



14 March 2019

## Water abstraction statistics: England, 2000 to 2017

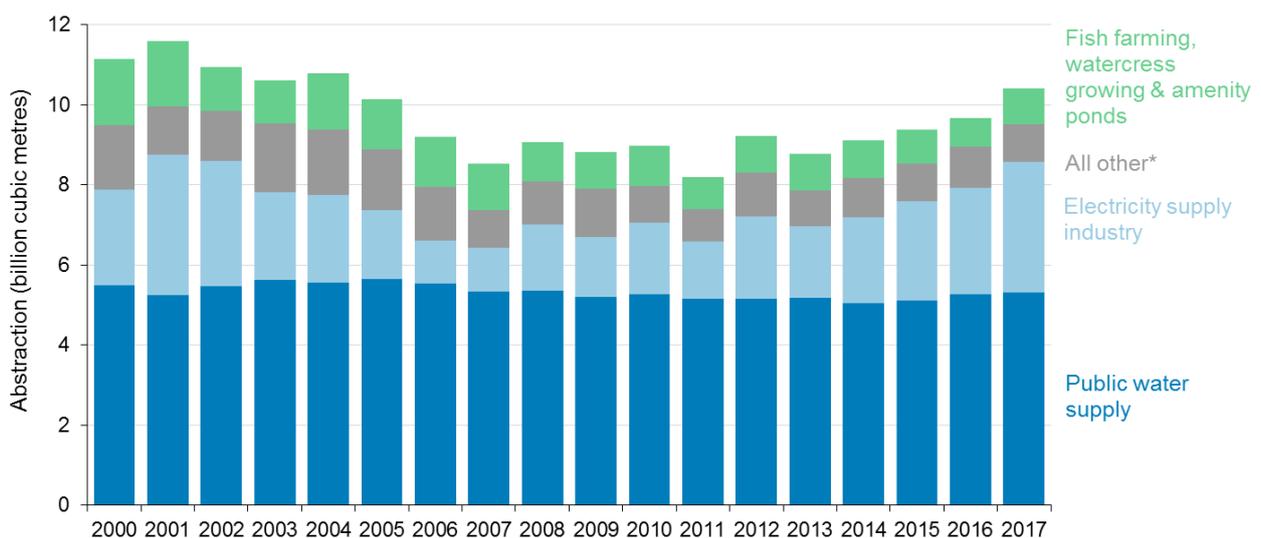
Latest estimates of direct abstraction of water from non-tidal surface water and groundwater in England show an increase of 7.5% from 2016.

There had been a gradual decline in estimated abstractions between 2000 and 2011 but following a 12.6% increase in 2012 and a 5.0% reduction in 2013, there have been increases in abstractions over the past 4 years of between 3.0% and 7.5%. In 2017, direct abstraction of water from non-tidal surface water and groundwater in England was estimated at 10.4 billion cubic metres.

### In this release

Abstraction is the removal of water resources, permanently or temporarily, from rivers, lakes, canals, reservoirs or from underground strata. This release and the accompanying datasets provide estimates of licensed and actual abstraction by licence holders for a variety of purposes in England.

**Figure 1:** Estimated abstractions from non-tidal surface water and groundwater in England, 2000 to 2017



**Note:**\* 'All other' includes Spray irrigation, Agriculture, Private water supply, Other industry and Other

**Source:** Environment Agency

**Enquires on this publication to:** Department for Environment, Food and Rural Affairs. Ground Floor, Seacole Block, 2 Marsham Street, London, SW1P 4DF

