



## 4. Managing High Risk Areas under the draft Adelaide Plains Water Allocation Plan

### Current situation

The draft Adelaide Plains Water Allocation Plan (draft WAP) proposes that no existing water entitlements will be permanently reduced over the life of the WAP. However it recognises that in two of the proposed consumptive pools (T1 Northern Adelaide Plains and T2 Northern Adelaide Plains – see Figure 1), the total volume of existing water entitlements is already above the resource extraction limit, based on evidence from scientific investigations. Despite this, the impacts on the groundwater resource in these areas are considered to be at an acceptable level, as entitlements are currently not fully utilised.

Scientific modelling has shown that in these two ‘high risk’ consumptive pools, there would be a significant risk to the groundwater if current water entitlements were used at a higher rate over an extended period. Groundwater could become more saline and the groundwater levels could drop to levels which would compromise the integrity of the aquifer.

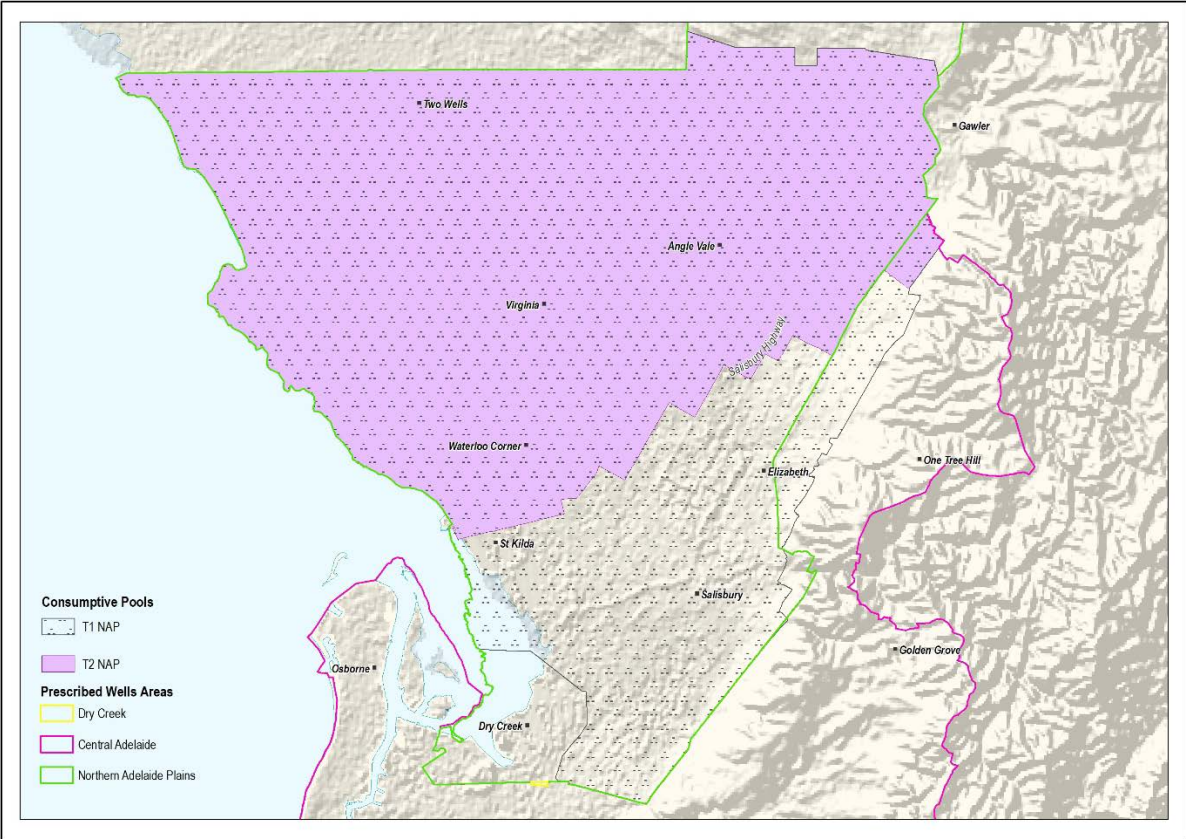


Figure 1. T1 Northern Adelaide Plains and T2 Northern Adelaide Plains Consumptive Pools



### **Managing high risk areas through a ‘safety net’ scheme**

To manage this risk, the draft WAP proposes a ‘safety net’ scheme in these two consumptive pools. Groundwater levels would be closely monitored in both pools. If water pressure levels fell below specified thresholds (or ‘triggers’), action could be taken to reduce allocations temporarily until the condition of the groundwater recovered (Figure 2). These triggers are discussed in more detail in the draft WAP and the supporting science reports. The principles proposed in the draft WAP set out the specific monitoring wells which will be used and the groundwater levels for each well which would trigger a response.

The draft WAP proposes that if the triggers were exceeded, the management response would be in two stages:

1. In the first year, licensees would be notified about the situation and advised that allocations may be reduced in future.
2. If the triggers were exceeded again in the following water use year, allocations would be issued at a reduced entitlement share rate for that consumptive pool, commencing on 1 July of the next (third) water use year. The percentage reduction would be the same for every water licensee in the consumptive pool – resulting in a reduction of the volume allocated to each licensee of a maximum of approximately: 10% in the T1 Northern Adelaide Plains Consumptive Pool; and 15% in the T2 Northern Adelaide Plains Consumptive Pool. Water used for stock and domestic purposes would not be included in the reductions. When the groundwater pressure level recovered to above the trigger level, the entitlement shares would return to their value of 1 share = 1 kilolitre (kL) for the following water use year.

