

12 PUBLIC INTEREST CONSIDERATIONS

CHAPTER SUMMARY AND CONCLUSIONS:

- Reference Projects 1 and 2 would inundate a total of 1,966 and 2,797 hectares of land respectively. This would directly impact 16 landowners across 37 parcels, with an additional 18 land parcels and 13 landowners impacted by the pipeline distribution network. Sunwater would continue to consult with impacted landowners to discuss potential impacts and mitigation strategies, and likely acquisition required.
- Public interest issues identified include:
 - water security and supply
 - policy reform
 - agricultural growth and enhanced irrigation opportunities
 - water allocations and price
 - economic growth
 - environmental impacts
 - hydrology impacts
 - property impacts
 - changes to land access and land use
 - recreation opportunities
 - project timing and next steps.
- Reference Projects 1 and 2 are expected to deliver increased provision of a secure water supply for agricultural and irrigation use, leading to further growth in the sector regionally. Upgrades to local roads may also be required which will improve local connectivity and safety. The potential for recreation is also a positive benefit to the area.

12.1 Purpose

The purpose of this chapter is to assess whether the Reference Projects will provide, on balance, equitable outcomes for all stakeholders. This chapter will also identify opportunities for any potential negative impacts of the Reference Projects to be managed and, where possible, mitigated or adjusted to realise opportunities and benefits.

12.2 Stakeholder and Community Engagement

Building Queensland and Sunwater have engaged with a range of stakeholders and community members during the preparation of the NDMIP DBC.

Building on activities undertaken during the development of the PBC (2017), engagement targeted state and local government bodies, industry and agriculture groups, regional economic development groups, likely water customers, Traditional Owners, environmental groups, and impacted landowners. The views of the



broader community have also been considered through community engagement activities and information dissemination.

Engagement focused on increasing awareness and understanding of the project, the current planning phase, future steps, and identifying and discussing potential impacts to social values to inform design.

12.2.1 Engagement objectives

The objectives of community consultation and stakeholder engagement activities were:

- gain an understanding of the needs, impacts and opportunities of stakeholders
- develop an understanding of the phase and current investigations of the project and manage stakeholder expectations regarding the next phase
- ensure the SRG is reflective of the community and provides accurate and transparent discussion around the project
- communicate the project to the broader community
- understand the water demand requirements in the area.

In addition, engagement activities were designed to solicit information on, and identify key information from, key stakeholders on:

- property impacts
- environmental concerns
- changes to access to water supply
- requirements for further consultation.

12.2.2 Approach to engagement

Stakeholder engagement for the DBC adopted an approach that:

- was inclusive and respectful of the broad range of stakeholders that hold an interest in the project
- managed stakeholder expectations in relation to the level of influence they may have on the project by clearly articulating the process and phase of the project
- was representative of both Building Queensland and Sunwater
- engaged stakeholders at regular intervals to maintain strong relationships, providing two-way communication between stakeholders and the project team.

To support the development of the DBC, Building Queensland and Sunwater implemented an engagement program that focused on engaging and involving key stakeholders, and informing the broader community. Engagement with stakeholders allowed groups to provide feedback, raise concerns and identify opportunities throughout the DBC engagement period.

12.2.2.1 Stakeholder identification

Table 12-1 provides a list of the identified stakeholders.

Table 12-1 Stakeholder list



STAKEHOLDER CATEGORY	STAKEHOLDER
Commonwealth Government	Department of Infrastructure, Regional Development and Cities
	Infrastructure Australia
	Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan
	Minister for Infrastructure and Transport and Regional Development, The Hon Michael McCormack MP
	Minister for Agriculture and Water Resources, The Hon David Littleproud MP
	Member for Kennedy, Bob Katter
	Member for Leichhardt, Warren Entsch MP
State government	Department of Premier and Cabinet
	QLD Treasury
	Department of Natural Resources, Mines and Energy
	Department of State Development, Manufacturing, Infrastructure and Planning
	Department of Agriculture and Fisheries
	Minister for Natural Resources, Mines and Energy, Anthony Lynham MP
	Minister for Agricultural Industry Development and Fisheries, Mark Furner MP
	Member for Cook, Cynthia Lui MP
Member for Hill, Shane Knuth MP	
Local government	Cairns Regional Council
	Mareeba Shire Council
	Tablelands Regional Council
	Kowanyama Aboriginal Shire Council
Regional economic development groups	Regional Development Australia FNQ and TS
	Advance Cairns
	Cairns Chamber of Commerce
	Tablelands Futures Corporation
	Tourism Topical North Queensland
	Mareeba Chamber of Commerce
Industry groups	Mareeba Dimbulah Irrigation Area Council
	Irrigation Advisory Committee
	Far North Queensland Growers
	AgForce
	Queensland Farmers Federation
	Growcom
	Tablelands Canegrowers
	Macadamia Association



