

Proposed amendments: Three Moon Creek Interim Resource Operations Licence

November 2020

Summary

Sunwater and DNRME are proposing to change existing rules in the Three Moon Creek Water Supply Scheme (WSS) that will enable the following:

- New temporary trading rules to provide water users with certainty on what will and will not be approved by Sunwater.
- Establishment of trading zones for the first time (based on existing section boundaries) to facilitate the new temporary trading rules.
- New operational rules to allow more flexibility for the Irrigation Advisory Committee (IAC) to manage water stored in Cania Dam.
- Amendment to both the surface water and groundwater announced allocation (AA) rules to facilitate the new operational rules.
- Clear specification of the groundwater monitoring bores used for determining the announced allocations when levels in Cania Dam fall below 12.5% storage capacity (11,000 ML).

Background

The Three Moon Creek Water Supply Scheme (WSS) is managed by Sunwater under rules contained in the Three Moon Creek Interim Resource Operations License (IROL). The IROL is issued by Department of Natural Resources, Mines and Energy (DNRME).

The Three Moon Creek WSS is a groundwater recharge scheme. Releases are made from Cania Dam by direction of the Three Moon Creek Irrigation Advisory Committee (IAC) to fill small weirs downstream for recharging the groundwater aquifers. Most scheme customers access their water through groundwater bores. Some customers may also access surface water when releases are made, or from weirs and waterholes while water is available.

Currently, temporary trading in the scheme is subject to approval by Sunwater and this had led to long processing times and uncertainty for customers. The IAC have requested clarification of temporary trading rules to achieve certainty, equity and reduced processing times.

For efficiency, DNRME have also taken the opportunity to propose amendments to deal with ongoing challenges surrounding release restrictions from Cania Dam.

Changes in detail

1. Seasonal water assignment (temporary transfer) rules

The proposed seasonal water assignment rules aim to allow water users greater certainty around whether a trade can occur and what factors Sunwater must consider before accepting a trade. These rules have been developed in consultation with the IAC.

Permitted trades

Permitted trades are small, low risk trades that have been deemed to not require further assessment. These trades can be processed within one-two business days, providing irrigators with certainty that the trade will occur and be processed quickly. When the Announced Allocation (AA) for medium priority groundwater is 75% or above, one permitted trade per customer per year will be allowed subject to limits specified in Table 1. Circumstances may allow for additional trades or trades of greater volumes than those specified in Table 1. These will be assessed on an individual basis, as explained in 'Assessed Trades' below.

Permitted trades will allow irrigators to manage their water with increased effectiveness. These rules have been based on historical trades between customers, and approximately 75% of historical trades would fall into the proposed 'permitted trade' rules.

Table 1: Maximum volumes for permitted trades

Seasonal Water assignment type	Maximum volume per trade (ML)	
	Within same zone	Between different zones
Surface water to surface water	50 ML	N/A
Surface water to groundwater	N/A	50 ML
Groundwater to surface water	N/A	50 ML
Groundwater to groundwater	100 ML	50 ML

Other permitted trades: self-trades

This is to reflect current practices for the few IWA holders who have both surface water and groundwater stated on their allocation or who hold an IWA for both. Self-trades (trading water between water accounts for the same customer) will continue to be allowed under a permitted trade arrangement providing clarity and enabling Sunwater to provide efficient processing times.

Prohibited trades

When medium priority groundwater announced allocations are at or below 50%, all temporary trading between zones will be prohibited. This level represents historical lows in the Three Moon Creek groundwater aquifer at which point any trades would potentially impact negatively on other customers

Assessed trades

If the trade is not specifically permitted or prohibited, Sunwater has set up a transparent framework for accepting and assessing all other trades in Three Moon Creek. As part of this amendment Sunwater has provided the assessment guidelines that it must undertake before accepting or rejecting an application for a temporary transfer. The idea of the assessment guidelines is to ensure that a trade will not create unacceptable impacts on other water users. Assessed trades will have a longer processing time, but with a clear guideline in place this process should provide more clarity, consistency and equity for water users.

2. Establishing trading zones

To more effectively facilitate the proposed temporary trading rules, DNRME has proposed new trading zones based on the current IROL sections. DNRME has undertaken consultation with the IAC and existing customers in both 2018 and 2020 to gather feedback regarding the new trading zones. The proposed zones are explained below in Table 2.

Table 2: Proposed zones for groundwater and surface water

Zone	AMTD (km)	Location
Groundwater zones		
RA	12.6 – 48.5 AMTD	Below Abercorn Gauging Station to Hughes Street, Mulgildie. Includes Avis Weir.
RB	48.5 – 64 AMTD	Hughes Street, Mulgildie to Burke Street/Rifle Range Road, Monto. Includes Bazley Weir.
RC	64 – 69.1 AMTD Monal Creek: 0 – 5.4 AMTD	Burke Street/Rifle Range Road, Monto to Powers Road. Includes Monto Weir, Youlambie Diversion and supplemented section of Monal Creek.
RD	69.1 – 96.2 AMTD	Powers Road to confluence of Cedar Creek and Three Moon Creek. Includes Youlambie Weir.
Surface water zone		
RE	12.6 – 130.6 AMTD	Below Abercorn Gauging Station to Cania Dam full supply ponded area.

