



CHAPTER 8

LEGAL AND REGULATORY CONSIDERATIONS

Nullinga Dam and Other Options Preliminary Business Case



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8 LEGAL AND REGULATORY CONSIDERATIONS

CHAPTER SUMMARY AND CONCLUSIONS

Water resource planning and pricing

- Water planning regulation is changing:
 - *Water Reform and Other Legislation Amendment Act 2014* introduced a new water planning framework to provide a more streamlined and responsive approach to water planning, including transitioning content of Resource Operations Plans (ROP) to a suite of new water instruments
 - *Water (Local Management Arrangements) Act 2017* deals with local area ownership and management of channel irrigation schemes.
- The current Barron Water Plan will continue to operate until 19 December 2022. The MDWSS is the only water supply scheme included in the Barron Water Plan area. SunWater is the holder of the Resource Operations Licence for the MDWSS. There are no provisions in the statutory water instruments which provide for development of Nullinga Dam.
- The Barron Water Plan provides water allocations must either be for ‘rural’, ‘distribution loss’ or ‘any’ purpose. Pricing and the sale of allocations is dealt with under the Water Act. SunWater’s approval (as the Resource Operations Licence holder) is required to seasonally trade water allocations.
- The Queensland Competition Authority price path for Sunwater’s irrigation prices for the MDWSS and Mareeba-Dimbulah Distribution System will apply until 30 June 2019.
- The National Water Initiative principles for cost recovery for new or capital expenditure apply to rural surface water systems. The principles include charges will be set to achieve full cost recovery of capital expenditure (net of transparent deductions/offsets for contributed assets and developer charges and transparent community obligations) through either a return of capital and return on capital (upper bound pricing) or a renewals annuity and a return on capital (lower bound pricing).

Option 2: Improve MDWSS rules and operation

- The measures in Option 2 will primarily require changes to the Barron ROP, as deconstructed into the new water instruments, and Resource Operations Licence.
- Unless modification is made to existing bulk releases, no pricing issues are expected, as there are no capital costs and no new allocations created. There have been no identified issues with approvals as this option only proposes changes to the operation of the existing MDWSS rather than physical works to it.

Option 3: Modernise MDWSS and convert losses

- This option will require changes to the Barron Water Plan, Barron ROP (as deconstructed) and Resource Operations Licence.
- A two-step process will be involved in converting ‘distribution losses’ to ‘any’ purpose water allocations: (1) subdivision of the existing ‘distribution loss’ water allocation into two new water allocations; (2) conversion of one of the subdivided water allocations to ‘any’ purpose – the other remaining as ‘distribution loss’.



- SunWater will have the flexibility to sell, lease for a period of years or enter into seasonal water assignments in respect of all or part of that converted water allocation. Prices will need to consider the NWI principles for any government grant (contributed assets). SunWater will also need to make a submission to the QCA to the extent that the option results in capital costs and operation and maintenance costs.
- The works for Option 3 are relatively confined in nature and are unlikely to require many approvals. The limited approvals may be related to vegetation clearing, operational works and riverine protection permits. Some land acquisition may be required. Further investigation will determine the nature of approvals required.
- The potential transfer of the MDWSS to local management may occur prior to, during the course of or following completion of the implementation of Option 3. It will be important to ensure the water charges determined to be payable by customers are sufficient to allow SunWater or a local management 'irrigation entity' to meet all of its liabilities.

Option 4: Nullinga Dam for agricultural use

- The statutory water instruments do not allow for Nullinga Dam: no water is reserved and environmental flow objectives are set at 99 per cent. Changes would be required to the Barron Water Plan, Barron ROP and Resource Operations Licence.
- NRM will have the flexibility to sell the water allocations by public auction, tender or fixed price sale. The terms of sale may be used to facilitate customer pre-commitments by allowing the sale of water conditional upon sufficient water demand and/or the construction of Nullinga Dam. Pricing for new water allocations would need to comply with the NWI principles so that a return on and of contributed capital is not recovered from customers. A referral may be made to the Queensland Competition Authority in relation to pricing practices.
- Nullinga Dam will give rise to environmental impacts, native title, land access and approvals issues. Tenure would be required for the dam wall and inundation area and additional land may be required for construction purposes.

8.1 Introduction

This chapter examines the legal and regulatory aspects of the shortlisted options both from a water resource planning perspective (including pricing) and infrastructure approvals and land access perspective.

Discussion of the relevant legal/regulatory issues for the purposes of this chapter is at a level considered appropriate for the PBC stage. Issues may require more detailed consideration in a DBC stage.

8.2 Water Planning and Pricing Regulatory Context

8.2.1 *Water Act 2000 (Qld) & Water Regulation 2016 (Qld)*

Sustainable water resource management in Queensland is regulated by the *Water Act 2000 (Qld)* (Water Act) and the *Water Regulation 2016 (Qld)* (Water Regulation). The Water Act establishes a system for the planning, allocation and use of water under a sustainable management framework. This concept of 'sustainable management' under the Water Act was recently refined by amendments introduced by the



Water Reform and Other Legislation Amendment Act 2014 (Qld) (WROLA Act) which relevantly commenced on 6 December 2016 and now includes principles of ecologically sustainable development.¹

The *Water (Local Management Arrangements) Act 2017* (WLMAA) was passed by the Queensland Parliament on 16 February 2017. The WLMAA deals with local area ownership and management of channel irrigation schemes, discussed later in this chapter.

Prior to the WROLA Act amendments, water resource planning was implemented via a hierarchy of instruments created under the Water Act:

- Water Resource Plan (WRP)
- Resource Operations Plan (ROP)
- Resource Operations Licence (ROL)
- Distribution Operations Licence (DOL).

Relevant to this PBC, these are the:

- Water Resource (Barron) Plan 2002
- Barron Resource Operations Plan 2005
- Mareeba Dimbulah Water Supply Scheme (MDWSS) Resource Operations Licence dated 17 June 2005 held by SunWater.

There is no DOL for the MDWSS as the distribution infrastructure is operated under the authority of the MDWSS ROL as SunWater is the owner and operator of both Tinaroo Falls Dam and the distribution infrastructure.

8.2.2 New Water Planning Framework

As of 6 December 2016, the WROLA Act amendments introduced a new water planning framework intended to provide a more streamlined and responsive approach to water planning in Queensland. This new framework renamed Water Resource Plans, (now known as Water Plans), and transitioned the content of Resource Operations Plans (ROP) to a suite of water instruments as set out in Table 1.

Table 1 WROLA Act—Changes to Water Instruments

PREVIOUS WATER INSTRUMENT	NEW WATER INSTRUMENT (POST 6 DECEMBER 2016)
Water Resource Plan (WRP)	Water Plan
Resource Operations Plan (ROP)	Water Plan Operations Manual (supplemented water) Water Management Protocol (unsupplemented water) Resource Operations Licence (ROL) Distribution Operations Licence (DOL) Water Licence

Under the new regime therefore ROPs are replaced by the new instruments. The Water Act transitional provisions dealing with these new arrangements provide that various parts of existing ROPs are taken to be

¹ Water Act, section 2(2).



omitted from the ROP and included in another instrument e.g. a ROL or are taken to be omitted from the ROP and taken to be another instrument e.g. an Operations Manual.

The transition to the new planning framework does not affect existing water entitlements or the rules that currently apply to them. It only affects the documents in which they are recorded and the means by which they can be amended in the future.

Further details of the deconstruction and transitioning of specific content of ROPs to the new planning framework is set out in the table 7 at the end of this chapter.

8.2.3 Barron Water Plan

The Water Resource (Barron) Plan 2002, now called the Barron Water Plan, is subordinate legislation prepared under the Water Act.² It sets out the management framework for water resources in the Barron catchment area and outlines outcomes, objectives and strategies for achieving a sustainable balance between water for industry, irrigation and urban use and the environment.