STAKEHOLDER CATEGORY	STAKEHOLDER
Traditional Owners	The Alliance of the Northern Gulf Indigenous Corporations
	North Queensland Land Council
Environmental groups	Australian Conservation Foundation
	Cairns and Far North Environment Centre
	Wet Tropics Management Authority
Potential customers	Existing MDWSS customer/s
	Other potential water customers
Potentially impacted landowners	Landowners impacted by inundation
Broader community	Residents of Mareeba Shire Council and Tablelands Regional Council Local Government Areas
	Community groups
	Recreation groups
	Local businesses
Media	Cairns Post
	Mareeba Express
	Tablelands Advertiser
	North Queensland Register
	Courier Mail
	Rural Weekly
	Queensland Country Life
	4CA Cairns – John Mackenzie
	WIN Cairns
ABC North Queensland	

12.2.2.2 Engagement activities

Final stakeholder engagement activities will include close out consultation with the SRG, potentially impacted landholders at both Tinaroo Falls Dam and the Nullinga Dam site along with direct engagement with CRC and MSC. The engagement program used the engagement tools and activities outlined in Table 12-2.

The project team liaised directly with potentially impacted landowners, key stakeholders and the Mareeba, Atherton and surrounding communities to provide information on the project and answer questions.

Table 12-2 Engagement tools and activities

ENGAGEMENT ACTIVITY /TOOL	DETAILS	STAKEHOLDERS
Request for Information (RFI) on Water Demand Study	Public Request for Information (RFI) process that sought to identify parties potentially interested in purchasing water from Nullinga Dam. The RFI documents were displayed on the Sunwater and	Potential customers



ENGAGEMENT ACTIVITY /TOOL	DETAILS	STAKEHOLDERS
	Marsden Jacobs websites. Detailed discussions were had with urban service providers and potential agricultural customers to address outstanding issues and seek further details.	
SRG meetings	Four SRG meetings held in Mareeba at regular intervals during DBC development. Meetings were key to understanding water demand, local issues and competing needs with key stakeholders and potential customers. Environment and Traditional Owner groups were also offered a briefing on the project if they were unable to attend the SRG meetings.	SRG members, outlined in section 12.2.3.1.
Landowner briefings	Held over two days, directly impacted landowners were invited to face-to-face briefings with the project team at their property or a convenient location. The aim of the briefing was to inform landowners about the project and its progress, discuss possible property impacts, gather feedback on land use, and understand the level of concern for the possible construction of the dam. Additional meetings to close out communications with landowners are scheduled to occur in early 2019.	Potentially impacted landowners (14)
Information fact sheet	The NDMIP fact sheet was developed as an informative tool, and was used to support information sessions and briefings, and was distributed to Mareeba residents and the SRG.	All
Information stalls	Information stalls at Mareeba Markets and Atherton Markets in November 2018 to inform interested community members about the project and gather feedback on sentiment towards the possible construction of the dam.	Mareeba and Atherton communities (approximately 220 community members spoken to)
Mail out	Fact sheet delivered to the letterboxes of Mareeba residents to inform them of the project and where to find more information.	Mareeba residents – distribution of approximately 2,800.
Website	The Building Queensland and Sunwater web pages were used as a source of information about the DBC. The PBC was made available for download as well as links to the RFI and contact details.	All
Phone and email	A dedicated email address was made available for the project, as well as Building Queensland and Sunwater's existing information hotlines and email addresses and were advertised on the fact sheet and advertising material.	All
Advertising	Advertising was used to promote the Water Demand Study Request for Information and the information stalls in Mareeba. Advertising considered a combination of the Public Notices and Early General News sections of traditional	Atherton Tablelander Cairns Post Tablelands Advertiser Brisbane Courier Mail