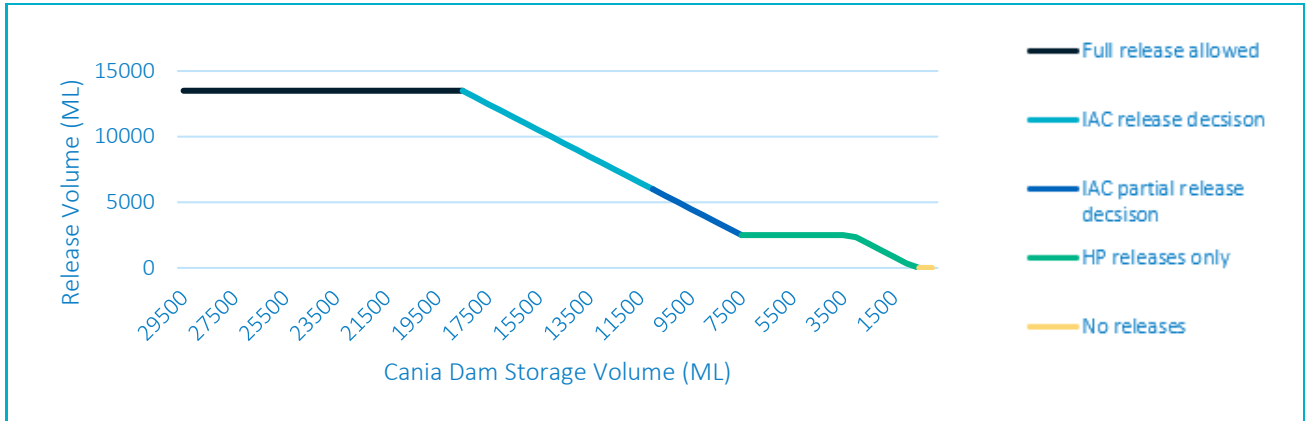
3. Release rules from Cania Dam

The current release rules allow for one or two annual releases up to a combined maximum volume of 13,500 ML when the storage level in Cania Dam is above 26,700 ML (EL 319.18 mAHD or 30% storage capacity). When Cania Dam is below 26,700 ML only a winter release of up to 6,000 ML can be made, if available. These releases are to be made to the downstream weirs where they recharge the groundwater aquifer and allow for opportunistic surface water use.

The IAC and other customers have identified that holding water in Cania Dam can be inefficient, particularly in dry times, noting the groundwater aquifer could store more water. In these circumstances, the release has not made it to Mulgildie Weir due to groundwater recharge along the waterway.

In consultation with scheme irrigators, DNRME is proposing a more flexible arrangement to the release rules to allow for water to be stored in the aquifer, where possible, while still allowing the IAC to make the release decision. The full release of 13,500 ML will remain available, but the release level threshold has been reduced to 18,500 ML (EL 316.34 mAHD or 21%). When the level in Cania Dam falls below 18,500 ML, the IAC can make a partial release of anywhere from 2,500 ML to 13,500 ML, based on the level in the dam. This release can reduce the volume in the dam down to 5,000 ML. However, if the level in Cania Dam is below 7,500 ML (EL 310.31 mAHD or 8.5%) at the start of the water year, all water in the dam is reserved for high priority use. In this scenario, up to 2,500 ML may be released for high priority per year. This reserve allows for two high priority releases (i.e. two consecutive years), with the understanding that the dam level can be drawn down to dead storage. Figure 1 demonstrates the proposed maximum releases allowed based on the dam storage volume.

Figure 1: Proposed operational release rules indicating when and how much can be released based on the storage volume



4. Announced allocation (AA) amendment to allow for proposed release rules

Similarly to the operational rules, the Cania Dam levels that determine AA have been reduced, as per Table 3 and graphically represented in Figure 2.

When levels in Cania Dam fall below 11,000 ML (EL 312.69 mAHD), groundwater AA will be determined by zone based on the water levels in the aquifer. Three monitoring bores per zone (as indicated in Table 4) will be used and have been assigned a target water level. If at least two of the three monitoring bores meet or exceed the target water level the AA will be 50%. If at least two of the three bores indicate below the target water level, the AA will be 25%. Once an AA has been declared it cannot be reduced.

Table 3: Proposed AA trigger levels

Trigger levels that determine medium priority AA						
Volume at trigger level (ML)		≥ 18,500	≥ 11,000 to < 18,500	< 11,000	< 11,000 AND target bore water levels are met/higher	< 11,000 AND target bore water levels are not met/higher
Type of IWA (water source)	Groundwater	100%	75%		50%	25%
	Surface water located at Cania Dam, weirs and waterholes	100%	100%	0%		
	Surface water not on a weir or waterhole	100%	50%	0%		

