



**REVISED DRAFT
REPORT**

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Pre-feasibility Assessment of Alternative Management and Funding Models for Sustainable Operation and Maintenance of Stormwater WQ Assets in the ACT

Report prepared for ACT Government –
Environment Planning Directorate

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Executive summary

Background to project

In 2016 Marsden Jacob Associates (MJA) prepared a report for the ACT Government on existing management and funding arrangements for the operation and maintenance of stormwater WQ assets in the ACT. We found that:

- Various features of the current institutional arrangements fell well short of best-practice. Key among these were ambiguity regarding roles and responsibilities for stormwater WQ asset O&M, misaligned incentives between those who are responsible for accepting assets and those responsible for the O&M of assets and a lack of transparency on the decision making processes for funding allocations and expenditure of allocations
- The weaknesses in the institutional arrangements extended to funding arrangements. Although a framework for funding of O&M is in place, it contains a number of weaknesses that have contributed to a lack of understanding of the O&M task (in financial terms) and funding levels that have fallen short of those implied by reasonable engineering standards

The expected funding shortfall was estimated to be up to \$4.2m in 2014/15.

However, this does not necessarily mean that funding allocated from ACT Government Budget appropriations has been inadequate. CMTEDD estimate that TAMS received O&M funding allocations of approximately \$40m per year. Decisions regarding the allocation of that global O&M appropriation are made by TCCS executives. Therefore, it may be the case that the allocation of O&M appropriations to stormwater WQ O&M may be insufficient, rather than appropriations through the budget process.

Notwithstanding the above caveat, our analysis extended to advising the ACT Government of alternative management and funding arrangements that had the potential to remedy the weaknesses in current settings.

Following a review of O&M management and funding arrangements in other Australian jurisdictions and internationally, we identified eight alternative models that had the potential to be applied in the ACT.

We applied a multi-criteria assessment of the eight alternative models in order to identify three preferred models:

- Introducing a **cost-reflective stormwater charge** irrespective of the final institutional arrangements;
- Creating a **stormwater utility** within ACT Government, that is funded by a cost-reflective charge; or
- Transferring the stormwater assets of the ACT to **Icon Water**, which would operate and maintain those assets and raise funding through the existing price determination process.

Scope of this project

Following consideration of the report by the ACT Government it was decided that more detailed information and analysis was required on the three models that were identified by MJA as preferred, along with the option of refining existing arrangements.

The ACT Government has engaged MJA to provide the following:

The scope of the engagement has six main components outlined below. Each of the components is to be informed through genuine consultation with key stakeholders.

- **Costs of implementation** – To consider the range of costs that will be incurred (one-off and ongoing) from implementation of each option. Costs are to include transaction costs, personnel costs and administrative costs
- **Technical factors that will influence feasibility** – To consider how existing arrangements would be improved through implementation, funding shortfalls could be reduced or eliminated through implementation and further detail on the historical economic drivers that motivated other jurisdictions to adopt cost reflective pricing for stormwater services
- **Broader implementation considerations** – Take account of potential barriers to implementation that may arise from corporate objectives of proposed host organisations, community preferences, legislative challenges, change management issues and other relevant risks
- **Consequences for the BPP assets** – Assess the extent to which each option would be suited to funding and management of O&M functions for the BPP schedule of stormwater WQ assets
- **Triple Bottom Line analysis** - extend the existing TBL analysis contained in the MJA report to each of the options under consideration, including to the extent possible (within budget and time constraints) impact assessment that is consistent with ACT RIS guidance
- Report if there is a **change in the rank** of the options and provide guidance on risks that should be mitigated when implementing each option

Funding options assessed

We assessed three main alternative funding mechanisms:

- Increasing revenue to fund the O&M expenditure shortfall through raising existing ACT Government General Rates and/or duties/taxes
- Introducing a simple stormwater levy as an alternate funding source for O&M expenditure
- Introducing a cost reflective stormwater levy or charge as an alternate funding source for O&M expenditure

Institutional options assessed

In an Options Paper distributed as part of this project we proposed two main forms of institutional reform:

- Creating a Stormwater Utility, in one of three forms:
 - A business unit/Directorate Branch
 - A Territory Authority
 - A Territory-Owned Corporation
- Integrating stormwater WQ functions into Icon Water through:
 - Transferring stormwater WQ assets and responsibilities for O&M to Icon Water
 - Transferring only responsibilities for O&M of stormwater WQ assets to Icon Water

In the course of consultations an alternative model for institutional reform was proposed by Icon Water. It has four main features:

- An alternative demarcation of stormwater WQ assets that would be subject to reform, with ‘regional’ scale assets transferring to Icon Water, and ‘local’ scale assets remaining with TAMS¹
- Icon Water would purchase the assets from the ACT Government
- Icon Water would earn a return on and return of assets, funded by a Community Service Obligation (CSO) payment from the ACT Government, that would be immediately passed back to the ACT Government through Icon Water dividend payments
- O&M expenditure would be funded through an additional stormwater charge that would appear on Icon Water bill notices

In its submission to the Options Paper CMTEDD also proposed an alternative set of reforms:

- Responsibility for stormwater WQ assets remain with TAMS² and assets remain on the ACT Government balance sheet
- Reporting requirements be substantially revised, as follows:
 - An output class would be established for Stormwater, publishing the amount appropriated each year in the Budget Papers for this function.
 - Accountability indicators outlining the expected level of performance for these assets would be included in the Budget Papers.
 - TCCS would be required to report on the performance against the accountability indicators in the Annual Report.
 - The Annual Reports would be reviewed by the Legislative Assembly through the Public Accounts Committee

¹ At the time that Icon Water prepared its submission, TAMS was responsible for the O&M of stormwater WQ assets through Roads ACT and PATS

² As above

Costs of implementation

The significant cost of implementing each form of funding reform would be engaging specialist advisors to determine the prudent and efficient O&M expenditure for stormwater WQ assets in the ACT, and to provide an ongoing framework for regular reassessment. In our experience the cost of such an exercise would be between \$250,000 to \$500,000. However, without undertaking this exercise the ACT Government will not be in a position to understand the efficient level of revenue that should be raised, which would result in an economically inefficient increase in Rates/taxes, or imposing a levy/charge at an inefficient level. Furthermore, this investment would allow the ACT Government to embed efficiency gains into the future, delivering long term benefits to the economy.

The two institutional reforms that attract significant implementation costs are:

- Transferring assets to Icon Water
- Establishing a Territory Authority

Costs consist of establishment costs and ongoing incremental corporate overhead costs. The following table sets out our estimates of the implementation costs of a 10 and 30 year evaluation period, expressed in present value terms.

Present Value of transactions costs

	Present Value establishment costs (\$m) ¹		Present Value ongoing incremental overhead costs (\$m) ^{2,3}		Present Value total transaction costs (\$m)	
	10 yr	30 yr	10 yr	30 yr	10 yr	30 yr
Territory Authority	\$1.9	\$1.9	\$3.8	\$7.7	\$5.7	\$9.6
Icon Water	\$2.8	\$2.8	\$3.2	\$6.4	\$6.0	\$9.2

Notes:

1. PVs are identical because establishment costs are incurred only in the first year of analysis

2. For Territory Authority, annual ongoing costs consist of:

\$100,000 for Board members, \$302,500 for CEO and \$197,500 for senior managers (including on costs)

3. For Icon Water, annual ongoing costs consist of:

\$302,500 for MD of Stormwater and \$197,500 for senior managers (including on costs)

Technical factors that influence feasibility

A number of the options have been ruled out due to technical factors that would prevent implementation. These are:

- Establishing a Stormwater Utility through creation of a Territory-owned Corporation. CMTEDD advise that it would not be possible under Government Trading Enterprise conventions
- Transferring only O&M responsibilities to Icon Water is not an option that Icon Water is prepared to consider as it would not provide sufficient opportunity to manage value across the entire stormwater value chain.

Broader implementation considerations

CMTEDD has expressed strong reservations about the net benefits of:

- Establishing a stormwater levy or charge
- Establishing a Territory Authority or Business Unit within TCCS
- Transferring assets to Icon Water

The key argument put forward by CMTEDD is that the benefits of reform are unlikely to outweigh the implementation costs. This Draft Report goes some way toward providing clarity on those issues.

Icon Water has expressed considerable interest in taking ‘regional scale’ stormwater WQ assets, and has undertaken its own pre-feasibility assessment.

Consequences for BPP assets

Each of the funding and institutional models outlined in this Draft Report would be capable of funding the ongoing O&M of stormwater WQ assets constructed under the BPP program. However, if some of those assets are constructed under commercial arrangements that allow for ongoing operation and maintenance at a project level scale (e.g. recycling stormwater), the projects would be self-funding and fall outside of the arrangements proposed in this report.

Triple Bottom Line analysis

The two major institutional reforms (establishing a Territory Authority and transferring assets to Icon Water) have significant establishment costs. In order for them to be economically worthwhile, the expected benefits from the reforms should outweigh the expected implementation costs.

For those options that do not have implementation costs, they should deliver material benefits from implementation if they are to be considered further.

Analysis in this report demonstrates that the ‘improved reporting’ and ‘Business Unit’ options are unlikely to result in material benefits through efficiency gains.

In contrast, the Territory Authority and Icon Water options are expected to yield efficiency gains. This report sets out the basis for those efficiency gains in detail. The following table provides a summary of our findings.

	Net Present Value (\$m)		Benefit Cost Ratio	
	10 yr evaluation	30 yr evaluation	10 yr evaluation	30 yr evaluation
Territory Authority	\$0.6	\$8.4	1.1	1.9
Icon Water	\$1.2	\$11.6	1.2	2.3

The results suggest that the option of transferring assets to Icon Water is likely to result in a relatively more beneficial outcome to the ACT Community. In essence this is because Icon Water has a proven institutional structure that is highly likely to capture efficiency gains from managing stormwater WQ assets within the existing regulatory environment that it operates within. In contrast the Territory Authority would be unproven, and therefore uncertainty would be attached to the likelihood of efficiency gains being realised.

The impact on ACT property owners would be similar under either the Territory Authority or Icon Water options. MJA's calculations of the necessary stormwater levy or stormwater charge that would be required per property in the ACT are in the following table.

Net impact on ACT property owners from introduction of stormwater levy or charge		
	10 yr	30 yr
Icon Water option	\$33.52	\$30.12
Territory Authority option	\$33.80	\$31.17

This suggests that the determining factor in deciding between the options would be the extent of net benefits available under each and the certainty attached with capturing those net benefits.

Change in ranking

The analysis in this report does not result in a change in the ranking of the options from MJA's 2016 report on funding and institutional reform options. That is, transferring assets to Icon Water remains the preferred option, and the implementation of a cost-reflective stormwater charge remains the preferred funding mechanism, with an associated reduction in General Rates to partially off-set the impact on ACT property owners.

1. Introduction to the project

1.1 Background

In 2016 Marsden Jacob Associates (MJA) prepared a report for the ACT Government on existing management and funding arrangements for the operation and maintenance of stormwater water quality (WQ) assets in the ACT. We found that:

- Various features of the current institutional arrangements fell well short of best-practice. Key among these were ambiguity regarding roles and responsibilities for stormwater WQ asset operation and maintenance (O&M), misaligned incentives between those who are responsible for accepting assets and those responsible for the O&M of assets and a lack of transparency on the decision making processes for funding allocations and expenditure of allocations
- The weaknesses in the institutional arrangements extended to funding arrangements. Although a framework for funding of O&M is in place, it contains a number of weaknesses that have contributed to a lack of understanding of the O&M task (in financial terms) and funding levels that have fallen short of those implied by reasonable engineering standards

The expected funding shortfall was estimated to be up to \$4.2m in 2014/15.

Our analysis extended to advising the ACT Government of alternative management and funding arrangements that had the potential to remedy the weaknesses in current settings.

Following a review of O&M management and funding arrangements in other Australian jurisdictions and internationally, we identified eight alternative models that had the potential to be applied in the ACT.

We applied a multi-criteria assessment of the eight alternative models and identified three potential reform options:

- Introducing a **cost-reflective stormwater levy/charge** irrespective of the final institutional arrangements;
- Creating a **stormwater utility** within ACT Government, that is funded by a cost-reflective levy/charge; or
- Transferring the stormwater assets of the ACT to **Icon Water**, which would operate and maintain those assets and raise funding through the existing price determination process.

Our report contained brief guidance on implementation pathways for each of the three preferred options. We were also asked to advise on implementation of an option that refined existing arrangements.

1.2 About this project

Following consideration of the report by the ACT Government it was decided that more detailed information and analysis was required on the three models that were identified by MJA as preferred, along with the option of refining existing arrangements.

The scope of the engagement has six main components outlined below. Each of the components is to be informed through genuine consultation with key stakeholders.

- **Costs of implementation** – To consider the range of costs that will be incurred (one-off and ongoing) from implementation of each option. Costs are to include transaction costs, personnel costs and administrative costs
- **Technical factors that will influence feasibility** – To consider how existing arrangements would be improved through implementation, funding shortfalls could be reduced or eliminated through implementation and further detail on the historical economic drivers that motivated other jurisdictions to adopt cost reflective pricing for stormwater services
- **Broader implementation considerations** – Take account of potential barriers to implementation that may arise from corporate objectives of proposed host organisations, community preferences, legislative challenges, change management issues and other relevant risks
- **Consequences for the BPP assets** – Assess the extent to which each option would be suited to funding and management of O&M functions for the BPP schedule of stormwater WQ assets
- **Triple Bottom Line analysis** - extend the existing TBL analysis contained in the MJA report to each of the options under consideration, including to the extent possible (within budget and time constraints) impact assessment that is consistent with ACT RIS guidance
- Report if there is a **change in the rank** of the options and provide guidance on risks that should be mitigated when implementing each option

1.3 Recent changes to ACT institutional arrangements

Since the Final MJA report was delivered to EPD in February, 2016 TAMS has undergone significant structural reform. Transport Canberra and City Services (TCCS) has been formed by the merger of the Capital Metro Authority and TAMS.

Some functions of Parks and Territory Services (part of TAMS) have been transferred to EPD (namely Parks and Conservation). These relate to catchment management functions.

Roads ACT remains within TCCS and will continue to be responsible for the O&M of ‘hard’ stormwater WQ assets along with drainage and conveyance stormwater assets. Place Management (within TCCS) will take on responsibility for the O&M of ‘soft’ stormwater WQ assets.

Presumably the existing arrangements for allocation of O&M funding between Roads ACT and Place Management will remain in place.

In the 2016/17 Budget additional O&M funding has been appropriated to TCCS for O&M of roads in Canberra.

1.4 Our approach

In preparing this report we undertook the following steps:

- Desktop research on technical aspects of each option and implementation requirements
- Prepared an Options Paper describing each option in detail
- Distribute and consult on Options Paper with key stakeholders
- Provided a ‘Summary of Positions’ Paper to the ACT Government, that captured the key points from submissions made in response to the Options Paper
- Prepared this Draft Report addressing elements of the project scope

1.5 Structure of this report

The remainder of this Draft Report is structured as follows:

- **Section 2** outlines the potential reforms that are considered in this report
- **Section 3** sets out the criteria for assessment of potential reforms
- **Section 4** contains our assessment of funding reform options against the selection criteria
- **Section 5** outlines our overall assessment of the funding reform options
- **Section 6** provides our assessment of institutional reform options against the assessment criteria
- **Section 7** contains our overall assessment of institutional reform options
- **Section 8** provides our conclusions

2. Potential reforms considered in this report

The potential reforms considered in this project were:

1. Introducing a stormwater levy or charge as an alternate funding source for O&M expenditure
2. Creating a Stormwater Utility, in one of three forms:
 - A business unit/Directorate Branch
 - A Territory Authority
 - A Territory-Owned Corporation
3. Integrating stormwater WQ functions into Icon Water through:
 - Transferring stormwater WQ assets and responsibilities for O&M to Icon Water
 - Transferring only responsibilities for O&M of stormwater WQ assets to Icon Water

In the course of consultations an alternative model for institutional reform was proposed by Icon Water. It has four main features:

- An alternative demarcation of stormwater WQ assets that would be subject to reform, with ‘regional’ scale assets transferring to Icon Water, and ‘local’ scale assets remaining with TAMS³
- Icon Water would purchase the assets from the ACT Government
- Icon Water would earn a return on and return of assets, funded by a Community Service Obligation (CSO) payment from the ACT Government, that would be immediately passed back to the ACT Government through Icon Water dividend payments
- O&M expenditure would be funded through an additional stormwater charge that would appear on Icon Water bill notices

In its submission to the Options Paper CMTEDD also proposed an alternative set of reforms:

- Responsibility for stormwater WQ assets remain with TAMS⁴ and assets remain on the ACT Government balance sheet
- Reporting requirements be substantially revised, as follows:
 - An output class would be established for Stormwater, publishing the amount appropriated each year in the Budget Papers for this function.
 - Accountability indicators outlining the expected level of performance for these assets would be included in the Budget Papers.
 - TCCS would be required to report on the performance against the accountability indicators in the Annual Report.
 - The Annual Reports would be reviewed by the Legislative Assembly through the Public Accounts Committee

³ At the time that Icon Water prepared its submission, TAMS was responsible for the O&M of stormwater WQ assets through Roads ACT and PATS

⁴ As above

2.1 Funding reform options

In this section we outline the main options for implementing a stormwater Levy or Charge as a means of raising sufficient revenue to offset the costs of stormwater WQ asset O&M functions in the ACT.

