INTRODUCTION

Dear Colleague,

Thank you in advance for participating in this on-line questionnaire as part of Monash University's National Urban Water Governance Program. This questionnaire contains 31 questions focused on capturing the views of professionals working in the urban water management area across Metropolitan Melbourne. We are seeking your perspective on current 'barriers' and 'drivers' to advancing the uptake of sustainable urban water management practices across Melbourne. There are two parts to this questionnaire:

- 1) Diverse Water Sources
- 2) Stormwater Quality Management

While these areas are interlinked as part of the total water cycle, we ask you about them separately to minimise any potential confusion with respect to some of the different technologies and management practices asked about in this questionnaire.

Even if you feel that you are not intimately involved with these areas, please give your best answer as we are interested in YOUR views. This questionnaire is anonymous and has been approved by Monash University's research ethics committee (for detailed information on how your confidentiality will be maintained, please read the Explanatory Statement attached in the question below). This questionnaire should take around 30 minutes to complete. If you get interrupted, you can close this questionnaire and complete it later. When you re-open it, you will be able to pick up from where you left off.

WIN ONE OF THREE PRIZES!

At the end of this questionnaire, you will have the option to enter our competition* where you could win one of the following prizes:

a) APPLE iPod Nano 2GB MP3 Player (RRP \$299)

b) OLYMPUS Mju 600 Digital Camera (RRP \$399)

c) Professional home "Spring Clean" to the value of \$300.

*Please note: The competition closes on 10th November 2006.

Once again, thank you for your time.

Yours Sincerely,

Dr Rebekah Brown and Jodi Clarke

Before commencing this questionnaire, it is a Monash University requirement that you read the 'Explanatory Statement' for this research project. Please click here to read this statement and then answer the question below.

□Yes, I have read and agree to the information in the Explanatory Statement for this research.

EXPLANATORY STATEMENT

Dear Colleague,

My name is Dr Rebekah Brown, a senior lecturer in the School of Geography and Environmental Science at Monash University and the Chief Investigator of the National Urban Water Governance Program involving the case study regions of Melbourne, Perth and Brisbane.

This research aims to address current knowledge gaps in progressing sustainable urban water management, including identifying current institutional 'drivers' and 'barriers' for advancing the uptake of future water source options and water quality management practices. The intention of this research is to contribute to current urban water reform strategies across Australia. More details on the research program can be viewed at our website (www.urbanwatergovernance.com).

We are requesting your participation in a voluntary and anonymous online questionnaire, which is expected to take about 30 minutes to complete. At the end of the questionnaire, you can enter our competition where you could win one of three prizes. To ensure that your anonymity is maintained at all times, your contact details will be stored in a separate database and the prize winner will be randomly electronically selected.

Monash University's Ethics Committee has approved this research project (Project No. 2006/109LIR). All results will be securely stored by the researchers and available to no other persons, unless the researchers give permission. In accordance with Monash University policy, the questionnaire data will be destroyed in 5 years. The data may also be used to contribute to the findings reported in journal article, conference presentation or used in future research projects. Should you have any complaints concerning the manner in which this research is conducted, please do not hesitate to contact Monash University's Ethics Committee at the following:

The Secretary The Standing Committee on Ethics in Research Involving Humans (SCERH) Building 3d, Research Grants and Ethics Branch Monash University Victoria 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: scerh@adm.monash.edu.au

If you require more information about the project or should you request a summary of the results of this research project, you can contact the researchers (contact details below).

Thank you for your time. Your input into this research is very much appreciated.

Dr Rebekah Brown Program Leader National Urban Water Governance Program Ph: (03) 9905 9992 Email: <u>Rebekah.Brown@arts.monash.edu.au</u> Ms Jodi Clarke Research Assistant National Urban Water Governance Program Ph: (03) 9905 2581 Email: Jodi.Clarke@arts.monash.edu.au

INFORMATION ABOUT YOU

This brief introductory section asks you 7 questions that will help us understand the range of people participating in this questionnaire. Please remember that this information is not for the purpose of trying to identify any individual and remains anonymous.