Figure 2: Proposed indicator trigger levels for AA in Cania Dam

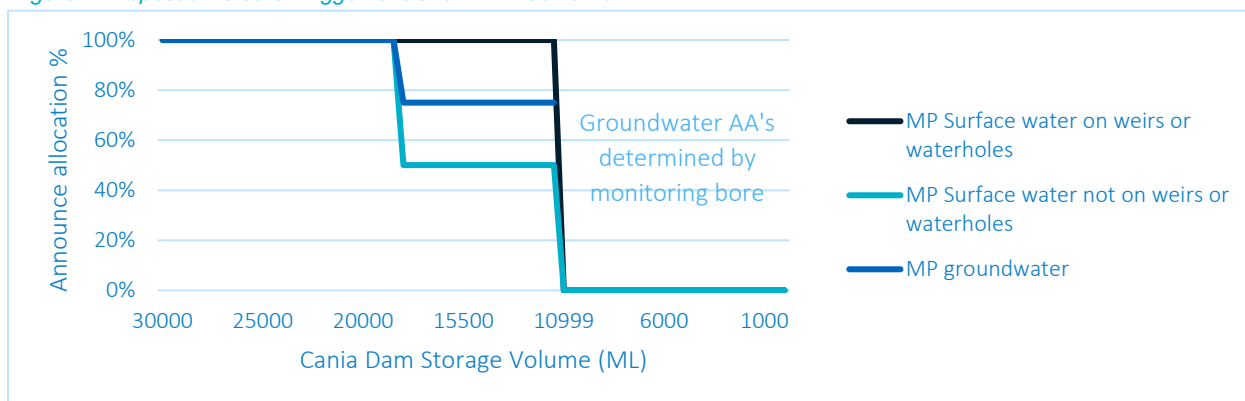


Table 4 – Proposed observation bores for determining groundwater announced allocation

Zone	Key indicator bores	Target water level (mAHD)	Zone	Key indicator bores	Target water level (mAHD)
RA	RN 13610458	200.43	RC	RN 13610036	220.42
	RN 13610116	200.30		RN 13610038	216.45
	RN 13610128	190.16		RN 13610043	215.59
RB	RN 13610077	212.74	RD	RN 13610409	234.85
	RN 13610359	204.14		RN 13610237	229.60
	RN 13610246	201.69		RN 13610228	249.27

Understanding the impacts

The proposed changes have been undertaken in consultation with both DNRME and the IAC. Sunwater is committed to working with the IAC and customers as we transition into the water planning framework. If future impacts are raised, Sunwater can work with DNRME and the IAC to resolve through future IROL amendments or by resolving them through the transition of the scheme into the ROL.

Next steps

Sunwater is currently undertaking consultation with all Three Moon Creek customers to understand any concerns and welcome feedback. Once this is completed, Sunwater will finalise the proposed amendments in collaboration with the IAC and make a formal application to DNRME to amend the Three Moon Creek IROL. Sunwater aims to make this application in December 2020.

DNRME has legislative steps they must undertake to assess and approve the application. One of these steps includes a 30-business day notification period where the changes are publicly advertised and accessible. If accepted by DNRME, the new IROL will be approved in early 2021. If accepted by DNRME, the new IROL will be approved in early 2021 and will commence in line with the new water year, 1 July 2021.

Once approved by DNRME, Sunwater can commence taking action around the 200 ML of high priority water that was surrendered by Council. Sunwater will continue to work with the IAC on an acceptable approach to managing this IWA, with the aim of taking it to auction as medium priority IWA in 2021.