This section describes the options and how they could be implemented. Assessment of the pros and cons of each option is provided in Section 4 of this report.

2.1.1 Simple stormwater Levy/Charge

Implementation of this option would result in the ACT Government setting a stormwater levy without attempting to explicitly set the levy at an amount that would result in the efficient and prudent cost of stormwater O&M activities being fully offset. In this way it would work much like the recent Safer Families Levy, which has been set at \$30 per household. The intent of the levy is to ‘lock in’ a sustainable revenue source to ensure that domestic violence services are funded consistently, and not subject to yearly budget allocation fluctuations.

The levy would be raised via Rates Assessment notices, under Section 69A of the *Rates Act 2004*. Levies raised via this section are set out in Schedule 1 of the *Rates Act 2004*.

There is no requirement under the *Rates Act 2004* that a levy be cost reflective or the basis for the levy be set out. Likewise, it is also not required that revenue raised by a levy be ‘earmarked’ against certain expenditures. Rather, revenue raised under the levy flows to Consolidated Revenue.

Currently there are two levies:

- Fire and Emergency Services Levy⁵
- City centre marketing and improvements levy⁶

Legislation has recently been passed to give effect to the Safer Families Levy.

In order for a Stormwater Levy to be implemented in the ACT, a number of regulatory changes would be required:

- Enabling legislation would be passed by the Legislative Assembly (e.g. Stormwater Levy Bill) to amend the *Rates Act 2004*, allowing the Stormwater levy to be listed in Schedule 1. The amendment would need to identify who is liable to pay the Levy and the form it would take.
- A disallowable instrument⁷, made under the *Taxation Administration Act 1999* would be introduced to set out the monetary charges that are to apply under the Stormwater Levy⁸

⁵ The Fire and Emergency Services Levy is imposed on all rateable properties in the ACT

⁶ The City centre marketing and improvement levy is only imposed on some commercial properties

⁷ For the Fire and Emergency Services Levy the relevant instrument is the Taxation Administration (Rates – Fire and Emergency Services Levy) Determination 2015 (No 1) – Disallowable instrument DI2015-166

⁸ Disallowable instruments are tabled in the Legislative Assembly for a period of 6 sitting days, during which time a motion to disallow the instrument can be tabled. Following the lapse of the period the disallowable instrument stands as a legislative instrument until it is revoked or lapses.

2.1.2 Cost-reflective Stormwater levy/Charge; set by Government

Under this option the Stormwater Levy would be set at the level necessary for sufficient revenue to be raised to offset the efficient and prudent O&M costs associated with stormwater WQ assets.

The Prudence and Efficiency tests

Economic regulators of utility services and infrastructure often apply a prudence and efficiency test when determining whether to allow recovery of revenue that would offset costs of providing the services. Although far from perfect, the approach provides a commonly accepted ‘anchor point’ from which proposed expenditure (both capital and operational) can be assessed.

Prudence test

- The prudence test typically considers the following factors:
- the basis (driver) for the investment or expenditure
- the outputs (and benefits) associated with each project or expenditure program
- the methods by which projects and initiatives were identified and developed including the application of any risk based processes used to prioritise projects or initiatives
- the planning and design processes used to develop projects, and evidence of options considered and design development.

Efficiency test

The efficiency test typically seeks to determine whether the costs presented by the regulated entity reflect those that would normally be expected to occur in a competitive environment. In undertaking the assessment of efficiency the following factors are typically considered:

- the cost estimation methodology, including the estimating process, key cost components, assumptions and unit rates
- assumptions surrounding the application of contingencies and escalation factors
- How the costs compare against those incurred by similar utilities

There are two main options for setting the levy at a cost reflective rate. First, an appropriate directorate of the ACT Government could undertake an assessment of the prudent and efficient costs of operating and maintaining stormwater WQ assets in the ACT. There are various cost recovery guidelines available in Australia. The Victorian Government ‘Cost Recovery Guidelines’ would be an excellent starting point. The results of the assessment would form the basis for setting the initial Stormwater Levy.

Second, the ACT Government, via a Minister, could request the Independent Competition and Regulatory Commission (ICRC) undertake an investigation into the costs of operating and maintaining stormwater WQ assets in the ACT. The ICRC is empowered to undertake such an

investigation under Section 8 (2) of the *ICRC Act 1997*. The Terms of Reference for the investigation would need to be drafted in such a way as to ensure the ICRC is required to:

- Report on the prudent and efficient O&M costs for stormwater WQ assets in the ACT
- Provide advice on the structure of a Stormwater Levy
- Provide advice on rates for a Stormwater Levy

The Report from the ICRC would form the basis of the Stormwater Levy.

Issuing a Terms of Reference under Section 8 (2) of the *ICRC Act 1997* does not bind the ACT Government to acting on all or some of the advice received from the ICRC. Nor is the Government required to formally respond to the Report.

The *ICRC Act 1997* requires that the costs of investigations be funded by the referring authority (presumably a Minister in this case). Those costs include any costs incurred by the ICRC to obtain external assistance.

Regardless of the form that the Stormwater Levy were to take and the administrative means by which the levy was introduced, it would be necessary for the ACT Government to explain why the Stormwater Levy is being introduced.

This would be likely to take the form of an information campaign that explained to rate payers why the levy is necessary and the activities that the levy will fund.

2.1.3 Cost-reflective Stormwater Levy/Charge ; set by ICRC

Under this option revenue to fund O&M of stormwater WQ assets would be collected via a Stormwater Levy that has been independently determined by the ICRC.

Section 15 (1) of the *ICRC Act 1997* allows the ICRC to investigate an industry, so long as the ICRC is provided with an Industry Reference by a referring authority. In this case the relevant Minister would provide the ICRC with an Industry Reference to investigate prices for the provision of stormwater services in the ACT⁹.

A threshold question under this option is the extent to which the ACT Government wishes to be bound by the findings of the ICRC investigation. If the ICRC is requested to make a Price Determination under the Industry Reference, then the ACT Government would be bound to implement the price structure determined by the ICRC. However, the referring Minister could limit the scope of the Industry Reference to the provision of advice on pricing for stormwater services in the ACT. By doing so the ACT Government would not be obligated to implement the price structure recommended by the ICRC in part or in full.

Regardless of whether the ICRC was instructed to provide advice on pricing or a formal price determination, the process would require a detailed exercise, given the relative paucity of data and analysis of stormwater WQ O&M expenditure that currently exists. It is highly likely that the ICRC would engage external consultants to assist it in collecting data on existing expenditure patterns and assessing the prudence and efficiency of expenditure. Therefore, the initial transaction costs associated with having the ICRC provide advice or a price direction are substantial.

⁹ Section 15 (1) explicitly allows for Industry References in relation to a Regulated Industry. The ACT Government could declare the Stormwater network in the ACT to be a Regulated Industry under Section 4 of the *ICRC Act 1997*, however this does not appear to be strictly necessary in order to make use of section 15 (1) (e).

2.2 Institutional reform options

In this section we outline the main options for institutional reform that have been considered in this report.

This section describes the options and how they could be implemented. Assessment of the pros and cons of each option is provided in Section 4 of this report.

2.2.1 Improved reporting requirements

In response to the Options Paper CMTEDD proposed an alternative institutional arrangements that centred on improving the reporting and accountability provisions. Under this option stormwater WQ assets would remain on the balance sheet of the ACT Government. TCCS would continue to have responsibility for O&M functions related to those assets.

To provide greater transparency and accountability, the following changes would be implemented:

- An additional output class would be established for Stormwater, publishing the amount appropriated each year in the Budget Papers for this function.
- Accountability indicators outlining the expected level of performance for these assets would be included in the Budget Papers.
- TCCS would be required to report on the performance against the accountability indicators in the Annual Report.
- The Annual Reports would be reviewed by the Legislative Assembly through the Public Accounts Committee

TCCS is currently required to report against specified outputs in its Annual Report. The existing output classes are:

- Output 1.1: Information Services (Libraries ACT)
- Output 1.2: Roads and Sustainable Transport
- Output 1.1: Public Transport (ACTION)¹⁰
- Output 1.3: Waste and Recycling
- Output 1.4: Land Management
- Output 1.5: Regulatory Services
- Output 1.6: Capital Linen Services

The proposed changes would result in the addition of Output 1.7: Stormwater. This would require TCCS to publicly report against performance indicators and targets. Achievements against the Output class would be communicated in the TCCS Annual Report and the formal

¹⁰ ACTION is classified separately from TCCS in the ACT Government Budget Papers. Reporting against the appropriation to ACTION is achieved through the TCCS Annual Report, rather than a separate Annual Report for ACTION.

‘Report on Statement of Performance’ submitted to the Auditor-General each year (also reproduced in the Annual Report).

Appropriations for Stormwater would be reported in the ACT Government Budget Statement H, which relates to TCCS.

2.2.2 Establishing a stormwater utility in the ACT Government

There are two fundamental options for the establishment of a stormwater utility in the ACT Government. These are:

- Creation of a branch or business unit within the existing TCCS Directorate structure
- Creation of a Statutory entity, in the form of a Territory Authority or a Territory-owned Corporation

Creation of a branch or business unit is within the existing powers of the TCCS Director General and would not require passage of legislation or regulation.

Creation of a Territory Authority would require the ACT Government to pass enabling legislation.

Creation of a Territory-owned corporation would not require passage of legislation or regulation. However, the relevant Minister would be required to follow procedures set out in the *Territory-owned Corporations Act 1990*, which would include formal notification to the Legislative Assembly that the territory-owned corporation has been established, accompanied by mandatory information relating to the establishment.

In the remainder of this section we outline the steps that would be required to implement each option.

Creation of a branch or business unit

Under this option the TCCS Director General, presumably in consultation with the relevant Ministers, would re-structure the TCCS Directorate. This would be a matter of policy that would not require passage of legislation, regulation or notification to the Legislative Assembly.

MJA found that roles and responsibilities for the O&M of stormwater WQ assets is split across the Infrastructure, Roads and Public Transport Division and the Parks and Territory Services Division. This had led to a number of operational frictions. Efforts to improve the situation included a memorandum of understanding¹¹ between the two divisions setting roles and responsibilities, and sharing of funding allocated by Treasury.

This option would result in all O&M functions relating to stormwater WQ assets in the ACT moving into a dedicated business unit of TCCS (for example, ‘Stormwater ACT’). The business unit would receive budget appropriations for that purpose, and be required to publicly report on performance criteria via either a separate annual report, or as a section of the TCCS annual report. This arrangement would be similar to that currently in place for ACTION.

Under the *Financial Management Act 1996* the Director General of TCCS would be responsible for ensuring that those funds appropriated to Stormwater ACT are expended in a manner consistent with the appropriation provisions set out in the Budget.

¹¹ MJA understands that the MOU is still in draft form, and may be finalised following the completion of the structural reform of TCCS.

Should the ACT Government elect to implement a stormwater Levy that revenue stream could be explicitly allocated to Stormwater ACT. Alternatively, funding for Stormwater ACT would be allocated from consolidated revenue as is currently the case, and annual funding would not necessarily be equal to that raised by the stormwater Levy.

Creation of a statutory entity

Under this option the ACT Government would create a stormwater utility through the establishment of a statutory entity. There are two main options to enable this under ACT legislation:

1. A Territory Authority
2. A Territory-owned Corporation

The steps required to establish each are outlined below.

Territory Authority

In order to establish Stormwater ACT as a Territory Authority the Legislative Assembly would need to pass enabling legislation¹², setting out:

- A declaration of establishment
- The functions of the Authority
- Governance arrangements
- Powers of the Minister to give directions to the Authority
- Requirements to agree a Statement of Intent with the Minister
- Requirements to produce an Annual Report in accordance with the *Annual Reports Act 2004*

Territory Authorities are required to operate in accordance with the provisions outlined in Part 8 of the *Financial Management Act 1996*. This requires that Territory Authorities do the following:

- Prepare a **Budget Statement** for presentation to the Legislative Assembly, setting out financial statements, output classes and performance criteria, and budget estimates for each of the next three years
- Under the leadership of the CEO (or Board, should it exist¹³) **manage the financial resources** of the Authority in an efficient and effective manner
- Expend appropriated funds in accordance with the intent of the appropriation
- Keep **proper accounts**

¹² Examples of enabling legislation are:

- *Cultural Facilities Corporation Act 1997*
- *Insurance Authority Act 2005*
- *Cemeteries and Crematoria Act 2003* (Part 3)

¹³ It is optional for a Territory Authority to be governed by a Board

- Have adequate control over the assets and liabilities of the Authority (or those assets over which the Authority has control)
- Prepare an **Annual Report** in accordance with the requirements of the *Annual Reports (Government Agencies) Act 2004*

Part 8 also authorises Territory Authorities opening one or more **bank accounts**, making **investments and borrowing** (with the approval of the Treasurer).

Section 61 requires that Territory Authorities give the Treasurer a **Statement of Intent** (SoI) for each financial year¹⁴. In preparing the SoI the Territory Authority must consult with the responsible Minister and take into consideration any comment made by the Minister prior to providing the SoI to the Treasurer.

Annual financial statements must be prepared by the Territory Authority, published in the **Annual Report** and be **audited** by the Auditor-General.

Territory Authorities must prepare an **annual statement of performance** that sets out the extent to which the Territory Authority delivered against the outputs contained in the SoI. The SoI is reviewed by the Auditor-General each year, and the **Auditor must express an opinion** on the Statement of Performance.

‘Stormwater ACT’ revenue would be derived from either a stormwater levy or appropriations from consolidated revenue.

Territory-owned Corporation

Under this option ‘Stormwater ACT’ would be established under the provisions of the *Territory-owned Corporation Act 1990*. This would be achieved by the Portfolio Minister notifying the Legislative Assembly that Stormwater ACT is to become a territory-owned corporation, in accordance with section 9 of the *Territory-owned Corporation Act 1990*.

In doing so the Minister would be required to set out:

- the names of the shareholders
- a description of the principal activities to be carried out by the company
- a copy of the constitution of the company

The voting shareholders must be Ministers under Part 3.2 (3) of the Act.

The name/s of territory-owned corporations are listed in Schedule 1 of the Act. At present Icon Water is the only company named. Prior to its sale to TabCorp in 2015, ACTTAB was also a company listed in Schedule 1.

The *Territory-owned Corporations Act 1990* states that the **objectives** of a territory-owned corporation are:

- to operate at least as efficiently as any comparable business;
- to maximise the sustainable return to the Territory on its investment in the corporation or subsidiary in accordance with the performance targets in the latest statement of corporate intent of the corporation

¹⁴ Statements of Intent are currently prepared by the ACT Building and Construction Industry Training Fund Authority and the ACT Long Service Leave Authority

- to show a sense of social responsibility by having regard to the interests of the community in which it operates, and by trying to accommodate or encourage those interests
- if its activities affect the environment—to operate in accordance with the object of ecologically sustainable development.

The Shareholders (which can only be Ministers) must appoint **Directors** to the Board of a territory-owned corporation only if they are satisfied that the person has the necessary skills and experience, and following consultation with the relevant Legislative Committee.

Directors are required to prepare a **Statement of Corporate Intent**, consisting of:

- the commercial objectives of the corporation or group
- a description of the main undertakings of the corporation or group
- a description of the nature and scope of the activities to be undertaken
- business and corporate strategies
- the targets and performance measurements by which the performance of the corporation or group may be judged in relation to its stated objectives
- any other information that the voting shareholders may have requested in writing the directors of the territory-owned corporation to include in the statement.

The Statement of Corporate Intent must span a three year period.

Shareholders have significant **influence over the Statement of Corporate Intent** under provisions of the Act (section 19). The Statement of Corporate Intent must be provided to shareholders as a draft, and directors must consider and consult with shareholders regarding their comments on the draft. Furthermore, directors must “make the changes to the draft statement that are necessary to give effect to the comments agreed to” (s 19 (2) (c)).

Directors must prepare **annual reports** that are in the form required under the *Corporations Act*, along with a section that provides an assessment of the performance of the corporation in relation to its objectives and targets as set out in the Statement of Corporate Intent.

Both the Statement of Corporate Intent and the Annual Report are to be presented by the relevant Minister to the Legislative Assembly.

Chief Executives of Territory-owned corporations are typically required to appear at **Estimates Committee hearings**.

Territory-owned corporations may **borrow or raise money** from an institution other than the ACT Government. However, the Treasury sets limits and guidelines for borrowing activities that must be complied with by the territory-owned corporation.

Territory-owned corporations may also **invest** surplus funds.

When **assets and/or liabilities are transferred** from the ACT Government to a territory-owned corporation taxes that would normally be payable if the transaction was with a private sector corporation (e.g. stamp-duty) are not payable by the territory-owned corporation.

Budget Statements relating to territory-owned corporations are made to the Legislative Assembly by CMTEDD.

If ‘Stormwater ACT’ were established as territory-owned corporation revenue would be derived from either a stormwater levy or appropriations from consolidated revenue.

2.3 Integrate stormwater WQ functions into Icon Water

2.3.1 Transfer assets

Under this option, rather than creating a new territory-owned corporation, the ACT Government would formally transferred stormwater WQ assets to the existing territory-owned corporation, Icon Water.

In doing so, the transferred assets would be classified as part of a utility and therefore be subject to regulation by the ICRC. Among other things this would allow the ICRC to make price determinations with respect to stormwater WQ assets.

Under this option the ACT Government would transfer the assets to Icon Water, potentially through passage of enabling legislation. Icon Water would be responsible for the assets, including ongoing operation, maintenance and renewal.

Icon Water would be required to manage the assets in accordance with its obligations under the *Territory-owned Corporations Act 2000*.

