If the trade of a water access right between a groundwater resource and a surface-water resource is permitted under the Basin Plan, then does the water resource plan set out information that demonstrates that all the trading conditions are met

(Note: for the condition that the level of connectivity between the two SDL components is well understood — it is sufficient to demonstrate that trading zones exist between the two SDL components)

6. Do the trade provisions in the water resource plan protect third-party rights within the water resource plan area and in other SDL resource areas with which trade is to be permitted?

#### Draft accreditation tests for Requirement H — risk approach

Does the water resource plan:

1. identify:
  - a. risks to the condition and continued availability of the water resources of the water resource plan area
  - b. risk factors that contribute to each identified risk
2. specify the uncertainties that are relevant to the assessment of each risk or risk factor identified as the case requires, including (but not limited to) those uncertainties associated with:
  - a. a lack of knowledge of the risk factor
  - b. variability within natural systems
3. specify, for each risk and risk factor identified:
  - a. whether the risk or risk factor has been assessed as a high, moderate or low risk or risk factor (as the case requires)
  - b. the evidence that supports that assessment
4. include lack of knowledge and lack of compliance in the assessed risk factors
5. apply a risk assessment method that:
  - a. assesses and evaluates risks to the water resources of the water resource plan area, and the contributing risk factors
  - b. includes assessment of all the risks to the condition, and the continued availability, of the water resources of the water resource plan area, including:
    - i. the risk of insufficient water for the environment
    - ii. the risk of water quality unsuitable for primary industry, aquatic ecosystem protection, recreation and drinking water
    - iii. the risk of poor health of water-dependent ecosystems
  - c. assesses the risks to the continued availability of the water resources of a water resource plan area by assessing the risks to there being a sufficient quantity of water available to avoid compromising:
    - i. key environmental assets of the water resources
    - ii. key ecosystem functions of the water resources
    - iii. the productive base of the water resources
    - iv. key ecosystem services and environmental outcomes for the water resources
  - d. assesses the risks based on a time period that is the same as the maximum time period for which the water resource plan may have effect
  - e. assesses risks based on the recurrence of:
    - i. the driest 10 years of historical record
    - ii. the driest 10 years in the 2030 climate change scenario
  - f. is consistent with the following standards:
    - i. AS/NZS 4360:2004 'Risk Management'

- ii. AS/NZS HB 436: 'Risk Management Guidelines – Companion to AS/NZS 4369:2004'
  - iii. AS/NZS HB 203:2006 'Environmental Risk Management – Principles and Processes'
  - iv. AS/NZS ISO 31000:2009 'Risk Management Principles and Guidelines'
- g. quantifies risks and risk factors in a transparent and replicable manner using a numerical scale against which each risk and risk factor is quantified
  - h. assesses risks and risk factors as 'high', 'moderate' or 'low' risks or risk factors based on the order in which risks and risk factors are quantified using the numerical scale referred to in paragraph (g)
  - i. grades any risk or risk factor with a likelihood of 40% or more as having a moderate or high likelihood of risk
  - j. grades a risk or risk factor that results in a loss of 40% of the value or functionality of the impacted water resource as having a moderate or serious consequence
  - k. uses quantitative information where possible; where this is not possible, qualitative information and data must be qualified with source and reliability
  - l. separately assesses the uncertainties described in points 2 (a) and 2 (b)
  - m. without limiting the risk factors considered, includes the following risk factors:
    - i. lack of knowledge
    - ii. insufficient compliance
  - n. demonstrates use of best available scientific information in conducting the risk assessment uses
  - o. evaluates the identified risks and risk factors for treatment
  - p. prioritises the risks and risk factors for treatment
6. include a separate analysis of the risks to the availability of Basin water resources that arise from the following:
    - a. the taking and use of water (including through interception activities)
    - b. the effects of climate change
    - c. changes to land use
    - d. the limitations on the state of knowledge on the basis of which estimates of matters relating to Basin water resources within the water resource plan area have been made
  7. describe strategies for the management of Basin water resources that will address each of the risks and risk factors that is:
    - a. identified in the water resource plan
    - b. assessed as either a 'moderate' or 'high' risk
  8. where a risk or risk factor has been identified as 'intolerable', describe a strategy that aims to reduce the risk to at least a 'tolerable' level
  9. where a risk or risk factor cannot be reduced, describe a management strategy to adapt to the risk or risk factor
  10. describe strategies for managing risk having regard to approaches in Australian risk management standards listed above