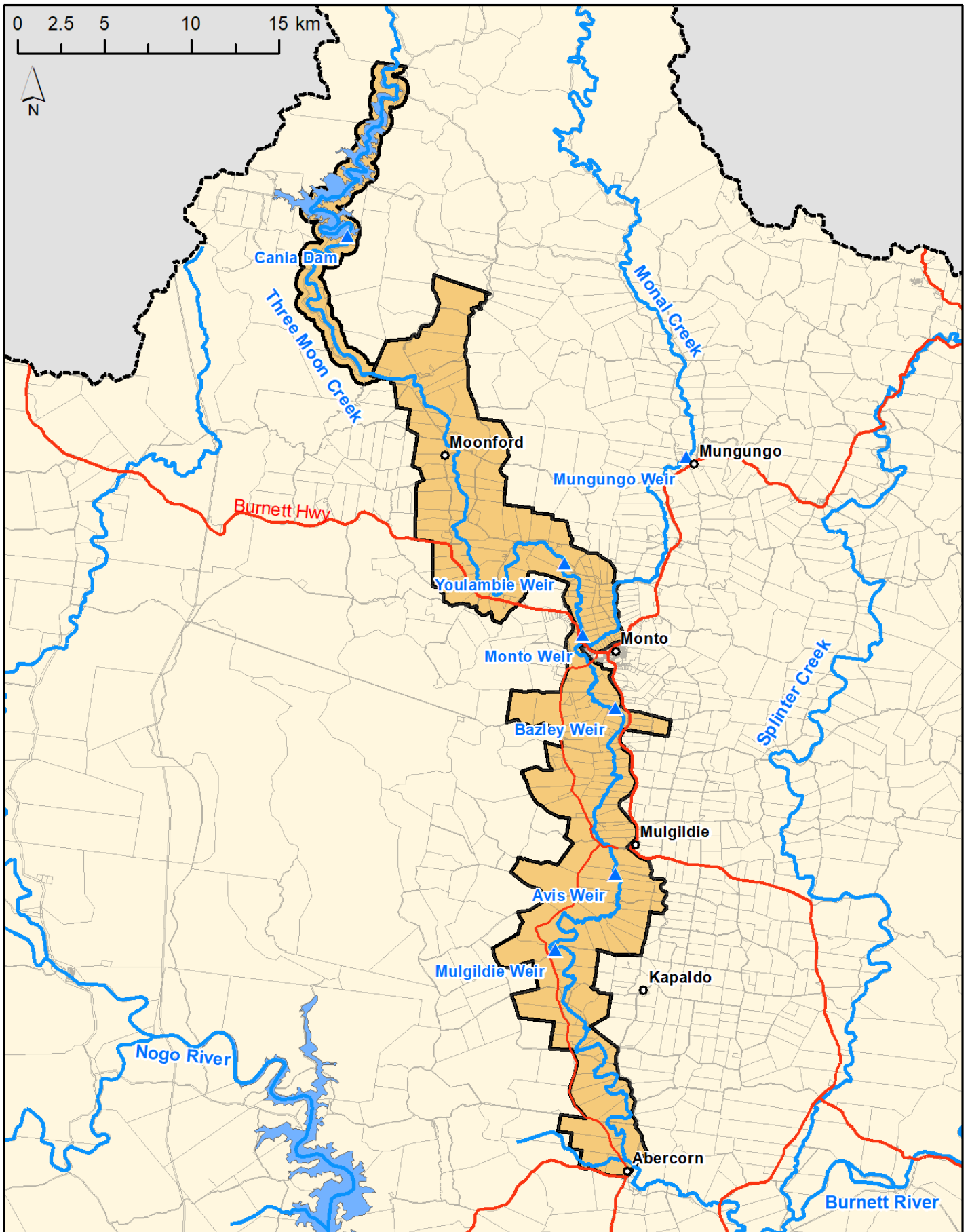
Submitting feedback

Should you wish to raise concerns, discuss these amendments further, or submit feedback please contact your relevant area's IAC committee member. Please refer to Table 5 to identify your relevant representative.

Table 5 – Three Moon Creek IAC representatives

Name	Position	Representative Area/Section
Paul Francis	Chairperson	-
Lindsay Penney	Committee Member	Section 5 – Allan Downie Property to Bunyip Hole
Russ Salisbury	Committee Member	Section 3 – Youlambie Weir to Monto
Brad Forsyth	Committee Member	Section 1 A – Upper Section
Chris Abbott	Committee Member	Section 1 B – Lower Section
Jason Larsen	Committee Member	Section 4 – Monto to and including Harold Kerle Property
