



# Response Plan for the Provision and Distribution of Emergency Water Supply



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## **Introduction**

Safe and reliable drinking water is vital to every community. Emergency response planning is an essential part of managing a drinking water system. The purpose of this document is to demonstrate how in an emergency situation, the Arlington Combo can be utilised effectively to provide drinking water to communities if mains supply is suspended.

## **Aim**

To supply a minimum of 10 litres/per head/per day to 27,000 consumers and to maintain that supply until the mains service has been restored.

## **Objectives**

- To establish a minimum of four Filling and Distribution Centres to achieve the necessary provision to 27,000 heads over a period of 24 hours.
- To have an approximate cycle time for initial distribution of under 3 hours.
- To maintain the supply of emergency water of 10 litres/per head/per day for as long as it is required.

## **Background Experience with Severn Trent Water 2007 Floods**

The severe floods that occurred in July 2007 brought to light major shortfalls in the provision of clean water at the mandatory level of 10 litres/head/day. Severn Trent Water (STW) had been investigating alternatives for their bowsers for several months prior to the major flooding occurring in Gloucestershire and Worcestershire. As a result of this, when the water supply was interrupted they did not have a sufficient number of tanks in place to provide their customers with the necessary water supply.

Consequently on Wednesday 25 July, they contacted Arlington Packaging for help. Arlington commenced delivery of the first batch of 50 Combos on the following day, Thursday and they were dispatched in less than 45 minutes. A second batch was delivered on the Friday, a third batch on the Saturday and a top up requirement on the Monday. Their ability to do this at such short notice not only relieved the pressure on STW but also demonstrated what the Arlington Combo is capable of in emergency planning situations.

The boxes were filled on site from a road side tanker, 1000 litres were pumped into them in approximately 5 minutes. The units were then loaded onto and dispatched from a flat bed with a hiab. Following this they were dropped at pre-arranged locations with the intention of a small tanker providing top ups to the units. What became apparent later however was that the flat beds dropping off the containers could exchange a \_ or \_ empty box with a full one, faster than the portable tanker could top them up.

The need for a road tanker and 2 drivers was therefore unnecessary and this meant that subsequently the need for personnel and tankers was also reduced.

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Nick Parker of STW said, *“They had DWI-compliant liners so we saved time avoiding a chlorination stage at Burslem before we could deploy them. There was a genuine desire by everyone to deliver water as quickly and as effectively as possible.”*

### Gloucestershire July 2007 Emergency Water Supply using the Arlington Combo

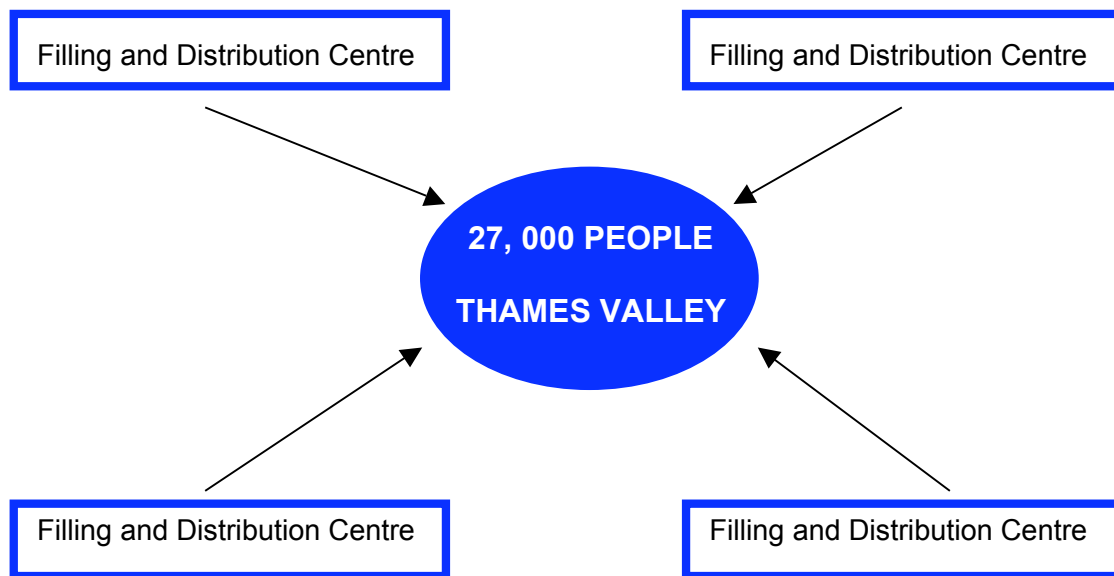


### Method of Supply and Distribution

The basis of distribution of emergency water supply to 27,000 people would be by establishing a minimum of 4 Filling and Distribution Centres to achieve the objective of a minimum cycle time of 2 hours 50 minutes. These centres would be strategically located and would facilitate the storage of the Combo, personnel and accessibility for HGVs in the event of an emergency.

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### CALCULATION FOR CYCLE TIME OF DISTRIBUTION CENTRES





# Filling and Distribution Centre\*



Personnel	Human Resources	Bowser Equipment	Vehicles
1 x Manager 1 x Fork Lift Driver 1 x Banksman 2 x filling teams 2 x lorry driver  Total x 3 to allow for rotation = 21 personnel on shifts	Canteen/Catering Toilets/Portaloos Rest room Office Communications Flood lighting Gritting facility	Boxes x 70 units Benches x 70 units Liners x 250 Top up supply – 10%- 20% = 15 units of both boxes and benches Filling coupling x 3	1 x flat bed LGV 12 tonnes 1 x fork lift

*\*(Multiply the criteria by 4 in order to equate to 4 Filling and Distribution Centres)*

### Personnel

<i>Manager</i>	<i>Fork Lift Driver</i>	<i>Banksman</i>	<i>Filling Teams</i>	<i>Lorry Drivers</i>
Stock Staff Communications	Maintaining fork-lift	Traffic control Gritting Flood Lighting Security	Filling the liners Coupling and Security Tags	Delivering full boxes/collecting empty boxes Fitting valves

**Catering**

The provision of food in the July 2007 Floods was essential in supporting emergency staff working shifts. Proper catering supplies are important.

**Toilets**

According to basic research, most portable facilities are emptied on a weekly basis. Consequently, there must be more than adequate facilities (approximately 4 toilets) available to accommodate the 21 staff over the emergency period.

**Communications**

It is vital that effective and reliable communications are in place at the centres, including Wireless Technology. In addition to this, it is imperative that the public are made fully aware that the containers are a provision of safe drinking water (previous experience showed that the public were not made aware of what the units were providing).

## **Conclusion**

This document has been primarily based on the experience gained whilst acting for Severn Trent Water during the July 2007 Floods and is for guidance and recommendation only. It must be remembered that each situation must be dealt with individually and if necessary, plans adjusted accordingly.

However, in light of an emergency situation, this framework will be a suitable basis to provide emergency water supplies to 27,000 people every 24 hours based on 4 distribution centres.

For more information and advice, please contact Harry Fairbank at Arlington Packaging on 0800 328 6485.