Under the assumption that assets are not purchased, they would be treated as gifted in the regulatory asset base. Under previous ACT Government policy Icon Water would be required to treat the gifted assets as revenue, which would result in Icon Water paying a relatively higher dividend payment to the ACT Government, even though additional cashflow had not resulted from the gifting of assets. A recent change to ACT Government policy has removed the requirement that gifted assets be treated as revenue by Icon Water.

Icon Water would only earn a return on and return of stormwater WQ assets that are added to the regulatory asset base through capital expenditure, such as renewals and augmentation.

Icon Water would recover the prudent and efficient costs of operating and maintaining the assets in line with the price determination process currently applied by the ICRC.

At present Icon Water does not have as an explicit corporate objective stewardship of the waterways, lakes and ponds in urban ACT. However, section 7 of the *Territory-owned Corporations Act 1990* states that two of the objectives of territory-owned corporations are:

- to show a sense of social responsibility by having regard to the interests of the community in which it operates, and by trying to accommodate or encourage those interests
- if its activities affect the environment—to operate in accordance with the object of ecologically sustainable development.

Ecologically sustainable development is further defined as:

- Effective integration of environmental and economic considerations in decision-making processes achievable through implementation of the following principles:
 - the precautionary principle;
 - the inter-generational equity principle;
 - conservation of biological diversity and ecological integrity;
 - improved valuation and pricing of environmental resources.

An option to further strengthen the requirement for Icon Water to act as a steward of the waterways, lakes and ponds of the ACT would be to include this in the Statement of Corporate Intent agreed between the Icon Water board and the shareholders.

The desired outcome would be to bind Directors to the additional objective, such that they required Icon Water management to act in such a way that the objective was met.

In practical terms, this simply means that the leadership of Icon Water be responsible for operating Icon Water in such a way as to operate and maintain the stormwater WQ assets with the effect of delivering beneficial waterway outcomes, as opposed to least-cost operation and maintenance.

If existing TCCS staff were transferred to Icon Water following the transfer of assets, this would require consultation with existing staff and an assessment of the industrial relations implications from such a change in employer. We note that under section 33A of the *Territory-owned Corporations Act 1990* existing employee benefits are retained and preserved when public sector staff are employed by a territory-owned corporations.

It is likely that Icon Water would establish a new division that would be responsible for the stormwater WQ asset functions. This would not be a trivial task, however Icon Water management have recent experience in internal structural reform. Therefore, it is likely that the task in itself is within the skills and capabilities of existing Icon Water management to deliver.

Revenue to fund prudent and efficient O&M functions would be derived from a stormwater charge, that would appear as a separate item on Icon Water bills.

2.3.2 Transfer O&M responsibilities

As an alternative to transferring the stormwater WQ assets to Icon Water, the relevant Minister could transfer responsibility for the O&M of those assets to Icon Water, while retaining ownership of the assets on the ACT Government balance sheet.

Icon Water would need to raise revenue from customers to offset the costs of operating and maintaining the assets, or receive an appropriation from the ACT Government budget.

If a stormwater levy was used to raise revenue this could be achieved under the provisions previously outlined in section 2.1.3 of this report.

2.3.3 Purchase regional stormwater WQ assets

In responding to the Options Paper, Icon Water proposed an alternative model for the transfer of stormwater WQ assets to Icon Water. The main features are:

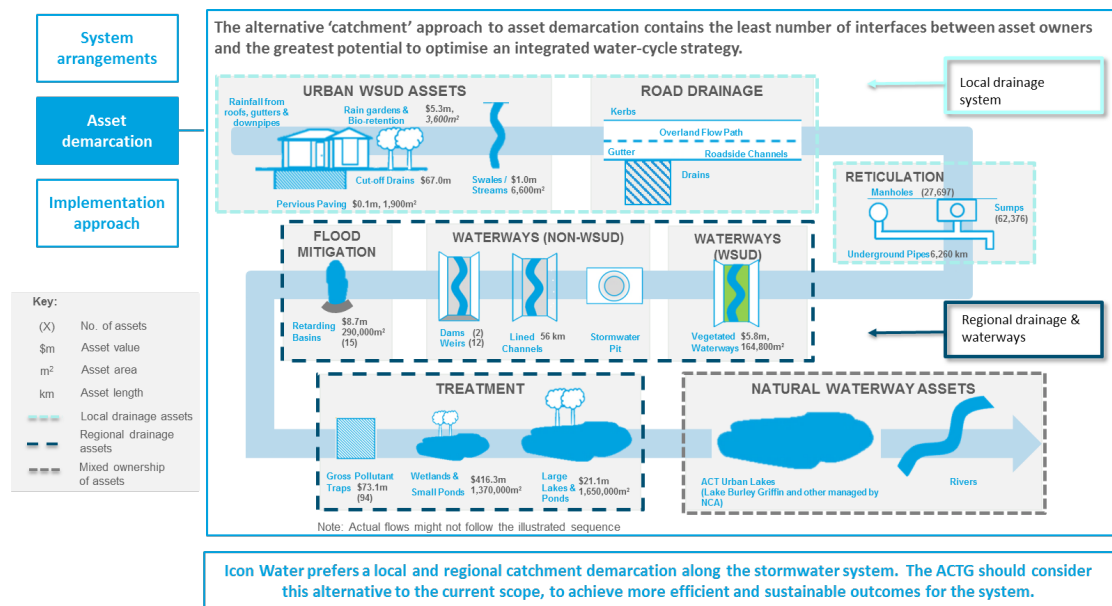
- An alternative demarcation of stormwater WQ assets that would be subject to reform, with 'regional' scale assets transferring to Icon Water, and 'local' scale assets remaining with TAMS¹⁵
- Rather than assets being transferred, Icon Water would purchase the assets in question from the ACT Government
- Icon Water would earn a return on and return of assets, funded by a Community Service Obligation (CSO) payment from the ACT Government, that would be immediately passed

¹⁵ At the time that Icon Water prepared its submission, TAMS was responsible for the O&M of stormwater WQ assets through Roads ACT and PATS

back to the ACT Government through Icon Water dividend payments

- O&M expenditure would be funded through an additional stormwater charge that would appear on Icon Water bill notices, and that would be determined by the ICRC as part of the normal regulatory pricing process

Icon Water has proposed two alternative demarcations of stormwater assets under this option. They are illustrated below:



Icon Water prefers the demarcation where only regional scale assets are purchased by Icon Water. Under this approach TCCS would retain responsibility for the local scale assets, the majority of which are stormwater conveyance assets located under roads. This is conceptually similar to the 'Melbourne Water' model, in which Melbourne Water Corporation is responsible for stormwater assets that primarily provide stormwater water quality functions, rather than stormwater conveyance functions. The majority of stormwater assets located under roads are the responsibility of the relevant council or Vicroads (which is the responsible entity for arterial roads and highways in Victoria).

Icon Water is also proposing that it take full ownership of the assets. Presumably this would be enabled through Icon Water issuing bond/s in appropriate capital markets.

The Icon Water model would see an additional stormwater charge on Icon Water bills, raising sufficient revenue to recover efficient and prudent O&M costs associated with the purchased assets.

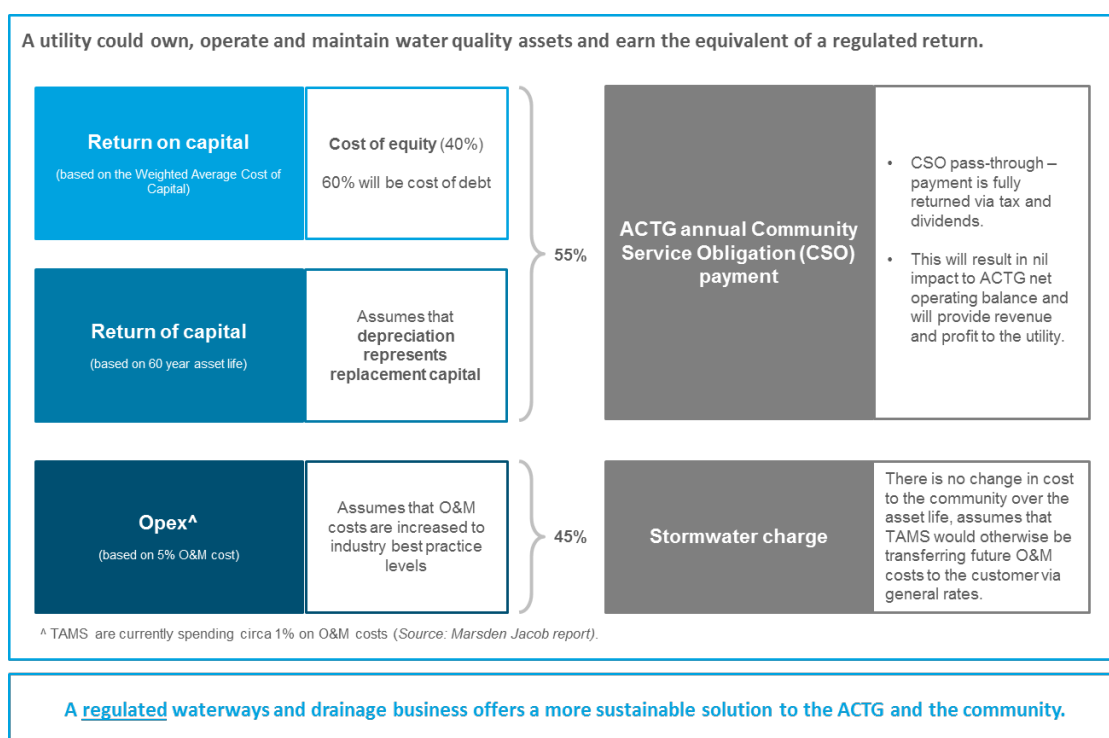
Icon Water does not propose that the stormwater charge be set at a level to provide a regulated economic return on the assets (typically 4% - 6%) or revenue to offset depreciation of the purchased assets (typically 2% of asset value). Rather, Icon Water has proposed that the ACT Government make a Community Service Obligation (CSO) pass-through payment to Icon Water that is the equivalent of the regulated return on the assets and depreciation (illustrated below).

Under the Icon Water proposal, the revenue received through the CSO pass-through would be immediately returned to the ACT Government through Icon Water tax-equivalent payments and dividend payments to the ACT Government. Icon Water argues that this would result in nil impact to the ACT Government net operating balance, but allow Icon Water to maintain revenue and profitability.

A typical CSO payment from Government to a Government Business Enterprise (GBE) is provided without an expectation that it be returned. Rather, the purpose of a CSO payment is to allow a GBE to provide services at less than commercial ‘prices’. This is reflected in the ACT Government definition of a CSO:

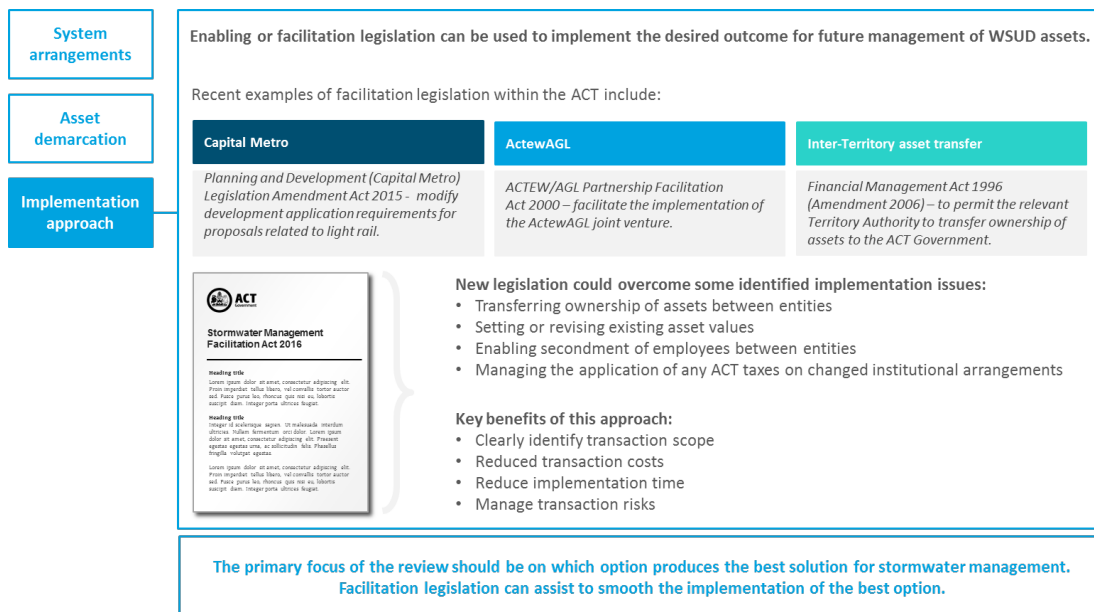
*'A Community Service Obligation arises when a government specifically requires a public enterprise to carry out activities relating to outputs or inputs, with identified public benefit objectives, which it would not elect to do on a commercial basis, and which the government does not require other businesses in the public or private sectors to generally undertake, or which it would only do commercially at higher prices'*¹⁶

In this way, the payment proposed by Icon Water would not comply with the traditional definition of a CSO. However, the underlying purpose of the annual payment from the ACT Government is to permit Icon Water to include stormwater services in its existing corporate structure without introducing a new stormwater charge that would be a significant increase in typical Icon Water bills for its customers.

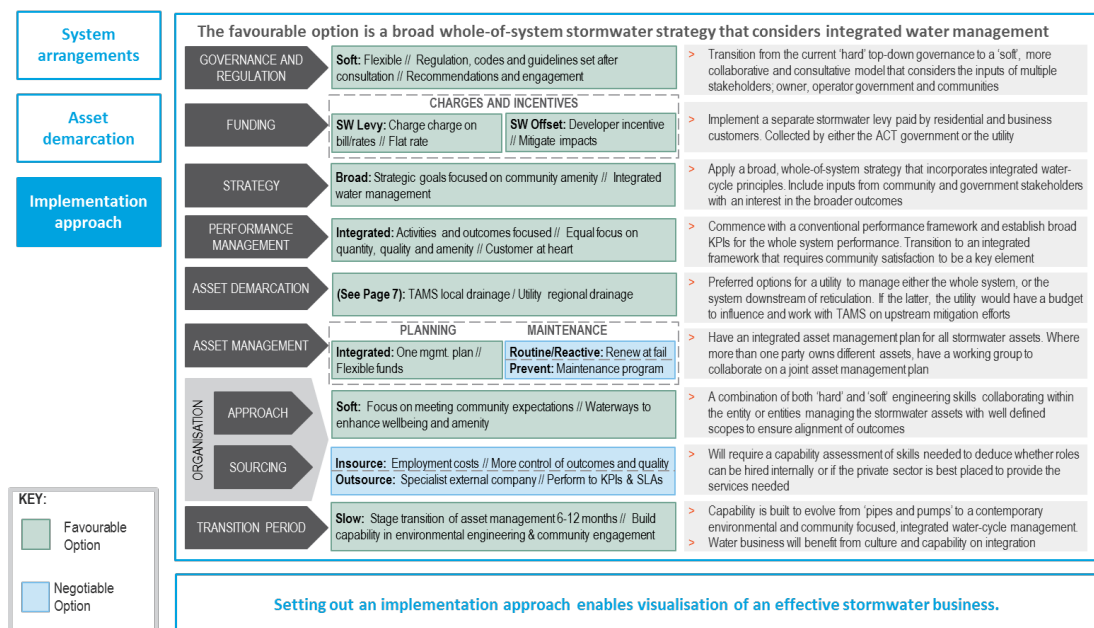


In terms of legislative provisions to enable the transfer of assets, Icon Water suggests specific enabling legislation be passed, citing examples of where this has been achieved in the past.

¹⁶ Industry Commission (1997) *Community Service Obligations: Policies and Practices of Australian Governments – Information Paper*, p. 11



Icon Water address a number of other related issues through an over-arching implementation strategy, set out below.



KEY:

Favourable Option

Negotiable Option

3. Criteria for assessment of potential reform options

In this section of the report we provide our assessment of each of the above options, against a common set of assessment criteria.

3.1 Overview of approach to assessing potential reform options

We have applied common assessment frameworks to assess the relative merits of the funding and institutional reform options outlined in Chapter 2 of this report. The assessments combine a principles-based approach to determining the extent to which the option would lead to an improvement relative to the current arrangements, and a practical evaluation of implementability based on current institutional, governance, policy and regulatory arrangements in the ACT, and specific feedback received from stakeholders in response to the Options Paper.

We apply a simple ‘traffic light’ assessment approach in our assessment of the various reform options. This traffic light coding is indicative and based on the evidence supporting the coding colour applied.

The assessment principles were developed by drawing on key principles for assessing cost-recovery funding mechanisms in the Australian Government’s ‘Cost Recovery Guidelines’ and from funding and charging option assessments of water, wastewater stormwater and catchment services completed by prominent economic authorities including regulators and the Productivity Commission (2014; Productivity Commission, 2014; Independent Pricing and Review Tribunal, 2013; Queensland Competition Authority, 2014). The assessment principles are based on ‘best-practice regulation’ guidance from Commonwealth and State Governments.

Low ranking against key criteria	
Medium ranking against key criteria	
High ranking against key criteria	

3.2 Assessment criteria for funding options

The criteria used to assess the funding reform options are described in Table 1 below.

