News story: EA works with Ordnance Survey to publish Master Map of the UK's water network

For over two decades the EA has carefully mapped the flow of water in rivers across England and Wales to help protect communities from flooding and to improve habitats for wildlife through their Detailed River Network.

This new collaboration combines the data from the Detailed River Network with SEPA's data on Scotland's watercourses to produce one comprehensive view of all watercourses across Great Britain.

This project led to the creation of OS MasterMap Water Network and, following its initial launch in 2015, became a full product in April 2019.

This new dataset is a crucial element in understanding our natural environment. As the only detailed, heighted water network of Great Britain, OS MasterMap Water Network is continually updated and improved, showing the flow and precise course of rivers, streams, lakes and canals, at a national and local level.

OS MasterMap Water Network will support analysis used for planning and policy initiatives. This would include managing and reporting of water quality, water resources, fisheries status, mapping navigations, predictive modelling, risk assessment, regulation, incident response and a host of other river-related initiatives, from permitting applications to catchment delineation.

Since its initial launch in 2015, OS, EA and SEPA have continued to work together to improve the product. As a result, we have made 850,000 improvements to the data which focused on watercourse connectivity, flow direction, contiguous naming and identified primary flow path.

Joint working has identified and delivered improvements to successive versions of the dataset through testing. OS and EA are delighted to confirm that EA will start to migrate from their existing Detailed River Network to the OS MasterMap Water Network and will be progressively implementing this across all systems and projects where a network of watercourses is required.

The principal benefits of using the OS MasterMap Water Network are

- Continuous maintained data across geographic boundaries to allow seamless data exchange
- Common references for sharing data with other organisations using the product
- Up-to-date data
- Greater extent e.g. more watercourses mapped in fenland areas
- Better correspondence with OS base data
- Greatly reduced data management overheads for users

Martin Whitworth, Deputy Director for Data and Systems at the Environment Agency, said:

> This exciting new collaboration between the Environment Agency and Ordnance Survey is an important step forwards in how we collect and use information about our rivers.
>
> It will give us greater insight into river flows right across Great Britain, helping us to better protect communities in England from flooding whilst also bringing a host of benefits in terms of planning, construction and helping to inform important environmental conservation work.

With the release of OS MasterMap Water Network, EA will no longer need to maintain their Detailed River Network as this data will now be supplied and maintained by Ordnance Survey.

As a result, the Detailed River Network will be withdrawn from the market and this new product will replace it. OS MasterMap Water Network is available to all public sector organisations for free at the point of use and is available through commercial terms for all other organisations.

As part of the collaboration to deliver the OS MasterMap Water Network, OS has worked closely with SEPA and Scottish Government to deliver additional detailed information on the location of culverts managed by Local Authorities.

The culvert information provides the underground connections between watercourses which are vital to understand as part of the "Flood Risk Management (Scotland) Act 2009". We completed the inclusion of the identified Scottish Local Authority culverts at the end of 2017 and are starting to work with SEPA and Scottish Government on how this information will be maintained going forward.

Dr David Pirie, SEPA Executive Director, said:

> Every day SEPA works to protect and enhance Scotland's environment, including helping Scotland prepare more powerfully for future increased flooding in the face of clear science on climate change.
>
> This new more detailed map of Scotland's rivers will enhance SEPA's reporting of environmental data and provide better information on the risk of flooding.

OS will continue to work together with EA and SEPA to ensure the product meets their needs as well as the needs of other customers. For further information go to OS MasterMap Water Network