ENGAGEMENT ACTIVITY /TOOL	DETAILS	STAKEHOLDERS
	newspapers, web banners, sponsored articles, sponsored social media posts, and local e-Newsletters.	The Australian The Australian Financial Review The Mareeba Express Queensland Country Life North Queensland Register Rural Weekly – North and Central QLD AgForce QLD Australian Macadamia Society Growcom (Horticulture Now)
Tinaroo Falls Dam drop-in session	Landowners and residents that share a boundary dam were issued an invitation letter to attend a drop-in session at Tinaroo Lake Resort. The drop-in session focused on providing additional information to attendees and addressing any concerns in relation to a potential raising of the dam and potential increase in water level. This solution is further discussed in Section 7.4.2. An additional face-to-face briefing occurred with the property owners at a low-lying property in Tinaroo.	Approximately 290 individual properties adjacent to Tinaroo Falls Dam

12.2.3 Engagement outcomes

12.2.3.1 Stakeholder Reference Group

The SRG, initially established during the PBC phase, was engaged at four milestones during the DBC development. The SRG meetings were guided by a charter aimed at providing transparency and encouraging constructive, evidence-based feedback. SRG meetings were key to understanding local issues and competing needs with key stakeholders and potential customers. Table 12-3 identifies the members of the SRG, and Table 12-4 discusses the content and outcomes of these meetings.

A fourth SRG meeting is scheduled to be undertaken post finalisation of the DBC.

Table 12-3 Stakeholder Reference Group members

SRG MEMBER	ATTENDANCE		
	SRG 1	SRG 2	SRG 3
Advance Cairns			
AgForce			
Australian Conservation Foundation			
Cairns and Far North Environment Centre			
Cairns Chamber of Commerce			
Cairns Regional Council			
Department of Agriculture and Fisheries			
Department of Natural Resources, Mines and Energy			



SRG MEMBER	ATTENDANCE		
	SRG 1	SRG 2	SRG 3
Department of State Development, Manufacturing, Infrastructure and Planning			
Howe's Farming Group			
James Cook University			
Kowanyama Aboriginal Shire Council			
Mareeba Chamber of Commerce			
Mareeba Dimbulah Irrigation Area Council			
Far North Queensland Growers			
Mareeba Shire Council			
MSF Sugar			
North Queensland Land Council			
Regional Development Australia, Far North Queensland and Torres Strait			
Tableland Canegrowers			
Tableland Futures Corporation			
Tablelands Regional Council			
Wet Tropics Management Authority			

Table 12-4 Meeting outcomes

MEETING DATE	DISCUSSION POINTS	OUTCOMES
Meeting 1 18 July 2018	Building Queensland BCDF Findings from the PBC DBC scope and status RFI process and required outcomes	Discussion focused on consideration of a long-term water strategy, of which Nullinga Dam was an important component to SRG members. Water demand, capacity to pay and were also discussed and highlighted by the SRG as key factors for the success of the dam. Overall, SRG members were supportive of construction of a new dam.
Meeting 2 19 October 2018	Update on project status Findings from the Water Demand Study and RFI process Consideration of the various project options Consideration of social impacts	Economic and job growth in the region were seen as key drivers to the project, as well as the diversification of crops requiring more water. When considering social impacts, the benefits of a new dam to the economy, job growth, housing, agriculture and recreation were seen to outweigh potential impacts.



MEETING DATE	DISCUSSION POINTS	OUTCOMES
Meeting 3 27 November 2018	Update on key findings Details of Reference Projects Community engagement to date Next steps	As key findings and the Reference Projects were discussed, the cost of the dam and associated infrastructure were a focal point, especially regarding who will pay for the dam, pipelines, and what the cost to irrigators would be. It was also noted that new additional water from Nullinga Dam is preferred over additional capacity from any raising of Tinaroo Falls Dam. The two schemes (conjunctive vs standalone) were discussed with a conjunctive scheme being the preferred option. Feedback regarding support for Nullinga Dam is discussed in section 12.2.4.

12.2.3.2 Water Demand Study promotion

In July 2018, advertising across traditional media platforms and digital channels was utilised to promote a water demand study and RFI. Traditional media focused on advertisements in the Public Notices and Early General News sections of local, state and national newspapers. Digital engagement used banner advertisements, social media posts and articles to encourage participation in the RFI. Table 12-5 and Table 12-6 detail the publications targeted. Members of the SRG were also asked to distribute the information through their established networks.

