

# Prospects for spray irrigation

Forward look to Spring 2016

December 2015

**This month's prospects for spray irrigation is looking forward to Spring 2016. We want to share our current water resources position with you and highlight where we think there may be risks to abstraction in Spring 2016 due to lower than average water availability.**

## Yorkshire Area Prospects

The prospects for water resources availability for spray irrigation in Yorkshire for spring 2016 is GOOD for North, West and South Yorkshire, and MODERATE in East Yorkshire.

### Background

Monthly rainfall totals across most of the Yorkshire Area for spring and summer 2015 were average with the exception of the east where totals were below average. Due to the drier weather in the eastern catchments of the Derwent and Hull, river flows steadily dropped and we started implementing restrictions on abstraction from May. The restrictions on abstraction extended to the Swale and Ouse catchments throughout the summer period. Increasingly unsettled weather helped to elevate river flows towards the end of summer, and by the end of September the number of restrictions on abstraction had reduced with only a handful remaining into October.

The last 2 months have been wet and this has increased river flows, filled reservoirs and decreased soil moisture deficits. Most aquifers have responded to the rainfall and are showing recharge in levels. The twelve month total rainfall for the Hull catchment is still being classed as 'below normal' and further emphasises that the rain generally hasn't fallen over the east of the Yorkshire Area. The groundwater level in the northern unconfined area of the chalk aquifer at Wetwang has risen, albeit slightly, for the first time since December 2014. The rise in level will have been in direct response to recharge from rainfall. It is expected that levels across the Chalk will respond to the rainfall in the coming weeks, as first observed at Wetwang. However, aquifer levels are still close to the long term minimum level for the time of year and more rainfall is needed over East Yorkshire to continue recharging this important aquifer.

The Met Office is currently forecasting mainly mild and unsettled weather for the remainder of December and into the New Year.

### Forward Look

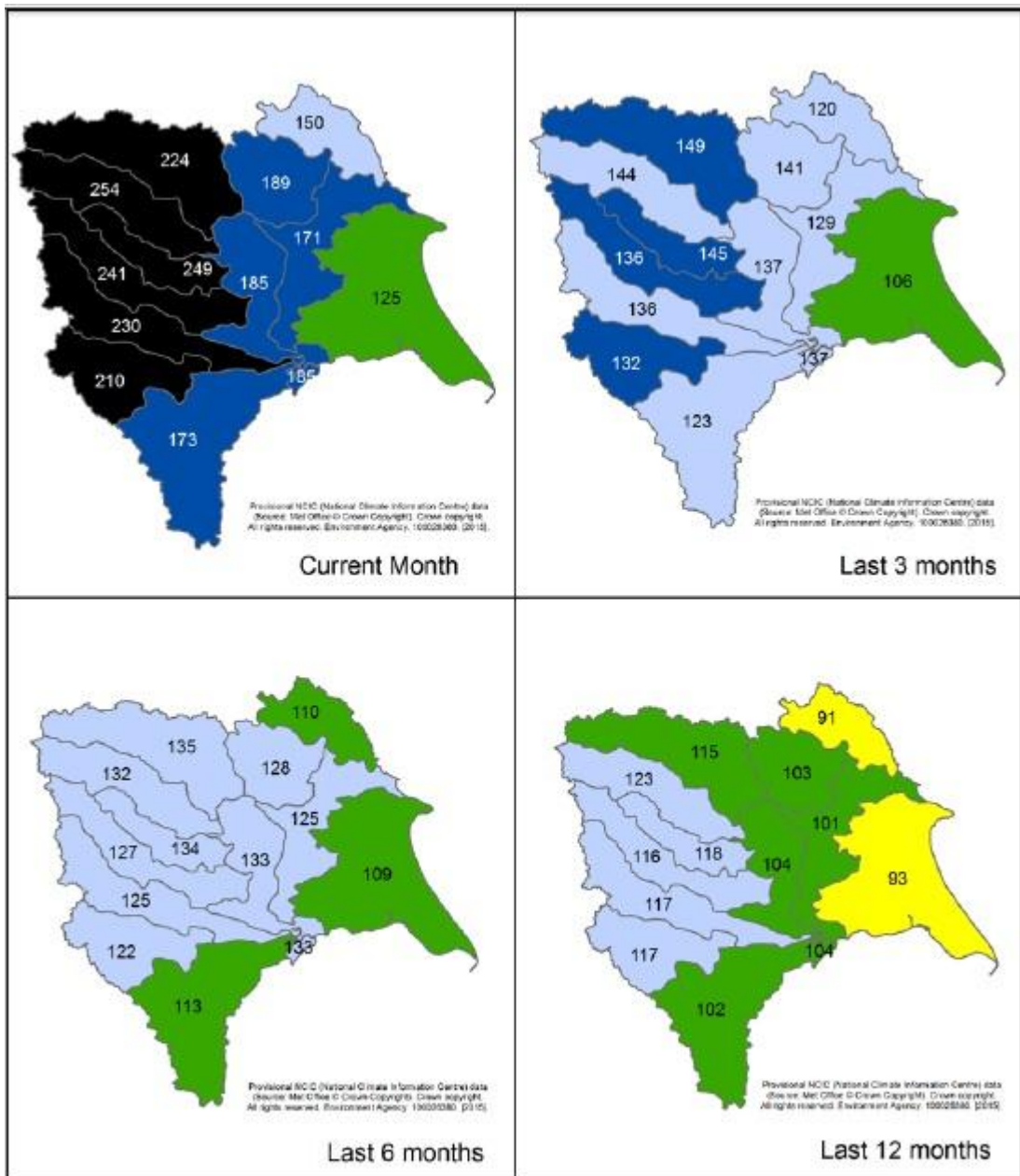
The last 2 months have seen wet conditions across the Yorkshire Area and this puts us in a good position for Spring 2016 for most of the area. This is a critical period for recharge of the chalk aquifer: levels are currently below average and lower than they were in October 2014. We need more rainfall over East Yorkshire this winter otherwise we risk starting the April 2016 spray irrigation season with lower aquifer levels and this will impact river flows in the Hull and East Riding. Restrictions are likely to be enforced sooner than they were this year.