A Water Plan would ordinarily expire 10 years after it was introduced, but in this case, the Minister for Natural Resources and Mines granted an extension under the Water Act such that the Barron Water Plan will continue to operate until 19 December 2022.³

The Barron Water Plan specifies environmental flow objectives (EFOs) and water allocation security objectives (WASOs) and associated performance indicators.

- EFOs – These are the flows specified in the Water Plan as being necessary to protect the environment.⁴
- WASOs – These are the performance standards that the holder of a water allocation can expect from their allocation.⁵

Limited unallocated water is available within the area included in the Water Plan (the Plan Area). There is 300 ML of unallocated water held as a general reserve within subcatchment area B and 4,000 ML of unallocated water held as a strategic reserve in subcatchment area A.⁶ The strategic reserve in subcatchment area A is only available to be taken from the Barron River at Lake Placid for use in the Cairns local government area. There is no strategic infrastructure reserve under the Water Plan.

The Barron Water Plan recognises that, for converting authorisations to water allocations, the purpose of a water allocation must either be for ‘rural’, ‘distribution loss’ or ‘any’ purpose.⁷ For the granting of an unallocated water reserve, unallocated water held as a general reserve must be granted for the purpose of ‘any’ and unallocated water held as a strategic reserve must be granted for the purpose of ‘town water supply’.

The existing MDWSS is the only water supply scheme included in the Barron Water Plan Area. The Plan does not currently provide for, nor contemplate the potential development of, another bulk storage facility such as the Nullinga Dam. The Water Plan would require amendment to allow for the provision of new water allocations from Nullinga Dam.

² Water Act, section 42.

³ Water Act, sections 53-54, Water Resource (Barron) Plan (Postponement of Expiry) Notice 2014 (published in the Government Gazette on 15 August 2014).

⁴ Barron Water Plan, sections 17-18, schedule 5.

⁵ Barron Water Plan, sections 19-20, schedule 6, parts 1 and 2.

⁶ Barron Water Plan, section 24B.

⁷ Barron Water Plan, section 33.



8.2.4 Barron Resources Operations Plan 2005

The Barron Resource Operations Plan 2015 (Barron ROP) was prepared under the Water Act in June 2005 and was subsequently amended in October 2011, June 2013 and September 2015.

The MDWSS is the only Water Supply Scheme included in the Barron ROP. The Barron ROP defines the rules for water supply schemes, water infrastructure and water entitlements within the Barron Water Plan area. In its current form, the Barron ROP does not include a process for the release of an unallocated water reserve that would provide for the potential development of Nullinga Dam as a new bulk storage facility, either as part of the MDWSS or under a new scheme.

As noted above, as of 6 December 2016, ROPs no longer exist – their content has been deconstructed and transitioned over to various other water instruments, primarily the MDWSS ROL and the Operations Manual for the ROL. MDWSS ROL

A ROL can only be held by the owner of the water infrastructure to which the licence applies.⁸ In this case, in conjunction with preparation of the Barron ROP, the ROL for the MDWSS was issued to SunWater on 17 June 2005.

8.2.5 Amending Water Instruments

The Water Act and the water instruments themselves collectively contemplate that amendments may need to be made to the instruments and identify the processes for doing so.

Several of the shortlisted options will require amendments to all or some of the existing water instruments to a certain degree as well as, in the case of Option 4, the creation of new water instruments as part of a new water supply scheme. The specific amendment requirements for the various options are set out in this chapter.

8.2.6 Water Pricing: Water Allocations—Sales and Secondary Trading under the Water Act

8.2.6.1 Sale of New Water Allocations

Several of the shortlisted options will involve the creation of new water allocations, particularly Option 4.⁹

Pricing and sale of allocations is dealt with under the Water Act. The Chief Executive of Department of Natural Resources and Mines (DNRM) has power under the Water Act to release unallocated water by public auction, tender, fixed price sale or grant for a particular purpose.¹⁰ The Chief Executive of DNRM also has the power under the Water Act to set a price for unallocated water.

8.2.6.2 Trading of Existing Water Allocations (Seasonal Assignments and Non-seasonal Assignments)

Water allocation dealing rules (including for the transfer or lease of water allocations) may be prescribed in a regulation, the relevant Water Management Protocol (for permanent trading rules) or the relevant Operations Manual (for seasonal assignments).¹¹

Seasonal water assignment rules are generally those pertaining to non-permanent assignments. Water trading rules however generally contemplate permanent assignments. The WROLA Act amendments have

⁸ Water Act, section 176(2).

⁹ Water Act, section 40.

¹⁰ Water Regulation, sections 16-21.

¹¹ Water Act, section 158.



transitioned seasonal water assignment rules of a ROP to an Operations Manual and water trading rules to a Water Management Protocol (for both supplemented and unsupplemented water).

Under the seasonal water assignment rules for the MDWSS, the approval of the ROL holder (i.e. SunWater) is required to seasonally trade water. Such approval may only be issued where the total water use in a water year for each zone specified in the Operations Manual does not exceed specified maximum water use volumes.

8.2.7 Water Pricing: National Water Initiative Pricing Principles

The Commonwealth and each of the States and Territories of Australia, including Queensland, are parties to the Intergovernmental Agreement on a National Water Initiative dated 25 June 2004 (NWI Agreement). Pricing Principles have been agreed pursuant to the NWI Agreement and include – ‘Principle 1: Cost recovery for new capital expenditure’ – which applies to rural surface and groundwater based systems.¹²

For new or replacement assets, Principle 1 generally provides that charges will be set to achieve full cost recovery of capital expenditure (net of transparent deductions/offsets for contributed assets and developer charges (refer to principle 6) and transparent community service obligations) through either:

1. a return of capital (depreciation of the Regulated Asset Base (RAB)) and return on capital (generally calculated as rate of return on the depreciated RAB); or
2. a renewals annuity and a return on capital (calculated as a rate of return on an undepreciated asset base (Optimised Replacement Cost (ORC))).

Paragraph 1 above reflects ‘*upper bound pricing*’ and paragraph 2 reflects ‘*lower bound pricing*’ from the NWI Agreement.

8.2.8 Water Pricing: QCA Act and Report

8.2.8.1 QCA Price Paths

Under the *Queensland Competition Authority Act 1997* (Qld) (QCA Act), the Minister (being the Treasurer and Minister for Trade and Investment) may refer a monopoly business activity to the Queensland Competition Authority (QCA) for an investigation about the pricing practices relating to the activity.¹³

As a result of a Ministerial referral under the QCA Act, in May 2012, the QCA delivered its Final Report SunWater Irrigation Price Review: 2012-17 (QCA Report). The QCA Report sets various price paths in relation to SunWater’s irrigation prices for, amongst others:

- the Mareeba-Dimbulah Water Supply Scheme
- the Mareeba-Dimbulah Distribution System.

The current irrigation price paths apply from 1 July 2012 to 30 June 2017 and the government has proposed to continue the current irrigation pricing policies for the period from 1 July 2017 to 30 June 2019.

The price paths are set to reflect efficient operational, maintenance, and administrative costs, and prudent and efficient expenditure on renewing and rehabilitating existing assets through a renewals annuity. The return on and of prudent augmentation capital expenditure would be recovered as part of the renewals annuity. The price paths exclude, relevantly, a rate of return on existing assets although, in recommending

¹² NWI Principle Principles: Principle 1: Cost recovery for new capital expenditure, paragraph 13.

¹³ QCA Act, section 23.



practices, the QCA is required to (amongst other things) provide for a commercial return on, and of, prudent capital expenditure in respect of augmentation assets constructed after 30 June 2012.

To address the risks which SunWater may face due to potential changes in market conditions for inputs, or as a result of regulatory imposts, the QCA has recommended that, depending on the circumstances, cost risks may be managed through the mechanisms set out in Table 2.

