**2019 Water Framework Directive Classifications in the Stour Catchment – the story behind the stats.**

The 2019 WFD classifications have been published based on monitoring between 2016 and 2019 – the first time data has been assessed over a period of three years. The move to a three-year reporting cycle was intended to ‘smooth-out’ annual / seasonal anomalies sometimes present in annual monitoring. In addition, it was hoped that moving to a three-year reporting cycle would make changes (improvements) more obvious. This update concentrates on surface water assessments.

A reminder of the 5 Ecological classifications:

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| **HIGH** | Natural or almost natural state conditions with no, or only minor evidence, of distortion. |
| **GOOD** | Slight change from natural state conditions as a result of human impact. |
| **MODERATE** | Moderate change from natural state conditions as a result of human impact. |
| **POOR** | Major change from natural state conditions as a result of human activity. |
| **BAD** | Severe change from natural state conditions as a result of human activity. |

For the Ecological Classification remember that there is a ‘lowest common denominator’ approach: if a water body is assessed as having 10 elements at Good and 1 as Poor, then overall it is classified as Poor.

The Chemical Classification, which looks at 52 chemicals, is a simple Pass / Fail.

**National picture**

Nationally 4,679 surface waters were assessed. Over 100 individual elements were looked at, including biological, physico-chemical, specific pollutants and chemicals, producing nearly 124,000 element results.

The way of assessing chemical status / potential has changed hugely in this classification. We have introduced new priority substances and new stricter standards, increased the collection of water and biota based evidence, and improved laboratory analytical techniques and methods. As our evidence base, assessment and methods have improved, we are more accurately reflecting the chemicals that are in the environment.

The results:

* 16% of surface water bodies achieve Good or better ecological status or potential, the same as 2016.
* 14% of river water bodies achieve Good or better ecological status or potential, the same as 2016
* Although the overall results have flat-lined, there is some movement between classes. The reason for this is individual to each water body, and may reflect increasing pressures causing deterioration, where we have carried out improvement or protection measures or where the environment is recovering.
* There has been a very slight improvement in ecological status / potential but due to the number of water bodies assessed these enhancements are not reflected in percentages. (332 water bodies have a higher class than 2016; 289 water bodies have a lower class than 2016; overall an increase in class for 43 water bodies, with 32 fewer in Poor and Bad.
* Against a background of population increase, a changing climate and other pressures, we have done well to maintain a constant level and not see deterioration – ‘running just to stay still’.
* Due to the change in chemical monitoring there are now no river water bodies which meet Good status / potential – this appears to be a massive drop from 97% passing to none passing – but it is not real, it is due to the reasons above.

**Stour Catchment**

Surface water bodies in the Stour catchment follow the national picture. There has not been much change in the overall classifications since 2016. Two of the Poor water bodies have improved to Moderate; whilst one has deteriorated from Poor to Bad. The two lakes that were previously assessed as Good are now assessed as Moderate, meaning we have no Good water bodies in the whole of the catchment.

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| **BAD** | | **POOR** | | **MODERATE** | | **GOOD** | |
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| 2016 | 2019 | 2016 | 2019 | 2016 | 2019 | 2016 | 2019 |

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| --- | --- | --- | --- | --- | --- |
|  | No | % | No | % |  |
| **Bad** | 1 | 4 | 2 | 8 | + 1 |
| **Poor** | 7 | 29 | 4 | 17 | -3 |
| **Moderate** | 14 | 59 | 18 | 75 | +4 |
| **Good** | 2 | 8 | 0 | 0 | -2 |
| **High** | 0 | 0 | 0 | 0 |  |
| **TOTAL** | 24 | 100 | 24 | 100 |  |
|  | 2016 | | 2019 | |  |

**Element changes**

Looking into the detailed element changes paints a slightly better picture. 240 individual elements were assessed. Of these 173 (72%) were assessed as Good or better. This is only slightly below the national picture where 77% were at Good or better status.

However, all 24 surface water bodies fail the new chemical assessment. However, ignoring the new substances and new standards, there is little underlying change in chemical status for other chemicals.

Looking in detail at an Operational Catchment level:

**Operational Catchments**

**Upper Stour Operational Catchment (1 BAD; 1 POOR; 2 MODERATE)**

There are four water bodies in the Upper Stour Operational Catchment. Of these three stayed the same classification overall and one, the Upper Great Stour, deteriorated from Poor to Bad.

