STATES OF JERSEY

REVIEW OF NITRATE LEVELS IN JERSEY'S WATER (S.R.3/2017): RESPONSE OF THE MINISTER FOR THE ENVIRONMENT

Presented to the States on 19th May 2017
by the Minister for the Environment

STATES GREFFE

REVIEW OF NITRATE LEVELS IN JERSEY'S WATER (S.R.3/2017): RESPONSE OF THE MINISTER FOR THE ENVIRONMENT

Ministerial Response to: S.R.3/2017

Ministerial Response required by: 23rd May 2017

Review title: Review of Nitrate Levels in Jersey's Water

Scrutiny Panel: Environment, Housing and Infrastructure

INTRODUCTION

The Minister for the Environment welcomes the Environment, Housing and Infrastructure Scrutiny Panel report on Nitrate Levels in Jersey's Water, and generally supports their recommendations.

The Minister has responded to each finding and recommendation below, and provided additional comment where appropriate.

FINDINGS

	Findings	**Comments**
1	Nitrate contamination is having a clear and significant impact on Jersey's public water supplies, private water supplies and on the sea lettuce in St. Aubin's Bay.	Agree.
2	Whilst it is acknowledged that the prevalence of sea lettuce in Jersey is influenced by a number of different factors, measures to reduce nitrate loading on land will significantly improve the sea lettuce problem.	The Department of the Environment ("DoE") agree with this finding. However, it is important to be aware that the trigger-point for sea lettuce growth in St. Aubin's Bay is not yet known/predicted. I am therefore unware of the level of nutrient reduction required to reduce sea lettuce growth. If funding becomes available, the Department will undertake modelling of nutrient pressure affecting the Bay, which will hopefully enable predictions of nutrient reduction vs. sea lettuce growth to be made.
3	Nitrate removal facilities at the Sewage Treatment Plant or Jersey Water should be considered a solution of last resort. Treatment of water at this stage would not improve the quality of our stream water or private water supplies.	Agree.

	Findings	Comments
4	The dominant cause of high nitrate levels in Jersey's public water supplies is the practice of early potato growing, combined with the subsequent land uses after the early potatoes are harvested.	Agree.
5	High nitrate levels that are affecting private water supplies are likely to be the result of poor compliance with basic good practice in nutrient management, the siting of septic tank discharges, farmyard waste management measures and old landfill sites.	Agree.
6	The two main sources of the sea lettuce problem in St. Aubin's Bay are a combination of effluent from the Bellozanne Treatment Works, and nitrates flowing off farmland into surface water streams and onto the beach.	Agree.
7	Whilst there are signs of some improvement in widespread excessive nitrate loading across the Island, the rate of improvement is not currently sufficient to meet the target deadlines set out in the Water Management Plan.	Agree.
8	The objectives contained within the Water Management Plan provide a good balance between what is desirable and what is reasonable for a sustainable economy.	Agree.
9	The Panel supports the Economic Development, Tourism, Sport and Culture Department in undertaking an ecosystem services review to help determine the value of Jersey's environment to our economy and society.	Noted.
10	A catchment-based approach is the best means of addressing the nitrate problem in Jersey. In Scotland, such an approach has raised compliance on farms from 35% to 86%.	Agree.
11	The amendments made to the Water Pollution (Jersey) Law 2000 will give the Minister for the Environment greater powers to control the use of fertilisers on land where Jersey's water is being polluted.	Agree.
12	The new regulatory framework will be considered a backstop, only to be used if and when necessary.	Agree.

