

Industry Feedback

qldwater consolidated feedback



Feedback on the review of the policy for nutrient offsets

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1. Background

The Queensland Water Directorate (*qldwater*) is the central advisory and advocacy body within Queensland's urban water industry representing the majority of the State's Water Service Providers, from small local governments up to major utilities including Queensland Urban Utilities and Unitywater. *qldwater* works with its members to provide safe, secure and sustainable urban water services to Queensland communities. This collated response was compiled for the Department of Environment and Heritage Protection in response to their request for "*feedback to inform the review of its policy concerning flexible options for managing point source water emissions*".

The Policy under review describes a 'mechanism' for nutrient offsets which is stated to have four key objectives (p.1):

1. Deliver an overall improvement in the health of Queensland waterways by reducing total nutrient loads.
2. Provide cost effective and flexible options for regulated point sources to meet licence conditions for nutrient loads.
3. Allow for further growth and development while improving waterway health in accordance with local and national water quality standards.
4. Minimise transaction costs and green tape burden

In general, the policy is well conceived and its objectives are strongly supported by the urban water sector. However, it has largely failed in achieving its objectives in the three years it has been in place. This is in part because of the significant structural and cultural change underpinning the policy mechanism meaning further time is needed for change to occur. However, there are also significant barriers and perverse incentives created within the policy. This response provides feedback on these barriers with respect to the urban water and sewerage sector and also proposed solutions to help achieve the objectives.

2. Collated Industry Response

This response is collated from written submissions, phone interviews and discussion by the *qldwater* ERA 63 Expert Panel and the Technical Reference Group. *qldwater* also encouraged members to respond individually to the Department and provided contact details to EHP of industry experts with an interest in this regulatory review.

3. Barriers Preventing the Mechanism from Achieving its Objectives

Barrier 1: Scope of the Initial Policy Mechanism

The policy has been designed to apply to a range of point source industries in the hope of a market developing whereby nutrient trading can be undertaken among a range of industries with the aim of improving of waterway health. While this is a sensible ultimate aim, it is an overly ambitious expectation for a new approach in the first instance.

Proposed Solution: Re-scope the initial policy to specifically target sewage treatment sources recognising that most are owned and managed by local governments who are also environmental stewards and answerable to communities in balancing social, ecological and financial outcomes. While the objectives of councils and the Department may not fully align, there will be a much greater chance creating the conditions to make the ‘mechanism’ successful and sustainable. This would also promote development of support mechanisms and a partnership approach.

Barrier 2: Lack of Support Mechanisms and Partnership Approach

To create the precursors of the market envisaged by the policy requires support particularly where there are market failures associated with under-valuing environmental externalities. At present, the Policy overtly requires that all costs and risks be borne by the holder of an Environmental Authority. The following statements may be sensible on face value but are likely to dissuade most organisations from the investment necessary to use the ‘mechanism’:

- responsibility for managing the risk from an activity sits with the person carrying out the activity and not the department (p. 1);
- a nutrient reduction action ratio or buffer of 1.5:1 will then be applied for diffuse nutrient reduction actions to account for uncertainties (p. 5);
- the costs of all monitoring and reporting activities are to be met by the proponent and are not the responsibility of the department (p. 6);
- it will be the responsibility of the proponent to propose and demonstrate the delivery ratio using appropriate catchment and receiving water quality models (p. 5);
- proponents are required to demonstrate that the selected actions will generate additional water quality improvements that would not otherwise have taken place. (p. 6);
- nutrient reduction actions must be additional to what is already required (p. 6);
- the proponent may contract management actions to a third party (e.g. land owner, manager, broker), but the legal responsibility for the nutrient reduction action will remain with the proponent (p. 6);
- the environmental authority conditions may also include requirements for when and how the nutrient reduction action will be replaced in the event it is destroyed or damaged in circumstances such as an extreme weather event (p. 6); and
- if the nutrient reduction action fails to achieve the agreed outcome, and the proponent is unable to demonstrate that the nutrient reduction action has been appropriately implemented and maintained, then this will be a breach of the environmental authority and the department will consider its enforcement options (p. 6).

While none of these requirements are unacceptable in isolation, it is unlikely that many industries will be able to adopt a mechanism that represents such a large and uncertain risk. It is telling that the only examples of success of the mechanism comes from the largest Queensland council-owned utility and necessitated a degree of risk sharing by both the utility and the Department.