Table 12-5 Traditional Media

Publication	Dates run
Atherton Tablelander	17 July and 24 July 2018
Cairns Post	21 July and 28 July 2018
Tablelands Advertiser (Cairns)	20 July and 27 July 2018
Brisbane Courier Mail	21 July and 28 July 2018
The Australian	28 July 2018
The Australian Financial Review	18 July 2018
Mareeba Express	18 July and 25 July 2018
Queensland Country Life	19 July and 26 July 2018
North Queensland Register	19 July and 26 July 2018
Rural Weekly – North and Central QLD	20 July and 27 July 2018



Table 12-6 Digital media

Publication	Placement / targeting	Dates run
NewsCorp	North QLD (Mackay, Townsville, Cairns, Bundaberg and Whitsunday regions)	16 July – 3 August 2018
Queensland Country Life	Website and Facebook	16 July – 29 July 2018
North Queensland Register	Website and Facebook	16 July – 29 July 2018
Mareeba Express	Sponsored article on news headline webpage and Facebook	Four weeks from 16 July 2018
AgForce QLD	e-Newsletter inclusion and Facebook	16 July and 26 July 2018
Australian Macadamia Society	e-Newsletter	Week commencing 16 July 2018
Growcom (Horticulture Now)	e-Newsletter	24 July 2018

12.2.3.3 Landowner engagement

Landowners were engaged face-to-face over a two-day period to discuss possible impacts and benefits, and to inform development of the DBC. A total of 17 individual landowners were identified to be impacted by the dam as per Table 12-7, two of which includes the State Government and Sunwater.

Table 12-7 also identifies the landowners impacted by distribution infrastructure.

Table 12-7 Impacted landowners - dam

TYPE OF LAND	NUMBER OF PROPERTIES IMPACTED BY DAM	NUMBER OF PROPERTIES IMPACTED BY DISTRIBUTION INFRASTRUCTURE
Total impacted properties	38	18
- Private owned	28	11
- State owned + Sunwater owned	8 + 2	3 + 3
- Local council owned	-	1
Individual landowners	17	14
- Private	15	11
- Public (State / Sunwater / Local Govt)	2	3

Table 12-8 provides a summary of the feedback from the 15 individual private landowners that will be impacted. No discussions have been undertaken with landowners impacted by proposed distribution infrastructure.



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Table 12-8 Landowner engagement

REF NO	IDENTIFIED IMPACTS TO PROPERTY	KEY ISSUES
1	Potential inundation on legal access, not actual access	<ul style="list-style-type: none"> Residential block Engagement attempted but stakeholder was unavailable or uncontactable
2	Entire property affected by inundation	<ul style="list-style-type: none"> Residential block Concern over what impact the project will have on the ability to plant crops and continue maintenance and modifications to the property Does not support dam due impact on the property however recognises the need for Cairns water supply How the proposed Nullinga Dam would work in conjunction with Tinaroo Falls Dam Sentiment: Tolerate the project
3	Entire property affected by inundation	<ul style="list-style-type: none"> Residential block Concerned about potential acquisition and timing Concern over what impact the project will have on the ability to continue maintenance and modifications to the property prior to the decision on the dam Does not support dam Sentiment: Reject the project
4	Entire property affected by inundation	<ul style="list-style-type: none"> Recreational block Supportive of the dam and its contribution to the regional economy, if allocations were provided to horticulture Concern over price of water and reliability of supply from Nullinga, buyers will be resistant to \$4,000/mL and farmers whose properties are acquired should be offered water allocations first Recommends that Nullinga and Tinaroo be joined for water security Consideration of using the dam for hydro power Subdivision and construction of properties around the dam to support recreation and cost of the dam Would like to see opportunities for recreational use Sentiment: Embrace the project



