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30. CONCLUSIONS AND RECOMMENDATIONS

This chapter addresses **Section 10** of the ToR. Its purpose is to make conclusions and recommendations with respect to the Project based on the studies presented, the Environmental Management Plans (EMPs) and conformity of the Project with legislative and policy requirements.

30.1. Conclusions

The conclusions drawn from the environmental impact assessment process relate primarily to the key issues underlying the Project in terms of its rationale, the environmental and social implications, the Project construction impacts and mitigation measures, the operational impacts and mitigation measures, cumulative impacts and the environmental management approach during Project construction and operation.

In 2005, the government released the Coal Infrastructure Program of Actions (CIPA) detailing approximately \$4.2 billion worth of coal-related infrastructure (2005, updated in 2008) to meet the growing needs of the coal industry. With respect to water, the proposed developments covered by the Program of Action included the Nathan Dam and Pipelines Project to service demand for water in the Surat Basin and southern Bowen Basin.

The Statewide Water Plan (SWP, 2006) established a plan to balance water supply with increasing demand from urban communities, industry and rural users, to improve water security, and support ongoing economic growth. The SWP was, with respect to the Fitzroy Basin, based on the Central Queensland Regional Water Supply Strategy (CQRWSS; 2006), which identified future water needs for the sub regions and the preferred water supply option for meeting these needs. Within the Dawson-Callide and Upper Dawson sub-regions the Nathan Dam was again identified as the best option for meeting the short to medium-term water needs. The CQRWSS placed a high priority on the Project.

Subsequent to development of the SWP, the Nathan Dam and Pipelines Project was included in the *Program of Works, Statewide Water Grid Regional Water Infrastructure Projects* approved by the Governor in Council under Part 3 of the SDPWO Act on 18 April 2008. This program directs the designated proponents of the projects to undertake all necessary investigations in order to obtain environmental approvals and prepare a business case for their respective designated regional water projects. SunWater was the designated proponent for the Nathan Dam and Pipeline Project.

In late 2007, SunWater opened discussions with existing and potential coal miners in the Surat Basin with a view to assessing future demand for Nathan Dam. SunWater's assessment confirmed that adequate secure water supply is required for the thermal coal industry in the region. Most coal mine developments in the Surat Basin are also dependant on access to port and rail infrastructure. The medium to long term expansion of the thermal coal sector remains relatively unaffected by recent economic events with growth being driven by a long-term commodities demand 'super-cycle' due largely to the urbanisation of developing countries.

Since the initial demand assessments in late 2007, SunWater has been in regular contact with potential customers to continually update demands and development timeframes. Assuming that the Surat Basin Rail project and the Wiggins Island Port development proceeds, current estimates of demand in the Surat Basin range from 52,000 ML/a to 68,000ML/a.

The growing demand for water in the Upper Dawson and Dawson-Callide sub-regions and the Surat Basin is driven by the coal mining industry. That industry is growing rapidly and is supported by significant private and government

expenditure on a range of infrastructure projects including ports, rail and rolling stock, power and water. The Queensland government has, over recent years, developed a range of strategic planning and policy initiatives that support and coordinate this development. The Nathan Dam and Pipeline Project is recognised in all the relevant documents as the preferred water supply in the region.

Water products to be supplied by the dam include 66,011 ML/a of high priority or equivalent water and the medium priority water currently supplied by Glebe Weir (replaced by the dam) to users within the Dawson Valley Water Supply Scheme (DVWSS). The high priority water is intended for mining and urban uses with the majority supplied directly from the dam via a pipeline, the remainder will be supplied by the existing downstream network of storages. Demand has been modelled as a constant daily demand. Provision of medium priority water allocations for agriculture will be considered if demand transpires, however, price sensitivity assessments of the irrigation sector suggest that water from the dam will be too expensive.

The Fitzroy Basin Resource Operations Plan 2006 (ROP) implements the Water Resource (Fitzroy Basin) Plan. As part of the ROP, areas of the Basin are identified which are able to provide future water allocations, over and above existing surface water entitlements. This 'unallocated' water reflects a potential future water source which can be provided while still meeting the WRP objectives. The ROP specifically identifies unallocated water within the Dawson River, associated with Nathan Dam.

The Project has been assessed by the proponent and the assessment team with a view to understanding the current environmental, social and economic aspects of the Project area from the available information and to additional investigations, where required, to provide a sound basis to the impact assessment. Government agencies, stakeholders and the public have been involved in the EIS process to date and are encouraged to participate in the assessment. This process has led to considerable confidence in undertaking the assessment for the Project, modifying elements of the Project, and developing mitigation measures.

The Project, including all components of dam, pipeline and associated infrastructure works is expected to generate a wide extent and variation in scale of impacts, both negative and positive. The more significant impacts and mitigation measures, which have been incorporated into the Project's EMPs, are summarised below.

Most impacts associated with construction are local and short-term, and are readily mitigated. Key construction impacts include loss of remnant vegetation and fauna habitat. More widespread impacts are the positive effects of economic and employment stimulus.

During operation, impacts include changes in land use in the water storage area, potential barriers to fauna movement and some changes in surface water flow. Indirect impacts include the social and economic benefits related to water supply security.

Based on the assessment process, outcomes and mitigation measures, a cumulative impact assessment has identified that implementation of the recommended mitigation measures, combined with a number of initiatives nominated by the proponent, will achieve a sustainable outcome.

With respect to Matters of National Environmental Significance (MNES), a series of mitigation measures are proposed which minimise the residual risk to MNES as far as practicably possible. However, SunWater has also offered an offset

package, to satisfy both State and Commonwealth requirements that includes managing the conservation value within the catchment of the dam in a manner which achieves the purpose of vegetation and biodiversity offsets. While the full extent of this offset is yet to be confirmed, it represents a substantial commitment and a high value conservation outcome.

A number of recommendations have been made in the EIS in relation to the management of environmental impacts during the construction and operation of the Project. These recommendations will require actions to be taken during the design, construction and operational life of the Project. The mitigation of impact and realisation of beneficial outcomes identified in the environmental impact assessment process will require an effective management framework and implementation. Detailed EMPs will need to be prepared. Some aspects of the EMPs will need to be approved by the Queensland Government and others will need to be approved by SunWater prior to the commencement of construction and operation of the Project.

The EIS provides draft EMPs which set out the Project commitments to avoid or minimise potential environmental impacts of the Project as identified in the EIS, identification of environmental aspects to be managed and how environmental values may be protected and enhanced. Included are Construction and Operational Environmental Management Plans, CEMPs and OEMPs respectively, which are dynamic documents as they incorporate continuous improvement. Each plan will be updated to incorporate further information, approval conditions, and changes in environmental management procedures in the light of ongoing monitoring results, new techniques, and relevant legislative requirements.

30.2. Recommendations

Having regard for the benefits and the impacts of the Project presented in this EIS, it is a recommendation of the EIS that the Project proceeds subject to:

- a) developing and implementing detailed EMPs for the construction phase and the operational phase;
- b) developing and implementing a scheme of effective mitigation measures and proponent commitments based on those set out in the EIS; and
- c) finalising the offset strategy.