Proposed Solution: Promote a Partnership Approach. Only a partnership approach between the State and local governments will provide sufficient resources and allow appropriate risk-sharing to overcome the uncertainties and risks the mechanism (necessarily) entails. Later

reviews could then broaden the scope to other point source polluters who may be willing to invest in a more mature model with fewer uncertainties. This would also make it easier to manage the barriers of risk and uncertainty.

Barrier 3: Uncertainty and Risk

At present uncertainty and potential risk are considered in the policy only through the introduction of (arbitrary) ratios for nutrient improvements. For example, the difficulty in estimating load reductions from diffuse sources (compared with point sources) means that “a nutrient reduction action ratio or buffer of 1.5:1 will then be applied for diffuse nutrient reduction actions to account for uncertainties” (p .5). This is an example of one of the many requirements in the policy that shift all risks onto the holder of the EA, even though they also carry the cost of ongoing monitoring (to assess success) and bear the risk of failure if the nutrient reduction actions are unsuccessful or are destroyed through force majeure. The arbitrary ‘safety factor’ has no grounding in science and is unaffected by evidence or monitoring.

In return for bearing all the risks, an investor (EA holder) may be able to defer or reduce capital expenses for a period with a “maximum of 20 years” (p. 6). Capital planning for sewerage assets has a much longer time horizon and represents one of the most significant expenses of public funding for regional communities. There is little incentive in the current policy to allow councils to justify to their communities taking on the required risks and there are significant disincentives and public costs. Even a wildly successful implementation of the mechanism provides little certainty for investors because the Policy is subject to review every five years and or on a political whim. Risk sharing, co-investment and a more pragmatic and evidenced-based approach to setting ratios as safety factors would improve uptake without risking environmental outcomes.

Proposed Solution: The uptake of this policy requires a degree of risk taking (like any innovation or investment) but at present the balance is too far on the side of the holder of the EA. To achieve the objectives, the policy needs create mechanisms to shift this balance and increase certainty for potential investors and innovators. This is particularly obvious in these early stages of the development of market-based forces to encourage increased investment in priority nutrient reduction actions. There are numerous ways in which risks could be more equitably shared and insurance mechanisms explored to increase certainty and potential benefits for all parties. The process involved in developing the only existing offset approach using the mechanism would provide insight into how these processes might be developed. A risk-based approach could also help identify the optimal environmental scope and outcomes desired for nutrient reduction activities.

Barrier 4: Environmental Scope and Outcomes

The Policy is currently unclear about the environmental outcomes it is seeking and appears confused with respect to the locations of the environment it is addressing. The objectives seek “an overall improvement in health of Queensland waterways by reducing total nutrient loads”, thus suggesting that there should be net reduction in nutrients in a waterway. Later,

the policy requires that “a proponent must be able to demonstrate that any proposed nutrient increases at the point source, to be counterbalanced by alternative nutrient reduction actions, will not create an unacceptable impact to receiving waters”. This suggests that balancing total nutrient volumes will suffice if it occurs at the point of discharge. However, in Section 7.3 an (arbitrary) nutrient reduction ratio of 1.5:1 is specified as “this would result in a net reduction in the nutrient discharge to the waterway”. This section clearly requires reductions in volumes of nutrients at the point of discharge.

Clearly the point of discharge is a key concern (which is appropriate) but the aims of net reduction of nutrients at both the scale of the waterway and that of the catchment are also implied. However, Section 7.1 requires that nutrient reduction activities must occur upstream of the point source “so that there is not a decline in water quality in the stream segment between the nutrient reduction site and the point of concern” (p. 4). This places the focus solely on the discharge point and downstream receiving environment, but again does not appear to require a reduction in nutrient volumes (i.e. so long as water quality remains the same). The policy has no regard for nutrient reductions at the end of catchments or broader receiving environment (e.g. a bay or the GBR lagoon) meaning that there can be no consideration of downstream improvements to key habitats, even if water quality at the point of discharge is maintained.

Proposed solution: Clarify desired environmental Outcomes:

At a minimum clarify the nutrient reduction (or balance) objectives of the policy. At present these appear to be: that any nutrient reduction action must decrease net volumes of nutrients at the point of discharge. Moreover, if a point source is to have an increased discharge, then the nutrient reduction action must cause an equivalent decrease plus an additional reduction equivalent to 50% of the projected increase.