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REF NO	IDENTIFIED IMPACTS TO PROPERTY	KEY ISSUES
5	Almost entire property affected by inundation	<ul style="list-style-type: none"> ▪ Farming block ▪ Concerned about potential acquisition and timing ▪ Would like dam to go ahead to support water supply, however is unsure of actual demand to support it ▪ Preference against a separate scheme to Tinaroo Falls Dam ▪ Does not support pricing structure at \$4,000/mL ▪ Sentiment: Accept the project
6	Large portion of both properties affected by inundation, property access may also be affected	<ul style="list-style-type: none"> ▪ Residential and farming block ▪ Supportive of the dam, as long as acquisition is undertaken fairly and water license was offered to landowners first. Would prefer total acquisition rather than being left with a tiny parcel of land ▪ Property will be split in two and access to high ground will be impacted ▪ Dam will positively contribute to the area and they support it in principle ▪ Sentiment: Embrace the project
7	Small portion of property affected by inundation	<ul style="list-style-type: none"> ▪ Residential and farming block ▪ Would like dam to go ahead to support water supply ▪ Concern over price of water and security of supply and believes that current prices are impacting farming practices ▪ Believes that vegetation clearing would need to be allowed to open up more land to use the water ▪ Access to the property would be severed to residence and would need to be replaced ▪ Sentiment: Embrace the project
8	Approximately one third of property affected by inundation, property access may also be affected	<ul style="list-style-type: none"> ▪ Block used for business ▪ Supportive of the project if it reaches all approvals ▪ Would like to retain property ▪ Large financial and community benefits to the area – compared process with construction of some windmills where local suppliers were used, fair contributing to all businesses, Consultative Committee run well ▪ Noted zero vacancy in accommodation in the area ▪ Would like to see opportunities for recreational use ▪ Sentiment: Embrace the project



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REF NO	IDENTIFIED IMPACTS TO PROPERTY	KEY ISSUES
9	Lower third of property affected by inundation	<ul style="list-style-type: none"> Residential block Concern over increased theft in the area due to construction of the dam and potential recreational use Would not stay at property if dam was constructed Sentiment: Reject the project
10	Approximately one third of property affected by inundation, property access may also be affected	<ul style="list-style-type: none"> Engagement attempted but stakeholder was unavailable or uncontactable
11	Multiple access roads that appear impacted by inundation	<ul style="list-style-type: none"> Residential block Does not support construction of the dam as access road would be impacted Sentiment: Reject the project
12	Multiple access roads and dwelling that appear impacted by inundation	<ul style="list-style-type: none"> Residential block Engagement attempted but stakeholder was unavailable or uncontactable
13	Engagement yet to occur	<ul style="list-style-type: none"> Residential block Engagement attempted but stakeholder was unavailable or uncontactable
14	Property impacted by new access road	<ul style="list-style-type: none"> Concern over any change in title deeds and who may be responsible to build new infrastructure and rehabilitate land Would like dam to go ahead to support water supply and possible job growth Sentiment: Embrace the project



The key findings from engagement with landowners included:

- there was a general understanding that the purpose of the proposed dam was to provide an additional water supply to the region, which would benefit the economy and broader community
- further information on acquisition was requested, including timeframes and acquisition process
- a high level of concern was expressed with regards to whether the project would proceed, and the amount of information being provided
- landowners with the highest inundation impacts reported significant concerns regarding acquisition and the ability to continue investing money into the property
- some landowners either did not have awareness of the proposed dam prior to purchasing their property or were given assurance that the project would not proceed, and questioned why it was still being investigated
- landowners that supported the project saw the benefits in increased recreational opportunities, water supply, regional economic growth and possible job creation, however would like to see further information regarding demand, purchase price and security of supply.

12.2.3.4 Broader engagement

Prior to the DBC, limited engagement with the community had been undertaken on the possible construction of Nullinga Dam. There was some awareness, scepticism and apathy within the community, due to its long-term consideration.

Community engagement focused on increasing awareness and understanding of the DBC and next steps. Engagement also allowed community members to give feedback on the possible construction of Nullinga Dam and indicate how they felt towards the project.

Table 12-9 below outlines the information stalls, and the themes gathered from community feedback.

