

## Water Guidelines for Festivals

### Who do I approach for water and sewerage advice?

Water UK is the representative body for all UK water and wastewater companies. Water UK recommends that organizers contact their local water and sewerage companies. To identify the correct water or water and sewerage company you can call Water UK on 0207 344 1844 and ask for the enquiry line, leave a postcode and contact telephone number and Water UK will get back to you with the company contact details.

In respect to Regulations Private water supply regulation the DWI has a great deal of information on their web site [www.dwi.gov.uk](http://www.dwi.gov.uk) or you can call them via skype or tel 3000686400 email [dwi.enquiries@defra.gsi.gov.uk](mailto:dwi.enquiries@defra.gsi.gov.uk)

[The Water Regulation Advisory Service also provide information on water supplies, fittings, material, chemicals and good practice advice. This can be found at www.wras.co.uk or by telephone 0333 207 9030.](http://www.wras.co.uk)

You can also seek advice from trade associations such as PSE (Portable Sanitation Europe), the IOP (Institute Of Plumbers) or BSI (British Standards Institute).

In addition established commercial temporary water supply companies with experience in events applications can be approached for advice and quotes on services.

### Is my water supply is from a private network?

The first thing to establish is where the water that supplies the water network comes from

Is it mains fed from the public water companies or is it from a borehole or spring? If it is fed via the mains the organizer will need to notify the water supplier (water company) calling their main phone number should be sufficient but some may require written notification. These notification forms can also be obtained from the water company. If the supply is from a private source such as a well spring or borehole, the event organizer will need to obtain a copy of the abstraction license issued by the environment agency if the private supply is likely to extract more than 20m<sup>3</sup> per day. If the private water source owner has not got a license the owner can only extract a maximum of 20m<sup>3</sup> per day.

Regardless of the source of supply the onward distribution of water used for drinking, washing and for food production premises at a temporary event will be considered to

be private distribution network and is regulated under the Private Water Supplies Regulations 2009. Private water supplies generally fall under one of 2 categories

- A Supply using public mains water either through a direct connection to the public main or imported by tankers will be considered to be a Private Distribution System.
- A private water source such as wells, springs or boreholes is a private water supply (these are further categorized by volume of water used)

The Local Council environmental health departments are the regulatory body for private water supplies and distribution systems. There is a requirement for all supplies to be risk assessed and in most cases some form of water quality sampling will be required (Particularly with private water supplies). The local Council can charge up to £500 for a risk assessment plus the costs of sampling including up to £100 if they take the sample themselves (It may be acceptable for you to undertake your own sampling and possibly risk assessment with the agreement of the council).

For private distribution networks connected to the mains water supply you must also ensure that the water fittings and distribution system complies with The Water Supply (Water Fittings) Regulations 1999. These regulations are directly enforced by the public water company water fittings inspectors. Anyone setting up a water supply should be competent and aware of the requirements to comply with these regulations.

In respect to discharging waste water the environmental agency take a dim view of discharge of fecal waste, high chlorine content water and in many cases grey water also. In respect to abstraction from a private source it is very likely that when discharging waste water to ground the water rapidly reaches the natural aquifers that supplies the abstracted water. Hence an environmental disaster and ultimately a public health issue which could lead to a criminal prosecution, fines and remediation costs. The best way to approach this issue is to seek guidance from the environment agency.

### **Do I need to inform water companies?**

If you are taking water from a public mains water supply you should notify them of the date of the event and the numbers of people attending to ensure that they are able to meet the extra demand in the location of your event.

The key questions to ask the water companies is how you can obtain consent to connect forms and guidance in completing those forms. Many companies are drinking water supply only. You will need consent to connect to the public water supply if you are intending to make a new connection to the mains. If you are connecting to an existing mains connection you should notify the public water company and confirm whether you need any further consent.

For those companies that provide drinking water and sewage you will require consent to connect to the public water network and separately consent to discharge waste water to the mains sewage.

### **Do I need water and waste tankers?**

There are a number of ways in order to obtain consent to collect and store both drinking water and waste water. This is via a controlled abstraction and discharge process. The key is to estimate how much you will need to store and discharge and seek advice from the authorities as to how quickly you can abstract and what is acceptable to discharge. Calculate how long this process will take and establish the feasibility of this approach. For larger festivals it is unlikely that the public networks could support such volumes within the time frames available. It may be possible to meet the limits of the municipal facilities and supplement it with tankers.

