

Principle 1 – As stated in the reports there is a need to review the P Standard because the existing standards for algae and other plants that the phosphorus standards aimed to protect are changing; and the existing phosphorus standards produce a high number of mismatches between phosphorus and biology classifications. In the current situation there is therefore the possibility that the standards are currently either too lax or too stringent dependent on the measured biological quality. A process which develops standards that are more closely matched with the biology is therefore a sensible way forward.

Principle 2 – The development of default standards that are better matched with biology is welcomed, however as the application of the standards are still based solely on the altitude and alkalinity of the receiving watercourse without consideration of the current biological status, there is still the potential for mismatches in classifications and that the standards will be either too lax or too stringent dependent on the measured biological quality. The proposal set out in principle 2 to adjust standards to take account of observed biology is essential to ensure that both the assessment of need and the making of investment decisions are based on the best possible information.

Question 1 – The default standards that have been developed, whilst being more site specific and not being based on broad river types, are similar to the existing standards in that confirmation of the required standard for a particular watercourse is based on its alkalinity and altitude, with no reference to the observed biology, which may be better or worse than expected. Where the existing biology is better than expected, such an approach would drive significant unnecessary investment to support an ecosystem that is already tolerant of the existing levels of phosphorus in the watercourse. In the opposite situation significant investment would be made and potentially no benefits delivered.

Work by United Utilities has identified the need for Phosphorus removal to very low concentrations at a significant number of WwTW's based on the application of the existing phosphorus standards. The straight application of the default standards, which are in general tighter than existing, would in all likelihood increase the number of sites where investment would be required and also make the standards to be achieved more onerous. Such an approach is not appropriate when further information is available to support investment decisions.

Question 2 – The approach of using standards adjusted to match observed biology has significant benefits over and above the simple application of default standards. Firstly, it should reduce the level of mismatches between phosphorus and biology classifications, secondly when assessing status, it should ensure, as recommended in the report, that work is only carried out where there is a definite need with supporting evidence of adverse biological impacts with an established causative link to discharges to river. In addition it should also support long term planning within the water industry allowing greater flexibility in the planning of improvements.

As stated on Page 10 of the report there are difficulties in applying this approach due to a lack of representative monitoring data and information to robustly identify the causative link between discharges to river and the biological impacts. With reference to point 4.4(iii) a

suggested approach would be to a) Relax the default standards where biological data is better than indicated by the levels of phosphorus, if the biology is in fact at its desired quality then no further work should be proposed other than that to maintain current quality over time. B) Where the biology is worse than expected, either the default standards be applied or no investment is proposed until there is robust information to identify the cause. More investigations are definitely needed where the biology doesn't stack up with the levels of Phosphorus to avoid abortive investment aimed at Phosphorus removal.

With reference to investigations and the gathering of robust data, there needs to be agreement on who collects this data, the scope of data collection required to make a robust judgement and also the funding of these investigations.

Question 3 – The dual approach of using default standards to assess status and for decisions on new discharges, whilst applying adjusted standards to the planning of improvements to existing discharges has a number of problems and is likely to lead to a number of inconsistencies:

1. Assessment of status using the default standards will not draw on all available data and mismatches between phosphorus and biology classifications will continue and it will not robustly identify needs where there is variation from the expected biology.
2. When considering new discharges the use of unadjusted standards may lead to an under or over estimate of the capacity of the receiving water to accept additional phosphorus load with the potential for either deterioration to be caused or the stifling of economic growth by limiting housing development and the development of new industry.
3. As stated above the use of adjusted standards to plan improvements to existing discharges does give benefits in terms of ensuring that investment is correctly targeted.

Finally it is essential that any investment to achieve Phosphorus standards must have a high confidence of yielding measureable improvement i.e. if in doubt data is gathered first and foremost then staged investment as next step plus data gathering.

We would also like to make the following comments on the “Proposed recommendations on biological standards”:

Rivers – Fish – FCS2 and WFD111 Fish Barrier Tool:

We have the following comments in the event that the barrier tool will be considered for fish classification in England or Wales. The comments also generally reflect our view of how barriers should be assessed in England and Wales using the existing fish classification methodology.

- We agree that limited confidence should be given to classifications resulting from the WFD111 method Fish Barrier Tool, and to any other classification method that has not been ‘ground-truthed’. High confidence should only be used where additional electro fishing data support the conclusion that the barrier is preventing migratory species from occurring at sites where they would otherwise be expected.
- We agree that monitoring data should be used when determining classifications and considering investment actions should consider this.
- We also agree that the barrier tool should only be a risk assessment for lamprey and eel in that classification should only be downgraded for

eels or lamprey when the data show these species are absent from where they normally would be present.

- We agree that a streamlined approach to using the WFD111 method of barrier assessment would not apply to eels because of their differing ability to pass barriers, and that a full barrier assessment/ survey should be required to assess all potential eel barriers.

Ecological Indicators for Water Resources Pressures in Rivers & Lakes

We support the use of the indicators in general because we believe they have the potential to lead to more consistent and informed classification; something that, from experience, has been lacking in WFD classification relating to water resources pressures. We have the following specific comments, however:

- We understand that the ecological indicators/ sub-sets of indicators are still under development and that this is why there is no information provided in the consultation document describing how the proposed indicators would actually inform classification. Our view is that, until they have been 'ground-truthed,' additional data will be required to support conclusions made using the indicators about ecological impacts of water resource pressures, and that investment actions should consider this.
- We agree that there are issues associated with the use of subjective terminology. Some of the water resource pressure indicators are also indicators of other pressures, and may be too general, particularly if used on their own and not alongside additional indicators or additional data. However, the opposite is also true: some of the proposed indicators will only apply in very specific circumstances. We note that there is work underway to address these issues and that this work is due to report in March. We hope that it will be possible to consult on the final sub-sets of indicators selected for application in different circumstances and how the indicators/sub-sets of indicators would be used to inform WFD classification.