11. only contain strategies that are credible, evidence-based, achievable and transparent
12. contain a quantitative assessment of residual risk level, after application of risk management measures for each identified strategy
13. if identified risks relate to an interception activity, then strategies to address that risk must be consistent with the provisions of Requirement D
14. specify, for each risk or risk factor management strategy described:
  - a. the circumstances in which the strategy is required to be implemented
  - b. details of how the strategy will be implemented, including trigger points for management action
  - c. who is responsible for implementing the strategy
  - d. who has the obligation of ensuring that the strategy is implemented
  - e. the time frames within which the strategy must be implemented
15. demonstrate obligations are imposed on relevant persons or the state as required to ensure that the strategies are implemented?

**Draft accreditation tests for Requirement I — monitoring and metering**

Does the water resource plan:

1. include provisions for monitoring the water resources of the water resource plan area, as required to inform the information and evaluation reports that the Basin Plan monitoring and evaluation program requires Basin states to prepare in relation to the water resource plan area
2. include the best information available on water measurement as at no more than six months before the time the water resource plan is submitted for accreditation or adoption
3. include the following information about each type of water access entitlement relating to the water resources of the water resource plan area:
  - a. the number of offtakes, diversion and extraction points at which take is measured
  - b. the number of those offtakes, diversion and extraction points at which take is measured in accordance with national measuring standards
  - c. the best estimate of the total long-term average quantity of water taken from the water resources that is measured
  - d. the number of offtakes, diversion and extraction points at which take is not measured
  - e. the best estimate of the total long-term average quantity of water taken from the water resources that is unmeasured
  - f. how the quantities under paragraphs (c) and (e) were calculated
  - g. the best estimate of the proportion of the quantity estimated under paragraph (c) that is measured in accordance with national measuring standards
4. include the following information for each type of water access right, other than a water access entitlement:
  - a. the best estimate of the number of offtakes, diversion and extraction points on watercourses forming part of the water resources at which take is measured

- b. the best estimate of the number of those offtakes, diversion and extraction points at which take is measured in accordance with national measuring standards
  - c. the best estimate of the total long-term average quantity of water taken from watercourses forming part of the water resources that is measured
  - d. the best estimate of the number of offtakes, diversion and extraction points on watercourses forming part of the water resources at which take is not measured
  - e. the best estimate of the total long-term average quantity of water taken from watercourses forming part of the water resources that is unmeasured
  - f. how the quantities under paragraphs (c) and (e) were calculated
  - g. the best estimate of the long-term average quantity estimated under paragraph (c) that is measured in accordance with national measuring standards
5. describe any program that is proposed to be implemented in the water resource plan area during the period the water resource plan has effect, if an aim of the program is to:
    - a. increase the number of water access rights in relation to which take is measured
    - b. improve the standard to which take is measured
    - c. improve methods for estimating unmeasured components of take
  6. for identified programs specify:
    - a. the time frame for implementing the program
    - b. who is responsible for implementing the program?