It is difficult to forecast the weather and to predict what river flows and aquifer levels will be in Spring 2016. However, based on current information, we have assessed the prospects as:

- **GOOD for North, West and South Yorkshire, and**
- **MODERATE for East Yorkshire**

For the most up to date water situation reports please visit our website here:

<https://www.gov.uk/government/statistics/water-situation-report-yorkshire-and-north-east>



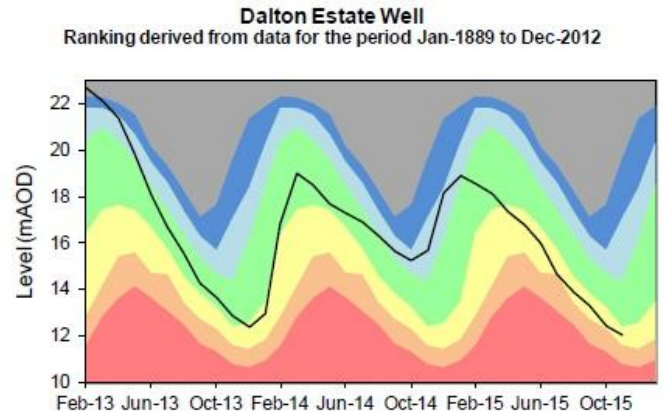
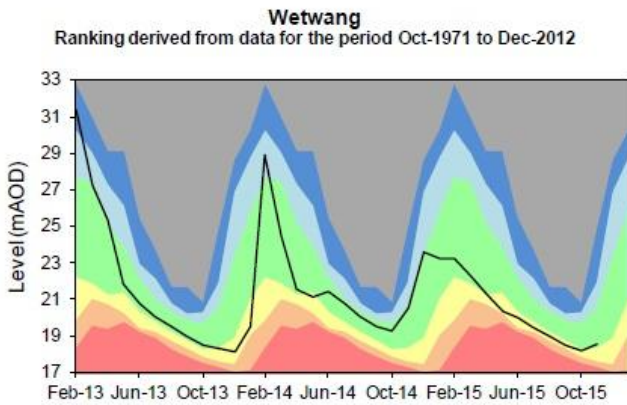
- Exceptionally high
- Above normal
- Below normal
- Exceptionally low
- Notably high
- Normal
- Notably low

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## Ensuring your business is resilient to drought

Climate change predictions suggest the extremes of weather we have seen in the last few years are likely to become more frequent in the future. It will become increasingly important to ensure we are as resilient as possible to periods of reduced water resource and drought. The section below gives you some ideas on what you could consider before and during a drought to help make your business more resilient.

We will work with abstractors to minimise the impact of drought and related restrictions on businesses in the future. If you have ideas on things such as voluntary initiatives to conserve water whilst reducing the impacts of imposed restrictions in your area, or would like to set up an abstractor group in your area to work together to improve resilience, please get in contact, our details are at the end of this newsletter.