Table 12-9 Information stall themes

MARKET STALL	MAREEBA MARKETS	ATHERTON LIONS MARKETS
Date	Saturday 10 November 2018	Sunday 11 November 2018
Community attendees	162	61
Fact sheets distributed	121	55
Responses to sentiment survey	99 (92.9% Yes; 2% No; 5% Maybe)	50 (96.2% Yes; 0% No; 3.8% Maybe)
Common themes	<ul style="list-style-type: none"> ▪ Perception that too many studies had already been done, and the dam should have been built already ▪ Fair resumption price for impacted properties ▪ Diversified crops require more water and therefore the dam is required ▪ Securing water supply for the future 	<ul style="list-style-type: none"> ▪ Perception that too many studies had already been done, and the dam should have been built already ▪ Fair resumption price for impacted properties ▪ Diversified crops require more water and therefore the dam is required ▪ Securing water supply for the future



MARKET STALL	MAREEBA MARKETS	ATHERTON LIONS MARKETS
	<ul style="list-style-type: none"> Recreational activities Potential of hydro power Possibility of a diversion at North Johnstone River 	<ul style="list-style-type: none"> Possibility of a diversion at North Johnstone River

The community in Atherton was also targeted as a “project recognition test” to ascertain, in an area outside of the geographical area of the project:

- level of recognition of the project (“have you heard about the Nullinga Dam project?”)
- level of understanding of the project’s aims, if they did know about it
- level of acceptance of the project, after information provided.

There was a low initial recognition rate with an estimated 20 per cent of people being able to say an initial “yes” to having heard of the project. Approximately another 40 per cent had vague recognition (“yes, I think I’ve heard of it”) and the remainder had no direct understanding or recall of it.

12.2.4 Social Licence to Operate

Measures of social licence from stakeholders were drawn from the International Council on Mining and Metals (2015) and Mercer-Mapstone (2018), which analyse social acceptance based on a five-point Likert scale. The five scales of social licence analysed for the purposes of the DBC were:

- 1 = Reject
- 2 = Tolerate
- 3 = Accept
- 4 = Approve
- 5 = Embrace

Descriptive statistical analysis was then used in order to provide a summary on the average social licence score, and to give an indication on how stakeholders perceive the impacts or benefits of the project. For instance, respondents that answered “Reject” received a score of one (1). Respondents that answered “Embrace” received a score of five (5).

12.2.4.1 Reference Project 1 and 2

Landowners impacted under Reference Projects 1 and 2, and members of the SRG were surveyed for the average social licence score, resulting in a rating of 3.89, and an acceptance of the project. As community members were not surveyed using the same metrics, support can only be gauged through a yes or no response.

12.2.4.1.1 Landowners impacted by Nullinga Dam

Of those engaged with in November 2018, the following sentiment was received:

STATUS	RESPONSES	RATED SCORE
1. Reject	2	2
2. Tolerate	1	2
3. Accept	0	0



STATUS	RESPONSES	RATED SCORE
4. Approve	1	4
5. Embrace	5	25
Not yet engaged with	(5)	N/A
Mean score		3.67

12.2.4.1.2 Stakeholder Reference Group

At the third SRG in November 2018, nine of the participants took part in a survey that asked for a position statement from the organisation on whether they support, or do not support, the possible construction of Nullinga Dam and other improvements to the MDWSS. The ratings below are inferred from these responses.

STATUS	RESPONSES	RATED SCORE
1. Reject	0	0
2. Tolerate	1	2
3. Accept	2	6
4. Approve	1	4
5. Embrace	5	25
Mean score		4.11

12.2.4.1.3 Broader community

At the community information stalls in Mareeba and Atherton, attendees were surveyed with the question:

“As a community member, do you support construction of the Nullinga Dam?”

Out of 151 Yes, No or Maybe/Don’t Know responses:

- 94 per cent of those surveyed said “Yes” to supporting construction of Nullinga Dam
- 4.6 per cent of those surveyed said “Maybe/Don’t Know”
- 1.3 per cent of those surveyed said “No”.

This survey evidences broad support for the construction of Nullinga Dam within the broader community.

12.2.5 Engagement recommendations

The following recommendations aim to manage the expectations of key stakeholders, impacted landowners and the broader community, should any of the Reference Projects progress beyond the DBC process:

- update key stakeholders and the community on whether the project will proceed, and the decision-making process
- provide regular updates to impacted landowners on how the project is progressing and next steps, especially regarding land acquisition timeframes
- ensure disadvantaged communities have the opportunity to participate in further engagement
- engage with landowners downstream to communicate impacts and mitigation strategies
- develop and communicate a recreation strategy for the dam
- notify landholders and the community of the outcomes of the DBC.