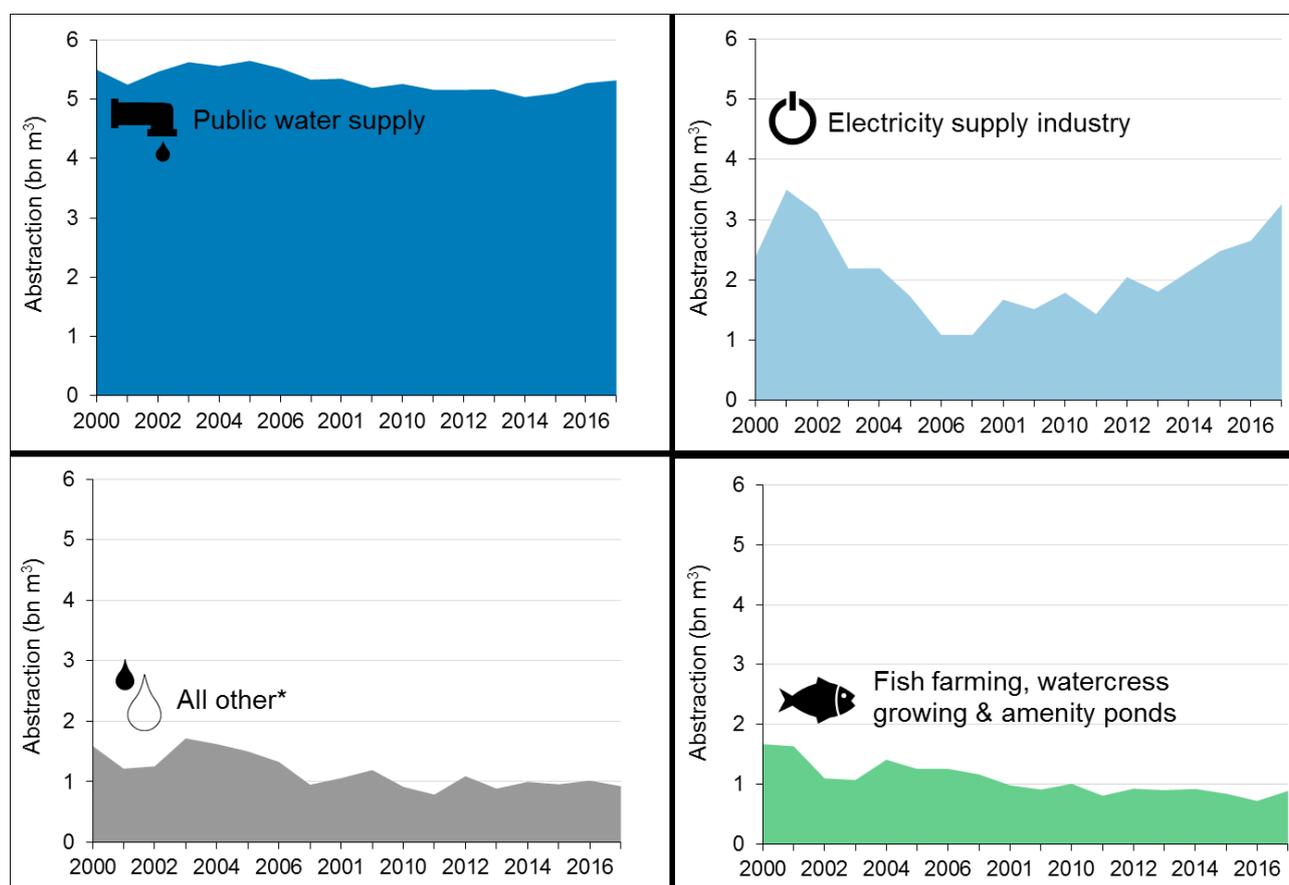
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Figure 1 shows estimates of the amount of water abstracted for each calendar year from 2000 through to 2017. The abstraction of water from non-tidal surface water and groundwater in England had fallen steadily from an estimated peak of 11.6 billion cubic metres in 2001 to a low of 8.2 billion cubic metres in 2011. Since then, total abstraction has increased by 26.9% to an estimated 10.4 billion cubic metres in 2017. This increase is mostly accounted for by the electricity supply industry; estimated abstraction in this category increased from 1.4 billion cubic metres in 2011 to 3.3 billion cubic metres in 2017 (Figure 2). Abstraction for public water supply, which makes up 51.2% of total abstraction, has been relatively stable - increasing by 3.1% over the same 6-year period to an estimated 5.3 billion cubic metres in 2017 (Figure 2). Estimated abstraction for fish farming, watercress growing and amenity ponds has fallen from 1.7 billion cubic metres in 2000 to 0.9 billion cubic metres in 2017; abstraction for 'all other purposes' has also fallen by a similar amount (an estimated 0.7 billion cubic metres) since 2000 (Figure 2).

