



Fire Safety Guideline
Marina Firefighting Systems

MFS Fire Safety Guideline for Marina Firefighting Systems

Fire Safety Guideline

Marina Firefighting Systems

First Issued: 11 June 2004
Author: FSE Marchant
Review date: 2 March 2022
Reviewed by: SFSE Seppelt
Version: 2.0
Authorised by: ACFO Community Safety & Resilience

DOCUMENT CONTROL

Revision History:

Version	Revision Description	Date
A	Original	11 June 2004
1.0	General Departmental review	19 May 2017
2.0	Format update	2 March 2022

List of Amendments:

Clause	Amendment
Title	Change from <i>Built Environs Section Guideline 008: Marina Fire Fighting Systems</i> to <i>MFS Fire Safety Guideline for Marina Firefighting Systems</i>
Whole document	Update to new format
Section 4 Fire Hose Reel Systems	Amended incorrect reference from AS 2444 to AS 2441

CONTENTS

Glossary.....	4
Referenced Documents.....	4
1 Purpose.....	5
2 General	5
3 Fire Hydrant Systems.....	5
3.1 General	5
3.2 Hydrant Location	5
3.3 Performance Requirements.....	5
3.3.1 Mains Fed Fire Hydrant Systems.....	5
3.3.2 Tank Fed Fire Hydrant Systems.....	5
3.4 Fire Service Booster	6
4 Fire Hose Reel Systems.....	6
4.1 Hose Reel Locations	6
4.2 Operation of Hose Reels	6
5 Distribution Pipework.....	6
6 Fire Main Isolation Valves	7
7 Special Provisions	7

Fire Safety Guideline

Marina Firefighting Systems

GLOSSARY

AS Australian Standard

MFS South Australian Metropolitan Fire Service

REFERENCED DOCUMENTS

The following documents are referred to in this Guideline:

AS 2419.1 Australian Standard 2419 – *Fire hydrant installations, Part 1: System design, installation and commissioning*

AS 2441 Australian Standard 2441 – *Installation of fire hose reels*

AS 3962 Australian Standard 3962 – *Guidelines for design of marinas*

South Australian Fire Authorities Community Safety Department, *Built Environment Section Policy 014, Above ground water storage tanks for fire fighting purposes*, South Australian Metropolitan Fire Service and South Australian Country Fire Service

1 PURPOSE

To provide guidance for the installation of firefighting systems at public marinas and the relevant operational firefighting requirements of the South Australian Metropolitan Fire Service (MFS).

The recommendations contained within this Guideline document are in addition to other relevant legislative requirements.

2 GENERAL

Marinas should be designed in accordance with AS 3962. The MFS recommends that all marinas be provided with a fire hydrant system as detailed in this document.

3 FIRE HYDRANT SYSTEMS

Fire hydrant systems must comply with AS 2419.1. The following requirements for marina fire hydrant systems are in addition to the requirements of AS 2419.1.

3.1 General

As per AS 2419.1 Clause 3.4, not less than one dual outlet pillar hydrant must be provided and located so that every part of the marina and main deck of the moored vessels is within reach of a 10m hose stream issuing from the nozzle at the end of a 60m length of laid hose connected to a fire hydrant outlet.

3.2 Hydrant Location

To establish the location of hydrants (and fire hose reels) at the time of design, vessels should be taken as being 15m in length and moored 90 degrees to the marina. It is incumbent upon the operator of the marina to ensure that vessels exceeding this length are moored in a closer proximity to fire hydrants (and fire hose reels) to achieve the recommended coverage requirements of this Guideline.

3.3 Performance Requirements

3.3.1 Mains Fed Fire Hydrant Systems

Where the hydrant system is connected to a water authority supply main, the system should be designed for a minimum of two (2) hydrants flowing simultaneously at 10 L/s each (refer Section **Error! Reference source not found.**).

The MFS will permit reduced unassisted attack hydrant pressures provided that a minimum pressure of 200 kPa is available at the hydrants within the booster at full system demand flow rate.

When boosted, the performance of the system must meet the attack hydrant performance requirements of AS 2419.1.

3.3.2 Tank Fed Fire Hydrant Systems

Where a water authority supply main is not available or cannot achieve the performance requirement of Clause **Error! Reference source not found.**, then a static water supply tank suitably equipped to permit access to its contents by the attending fire authority must be provided.

Firefighting water supply tanks shall comply with the requirements of the South Australian Fire Authorities Built Environment Section Policy 014 'Above Ground Water Storage Tanks for Fire Fighting Purposes'.

In addition to the requirements of Built Environment Section Policy 014 and for the purposes of this Guideline in relation to marina fire hydrant systems, the minimum effective tank capacity should be 36,000 L.

When boosted, the performance of the system must meet the attack hydrant performance requirements of AS 2419.1.

3.4 Fire Service Booster

A fire brigade booster assembly complying with the requirements of AS 2419.1 must be provided to serve a marina fire hydrant system.

The booster must be equipped with not less than two (2) inlets and where a water authority supply main is incorporated, have not less than two (2) feed hydrant outlets (

Note: Additional booster connections may be required for very large marinas (refer Section 7).

The booster assembly must be enclosed in a budget-keyed, weatherproof booster cabinet.

4 FIRE HOSE REEL SYSTEMS

It is recommended that fire hose reel systems are installed to serve public marinas. Fire hose reel systems should comply with AS 2441. The following recommendations for marina fire hose reel systems are in addition to the requirements of AS 2441.

4.1 Hose Reel Locations

Fire hose reels should be located on the marina so that a 36m long hose is located within a 27m radius of all moored vessels.

4.2 Operation of Hose Reels

Where a static water supply is incorporated, either;

- a. a town main connection of not less than 32mm diameter; or
- b. a small automatic compression ignition motor driven pump

must be provided to ensure simultaneous operation of not less than the two (2) most hydraulically remote fire hose reels.

5 DISTRIBUTION PIPEWORK

Distribution pipework must be suitably arranged to accommodate for the movement of floating marinas. Pipework must be either copper (Grade A or B), high pressure plastic protected from ultraviolet solar radiation, or steel.

Pipework should be suitably protected from saltwater corrosion and tested in accordance with AS 2419.1.

6 FIRE MAIN ISOLATION VALVES

Each marina spur must have an isolation valve, where pipework serving the marina branches from the onshore distribution main.

7 SPECIAL PROVISIONS

Special provision may be required for very large marinas, such as additional water flows, as determined by the MFS. Such facilities must be specifically agreed with the MFS Community Safety and Resilience Department.