

Firefighting Foam - Industry Education Program

Summary Report - January 2018 - April 2019

This summary report presents the outcomes of an industry education program carried out by the Department of Environment and Science (the Department) between January 2018 and April 2019. The objective of the program was to increase state-wide compliance with the [Operational Policy, Environmental Management of Firefighting Foam 2016 \(.pdf\)](#). The program facilitated direct engagement with industry operators identified to have a high likelihood of using firefighting foams.

A glossary of terms in relation to firefighting foams can be found within the [Queensland Government quick guide to firefighting foam \(.pdf\)](#).

Key information

- Departmental officers conducted 155 site visits and contacted a further 332 sites via telephone or correspondence to provide education about the environmental management of firefighting foams.
- 48% of sites were found to be compliant with the firefighting foam policy, an increase from an estimated 5% in early 2017.
- A high proportion of non-compliant sites have plans in place to remove and dispose of legacy foams.
- There has been a significant response from commercial and industrial operators to transition to fluorine free foams and environmentally safe practices, and this is apparent in the results of this program.

Introduction

In July 2016, the department introduced the Operational Policy “Environmental Management of Firefighting Foam” in response to emerging concerns regarding the risks associated with PFAS. Full compliance with the policy is to be achieved by July 2019, except in special circumstances approved by the Department. The policy sets out the management standards for meeting General Environmental Duty provisions under the *Environmental Protection Act 1994* (the EP Act).

In 2017, the Department conducted a voluntary survey of select industry and commercial operators to establish a baseline of the use of firefighting foams in Queensland. A [summary of the survey results \(.pdf\)](#) was published in August 2017.

Based on the outcomes of the survey, the recommendations were to provide information and engage with industry particularly in regard to how an operator can identify a prohibited firefighting foam, and how to manage the use of firefighting foams to protect the environment.

Objective

The primary aim of the program was to educate commercial and industrial operators on environmental risks relating to firefighting foams and the associated management standards in Queensland under the Policy.

The industry education program was carried out in three phases.

The first phase involved a targeted area at the mouth of the Brisbane River with numerous heavy industrial sites. Departmental officers conducted field based engagement activities at 26 sites.

The second phase of the program targeted specific areas along the east coast of Queensland, particularly at locations close to environmental receptors such as waterways. During phase two, 62 sites were visited..

The third phase shifted focus to inland areas of Queensland with particular regard to large industrial mining operations. During phase three, 67 sites were visited.

Results

A total of 487 sites were included in the program. Departmental officers conducted 155 site visits and contacted a further 332 sites via telephone or correspondence.

Level of compliance

The overall finding of the program (conducted between January 2018 to April 2019) was that 48% of contacted sites with firefighting foams were compliant with the department’s [Operational Policy, Environmental Management of Firefighting Foams](#).

This was a significant increase from an estimated compliance level of less than 5% in early 2017 following a voluntary industry survey. A small portion (16%) of sites required action to be taken in the short-term to their site practices to become compliant with the policy. Such action includes improving containment around foam storages. The remaining sites (36%) were required to transition away from legacy fluorinated foams, with more than half of these sites (52%) having disposal plans to ensure transition by July 2019 or shortly thereafter. These results are illustrated in Figure 1.

Types of firefighting foam

During the program, a total of 801,579L (approximately 800 tonnes) of firefighting foam was reported in Queensland. Of this, approximately 780 tonnes was reported as fluorinated foam. A breakdown of the types of fluorinated foam reported is illustrated in Figure 2.

Conclusion

Engagement activities carried out under the program are considered to have contributed positively to Queensland’s transition away from the use of persistent organic pollutants contained within particular firefighting foams. The materials generated for the purpose of the program are now available on the [Queensland Government website](#) for reference by operators and regulators alike.

Based on the outcomes of the industry education program, it is apparent that there has been a significant response to the issue of fluorinated firefighting foams in Queensland from relevant industry stakeholders.

