

Green Careers with the Environment Agency

Emma's story

Hi there, my name is Emma Cross. I work as a Senior Technical Specialist in **Water Resources** hydrology in the Environment Agency. The **Environment Agency** is a public body that strives to create better places for people and wildlife, and support sustainable development. My role as a Water Resources Hydrologist is to create a better place by protecting and improving the water environment.

So where did my journey begin?

Well, it began at school and it's thanks to my inspirational Geography teacher! Studying Geography at GCSE level wasn't originally on the cards, but my Geography teacher influenced me to rethink. It was during my GCSE and A-Level studies that I developed a love for Geography and the natural environment.



I decided to study Physical Geography at Cranfield University. I chose this university as they offered a sandwich degree – the third year being an industrial placement. I would definitely recommend this type of course, if you can.

It was in my second year at university that I started to gain more interest in **hydrology data**, rivers and catchments. So for my third-year industrial placement, I decided to do my best to find an opportunity within the water sector. I managed to secure a year's placement with the Environment Agency working within Water Resources in the **Severn catchment**.



My student placement was a real game changer and on reflection probably one of the best years of my life! It goes without saying that the placement gave me a fantastic opportunity to put my studies into use in the real world. It also confirmed that I wanted to be an Environmental Hydrologist, rather than a Flood Hydrologist. But it did so much more than this! It helped me to come out of my shell and to start to believe in myself thanks to the nurturing nature of my placement supervisor.

As part of my industrial placement, I was given the opportunity to lead a small project to collect river flow data about the **freshwater pearl mussel** – an endangered species – to better understand its environmental needs. I enjoyed this work so much that it formed my final year dissertation. I like to think that I have played a small part in helping to secure the future of the freshwater pearl mussel.

During my final year of my degree, I explored the option of carrying out a post-graduate degree – linked to my love for hydrology and conversations that I had with my student placement supervisor. I decided to stay on at Cranfield University to study a **MSc in Environmental Water Management**. Shortly after graduating, I returned to the Environment Agency to begin my first Water Resources hydrology role within the **Thames catchment**. I wanted to return to the Environment Agency due to its leading role in managing water resources and the environment and because it is a great place to work. This was 19 years ago!

The beginning years of my career involved gaining lots of hands-on experience of using hydrological data, tools and science. I had lots of fun playing with data and information;

Practice, learn, develop, dream...

analysing, interpreting and visualising data to help safeguard water resources. One of my favourite tasks was completing the **monthly water situation report** as it was great way to get to know the local hydrology. I also enjoyed working as a wider team to provide information to support **Abstraction Licensing Strategies** and completing desk studies with other technical specialisms for the **Restoring Abstraction Programme**.

As time progressed, **my inspirational technical mentor did a great job at providing me with development opportunities** such as leading work and coaching Hydrologists. Despite this, I had this nagging feeling that I needed to step outside my comfort zone and do something different within Water Resources hydrology. I also had an eye on the future. I knew my dream job was to become a Hydrology Technical Specialist – the role my technical mentor was in! These posts were like gold dust, and I knew that I needed to gain more experience as a technical leader and broaden my technical knowledge to secure one.



After around five years, I secured a 12-month secondment working as a Water Resources Hydrology Advisor in my organisation. This was a promotion because it was the next level-up and it was in a national team. I was responsible for developing the technical skills of Hydrologists and improving hydrological data, tools and systems across my organisation.

I enjoyed working with new people and teams, being out of my comfort zone and applying my experience and knowledge at a national, rather than local scale.

Then I had to do some waiting for my dream job to come about. During my waiting, I completed another 12-month secondment as a Hydrology Technical Specialist, giving me even more experience of the role. Then finally, in 2012, eight years into my career, I **secured my dream job!** The Technical Specialist role very much suited my strengths as it involved supporting Hydrologists to develop their knowledge and skills and working through them to achieve lots of amazing environmental outcomes. It also gave me the stretch and challenge I was looking for as I worked on the more complex technical water resources work.

The next chapter...

With my dream job under my belt, my focus turned towards my professional development. I was already a graduate member of **CIVEM** but in 2014, 10 years into my career, I became a chartered Water Environment Manager, Environmentalist and Scientist.

This led me to setup a network to support others to become chartered and through this I have mentored lots of

people. I am a member of the **British Hydrological Society** and have recently got involved in supporting the work of the South East Regional group.

Gaining my current Senior Technical Specialist role in 2022 involved taking on work-based opportunities to strengthen my technical leadership. This included taking on a 12-month Team Leader secondment. My role is a new strategic role and so I have had the opportunity to help shape it – which has been **very exciting and rewarding**. It involves developing the hydrology service and the data and tools we need for the future. I also lead on very complex, large-scale and long-term Water Resources projects. My new role is really challenging but I love it because it really plays to my strengths as a Hydrologist and brings out the best in me and the people I lead!



Written by Emma, Senior Technical Specialist in the Environment Agency