Table 1: Funding evaluation criteria

Principle	Description
Efficiency	Does the funding mechanism incentivise the institution to deliver programs efficiently and effectively, and avoid perverse outcomes? Efficiency tends to mean the allocation of resources to the most valuable uses for society as a whole. Does the funding mechanism minimise distortions in economic activity?
Equity	Does the funding mechanism improve equity in funding Stormwater WQ O&M functions, specifically horizontal and vertical equity? Horizontal equity refers to treating people in similar situations in similar ways. Vertical equity refers to those with greater means contributing proportionately more than those with lesser means. For example, this could be achieved by charging different prices to different people for the same service.

Cost allocation and sharing	This is a specific equity test. Does the approach result in appropriate cost-sharing outcomes for property owners? Horizontal equity means that the share of funding by property owners should ideally be proportional to the impact the property creates or the benefits the property receives. This implies a tiered approach to assigning costs. • The impactor pays approach should be employed first when identifiable parties can be shown to be causing an adverse impact or a future adverse impact. • Where impactors are too diffuse to be charged, or where there are legacy impact issues then those benefiting from the activity should pay. This is because it may not be feasible to seek retrospective payments from past polluting (legacy) activities. Where beneficiaries pays is used, the following hierarchy should be applied: • Where direct beneficiaries¹⁷ captures sufficient benefits to meet the funding requirement of the activity, indirect beneficiaries¹⁸ should not pay, where it is efficient to recover funds from direct beneficiaries. • Where the direct beneficiary is unable to capture sufficient benefits to meet the cost of the activity, the direct beneficiary should pay up to the point where benefits equal costs and the indirect beneficiary should pay the residual to meet the cost of the activity for the additional benefits, where it is efficient for them to do so. • If there are no direct beneficiaries then costs should be shared between indirect beneficiaries. • As a last resort, the taxpayer should fund the activity where clearly identifying the impactor or beneficiary is difficult, where there are legacy issues, or where it is administratively inefficient to charge either the impactor or the beneficiary.
Revenue requirement	Does the funding mechanism provide a sufficient and stable revenue stream to fund prudent and efficient stormwater WQ O&M functions in the ACT? Costs to be recovered include operations and maintenance costs, and administrative, general and financing expenditure. Where assets are gifted to the institution funding should not provide a return on capital.
Flexibility	The options should work within existing institutional arrangements or feasible institutional reforms. The funding mechanism should also be able to be modified in response to any major shifts in waterway policy or regulation. The funding mechanism should be able to be reviewed on a regular basis so that revenue keeps pace with prudent and efficient stormwater O&M expenditure in the ACT. In other words, prices should not be locked in
Administrative simplicity and cost	The funding mechanism should be simple and low cost to administer, with a straightforward and streamlined means of preparing and introducing the funding mechanism, building on existing revenue raising mechanisms
Transparency and accountability	The calculation basis for charges underpinning a funding mechanism should be clear. The funding mechanism should be transparent, easy to calculate, understandable to users and published
Implementation	The funding mechanism should consider implementation ease, timeframe and acceptability. This includes assessing community, Government and participant acceptance of the funding mechanism.

3.3 Assessment criteria for institutional options

The criteria used to assess the institutional reforms are described in Table 2 below.

Table 2: Institutional reform assessment criteria

Principle	Description
Structure and responsibilities	Institutional arrangements should support the collective institution's authority to deliver on WQ O&M through providing clarity of roles and responsibilities. There should be clear lines of accountability for performance. The rules, guidelines and regulatory requirements necessary to enable decision making should be in place.

¹⁷ Direct beneficiaries are those who derive a direct private benefit from the activity, such as the users of a water supply and wastewater system to a development area

¹⁸ Indirect beneficiaries are those who derive an indirect benefit, such as landholders that benefit by knowing waterway and catchment resources are used efficiently, or are protected.

Transparency	Institutional arrangements should promote procedural and operational transparency. There should be clear, consistent reporting on activities and outcomes. Reporting should be accessible to stakeholders and easily understood.
Minimise transaction costs	Institutional arrangements should not result in net transaction costs (either in the establishment phase or ongoing operations) that are likely to outweigh the benefits from reform.
Potential for efficiency gains	Institutional arrangements should incentivise institutions to deliver O&M functions efficiently and effectively, and avoid perverse outcomes. Efficiency tends to mean the allocation of resources to the most valuable uses for society as a whole. To be effective, the institutional arrangements should result in Stormwater WQ objectives and outcomes being met.
Implementation	The institutional arrangements should consider implementation ease, timeframe and acceptability. This includes assessing community, Government and stakeholder acceptance of the institutional arrangements.

4. Assessment of funding reform options against assessment criteria

4.1 Introduction

In this section of the report we present our analysis of the alternative funding reform options that have been analysed in this project. As outlined in the previous section, each option is assessed against eight criteria. A summary of our assessment is presented in Table 3 below.

Table 3: Assessment of funding options against criteria

	No change	Simple Stormwater levy/Charge	Cost-reflective Stormwater levy/Charge; set by Government	Cost-reflective Stormwater Levy/Charge ; set by ICRC
Efficiency				
Equity				
Cost allocation and sharing				
Revenue requirement				
Flexibility				
Administrative simplicity and cost				
Transparency and accountability				
Implementation				

In the remainder of this chapter for each option we:

- provide a summary of the stakeholder feedback received in relation to that option, although in some cases stakeholders provided no comment or where not directly asked to provide comment
- score each option against the assessment criteria, with a short discussion explaining our reasoning

Our overall assessment of the options is presented in the following chapter.

4.2 No Change

4.2.1 Stakeholder views on this option

The Options Paper did not explicitly ask stakeholders to consider a ‘no change’ option to funding arrangements.

4.2.2 Assessment against criteria

Table 4: Assessment of no change option

Efficiency		Funds raised through State Government taxes (e.g. payroll, stamp duty) are inefficient compared to other approaches available. It is likely that a material proportion of funds appropriated for stormwater WQ O&M are raised via highly inefficient territory taxes such as payroll tax and stamp duties. Continuing with existing arrangements would imbed that cost on the economy. A key source of inefficiency is the 'de-coupling' between those who paid the tax and how the appropriated tax revenue is spent. Fails to provide any incentive to property owners to change behaviour around stormwater management on properties
Equity		Continuing with the status quo would not result in an improvement in equity
Cost allocation and sharing		There is no direct link between those who benefit from stormwater WQ O&M functions and those who pay taxes, fees and charges that contribute to consolidated revenue
Revenue requirement		Long term funding not secure and has significant risks, particularly in tightening fiscal environments. However, the funding mechanism is relatively stable, through use of the Growth Model and allocating O&M funding according to capital expenditure value. Unpredictable revenue streams from year to year, which limits the ability to strategically manage the assets in a manner that reduces lifecycle costs
Flexibility		The funding mechanism does provide some flexibility to the ACT Government in terms of varying O&M funding appropriations.
Administrative simplicity and cost		Administratively simple, as a continuation of the status quo, however the economic cost of raising ACT Government taxes is relatively high compared to alternatives.
Transparency and accountability		The basis for allocation of total O&M funding to TCCS is not publicly available. However, a handful of ACT Government officers understand how the models operate. The criteria for distributing O&M funding among competing functions within TCCS is not publicly available. The lack of transparency associated with the funding estimation models and the lack of public accountability regarding funding allocation decisions would continue
Implementation		Continuation of the status quo requires no change in implementation for the ACT Government, however acceptance of the funding approach and mechanisms is far from universal across the ACT Government. Ongoing tension across ACT Government regarding the adequacy or otherwise of funding appropriations for stormwater WQ O&M would continue. It is difficult to assess community acceptance due to the lack of transparency.

4.3 Simple Stormwater Levy/Charge

4.3.1 Stakeholder views on this option

Stakeholders were not specifically asked to comment on a simple stormwater levy.

4.3.2 Assessment against criteria

Table 5: Assessment of simple stormwater levy/charge

Efficiency		Relatively more efficient (compared to status quo) because funds would be raised primarily through a relatively efficient taxing mechanism.
Equity		Moves towards (indirect) beneficiaries pays, compared to current arrangements.
Cost allocation and sharing		This supports greater horizontal equity, but nexus to direct beneficiaries or impactors is not tight
Revenue requirement		Because the amount of the levy would not be set with reference to prudent and efficient costs it is likely that revenue will be inadequate. Would provide a reasonably predictable long term funding source (like the Emergency Services Levy). However, barriers to changing levy amount in the face of political pressure would be relatively low. Therefore funding stream adequacy in the medium to long term not as certain relative to other options.
Flexibility		Levy amount could be reviewed from time to time, and removed if future policy changes deem it no longer necessary. However, lack of framework to quantify adequate funding would make it difficult to explain to stakeholders why an increase in the levy is required.
Administrative simplicity and cost		A simply levy (e.g. \$50 per property) would be administratively simple to implement. Upfront costs to implement levy would be incurred, however annual costs are likely to be similar to those associated with other ACT levies.
Transparency and accountability		Relative improvement in transparency because property owners would be aware that stormwater levy is for expenditure on stormwater WQ O&M. ACT Government likely to be held publicly accountable for efficient expenditure. However, difficult to be directly accountable for efficiency of expenditure because levy is not based on bottom up cost estimates.
Implementation		Community willingness to pay for stormwater WQ levy yet to be tested in the ACT. Mixed views across ACT Government on the feasibility of implementing a stormwater levy.

4.4 Cost-reflective Stormwater levy/Charge; set by Government

4.4.1 Stakeholder views on this option

CMTEDD argued that the ACT Government currently determines prudent and efficient O&M costs through the process to assess relevant business cases through the Budget process.

CMTEDD pointed to the substantial cost that would be associated with a more formal process:

Undertaking a defined process to formally determine the efficient O&M costs associated with existing stormwater WQ assets would be likely to require significant technical support to be engaged by Government, at potentially substantial cost. It would be a matter for the responsible directorate to establish the scope of work and determine the source of funding for such work. (CMTEDD)

This is core business for TAMS. A priority action should be for TAMS to firmly establish actual expenditure on stormwater WQ asset O&M, to remove this uncertainty. (CMTEDD)

...we know what our total spend on stormwater maintenance is. Question for Roads ACT is can they split out the WQ expenditure separately. Reporting is the easy bit if expenditure is identified at the source. (TAMS)

4.4.2 Assessment against criteria

Table 6: Assessment of cost-reflective stormwater levy/charge set by Government

Efficiency		Relatively more efficient (compared to status quo) because funds would be raised entirely through a low cost taxing mechanism, and would raise only enough revenue to offset efficient costs, assuming ACT Government adopted robust cost-recovery framework.
Equity		Potential to implement different levies for different property types (e.g. residential and commercial). Would be relatively closer to an impactor pays model.
Cost allocation and sharing		This supports greater horizontal equity, but nexus to direct beneficiaries is not tight because all properties of same type would pay the same levy.
Revenue requirement		Sufficient funding is more likely to be generated under this option, assuming the ACT Government adopts a robust cost-recovery framework. Reasonable certainty of long term funding stream but subject to risk of levy amount changing under political pressure.
Flexibility		Levy amount would only be changed at regular review intervals (e.g. every three years) however could be removed if revenue stream is no longer required.
Administrative simplicity and cost		Upfront costs would be incurred (\$250,000 to \$500,000 in MJA experience with similar projects) to estimate cost reflective levy. Ongoing costs would be similar to those for other ACT Government levies.
Transparency and accountability		Under the assumption that the ACT Government published the basis for the levy amount, this would be an improvement in transparency and accountability.
Implementation		CMTEDD consider transaction costs likely to outweigh the benefits. Mixed views across ACT Government on the feasibility of implementing a stormwater levy. Community willingness to pay for stormwater WQ levy yet to be tested in the ACT.

4.5 Cost-reflective Stormwater Levy/Charge; set by ICRC

4.5.1 Stakeholder views on this option

Icon Water did not directly express views on how prudent and efficient O&M costs should be identified, however did state:

A regulated waterways and drainage business offers a more sustainable solution to the ACT Government and the community. (Icon Water).

A sustainable funding and revenue stream must be established, such as a dedicated, cost-reflective stormwater charge per property and developer charges. (Icon Water)

Pricing policy and regulation is the responsibility of the ICRC. The utility collects and allocates funds to the assets it owns, and has the ability to run incentive programs to drive investment throughout the stormwater system, e.g. upstream solutions to minimise downstream issues. (Icon Water)

Implement a separate stormwater levy paid by residential and business customers. Collected by either the ACT government or the utility. (Icon Water)

A complementary stormwater offset mechanism would be incorporated to provide developer incentives to mitigate impacts (Paraphrasing Icon Water)

This implies that Icon Water has a preference for O&M to be determined within the regulatory framework that Icon Water currently operates under.

CMTEDD raised similar concerns regarding the substantial transaction costs that would be incurred through this option.

With respect to the pros and cons and costs of the ICRC determining O&M costs:

The ICRC would provide an independent party to determine the prudent and efficient level of O&M costs for stormwater EQ assets. They may have greater technical expertise available compared to the ACT Government to undertake this work. However, consideration of such an approach would need to weigh this benefit against the significant cost such an approach is likely to entail. We consider it unlikely that the overall benefits would outweigh the costs from this approach. (CMTEDD)

The cost of an investigation by the ICRC is dependent upon the nature and complexity of the investigation. The ICRC would be best place to provide further information on the costs of pricing investigations undertaken by ICRC in the past. However, such costs, especially in regards to an initial investigation, are likely to be significant. (CMTEDD)

ICRC pricing investigations typically take about 12 months (retail electricity prices) or 18 to 24 months (water and sewerage prices). However, it is dependent upon the nature and complexity of the investigation - our expectations is that an initial determination could take up to 12 months. (CMTEDD)

Informally, the ICRC suggested that investigations of this type, when undertaken for the first time, can be costly. Order of magnitude estimates were between \$400,000 and \$750,000.

There are significant disadvantages from utilising the ICRC to determine a stormwater levy independently. The amount allocated to maintenance is a budgetary allocation for

the ACT Government. A key disadvantage of this approach is that it removes the ability of Government to adjust the levy to take into account other financial factors that may be impacting on the cost of living for residents.

While the ICRC determining a levy could be advantageous in relation to ensuring it is reflective of efficient costs of providing stormwater services to the community, such benefits would need to be balanced against the associated costs associated with this potential approach. In particular, the processes associated with determining the appropriate level of the levy may involve significant cost, in particular during the initial process to determine efficient costs and set the levy for the first time. (CMTEDD)

CMTEDD also pointed to the constrained resources of the ICRC:

The ICRC is a relatively small organisation (current has about 8 staff including the Senior Commissioner). Therefore, it would be expected that additional external technical expertise (or alternatively consultants) would be required from time to time to undertake work associated with determining a stormwater charge for the Territory. (CMTEDD)

4.5.2 Assessment against criteria

Table 7: Assessment of cost-reflective stormwater levy/charge set by ICRC

Efficiency		Relatively more efficient (compared to status quo) because funds would be raised entirely through a low cost taxing mechanism, and would raise only enough revenue to offset prudent and efficient costs, calculated in line with ICRC building-block method.
Equity		Potential to implement different levies for different property types (e.g. residential and commercial). Would be relatively closer to an impactor pays model.
Cost allocation and sharing		This supports greater horizontal equity, but nexus to direct beneficiaries/impactors is not tight because all properties of same type would pay the same levy.
Revenue requirement		Sufficient funding is more likely to be generated under this option because ICRC would use robust building block method to estimate revenue required to fund prudent and efficient expenditure. Reasonable certainty of long term funding stream but subject to risk of levy amount changing under political pressure.
Flexibility		Levy amount would only be changed at regular review intervals (e.g. every three years) however could be removed if revenue stream is no longer required.
Administrative simplicity and cost		Substantial upfront costs would be incurred (\$500,000 to \$750,000) by ICRC to estimate cost reflective levy ¹⁹ . Additional costs reflect compliance with ICRC transparency and consultation process when undertaking Industry investigations. However, once initial levy has been established, ICRC costs would be lower for levy reset investigations.

¹⁹ The ICRC public consultation process would result in relatively higher costs than a technical engineering estimate (likely to cost between \$250,000 and \$500,000).

		Administrative costs would be similar to those incurred in raising other ACT Government levies.
Transparency and accountability		Very high degree of transparency and accountability because ICRC process would include stakeholder consultation and publication of basis for the levy, including detailed calculations and reasoning.
Implementation		Community willingness to pay for stormwater WQ levy yet to be tested in the ACT. Mixed views across ACT Government on the feasibility of implementing a stormwater levy. CMTEDD consider transaction costs likely to outweigh the benefits.

5. Overall assessment of revenue options

5.1 Introduction

Previous analysis by MJA has established that the existing levels of O&M expenditure for stormwater WQ assets by TCCS (formerly RoadsACT and PATS) have been below those implied by best-practice engineering estimates for the asset types in the ACT. More precisely, it has been estimated that current estimated expenditure (~\$2.5m per year) is around \$4.2m below the 'best-practice' level (~\$6.7m).

However, this does not necessarily mean that funding allocated from ACT Government Budget appropriations has been inadequate. CMTEDD estimate that TAMS received O&M funding allocations of approximately \$40m per year. Decisions regarding the allocation of that global O&M appropriation are made by TCCS executives. Therefore, it may be the case that the allocation of O&M appropriations to stormwater WQ O&M may be insufficient, rather than appropriations through the budget process.

Notwithstanding the above caveat, the following analysis of the funding model options proceeds under the assumption that there is an overall funding shortfall, even though a compelling case has yet to be made.