#### **Draft accreditation tests for Requirement J — plan reviews**

Does the water resource plan:

1. require a mid-term review of the water resource plan to be undertaken
2. require the review to assess the:
  - a. extent to which the water resource plan has given effect to the water resource plan requirements set out for accreditation of the water resource plan
  - b. extent to which the water resource plan is inconsistent with the Basin Plan
3. review the period of the first five years after the commencement of the water resource plan
4. provide for the preparation of a report containing the following:
  - a. the findings of the review
  - b. recommendations about whether the water resource plan should be amended and, if so, how
  - c. recommendations about whether the water resource plan should be implemented differently and, if so, how
5. require the review to be completed before the end of the sixth year after the commencement of the water resource plan
6. require the report to be provided to MDBA by the relevant Basin state within two weeks of the report being provided to that Basin state

7. if the water resource plan provides for other reviews of the water resource plan to be undertaken, then does the water resource plan specify:
  - a. the circumstance that will trigger the review
  - b. the person responsible for conducting the review
  - c. the matters to be covered by the review
  - d. the time frame within which the review will be conducted
8. where other reviews are provided for does the water resource plan provide for the findings of the review to be provided to MDBA?

**Draft accreditation tests for Requirement K — scientific information**

1. Was the water resource plan developed on the basis of best available scientific knowledge?

In particular, does the water resource plan:

2. include a comprehensive listing of all reference material and information sources
3. include the references in MDBA's Basin Plan Knowledge and Information Directory that have been tagged as being pertinent to the water resource plan area up to no more than six months before submission of the water resource plan for accreditation
4. reference material developed over the previous five years by local research institutions and state agencies that is relevant to water resource management in the water resource area
5. classify references using a 'best practice science classification tool', which meets criteria to be established by MDBA
6. name areas in the Basin Plan under Requirement K including allocation, management and delivery rules based on models, to the extent that they relate to the correspondingly named SDL resource areas and the forms of take
7. describe or reference (where appropriate) the scientific analytical methods or models used in determination of:
  - a. the model or method that a water resource plan identifies as being a model or method to be used in assessing the achievement of whether environmental watering objectives are being achieved
  - b. the model or method that a water resource plan identifies as being a model or method to be used to determine the effectiveness of strategies to meet water quality and salinity targets
  - c. the model or method that a water resource plan identifies as being a model or method to be used to determine trading zones, third-party impacts and adjustment provisions as specified in Requirement G
  - d. if the allocation, management and delivery rules of the water resource plan are based on a model, does the model accurately reflect the rules of the water resource plan
  - e. if the allocation, management and delivery rules of a water resource plan for a water resource plan area are based on a model, was the model calibrated against the 1895–2009 historical climate scenario to determine the accuracy of the model in estimating annual take
  - f. if the allocation, management and delivery rules of a water resource plan are based on a model, was the model verified
  - g. if the allocation, management and delivery rules of a water resource plan are based on a model, was the model peer-reviewed

8. include scientific analytical methods or models used in determining permitted take, or estimation of actual take, which simulate or analyse key processes including:
  - a. monitoring and measurement of take
  - b. annual allocation provisions
  - c. water delivery mechanisms
  - d. the raking and the returning of water to the system
9. provide for the publication of information and reference material through application of the National Government Information Licensing Framework or other appropriate intellectual property management arrangements?

#### Draft accreditation tests for Requirement L — extreme events

Does the water resource plan:

1. set out measures for managing the water resources to which the water resource plan applies during the following extreme events:
  - a. occurrence of a 1:120 year annual and 1:120 year decade-long drought
  - b. occurrence of a 1:120 year annual and 1:120 year decade-long wet period
  - c. occurrence of a 1:114 year annual and 1:114 year decade-long drought under high global warming scenario using a model that generates Basin-wide water availability scenarios for 2030 ranking in the driest 5–10% for models available for climate projection
  - d. occurrence of a 1:114 year annual and 1:114 year decade-long wet period under high global warming scenario using a model that generates Basin-wide water availability scenarios for 2030 ranking in the wettest 5–10% for the models available for climate projection
  - e. water quality events of an intensity, magnitude and duration that are sufficient to render water acutely toxic or unusable for established local uses and values including ecological communities, human or livestock consumption, and irrigation or other industrial processes. Includes issues of salinity, acidity, blue-green algal blooms and black water
  - f. public water infrastructure failures, temporary or permanent commissioning or decommissioning of major works affecting water management or delivery capabilities
  - g. emergency demand for water from outside the water resource plan area in response to contamination or shortages of other supplies. This refers to requirements beyond the limits of existing arrangements and licences but not beyond infrastructure capacity to deliver the water. For example, water movement to Melbourne or Adelaide through inter-Basin transfer pipelines
  - h. any events that have resulted in the suspension of statutory regional water plans in the past 50 years including interim or transitional plans
2. specify who will implement the identified 'occasional' water management measures
3. specify, for each extreme event listed, the conditions that trigger:
  - a. the beginning of the event
  - b. the end of the event?