	Findings	Comments
13	Incentivisation is a fundamental part of the Water Management Plan and is vital for the success of the Plan's objectives. Market assurance schemes, such as LEAF, will provide a strong financial incentive for farmers to comply with the high standards specified by the organisation.	Agree.
14	Under the new Rural Economy Strategy, the rural payment will become contingent on claimants having LEAF accreditation. It has therefore been proposed that the compliance around the new payment will be undertaken by LEAF auditors.	Agree.
15	The difficulty will not be what is written in the Water Management Catchment Orders, but rather the ability to achieve and assess compliance with the additional requirements that they impose.	Agree.
16	Over the last 10 years the farming community have been heavily involved in helping to reduce levels of nitrates on our Island.	Agree.
17	The vast majority of the agricultural industry are fully supportive of the Water Management Plan and the principal of clean water for our Island in general.	Agree.
18	Reducing the amount of fertiliser applied to fields would not only significantly improve Jersey's nitrate problem but would also save farmers a substantial amount of money.	Agree.
19	At least one new full-time equivalent post will be required to undertake both an advisory and compliance role in order to successfully deliver the Water Management Plan objectives across the Island.	Agree.
20	The additional requirements of the Water Management Plan can be funded out of existing resources until 2018, after such time additional money will need to be identified.	Existing resources until 2018 are dependent on the outcome of the requested carry-forward from the States Treasury. This carry-forward is not sufficient to employ a catchment/ compliance officer, and additional funds will need to be sought for this.
21	A potential tax on fertilisers and/or pesticides is worthy of consideration. It is possible that such a tax could help fund the employment of a catchment/compliance officer.	Noted.

	Findings	Comments
22	The employment of a new catchment/ compliance officer will be crucial for providing both advice to support the achievement of compliance and assessing compliance.	Agree.
23	Without the sufficient resources available, the success of the Plan and its objectives will be greatly affected.	Agree.
24	Monitoring the Island's water supply is essential for determining the ongoing success of the measures contained within the Water Management Plan.	Agree.
25	In order to successfully address the nitrate problem affecting the Island's public water supplies, nitrate leaching from farmland across the Island will need to reduce by 25–33% from 2016 levels. This will present a significant challenge for the Minister for the Environment and his Department.	I have not placed a figure on the reduction required to eliminate the need of further dispensations post the expiry in 2021. However, achieving this target is recognised as a challenge.
26	If improvements continue at the same rate as they have been, point sources of nitrate pollution will be largely addressed within the timescales set out within the Water Management Plan, which in turn will significantly improve nitrate levels in private water supplies. However, further improvements will require continued hard work and a close working relationship between all key stakeholders.	Agree. I will continue to progress and address point source pollution under the Water Pollution (Jersey) Law 2000.
27	The Water Management Plan does not provide any prediction as to whether or not Jersey's sea lettuce problem will be addressed within the required timeframe.	Noted. Work on sea lettuce is a separate work-stream undertaken by the Environmental Protection team, in partnership with colleagues from Marine Resources from my Department, and colleagues from the Department for Infrastructure. A gap analysis of the ongoing research and monitoring of nutrient pressures affecting St. Aubin's Bay is currently being undertaken by CEFAS (Centre for Environment Fisheries and Aquaculture Science). CEFAS have recently advised that modelling the nutrient pressures in the Bay will help identify the trigger-point for sea lettuce growth and help predict the amount of nutrient reduction needed to reduce its occurrence. The model could also be used to determine/predict

	Findings	Comments
		the length of time it would take to see changes to sea lettuce growth in the Bay and whether this fits into the timeframe of the Water Management Plan.
28	The qualitative assessment of the effectiveness of Scenario 2b is set against 'good ecological status' requirements of the EU Water Framework Directive rather than the objectives of the Plan itself.	Agree.
29	A collaborative working relationship between the Government, the industry and Jersey Water is fundamental to the overall success of the Plan in reducing high levels of nitrate in the Island's water.	Agree.

RECOMMENDATIONS

	Recommendations	To	Accept/ Reject	Comments	Target date of action/ completion
1	The Minister for the Environment should ensure that the use of incentives, as a tool to encourage best practice and compliance among farmers, is made more explicit within the Water Management Plan.	DoE	Accept/ Reject	The chosen Scenario 2b recommends that rural payments should continue. Rural payments are administered by the Minister for Economic Development, Tourism, Sport and Culture, and not myself. The rural payments were finalised after the Water Management Plan was published.	Ongoing
2	The Minister for the Environment must ensure that funding is found without delay to enable a new catchment/ compliance officer to begin work.	DoE	Accept		By January 2018
3	The Minister for the Environment should ensure that the following work is carried out in respect of water and sea lettuce monitoring in Jersey –				

