

Memorandum of Understanding

Use of Recycled Water for fire fighting purposes.

Between

Fire & Rescue NSW, the NSW Rural Fire Service

And

Sydney Water

This document describes certain management arrangements for the use of recycled water by Fire & Rescue NSW and the NSW Rural Fire Service within Sydney Water's area of Operations.

Document History

Version	Author(s)	Description	Date	Revision Details
0	WSAA/AFAC	Final Draft template	17/03/07	First issue
1.0	Sydney Water	First draft memorandum of understanding	26/04/08	Issued to NSWFB for comment
1.1	Sydney Water	2 nd Draft	9/5/08	Included NSW Health comment
1.2	SWC & NSWFB	3 rd Draft	23/5/08	Included NSWFB comments
1.3	Sydney Water	First Issue	01/07/08	First Issue ready for signing
2.1	Sydney Water	Second Issue	1/6/11	First issue reviewed and renewed with minor changes.

Table of Contents

1. Preface	3
2. Background	4
3. Purpose	4
4. Management of Environmental & Health Issues	5
5. Sydney Water's Roles and Responsibilities	5
6. FRNSW and RFS Roles and Responsibilities	6
7. Protocols and SOPs	7
8. Liaison between FRNSW, RFS and Sydney Water	7
9. Review	7
10. Authorisation	7
11. References	8

This Memorandum of Understanding is entered into on the day of July 2011

Between

- **Fire & Rescue NSW of Level 10, 227 Elizabeth Street, Sydney NSW,**
- **NSW Rural Fire Service of 15 Carter Street, Lidcombe NSW and**
- **Sydney Water Corporation ABN (49 776 225 038) of 1 Smith St, Parramatta, NSW.**

1. Preface

The purpose of this document is to establish an understanding between Fire & Rescue NSW (FRNSW - formerly the NSW Fire Brigades), the NSW Rural Fire Service (RFS) and Sydney Water in respect of the use of recycled water from agreed schemes as listed in Schedule 1, during operational and training activities if appropriate, as conducted by FRNSW and the RFS.

This memorandum of understanding is intended as a generic document that can be applied to all recycled water schemes where recycled water is supplied for fire fighting (listed in Schedule 1 as updated from time to time).

This memorandum of understanding has been developed in accordance with the National Water Quality Management Strategy – Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1 - 2006), (AGWR).

In endorsing this document, the agencies acknowledge that recycled water is both environmentally sustainable and suitable for fire fighting purposes provided it is used in accordance with this MOU.

2. Background

Recycled water may be sourced from stormwater, grey water, treated sewage and treated to a standard to meet the relevant requirements of the AGWR for its intended use.

Sydney Water is implementing recycled water supply schemes incorporating the supply of recycled water for the purposes of garden watering, toilet flushing, open space irrigation, industrial processes and firefighting.

For each recycled water supply scheme listed in Schedule 1, Sydney Water or its contractors must develop a Recycled Water Quality Management Plan that meets the AGWR and be endorsed by NSW Health. The Recycled Water Quality Management Plan details, amongst other things, the risk based management approach of the recycled water supply system with specific emphasis on managing public health and environmental risks. It also details the levels of treatment, the validation of the treatment processes and the acceptable uses for the recycled water.

FRNSW and the RFS have established a position that supports the use of recycled water that meets the AGWR as required by NSW Health for fire fighting, including training. The Recycled Water Quality Management Plan will demonstrate for each scheme that the recycled water is no less safe than drinking water when used according to FRNSW and RFS operational protocols.

3. Purpose

To ensure that recycled water management practices are safe and sustainable, this memorandum of understanding describes the:

- Use of recycled water from reticulated systems for fire fighting (including training) by FRNSW and the RFS;
- Health and Environmental risk identification and associated risk management controls for the end use of the recycled water; and
- Roles and responsibilities of Sydney Water and its contractors, FRNSW and the RFS.

4. Management of Environmental & Health Issues

4.1 Environment

While some level of run off from a fire is unavoidable, both parties anticipate that generally the impact of the use of recycled water itself is unlikely to be significant.

Given the nature of an emergency, the quality of run-off from a site will be influenced more by the materials and chemicals involved as opposed to the high quality recycled water used by FRNSW and the RFS. Normal management practices for contaminated runoff into waterways would apply in the event of such a discharge to a waterway.

4.2 Health

In accordance with the AGWR, recycled water for both residential use and fire fighting operations is treated to a standard whereby incidental exposure, either by accidental splashing, aerosol inhalation or ingestion is not considered to pose a significant health hazard to workers.

Further references on the assessment of health risk are listed in Section 11.

The following best practice measures are recommended for all FRNSW and RFS members in direct contact with recycled water:

Table 1 outlines how FRNSW and the RFS will manage key identified risks.

Table 1. Identified risk from recycled water and related management strategies

Identified Risks	Risk Management Strategy
Discharge of recycled water to stormwater during training.	Conduct firefighter training on grassed areas, or contain firewater run-off where practical.
Unknowingly drinking recycled water (eg. by drinking from the hose or from the tanker).	Delivery of a recycled water awareness package to educate firefighters in the appropriate uses of recycled water.
Transport and storage of recycled water in a fire appliance, which is then later discharged or consumed unknowingly.	Delivery of a recycled water awareness package to educate firefighters of the appropriate uses of recycled water. Identification of tankers carrying recycled water with appropriate signage.

