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## **WATER RESOURCES MANAGEMENT PLAN – BACKGROUND AND 2017 PLAN UPDATE**

### **INTRODUCTION**

All water companies have a statutory duty to prepare and maintain a Water Resources Management Plan (WRMP). We published our current Northumbrian Water and Essex & Suffolk Water WRMPs in October 2014 and are now updating them as part of the PR19 process.

Our updated WRMPs will have at least a 25 year planning horizon commencing in 2020 and will show how we intend to maintain the balance between water supply and customer demand over that period.

### **PROCESS FOR PRODUCING A WATER RESOURCES MANAGEMENT PLAN**

Prior to submitting our draft WRMPs to the Secretary of State, we are required to hold preliminary discussions with statutory consultees including the Environment Agency (EA) and Ofwat as well as with other organisations including our Water Forums.

The timetable for producing our draft WRMPs is as follows:

1 December 2017:	Submit draft WRMPs to the Secretary of State
Spring 2018:	Formal consultation on draft WRMPs

### **ABOUT OUR NEW PR19 WATER RESOURCES MANAGEMENT PLANS**

Our current WRMPs confirm that we have a supply surplus in all of our Water Resource Zones across both operating companies. We will be updating our supply calculations (also known as Water Available for Use) and our customer demand forecasts in line with the latest Environment Agency Water Resources Planning Guidelines. The updates will take account of our proposed metering, leakage and catchment management strategies (see below) and of future projected climate change.

We expect a supply surplus to remain in each of our Water Resource Zones and so there should be no need for new supply schemes.

### **LEAKAGE STRATEGY (ESSEX & SUFFOLK WATER AND NORTHUMBRIAN WATER)**

Our WRMP will incorporate the outputs from an update to our existing Sustainable Economic Level of Leakage (SELL) model. The outputs of this will be used to determine the optimum balance of Active Leakage Control (ALC) and capital investment to maintain our leakage levels over the PR19 period. We will particularly look for further opportunities for Pressure Management schemes. This will incorporate both the introduction of new, and the optimisation of all existing, installations. This work has to be introduced systematically to ensure that standards of service are maintained and customer contacts minimised.

Within ESW the existing target leakage levels are now significantly below the SELL due to the previous capital investment at Abberton. There is, however, no plan to relax these historic target levels.

We now have an established customer initiative, inviting them to “Join the Drive to Stop Leaks.” This incorporates targeted campaigns via web interfaces, customer competitions and enhanced van liveries, all highlighting the need for them to report all sightings of leakage.

### **METERING STRATEGY (ESW & NW)**

Metering in NW will continue responding to those who opt for a meter. We estimate that approximately 12k pa meters will be installed over AMP7. In ESW, due to the area being classed as seriously water stressed, Defra require us to consult with our customers as to whether or not they support compulsory metering. The forum will be consulted on the questions we propose to ask customers. If compulsory metering is not supported, the Suffolk area will continue with optant

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metering and in Essex we will continue with optant metering and metering on change of occupier. This has been the Essex metering strategy since 2004.

We are currently scoping out a customer research and engagement project that will cover the needs of the WRMP and will also be used to inform a refresh of our metering policy. This will include exploring what our customers want from meters.

### **CATCHMENT MANAGEMENT**

We have a Catchment Management team covering both of our operating regions. The team aims to improve the quality of water in the rivers, lakes and reservoirs that we abstract from for drinking water supply. Our work focuses on reducing the amount of nitrate and pesticides entering the rivers and lakes. Phosphate, sediment, cryptosporidium and dissolved organic carbon (colour from upland peat in the north east) are additionally targeted as these also contribute to poor river and lake water quality.

Our catchment management initiatives work in conjunction with, and support national campaigns and objectives, including the Water Framework Directive, Catchment Sensitive Farming, Campaign for the Farmed Environment, and the Voluntary Initiative.

We launched our AMP6 Pesti-wise initiative in 2015; working with farmers and agronomists within targeted sub-catchments to address the issue of elevated pesticide levels in the streams and rivers from which we abstract. Pesti-wise offers targeted interventions to reduce run-off from field and farmyard point sources and thus reduce the concentration of pesticides entering our reservoirs and drinking water abstraction points, via voluntary means.

We aim to achieve 100% engagement in the five Pesti-wise sub-catchments as we know from previous trials that the higher the engagement, the better the results. It is not practical to achieve 100% engagement across all of the catchments from which we abstract during one AMP period. Therefore, our aim is to cover all of our high risk catchments over a number of AMP periods.

Our Plan for AMP7 is to continue with our “business as usual” catchment management work covering all of our catchments, most of which is implemented through partnerships such as the award winning Chelmer and Blackwater Catchment Partnership. We also intend to roll out Pesti-wise to the next set of catchments. We are currently preparing our AMP7 catchment management plans although would like Pesti-wise to be extended to cover a further 10 sub-catchments.

We are also planning a joint holistic water management project with the Environment Agency for the South Tyne in AMP7. The aim is to work in partnership with the Environment Agency and landowners to implement land management measures that will “slow the flow” of water from the uplands into the South Tyne. We believe that this will have significant benefits for us including improved water quality and for the Environment Agency in terms of reduced flood risk for communities on the downstream River Tyne.

### **BERWICK WATER RESOURCE ZONE: ABSTRACTION SUSTAINABILITY**

Our customers in the Berwick Water Resource Zone are supplied with drinking water abstracted from boreholes drilled into the water bearing Fell Sandstone. On average, we supply around 9.5 MI/day although we are licensed by the Environment Agency to abstract over 12 MI/day. Our AMP6 National Environment Programme requires us to investigate the sustainability of our abstractions in the Berwick and Wooler area. The main driver for these investigations is the Water Framework Directive which requires the Fell Sandstone groundwater to be in good status.

The scope of our investigations were agreed with the Environment Agency early in period. We have now drilled 10 new monitoring boreholes which have confirmed the depths and thickness of the Fell Sandstone and the associated groundwater levels (water table). We will complete test pumping this year where we will record groundwater levels in our abstraction boreholes under both pumped and rest conditions using level transducers and data loggers. We will also monitor water levels in our new monitoring boreholes to evaluate the effect of our abstractions on the wider Fell Sandstone aquifer.

Some of our new monitoring boreholes have been constructed near to the River Till (a Site of Special Scientific Interest). These will also allow us to confirm whether our abstractions effect groundwater discharge into the river.

We are also undertaking research, in collaboration with the Environment Agency and Newcastle University, to understand the impact of agricultural fertiliser on groundwater nitrate concentrations in the Berwick area. Berwick is a largely rural catchment and current indications show there is a slow, but steady, increase in the concentration of nitrate (NO<sub>3</sub>) in the regions groundwater. Current levels are well below the drinking water standard of 50 mg/l (as NO<sub>3</sub>), but timely action through engagement with local farmers (catchment management) aims to prevent, or even reverse, this trend.

Our AMP6 NEP investigation will be completed this year in time to inform our PR19 Water Resources Management Plan.

If you have any questions or comments that you would like to make regarding our current or new draft WRMP, please email [waterresources@nwl.co.uk](mailto:waterresources@nwl.co.uk).

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