Alan Little	Committee Member	Section 6 – Bunyip Hole to Abercorn

Alternatively, to discuss any content in this fact sheet further, or for general enquiries, please contact customer support on 13 15 89 Monday-Friday 8.30am-4.30pm or email your enquiry through to customersupport@sunwater.com.au.



Three Moon Creek Water Supply Scheme Area

Legend

- ▲ Existing storage
- Watercourse
- Three Moon Creek water supply scheme area
- Burnett Basin Water Plan area
- DCDB

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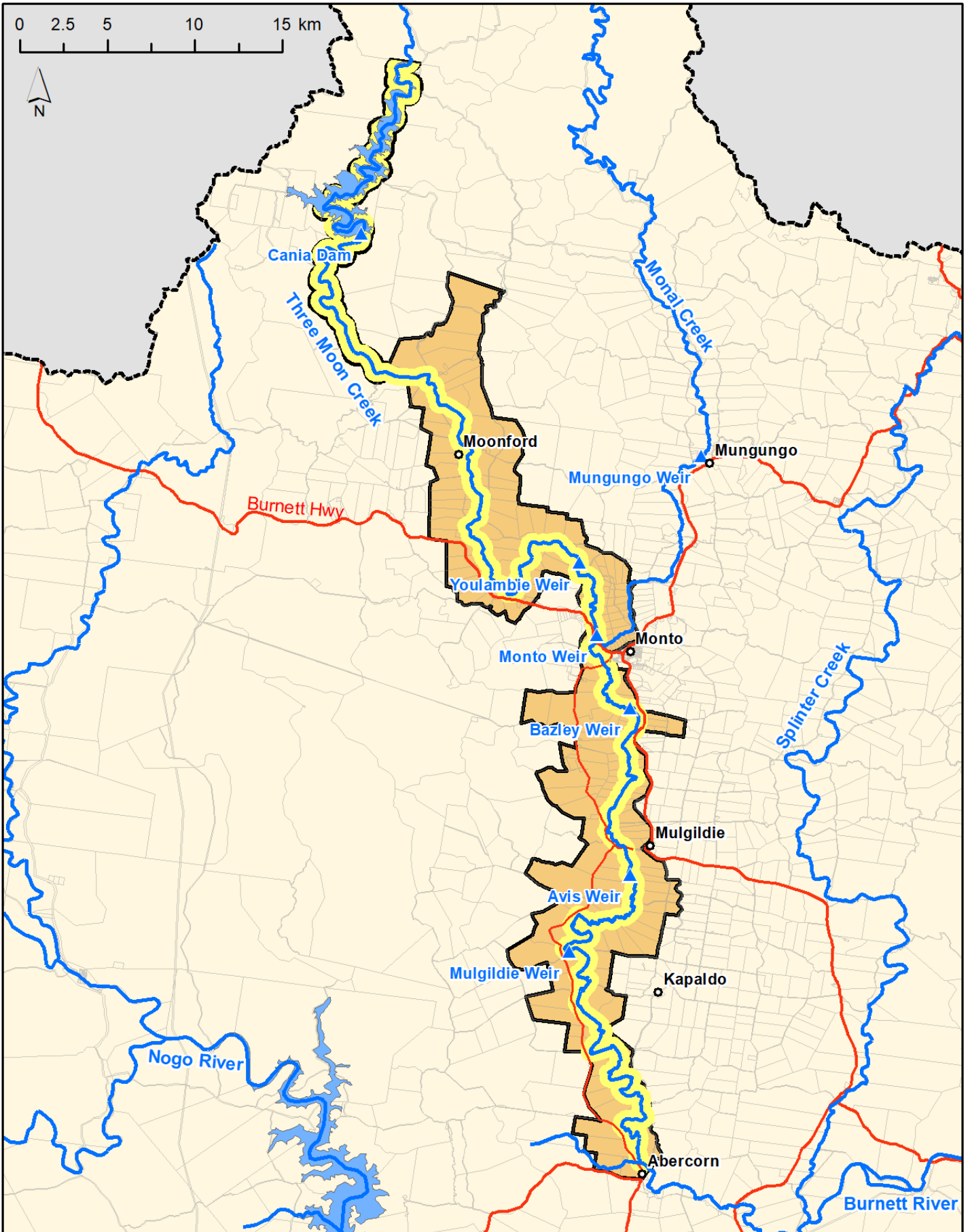
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Three Moon Creek Water Supply Scheme - Proposed Surface Water Zone RE