We continue to recognise the importance of irrigation to the agricultural industry in the region and will aim to work with farmers and others to try to minimise, where possible, the impact of any dry weather on their businesses.

Abstraction is primarily controlled by conditions on licences and licence holders must ensure that they adhere to these at all times. We would encourage all abstractors to review their licences to ensure that they continue to meet their needs. In areas across England in 2009 and 2010, some farmers experienced difficulties lifting crops from dry ground and found that their abstraction licences didn't cover abstraction beyond the end of September. You may also need to extend the winter season on your licence from February to March.

For those farmers who wish to extend their licensed abstraction period, we strongly recommend that you apply now to formally vary your licence. In most cases these variations will be relatively straight forward and will provide you with long term drought resilience without the need to talk to us in the future for a temporary dispensation. This is particularly important as the allowances in the last few years are unlikely to be made in the future as more farmers formally vary their abstraction periods.

We do have powers to further restrict the abstraction of water for irrigation from rivers, streams and underground sources, and will use those powers should the situation become critical. If such a situation arises, however, we will always seek to achieve as much as possible through voluntary savings before imposing formal restrictions. Total bans will only be used as a last resort.

### What can irrigators do?

- For their part, irrigators are encouraged to take such actions as they can to minimise the impacts on the environment and their businesses. Please talk to us now about actions you can take (our contact details are at the end of this document).

### Abstraction Licences

- Check your licence details and, at all times, adhere to licence conditions.

## Voluntary Restrictions

- Comply with voluntary restrictions where they are requested. This will delay, and may avoid the need for more formal restrictions.

## Storage Reservoirs

- Take every possible opportunity to ensure that winter storage reservoirs are as full as possible by the start of the irrigation season;
- Continue to plan for the future. Is there an opportunity to convert from direct summer abstraction to high flow storage? The Rural Development Programme for England (RDPE) may be able to help with funding.

## Irrigation Management

- Make sure that meters are in good working order and properly fitted;
- Check irrigation systems and replace worn or broken items before the start of the season;
- Make sure that irrigation systems are properly set up and operated in accordance with an accurate and reliable irrigation scheduling system;
- Ensure you are prepared to change your irrigation plans if necessary;
- Prioritise crops and fields in terms of water need;
- Choose irrigation times carefully, e.g. avoid the heat of the day; irrigate at night, if possible;
- Undertake a water audit. Know the cost of your water, calculate crop per drop.

## Abstractor Groups and Guidance

- Where appropriate, discuss issues, share ideas etc. with neighbouring farmers. A number of local liaison groups already exist for this purpose. Consider setting up a group?
- Maintain an awareness of developing guidance from academic institutions and farming organisations (e.g. NFU, UKIA, Cranfield University etc.);
- The Environment Agency has a range of literature available to help support your business including Rain Water Harvesting; Think about Installing an Irrigation Reservoir and adopting Best Metering Practice.

## Definitions

Prospects for spray irrigation are defined as 'Good', 'Moderate' or 'Poor'.

Good	Water levels are average or above average and supplies are expected to be safe. There is a possibility of minor local controls on abstraction from surface water in late summer if the weather is exceptionally hot and dry.
Moderate	Water levels are low. Some controls on surface water abstraction are possible by mid-summer if the weather is hot and dry. Controls on abstraction from groundwater are possible in small, sensitive groundwater areas.
Poor	Water levels are well below average. Soil moisture deficit is developing early and significant restrictions on abstraction from surface and groundwater are probable.
Exceptionally high	Value likely to fall within this band 5% of the time
Notably high	Value likely to fall within this band 8% of the time
Above normal	Value likely to fall within this band 15% of the time
Normal	Value likely to fall within this band 44% of the time
Below normal	Value likely to fall within this band 15% of the time
Notably low	Value likely to fall within this band 8% of the time
Exceptionally low	Value likely to fall within this band 5% of the time

Please contact us if you would like more information on any of the above ideas or have ideas of your own to assist you and/or other abstractors to improve their resilience.

If you have any questions or would like to feedback comments about the prospects report please contact Julie Dracup by email on [julie.dracup@environment-agency.gov.uk](mailto:julie.dracup@environment-agency.gov.uk)

An electronic version of this document is available on the NFU website here:  
<http://www.nfuonline.com/about-us/our-offices/north-east/environment-and-land-use-latest-news/water-use-in-the-north-east/>

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We will continue to provide ongoing updates to our Spray Irrigation prospects in order to give as much detail as we can on possible restrictions, their likely timing and magnitude across Yorkshire.

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