	Recommendations	To	Accept/ Reject	Comments	Target date of action/ completion
	(a) Maintain the frequency of water monitoring at current levels throughout the 5-year Water Management Plan.	DoE	Accept	This work began in 2012 and is already set to continue as a key priority. Information obtained on the status of the water quality/ ecology of St. Aubin's Bay will be used to assess the effectiveness of catchment measures and Sewage Treatment Works compliance.	Ongoing
	(b) Undertake an in-depth analysis of what the monitoring results mean in order to help understand the relative effectiveness of different types of measures.	DoE	Accept	The gap analysis undertaken by CEFAS will use historic and current monitoring data to assess nutrient trends in St. Aubin's Bay. CEFAS will provide DoE with advice on whether or not the current monitoring of the Bay will enable DoE to effectively measure any deterioration or improvement of the Bay in relation to a particular source of nitrogen (sewage treatment works or catchment sources). This will give DoE confidence in their ability to assess the effectiveness of catchment measures and whether they can reliably link any changes in the Bay to the source of nitrates. The assessment of the water quality status of St. Aubin's Bay, using the Water Framework Directive ("WFD") assessment criteria will continue.	Ongoing
	(c) Undertake regular and effective monitoring of the sea lettuce blooms in St. Aubin's Bay. To support this work, at least one long-term flow measurement point is needed in one of the main streams entering St. Aubin's Bay.	DoE	Accept	Officers from my Department have monitored sea lettuce blooms annually since 2012. This will continue. Current monitoring includes an annual assessment of the bloom using the Water Framework Directive assessment criteria (including distribution and biomass), daily photographs using a time-lapse camera, and weekly photographs from the shore. A sentinel long-term flow monitoring device was installed in 2016 and is currently being commissioned.	Ongoing – dependent on funding

	Recommendations	To	Accept/ Reject	Comments	Target date of action/ completion
	(d) Gather evidence to determine how much of a reduction in nitrogen from the Sewage Treatment Works and nitrate-rich freshwater streams would be required to avoid elevating available nitrogen above the levels found in the offshore waters that surround St. Aubin's Bay.	DoE	Accept	Modelling the nutrient pressures in the Bay will help identify the trigger-point for algal growth and help predict the amount of nutrient reduction needed to reduce the occurrence of sea lettuce. CEFAS have already recommended this approach, which is dependent on funding.	
4	The Minister for the Environment should ensure that broader EU Water Framework Directive requirements are not prioritised until there is clear evidence that the measures of the Water Management Plan are successful in improving Jersey's drinking-water.	DoE	Accept	The importance of public and private drinking-water supplies is acknowledged, but it is also recognised that there are other benefits when using a catchment-based approach, including those to the environmental receptors.	Ongoing
5	The Minister for the Environment must ensure that all key stakeholders continue to work closely together throughout the duration of the Plan in order to effectively address the issue of nitrate levels.	DoE	Accept	Regular meetings of the 'Action for Cleaner Water Group' will continue.	Ongoing

CONCLUSION

I thank the Panel for undertaking this review and for the above findings and recommendations. I fully recognise the challenges ahead, and I agree with the Panel that the road to success depends on the continued close collaboration and sharing of ideas with land-owners, farmers and the Public. As such, the close and valuable working between members of the 'Action for Cleaner Water Group' will continue. Pivotal to the reduction of nitrates at source is the new Water Management Plan, and I shall be monitoring its progress very closely. A catchment/compliance officer is also key to success, and I will continue to seek funding to enable this.

I take the annual occurrence of the nuisance weed, sea lettuce, very seriously, and there is much work being progressed, both within my Department and the Department for Infrastructure. Ongoing monitoring will continue, and the use of a model will help us to predict blooms and identify solutions. The continued reduction in nitrate levels in streams and groundwater and the new Sewage Treatment Works will undoubtedly improve the situation, but this must be countered against climate change and increasing pressures on our environment.