If a water resource plan:

4. applies to water resources that form part of the River Murray system, does the plan set out measures to meet critical human water needs identified in the Basin Plan
5. applies to water resources that form part of the River Murray system, does the plan set out measures to maintain consistency with the sharing arrangements established under the Murray–Darling Agreement (Water Act Schedule 1)
6. applies to water resources that do not form part of the River Murray system, does the water resource plan set out measures to meet critical human water needs during an extreme event?

Does the water resource plan:

7. identify situations under which the water resource plan is not expected to continue to operate?

#### **Draft accreditation tests for Requirement M — Indigenous values**

Does the water resource plan:

1. specify the Indigenous water values and uses that relate to the water resources of the water resource plan area
2. specify the Indigenous water planning objectives and outcomes for the water resource plan area
3. specify any barriers and risks to the values and uses identified that arise from the use and management of Basin water resources
4. specify opportunities to enhance the Indigenous values and uses identified that arise from changes to the use and management of Basin water resources
5. if a risk or opportunity has been identified, specify measures to protect or enhance those values and uses
6. for each measure specified, specify:
  - a. how the measure will be implemented
  - b. who will be responsible for implementing the measure
  - c. the time frame within which the measure will be implemented
7. define the principles of Indigenous participation in the plan
8. specify measures to ensure that the knowledge of Indigenous people is documented and taken into account in managing the water resources of the water resource plan area
9. take into account:
  - a. native title rights, native title claims and Indigenous land use agreements within the water resource plan area
  - b. clauses 25(ix), 52 and 54 of the National Water Initiative
10. retain or enhance cultural values or water regime relationships that are already catered for under existing (transitional or interim) state or territory water resource planning arrangements?

Was the water resource plan prepared taking into consideration:

11. Indigenous social, spiritual and cultural knowledge of the water systems through consultation with affected Indigenous nations and with Murray Lower Darling Rivers Indigenous Nations or Northern Murray–Darling Basin Aboriginal Nations as appropriate

12. the need to publish Indigenous knowledge of the water systems gathered during consultation with affected Indigenous nations and with Murray Lower Darling Rivers Indigenous Nations or Northern Murray–Darling Basin Aboriginal Nations as appropriate?

#### **Draft accreditation tests for Requirement N — making the plan**

Was the water resource plan prepared having regard to:

1. analysis of the potential socioeconomic impacts of the plan
2. consultation between relevant federal, state and local government organisations with jurisdiction in the water resource plan area
3. organisations responsible for the development and implementation of water resource plans in adjacent water resource plan areas
4. organisations responsible for the development and implementation of water resource plans in adjacent water resource plan areas in another state or territory
5. organisations responsible for water management in areas outside the Basin but adjacent to, or connected with, the water resources of the water resource plan area
6. consultation with relevant environmental, community (including age structure representatives), industry and cultural stakeholders?

Does the water resource plan:

7. include a description of the range of technical investigations and consultative processes used as a basis for preparation of the plan
8. describe how decisions were made with respect to the optimisation of environmental, social and economic impacts of the plan?

#### **Draft accreditation tests for Requirement O — integration with natural resource management plans**

Does the water resource plan:

1. identify each regional natural resource management plan that relates to the water resource plan area and the time frame covered by the water resource plan
2. specify how the water resource plan is to be integrated with each identified regional natural resource management plan
3. demonstrate integration with the relevant natural resource management plan as far as is feasible?