Table 2 Queensland Competition Authority: Cost Risk Mechanisms

MECHANISM	CONDITION
End of regulatory period revenue adjustments (which impact future prices)	Only efficient costs beyond SunWater’s control should be eligible, on receipt of a relevant submission from SunWater
Price review triggers to allow a review of costs (and prices) during the regulatory period	Initiated only if SunWater is able to demonstrate material differences between forecast and efficient costs that it is unable to manage, and that the differences could not have been reasonably forecast at the time prices were set. The QCA did not pre-define a threshold for a review trigger but rather will make an assessment on application from SunWater or customers.
Cost pass-through mechanisms to allow adjustments to prices during the regulatory period	Cost pass through may be appropriate when the nature of costs can be reasonably foreseen and the subsequent change unambiguous. Government imposed regulatory imposts are relevant.

The QCA has noted that it expects that most cost variations should be resolved through end-of-period adjustments except potentially for electricity and flood damage costs, once known. This expectation may sit fairly comfortably with the timing of options involving changes to the existing MDWSS.

8.2.8.2 Distribution Charges and Water Charges under SunWater’s Standard Supply Contracts

Under SunWater’s standard supply contract (SunWater Supply Contract, Channel and Pipeline Standard Conditions Schedule 3 Version 2) (Standard Channel SC), a customer must pay to SunWater the Distribution Charges for specified Distribution Services.

Distribution Charges are determined based on the Regulated Charge, being *“a charge payable to SunWater for any service to be provided under this Agreement as set as a rate or charge or required to be charged for the Customer by SunWater, under any Law.”*

The relevant prices recommended by the QCA’s price paths form the basis of the Regulated Charges and, consequently, the Distribution Charges, which are charged to the relevant customers under the MDWSS. Any changes to the relevant prices as recommended by the QCA’s price paths therefore flow through to customers under SunWater’s Standard Channel SC.

A similar mechanism applies under SunWater’s Supply Contract River Standard Conditions Schedule 3 Version 2 (Standard River SC) in relation to the Water Charges which a customer must pay to SunWater for specified Release Services. Bulk water services are provided in accordance with the Standard River SC.

8.2.8.3 Changes to the Terms of a Supply Contract

Under both the Standard Channel SC and Standard River SC, SunWater may amend the terms and conditions of the contract on each five-year anniversary of the contract (i.e. the Review Date) provided SunWater has undertaken prior consultation with a customer (or group representing the customers) and provided three months’ notice to the customers.



If accepted by the customer in writing, then as and from the relevant Review Date, the relevant supply contract will be replaced by a new agreement with the new terms and conditions.

If the customer does not accept the new terms and conditions by the relevant Review Date, SunWater may:

- elect to continue to supply the relevant services on the existing terms or
- terminate the supply contract as and from the date of such notice.

8.3 Mareeba Dimbulah Water Supply Scheme

The Water Act provides that a water supply scheme is a water supply scheme for which a ROL or interim ROL licence has been issued.¹⁴ A ROL has been issued for the MDWSS (this replaced an Interim ROL which was issued in December 2004 and applied for an interim period until the ROL was issued in June 2005).

The MDWSS is owned and operated by SunWater in accordance with the Water Act, Barron Water Plan, Barron ROP (as deconstructed) and the ROL.

The existing hierarchy of water instruments recognise the MDWSS as follows:

- The Barron Water Plan includes the MDWSS within the Water Plan Area and specifies WASOs for high priority and medium priority water within the MDWSS.
- The Barron ROP is the primary document setting out details of the MDWSS. It lists details of the infrastructure which comprises the MDWSS as well as monitoring and reporting requirements for the ROL (this content has transitioned over to the ROL itself). The Barron ROP also sets out the following specifically for the MDWSS:
 - Operating rules
 - Environmental management rules
 - Water sharing rules (including carryover rules)
 - Water allocation change rules (including procedures for changing the purpose of water allocations); and
 - Seasonal water assignment rules.

This content is now taken to be included in the new instruments, with the environmental management rules included in the ROL, the operating rules, water sharing rules and seasonal assignment rules included in the Operations Manual and the water allocation change rules included in the Water Management Protocol.

The ROL for the MDWSS authorises Sunwater (as the licence holder) to interfere with the flow of water, to the extent necessary to operate the water infrastructure to which the licence applies in accordance with the Barron ROP.

The Scheme presently involves 204,000 ML of allocation for urban, irrigation or industrial use (45,000ML of which is held by SunWater for distribution losses).

Option 3 involves investing in the MDWSS to improve existing infrastructure such that 'distribution loss' water allocations can be converted to medium priority water allocations. Part 3 of the Barron ROP contains Water Allocation Change Rules, including identification of permitted and prohibited changes.

¹⁴ Water Act, schedule 4.



A two-step process would be involved in converting ‘distribution losses’ to ‘any’ purpose water allocations as follows:

1. Subdivision of the existing ‘distribution loss’ water allocation into two new water allocations – one would remain a ‘distribution loss’ and the other would be available for conversion.
2. This would be followed by conversion of one of the subdivided water allocations to ‘any’ purpose.

8.4 Water Infrastructure Delivery—Approvals, Land Access and Native Title

Quite apart from the water resource planning regulatory context discussed above, there will be a range of legal issues involved in the delivery of new infrastructure or modification to existing infrastructure relevant to some of the options.

These issues will be most significant for Option 4 i.e., a new Nullinga Dam, but may also have some relevance for Option 3 to the extent that option involves new infrastructure or modifications of existing infrastructure.

Delivery of any infrastructure project (including water related infrastructure) will require consideration of a range of issues including:

- environmental impact assessment for both Commonwealth and State purposes
- planning and environment approvals
- land access and compulsory acquisition issues
- native title and Aboriginal cultural heritage.

8.5 Detailed Consideration of Options

8.5.1 Option 2: Improve MDWSS Rules and Operation

The option under consideration involves reforming the existing MDWSS to improve efficiencies. The measures that might be implemented as part of this option include:

- 2A—Altering the water year to commence at a different time of year
- 2B—Altering existing carryover rules in the Scheme and link to improved water ordering practices
- 2C—Incentivise improved water ordering practices
- 2D—Improve access to peak flow entitlements by enabling greater flexibility through trading of peak flow entitlements
- 2E—Allow seasonal trading of any unused portion of the distribution loss allocation;
- 2F—Modify the existing Transmission and Operation Allowance.

Option 2A: Alter the Water Year

Under the Water Act and Water Regulation, the water year is effectively the accounting period for the relevant Water Plan, ROL, Operations Manual, water sharing rules or seasonal water assignment rules as stated in the relevant plan, manual, licence or rules.¹⁵

In this case, the water year for the MDWSS is currently defined in the ROP and is referenced as part of the water sharing rules – it is the period from 1 July to 30 June the following year. Following the deconstruction

¹⁵ Water Act, schedule 4; Water Regulation, section 142.



of the Barron ROP as of 6 December 2016, the water year is now deemed to be specified in the Operations Manual.

Changing the water year would require a change to the Operations Manual.

Option 2B: Alter the Carryover Rules and Improve Water Ordering Practices

Currently the carryover rules are set out in part two of the ROP as part of the Water Sharing Rules and the methodology published by SunWater for determining the volume of water permitted to be carried over by each water user. An application for a carryover is currently made pursuant to an application form maintained by SunWater. The form contains conditions under which the carryover is permitted. Automatic carryovers have been considered but are not favoured.

While automatic carryovers would immediately make a larger total volume available from the Scheme (which may or may not be taken up), it might also result in compromising the cap on water permitted to be carried over identified in section 28(2) of Part two of the ROP. It might also result in a reduction in the 'full to empty' period for Tinaroo Falls Dam which supplies the Scheme.

The preferred approach is to continue to require an application for carryover to be made consistent with the existing carryover rules but to link approval to improved water ordering history thereby helping to minimise system losses.

Linking carryover approval to improved water ordering has been suggested as a means of inducing better water ordering practices in the MDWSS. Existing entitlement holders can currently satisfy their entitlement (or part of it) from water sitting in channels without placing orders. SunWater accommodates the practice by ensuring there is sufficient water in the channels to allow this to occur. This in turn adds to system/distribution losses.