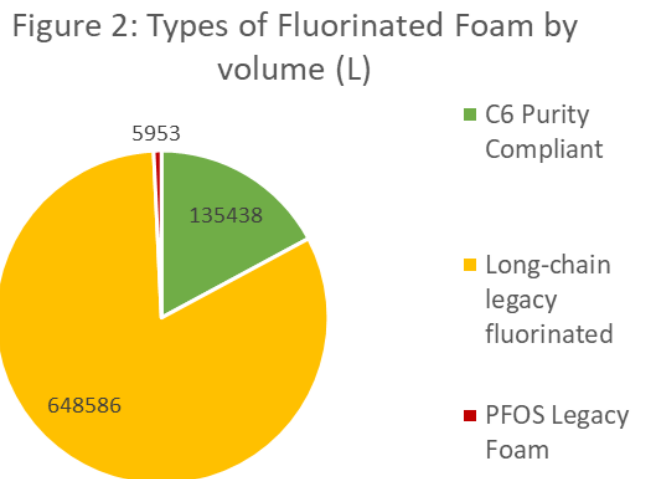
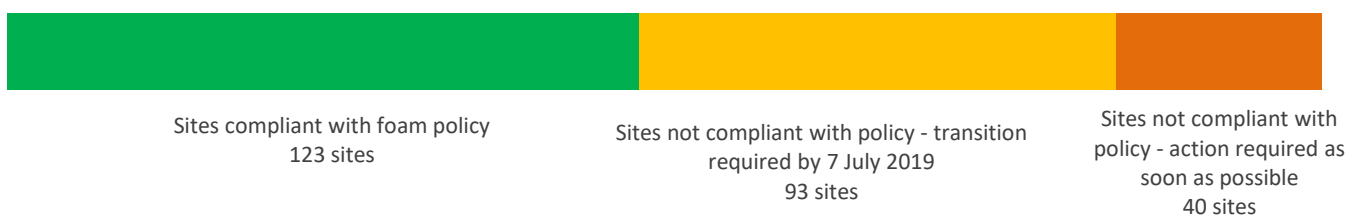
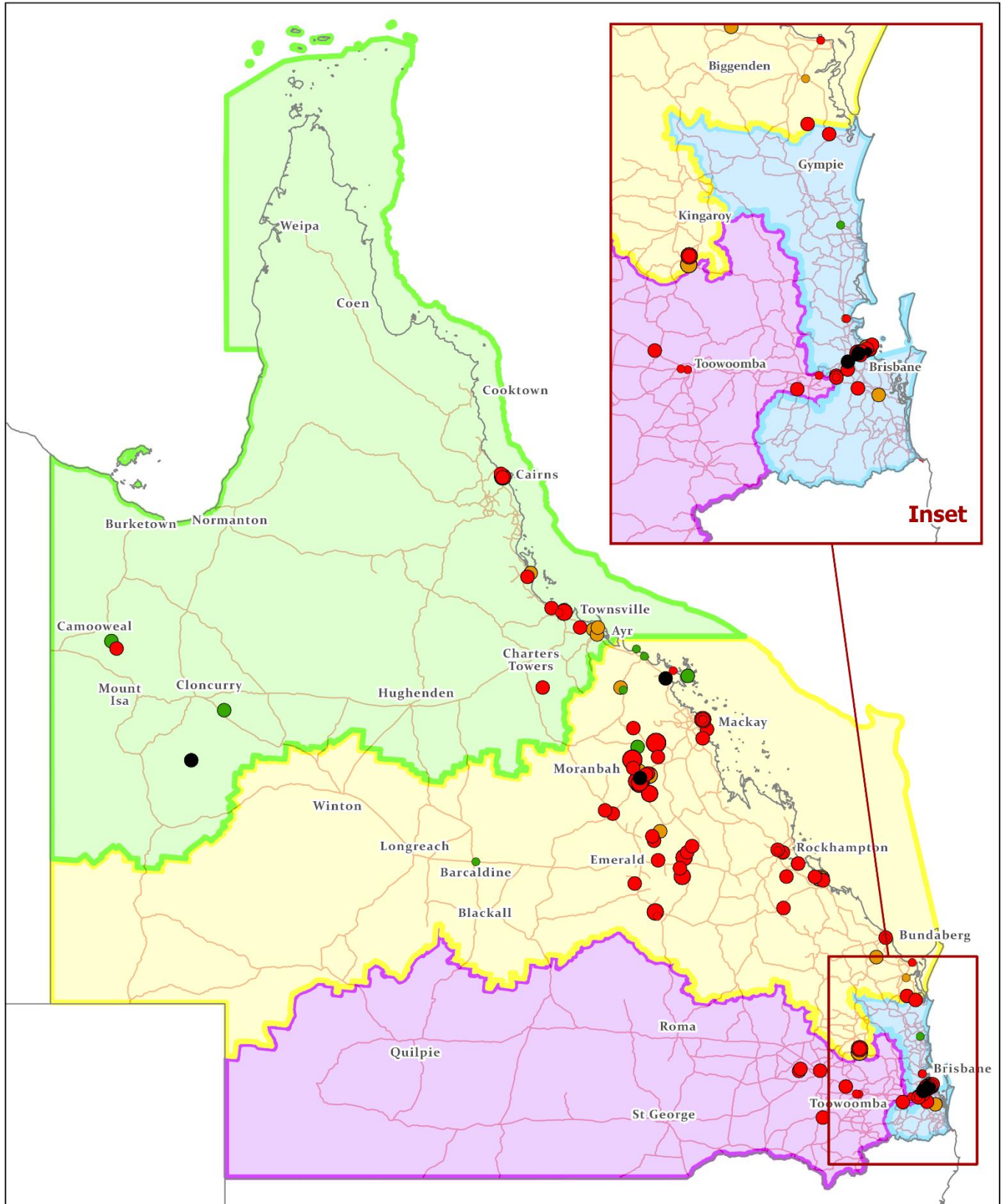


Figure 1: Policy compliance status





Firefighting Foam Sites of Queensland

Data current as at 03/04/2019



Scale 1:7,500,000
GCS GDA 1994



Foam Composition, Total Volumes (Litres)		ESR Regions	
● Fluorine Free, <=100	● Long-chain legacy fluorinated, <=100	■ Coal and Central Queensland Compliance	● Long-chain legacy fluorinated, <=10000
● Fluorine Free, <=10000	● Long-chain legacy fluorinated, <=25000	■ Energy, Extraction and South West QLD Compliance	● Long-chain legacy fluorinated, <=60000
● C6 Purity Compliant, <=100	● PFOS Legacy Foam, <=100	■ Industry, Development and Southeast QLD Compliance	● PFOS Legacy Foam, <=10000
● C6 Purity Compliant, <=10000		■ Minerals & North Queensland Compliance	
● C6 Purity Compliant, <=25000		— State Controlled Roads	

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