



Department of **Water**
Government of Western Australia

Southern River integrated land and water management plan: a process evaluation

Response to report

Department of Water

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Summary

A number of issues/learnings captured within the Southern River integrated land and water management plan: a process evaluation document have been addressed with the establishment of the Department of Water and its role in drainage planning. Additionally, the development of a number of draft drainage and water management plans (DWMP), the *better urban water management* (BUWM) document and other guidance documents recently developed by the department are consistent with the learnings. The New WATERways program and the department's capacity building program have addressed some issues in part. It is considered the following issues/learnings from Southern River still require progressing:

- liability risk, ongoing maintenance costs and legacy sites.
- third pipe and water availability.
- monitoring framework.

Response table

Issue	Learning	Response/Action
Governance	<ul style="list-style-type: none"> • Lack of clear roles and responsibilities as a result of the evolving water governance structure in Western Australia. • Resourcing the implementation of new responsibilities. 	<ul style="list-style-type: none"> • Department of Water established in November 2005 with clear responsibility for strategic drainage planning and developing drainage funding and governance models. • Through a number of forums, further consultation has been undertaken with key stakeholders on the roles and responsibilities for drainage funding and management in Western Australia. As a result of this consultation, advice to the Minister for Water Resources is currently being prepared by the department. • ACIL Tasman Funding Model Study to provide input to the advice being prepared for the Minister.
Memorandum of understanding (MOU)	<ul style="list-style-type: none"> • The symbolic value of the MOU facilitated cooperation amongst agencies. • MOU is useful for sign on and to clarify roles and responsibilities. 	<ul style="list-style-type: none"> • The establishment of the department with a clear mandate from government to facilitate drainage planning and the development of the BUWM document has clarified roles and established the framework for cooperation between the agencies in urban water management.

Issue	Learning	Response/Action
Steering committee / technical working group	<ul style="list-style-type: none"> • The appropriate range of expertise from key organisations should be represented on the steering committee and technical working group. • Strong interaction and reporting mechanisms between the steering committee and technical working group are required. • Important decisions should only be made at the steering committee. • Inclusion of a representative from the development industry on the steering committee. • Changing membership in the technical working group and large gaps between steering committee meetings caused a loss of momentum during the process. • The technical working group should review urban water management plans (UWMP) rather than circulating the documents around agencies. 	<ul style="list-style-type: none"> • High level steering committees and/or technical working groups will be formed where a development area is identified as requiring these levels of stakeholder facilitation and coordination. • The individual 'learning's' are noted, however a number of these are a product of the length of time of the project and the fact that it was a 'learning process'.
Land and water framework	<ul style="list-style-type: none"> • Development of higher level water management plans should occur in a timely manner as these inform and provide guidance for local level water management plans. • Earlier development of plans may result in greater application of water sensitive urban design (WSUD). • Early planning allows the greatest advantage to achieve stormwater management and public open space objectives. 	<ul style="list-style-type: none"> • Department of Water program for the preparation of DWMPs is addressing this gap. • Agreed: Department of Water Urban Drainage Initiative is designed to achieve this outcome.

Issue	Learning	Response/Action
	<ul style="list-style-type: none"> Develop a strategy for securing the use of land for stormwater management. 	<ul style="list-style-type: none"> The BUWM document establishes the planning policy to ensure structure planning sets aside sufficient land for sustainable urban water management.
Implementation	<ul style="list-style-type: none"> Although WSUD principles were reflected in the plan, there are several instances where traditional drainage methods were employed during implementation. 	<ul style="list-style-type: none"> Department of Water is preparing and publishing technical guidelines and is undertaking a local government authority and land development industry focused capacity building program to provide the knowledge and confidence for full implementation of WSUD principles and objectives.
Terminology	<ul style="list-style-type: none"> Use a single consistent set of terms that does not conflict with the state water planning framework. 	<ul style="list-style-type: none"> This is being addressed in the role out of the latest guidance documents.
Reduction targets	<ul style="list-style-type: none"> Set water conservation targets early in the process. The process and basis on which targets are developed must be clearly articulated in a plan. The integrated land and water management plan (ILWMP) should demonstrate how the set targets are compatible with broader catchment objectives. Further clarification about design objectives and how these were determined is required, including a definition of a development that does not actively manage water quality. 	<ul style="list-style-type: none"> Targets are set and published in the DWMPs. Agreed: Better documentation on the development of targets is now included in DWMPs and guidelines. Agreed: This information now included in DWMPs. Department of Water is currently refining the water quality design targets and criteria.