5. Sydney Water's Roles and Responsibilities

5.1 The roles and responsibilities of Sydney Water, a supplier of recycled water are to:

- Supply and maintain recycled water in accordance with the Recycled Water Quality Management Plan for each scheme listed in Schedule 1;
- Undertake a review as to the effectiveness of the memorandum of understanding as detailed in clause 9;

- Provide input and advice to FRNSW and RFS recycled water awareness sessions;
- Provide assistance to the FRNSW and RFS when requested regarding access to recycled water supply in emergency situations;
- Include recycled water hydrants on any existing Sydney Water GIS database and provide this information to the FRNSW and RFS upon request.
- Provide quarterly water quality reports for relevant schemes to FRNSW and RFS in the form provided to NSW Health.
- Provide to FRNSW and the RFS, annual ISO compliance inspection report non-conformance findings in relation to recycled water management plans for the schemes listed in Schedule 1.

6. FRNSW and RFS Roles and Responsibilities

6.1 The roles and responsibilities of FRNSW and the RFS in relation to the use of recycled water are to:

- Provide a recycled water awareness programme to all fire service members involved in the use of recycled water, including the maintenance of training records (refer to section 6.2);
- Encourage safe working practices for members working directly with recycled water;
- Develop and maintain standard operating procedures documenting appropriate environmental and health requirements;
- Manage the use of recycled water to minimise environmental impacts (including the development of a site management plan where relevant and in co-operation with water utilities)
- Cooperate with Sydney Water in the review of this memorandum of understanding;
- Implement improvement opportunities identified through regular reviews/audits.
- Record and report at an agreed frequency (at least annually) to Sydney Water on the number of incidents where recycled water has been used for fire fighting and/or training purposes and
- Minimise legal risks by implementing due diligence procedures and systems.

6.2 FRNSW and RFS Recycled Water Awareness Programme

6.2.1 FRNSW and RFS shall provide an awareness programme to members using recycled water to ensure that they are aware of the required management controls detailed in section 4. The awareness programme will address:

- The occupational health and safety research relevant to recycled water and its use for firefighting;
- Awareness of key requirements of the AGWR on the use of recycled water;
- The categories of recycled water and the acceptable uses for each category;
- Identification of recycled water systems;
- The occupational health and safety precautions to be taken in relation to the use of recycled water;
- Use of recycled water for firefighting and training, including intermixing;
- Transportation and storage of recycled water;
- Management of recycled water runoff;
- Agency management plans and Standard Operating Procedures (SOPs).

6.2.2 Details of FRNSW and the RFS Recycled Water Awareness Programmes will be provided to Sydney Water upon request.

7. Protocols and SOPs

- 7.1 FRNSW and the RFS may develop agency specific protocols and SOP's dealing with the use of recycled water during operational activities as appropriate.

8. Liaison between FRNSW, RFS and Sydney Water

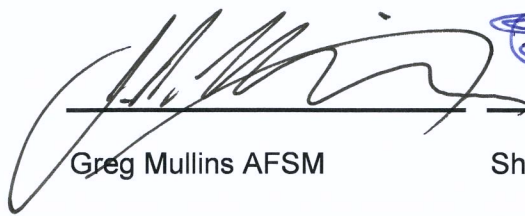
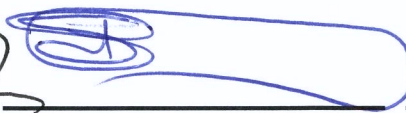
- 8.1 A joint operational group shall meet as required to coordinate the:
- Implementation of this memorandum.
 - Review of Schedule 1.
 - Information and data sharing programs.
 - Review of this memorandum.
- 8.2 Contact details for key staff are provided in Schedule 2. Each party is to notify the other of changes in relevant personnel and/or contact details when they occur.

9. Review

- 9.1 Schedule 1 shall be reviewed regularly to include schemes that meet NSW Health requirements as set out in the AGWR for fire fighting, including training.
- 9.2 A review of the effectiveness of this memorandum of understanding will be undertaken by representatives of the parties three years after its execution. The frequency of this review will also be discussed with NSW Health.

10. Authorisation

- 10.1 This memorandum of understanding will become effective on the last date shown below when executed by all parties hereto and is effective for a period of three years thereafter.

		
Greg Mullins AFSM	Shane Fitzsimmons AFSM	Kerry Schott
Commissioner Fire & Rescue NSW	Commissioner NSW Rural Fire Service	Managing Director Sydney Water
Date: 26/7/11	Date: 18-7-11	Date: 5.7.11

11. References

1. Workcover Report “ Reuse of recycled waste water” (1995) File No. 95/0673
2. Occasional Paper “Health Risk assessment of Fire Fighting from Recycled Water Mains” Water Services Association of Australia (2004)
3. QFRS Steering Committee (2006). *Health Risk Analysis For Fire fighters Using Recycled Water Class A+ For Firefighting Operations*. Queensland Government.
4. National Water Quality Management Strategy: Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1 November 2006). National Resource Management Ministerial Council, Environmental Protection and Heritage Council and Australian Health Minister’s Conference.
5. NSW Fire Brigades State Operations Operational water use policy (16th June 2004)