The three main options for raising additional revenue to close the funding gap are:

- Raise additional revenue through existing tax instruments
- Raise additional revenue through introducing a simple stormwater levy
- Raise additional revenue through introducing a cost-reflective stormwater levy or charge.

5.2 Existing tax instruments

A property based levy or charge is a highly efficient means of raising revenue because property owners cannot change behaviour in order to avoid the levy. In this way the levy is one of the least distorting revenue mechanisms available to the ACT Government.

A levy or charge that raises revenue to offset prudent and efficient expenditure has the additional advantage of being allocatively efficient, because it directs resources to their efficient use.

The current arrangement for funding O&M expenditure is relatively inefficient because it is likely to rely in part on highly inefficient taxation measures for at least some of the revenue raising requirement.

Of the total 'own-source' revenue raised by the ACT Government in 2015-16 (\$1.54bn), around 40% (\$622m) was raised through relatively efficient revenue measures (General Rates, property based levies and Motor Vehicle Registration charges).

It is unlikely that the ACT Government would seek to raise additional revenue through existing relatively inefficient tax measures. The ACT Government has committed to removing taxes on insurance and is part way through a phasing out of conveyance duties on residential and commercial properties. The ACT Government has also committed to increasing the tax free threshold for ACT payroll tax, and to not increase the marginal rate of taxation as part of its

Budget Reform strategy. Although there are a handful of inefficient levies in existence (e.g. Energy Industry Levy and the Lifetime Care and Support Levy) it is unlikely that they would be used to raise revenue for stormwater purposes.

This means that the ACT Government would be left to raise additional revenue to close the funding gap through the relatively efficient land and property based tax instruments:

- Utilities (Network Facilities) Tax
- Fire and Emergency Service Levy
- City Centre Marketing and Improvements Levy

We assume that since the FESL and CCMIL were introduced for specific purposes the ACT Government would not elect to raise additional revenue via these instruments.

For illustrative purposes, assume that the ACT Government seeks to raise an additional \$5m per year to fund efficient and prudent stormwater WQ asset O&M activities, either through the Utilities (Network Facilities) Tax or General Rates on Commercial and Residential Properties.

The Utilities (Network Facilities) Tax raised \$27.6m in 2015/16. Raising an additional \$5m in 2016/17 would require an 18% increase in the Utilities (Network Facilities) Tax, over and above annual indexation, which traditionally runs at 5% per year²⁰.

General Rates on Commercial and Residential Properties raised \$419m in 2015/16, representing 27% of total own-source revenue.

Raising an additional \$5m per year would require an increase in the fixed component of General Rates of around \$32 per property, which represents a 4.2% increase for residential properties and 1.4% for commercial properties.

5.3 Simple stormwater levy

Property based levies and taxes such as the Fire and Emergency Service Levy, General Rates and a property based stormwater levy are identical in terms of the Marginal Excess Burden²¹ they create (the measure of economic inefficiency caused by a tax). This means that the ACT Government should be indifferent between raising revenue via an increase in General Rates or introducing a stormwater levy. Therefore, the criteria for making the choice between the two becomes the additional benefits that accrue to each measure.

Relative to General Rates, a property based stormwater levy brings two additional benefits:

- Provides information to property owners about the opportunity costs of managing stormwater flows
- Allows stakeholders to assess the tradeoffs between providing stormwater O&M services and other public services such as Fire and Emergency Services

At present property owners in the ACT have no way of identifying the costs incurred by the ACT Government to manage urban stormwater, because the government does not publicly

²⁰ The Utilities (Network Facilities) Tax was indexed by 10% in the 2016/17 budget.

²¹ Marginal Excess Burden is defined as the increase in deadweight loss caused by raising one additional tax dollar (Friedman, 2002), p.497), where the deadweight loss from a tax is defined as the difference between the tax revenues to the government and the loss the tax causes to others (Friedman, 2002), p. 186).

report on stormwater management functions and the metrics such as funding allocated to the function and/or stormwater management expenditure.

This means that the ACT Government cannot signal to property owners the opportunity costs from their choices regarding stormwater management. Put differently, without this type of information being made publicly available, the government cannot communicate the trade-offs associated with inefficient management of stormwater (i.e. the alternative services that are foregone through inefficient management).

With a separately identified stormwater levy in place, property owners would at least be aware that there are costs associated with managing stormwater in the ACT, and be provided with an order of magnitude estimate of those costs. This would provide a source of information that could be used to improve property owner perceptions of the cost of managing stormwater.

A flat, fixed stormwater levy is unlikely to significantly alter the behaviour of property owners with respect to stormwater management because each individual property owner is likely to estimate that his or her actions alone will not reduce stormwater management expenditure sufficiently to result in a reduction in the stormwater levy. However, if the stormwater levy had a variable component that changed in accordance with a driver of stormwater management costs (e.g. the percentage of the lot that is an impervious surface), property owners would have an incentive to invest in works that would reduce the percentage of impervious surface, and thereby reduce the value of the stormwater levy for the property owner.

It therefore seems logical to introduce a stormwater levy, due to the transparency and accountability benefits that are attached to this option.

5.4 Cost reflective stormwater levy/charge

Although it has been established that a stormwater levy delivers additional benefits to policy makers relative to an increase in General Rates, a stormwater levy could still be set at an allocatively inefficient point. If the levy is set without reference to the prudent and efficient O&M costs, there is the risk that the Levy will be set too low, resulting in too few resources being allocated to the function, or too high, leading to the allocation of too many resources.

A further risk from setting a stormwater levy arbitrarily is that the basis for the levy amount is not set out logically and transparently. Should a change to the levy be necessary, communicating why this is the case can be difficult. Furthermore, those managing the expenditure of revenue raised under the levy will not be able to directly target input costs and quantities in an effort to ensure the funds were spent in the manner intended.

The benefit of setting the levy or charge at a point that generates revenue to offset prudent and efficient O&M costs is that the ACT Government can have confidence that the resources allocated to stormwater O&M will result in a relatively efficient use of resources. That is, based on a robust process that seeks to recover only prudent and efficient expenditure. The basis for the levy or charge will be transparent, and allow stormwater system managers to monitor expenditure and outcomes against *a priori* expectations.

Levies and charges that are set within a regulatory framework also tend to be reviewed or reset at regular intervals. This allows an assessment of whether O&M functions are delivering expected outcomes, and whether the expected O&M revenue required to fund prudent and efficient activities is too high or low. This is a built in review mechanism that allows the levy or charge to be adjusted as warranted.

5.5 Assessment

On balance of the above considerations, MJA's assessment is that the ACT Government should proceed with the necessary next steps to implement a stormwater levy or charge, that is set at a level necessary to raise sufficient revenue to offset prudent and efficient stormwater WQ O&M functions.

To achieve this, the ACT Government would need to invest in a project to determine the prudent and efficient expenditure level. CMTEDD has argued in its response to the Options Paper that the transaction costs associated with this would be substantial, and it would be important to understand whether the benefits of doing so would outweigh the costs.

From our experience, the transaction costs will be significant. Although TCCS has recently completed a valuation of its stormwater asset base, not all of the stormwater WQ assets are recorded in that database. And although RoadsACT has detailed records on expenditure incurred by the third party contractor to undertake O&M functions for the drainage and conveyance stormwater assets, similar records do not exist for the majority of stormwater WQ asset O&M expenditure.

As a result, it would be necessary to invest in a project that would complete the asset register to enable the ACT Government to accurately assess the scope of the O&M task. Second, the project would estimate prudent and efficient O&M expenditure for the asset base. This would require expert advisors due to the lack of widely accepted standards and cost benchmark with respect to stormwater WQ assets. Based on MJA experience with similar projects, it would likely to take 6 to 9 months to complete, and is likely to cost between \$250,000 and \$500,000 in consulting fees alone.

Although substantial, the costs to the ACT property owners could be larger from a stormwater levy that is set too high or an unnecessary increase in General Rates. To illustrate, assume that the levy necessary to offset prudent and efficient costs is \$20 per property, rather than \$30. Implementing the \$30 per property levy could result in \$1.57m in excessive revenue being raised from property owners, that could be put to more productive use elsewhere in the economy. The welfare costs to the economy would be relatively worse if the mechanism for raising additional revenue was a tax instrument with a positive MEB.

Therefore, incurring \$250,000 to \$500,000 in transaction costs for such a project appears to be efficient.

6. Assessment of institutional reform options against assessment criteria

6.1 Introduction

In this section of the report we present our analysis of the alternative institutional reform options that have been analysed in this project. As outlined in the previous section, each option is assessed against five criteria. A summary of our assessment is presented in Table 8 below.

Table 8: Assessment of institutional options against criteria

	Refine existing arrangements		Stormwater Utility			Icon Water		
	No change	Improved reporting structure	Business Unit	Territory Authority	Territory-Owned Corporation	Transfer assets	Transfer O&M responsibilities	Purchase regional stormwater WQ assets
Structure & responsibilities								
Transparency & accountability								
Minimise transaction costs								
Potential for efficiency gains								
Implementation								

In the remainder of this chapter for each option we:

- provide a summary of the stakeholder feedback received in relation to that option, although in some cases stakeholders provided no comment or where not directly asked to provide comment
- score each option against the assessment criteria, with a short discussion explaining our reasoning

Our overall assessment of the options is presented in the following chapter.

6.2 No Change

6.2.1 Stakeholder views on this option

Stakeholders were not explicitly asked to provide views on this option.

6.2.2 Assessment against criteria

Table 9: Assessment of no change option

Structure & responsibilities		The existing arrangements have resulted in poor accountability for allocation of O&M funding and delivery of stormwater WQ outcome objectives. Allocation of responsibilities has recently improved through an intra-directorate MOU.
Transparency		The reporting requirements under existing arrangement are inconsistent and not transparent.
Minimise transaction costs		Continuing with the status quo would be not result in additional transaction costs in the short term, however because the existing weaknesses would continue, it is likely that transaction costs to respond to short term emergencies etc would increase.
Potential for efficiency gains		There is no potential for capturing the benefits from efficiency gains under this option
Implementation		The 'no change' option is likely to face resistance across ACT Government and broader stakeholders.

6.3 Improved reporting structure and Business Unit

6.3.1 Stakeholder views on this option

CMTEDD suggested an alternative means of achieving the outcomes desired under a stormwater utility model:

Creating an Output within TAMS rather than just a business unit – this ensures transparency of appropriation and also reporting as well as publishable performance indicators, while avoiding costs associated with setting up a formal stormwater utility. (CMTEDD)

Given the substantial uncertainty about current expenditure associated with WQ assets, the establishment of an improved reporting regime would be highly beneficial.

Establishing a stormwater unit within TAMS (not necessarily a Utility) would be the simplest method to create transparency around expenditure of O&M for Stormwater.

- *An output class could be established for Stormwater, publishing the amount appropriated each year in the Budget Papers for this function.*
- *Accountability indicators outlining the expected level of performance for these assets would be included in the Budget Papers.*
- *TAMS would be required to report on the performance against the accountability indicators in the Annual Report.*
- *The Annual Reports are reviewed by the Legislative Assembly through the Public Accounts Committee. (CMTEDD)*

Minimal costs (particularly when compared to the alternative options) would be required to implement this approach, and ultimately this cost would be borne by the responsible directorate for the WQ assets. (CMTEDD)

It is likely that additional funds above what is currently being expended would be required. There would either be costs to budget (through additional appropriation) or costs to consumers (through a cost reflective levy) from this option. However, this

*approach may lead to an improvement in the overall maintenance of the assets.
(CMTEDD)*

6.3.2 Assessment against criteria

Table 10: Assessment of improved reporting structure & Business Unit options

Structure & responsibilities		Improved reporting arrangements would result in increased accountability for expenditure of O&M funds and the achievement of policy objectives. However the degree of improvement would be reliant upon the nature of reporting required. The arrangements would not necessarily improve clarity of roles and responsibilities since these would still be split between Roads ACT and Place Management within TCCS. There are few barriers to the removal or watering down of the accountability and reporting framework. It seems possible to change the arrangements without scrutiny of the decision in parliament that would normally be the case where a change to regulatory or legislative instruments is required.
Transparency		This option would result in greater transparency. However, the average resident would need to have a reasonable understanding of ACT Government budget reporting frameworks to identify the stormwater reporting section.
Minimise transaction costs		There would be initial transaction costs associated with putting in place the systems to enable data on O&M expenditure to be captured at a level necessary to report via Budget Papers. Once established the ongoing additional transaction costs would be minimal.
Potential for efficiency gains		The empirical evidence on efficiency gains from institutional reforms suggests more transparent reporting is a necessary but not sufficient element. It is unlikely to attract the skilled management and leadership, and the parent institution (TCCS) would still have competing objectives that could result in the diversion of resources away from efficient stormwater WQ asset O&M functions.
Implementation		This option has been proposed by CMTEDD and therefore has support from central agencies. The views of the community have not been sought at this stage. TCCS has not had the opportunity to comment on the more limited option of improving reporting requirements without creating a Business Unit.

6.4 Territory Authority

6.4.1 Stakeholder views on this option

We do not support this option, due to the extensive process required to establish a stormwater utility, and the significant costs such an approach would entail.

Furthermore, there are already provisions within the Utilities Act 2000 to deal with the

operation and maintenance of the stormwater network – greater utilisation of these provisions should be considered as a potential option. (CMTEDD)

Administrative and compliance costs may outweigh benefits. The actual cost would need to be developed following detailed consideration of scale, scope and functions of any authority. The associated timeframes with the development of a Stormwater Utility would be significant, due to the requirement of having to amend Acts, and to set up the administrative and operational arrangements of the utility. (CMTEDD)

Establishing a Territory Authority seems to be a high cost solution to implement in contrast to implementing specific output classes and accountability indicators within TAMS. It would require an extensive process to establish a Territory Authority, with no apparent additional benefits that could not be achieved through implementing better reporting arrangements for TAMS. In addition, there are already provisions within the Utilities Act 2000 associated with the operation and maintenance of the stormwater network – these provisions should be used in the first instance where possible, rather than the formal establishment of a Territory authority. (CMTEDD)

[Preparing enabling legislation] ... could be achieved within existing resources. (CMTEDD)

On the question of transferring staff:

Under this option, there would be a requirement to have a transition between existing arrangements and the new arrangement. Furthermore, an Authority would need to be adequately equipped to undertake its tasks as per the legislation requirements. However, whether staff will be transferred would be dependent on individual staff, the staffing requirements of TAMS and staffing requirements of a new Authority. (CMTEDD)

6.4.2 Assessment against criteria

Table 11: Assessment of Territory Authority option

Structure & responsibilities		The Territory Authority model would clarify roles and responsibilities with respect to stormwater WQ O&M, because the CEO would be ultimately accountable to the Legislative Assembly and the community for the performance of the Territory Authority. This would provide the institutional framework to allow clear decision making. However, because the Territory Authority would not be subject to public scrutiny through an ICRC price determination process, there would be relatively less accountability under this model.
Transparency		The public reporting framework for Territory Authorities would provide a higher degree of transparency regarding funding arrangements, expenditure, achievements against policy objectives and strategic intent. Accessibility to reports would also be improved.
Minimise transaction costs		The Territory Authority would result in various transaction costs being incurred initially. These would be from establishing the Authority, appointing a leadership structure and Board (if required) and setting up facilities. The Authority would also need to establish baseline reporting systems and best-practice expenditure benchmarks

		to enable it to comply with reporting requirements.
		Once established the ongoing additional transaction costs would be similar to those of a stand alone business unit of similar scale.
Potential for efficiency gains		The Territory Authority institutional option has many of the characteristics of water and wastewater utilities that achieved significant efficiency gains following institutional reform in the 1990s. However, since the Territory Authority would be a newly formed institution, there is a degree of uncertainty regarding whether the efficiency gains could be captured.
Implementation		The views of the community have not been sought at this stage. CMTEDD is likely to resist implementation until concerns regarding high transaction costs have been resolved.

6.5 Territory-Owned Corporation

6.5.1 Stakeholder views on this option

It is unlikely a Stormwater Utility could be created as a Territory owned corporation in the PTE sector, as it is unlikely to comply with the requirements of the Australian Bureau of Statistics. A stormwater utility is likely to be classified as a non-market producer since:

- *The services they would provide are not economically significant as they will not impact on the quality or demand for stormwater services;*
- *There is no competition from the private sector;*
- *Consumers do not have the option of sourcing the services from another provider; and*
- *There is no long-term goal to create profit.*

These factors would result in any stormwater utility needing to remain part of the General Government Sector.

This is likely to be a high cost option, particularly considering the dual regulatory framework that would apply (i.e Government and Corporations Law).

