



DEFA Environmental Quality Standards Consultation – Summary of Responses



Department of Environment, Food and Agriculture

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We Asked

The Department of Environment, Food and Agriculture is seeking views on proposals to introduce Water Quality Objectives (WQO) and Environmental Quality Standards (EQS) to assess water quality and monitor compliance for inland, coastal and bathing waters in the Isle of Man.

You Said

17 responses were received to our survey and found our approach acceptable.

We Did

The Department has drafted the Water Pollution (Standards and Objectives) Scheme 2020 which will be brought to Tynwald in December 2020. Within the draft scheme the Environmental Quality Standards and Water Quality Objectives are included and policy documents have been produced to outline how the scheme will be implemented. The feedback from the consultation will be used to review the current monitoring programme and investigations.

Summary

The consultation was available on the Consultation Hub from the 15th July 2020 to 7th October 2020. It included the Environmental Quality Standards which are to be included in the Water Pollution (Standards and Objective) Scheme 2020. This Scheme is due to be brought to the December Tynwald sitting. In total, we received 17 responses to the consultation.

The first three questions consisted of tables of the EQS for inland, coastal and bathing waters; 82% of the respondents agreed with the tables or had no opinion. Some respondents had queries about the origin of the EQS and whether background concentrations of heavy metals for example will be taken into account due to the islands natural geology.

Positive Comments

The Department received a lot of positive comments from various stakeholders and members of the public for proposing to introduce Environmental Quality Standards into Isle of Man legislation. The standards have been correlated with UK and EU legislation so it will bring the island in line with current Environmental Protection legislation. Some of the positive comments we received are quoted below;

- We fully support this initiative to bring us in line with UK and EU standards.
- We welcome the application of EQS for inland waters.
- Good status is a recognised part of the current GQA, and the UK and EU legislation. As an aspiration for the Isle of Man, 'Good' is an acceptable level to aim for.
- We welcome the implementation of robust WQO and EQS for coastal waters as a clear gain for public health.
- The Government is to be congratulated on taking water quality and environmental standards seriously. It is very much to be hoped that this consultation leads to appropriate legislation and real progress, preferably before the proximity to the next election causes a lack of impetus.
- It is great to see the islands is taking on water quality and safety standards to protect residents and the environment. Clean water that can be used for drinking will be a commodity many countries in the future will be struggling to find due to pollution and the island can be placing itself in an opportunistic position for its sustainability and attraction to live here.
- I agree with updating the nutrient and chemical standards.
- Introducing heavy metal standards is a good idea. These disused mines are causing and will continue to cause a chronic risk to water quality and safety.
- For far too long, mines and mine waste have been allowed to pollute Manx rivers. It is entirely appropriate for heavy metal EQSs to be introduced.
- Heavy metal EQS is long overdue and most welcome.
- The adoption of a risk based approach which recognises the Islands is seen as a pragmatic approach and is supported.
- The updates to the standards are to be welcomed as a step in the right direction for public health and environmental protection.
- Target should have been set higher or perhaps staggered to reach excellent with x years. Still an improvement.
- I think this makes sense, but only as long as all risks within catchments are fully understood. If annual testing takes place, would it be possible to do broader test day every 5 years? This has been suggested and something EPU will look into.
- The proposed minimum standard accords with Tynwald's prior agreement at the December 2019 sitting and is acceptable.

- It will be very good to see the bathing water standards brought up to date.
- The proposed EQS for coastal waters is acceptable provided that all discharges are licensed
- Adoption of these Inland Waters EQSs will be a great step forward.
- If these EQSs are in accordance with the best UK/EU scientific advice, then their adoption in the Isle of Man is excellent news.
- Our health is most important. Our health depends on many factors but most importantly the quality of the fresh water available to us.
- All that you can do to improve our situation will be very helpful to all our residents.
- Please keep our good water!
- Bathing in the sea is important for us and "clean sea water" is essential for attracting many visitors (whom we need as visitors to assist our economy!

Queries

To assist in responding to the various queries raised in the responses, we felt it would be beneficial to provide some additional information on the work the Environmental Protection Unit is undertaking.

The table below provides a detailed response to the queries submitted within the consultation responses.