1. Which stakeholder group do you represent?

- City West Water
- South East Water
- Yarra Valley Water
- Melbourne Water
- Environment Protection Authority
- Department of Sustainability and Environment
- Sustainability Victoria
- Department of Human Services
- Essential Services Commission
- Southern Rural Water
- Local Government
- Land Developers
- Consultants
- Politicians
- Community / Environment Groups
- Researchers
- U Other (Please specify, e.g. specific trades, other government departments)
- 2. At what level are you positioned within your organisation's hierarchy?
 - U Junior Middle
 - Senior
 - Executive
- 3. Broadly, what is the main type of work that you do?
 - Strategy / Policy
 - Design / Technical / Operations
 - Regulation / Auditing
 - Research / Science
 - Education / Marketing
 - Other (please specify)
- 4. Which area of water management do you primarily work in? (You can tick more than one if needed)
 - Stormwater / Waterways
 - Sewage
 - □ Water Supply
 - Land Development Broadly
 - Total Water Cycle Management
 - Other (please specify)

5. What is your primary professional background and training? (You can tick more than one if needed)





 \square 20+ years

7. How many years experience do you have working in the area of urban water management?

<u> </u>
📙 year
🗌 2-5 years
🗌 6-10 years
11-15 years
16-20 years
20+ years

Stormwater Quality Management

This part of the questionnaire asks you 8 questions about Stormwater Quality Management across Melbourne for protection of the receiving waterways. This part is much shorter, and we estimate that it will take you about 10-15 minutes to complete.

Part 2 is divided into four sections:

- 1) Stormwater Quality Management for Waterway Health
- 2) Timeframes for Stormwater Quality Treatment Technologies
- 3) Factors Influencing Stormwater Quality Treatment Practices
- 4) Stakeholder Commitment

We have provided 'comment boxes' throughout the questionnaire. Please note: it is entirely optional to add your comments, and it may add to the overall time that we estimated it would take you to complete the questionnaire.

1. Stormwater Quality Management for Waterway Health

This section is focused on stormwater quality management from an environmental protection perspective.

1. In YOUR opinion, how important is advancing stormwater quality management practices across Melbourne to the following groups for protection of the receiving waterways?

	Very Low	Low	Average	High	Very High	I don't know
You						
Your Organisation						
The Community						
Current State						
Politicians						

If you would like to comment on the question above, please write in the box below.

2. Timeframes for Stormwater Quality Treatment Technologies

In this section we ask for YOUR view on the envisaged timeframes that a range of stormwater quality treatment technology types could potentially be implemented across Metropolitan Melbourne for protection of the receiving waterways.

2. When (if ever) do you envisage that the following technology types are likely to become mainstream on-ground practice in GREENFIELD developments (i.e. new growth areas) across Melbourne for protection of the receiving waterways?

	Already Mainstream Practice	Next 5 yrs	6-15 yrs	16-30 yrs	Over 30 yrs	l don't know	Not Applicable
Treatment							
Wetlands							
Gross Pollutant							
Traps							
Infiltration							
Systems							
Sedimentation							
Basins / Ponds							
Porous							
Pavements							
Rain gardens /							
Bio-retention							
systems							
Street tree bio-							
retention							
systems							
Swales							

3. When (if ever) do you envisage that the following technology types are likely to become mainstream on-ground practice in EXISTING areas across Melbourne for protection of the receiving waterways?

	Already Mainstream Practice	Next 5 yrs	6-15 yrs	16-30 yrs	Over 30 yrs	l don't know	Not Applicable
Treatment Wetlands							
Gross Pollutant Traps							
Infiltration Systems							
Sedimentation Basins / Ponds							
Porous Pavements							
Rain gardens / Bio-retention systems							
Street tree bio- retention systems							
Swales							

If you would like to comment on any of the two questions above, please write in the box below:

3. Factors Influencing Stormwater Quality Treatment Practices

This is the second-last section of the questionnaire. Here, we ask three questions that seek YOUR views on the current 'drivers' and 'barriers' to a small number of different technologies.

While there are a vast range of potential 'drivers' and 'barriers' (as well as technologies) for stormwater quality treatment practices, the following questions are limited to the most significant "institutional" related factors that have been identified in previous research.

These factors can be related to the 'scale' and 'location' of the stormwater treatment measures. The following three questions focus on these differences by asking about the:

- 1) LOCAL SCALE typically streetscape or local park level
- 2) PRECINCT SCALE typically serves over 100 lots
- 3) REGIONAL SCALE typically catchment scale treatments

4. In your opinion, how do each of the following factors influence the current UPTAKE of LOCAL SCALE (i.e. typically streetscape or local park level) stormwater quality treatment practices across Melbourne?