Proposed solution: Consider risks and benefits at all relevant locations:

Ideally, it would be more effective to discard specific aims related to point sources and adopt an outcomes-based approach by assessing risks and benefits at each part of the environment that is being impacted (regardless of the location of the nutrient reduction action). While the risks to the immediate receiving environment (particularly from acute toxicants) should always be of prime concern, they should be balanced with the potential to better meet environmental values at other locations. These include the environment at the point of the nutrient reduction activity, the intervening waterway and downstream receiving environments. There may be net benefits from focussing more on the values of these locations (so long as the values of the receiving environment are not unduly compromised). The mechanisms could then allow for trade-offs between risks and benefits to the environment both upstream and downstream of a point source.

Proposed solution: Consider risks and benefits beyond the catchment.

This form of risk assessment proposed above could be extended further to consider the benefits of nutrient reduction actions and bubble licences covering adjacent or even distant catchments. If adjacent catchments are heavily impacted compared to that with the point source discharge then net environmental benefit may be gained through allowing cross-catchment offsets, particularly if both catchments discharge to the same receiving

environment and it is heavily impacted. Nutrient reduction actions that achieve a net environmental benefit (while not unduly risking the immediate receiving environment) should be open for consideration even if the benefit is not in the same catchment.

Even offsets in distant catchments could provide net benefits for receiving environments. A good example is the Great Barrier Reef where the need to reduce nutrient inputs is urgent. Point sources contribute negligible volumes of these nutrient relative to diffuse sources so there is significant leverage in directing investments towards diffuse nutrient reduction actions. Addressing the highest priority diffuse loads in the highest priority reef catchments is the most efficient and effective mechanism for improving the health of the reef regardless of whether the catchment also contains a point source. Subject to adequate protection of the values at a point source discharge, the mechanism could encourage investment at locations that will provide the largest environmental return. This is an urgent and pressing need in catchments of the Great Barrier Reef.

Barrier 5: Timing and Duration

The Policy requires that “Nutrient reduction actions must be provided in advance or concurrently with impacts that are occurring so that the nutrient reduction action provides the benefit at the time of additional nutrient release” and “The duration of the nutrient reduction action will be negotiated on a case-by-case basis to align with the performance specifications and lifespan of the point source infrastructure” (p. 6). These requirements do not sufficiently encourage the development of nutrient reduction actions prior to a major change in point source infrastructure occurring. The result is that grand offsets may be designed, negotiated and executed in the brief yet widely spaced intervals common to sewerage infrastructure investments.

A better approach would be to develop numerous small investments in nutrient reduction action to defray costs and risks, increase immediate environmental benefits and perhaps have cumulative downstream benefit. This would also provide greater surety to both the regulator and the ERA holder that appropriate nutrient reductions were being sustainably achieved and that relationships with landholders, contractors and catchment groups were tested. The power of demonstration sites and proof-of-concept studies should not be underestimated particularly in promoting innovative or culture-changing processes and activities.

Proposed Solution: Amend the policy to promote and encourage gradual, modest investments in nutrient reduction activities that improve environmental outcomes immediately and also accumulate broader benefits and create a buffer for future potential point source changes.

4. Conclusion

The importance of this policy to the future environmental sustainability of Queensland communities cannot be over stated. Some communities are growing, many have static or falling populations but all have a mechanism to manage sewage. Whether it is Moreton Bay,

Lake Eyre, Fraser Coast, the GBR, or the Murray Darling Basin, Queensland STPs discharge to catchments with sensitive receiving environments and the pressure to protect their values is increasing as the economic environment is becoming more constrained. Flexible options are urgently needed to improve environmental protection with more efficient use of limited public funding. The nutrient offsets policy could provide an essential foundation for such options if it can be amended to better meet its stated aim of flexibility.

In most cases STP discharges provide a relatively minor component of the total volume of nutrients and sediments reaching these environments and they are relatively expensive to upgrade, particularly at small scales. To direct limited public funding to the highest possible use requires often difficult trade-offs and risk-based decision making. An outcomes-based policy that is able to balance potential risks with broad environmental benefits is an essential requirement for informing such trade-offs and balancing public investment to protect not just local waterways but also the broader catchments and their receiving environments.