As the carryover rules are set out in the Water Sharing Rules of the Barron ROP, this content is now deemed to be part of the new Operations Manual for the MDWSS. As such, any changes to the carryover rules will need to be made by way of an amendment to the Operations Manual via the process outlined above. The process to amend the Water Supply Contract is set out in section 9.2.8.3 of this chapter. Such changes may include amending the condition that provides that the carryover arrangements for the water year stop when Tinaroo Falls Dam spills to instead provide that the carryover arrangements stop when Tinaroo Falls Dam stops overflowing.

Option 2C: Incentivise Water Ordering

This option is designed to prevent unnecessary releases of water which result in unnecessary losses linked to poor ordering practices in the Scheme.

Option 2D: Improve Access to Peak Flow Entitlements

Improving access to peak flow entitlements essentially relates to the capacity of the scheme channel system having been originally engineered on the basis of supplying 75mm of irrigation water to 50 per cent of what were then tobacco suitable soils over 12 days. A one in three roster system was assumed during design and implemented in the irrigation scheme.

The system operates on this three-day roster basis according to which, the water user takes three times the daily entitlements every three days to fill dams.

Some irrigators in the Scheme currently collaborate on an informal basis to take their design flow rate entitlement in ways which best suit their operations. These arrangements are purely informal. The proposal involves formal recognition of trading in design flow rate entitlement in the Scheme.



At present, the Water Sharing Rules in the Barron ROP do not contemplate trading of peak flows. SunWater's distribution rules and access conditions set out in its standard pipelines/channels contract outlines the peak flow arrangements for the MDWSS.

Amendments would need to be made to the Water Sharing Rules (which are now contained in the Operations Manual) to enable such trading to occur. The existing MDWSS ROL would also require amendment to set out requirements for SunWater to record details of the peak flow trading undertaken in a water year. Amendments would also need to be made to SunWater's distribution rules and access conditions in the Water Supply Contract to reflect the new peak flow trading arrangements. The process for making such amendments is set out in section 9.2.8.3 of this chapter.

Option 2E: Allow seasonal trading of any unused portion of the distribution loss allocation

Seasonal trading of a portion of the distribution losses allocation would allow unused water to go to productive use. The market would determine the highest and best use of the unused allocation, rather than it staying within Tinaroo Falls Dam and being incorporated into the next year's allocation.

Under the Water Act, seasonal water assignments of water managed under a ROL can only occur with the consent of SunWater (as ROL holder).¹⁶ The seasonal water assignment rules under the ROP (which are now set out in the Operations Manual) provide that a ROL licence holder must not approve a seasonal assignment of a water allocation if the purpose of that water allocation is 'distribution loss'.¹⁷ This prohibition would need to be removed to enable seasonal trading of distribution losses.

To go one step further and enable use for productive uses, the seasonal water assignment rules would also need to provide that a seasonally traded distribution loss may be used for any purpose.¹⁸

Seasonal water assignments are treated separately to water allocation dealings under the Water Act and Water Regulations. The latter include, among other things, changing the purpose for which water may be taken under an allocation – i.e. converting a 'distribution loss' allocation to an allocation to be available for 'any' purpose. There is no such process prescribed for seasonal water assignments, and in practice, the ability for seasonally traded distribution losses to be used for another purpose has been prescribed by a ROP. The Water Act may benefit from amendment to clarify that seasonal water assignment rules may allow an allocation to be used for the purposes prescribed by the Operations Manual.

The formula to be applied to calculate any unused portion of the distribution loss would need to be set out in the Operations Manual to provide transparency around the availability of this water from year to year.

Option 2F: Modify the existing Transmission and Operation Allowance

The Transmission and Operation Allowance (TOA) is set out in the ROP as an allowance for the river transmission operations expected to occur in running the system to the end of the water year – i.e. transmission losses. TAO varies with the announced allocation for medium priority water allocations and is linearly interpolated month by month under the ROP. The volume of the TOA comprises a large percentage of the volume of water allocation to be delivered within the Barron River and could be reviewed to confirm the actual requirement (which is suspected to be much less). Possible modification of the TOA essentially

¹⁶ Water Regulation, section 61.

¹⁷ Barron ROP, section 44(2).

¹⁸ An example of such rules can be found in the Fitzroy Basin Resources Operations Plan, September 2014, Amended September 2015.



involves altering the environmental flow objectives set out in the Barron Water Plan and altering the release volumes set out in the Barron ROP.

Bulk releases to the Barron River are required to be made under the Barron ROP to maintain specified daily flow volumes.¹⁹

Hydrological assessment may demonstrate that the entirety of these bulk releases are unnecessary for the purposes of achieving the EFOs and the WASOs, in which case, the bulk release flow volumes could be modified to ‘free up’ water for reallocation to use by irrigators. In any such assessment, the ecological outcomes of the Water Plan would need to be observed (see Barron Water Plan section 14).

This option would require amendment to the minimum and maximum river flow volumes set out in the Barron ROP. This content now forms part of the ROL so this document would require amendment in addition to the Barron Water Plan.

8.5.1.1 Water Act, Water Regulation and Water Instrument Changes

The changes that each of the Option 2 measures may require to the Water Act, the Water Regulation and the water instruments are outlined in Table 3.

Table 3 Option 2: Changes to Water Act, Water Regulation and Water Instruments

OPTIONS	WATER ACT & WATER REGULATION	BARRON WATER PLAN	BARRON ROP COMPONENT (AS DECONSTRUCTED)	MDWSS ROL
2A – Change the water year	No change.	No change.	Amend ‘water year’ definition set out in the Water Sharing Rules which are now taken to be an Operations Manual.	No change.
2B – Change the carryover rules	No change.	No change.	Amend carryover rules set out in the Water Sharing Rules which are now taken to be an Operations Manual.	Amend monitoring and reporting requirements for carryover rules which have transitioned from the ROP to the ROL to ensure they align with the new Operations Manual provisions.
2C – Incentivise water ordering	No change.	No change.	Amend carryover rules set out in the Water Sharing Rules which are now taken to be an Operations Manual. Amendment may also be required to SunWater’s Water Supply Contract as set out in section 8.5.1.	Amend monitoring and reporting requirements for carryover rules which have transitioned from the ROP to the ROL to ensure they align with the new Operations Manual provisions.

¹⁹ Barron ROP, Chapter 3, Part 1.



OPTIONS	WATER ACT & WATER REGULATION	BARRON WATER PLAN	BARRON ROP COMPONENT (AS DECONSTRUCTED)	MDWSS ROL
2D – Introduce trading of Design Flow Rate Entitlement	No change.	No change.	Potentially amend seasonal water trading rules which are now set out in the Operations Manual. ²⁰	Potentially amend reporting requirements to reflect any records to be maintained by SunWater about the peak flow trading.
2E – Allow seasonal trading any unused portion of the distribution loss allocation	Possible change to clarify seasonal water assignment rules may allow an allocation to be used for the purposes prescribed by an Operations Manual.	No change.	Remove prohibition on seasonally trading ‘distribution losses’ and insert provision allowing such water to be used for ‘any’ purpose. Also, insert formula for the calculation of unused ‘distribution losses’. See amendment process set out in section 8.5.1	Amend monitoring and reporting requirements for seasonal water assignments which have transitioned from the ROP to the ROL to include the volume of ‘distribution losses’ that remains unused in a water year, the volume of that allocation that is seasonally traded and the purpose for which is used. See amendment process set out in section 8.5.1
2F - Modify the existing Transmission and Operation Allowance	No change.	Amend EFOs to reflect modified releases.	Amend Environmental Management Rules which are now taken to be the Operations Manual. See amendment process set out in section 8.5.1	Possible amendment to reflect new bulk release requirements, including possible amendments to Environmental Management Rules. See amendment process set out in section 8.5.1

8.5.1.2 Pricing Issues

Option 2F: Modify existing Transmission and Operation Allowance

If Option 2F is adopted, the Chief Executive of DNRM would need to comply with sections 16 to 21 of the Water Regulation in relation to the release and sale of new water allocations relating to unallocated water resulting from the modification of the Transmission and Operation Allowance. Market forces will determine the sale price which the Chief Executive of DNRM is able to achieve in relation to the sale of new water allocations for available water created as a result of Option 2E.