We do not consider this option should be further pursued. (CMTEDD)

Regarding establishment costs:

Costs are likely to be substantial in regards to establishing a stormwater utility as a Territory-owned corporation. (CMTEDD)

Regarding reporting and accountability requirements:

Reporting and accountability requirements would be substantial, given the dual regulatory framework that would apply to the TOC (both Government and Corporations Law). (CMTEDD)

6.5.2 Assessment against criteria

Table 12: Assessment of Territory-owned Corporation option

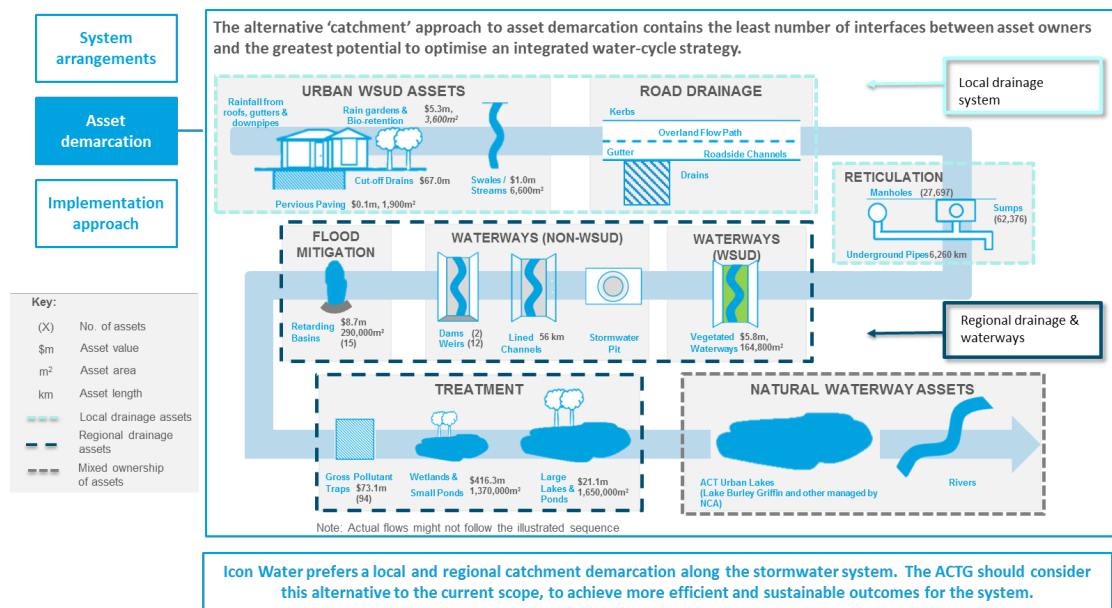
Structure & responsibilities		The Territory-owned Corporation model would have similar advantages to a Territory Authority in terms of these criteria.
Transparency		
Minimise transaction costs		A Territory-owned Corporation would result in higher transaction costs to those associated with a Territory Authority, because it must have a Board in place (minimum four members). A TOC also has additional reporting requirements under the Corporations Act and Government Performance arrangements.
Potential for efficiency gains		A Territory-owned Corporation has the institutional features that are required to deliver efficiency gains, however there is uncertainty regarding the extent to which those benefits would be captured in practice because the institution would be untested.
Implementation		CMTEDD advice that the nature of the stormwater WQ O&M services is likely to mean that the TOC could not be established under Commonwealth/State-Territory arrangements.

6.6 Transfer assets to Icon Water

6.6.1 Stakeholder views on this option

Icon Water has proposed two alternative demarcations of stormwater assets under this option. They are illustrated below:

Figure 1: Icon Water proposed demarcation of stormwater WQ assets



Icon Water has made it clear through its submission that it would be unlikely to consider a model where the scope of assets to be transferred to Icon Water was identical to those classified as 'stormwater WQ assets' in the Options Paper.

It appears that Icon Water is willing to consider an option where both local and regional scale assets transfer to Icon Water, however appears to have a preference for only regional scale assets. This is very similar to the 'Melbourne Water' model.

For this project that would mean TAMS retaining the local scale assets, with regional scale assets transferring to Icon Water.

On the pros and cons of transferring assets to Icon Water:

The key disadvantage of transferring ownership of stormwater WQ assets to Icon is that \$2.4 billion of assets (approximately 12 per cent of the asset base) will be removed from the GGS statements. This approach would also involve the ACT losing direct control and ownership of the asset, which would limit the influence the Government, could have on ensuring the assets are maintained to the required standard.

Given the nature of Icon Water being an ACT Government owned corporation, and stormwater services being a monopoly service, there would be the need for significant additional regulatory requirements, in particular if a stormwater levy was to be adopted (in order to ensure costs are efficient). Another disadvantage is that it is not likely that commercial returns could be earned from these assets, given the nature of the service being provided.

There does not appear to be any apparent benefit over existing arrangements for the assets from this approach that could not be achieved from an alternative approach to improving the current management of the assets. (CMTEDD)

On the associated transactions costs:

The transaction costs are likely to be fairly significant, in particular in setting up a transparent framework and approach for the setting of a levy. (CMTEDD)

On the implications for the ACT Government balance sheet:

Yes. Stormwater Assets are currently recorded in the balance sheet and account for approximately \$2.4 billion of assets. This equates to approximately 12 per cent of the Territory's total assets.

Icon Water would not need to pay a dividend on gifted assets as they have an explicit exemption from this following a recent decision of the Government.

There would be a \$2.4 billion financial impact on the Head Net Operating Balance, as Icon Water is a PTE and their finances do not get included in the General Government Sector. (CMTEDD)

6.6.2 Assessment against criteria

Table 13: Assessment of Transfer assets to Icon Water option

Structure & responsibilities		This option ranks highly against these criteria because Icon Water would be clearly responsible for the O&M of the assets that are transferred. There would be strong transparency because Icon Water would be required to set out in detail its stormwater WQ strategy, and associated expenditure plans to deliver against that strategy. The ICRC would provide public accountability for performance and provide confidence that stormwater WQ O&M expenditure was prudent and efficient.
Transparency		
Minimise transaction costs		Transferring assets to Icon Water would avoid the transactions costs associated with establishing a new Territory Authority or TOC. However, transaction costs would still be incurred in establishing a stormwater business unit within Icon Water, and in the initial estimation of prudent and efficient stormwater WQ O&M expenditure.
Potential for efficiency gains		The structure of Icon Water and its existing track record of operational efficiency means that we can be confident that significant efficiency gains could be made through Icon Water taking on the stormwater WQ asset management, including O&M functions. This is supported by empirical evidence that corporatised water and wastewater utilities are relatively more efficient than those operating within government departments.
Implementation		Icon Water has expressed reservations about the scope of assets that would be transferred to it under this option. CMTEDD is likely to resist implementation until concerns regarding high transactions costs have been resolved.

6.7 Transfer O&M responsibilities to Icon Water

6.7.1 Stakeholder views on this option

Icon Water has made it clear through its proposal that this option is not feasible from its perspective:

Icon Water is not interested in a restricted O&M model that fails to exploit our expertise in water management. (Icon Water)

CMTEDD made a number of direct comments in relation to the questions:

The key benefit of this option is that the ACT Government would retain ownership and ultimate control of the asset, but could utilise Icon Water for the ongoing management of the assets, which may allow for an improvement in their overall management compared to current arrangements.

However, any benefits would need to be balanced against potential competition issues, in particular in light of the ongoing process to implement reforms arising from the Harper Review of Competition Policy. Any shift to outsource maintenance of these

assets directly from Government should involve a competitive procurement process. (CMTEDD)

On the question of enabling legislation:

This should be possible as per Part 14 of the Utilities Act 2000, which allows the Territory to maintain the asset. Legal advice would be required to determine the extent of the powers provided within this part of the Utilities Act and whether there needs to be further clarity provided through legislative amendments. (CMTEDD)

6.7.2 Assessment against criteria

Table 14: Assessment of Transfer O&M responsibilities to Icon Water option

Structure & responsibilities		Under this option Icon Water would have responsibility for O&M but wouldn't have authority to influence asset management. This means that Icon Water would effectively become a contractor to the ACT Government.
Transparency		Icon Water would report publicly on its O&M function. Under the assumption that Icon Water received a regulated revenue stream for O&M, the ICRC determination process would also provide confidence that O&M expenditure was prudent and efficient, within the constraints of this model.
Minimise transaction costs		Transferring assets to Icon Water would avoid the transactions costs associated with establishing a new Territory Authority or TOC. However, transaction costs would still be incurred in establishing a stormwater business unit within Icon Water, and in the initial estimation of prudent and efficient stormwater WQ O&M expenditure.
Potential for efficiency gains		In theory the corporatised structure would support the capture of efficiency gains, but only in terms of O&M functions. The additional efficiency benefits that would come from re-organisation of the stormwater treatment train would not be possible under this option.
Implementation		Icon Water has clearly stated that it is not interested in this model. CMTEDD notes that this option would result in the ACT Government retaining control of the assets (a benefit), but would resist implementation until concerns regarding transactions costs are resolved.

6.8 Icon Water purchase regional stormwater WQ assets

6.8.1 Stakeholder views on this option

Icon Water is also proposing that it take full ownership of the assets. It is not clear whether Icon Water proposes to purchase the assets, and if so, under what arrangement. Icon Water has outlined below the benefits it sees from taking full ownership, as opposed to 'just-management' models.

Figure 2: Icon Water views on strengths and weaknesses of alternative options

Icon Water has considered the three proposed operation, asset management, and ownership options. As discussed our firm preference is for full ownership.

Long-term Leadership

The asset owner can take the lead in achieving the vision for healthy waterways in the ACT. The more responsibilities become devolved through contractual arrangements, the less control and less flexibility there is to realise outcomes.

Customer and community relationship

The asset owner can plan and deliver long-term outcomes in consultation with the community. Icon Water has a direct relationship with the community through its existing business of providing high quality water services to the region.

Item	O&M only	O&M and asset mgmt.	Full ownership
Performance of operations & maintenance	✓	✓	✓
Long-term asset strategy work	✗	Partial	✓
Alignment of interests	Poor	Moderate	Best
Ability of ownership model to deliver integrated water mgmt.	Poor	Moderate	Best
Incentive to deliver leading solutions for the community	Poor	Moderate	Best
Transaction Costs*	60% (\$2m)	80% (\$2.5m)	100% (\$3m)

* Transaction costs such as due diligence, legal and set up costs are unlikely to vary greatly between options. Difference in costs will depend on employee impacts.

Full ownership enables the greatest opportunity to provide leadership and offer community value. Icon Water is not interested in a restricted O&M model that fails to exploit our expertise in water management.

By taking ownership Icon Water would be in a position to earn the equivalent of a regulated return on those assets. However, Icon Water proposes that this be paid in the form of a fully passed through Community Service Obligation (CSO) by the ACT Government, rather than by property owners. O&M revenue would be earned through a stormwater charge appearing on Icon Water bills.

It appears that Icon Water is seeking to maintain its capital structure through ‘earning’ regulated returns in an accounting sense through a revenue injection by the ACT Government (paid in the form of a CSO). Icon Water argues that the revenue injection would be immediately paid back to the ACT Government through tax equivalent and dividend payments. Therefore, Icon Water argues the CSO would not impact the net operating balance of the ACT Government.

On a technical note, a typical CSO payment from Government to a Government Business Enterprise (GBE) is provided without an expectation that it be returned. Rather, the purpose of a CSO payment is to allow a GBE to provide services at less than commercial ‘prices’. This is reflected in the ACT Government definition of a CSO:

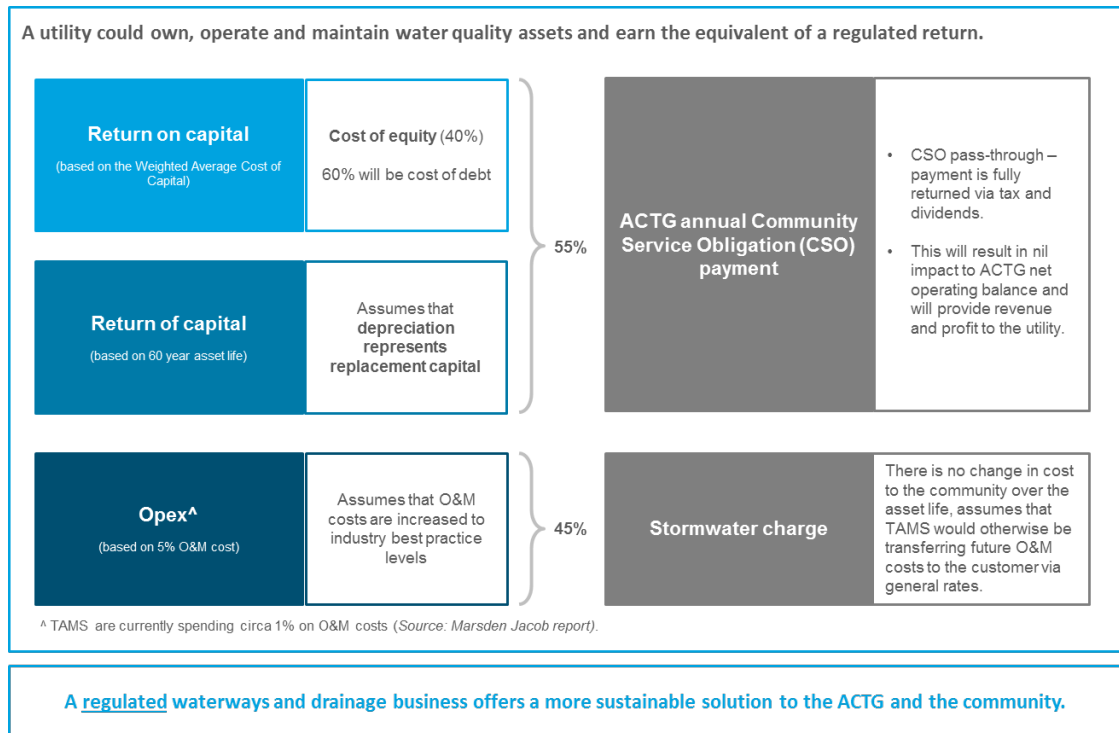
‘A Community Service Obligation arises when a government specifically requires a public enterprise to carry out activities relating to outputs or inputs, with identified public benefit objectives, which it would not elect to do on a commercial basis, and which the government does not require other businesses in the public or private sectors to generally undertake, or which it would only do commercially at higher prices’²²

In this way, the payment proposed by Icon Water would not comply with the traditional definition of a CSO. However, the underlying purpose of the annual payment from the ACT Government is to permit Icon Water to include stormwater services in its existing corporate

²² Industry Commission (1997) *Community Service Obligations: Policies and Practices of Australian Governments – Information Paper*, p. 11

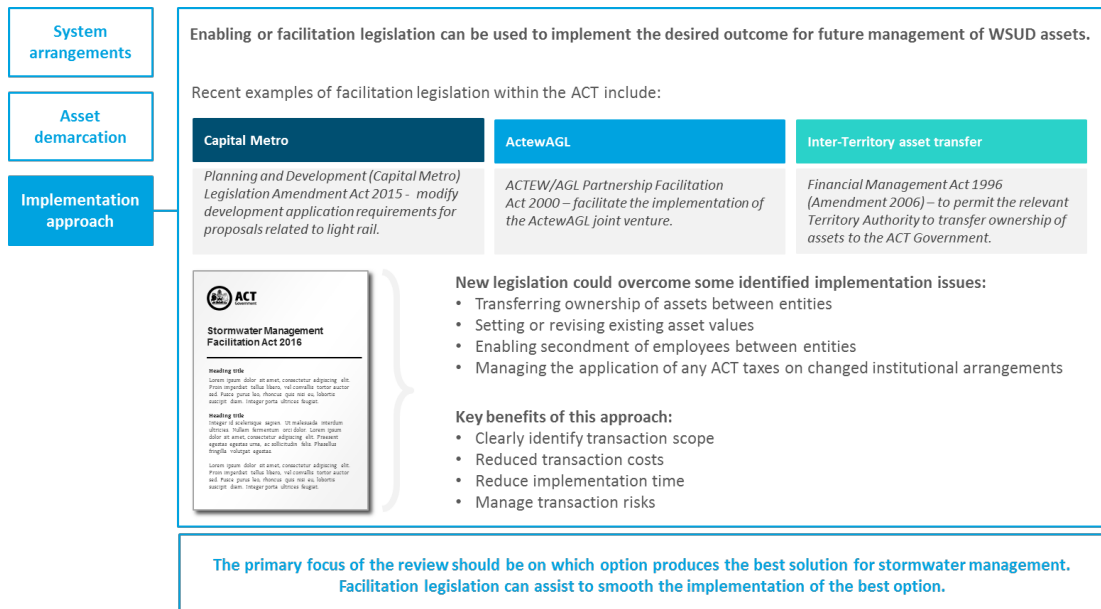
structure without introducing a new stormwater charge that would be a significant increase in typical Icon Water bills for its customers.

Figure 3: Icon Water regulatory return option



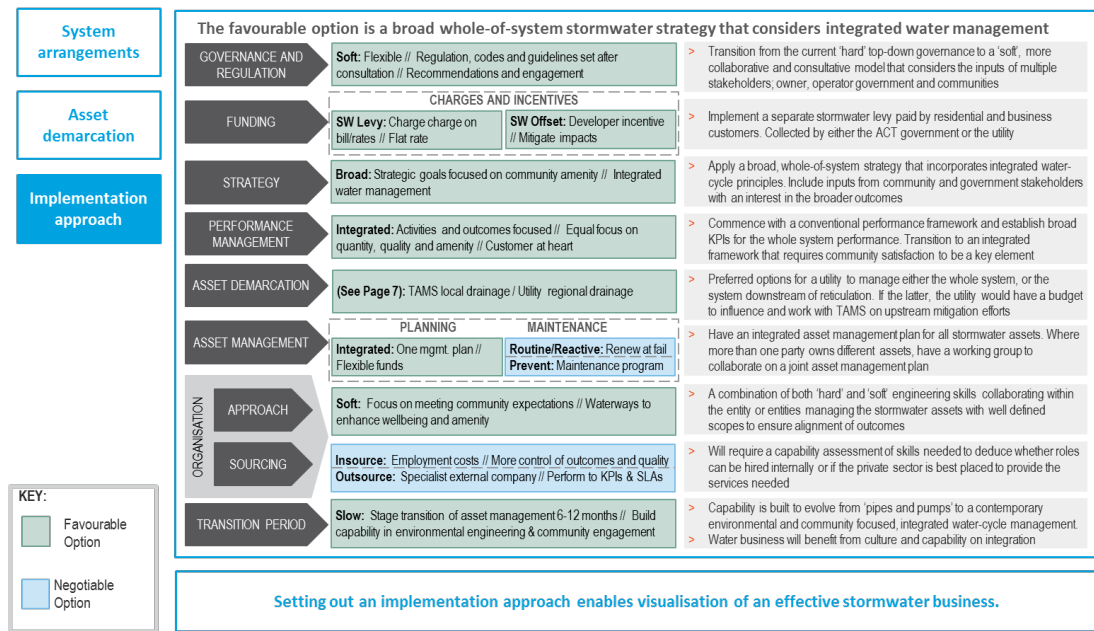
In terms of legislative provisions to enable the transfer of assets, Icon Water suggests specific enabling legislation be passed, citing examples of where this has been achieved in the past.