You Said	DEFA Response
Why is there no mention of biological EQS here? It has been acknowledged that there is a need for a Manx-specific river invertebrate classification tool for many years and also in this report. A timescale should be set for the completion of this.	Biological EQS has not been mentioned in the consultation as officers are working with APEM to produce an Isle of Man specific River Invertebrate Classification Tool (RICT). The collection of reference sites is starting this month for 27 sites. These reference samples will be collected for three seasons and the samples will then be sent to APEM for species identification. The data will then be used to develop a model which the Department can use to classify the biological health of a monitoring site. We did not want to transpose the UK standards as the boundaries may vary once the model has been completed.
The recommended removal of the licencing system for domestic sewage inputs to rivers is a cause for concern. Many of these discharge directly into rivers and streams, rather than to a soakaway.	Although APEM recommended to not license all discharges to controlled waters the Department has chosen to continue licensing. By continuing the licensing of all discharges it ensure that in the event of a pollution or odour complaint officers can check an area for the presence of a sewage treatment works. The Department has produced a discharge licensing policy to ensure that all other measures for discharging of effluent from a sewage treatment works are considered prior to progressing a discharge license application. This includes applicants being required to undertake percolation tests to check if the effluent can be discharged to nearby land which is more that 10m from a watercourse. By assessing other discharge methods it will reduce the volume of effluent entering the Isle of Man's inland and coastal waters.
The APEM report recommends no EQS is set for aluminium (in line with the	Aluminium was previously monitored by Fisheries staff in the Sulby catchment following the construction of the

UK) due to difficulty of monitoring the toxic fraction. There is a history of aluminium pollution in the Sulby river following the construction of the reservoir and dam. Even if no EQS can be set it would be advantageous to monitor aluminium to provide a baseline in Manx rivers.	Sulby reservoir which resulted in a specific water quality issue within the catchment. However, no EQS has been adopted by the UK for aluminium and there is no benefit to be gained from an EQS for aluminium in the Isle of Man. The Department will discuss the requirement to analyse for Aluminium periodically in the Sulby catchment to be able to assess any changes in the concentrations over time. This can be included in the policy document for implementing the Inland Water EQS.
It is important to recognise that whereas benz(a)pyrene is indeed a valid indicator for pollution by PAHs, potential hydrocarbons are numerous. However, it will suffice as a first indicator.	At present APEM have only provided the Department with a standard for benzo(a)pyrene but more specific ICES (International Council of the Exploration of the Sea) recommended standards will also be included in the Scheme when presented to Tynwald.
There is no specific mention of pollution by suspended solids. High levels of suspended sediments can have serious impacts on freshwater fish and invertebrates and can smother habitats in general and spawning and feeding sites in particular.	The Department uses the UK best practice for suspended solids as 60 mg/l for Inland Waters and 100 mg/l for Coastal Waters for discharge licensing purposes. We have not included it as an EQS as we are not aware of any EU or UK standards for suspended solids in the 2008/10/EC Water Quality Standards
There is some concern about PCB EQS of 15ng/l. They can persist in the environment for long periods, bioaccumulate and biomagnify up the food chain, placing the environment and people at risk. The level at which they are thought to cause harm is still unclear and therefore the EQS should be zero. The suggested EQS in the APEM report is set at the lowest concentration identifiable by current lab testing, so a null report could not guarantee a total absence of PCBs in any case. I would suggest that the wording is changed to set the EQS as below 15 ng/l rather than 15ng/l, and this can be revised downwards as and when testing sensitivity increases. This would demonstrate that the IOM is not satisfied with any level of PCB contamination, but recognises the reality of analytical capabilities.	APEM has advised that in the EU & UK there is no regulated water quality EQS for PCBs, i.e. 2008/10/EC Water Quality Standards. UK PCB discharges are required to be reported through Pollution Inventory Reporting. 15 ng/litre in water is proposed, on the basis that this is currently the achievable minimum reporting value in UK laboratories for PCBs in landfill leachate. Additionally marine water standards are proposed for PCBs in biota and sediment which are based on the OSPAR Background assessment criteria (BACs) and Environmental Assessment Criteria (EACs).
There is no mention in the questionnaire about the potential health risks from inland waters to	This is not something the Department can regulate as disease such as leptospirosis are out of our control. We always advise for members of the public to follow good