For example, if a licensee in the T1 Northern Adelaide Plains Consumptive Pool has 100,000 entitlement shares and the groundwater resource is considered to be in an acceptable condition, the value of the entitlement share would be 1 kL and the licensee will be issued an allocation of 100,000 kL (100 megalitres (ML)). However, if the resource condition declines to a level that requires a management response (as described above), the value of the entitlement share would reduce to 0.9 kL and the licensee would be issued an allocation for the next water use year of 90,000 kL (90 ML).

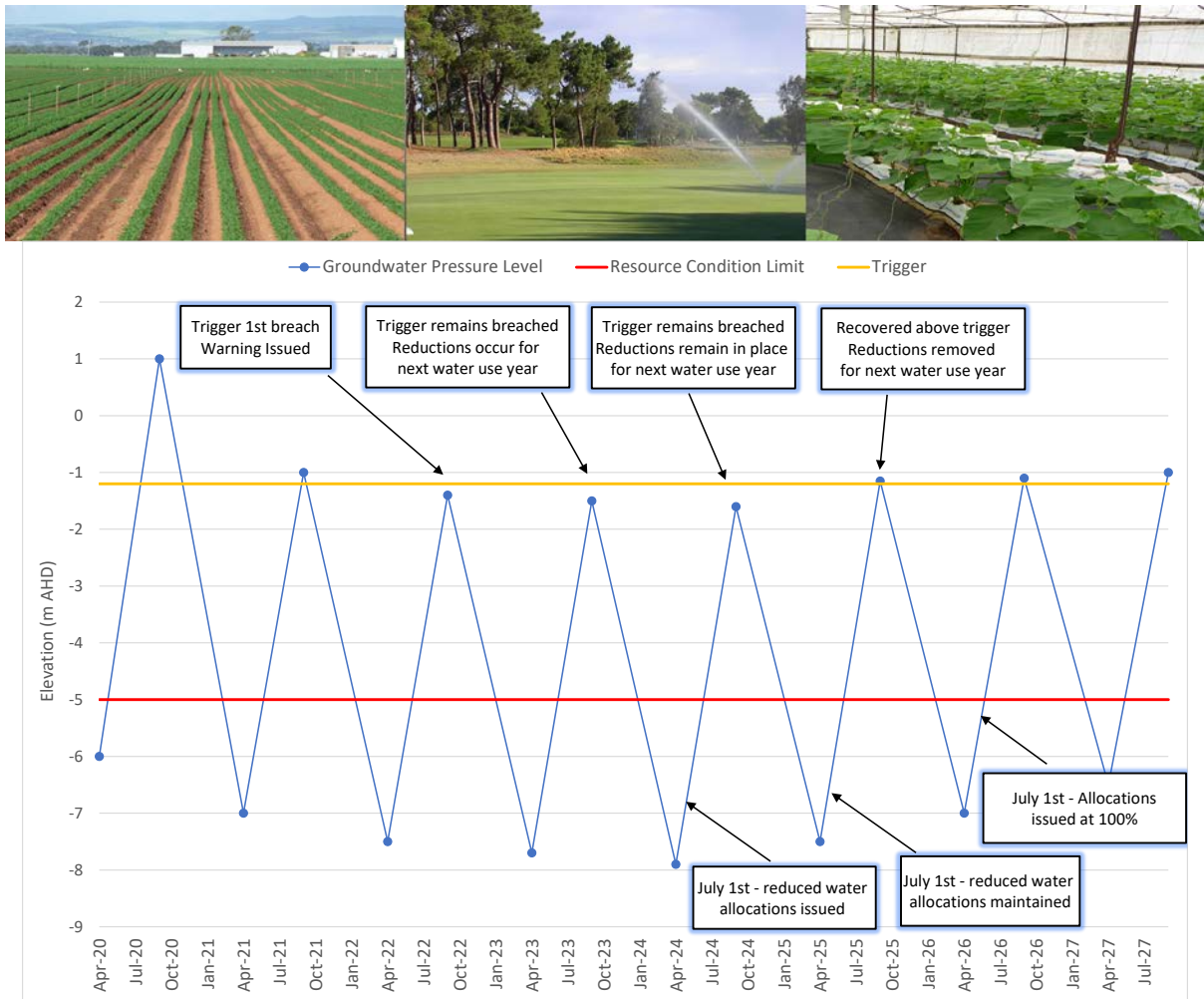


Figure 2. Example of the safety net scheme

### Benefits of the safety net scheme

Allowing existing water entitlements to stay at the current volume for each existing licensee has the significant advantage of providing flexibility to respond to seasonal weather conditions, which is particularly important for irrigators in the Northern Adelaide Plains. Water extraction can increase above current levels for short periods when conditions are drier than usual, provided the long term average use stays stable. The safety net scheme aims to protect the groundwater resource, while allowing this flexible approach to be taken and without having to permanently reduce water entitlements.

The draft WAP also has an overarching objective of encouraging the permanent transfer of some water entitlements from the high risk consumptive pools to other areas where groundwater is still available to be taken. This allows the asset value of unused water entitlements to be realised through transfers while reducing the likelihood of the management actions under the safety net scheme being required, due to reduction of the total volume of entitlements in the higher risk areas.