Other Option 2 Measures

No pricing issues are expected under the other proposed measures in Option 2 as no capital costs are expected to be involved and no water allocations are expected to be created.

8.5.1.3 Approvals

No approvals issues arise for the various Option 2 measures as these only involve changes to the operation of the existing MDWSS rather than any physical works,

²⁰ It is assumed that such trading would only occur on a seasonal basis. To the extent that permanent water assignments were proposed for Design Flow Rate Entitlements, amendments would need to be made to Water Management Protocol.



8.5.1.4 Land Acquisition Issues

No land should need to be acquired for Option 2.

8.5.2 Option 3: Modernise MDWSS and Convert Losses

This option involves improvements to existing Scheme infrastructure generally in accordance with a range of measures to be identified by SunWater (in a preliminary way). These improvements would be intended to reduce system losses and would include new balancing storages.

This would be coupled with the conversion of SunWater’s existing 45,000 ML loss allocation (or part of it) to tradable medium priority allocations, pursuant to the two-step process described in section 9.3 of this chapter.

8.5.2.1 Water Act, Water Regulation and Water Instrument Changes

The changes that Option 3 will require to the Water Act, the Water Regulation and the water instruments are outlined in Table 4.

Table 4 Option 3: Changes to Water Act, Water Regulation and Water Instruments

OPTION	WATER ACT & WATER REGULATION	BARRON WATER PLAN	BARRON ROP COMPONENT (DECONSTRUCTED)	MDWSS ROL
Convert ‘distribution loss’ allocation to ‘any’ purpose allocation	While unlikely, possible change to Water Regulation section 73 to resolve ambiguity about conversions which increase consumptive pool of water.	Amend EFOs to reflect new flow levels. See amendment process set out in the Supplementary Report.	Amend to reflect increased supply levels available for ‘any’ purpose, medium priority water. See amendment process set out in the Supplementary Report.	Amend Environmental Management Rules which are now included in the ROL to reflect new environmental flow levels. See amendment process set out in the Supplementary Report.

8.5.2.2 Pricing Issues

Water Pricing: Sale or Trade of Converted Water Allocations

If Option 3 is adopted and part of SunWater’s existing water allocation in relation to distribution losses is converted to a medium priority water allocation for any purpose, SunWater will have the flexibility to sell, lease for a period of years or enter into seasonal water assignments in respect of all or part of that converted water allocation, subject to the rules and procedures in the Water Regulation and, to the extent applicable, the water management protocol for the Barron Water Plan.

SunWater would be able to enter into contracts to effect such dealings with the converted water allocation on terms determined by SunWater. As part of such dealings, SunWater can put in place contractual arrangements to facilitate customer pre-commitments. For example, such dealings may provide that the relevant sale, lease or seasonal assignment only takes effect upon the satisfaction of certain conditions precedent such as:

- sufficient demand being pre-committed
- if the customers are asked to pre-commit before finalisation of the detailed business case, completion of the detailed business case and relevant decision to proceed being made



- completion of the construction and commissioning of the relevant investments to the MDWSS.

Further, as noted in section 9.2.6.2, to the extent the dealing is:

- the transfer or lease of a water allocation then, unless the relevant Water Management Protocol or Operations Manual provides otherwise, the dealing is subject to:
 - the relevant public consultation process being undertaken
 - the approval of the Chief Executive of DNRM) being obtained
- a seasonal water assignment of a water allocation which is managed under a ROL, the dealing will be subject to the consent of the ROL licence holder being obtained.

In the QCA Report, to provide a positive incentive for SunWater to reduce distribution losses, the QCA recommended that the proceeds from the sale of a water allocation converted from water losses should be retained by SunWater and excluded from estimates of its maximum allowable revenue (MAR) although SunWater should be prohibited from ‘double charging’ through its annual water charges.

Water Pricing: NWI Pricing Principles

Option 3 will result in the development of new water assets to which paragraph 13 of the NWI Pricing Principles would apply.

In relation to the sale, lease or seasonal water assignments of all or part of SunWater’s converted water allocation, market forces will determine what SunWater is able to recover.

As noted in section 9.0, paragraph 23 of the NWI Pricing Principles states that ‘new contributed assets ... should be excluded or deducted from the RAB or offset using other mechanisms so that a return on and of the contributed capital is not recovered from customers’. The NWI Pricing Principles would apply to Option 3 in the event that funding from the NWIDF capital component contributed to this option.

QCA Price Paths

As noted in section 8.2.8, the current irrigation pricing policies outlined in the QCA irrigation price paths will continue until 30 June 2019. Therefore, to the extent investment in the MDWSS:

- results in capital costs, SunWater will need to make a relevant submission to the QCA to determine if:
 - an adjustment to the current price paths, or
 - an end of regulatory period revenue adjustment,
 can be made to allow for the recovery of:
 - the return of capital and;
 - the return on capital,
 in respect of those capital costs; or
- results in material changes to SunWater’s operation and maintenance costs or requires changes to the renewals annuity as originally forecast for the purposes of setting the price paths, SunWater will need to make a relevant submission to the QCA to determine if:
 - an adjustment to the current price paths; or
 - an end of regulatory period revenue adjustment,



can be made to allow for the recovery of such operation and maintenance costs or changes in the renewals annuity.

8.5.2.3 Approvals

The works associated with Option 3 which primarily involve construction of balancing storages, channel upgrades, conversion of channels to pipes and automation of gates, would be relatively confined in nature and are unlikely to require many approvals. Further investigation will determine the nature of the approvals required.

The limited approvals which are anticipated may be required include:

- Approval to clear vegetation under the *Vegetation Management Act 1999* (Qld) and an associated development permit for operational works for clearing native vegetation under the *Sustainable Planning Act 2009* (Qld).
- Development Permit for operational works for the construction of a referable dam under the *Sustainable Planning Act 2009* (Qld) and an associated Certificate of Failure Impact Assessment under the *Water Supply (Safety and Reliability) Act 2008* (Qld) (i.e. if applicable for the proposed balancing storages depending on their specific characteristics).
- Development Permit for operational works for constructing or raising waterway barrier works under the *Sustainable Planning Act 2009* (Qld).
- Development Permit for operational works for taking or interfering with water from a watercourse under the *Sustainable Planning Act 2009* (Qld).
- Development permit for reconfiguring a lot under the *Sustainable Planning Act 2009* (Qld) (e.g. if required to secure land tenure arrangements for balancing storage sites).
- Water permit under the *Water Act 2000* (Qld) to take water for temporary construction purposes.
- Riverine protection permit under the *Water Act 2000* (Qld) to excavate, place fill or destroy vegetation in a watercourse.
- Permit to interfere with native plants and animals (habitat) under the *Nature Conservation Act 1992* (Qld).
- Cultural heritage due diligence investigations.

A development permit for a material change of use under the Mareeba Shire Council Planning Scheme and *Sustainable Planning Act 2009* (Qld) is unlikely to be required, but an operational works permit for earthworks may be necessary.

8.5.2.4 Land Acquisition Issues

This option does not require additional land to duplicate existing channels or pipelines.

Land may be required for the construction of the proposed balancing storages. This tenure could be secured by ownership of the land or a long-term lease. An easement would not be sufficient security of tenure due to the long-term operation of the proposed works. If the land is currently held under a lease under the *Land Act 1994*, the existing permitted use might not allow it to be used for the purpose of balancing storage infrastructure.



