

Water Management

The Two Water Cycles

The world and our environment are constantly changing. As they do so, they throw up new challenges and different needs. This is particularly true in the field of water management where we encounter extreme weather conditions. In order to manage water, Wavin Plastics, a leading UK provider of water management solutions, introduces two water cycles.

The following two water cycles define two application categories needing sustainable solutions:



1. Rain And Storm

This is the natural cycle of rainfall onto roads and rooftops and its subsequent route back towards the river and sea. Evaporation begins the cycle again.

Rain and stormwater falling onto buildings and developed land must be properly managed because it is denied natural drainage. This water may pass through up to six application areas before restarting its journey via evaporation.

The following issues face the future of the rain and storm cycle:

- Increasing rainfall intensity
- Continuing climate change
- Changes to Building Regulations
- Increased population
- Increased land development

All these issues point to the need for improved sustainability and the protection of water quality.

2. Clean And Waste

This is the dependent cycle of human usage, from the main supply, through all forms of usage, and followed by safe disposal for treatment and renewal.

Water is supplied, used and returned for treatment and renewal. Throughout this cycle, it needs safe, secure and efficient management to ensure convenient availability and to protect both public health and the environment. Water will pass through six application stages in this cycle.

The following issues face the future of the clean

“Whether it’s a drizzle or a deluge, it is vital to capture rainwater wherever it falls.”

and waste cycle:

- Increased population
- Increased water usage
- Changes to Building Regulations
- Denser housing development
- More multi-occupancy housing
- Noise pollution from living closer together

All these issues point to the need for improved water resource management and energy efficiency.

Rainwater

Whether it’s a drizzle or a deluge, it is vital to capture rainwater wherever it falls, especially if it has nowhere to drain away naturally. Rainfall on developed ground is denied natural drainage and infiltration. As a plumber, you must be able to offer your customers solutions that cope with increased rain volumes falling in heavier bursts – especially with increased land development and growth in hard standing impermeable surfaces.

Captured rainwater should be able to travel easily

through pipe systems below ground to its interim or ultimate destination. By carefully considering every stage of water management, you will understand the need for ever-more efficient and dependable solutions.

Wherever it needs to go, captured rainfall must be sent on its way quickly and cleanly. This may be surface water captured by gullies and channels, or sub-surface water that’s naturally infiltrated into the ground.

The Building Regulations give rainwater infiltration priority over discharge into natural watercourses and main sewers. Good infiltration requires containment and slow release into the

surrounding ground to preserve resources and avoid damage.

Rainwater is a precious natural resource, so ensuring it doesn’t go to waste is a high priority. As a plumber, it is important to ensure minimal loss while finding more efficient ways to help replenish groundwater.

Climate Change

The limitations of conventional drainage have been exposed by a combination of climate change and continuing land development. Wavin Plastics has already recognised the urgent need for versatile, sustainable responses to the increased risk of storm damage and flash flooding.

When rain and storm water move at speed, it can gather up leaves, debris and pollutants. These unwelcome passengers slow its progress or make it unusable. Unless these materials can be effectively screened out early, they can cause blockages and taint the water with hydrocarbons and other chemicals.

As our population and lifestyle changes, so pressure grows on potable water supplies. Meanwhile, more frequent and intense short downpours don’t top up groundwater or cure

shortages.

Water supply is precious and its quality is essential to public health. So there can be no compromises. It must be perfect every time the tap is turned on.

From treatment to tap can be a long journey. It is under pressure the whole way, and under threat from hazardous chemicals in the ground or from physical threats to pipeline integrity.

Whatever it has been used for, waste water needs to be removed fast, efficiently and safely every time: immediately moved out of the building and on to the next stage in the water cycle. Water removal should be odour-free, visually unobtrusive and quiet.

It takes a specialist process to treat waste or foul water and make it safe for release into the natural environment. Wavin technology already contributes to safe management of both inflow and outflow whilst continuing to search for even better, safer techniques.

Waste water does not have to go via a sewerage treatment plant, before being allowed to begin its journey back to the start of the water management cycle. If it can be treated locally, it may be safely released via a soakaway to replenish local groundwater.

Unlike other valued natural resources that are used and gone forever, water is clearly renewable. It’s got the power to be as good as new, time and time again. Here is the ultimate, ideal goal for any precious resource: renewal as well as versatility. In this final stage of water management, it can be continuously recovered and recycled.

Manufacturers are improving their perspectives on water management continually.

■ For further information visit www.wavin.co.uk. To discuss a specific application or project need, or to request technical advice and information, call 01249 766655. For product literature call 01249 766333 or email literature@wavin.co.uk

“As a plumber, it is important to ensure minimal loss while finding more efficient ways to help replenish groundwater.”

Training, Information And Support Offered By The WMSoc

The Water Management Society (WMSoc) has been in existence since the early 1970s and predates the first recognised occurrence of Legionnaires' Disease in the UK.

Members of the WMSoc have been involved in all major investigations and are regularly consulted as expert witnesses on water topics. Membership is open to anyone involved in the management of water as part of their duties and there are different levels to reflect experience and qualifications. Membership, which is a personal benefit, entitles holders to reduced fees at all WMSoc conferences and courses and a regular mailing of 'Waterline', the Society journal, which keeps members up-to-date with items of relevant news and company information as well as technical papers from around the world.

For a voucher copy of the Journal send an email, using the title line *Waterline request*, to wmsoc@btconnect.com and giving full postal details.

The WMSoc has been providing training courses on water-related topics for industry and building managers for the last 15 years. These accredited courses cover topics as diverse as basic water chemistry to advanced risk assessment and a whole spectrum of topics in between. Every attendee receives a certificate indicating the level they achieved at the end-of-session test and is entered on a register. Courses are delivered by people active in the water management field and are regularly updated. Full details can be found at www.wmsoc.org.uk – you can also book on-line. Anyone booking a second course within 3 months of the first course can



“The programme of courses offers training at all levels of expertise.”

book at member rate, making a significant saving.

The programme of courses offers training at all levels of expertise from those entering the industry and needing to refine the knowledge they already have to those, longer in the tooth, who require refresher training. The Society believes that training is a 'living' process and should be regularly reviewed and renewed and to support this runs a programme of Refresher training courses.

Each year the WMSoc holds conferences on water-related topics; speakers at these events are national and international experts in their field and those attending also derive the benefit of net-working with a cross-section of industry disciplines.

The WMSoc website has recently been revamped and now acts as a central information point, members can gain access to restricted areas on the site.

■ Contact with the WMSoc on any of the topics above and on any other water-management-related topics should be made through the Secretariat on 01827 289 558, Contact Sue Pipe. Alternatively, go to www.wmsoc.org.uk or email wmsoc@btconnect.com