12.3 Impact on stakeholders

The stakeholders identified for this project are outlined in section 12.2.2.1. These areas of public interest include:

- water security and supply
- policy reform
- agricultural growth and enhanced irrigation opportunities
- water allocations and price
- economic growth
- environmental impacts
- hydrology impacts
- property impacts
- changes to land access and land use
- recreation opportunities.

12.3.1 Property impacts

It is expected that the Reference Projects 1 and 2 would inundate a total of 1966 and 2797 hectares of land respectively. This would directly impact 17 landowners across 38 parcels, 10 of which are owned by either Sunwater or the State of Queensland. The remaining 28 parcels are privately owned. Sunwater undertook engagement with directly impacted landowners about Nullinga Dam and the potential impacts in November 2018. Sunwater discussed individually with landowners' issues relating to:

- land use
- land access
- change in land use
- impacts on productivity and economic activity
- amenity
- impacts on the broader community and region.

The proposed dam site is located to one end of a natural valley, surrounded by small mountain ranges. The area is accessed through a series of narrow sealed and unsealed roads which require vehicles to move off road when passing in opposite directions. The various gully crossings across the Walsh River are one-way, and the area consists of farming properties - some large and others smaller scale considered to be hobby-farms.

The Walsh River valley that would be inundated is accessed via Springmount Road from both directions with final access to the right abutment via Stankovich Road and the left abutment via Collins Weir Road.

Both of these unsealed roads currently enter the valley at the proposed dam wall site, and both provide access to a number of properties in the valley. The saddle dam is proposed in the north of the valley which crosses the boundaries of two properties.

There are five main properties that would experience substantial inundation of property, no matter the size of the dam proposed. These properties are located on the floor of the valley and include:



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- two residential blocks in total which would experience inundation
- two substantial farming blocks (note one of these has a residence which will not be inundated)
- one private small property currently used as a recreation area
- another residence on leased State land at the end of Collins Weir Road would experience some inundation to the property and access.

Five properties would lose the access they have from Stankovich Road (east) while seven properties would lose their access due to Collins Weir Road (west) being inundated. This includes the two substantial farming areas noted above.

Where property acquisitions are required, these will be undertaken in accordance with the *Acquisition of Land Act 1967*. The acquisition of properties will require compensation to landowners. Sunwater also grants flood margin licences to adjoining landowners to use some acquired land for grazing or agriculture.

As per the engagement summary, the key findings from discussion with landowners in relation to property impacts were:

- further information on acquisition was requested, including timeframes and acquisition process
- landowners with the highest inundation impacts reported significant concerns regarding acquisition and the ability to continue investing money into the property
- some landowners either did not have awareness of the proposed dam prior to purchasing their property or were given assurance that the project would not proceed and questioned why it was still being investigated.

In addition to the dam itself, the pipeline distribution network will also impact approximately 18 land parcels and 13 individual landowners, two of which are Sunwater and the State of Queensland. Although no land acquisition is planned for the distribution network, a 10m easement will be required during construction, as well as an additional 20 pipeline easement. It is recommended that these landowners, as well as those downstream of the proposed dam, are consulted with at a later stage if the project progresses.

12.3.2 Environment impacts

Potential environmental impacts with a public interest include:

- permanent loss of remnant vegetation within inundation area and dam wall footprint
- impact to aquatic fauna passage
- permanent loss of regulated vegetation watercourse regional ecosystems along existing watercourse
- potential loss of flora or fauna species of conservation significance
- resumption of property
- change of land use including loss of agricultural land
- potential air, noise and vibration impacts on sensitive receivers during construction of pipeline and dam construction
- potential impacts on groundwater levels from construction of the dam and also expansion of area under irrigation
- potential changes to water quality as a result of intensification of agriculture from removal of vegetation and increased erosion and sediment



- changes to environmental flows impacting on aquatic flora and fauna and potential degradation of aquatic habitat.

12.4 Public access and equity

12.4.1 Public access

Public access is related primarily to agricultural users and irrigators in the region, however following land acquisition and during construction, access issues will arise due to the area no longer being accessible by the public.

Private property access would also be impacted at several properties, some that will likely require a full acquisition. Further analysis during subsequent project phases will be required to determine impacts to property access.

The new dam may have potential for recreation and enhanced public access when completed.