8.5.3 Option 4: Nullinga Dam for Agricultural Use

Option 4 involves the construction of a new dam on the Walsh River, within the existing Water Plan Area. The dam option would involve construction of a dam (of presently indeterminate size and capacity) which would not initially at least, supply water into the MDWSS. Consequently, it would essentially create a new scheme in the planning area.

It should be noted that there is no provision for water reserved in the current ROP which would enable the dam to be built as part of the existing Scheme. Additionally, the environmental flow objectives for EFO nodes 10 and 11 are set at 99 per cent which would not allow the new dam to be built.

There are currently no unsupplemented water users in the area likely to be impacted by construction of the dam.

Table 5 Option 4: Changes to Water Act, Water Regulation and Water Instruments

OPTION	WATER ACT & WATER REGULATION	BARRON WATER PLAN	BARRON ROP COMPONENT (DECONSTRUCTED)	MDWSS ROL
Construct Nullinga Dam to meet pre-sold demand commitments	No change.	Amend to reflect new bulk water supply scheme for the Nullinga Dam (separate to the MDWSS).	Amend Operations Manual to reflect the new water supply scheme for the Nullinga Dam (separate to the MDWSS, but still within the one Operations Manual). Alternatively, a new Operations Manual could be prepared specifically for the Nullinga Dam.	No change to the MDWSS ROL, but a new ROL will be required for the new Nullinga dam infrastructure.

8.5.3.1 Pricing Issues

Water pricing: Sale of New Water Allocations and Customer Pre-commitments

If a new Nullinga Dam is constructed, the Barron Water Plan will need to be amended to provide for the increased volume of water which is available for allocation.

Presently the Barron Water Plan does not provide an alternative process for the release of unallocated water from the dam and therefore the Chief Executive of DNRM) would need to comply with sections 16 to 21 of the Water Regulation in relation to the release and sale of water allocations relating to unallocated water resulting from the new dam.

The Chief Executive of DNRM will then have the flexibility of selling the water allocations by public auction, tender or fixed price sale. Importantly, the Chief Executive of DNRM may decide the terms of sale. This flexibility regarding the terms of sale may be used to facilitate customer pre-commitments. For example, the water allocations may be sold subject to conditions precedent such as:

- sufficient demand being pre-sold
- if the customers are asked to pre-commit before finalisation of the detailed business case, completion of the detailed business case and relevant decision to proceed being made
- completion of the construction and commissioning of the Nullinga Dam.



Also, appropriate provision would need to be made in the contract for the sale of a water allocation for the purchaser of the water allocation and the dam's owner/proponent to enter into an appropriate supply contract as required by section 147 of the Water Act.²¹

Water pricing: NWI Pricing Principles

Option 4 will result in the development of new water assets to which paragraph 13 of the NWI Pricing Principles would apply.

Market forces will determine the sale price which the Chief Executive of DNRM) is able to achieve in relation to the sale of new water allocations for available water created as a result of the construction of the Nullinga Dam under Option 4.

Paragraph 23 of the NWI Pricing Principles states that 'new contributed assets ... should be excluded or deducted from the RAB or offset using other mechanisms so that a return on and of the contributed capital is not recovered from customers'.

QCA Price Paths

The construction of new bulk water assets, such as Nullinga Dam, has not been considered by the QCA in setting the relevant price paths for the MDWSS, or price paths independently of the Scheme. As a result, consideration will need to be given as part of a detailed business case for the Nullinga Dam as to whether the Minister should make a referral to the QCA under section 23 of the QCA Act in relation to the pricing practices relating to the Nullinga Dam to ensure the State's compliance with the NWI Pricing Principles (unless the State decides not to apply the NWI Pricing Principles in this case).

8.5.3.2 Approvals

A new dam will lead to the environmental impact, native title, land access and approvals issues discussed in section 9.4 of this chapter. Specific approvals anticipated to be required for Option 4 are set out in Table 6.

²¹ Water Act, section 147.



Table 6 Option 4: Approvals

APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
COMMONWEALTH APPROVALS				
Approval of a 'controlled action'	If the construction or operation of the dam will have, or is likely to have, a significant impact on a matter of national environmental significance.	<i>Environment Protection & Biodiversity Conservation Act 1999 (Cth)</i> <i>Note: Engage Early – Guidance for proponents on best practice Indigenous engagement for environmental assessment under the EPBC Act 1999</i>	Post EIS if a 'controlled' action. Estimate 18 months for EIS after which approval would issue with conditions.	Department of Environment & Energy
STATE APPROVALS THROUGH THE INTEGRATED DEVELOPMENT ASSESSMENT SYSTEM (IDAS) APPLYING UNDER THE SUSTAINABLE PLANNING ACT 2009 (QLD)*				
Environmental Impact Statement (while not an approval in itself, the Coordinator-General's EIS Assessment Report may include conditions which apply to the approvals set out below and which may be applied directly to the project).	Required for infrastructure projects declared to be a 'coordinated project' under the <i>State Development and Public Works Organisation Act (Qld)</i> .	<i>State Development and Public Works Organisation Act (Qld)</i>	Estimate 18 months for EIS process.	Coordinator-General
Development permit for a material change of use for 'utility installation' or undefined use under local planning scheme	Likely to be required if no steps taken to remove need for assessment under planning scheme (see section 9.4 of this chapter).	<i>Sustainable Planning Act 2009 (Qld)*</i> <i>Sustainable Planning Regulation 2009 (Qld)*</i> Mareeba Shire Council Planning Scheme January 2016	Post EIS. Estimate 18 months for EIS process. While application can be made during EIS process no decision can be made until EIS assessment report complete. Preference is to await EIS outcome as this can affect how	Mareeba Shire Council



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
			<p>application is structured and supporting information.</p> <p>If required, and if application is code assessable estimate 4 months. If impact assessable estimate 10 months.</p>	
Environmental Authority for an Environmentally Relevant Activities (ERA)	<p>Prescribed ERA - ERA 16 (Extractive and screening activities).</p> <p>Other ERAs may also be involved (subject to more detailed assessment at later stages of planning)</p>	<p><i>Environmental Protection Act 1994</i> (Qld)</p> <p><i>Environmental Protection Regulation 2008</i> (Qld)</p>	<p>Post EIS but prior to construction.</p> <p>Application can be made while EIS progressing but cannot be decided until EIS assessment report completed.</p> <p>Estimate five months.</p>	Department of Environment and Heritage Protection, State Assessment Referral Agency
Development permit for operational works for clearing native vegetation	<p>Two stage process. First, application to be for a 'relevant purpose' under section 22A of <i>Vegetation Management Act 1999</i> (Qld) – relevant purpose includes clearing for coordinated project under <i>State Development and Public Works Organisation Act 1971</i> (Qld). Then, application for development permit for clearing of native vegetation. Offsets will apply.</p> <p>Not required if clearing is on land the subject of a CID.</p>	<p><i>Vegetation Management Act 1999</i> (Qld)</p> <p><i>Sustainable Planning Act 2009</i> (Qld)*</p> <p><i>Sustainable Planning Regulation 2009</i> (Qld)*</p>	<p>Post EIS but application can be made during EIS process. Application cannot be decided until after EIS assessment report.</p> <p>Estimate six months.</p>	Department of Natural Resources & Mines, State Assessment and Referral Agency (SARA)