(e.g. rain gardens / bio-retention systems, street tree bio-retention, swales, side-entry pit traps, gross pollutant traps)

	Strongly Prevents	Slightly Prevents	Neither Prevents or Encourages	Slightly Encourages	Strongly Encourages	l don't know
Community Perception						
Capital Cost						
Maintenance Cost						
Technical Feasibility & Performance						
Professional Knowledge & Expertise						
Current Government Policy						
Management Arrangements & Responsibilities						
Regulation & Approval Processes						
Property Access Rights						
Environmental Outcomes						
Public Health Outcomes						
Social Amenity						

If you would like to comment on the question above, please write in the box below.

5. In your opinion, how do each of the following factors influence the current UPTAKE of PRECINCT SCALE (i.e. typically serves over 100 lots) stormwater quality treatment practices across Melbourne?

(e.g. small ponds, constructed wetlands, sedimentation basins, linear and basin bio-retention systems, infiltration systems)

	Strongly Prevents	Slightly Prevents	Neither Prevents or Encourages	Slightly Encourages	Strongly Encourages	l don't know
Community Perception						
Capital Cost						
Maintenance Cost						
Technical Feasibility & Performance						
Professional Knowledge & Expertise						
Current Government Policy						
Management Arrangements & Responsibilities						
Regulation & Approval Processes						
Property Access Rights						
Environmental Outcomes						
Public Health Outcomes						
Social Amenity						

If you would like to comment on the question above, please write in the box below.

6. In your opinion, how do each of the following factors influence the current UPTAKE of REGIONAL SCALE.

(i.e. typically catchment scale treatments) stormwater quality treatment practices across Melbourne? (e.g. constructed wetlands and ponds)

	Strongly Prevents	Slightly Prevents	Neither Prevents or Encourages	Slightly Encourages	Strongly Encourages	l don't know
Community Perception						
Capital Cost						
Maintenance Cost						
Technical Feasibility & Performance						
Professional Knowledge & Expertise						
Current Government Policy						
Management Arrangements & Responsibilities						
Regulation & Approval Processes						
Property Access Rights						
Environmental Outcomes						
Public Health Outcomes						
Social Amenity						

If you would like to comment on the question above, please write in the box below.

4. Stakeholder Commitment

This is the final section of the questionnaire!

Here we ask about YOUR VIEWS on the current level of 'commitment' of different stakeholder organisations across Melbourne to advancing Water Sensitive Urban Design.

Water Sensitive Urban Design (WSUD) has evolved from its early association with stormwater management and aims to ensure that water is given due prominence within urban design processes. This is through the integration of total urban water cycle thinking in the detailed planning and design of the built form. In particular, WSUD reintroduces the aesthetic and intrinsic values of waterways back into the urban landscape.

7. In YOUR OPINION, how 'committed' are the following stakeholders to advancing Water Sensitive Urban Design across Melbourne?

(Please rate the level of 'stakeholder commitment' using the scale below)

- 1 = No commitment
- 2 = Some individuals committed
- 3 = Increasing organisational / sector awareness and senior support
- 4 = Major organisational departments and internal champions committed
- 5 = Organisation / sector fully committed

	1	2	3	4	5	l don't know	Not Applicable
City West Water							
South East Water							
Yarra Valley Water							
Melbourne Water							
Environment Protection Authority							
Department of Sustainability and Environment							
Sustainability Victoria							
Department of Human Services							
Essential Services Commission							
Southern Rural Water							
Local Government							
Land Developers							
Consultants							

8. In YOUR opinion, how EFFECTIVE are the existing institutional arrangements across Melbourne for enabling the practice of Water Sensitive Urban Design?

Very Poor	Poor	Neutral	Good	Very Good	l don't know

Final Comments

If you would like to add any final comments, we would be very pleased to include them in our analysis. Please write them in the box below.

Your comments:

Thank you!

Thank you very much for your time!

When you submit this questionnaire, you will have the option of entering our Competition Prize Draw. This questionnaire forms part of a larger project, and it will also be administered to urban water professionals across Metropolitan Perth and Metropolitan Brisbane. The questionnaire closes on 10 November 2006 and the final results will be available in early 2007. at www.urbanwatergovernance.com. We will be progressively disseminating the findings through industry workshops in each city from March 2007 and we will advertise these as widely as we can.

Once again, thank you for your time. If you would like to find out more information about this research, please contact:

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