Legend

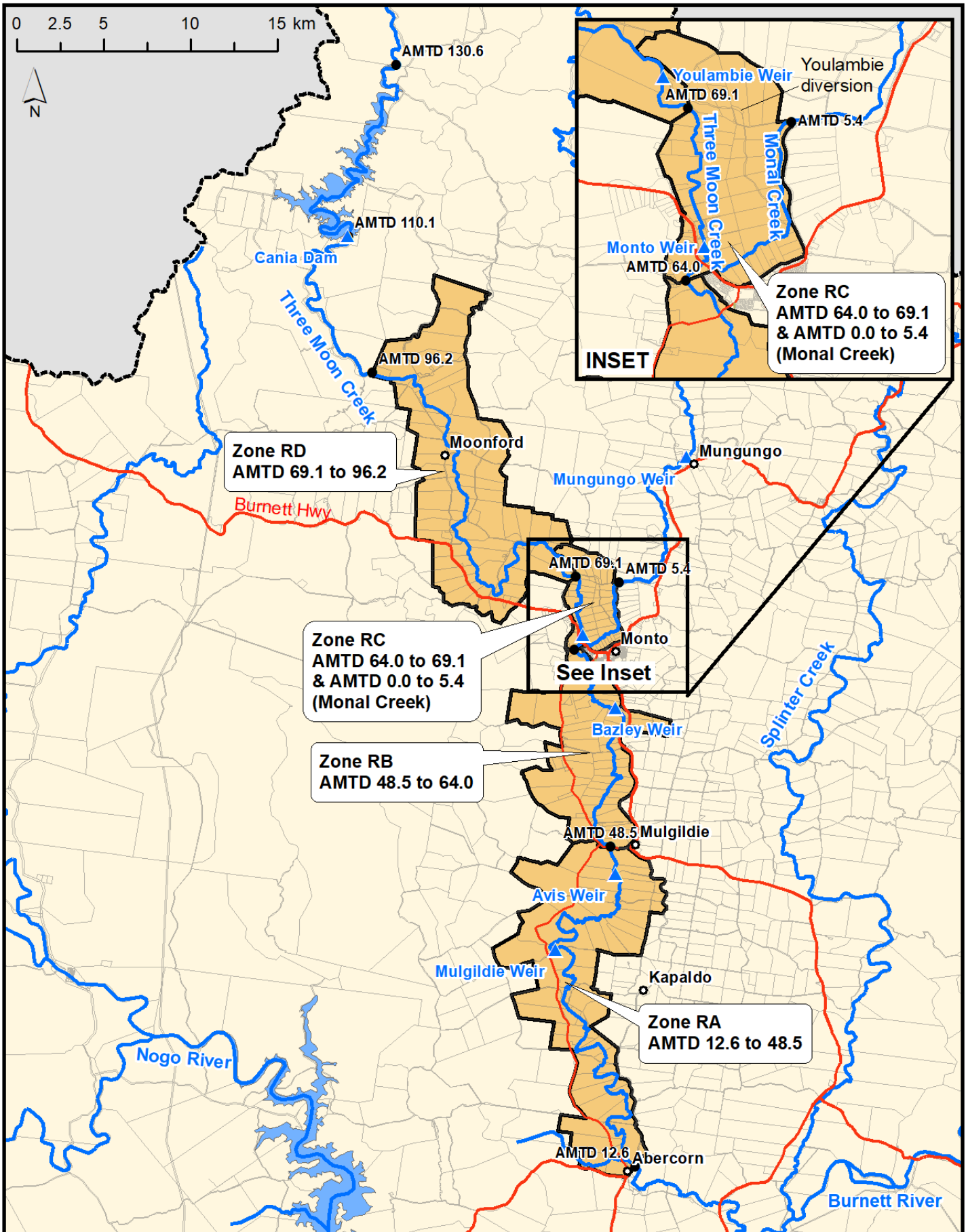
- ▲ Existing storage
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- Three Moon Creek surface water zone RE
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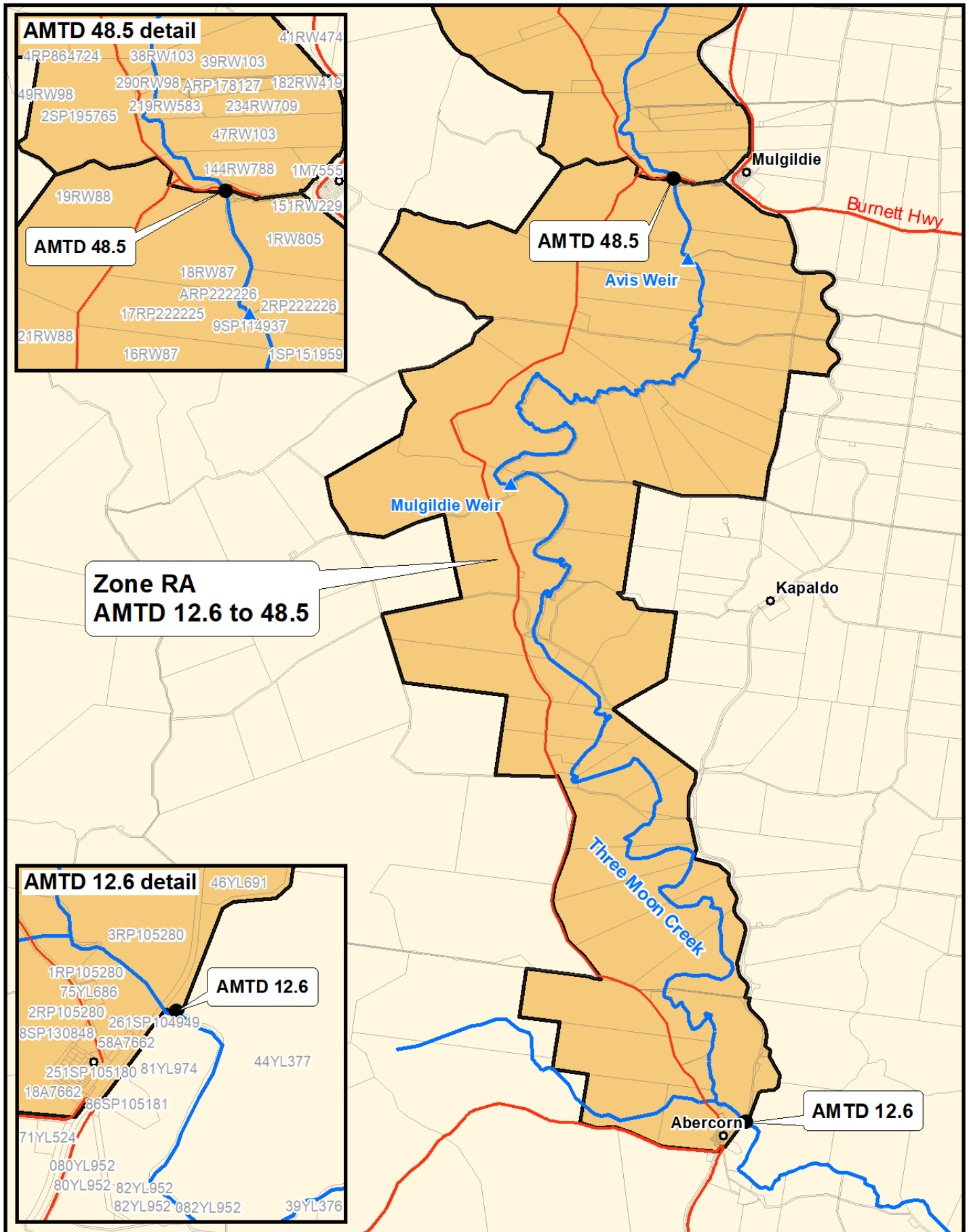
Three Moon Creek Water Supply Scheme Proposed Groundwater Zones