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
Development permit for operational works for construction of a referable dam	Subject to failure impact assessment, Nullinga dam may be classified with a Category 1 or Category 2 failure impact rating under the <i>Water Supply (Safety and Reliability) Act 2008</i> (Qld) in which case it is a 'referable dam' for which a development permit is required under the <i>Sustainable Planning Act 2000</i> (Qld).	<i>Sustainable Planning Act 2009</i> (Qld)* <i>Sustainable Planning Regulation 2009</i> (Qld)* <i>Water Supply (Safety and Reliability) Act 2008</i> (Qld)	Post EIS. (as above)	Department of Energy & Water Supply, SARA
Development permit for operational works for constructing or raising waterway barrier works	Waterway barrier works may be undertaken at various locations as part of the project.	<i>Water Act 2000</i> (Qld) <i>Sustainable Planning Act 2009</i> (Qld)* <i>Sustainable Planning Regulation 2009</i> (Qld)* <i>Fisheries Regulation 2008</i> (Qld)	Post EIS. (as above)	Department of Agriculture and Fisheries, SARA
Development permit for operational works for taking or interfering with water from a watercourse, lake or spring	Construction of the Nullinga Dam is likely to involve the taking or interfering with water from a watercourse which triggers the requirement for a development permit under the <i>Sustainable Planning Act 2000</i> (Qld).	<i>Water Act 2000</i> (Qld) <i>Sustainable Planning Act 2009</i> (Qld)* <i>Sustainable Planning Regulation 2009</i> (Qld)*	Post EIS (as above)	DNRM, SARA
Development permit for the removal of quarry material from a watercourse	Extraction of sand, gravel and rock from the watercourse triggers a requirement for a development permit under the <i>Sustainable Planning Act 2000</i> (Qld).	<i>Water Act 2000</i> (Qld) <i>Sustainable Planning Act 2009</i> (Qld)* <i>Sustainable Planning Regulation 2009</i> (Qld)*	Post EIS (as above)	DNRM, SARA
Development permit for reconfiguring a lot	Lot reconfiguration may be required to secure appropriate tenure for the project.	<i>Land Act 1994</i> (Qld) <i>Sustainable Planning Act 2009</i> (Qld)*	As above and depending on sequencing of land acquisition.	Mareeba Shire Council



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
		<i>Sustainable Planning Regulation 2009 (Qld)*</i>		
Building works	Development application for works requiring assessment against the Building Act 1975 (Qld) and assessable against the Mareeba Shire Council Planning Scheme July 2016.	<i>Building Act 1975 (Qld)</i> <i>Sustainable Planning Act 2009 (Qld)*</i> <i>Sustainable Planning Regulation 2009 (Qld)*</i>	Post EIS (prior to construction) Estimate 4 months.	Mareeba Shire Council
STATE APPROVALS (NON IDAS)				
State Development Area approvals	If State Development Area declared, a Development Scheme will be required. This will replace local government planning scheme. SDA approval will be development permit under the Development Scheme.	<i>State Development and Public Works Organisation Act 1971 (Qld)</i>	Post EIS (see above) Estimate nine months (or less) depending upon whether Coordinator-General requires public consultation.	Coordinator-General
Cultural Heritage Management Plan	Required where an EIS is required for a project to manage potential impacts on items of Aboriginal cultural heritage significance.	<i>Aboriginal Cultural Heritage Act 2003 (Qld)</i>	Suggest parallel to EIS. Aboriginal parties likely to be interested in EIS as relevant stakeholders.	Department of Aboriginal and Torres Strait Islander Partnerships
Regional interests development approval	Final location selection may result in project impacting on a protected area of regional interest for which approval is required under the <i>Regional Planning Interests Act 2014 (Qld)</i> .	<i>Regional Planning Interests Act 2014 (Qld)</i>	Post EIS (prior to construction)	Department of Infrastructure, Local Government and Planning



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
Water Permit	Taking water for a temporary purpose (e.g. for construction)	<i>Water Act 2000</i> (Qld) Barron ROP	Post EIS (prior to construction)	DNRM, SARA
Riverine protection permit	To excavate, place fill or destroy vegetation in a watercourse (unless such works are exempt under the <i>Riverine Protection Permit Exemption Requirements</i>).	<i>Water Act 2000</i> (Qld) <i>Riverine Protection Permit Exemption Requirements</i>	Post EIS (prior to construction)	DNRM, SARA
Permit to clear native plants	A licence, permit or authority, or an exemption is required to 'take' protected plants.	<i>Nature Conservation Act 1992</i> (Qld) <i>Nature Conservation (Wildlife Management) Regulation 2006</i> (Qld)	Post EIS (prior to construction)	DEHP
Damage mitigation permit	Where the confirmed breeding place of a native animal that is endangered, vulnerable, near threatened or least concern wildlife species is tampered with by the project.	<i>Nature Conservation Act 1992</i> (Qld) <i>Nature Conservation (Wildlife Management) Regulation 2006</i> (Qld)	Post EIS (prior to construction)	DEHP
Species management program	Required to address large impacts where potential breeding places of endangered, vulnerable, near threatened or least concern species, or essential habitat for these species are involved.	<i>Nature Conservation Act 1992</i> (Qld) <i>Nature Conservation (Wildlife Management) Regulation 2006</i> (Qld)	Post EIS (prior to construction)	DEHP
Forestry Act Permit	Depending on the interference with State forests and/or State-owned forest products and/or quarry material, a sales permit may be required to dispose of forest products and/or quarry material.	<i>Forestry Act 1959</i> (Qld)	Post EIS (prior to construction)	Department of Agriculture and Fisheries
Allocation Notice	To authorise the removal of quarry material from a watercourse.	<i>Water Act 2000</i> (Qld)	Post EIS (prior to construction)	DNRM



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
Certificate of Failure Impact Assessment	Required to be undertaken for referable dams to determine whether the Nullinga dam has a Category 1 or Category 2 failure impact rating.	<i>Water Supply (Safety and Reliability) Act 2008</i> (Qld)	Post EIS (prior to submission of the application for a development permit for operational works for the dam under the <i>Sustainable Planning Act 2000</i> (Qld))	DEWS
Disposal permit to remove and treat or dispose of contaminated soil from land on the Environmental Management Register or Contaminated Land Register	Required if contaminated soil is to be removed from site.	<i>Environmental Protection Act 1994</i> (Qld)	Post EIS (prior to construction)	DEHP
Road corridor permit	Required to construct, maintain, operate or conduct ancillary works and encroachments on a State controlled road.	<i>Transport Infrastructure Act 1994</i> (Qld)	Post EIS (prior to construction)	DTMR, SARA
Approval to interfere with State controlled roads	Required for works on State controlled roads.	<i>Transport Infrastructure Act 1994</i> (Qld)	Post EIS (prior to construction)	DTMR, SARA
Approval to interfere with a local road	Approval for carrying out works on a road or interfering with a road or its operation.	<i>Local Government Act 2009</i> (Qld) <i>Local Law No. 1 (Administration) 2011</i>	Post EIS (prior to construction)	Mareeba Shire Council
Oversize load permit	Required for heavy machinery and oversized loads to be transported on the road network.	<i>Transport Infrastructure Act 1994</i> (Qld)	As needed during construction	Queensland Police Service
Flammable and combustible liquids licence	Required for the storage of flammable and combustible liquids on site during construction.	<i>Work Health and Safety Act 2011</i> (Qld)	Post EIS (prior to construction)	Queensland Treasury



APPROVAL	DESCRIPTION	LEGISLATION	TIMING	RESPONSIBLE AUTHORITY
Hazardous chemicals notification	Required where the use, handling or storage of hazardous chemicals at a workplace exceeds manifest quantities, or is a Major Hazard Facility	<i>Work Health and Safety Act 2011 (Qld)</i> <i>Work Health and Safety Regulation 2011 (Qld)</i>	Post EIS (prior to construction)	Queensland Treasury

***Note:** The *Sustainable Planning Act 2009 (Qld)* and the *Sustainable Planning Regulation 2009 (Qld)* are due to be replaced by the *Planning Act 2016 (Qld)* during the course of 2017. The approval concepts and requirements will remain largely the same as those under the existing legislation.



8.5.3.3 Land Acquisition Issues

This option does not currently require additional land to duplicate existing channels or pipelines.

Tenure would be required for the wall and associated structures and infrastructure of any new dam and the inundation area and flood margin.

Additional land may be required for construction/lay down. Access licenses or short-term leases are likely to be sufficient for those purposes.