microorganisms, such as leptospirosis, which can be contracted from waters to which rats have access.	hygiene practices after entering controlled waters such as rivers or the sea to reduce their risk of becoming ill.
Clear definitions are needed for 'river', 'stream' etc and all water bodies mentioned in the APEM report, especially if legislation is envisaged.	The Water Pollution Act 1993 outlines the classes that make up 'controlled waters'; (a) the waters which extend seaward for 3 miles from the baselines from which the breadth of the territorial sea adjacent to the Island is measured ("relevant territorial waters"); (b) any waters which are within the area which extends landward from those baselines as far as the limit of the highest tide or, in the case of the waters of any relevant river or watercourse, as far as the fresh-water limit of the river or watercourse, together with the waters of any enclosed dock which adjoins waters within that area ("coastal waters"); (c) the waters of any relevant lake or pond or of so much of any relevant river or watercourse as is above the freshwater limit ("inland waters"); The proposed Scheme will include a map detailing the Inland Waters, which will be published on the Government website. Freshwater limits will also be reported to outline where the inland water EQS and coastal water EQS apply.
Oil and grease from boats in harbours and marinas need to be monitored too.	This is covered under Part 2 of the Water Pollution Act 1993 as it is a discharge from a vessel; this is regulated by the Department of Infrastructure.
What about monitoring radioactive compounds? There is extensive literature on this covering decades of radioactive waste from Sellafield. The data could be revisited with a view to ensuring further watching briefs on radioactive contaminants in Manx coastal waters and seafood.	The Isle of Man Government Laboratory carries out its own independent monitoring of environmental radioactivity on the Island, maintaining fixed monitoring stations at several locations on the Island, and also monitors radioactivity levels in food. Further information on the monitoring which is undertaken is explained here; https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/government-laboratory/environmental-radioactivity/
It would be useful to include trends in harmful algal blooms, especially red tides, as these are likely to increase as the Irish Sea warms.	Research into algal blooms has previously been undertaken by the Marine Monitoring Officer within the Government Laboratory. If algal blooms are reported or witnessed, these will be investigated by the Fisheries Division or the Government Laboratory.
We should strive for excellent rather than Good, but this is adequate.	The Department has recommended to set 'Good' as a minimum standard as this is in line with Tynwald's approval last year for the Bathing Water strategy.

	DEFA will explore the possibility of including a target for improving the minimum standard to 'Excellent' however an economic impact assessment will be necessary to identify areas which may not achieve this and any remediation measures which may be required to achieve compliance.
Tynwald need to ensure that recommendations from monitoring reports are implemented and tracked.	The EPU produces a yearly monitoring report summarising the work undertaken and the most recent water quality results. This will continue and a section will be added to include a review of the work being recommended the previous year with progress reported.
The APEM report proposes no continued monitoring of substance present at concentrations considerably lower than the EQS. However, the concern is that future levels of these pollutants could increase due to changes in inputs. A reduced monitoring programme for such pollutants would be preferable to the complete cessation of monitoring. Surely an EQS for all chemicals covered by the WFD should be set, even if they are not routinely monitored	Following discussion with APEM, the decision not to introduce EQS for all parameters outlined in the WFD was taken because of the limited industry presence on the Isle of Man. Regular monitoring of the full list of chemicals is not feasible due to resource constraints. However, the Department is considering the option of undertaking a screening assessment every couple of years to assess for the presence of specific chemicals at the regular monitoring sites. This is an appropriate risk based approach and if necessary, standards may be reviewed as more scientific information becomes available or a new industry wishes to start on the island with a discharge to a controlled water.
Agricultural pollution	Any reports of pollution are investigated by officers and the source of the pollution stopped if possible. With regard to diffuse pollution from land run off educating the necessary stakeholders on risks to watercourse by spreading all year
The Isle of Man should keep to the highest standards available and therefore it might be better to align with the EU WFD standards rather than the UK ones	The EQS we are proposing are from the Water Framework Directive and therefore follow the high standards set out by the EU. These standards will not be amended after Brexit.
The recognition of existing and potential sources of pollution and their adverse impacts appears adequate, but the risks to human health should include: water potability, seafood safety and although not strictly within the scope of the 'nutrient and chemical environmental quality' there could be a need to keep a watching brief on periodic increases in stinging marine organisms, such as jellyfish.	Water potability and food safety standards are regulated by the DEFA Environmental Health Officers. An increase in stinging marine organisms may be monitored by the Fisheries Division or the Marine Monitoring Officer at the Government Laboratory