**Upper Great Stour (BAD)**

This waterbody has deteriorated from Poor to Bad due to fish. This is disappointing as a lot of effort – and money – has gone into projects to improve fish, with habitat works at Godington, Singleton and Victoria Park; and new fish passages at Pledges and Buxford. Although the new fish pass at Buxford, completed early in 2019, came too late to influence fish numbers during this monitoring period.

More encouragingly, physico-chemical elements improved overall from Moderate to Good, with DO moving from Good to High, and Phosphate moving from Moderate to Good. Of the 13 elements assessed, ten (77%) are Good or better.

**East Stour (MODERATE)**

TheEast Stourstays at Moderate with both the biological and physio-chemical elements being Moderate. The classification is driven by macrophytes & phytobenthos (combined) and phosphate, the same as in 2016. Of the 12 elements assessed, 10 (83%) are Good or better.

**Aylesford Stream (POOR)**

The Aylesford Stream remains at Poor with the classification being driven by Poor macrophytes & phytobenthos (combined). However, the overall classification hides some improvements: Ammonia has improved from Moderate to High, and Phosphate has improved from Poor to Moderate. Before 2013 the Aylesford Stream used to be Good but deteriorated in recent years due to diffuse pollution from agriculture and from the urban area. These pollutant sources have been tackled and the improvement in ammonia and phosphate levels is encouraging. Over time this should translate into improvements in macrophytes & phytobenthos. Fish are still not monitored in the Aylesford Stream. Of the 9 elements assessed, 7 (78%) are Good or better.

**River Great Stour (Between Ashford and Wye) (MODERATE)**

The classification for this water body has not changed, indeed there have been no changes in the elements monitored. The classification is driven by phosphate and DO. Of the 12 elements assessed, 10 (83%) are Good or better.

**Lower Stour Operational Catchment (9 MODERATE)**

There are 9 water bodies in the Lower Stour Operational Catchment: 4 rivers and 5 lakes. Of these the rivers stayed the same classification overall and 2 of the lakes deteriorated from Good to Moderate. Looking first at the river water bodies:

**Great Stour (Between Wye and A2) (MODERATE)**

The classification for this water body has not changed since 2016. There have been some notable improvements at an individual element level though. The biological quality elements have improved from Moderate to Good, with fish improving from Moderate to High. Macro-phytes & phytobenthos (combined) have also improved from Moderate to Good. The classification is driven by Phosphate which remains at Moderate. Of the 16 elements assessed, 15 (94%) are Good or better.

**Great Stour (Between A2 and West Stourmouth) (MODERATE)**

The classification for this water body, which includes the stretch through the city of Canterbury, remains unchanged. Unfortunately, fish has deteriorated from Good to Moderate. The classification is driven by Phosphate. Of the 22 elements assessed, 19 (86%) are Good or better.

**Whitehall Dyke at Harbledown (MODERATE)**

The overall classification of this water body is unchanged, however there has been a significant improvement in Ammonia which has moved from Poor to High. The classification is driven by Phosphate. Of the 8 elements assessed, 6 (75%) are Good or better.

**The Lampen Stream (MODERATE)**

The classification of this water body is unchanged, with no changes at an element level. The classification is driven by the biological quality elements: fish, invertebrates and Macro-phytes & phytobenthos (combined). Of the 10 elements assessed, 7 (70%) are Good or better.

Now looking at the lakes:

**Stodmarsh Nature Reserve Pool (MODERATE)**

The classification for this waterbody is unchanged. The classification is driven by mitigation measures and expert judgement. Only 3 elements were assessed of which 1 (33%) was Good or better.

**Great Puckstone (MODERATE)**

The classification for this waterbody is unchanged. There has been some deterioration: Phytoplankton has moved from Good to Moderate; total Nitrogen, for which no data was available in 2016, is also Moderate. The classification is driven by Phosphate. Of the 7 elements assessed, 3 (42%) are Good or better.

**Fordwich Lake (MODERATE)**

The overall classification for this water body has changed from Good to Moderate. However none of the individual elements has changed, indeed, the Hydrological Regime has improved from Good to High. Of the 3 elements assessed, all (100%) are Good or better.

**Fordwich Lake East (MODERATE)**

The overall classification for this water body has changed from Good to Moderate. But like Fordwich Lake, none of the individual elements has changed. Of the 3 elements assessed, all (100%) are Good or better.

**Westbere Lake (MODERATE)**

The overall classification for this water body is unchanged. The Hydrological Regime has improved from Good to High. The Mitigation Measures Assessment is driving the classification. Of the 3 elements assessed, 2 (66%) are Good or better.