Figure 4: Enabling legislation to facilitate transfer of assets



Icon Water address a number of other related issues through an over-arching implementation strategy, set out below.

Figure 5: Icon Water views on implementation



Because this option was proposed by Icon Water in response to the Options Paper other stakeholders, such as CMTEDD and TCCS, have not had the opportunity to comment on this option.

6.8.2 Assessment against criteria

Table 15: Assessment of Icon Water purchase regional stormwater WQ assets option

Structure & responsibilities		This option ranks highly against these criteria because Icon Water would be clearly responsible for the O&M of the assets that are purchased.
Transparency		However, Icon Water has a preference to not purchase local scale assets, leaving these as the responsibility of TCCS. As long as asset boundaries are clearly stated, and robust operating agreements are in place between Icon Water and TCCS to avoid 'boundary disputes', this option would rank highly against this criteria.
		The transparency benefits that apply to the option of transferring assets to Icon Water also apply under this option.
		Although O&M funding is likely to be adequate for the assets purchased by Icon Water (due to the ICRC price determination process), it is unlikely that TCCS would be allocated funding under an equally robust and transparent process.
Minimise transaction costs		Likely to result in substantial upfront transaction costs. Icon Water would incur due diligence and legal costs. ACT Government would incur similar transaction costs. This option would result in a significant change to the ACT Government Balance Sheet, which could require specialist advice.
		Icon Water would need to establish a stormwater business unit within Icon Water, and develop an initial estimation of prudent and efficient

		stormwater WQ O&M expenditure.
Potential for efficiency gains		See comments regarding the option of transferring stormwater WQ assets to Icon Water.
Implementation		Icon Water has a strong preference for this model. However, CMTEDD is likely to resist this option on policy grounds and due to the high transaction costs.

7. Overall assessment of institutional options

7.1 Introduction

There is general agreement across stakeholders for a change in institutional settings and a movement towards a stormwater utility model. The debate centres on what form that stormwater utility should take, and whether it is necessary to separate the stormwater utility from the executive arm of the ACT Government (i.e. from within TCCS).

A number of the options raised in the Options Paper appear to be unfeasible, based on desktop analysis and stakeholder input:

- Establishing the stormwater utility as a Territory-owned Corporation
- Transferring just O&M responsibilities to Icon Water

CMTEDD advised that it would not be possible to create a Territory-owned Corporation that had stormwater functions as its main purpose because it would not comply with Australian Bureau of Statistics (ABS) classification of Public Sector Enterprises (PSE). Although the reasoning put forward by CMTEDD is open to debate in our view, we accept the expert advice of CMTEDD in this respect.

Icon Water has made it clear through its submission that it would not be interested in just taking on responsibility for the O&M of the assets. This was primarily due to the inability of Icon Water to manage the assets strategically, with a view to providing the necessary level of service efficiently. Given the views of Icon Water we recommend that this option not be pursued further. However, the Icon Water submission to the Options Paper did imply that expanding the scope of control to total asset management across the entire stormwater WQ assets treatment train may be feasible. The ACT Government may wish to further entertain this option should the model preferred by Icon Water prove difficult to implement.

This leaves establishing a stormwater utility through the following means:

- Refining existing reporting arrangements through introducing a ‘Stormwater’ performance category for TCCS in the ACT Budget
- Establishing a Business Unit within TCCS that has responsibility for Stormwater O&M
- Establishing a Territory Authority that has responsibility for Stormwater O&M
- Establishing the stormwater utility as a new division of Icon Water, either through transferring the assets to Icon Water, or Icon Water purchasing the assets from the ACT Government

7.2 Improves structure and responsibilities

Each of the feasible institutional reform options would increase the degree of accountability for the delivery of stormwater WQ assets O&M functions in the ACT. The differentiating question becomes the extent to which accountability improves.

The Icon Water option delivers the greatest improvement in structure and responsibilities because the institution would be publicly assessed in terms of performance against objectives in regulatory determination cycles. The ICRC process is comprehensive, transparent and is

designed to make the institution accountable for past expenditure decisions and planned expenditure. Since the determination process is public, interested stakeholders can hold the institution to account through public submissions.

The Territory Authority model has similar benefits because it would be clear that the Board and CEO are ultimately responsible for the delivery of services that meet performance objectives. However, the Territory Authority would not be subject to the same degree of public scrutiny because past performance and planned expenditure would not be subject to an ICRC led regulatory determination process. Therefore, although the Territory Authority leadership would report to the public via annual reports, and through appearances before Legislative Assembly committees, interested stakeholders would not be afforded the same opportunities to make written submissions.

The extent to which the Business Unit and improved reporting structure options delivered improvements in structure and responsibilities would largely depend on how those options were implemented. For example, if the leadership of the Business Unit was not easily identifiable to the public, or did not regularly appear before the Legislative Assembly, the benefits that come from public scrutiny of performance would not be captured.

7.3 Improves transparency

The greatest improvement in transparency, both in terms of funding and expenditure, would be gained under the Icon Water options. This stems from the formal regulatory determination process under the ICRC and the comprehensive annual reporting requirements of Territory-owned Corporations.

The regulatory determination process brings significant transparency benefits because the ICRC typically determines prices through a public consultation process. This provides multiple opportunities for stakeholders to interrogate and question planned expenditure. The ICRC also typically has expert advisors review and critique proposed expenditure by Icon Water to ensure it is prudent and efficient. This degree of scrutiny and transparency is not typical for Territory Authorities or Directorates.

There would still be a significant improvement in transparency under the Territory Authority option because it would be required to produce a comprehensive annual report, that set out achievements against the Statement of Intent and demonstrate prudent financial management. However, the activities of the Territory Authority would not be subject to the formal scrutiny were the ICRC regulating it, meaning that scrutiny of expenditure and outputs would not be subject to public consultation. Transparency regarding funding levels would also be improved as this would be a line item in the financial reports. However, the Territory Authority would not be obligated to report at sub-levels (e.g. allocation of funding to particular functions) as is the case with Icon Water.

There would be a minor improvement to transparency under the Business Unit option, however funding and expenditure are typically reported at too high a level to permit meaningful analysis. Reporting is also of past expenditure rather than planned expenditure, which doesn't afford interested stakeholders to opportunity to 'close the gate before the horse bolts'.

7.4 Minimises transaction costs

The main transactions costs are likely to be in the form of:

- Establishment costs
- Ongoing incremental corporate overhead costs

There would be minimal establishment costs associated with the improved reporting/Business Unit option. External expert advice is unlikely to be necessary as there are few, if any, legal or governance implications, and the ACT Government bureaucracy is well placed to advise on machinery of government changes.

Similarly, the ongoing corporate costs are likely to be minimal, particularly for the more limited ‘improved reporting’ option, because the resources to enable this are probably already contained in the ACT Government. For the ‘Business Unit’ option it is likely that a Director would be required to lead the stormwater utility. It is possible that existing TCCS staff could fill this role. However, if an additional resource is required that staff member would not be required to meet the formal corporate governance requirements under either the Territory Authority or Icon Water options. As a result, the transactions costs associated with the Business Unit option are likely to be similar or marginally less than those associated with the Territory Authority.

The establishment costs are likely to be significant under the Icon Water options, and particularly for the option where Icon Water purchases the assets. Icon Water estimates that the purchase option would attract set-up costs of approximately \$3m, while the transfer assets option would result in \$2.5m in transaction costs. These are likely to relate to due diligence and legal costs.

The establishment costs for the Territory Authority would also be significant according to CMTEDD, however an estimate of those costs was not provided. For the purposes of this exercise we assume establishment costs are around two thirds of those associated with the Icon Water options, primarily because the Territory Authority would not be purchasing the assets, thereby avoiding the associated due diligence and legal costs. The bulk of the establishment costs are likely to be in managing staff transition, branding and information campaigns to explain why the Stormwater Authority has been established.

There are likely to be ongoing ‘overhead’ costs under both the Territory Authority and Icon Water options. In the case of the Territory Authority, the ongoing costs could be relatively higher than those under the Icon Water options if the ACT Government elected to appoint a board to the Territory Authority.

Under the Territory Authority option a CEO and supporting staff would need to be appointed. This is not necessarily the case under the Icon Water option. The Board and MD may choose to expand the responsibilities of an existing General Manager rather than appoint an additional GM.

We have undertaken some simple financial analysis to illustrate the potential magnitude of the establishment and on going costs associated with the Territory Authority and Icon Water options.

For the Territory Authority we assume that a CEO and two senior managers are appointed. All other staff would be drawn from existing TCCS staff. We also assume that four board members are appointed.

For the Icon Water options we assume that a GM is appointed and is supported by a senior manager. All other O&M staff resourcing is met through transfer of existing TCCS staff and/or greater utilisation of existing Icon Water staff.

Outlined below in Table 16 are Present Value cost estimates over a 10 and 30 year time period, applying a 6% discount rate.

Table 16: Present Value of transactions costs

	Present Value establishment costs (\$m) ¹		Present Value ongoing incremental overhead costs (\$m) ^{2,3}		Present Value total transaction costs (\$m)	
	10 yr	30 yr	10 yr	30 yr	10 yr	30 yr
Territory Authority	\$1.9	\$1.9	\$3.8	\$7.7	\$5.7	\$9.6
Icon Water	\$2.8	\$2.8	\$3.2	\$6.4	\$6.0	\$9.2

Notes:

1. PVs are identical because establishment costs are incurred only in the first year of analysis

2. For Territory Authority, annual ongoing costs consist of:

\$100,000 for Board members, \$302,500 for CEO and \$197,500 for senior managers (including on costs)

3. For Icon Water, annual ongoing costs consist of:

\$302,500 for MD of Stormwater and \$197,500 for a senior manager (including on costs)

7.5 Potential for efficiency gains

The two institutional reform options with the greatest degree of change (transfer to or purchase of stormwater WQ assets by Icon Water or establishing a Territory Authority) would both result in significant upfront establishment costs and additional ongoing overhead costs. If incurring those additional transactions costs is to be economically efficient, offsetting efficiency gains must be on offer, and the probability of capturing those efficiency gains relatively certain.

Of course, if the remaining options were to offer reasonably certain efficiency gains without incurring transactions costs, then proceeding with those options would also be economically efficient. However, the empirical evidence on institutional reform of water and wastewater utilities (reviewed in detail below) suggests that a key necessary condition is sufficient separation of the institution from the executive arm of Government. Therefore, it is unlikely that the creation of a Business Unit that is within an ACT Government directorate is likely to deliver significant efficiency gains.

The potential for capturing avoided costs through efficiency and/or productivity gains is likely to be relatively weak under the ‘improved reporting’ option, because although there would be increased transparency regarding funding and expenditure (relative to existing arrangements), scrutiny of expenditure would not be as intense as that typically associated with formal regulation. Thus, TCCS leaders are unlikely to have the same incentives to continually improve performance.

The options that involve locating decision-making functions regarding the management of stormwater WQ assets at arms length from the executive branch of the ACT Government have many of the institutional characteristics of water and wastewater utilities that were created from microeconomic reforms in the 1990s. In the remainder of this section we assess what the efficiency gains may be under both the Icon Water and Territory Authority options.

7.5.1 Icon Water options

The main potential benefit under each of the Icon Water options is through efficiency and productivity gains in the delivery of stormwater WQ asset O&M functions, while delivering those functions at an acceptable level of service. This is a reasonable expectation because similar institutional reforms to water and wastewater utilities have delivered efficiency benefits.

For example, prior to 1995 water and wastewater services in regional NSW and Victoria were delivered by local government. Water and wastewater services were simply a function of councils, with shared O&M staff across many alternative functions. Water and wastewater revenue was typically collected as part of annual rates, with a few rare exceptions where a separate charge was levied, typically as a function of property value.

In Victoria major structural reform of local government and the public utilities sector resulted in councils being stripped of their water and wastewater functions and assets. Regional Urban Water Authorities (RUWAs) were established and Victorian Government Corporations. Skills based boards were appointed to the corporations, which in turn appointed Managing Directors. The sole purpose of the RUWAs was to provide water and wastewater services to customers. The Essential Services Commission began formal regulation of RUWAs in the early 2000s, although the RUWAs had been regulated by a government department from their establishment.

In contrast, NSW water and wastewater functions continued to be provided by local government in regional NSW. However, local governments were required to establish separate business units for water and wastewater functions, called Local Water Utilities (LWUs). Financial accounts for these LWUs were to be 'ring-fenced', meaning revenue from water and wastewater charges were to be passed through to the LWU business unit directly, rather than funding the operations of LWUs from consolidated revenue.

In practice, some larger councils established distinctly separate water utilities, that were branded separately from local government, had clear accounts and in some cases were functionally separate from local government. However, the majority of councils continued to operate the LWUs as though they were still an integrated part of overall council operations, sharing management and O&M staff. Councils also found 'innovate' ways of extracting water and wastewater revenue from the LWUs by charging administrative fees and rental charges that were well above market rates.

The differing institutional arrangements for wastewater utilities in particular were analysed by Byrnes et al (2009) to determine whether the alternative institutional models resulted in different efficiency and productivity outcomes.

The study found that a wide range of factors influenced the efficiency and productivity of wastewater utilities in both states. Some of these factors were unavoidable, such as the regulatory standard to which wastewater was to be treated and the proportion of wastewater coming from industrial customers.

However, after having taken all those factors into account, and controlling for their influence, the study found that the corporatised wastewater utilities in Victoria were around 22% more efficient than their counterparts in NSW. The authors surmised that the relatively greater efficiency of Victorian utilities was related to the alternative governance arrangements.

The corporate structure of the utilities provided four main benefits:

- the composition of the boards of Victorian utilities during the period was a function of relative expertise, rather than a proportional representation of the local government area

each utility served. This is likely to have led to decision making that was less influenced by local political considerations.

- Skilled managers may have been relatively more attracted to Victorian utilities due to the prospect of reporting to the CEO of a corporation, rather than the general manager of a council. The relatively more corporate structure may have played a role in attracting professionals comfortable in that environment.
- It could be argued that the corporate structure contributed to a higher degree of *managerial* competence within Victorian utilities, because management professionals were leading the corporations, rather than technical experts from engineering backgrounds. This was likely to have partly stemmed from strategic decisions being made by board members with a diversity of backgrounds (finance, law, community engagement and engineering). The authors argued that it was likely that investment in unnecessary capital projects would gain approval, contributing to greater efficiency.
- Similarly, because management of the corporations were reporting to skills based boards, there was less probability that resources had been diverted to projects that were driven by political considerations.

The findings reported in Byrnes et al (2009) were consistent with similar studies of water and wastewater utilities in Europe and the United States, suggesting that dedicated water and wastewater utilities were more likely to be relatively more efficient.

To our knowledge there have not been similar studies of the relative efficiency of governance arrangements for stormwater services, either in Australia or internationally. However, it seems reasonable to assume, conceptually at least, that similar efficiency gains would be on offer when providing stormwater services under a corporate governance structure.

To illustrate the magnitude of the financial benefits that could be on offer we have replicated a 22% efficiency gain in the delivery of stormwater WQ services in the ACT. Whilst this analysis should not be viewed as proof that these financial gains could be made, it does illustrate the potential benefits from pursuing the option further.

We specifically modelled the financial outcome where the set of assets preferred by Icon Water are transferred to or purchased by Icon Water. The implication of this for the modelling exercise was that a smaller percentage of the O&M task would be subject to the efficiency gains. Based on previous Marsden Jacob analysis of stormwater WQ O&M expenditure, we estimate that Icon Water would be responsible for 92% of total stormwater O&M expenditure. The remaining 8% would be the responsibility of TCCS.

We assume that the efficiency benefits would not fully manifest until five years following the change in institutional structure. This is necessary because it can take time to recruit skilled staff and for a performance oriented culture to emerge following institutional reform. Although, this assumption is probably too conservative, because Icon Water has been operating as a corporation for at least 10 years.

In order to compare the potential benefits from institutional reform with the transactions costs outlined previously, we calculated the benefits in present value terms over a 10 year and 30 year evaluation period, applying a 6% discount rate. The results are presented in Table 17 below.

Table 17: Present value of benefits from transferring/selling assets to Icon Water

Present Value of efficiency gain benefits (\$m) ¹	
10 yr	30 yr
\$7.6	\$21.8

When the potential benefits are compared against the associated transaction costs, the results suggests that the institutional model is worth pursuing further. The results of the analysis are presented in Table 18 below.