### **How can we store this drinking water or waste water?**

The volumes of water vary greatly and therefore a variety of temporary static tanks that are prepared in advance with evidence of a current **“in date”** disinfection certificate may be appropriate. It is advisable to request evidence of an ongoing historic audit trail of the tank as to its material, previous uses and continuing suitability of storing drinking water without risk of contamination to the public.

These tanks must be Regulation 31 approved (the approved material they are made of) They can be static tanks, roll out pillow tanks or standing mobile tankers (30000 liters – 500 liters). All of these tanks must have filling facilities which are compliant with The Water Supply (Water Fittings) Regulations 1999 (*details of which can be found on the DWI website and [www.legislation.co.uk](http://www.legislation.co.uk)*).

Further information can be found via the Water Regulation Advisory Service (WRAS)

### **Where do the drinking water delivery tankers get the water from?**

Drinking water tanker companies obtain water under license from the Water companies to abstract from designated areas that can support the volumes. This is very often a completely different network to that of the festival as the impact on the local network could not support abstraction during the event period. In addition, the tankers must have purpose made filling facilities approved by the water companies before the licenses are granted.

Tankers used for transporting water must be suitable and you should ensure that the company are able to supply documentation showing that the tanker was appropriately cleaned before use, what its previous use was before supplying the water and that they



have suitable hygienic filling and discharging procedures. Once the water is accepted to supply to the public the event organizer is the person responsible for the quality of that water at the point of supply.

The Water Act prevents the tanker operators in re-selling this water to third parties i.e festivals and events they are only allowed to charge for the transportation storage and delivery of the water

### **Where do the Waste Water Tankers take the waste?**

Waste water tankers also operate under license and can only discharge at waste water treatment plants that can cope with the volume. This is often a long distance away and therefore the cost of discharge is variable. On site waste water storage perhaps on the outskirts of the event will help in the logistical intensity of waste water removal and therefore the cost, both in money and carbon.

### **How do I overcome “peek” water issues?**

As a matter of safety water companies are reluctant to allow additional draw on mains water supplies during peak usage hours. Low pressure can result in pipe erosion, back flow and potential hygiene issues. It is recommended to consider tank storage of your mains water supply on site if you are anticipating high usage at peak times. Static tanks often known as buffer tanks will smooth out the peek demands of the festivals. In this way the water technician can significantly reduce the impact to the local public supply and will help the organizer in obtaining consent to connect.

Please note that it is important to gauge when peek demands will be and how large the water storage should be

### **What are the national peak water usage hours?**

As a rule of thumb the domestic peak water demand hours are 6 – 9 am and 6 – 9pm. It is however essential that festival organisers contact their local water company when planning an event to establish the mains water availability.

It is not essential to consult with the water company because they do not know your festival or event. For instance some events have peek spectator times and water usage goes up either side of the action others have peak time due to camping Showers etc.

It is essential that the organizer finds a way to monitor peak demands which will help the water infrastructure designers to smooth out the peaks and also recovery.

### **What are the alternatives to mains water supplies?**



The obvious one is alternative water suppliers such as licensed drinking water tanker providers (This may still be governed by the private water supplies regulations 2009) but water saving, composting toilets and grey water recycling and reuse during the event can reduce the total fresh water demand.

There is a lot of R & D being carried out in respect to black water recycling (fecal) and ultimately the world wide community needs this, but realistically it is one or two years away from being financially viable.

### **How do I monitor water to ensure its safety?**

Where the local council are aware of the supply they are likely to need to be satisfied with the amount and type of water samples being taken. They may also wish to take their own samples

There are training packages available for sampling and water monitoring purposes, or training so that you are competent in doing it yourself.

Bacteriological sampling should be undertaken by trained staff and tested at UKAS accredited laboratories to ensure that accurate results are obtained (contamination of a sample through poor sampling and testing practices could cause results make the event water supply unusable until clear results are received which will take 24 to 72 hours depending on the test methods used).

The capital cost of the equipment required for chlorine monitoring is typically under £1000.00 however more automated systems with SMS telemetry are much more.

Alternatively there are organizations such as water treatment specialists, water/environmental consultants or laboratories that can monitor water quality for you.

The water technician may be able to provide this service if they are competent to do so. Ask the temporary water and infrastructure providers for advice and quotation.

### **What qualifications should I look for with my water contractor?**

The first qualification that all water works must have and carry with them is one that ideally qualifies them to be registered on the National Water Hygiene Register. This scheme involves health screening and ½ day training. The EUSR (Energy and Utilities Skills Register) run the scheme.