A public utility easement may be used for water storage – but only for areas outside the storage area at full supply level.²²

8.6 Implications of Possible Local Management Arrangements

In 2012, the Queensland Government initiated an investigation into the feasibility of SunWater's eight channel irrigation schemes being transferred to local ownership and management. This culminated in the *Water (Local Management Arrangements) Amendment Act (LMA Act)* being passed by the Queensland Parliament on 16 February 2017.

The LMA Act will amend the Water Act to introduce a new chapter 4A which will facilitate the transfer of the business, assets and liabilities of SunWater in relation to a 'declared channel scheme' to an 'irrigation entity' and for the divestment of the irrigation entity from the State. The transfer of each 'declared channel scheme' will be subject to agreement on transfer terms and sufficient customer support.

Each of the Emerald, Eton, St George and Theodore channel schemes is a 'declared channel scheme'. The MDWSS is not currently a declared channel scheme, however, it may subsequently be declared to be one by regulation.

An 'irrigation entity' is a corporation established for the purposes of the transfer of a declared channel scheme and to which the State provides financial support, under a funding arrangement, for the corporation to undertake the transfer of the declared channel scheme.

We understand that the State is establishing special purpose vehicles, each of which will be owned by the State, to which the relevant declared channel scheme will be transferred. Following such transfer, ownership of the relevant special purpose vehicle will pass to customers of the declared channel scheme under an arrangement being managed by the State.

Customers of the MDWSS are currently preparing a revised business proposed for submission to the State. Consideration of this business proposal will inform the State with regards to the MDWSS becoming a 'declared channel scheme'.

The potential transfer of the MDWSS to local ownership is relevant in the circumstances where Option 3 is adopted and capital improvements are made to the MDWSS infrastructure.

It is possible that transfer of the MDWSS may occur prior to, during the course of, or following completion of the implementation of Option 3.

If the transfer of the MDWSS to local ownership were to occur prior to implementation of Option 3 then it would be up to the 'irrigation entity' which then owned the MDWSS as to whether and, if so, how it would proceed with Option 3.

²² Land Act, section 362(5); Land Title Act, section 82(5).



If the transfer of the MDWSS were to occur during the implementation of Option 3, the new chapter 4A of the Water Act would allow the Minister, by a gazette notice, to transfer any contracts which may have been entered into by SunWater in relation to the implementation of Option 3 including any agreement for the sale, lease or seasonal water assignment of all or part of the water allocation to be converted from the existing losses allocation.

If the transfer of the MDWSS to local ownership were to occur after the completion of Option 3, the 'irrigation entity' would be transferred ownership of the enhanced MDWSS infrastructure but would also likely assume all liabilities of SunWater relating to those scheme enhancements, e.g. any loan from the Commonwealth.

Therefore, it will be important to ensure that the water charges determined to be payable by customers following implementation of Option 3 are sufficient to allow SunWater, and potentially a locally owned 'irrigation entity' to meet all of its liabilities in relation to the Option 3 improvements.

For the purposes of Option 4, it is considered premature in the Preliminary Business Case to consider possible local management arrangements. Option 4 does not yet involve consideration of a new distribution system.

8.7 Risks and Issues for Later Consideration

This section identifies some possible risks and other issues arising out of the foregoing discussion that may require more detailed consideration at later stages of the business case and planning processes.

8.7.1 Option 2: Improve MDWSS Rules and Operation

- Identify scope of work required to support creation of new allocation if modification of TOA is to be pursued and new allocation created as a result.
- Setting preconditions on carryover entitlement, related to water ordering may prove contentious, from a water user point of view in particular and give rise to legal challenge.
- Depending on how contentious the proposed measure becomes, the regulator may also see it as problematic.
- With Option 2F, the proposed modification of environmental flows, for which there is no current allocation in the scheme, but which is regulated by the Water Plan in a way that might give rise to a new allocation being created in favour of SunWater will need to be preceded and supported by significant hydrological and ecological evidence. It will be necessary to demonstrate that the EFO Objectives in section 14 of the Water Plan will not be compromised.

Other stakeholders, such as NGO's, catchment groups, recreational users and traditional owners may also see that particular measure as contentious giving rise to the risk of legal challenge. Depending upon the extent of the proposed modification the regulator may also have some difficulty with what is proposed.

Consequently, the approach to this measure should ideally, be conservative and be undertaken with appropriate consultation.

8.7.2 Option 3: Modernise MDWSS and Convert Losses

Identify scope of work required to support subdivision/change application for existing distribution loss allocation.

As with aspects of Option 2, Option 3 will need to be supported by convincing information dealing with the extent to which the proposed works will result in savings to distribution losses.



It may be possible to demonstrate this in advance of the relevant applications by modelling. However, the greater likelihood is that the works will first need to be constructed then the applications (subdivision and conversion) will need to be made. This raises the risk of the capital investment being made without the hoped-for return being guaranteed, namely the successful conversion of the distribution loss allocation. Some discussion with the regulator will need to be undertaken prior to implementing this option to defray this risk to the extent possible bearing in mind that the regulator, as a matter of administrative law could not commit to any particular decision ahead of an application being made.

8.7.3 Option 4: Nullinga Dam for Agricultural Use

If Option 4 proceeds to a Detailed Business Case (now or in the future), due diligence to be undertaken in respect of possible new supply contracts to determine if the supply contracts are on the same terms and conditions as the Standard Channel SC or Standard River SC for the existing MDWSS to avoid possible perception of one scheme being treated very differently to another.

A tenure and native title audit should be conducted to identify the land required for the project and the current ownership of, and interests (including native title), in the relevant land and waters.

Undertake more detailed consideration of approvals pathway in terms of options described in section 9.5 and in table 6.

Prepare a coordination plan for environmental assessment, consultation with stakeholders, consultation with traditional owners in particular, land identification and acquisition strategy, approvals and water instrument issues.

8.7.4 Generally

Review required amendments to water instruments having regard to particular options chosen including sequencing of amendments.

Identify technical (hydrological, ecological) data required to support amendments and prepare program for preparation of same.



Table 7 Deconstruction and Transition of Water Resource Operations Plans and Resource Operations Plans

ORIGINAL INSTRUMENT	CONTENT	NEW INSTRUMENT
Water Resource Plan	All content.	Water Plan
Resource Operations Plan	Water supply scheme provisions relevant to: <ul style="list-style-type: none"> ▪ Monitoring and reporting arrangements ▪ Infrastructure details, including any full supply level stated in the ROP ▪ Authority to use water courses to distribute water ▪ Environmental management rules ▪ Matters relating to the implementation of, and compliance with, the ROP. 	Resource Operations Licence
	Water supply scheme provisions relevant to: <ul style="list-style-type: none"> ▪ Operating rules (excluding the authority to use watercourses to distribute water) ▪ Water sharing rules ▪ Seasonal water assignment rules. 	Operations Manual (applies to supplemented water)
	Provisions stating the responsibilities for the holder of a distribution operations licence (other than the responsibilities of the resource operations licence holder under an Operations Manual).	Distribution Operations Licence
	Provisions relevant to: <ul style="list-style-type: none"> ▪ ROP zones, including water management area zones and water supply scheme zones ▪ Water management areas, subcatchment areas or sub artesian areas ▪ The criteria and process for granting, refusing, amending or otherwise dealing with water licences, other than the criteria and process for deciding applications for a seasonal water assignment or for relocation of a water licence ▪ The volume(s) of unallocated water reserved or available to be released. 	Water Plan
	<ul style="list-style-type: none"> ▪ Provisions that have not found a new home under one of the above instruments <u>and</u> deal with a matter relevant to the usual content of a water management protocol (i.e. the management of unsupplemented water, although an exception is water trading rules for both supplemented and unsupplemented water). 	Water Management Protocol (generally applies to unsupplemented water)
	Provisions that have not found a home under any of the above instruments.	No new instrument – provisions cease to have effect.