**Stour Marshes Operational Catchment (4 MODERATE)**

There are 4 water bodies in the Stour Marshes Operational Catchment. All of these are assessed as Moderate; no change from 2016.

**Sarre Penn and River Wantsum (MODERATE)**

The overall classification for this water body is unchanged, indeed there has been no change in any of the assessed individual elements. The classification is driven by Phosphate. Of the 13 elements assessed, 10 (77%) are Good or better.

**Ash Level (MODERATE)**

The overall classification for this water body is unchanged, indeed there has been no change in any of the assessed individual elements. The classification is driven by Phosphate and DO. Of the 9 elements assessed, 4 (44%) are Good or better.

**Monkton and Minster Marshes (MODERATE)**

The overall classification for this water body is unchanged. There has been some movement of the assessed individual elements, with invertebrates deteriorating from Good to Moderate, and the Hydrological Regime now assessed as supporting Good. The classification is driven by Phosphate and DO. Of the 12 elements assessed, 9 (75%) are Good or better.

**Hogwell Sewer and Chislet North Stream (MODERATE)**

The overall classification for this water body is unchanged. There has been some positive movement of the assessed individual elements, with invertebrates and DO improving from Poor to Moderate, and Phosphate improving from Bad to Poor. Of the 15 elements assessed, 10 (66%) are Good or better.

**Little Stour and River Wingham Operational Catchment) (2 POOR)**

There are just two water bodies in this operational catchment and both are assessed as Poor; no change from 2016.

**Nailbourne and Little Stour (POOR)**

This water body was assessed as Poor in 2016 and remains the same in 2019. Most of the elements assessed have remained unchanged although Macrophytes and Phytobenthos (Combined) have improved from Poor to Good. Fish remains the main driver. Of the 10 elements assessed, 6 (60%) are Good or better.

**River Wingham & Little Stour (POOR)**

This water body was assessed as Poor in 2016 and remains the same in 2019; indeed, all of the elements assessed have remained unchanged. DO, Phosphate and fish are the main drivers. Of the 14 elements assessed, 8 (57%) are Good or better.

**North and South Streams Operational Catchment (2 MODERATE 1 POOR)**

There are three water bodies in this Operational Catchment. Two were assessed as Poor in 2016 and one as Moderate. One of the water bodies has improved so that now only one is Poor and two are Moderate.

**North & South Streams at Northbourne (MODERATE)**

This water body was assessed as Poor in 2016 but has improved to Moderate. Macrophytes and Phytobenthos (Combined) are the main driver, although the Mitigation Measure Assessment is also Moderate. Of the 9 elements assessed, 6 (66%) are Good or better.

**North & South Streams at Eastry (MODERATE)**

This water body was assessed as Moderate in 2016 and remains Moderate in 2019; indeed there is no change in any of the elements assessed. Dissolved Oxygen is the main driver, although the Mitigation Measures assessment is also only Moderate. Of the 9 elements assessed, 7 (78%) are Good or better.

**North & South Streams in the Lydden Valley (POOR)**

This water body was classified as Poor in 2016 and is unchanged in 2019; indeed there is no change in any of the elements assessed. The main driver is fish (Poor) although Macrophytes and Phytobenthos (Combined) are also only Moderate as is the Mitigation Measure assessment. Of the 10 elements assessed, 6 (60%) are Good or better.

**River Dour Operational Catchment (1 BAD 1 MODERATE)**

There are just two water bodies in this operational catchment; one is Bad and one is Moderate, an improvement from 2016 when one was Bad and one was Poor.

**Upper Dour (BAD)**

The Upper Dour was assessed as Bad in 2016 and remains Bad in 2019. It is not all bad news though: Phosphate has improved from Moderate to Good. The main driver is fish. Of the 9 elements assessed, 6 (66%) are Good or better.

**Dour from Kearsney to Dover (MODERATE)**

This lower stretch of the River Dour was assessed as Poor in 2016 but is now considered to be Moderate. Fish and Phosphate have both improved from Moderate to Good. The Mitigation Measure assessment is now driving the classification. Of the 11 elements assessed, 9 (82%) are Good or better.

**Oyster Coast Brooks Operational Catchment (1 MODERATE)**

There is just the one water body in this operational catchment

**Swalecliffe Brook (Moderate)**

This water body was assessed as Moderate in 2016 and again in 2019. There have been some changes in elements: Ammonia has improved from Poor to Moderate; DO has deteriorated from Good to Moderate; Phosphate has improved from Poor to Moderate. Of the 8 elements assessed, just 2 (25%) are Good or better.