Anyone installing drinking water pipework and fittings should be aware of the requirements of BS8558:2011 (Formerly BS6700:2006) to ensure that the system is likely to meet the water fittings requirements and be installed hygienically



More specialist training is available such as sampling and water monitoring or water auditing some of which focus on specializing in temporary events following the BS 8551 guidelines.

### **Who are responsible for assessing water quality?**

The DWI set the regulations.

For temporary events the primary requirement for drinking water safety falls with the Environmental Health department at the Local Council who enforce the regulations and water companies regarding water fittings and connections to public mains supplies.

Additional requirements of regulation involve the HSE, and EHO's involved with Health and safety regarding the responsibility of anyone providing water to the public or their employees.

In all cases of regulation of drinking water and duties to provide drinking water the owner and festival organisers are considered the responsible persons to ensure that the water provided to the public and any employee is wholesome.

### **If I use a private source such as a bore hole what do I need to consider?**

Private Water Supplies sources are regulated under the Private Water Supplies Regulations 2009 which sits under the Water Industry Act 1991 which governs all drinking water quality supply provisions. Info can be found on the DWI website.

The Environment Agency will need to be consulted if estimated abstraction is greater than 20m<sup>3</sup> or could exceed the amount allowed by any abstraction license held.

Borehole, well, and spring water is raw water. Many private water sources are unfortunately contaminated and under maintained. However the typical well maintained supply should be wholesome and may have inline filtration, regular monitoring and records that are reviewed by the Local Council Environmental Health Department.

It is a requirement for all private sources to be wholesome and there should be monitoring records showing that the supply is suitable.

If you are looking to use a borehole or their private water source (This may include rainwater harvesting) for your event you should get as much information as possible about the supply from the owner and consult the Environmental Health department and, where abstraction may exceed the allowable amount, the Environment Agency.

### **How can I re-use water on site?**

Grey water can be collected and reused for flushing toilets but for no other uses unless you can prove that it is of drinking water quality, or that it meets the environment agency standard for discharging into lakes, streams or on the ground.

### **Is bottled water safer than tap water?**

Not necessarily. It depends upon how it is bottled and stored. (the bottled water in containers regulations are not quite as strict as the water quality regulations) Bottled water must be stored in a cool dark place and ideally consumed before its use by date.

Point of use Filtered Tap water is probably the best water to drink but please note it will not have a long shelf life and should be consumed at the time of dispensing or at least on the same day. A cool dark place may give the water a little more longevity but there are no guidelines as to how long.

### **How can I minimize wastage on site?**

The way to reduce wastage is with good planning and collection of data specific to your event from year to year. Water meters at various high use areas can help with this and obviously the metering of the incoming water is essential. Ask the onsite water technician to collect data or appoint a water monitor to collect relevant data.

### **Water Supply Plans**

It is good practice to for private water supplies and private distribution systems to have some form of written documentation/information about the supply, people responsible for it and water quality data.

A water safety plan is a good method of dealing with the documentation and ensuring that all the relevant information is held in one place to maintain control of the water supply sufficiency, water quality and enable effective safe reaction to any problems that may arise such as burst mains.

The water safety plan can be a simple document for a small straight forward supply direct from a public main to a more complicated plan for a very large supply with many distribution points, storage, pumps, treatment systems etc.

Further information on water safety plans can be found on the DWI website and the information can be scaled as appropriate to the size and complexity of a supply.

### **What is the BS8551**



All Temporary Event Water supplies should be installed following the guidance of BS8551.

BS8551 Is a British Standard for Temporary Water Supply dealing with management and provision of temporary water on events. Key issues:

- Ensure a wholesome supply of water is delivered demonstrating “due diligence” in complying with water regulations.
- Detailed through
  - Preparation of vessels / static or mobile
  - Deployment of vessels, static or mobile
  - Water abstraction procedures
  - Transfer of water to a place of public use.
  - Infrastructure disinfection
  - Sampling and monitoring
  - Proof of preparation and Proof of competency
  - Auditing of documentation and remedial actions

WATER IS A FOOD STUFF AND VITAL TO MAINTAINING GOOD HYGEINE AND HEALTH, IT IS VERY PRECIOUS AND WILL IN TIME BECOME EVEN MORE PRECIOUS IF WE DON'T TREAT IT WITH THE RESPECT IT DESERVES.

WE ARE ALL RESPONSIBLE, SOME MORE THAN OTHERS.

WE SHOULD ENDEVOUR TO DO OUR BEST WITH IT

Thanks to the following companies and organisations for their contributions to this guide:

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