Issue	Learning	Response/Action
	<ul style="list-style-type: none"> The Model for Urban Stormwater Improvement Conceptualisation (MUSIC) needs to be adapted for use in a Western Australian context. 	<ul style="list-style-type: none"> As part of the Swan, Peel and Geographe Coastal Catchments Initiative projects, the Department of Water has undertaken extensive analysis and calibration work on the MUSIC model, in conjunction with its developers. This has established that catchment specific calibrations are required to enable the use of the model, thus requiring its use by an expert modeller familiar with all the 'calibration' requirements. At this stage, the department is not satisfied that the model is suitable for 'general release' for use by industry practitioners, who are not expert modellers.
Monitoring	<ul style="list-style-type: none"> Collect sufficient baseline data (two to three years of data collected) prior to starting the preparation of a plan. Monitoring to be factored into the planning timeline. Agreed upon and consistently applied monitoring protocols are required. Establish a central data storage system to allow access to data by all interested parties. The long time period to obtain permissions resulted in delays in the construction of monitoring stations. Permanent stations capable of collecting real time data should be installed. 	<ul style="list-style-type: none"> Agreed: DWMPs now specify three years of pre-development monitoring. Agreed Agreed: Being developed and included in guidelines Agreed: Protocols for data to be quality assured and entered on the WIN database are being developed Noted: Early planning of stations required. Agreed

Issue	Learning	Response/Action
	<ul style="list-style-type: none"> Long-term monitoring in the study area should be undertaken. 	<ul style="list-style-type: none"> Agreed: A gauging station has been established at confluence of Forrestdale Main Drain with Southern River. The gauging station on Balanup Drain coming out of North Forrestdale urban development area to be upgraded.
Issues not addressed in the ILWMP	<ul style="list-style-type: none"> Liability, risk and on-going maintenance costs of the WSUD infrastructure. Management of legacy sites and nutrients. The application of the <i>Contaminated Sites Act 2003</i> in the study area. 	<ul style="list-style-type: none"> Demonstration sites are being established and data is being collected from infrastructure that has already been established both in WA and other parts of Australia. The requirement for comprehensive pre-development monitoring and preparation of local water management strategies provides the process for these issues to be addressed in an equitable manner. Swan River Trust offsets. Role of Department of Environment and Conservation to administer this Act.
Evaluation and capacity building	<ul style="list-style-type: none"> Research and development should be undertaken as part of a capacity building program for WSUD in Western Australia. Monitoring and evaluation of the effectiveness of various WSUD mechanisms in Western Australian conditions including the ILWMP area. Require clear mechanisms for distributing research and development findings. 	<ul style="list-style-type: none"> The City of Armadale is currently undertaking a project on behaviour to encourage conservation. Department of Water has established a comprehensive research and development and monitoring evaluation program, which is being implemented in 08/09. Agreed
Potable water conservation and third pipe sources	<ul style="list-style-type: none"> If a third pipe is to be used, there needs to be an understanding of what resources are available for a third pipe. 	<ul style="list-style-type: none"> Water Corporation has developed and published guidelines, including the 7 step process. DoW currently drafting a position statement.

Shortened forms

BUWM	better urban water management
DWMP	drainage and water management plan
ILWMP	integrated land and water management plan
MUSIC	model for urban stormwater improvement conceptualisation
UWMP	urban water management plan
WSUD	water sensitive urban design