**Figure 2:** Estimated abstractions from non-tidal surface water and groundwater in England by purpose, 2000 to 2017



**Note:\*** 'All other' includes Spray irrigation, Agriculture, Private water supply, Other industry and Other  
**Source:** Environment Agency

In 2017, 19.7% of estimated total abstractions were from groundwater. The estimated amount of groundwater abstraction has decreased steadily from 2.4 billion cubic metres in 2000 to 2.0 billion cubic metres in 2017. Abstractions from non-tidal surface water had

decreased more sharply from an estimated 8.8 billion cubic metres in 2000 to a low of 6.0 billion cubic metres in 2011. The figure has since increased again to an estimated 8.4 billion cubic metres in 2017.

## Reasons for change

The changes in abstraction levels between one year and the next can be due to a variety of factors, including:

- Weather conditions, for example, drier and warmer years could result in an increase in abstraction for agriculture and spray irrigation. The highest 2 years for abstraction for the purpose of spray irrigation correspond with the lowest 2 years of annual levels of rainfall since 2000.
- Changes in the level of activity in different sectors.
- Improvements being made in the efficiency of water usage.
- Changes to abstraction licences, such as the issue of new licences and modifications to, or revocation of, existing licences.

## Other data available

Information on estimated abstractions (2000 to 2017) can be [downloaded](#). The following analyses are available:

- Abstraction licences in force and new licences determined by regional charge area (2000 to 2017)
- Abstraction licences in force by purpose and regional charge area (2012 to 2017)
- Estimated licensed and actual abstractions from all surface and groundwater sources by purpose (2000 to 2017)
- Estimated abstractions (2000 to 2017) from:
  - All surface and groundwaters by purpose and regional charge area
  - Tidal waters by purpose and regional charge area
  - Non-tidal surface waters by purpose and regional charge area
  - Groundwaters by purpose and regional charge area
  - All sources except tidal by purpose and regional charge area
  - All surface and groundwaters by purpose and source

Estimates of abstraction are categorised by purpose:

- Electricity supply industry
- Spray irrigation (agricultural and non-agricultural)

- Public water supply
- Other industry
- Agriculture (excluding spray irrigation)
- Fish farming, watercress growing and amenity ponds
- Private water supply
- Other

Estimates of abstraction are also calculated for 3 source types:

- Non-tidal surface water
- Groundwater
- Tidal waters

More information on the methodology used to estimate annual abstraction is available on request.

## Further information

The Environment Agency only license abstraction that exceeds 20 cubic metres per day. Estimates are based on records of actual abstraction received by the Environment Agency from water abstraction licence holders. The information presented here is based on Environment Agency regional charge areas which are defined by river catchment boundaries.

Following the devolution of responsibility for regulating water abstraction licences in Wales to Natural Resources Wales and for the purposes of this report, information concerning the part of the Dee/Wye regional charge area falling within the country of England has been amalgamated into the North West and Midlands regional charge areas. This creates a break in the series from 2015 where figures for these 2 regions and the total estimated actual abstraction for England are not directly comparable to previous years. The effects of these changes were assessed and they were found to have increased the estimated figure for total abstraction of non-tidal surface water and groundwater in England by 2.1%. While the changes could result in increases or decreases of more or less than this figure for some specific purposes or water sources, such discontinuity is not viewed as a significant qualification of the results presented here given the annual variability in the estimates.

Next Publication: February/March 2020