Legend

- ▲ Existing storage
- Watercourse
- Three Moon Creek groundwater zones
- Burnett Basin Water Plan area
- DCDB

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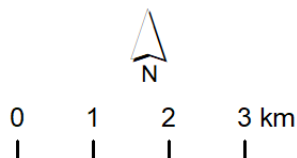




Three Moon Creek Water Supply Scheme Proposed Groundwater Zone RA

Legend

- Three Moon Creek zone AMTD
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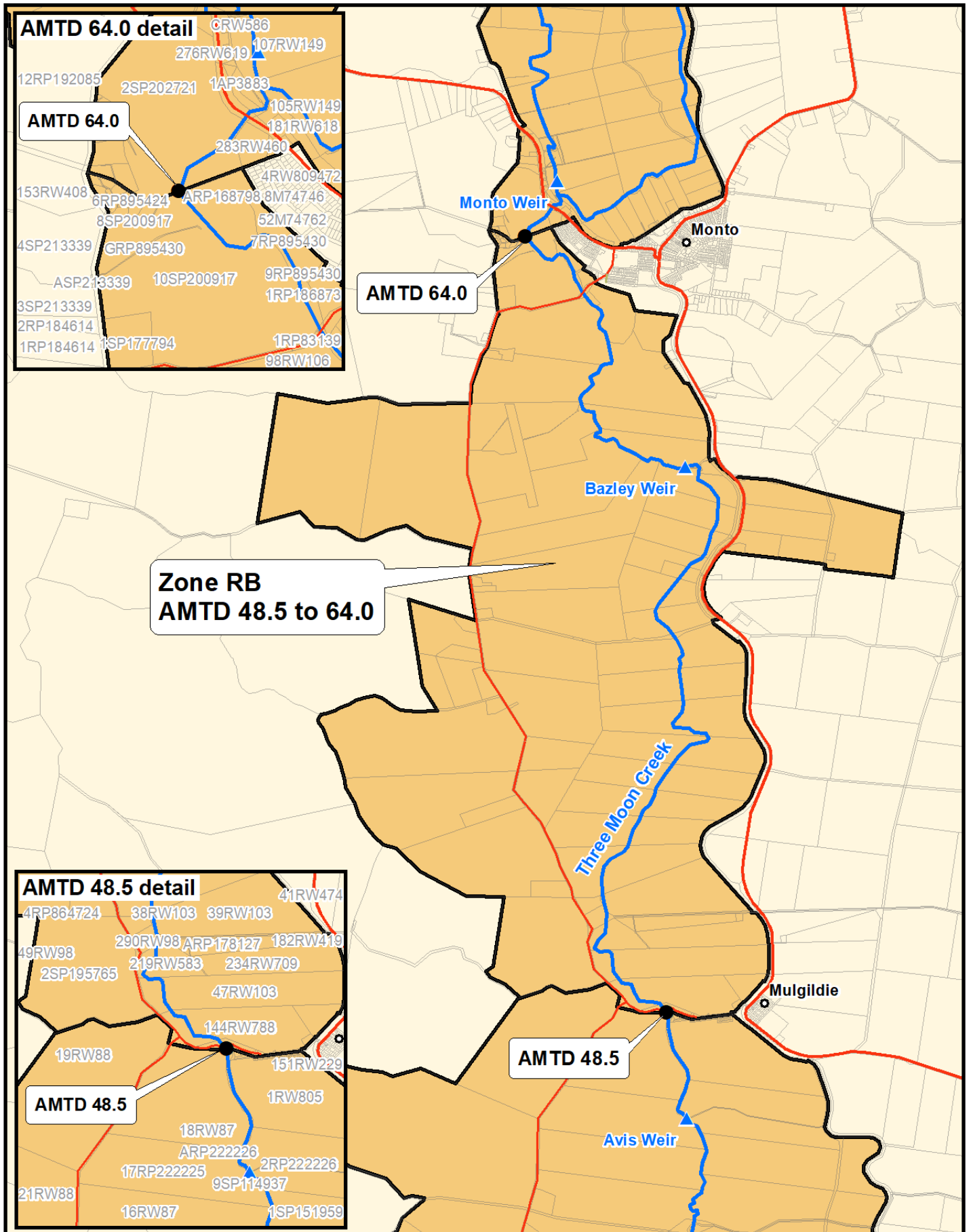


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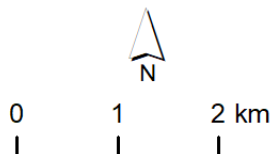
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Three Moon Creek Water Supply Scheme Proposed Groundwater Zone RB

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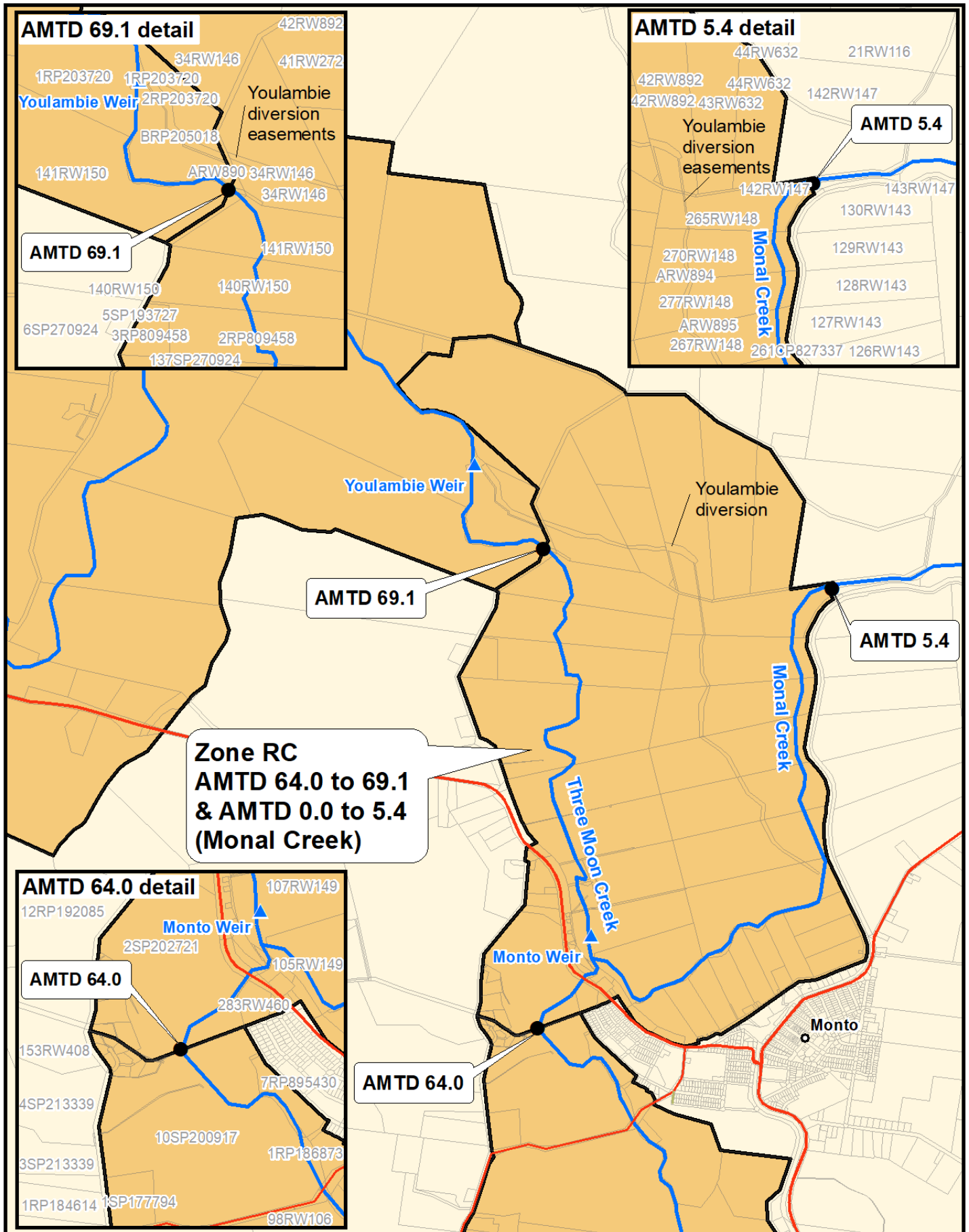