Heavy metal EQS are definitely needed due to the historic mining activities on the Island. Which rivers are tested for which heavy metal will be key to ensure these water courses are monitored adequately. However, only testing a certain river for certain heavy metals will not show any new introductions. Surely there is a need to test all rivers, at a reduced sampling plan, for all heavy metals? Where base metals occur naturally within the rock strata, e.g. old mine workings and areas of mine waste "deads", higher concentrations of contaminants can be expected. These levels need to be regarded as being natural rather than abnormal	The Department completed a screening assessment in March 2020 for all of the 87 monitoring sites to assess the presence of heavy metals. APEM reviewed this data and recommended routine heavy metal monitoring to be added to 13 sites. The sites to be monitoring for dissolved cadmium, copper, manganese, nickel, zinc and iron during the routine monitoring programme are; • Cornaa River – Ballaglass Glen • Dhoon River – Dhoon Glen • Farn Glen Stream – u/s Glen Auldyn • Santonburn – Ballalona and Tosaby • Glen Maye Stream – u/s and d/s Glen Maye • Foxdale Stream – u/s Foxdale and u/s St Johns Confluence • Laxey River – Old Laxey, u/s Glen Roy Confluence and u/s Mooar Confluence The Department will use the data collected from the 13 sites above to establish the natural levels of heavy metals at the specified sites. This will be taken into account when considering compliance with the proposed standards.
Is there any protection of the quality and quantity of inputs to watercourses from groundwater as affected by abstraction for example?	As groundwater is not used for drinking water supply in the Isle of Man and after consulting with Manx Utilities it is not deemed necessary to introduce EQS for groundwater. This will be reviewed if there are changes to the drinking water supply in future.
All riparian owners and all whose activities can affect inland waters adversely, including farming and industrial sites, should be made fully aware, preferably by an annual reminder, of the need to avoid aquatic pollution and the long-lasting impacts that it can have	Agricultural land owners who are applicants to the Agricultural Development Scheme are required to be aware of the potential for adverse impacts on controlled waters however this does not cover all sites. Rather than targeting specific landowners, DEFA's preferred approach in raising public awareness of the need to protect aquatic ecosystems from pollution is through regular news releases and social media. Where possible, following pollution incidents originating from a surface water drain DEFA has worked with Manx Utilities in sending an awareness letter to residents regarding protecting the nearby environment from pollutants.

Other Comments

Some additional comments were included in the consultation which the Department will consider when developing the policy documents for implementing the proposed Scheme. They will also be considered when reviewing the current monitoring programme.

- The Isle of Man should comply and try exceed the 2006 standards in order be future proof ready for standards that are likely to only get more stricter. Also, it is unacceptable that the

island does not seek to protect it's residents and surrounding environment to the highest standards available. The environmental beauty is used by the Tourism board as a draw for tourists to come experience something that is now rare in the modern world. The environment is valued so highly and sought to also be protected by the Strategic Plan of the Isle of Man document, so why fail at this large scale, chronic environmental harm point by discharging sewage into the ocean still.

- I fully support all the proposed improvements. However, I would recommend addressing obvious sources of pollution such as mine spoil sites, poor farming practices such as slurry, soil and riparian zone management in the first instance. Bank side stock poaching is totally is a big problem that needs immediate attention too. Many of these sources are obvious and don't require science to prove they are occurring. All dirty silt laden water impacts water quality. Also I didn't see any mention of animal health as livestock are not restricted from most watercourses. Will active forestry sites be monitored for diffuse pollution control measures? Keep up the good work
- Do a full comparable test regime so that any missing tests cannot be queried and possibly leave the review compromised. Perhaps review after it has been PROVEN that these chemicals do not actually appear after a decent time of testing has happened.
- Sampling of watercourses draining areas of old mine waste/tailings ("deads") should also be standard. Historically it was routine practice to use the "deads" material as construction material on projects around the island - the airport runways are an example but there will be others. As a result there will be areas of mine related contamination far removed from their origin in the mining areas. An assessment of the potential impact of contamination from transported "deads" should be considered as part of the development of effective EQS regulations (refer to answer to question 9). Where the natural discharge from old mine workings or areas of "deads" is high, then mitigation mechanisms may need to be considered to meet the EQS standards.