A detailed assessment of the upgrades required to existing roads has not been undertaken as part of the DBC, however is likely to include the relocation of a length of Collins Weir Road and a number of upgraded major and minor creek crossings, improving flood immunity. Several new roads and upgrades will be required, such as:

- upgrade of Springmount Road (from Mareeba Dimbulah Road to dam site) to a two-lane sealed road
- new roads between the dam site and Collins Weir will be required along the reservoir rim
- new road on the right bank along the reservoir rim will be required.

During construction and over a 24-month period, increased traffic would include light and heavy vehicles, concrete trucks and over-dimension vehicles. Construction traffic would be greatest during the main earthworks and civil construction, and would comprise vehicles transporting equipment, materials and construction workers to the site.

Maintaining traffic flow during construction is a key consideration, and through traffic on Springmount Road and all other local roads in the vicinity of the Reference Project would need to continue to operate or appropriate detours or temporary roads put in place.

12.4.2 Equity

Groups downstream of the dam may be from disadvantaged backgrounds and unable to participate fully in the consultation process without additional support. Contact was made at during engagement as part of the DBC with Kowanyama Aboriginal Shire Council and the North Queensland Land Council to inform them of the project and offer an opportunity for a project briefing to determine whether any issues or opportunities could be realised.

As detailed in Chapter 16, the regional study area has an Aboriginal and/or Torres Strait Island population of two and a half times larger than that of Queensland. If the Reference Project/s proceed to the environmental approvals process, further consideration will be given to the ability of elderly, non-English speaking and disadvantaged community members to participate in engagement activities.

Regarding equity of water supply and pricing structures, Queensland State Government policy, specifically QWBOS, seeks full cost recovery for new dam infrastructure. The indicative range of cost of water from a new dam is in excess of 10,000 ML/a, which is currently in excess of what farmers margins can support.



As part of the DBC, the standalone scheme of 10,000ML/a has been investigated, however it would be assumed that demand would be zero. Given a new Nullinga Dam will be built within an existing operation water supply scheme, with water prices trading on an open market, a Conjunctive Scheme has also been analysed using existing pricing per the MDWSS. The Water Demand RFI was based on the Conjunctive Scheme, however this scenario (using existing water prices) is expected to result in a large funding gap.

12.5 Consumer rights

Potential compulsory land acquisition may impact on existing consumer rights. Where property acquisitions are required, these will be undertaken in accordance with the *Acquisition of Land Act 1967*. The acquisition of properties will require compensation to landowners and a land acquisition strategy will be developed by Sunwater to ensure consumer rights are considered.

In addition, if the Reference Project/s proceed to the environmental approvals process, the required submissions process will be undertaken to ensure consumers' right to be heard.

12.6 Safety and security

The *Water Supply (Safety and Reliability) Act 2008* is the statutory framework for regulating the safety and reliability of water supply in Queensland. The primary purpose of the Act includes the regulation of referable dams, flood mitigation responsibilities and protecting the interests of customers.

Concept and preliminary engineering design of the dam is in accordance with the ANCOLD guidelines. Further engineering development will be required to ensure designs are to the relevant standards. At this stage, both the main dam wall and saddle dam have been designed on the basis that it is an Extreme Consequence Category Dam (the highest risk level for Australian dams). This is for both Sunny Day and Flood Failure, based on the downstream town of Dimbulah.

A review of this assessment found that during a dam break scenario, the flood waters may split with a portion along the Walsh River (towards Dimbulah) and a portion running across the plains to the North East towards Mareeba. The split flow may reduce the population at risk, as the flood waters will have a reduced extent, however the greater population at Mareeba may negate this. Further assessments will be required in subsequent project phases.

Regarding water quality, previous community concerns regarding leaching of metals from abandoned mines upstream of the Nullinga Dam site have been expressed. Environmental investigations have not identified this as a fatal flaw, however further studies including water quality monitoring will need to be conducted during the EIS stage to assess impacts. Nullinga Dam will be designed to supply same quality of water currently available.

Additionally, Reference Projects 1 and 2 are sized on providing same reliability of water as from Tinaroo Falls Dam. A Conjunctive Scheme operation may provide further security benefits.

12.7 Privacy

Information received from the public during engagement activities will be treated in accordance with the *Information Privacy Act 2009 (Qld)*. No other issues have been identified in relation to the privacy of individuals or groups