Table 18: Decision making criteria - Icon Water option

Present Value of total transaction costs (\$m) ¹		Present Value of efficiency gains (\$m) ^{2,3}		Net Present Value of Icon Water option (\$m)		Benefit Cost Ratio of Icon Water	
10 yr	30 yr	10 yr	30 yr	10 yr	30 yr	10 yr	30 yr
\$6.0	\$9.2	\$7.6	\$21.8	\$1.5	\$12.5	1.25	2.36

An additional benefit that may be available under the Icon Water options is through capturing economies of scope. These arise when it is more efficient for a single institution to produce multiple services, relative to multiple institutions providing those services separately. In this example economies of scope would be present if it were more efficient for Icon Water to provide water, wastewater and stormwater O&M services, rather than TCCS providing stormwater WQ services and Icon Water producing water and wastewater services.

Economies of scope arise through relatively more efficient allocation of resources across multiple tasks. In the case of Icon Water, they would likely arise through existing O&M staff working across all three service lines (water, wastewater and stormwater). Economies of scope also arise from the ability to spread fixed costs across a broader range of service types.

It is notoriously difficult to measure economies of scope in the real world. Therefore there have been few empirical studies of the benefits from economies of scope in the Australian water sector that can be drawn on to inform this study.

Icon Water in its submission to the Options Paper hinted at the presence of scope economies. It argued that through taking ownership of the “whole stormwater value chain” it could improve management to achieve the best outcomes.

7.5.2 Territory Authority option

The Territory Authority option would, in theory, bring many of the benefits that are associated with the Icon Water options. That is, the institution, although not a corporation by name, would have some of the features of a corporation. These include a dedicated leadership team that is primarily focussed on the delivery of stormwater WQ O&M functions in an efficient and prudent manner, to deliver value for money from the expenditure of funds raised via a levy or charge.

If the ACT Government elected to put in place a skills-based board, presumably those board members would bring skills in management and technical areas such as stormwater infrastructure design.

The ACT Territory Authority model also appears to provide sufficient decision-making independence from elected representatives and ACT Government bureaucrats to alleviate many of the weaknesses in the allocation of resources that were evident in regional NSW local governments with respect to water and wastewater services.

As presented in Table 19 below, if the Territory Authority did deliver similar efficiency gains as a result of the dedicated operating model, with highly skilled staff, the present value of the

efficiency gain benefits would be relatively higher than those under the Icon Water option. This is because the Territory Authority would take on O&M responsibilities for all stormwater WQ assets, rather than the 92% of assets that Icon Water proposes to acquire. Therefore, the potential efficiency gains apply to a relatively larger asset base.

Table 19: Expected present value of benefits from Territory Authority model

Present Value of efficiency gain benefits (\$m) ¹	
10 yr	30 yr
\$8.2	\$23.7

However, it does not seem reasonable to assume that a newly established Territory Authority would deliver the range of benefits with the same degree of certainty as that associated with the Icon Water options. This is because in many respects the Icon Water institutional model is proven.

Icon Water appears to have a culture that is focused on the delivery of its core services, responds in the appropriate manner to external regulation by the ICRC, has a Board and executive leadership that are sufficiently independent of the executive of the ACT Government and has organisational structures in place that have been refined over time.

To reflect the relative uncertainty regarding the benefits that could be achieved under the Territory Authority option, we have applied a 20% 'haircut' to the assumed efficiency gains. After applying the haircut the expected efficiency gains benefits are relatively lower, as outlined in Table 20 below.

Table 20: Expected present value of benefits from Territory Authority model

	Present Value of efficiency gain benefits (\$m) ¹	
	10 yr	30 yr
20% haircut on total efficiency gains	\$1.3	\$4.4
Revised total efficiency gains	\$6.9	\$19.3

Although the expected benefits of the Territory Authority option are relatively lower than those of the Icon Water options, the transaction costs of the Territory Authority model are also lower. Therefore, it could be the case that a relatively higher Net Present Value and/or Benefit Cost Ratio is achieved from this option, and if that were the case this model would be ranked ahead of the Icon Water model. However, the results of the NPV and BCR analysis presented in Table 21 below suggest this is not the case.

Table 21: Decision making criteria – Territory Authority option

Present Value of total transaction costs (\$m) ¹		Present Value of efficiency gains (\$m) ^{2,3}		Net Present Value of Territory Authority option (\$m)		Benefit Cost Ratio of Icon Water	
10 yr	30 yr	10 yr	30 yr	10 yr	30 yr	10 yr	30 yr
\$5.7	\$9.6	\$6.9	\$19.3	\$1.2	\$9.7	1.20	2.01

The results indicate that although the Territory Authority model is expected to deliver relatively lower benefits from efficiency gains, the relatively lower transactions costs associated with this model mean that the Territory Authority model still has the potential to deliver economically beneficial outcomes. Notwithstanding, those benefits are marginal over a 10 year evaluation period, suggesting that the Territory Authority model would need to be in place for the long run to deliver significant benefits.

7.6 Implied levy/charge under each option

Under the Icon Water option a separate stormwater charge would be introduced to fund prudent and efficient O&M costs, and the charge would be separately identifiable on Icon Water bills. Icon Water would be leaving approximately 8% of the existing stormwater WQ assets (in terms of capital value) with TCCS, which means the ACT Government would need to provide sufficient appropriations to TCCS to allow O&M activities related to those assets to continue.

Under the Territory Authority model, all assets would be transferred to the Stormwater Utility. Therefore, the stormwater levy envisaged under that model would entirely fund the O&M task.

In this section we present analysis of the revenue required to fund prudent and efficient expenditure under each model, and what this implies about the necessary stormwater charge or levy that would be imposed on properties in the ACT.

7.6.1 Icon Water option

Under this option the stormwater charge is set at a level that would allow Icon Water to recover sufficient revenue to:

- offset prudent and efficient O&M expenditure for the assets that Icon Water proposes to accept/purchase
- recover establishment costs and ongoing overhead costs

The upfront establishment costs associated with this option, and the variability in the O&M expenditure profile mean that if the charge was set at a level necessary to recover the costs in any given year, property owners would face significant volatility in the stormwater charge amount from year to year. This is an undesirable feature of any funding mechanism.

To provide stability to the stormwater charge, we have calculated a charge, that when applied to every property in the ACT over the evaluation period (10 or 30 years), would permit Icon Water to earn sufficient revenue to just offset all cost incurred over the period. This means that in some years Icon Water earn revenue that was less than efficient expenditure, but in others earn revenue in excess of efficient expenditure. We have not included in our estimates the financing costs that would be incurred by Icon Water in years where there is a shortfall, or the yield earned on surplus funds in years where excess revenue is recovered.

Table 22 below outlines the revenue requirement, in present value terms, for Icon Water to offset establishment costs, ongoing overhead costs and prudent and efficient O&M costs over 10 and 30 years.

Table 22: Icon Water revenue requirement over 10 and 30 years

Present Value of Icon Water revenue requirement (\$m)	
10 yr	30 yr
\$60.2	\$112.1

The associated stormwater charge necessary to raise the required revenue in outlined in Table 23 below. The calculations are made with reference to annual property forecasts provided to MJA by the LDA in 2015. For simplicity we assume a fixed charge is applied to all properties in the ACT. In practice, there are likely to be a number of properties that are exempt from the stormwater charge.

Table 23: Icon Water annual stormwater charge over 10 and 30 year evaluation periods

Icon Water annual stormwater charge per property	
10 yr	30 yr
\$45.48 per property	\$42.08 per property

The funding requirement for TCCS to operate and maintain the assets that are not transferred/purchased by Icon Water is outline in Table 24 below.

Table 24: TCCS revenue requirement over 10 and 30 years

Present Value of TCCS revenue requirement (\$m)	
10 yr	30 yr
\$5.4	\$10.8

We assume that the TCCS revenue requirement will be funded from consolidated revenue. We express this in per property terms in Table 25 below.

Table 25: Implied share of General Rates per property required to fund TCCS O&M activities over 10 and 30 years

Implied share of General Rates required to fund TCCS O&M function	
10 yr	30 yr
\$4.05 per property	\$4.06 per property

MJA estimated that the annual O&M funding allocated to stormwater WQ assets in the ACT was approximately \$2.5m in 2014/15. At that time there were around 156,000 properties in the ACT, implying that \$16 of General Rates per property was raised to fund O&M expenditure.

Under this option, \$4 of the \$16 would be retained to fund TCCS revenue requirements. This would result in a \$12 reduction in General Rates because the Icon Water stormwater charge would fund O&M expenditure rather than General Rates.

From this we have estimated the net impact on property owners from the introduction of a stormwater charge under this option. The results are presented in Table 26 below.

Table 26: Net impact on ACT property owners

	Net impact on ACT property owners from introduction of stormwater charge by Icon Water	
	10 yr	30 yr
Icon Water stormwater charge	\$45.48	\$42.08
Less current implied stormwater levy	\$16.02	\$16.02
Plus share of General Rates to fund TCCS functions	\$4.05	\$4.06
Net increase in per property charge	\$33.52	\$30.12

This suggests that net impact on property owners to fund total stormwater WQ assets O&M in the ACT under this model would be around \$30 per property over 30 years, or \$33.50 per property over 10 years.

7.6.2 Territory Authority option

Under this option the stormwater levy is set at a level that would allow the Territory Authority to recover sufficient revenue to:

- offset prudent and efficient O&M expenditure for all stormwater WQ assets in the ACT

- recover establishment costs and ongoing overhead costs

Similar to the Icon Water option, the upfront establishment costs associated with this option, and the variability in the O&M expenditure profile mean that if the charge was set at a level necessary to recover the costs in any given year, property owners would face significant volatility in the stormwater charge amount from year to year. This is an undesirable feature of any funding mechanism.

We have applied the same approach to providing stability to the stormwater levy under this option as that applied to the Icon Water stormwater charge.

Table 27 below outlines the revenue requirement, in present value terms, for the Territory Authority to offset establishment costs, ongoing overhead costs and prudent and efficient O&M costs over 10 and 30 years.

Table 27: Territory Authority revenue requirement over 10 and 30 years

Present Value of Territory Authority revenue requirement (\$m)	
10 yr	30 yr
\$66.0	\$125.7

The associated stormwater levy necessary to raise the required revenue in outlined in Table 28 below. The calculations are made with reference to annual property forecasts provided to MJA by the LDA in 2015. For simplicity we assume a fixed levy is applied to all properties in the ACT. In practice, there are likely to be a number of properties that are exempt from the stormwater levy.

Table 28: Territory Authority revenue requirement over 10 and 30 years

Territory Authority annual stormwater levy per property	
10 yr	30 yr
\$49.82 per property	\$47.19 per property

TCCS would no longer have a role in stormwater WQ assets O&M.

As outlined earlier in this section MJA estimated that the annual O&M funding allocated to stormwater WQ assets in the ACT was approximately \$2.5m in 2014/15. At that time there were around 156,000 properties in the ACT, implying that \$16 of General Rates per property was raised to fund O&M expenditure.

Under this option General Rates could reduce by \$16 per property because TCCS would no longer have a role in stormwater WQ assets O&M and therefore would not require funding from consolidated revenue for these purposes.

Given that, the net impact on ACT property owners is simply the stormwater levy necessary to fund the Territory Authority less the existing funding of O&M from consolidated revenue. Table 29 below outlines the net impact calculations.

Table 29: Net impact on ACT property owners

	Net impact on ACT property owners from introduction of stormwater levy	
	10 yr	30 yr
Stormwater levy to fund Territory Authority	\$49.82	\$47.19
Less current per property funding of stormwater O&M	\$16.02	\$16.02
Net increase in per property charge	\$33.80	\$31.17

This suggests that net impact on property owners to fund total stormwater WQ assets O&M in the ACT under this model would be around \$31 per property over 30 years, or \$33.80 per property over 10 years.

8. Conclusions

8.1 Introduction

We can conclude from this analysis that there are a handful of potential options raised in the Options Paper that are no longer viable. They are:

- Establishing a Stormwater Utility as a Territory-owned Corporation
- Transferring the responsibility for the O&M of stormwater WQ assets to Icon Water

The remaining options appear to be viable, acknowledging that some stakeholders have expressed strong views against some of those models. Equally, stakeholders have advanced preferences for some of the models under consideration, or variants of those models.

We can conclude from this that reform of funding and institutional arrangements does appear to be feasible in terms of stakeholder support.

However, it is worth re-stating our caveat regarding the adequacy of total O&M funding to TCCS from ACT Government Budget allocations. That is, the apparent O&M funding shortfall for stormwater WQ assets is not necessarily a direct result of inadequate O&M funding for all TCCS functions. CMTEDD estimate that TAMS received O&M funding allocations of approximately \$40m per year. Decisions regarding the allocation of that global O&M appropriation are made by TCCS executives. Therefore, it may be the case that the allocation of O&M appropriations to stormwater WQ O&M may be insufficient, rather than appropriations through the budget process.

8.2 Funding model reform

With respect to funding reform, we concluded that it would be inconsistent with current ACT policy for the ACT Government to raise additional revenue from the range of relatively inefficient taxation options such as payroll tax and conveyance duties. For this reason we deem those funding mechanisms as unfeasible.

Of the relatively more efficient forms of funding (from an economic perspective) there would be little difference between increasing existing General Rates and introducing a stormwater levy/charge to fund stormwater WQ O&M functions. This is because the marginal excess burden of each funding instrument is similar.

However, because a stormwater levy/charge would bring additional benefits (such as providing a price signal to property owners that stormwater management has an opportunity cost), introducing a stormwater levy/charge would be preferable to increasing General Rates. However, we acknowledge that the political feasibility of introducing a stormwater levy/charge is less straight forward.

8.3 Institutional model reform

In terms of institutional reform options, we concluded that the options of improving reporting requirements and establishing a Business Unit were unlikely to result in significant long term benefits. This was primarily because existing examples of the type of reporting proposed under

these models is not sufficiently transparent and is restricted to reporting of single line items with financial accounts, with terse commentary on why expenditure varied in relation to budgeted expenditure.

We are also concerned that there is little regulatory or legislative protection for the proposed reporting arrangements, meaning that the executive arm of the ACT Government could remove reporting arrangements without scrutiny by the legislative assembly of the ACT public.

We also concluded that there was little evidence to suggest that significant efficiency gains would result from the improved reporting and Business Unit models, because the options would not put in place the type of institutional changes seen in the Victorian regional urban water sector in the 1990s.

In contrast, the Territory Authority and Icon Water options do have the potential to deliver efficiency gains of the type seen in the Victorian urban water sector, because the institutional reforms would be of a similar nature.

Notwithstanding the potential benefits, we found that the Territory Authority and Icon Water options would result in significant transactions costs from implementation. Yet in both cases the costs did not exceed the expected benefits when evaluated over a 10 and 30 year timeframe.

8.4 Triple bottom line assessment and impact on property owners

The economic decision-making criteria associated with each option are presented in Table 30 below.

Table 30: NPV and BCR results for Territory Authority and Icon Water options

	Net Present Value (\$m)		Benefit Cost Ratio	
	10 yr	30 yr	10 yr	30 yr
Territory Authority	\$0.6	\$8.4	1.1	1.9
Icon Water	\$1.2	\$11.6	1.2	2.3

Of significance, under both institutional reform options the results improve significantly under the assumption that the reforms are in place over a 30 year period. This points to the need for long term policy reform that is carefully planned in order to capture benefits that arise in the long term.

The impact on ACT property owners would be similar under either the Territory Authority or Icon Water options. MJA's calculations of the necessary stormwater levy or stormwater charge that would be required per property in the ACT are outlined in Table 31 below.

Table 31: Net impact on ACT property owners from introduction of a cost reflective stormwater levy/charge

	Net impact on ACT property owners from introduction of stormwater levy or charge	
	10 yr	30 yr
Icon Water option	\$33.52 per property	\$30.12 per property
Territory Authority option	\$33.80 per property	\$31.17 per property

This suggests that the determining factor in deciding between the options would be the extent of net benefits available under each and the certainty attached with capturing those net benefits.

8.5 Impact on BPP program and ACT Budget

Each of the funding and institutional models outlined in this Draft Report would be capable of funding the ongoing O&M of stormwater WQ assets constructed under the BPP program. However, if some of those assets are constructed under commercial arrangements that allow for ongoing operation and maintenance at a project level scale (e.g. recycling stormwater), the projects would be self-funding and fall outside of the arrangements proposed in this report.

A number of the options would have a neutral effect on the ACT Government Budget position. The Territory Authority model is designed to be entirely self-funded from a cost reflective stormwater levy. As a result, the expenditure that is currently funded through appropriations from consolidated revenue would be funded through the levy. If the ACT Government kept existing taxes and duties in place, and introduced the stormwater levy, there could be a positive impact for the ACT budget. However, it is more likely that existing taxes/duties would be reduced such that the current amount of estimated funding for stormwater WQ asset O&M is no longer raised through general taxation measures. This would have neutral impact on the ACT budget.

Under the Icon Water option 92% of forecast expenditure would be funded through a cost reflective stormwater charge. The ACT Government would be required to fund the remaining 8% through consolidated revenue because that share of the O&M task would be carried out by TCCS. Therefore, the reduction in existing taxes/charges would be relatively less under the Icon Water option to maintain a budget neutral outcome.

8.6 Change in ranking

The analysis in this report does not result in a change in the ranking of the options from MJA's 2016 report on funding and institutional reform options. That is, transferring assets to Icon Water remains the preferred option, and the implementation of a cost-reflective stormwater charge remains the preferred funding mechanism, with an associated reduction in General Rates to partially off-set the impact on ACT property owners.

The option in which Icon Water purchases regional stormwater WQ assets was not considered in the MJA 2016 report.