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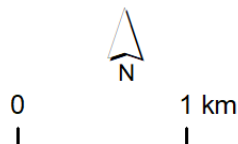
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Three Moon Creek Water Supply Scheme Proposed Groundwater Zone RC

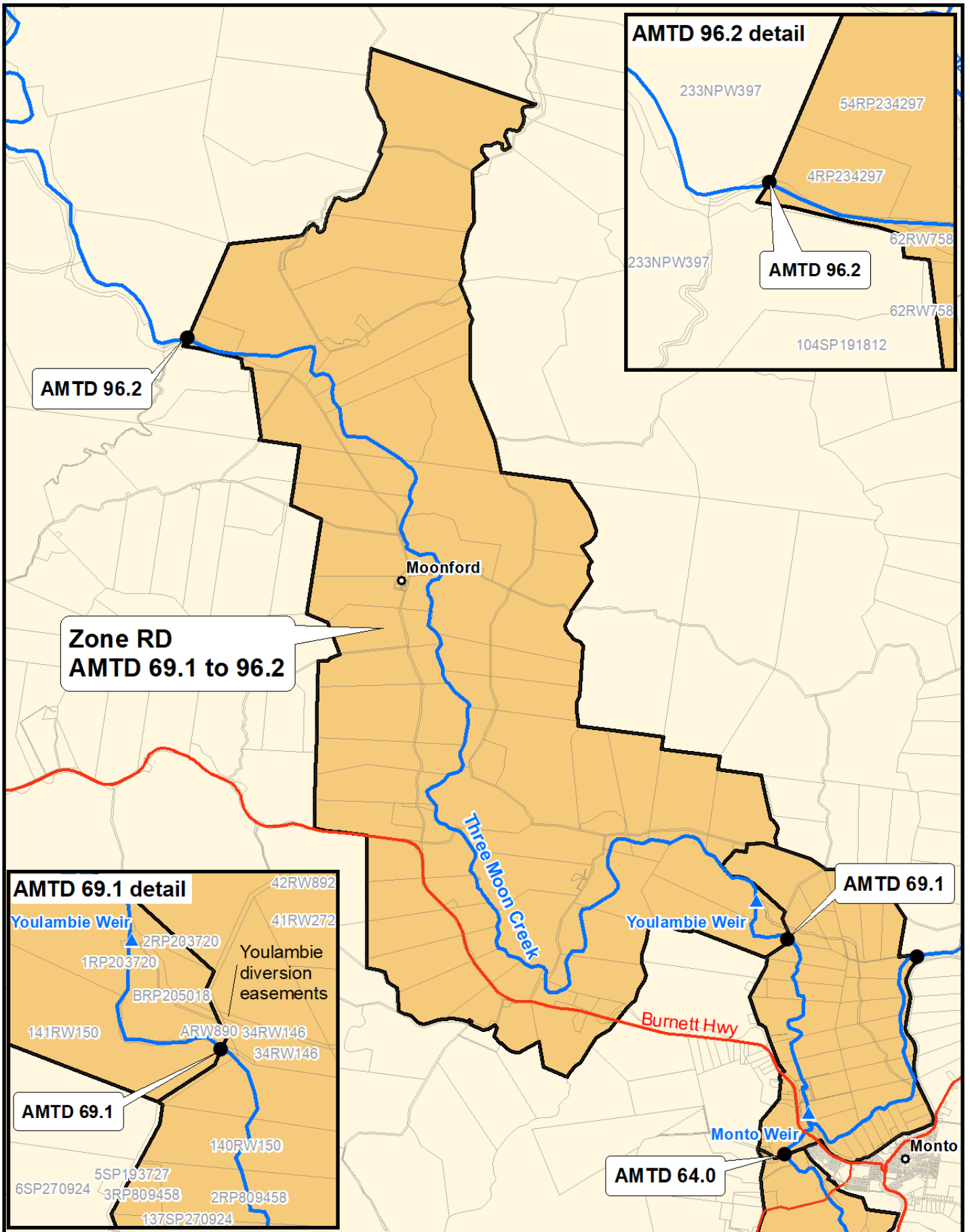
Legend

- Three Moon Creek zone AMTD
- ▲ Existing storage
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- Three Moon Creek groundwater zones
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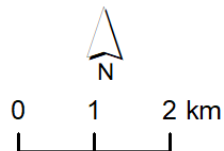




Three Moon Creek Water Supply Scheme Proposed Groundwater Zone RD

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